Downey 2045 General Plan Update and Zoning Text and Map Amendment

Environmental Impact Report (SCH# 2026030591)

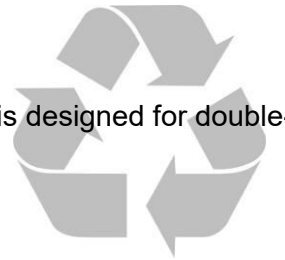
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1.0 – INTRODUCTION

1.1 – CEQA AND THE PURPOSE OF AN EIR

The City of Downey (City or lead agency) updated its General Plan (Downey 2045 General Plan Update or GPU), to establish a vision and policies to shape and manage long term growth in the City's "Planning Area," which includes all properties within the corporate City limits. The adoption and implementation of the GPU is defined as a "project" and is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code, Section 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations, Section 15000 et. seq.). For purposes of this EIR, implementation refers to future discretionary actions undertaken by the City to carry out the General Plan, including amendments to the Zoning Map, capital improvement projects, infrastructure investments, public facility improvements, and the review and approval of future development projects and other actions that are consistent with the General Plan.

Accordingly, the City has prepared this Program Environmental Impact Report (EIR) to assess the long-range and cumulative environmental consequences that could result from adoption and implementation of the General Plan. This report has been prepared in accordance with the CEQA Statutes and Guidelines and with the City's local rules and procedures for implementing CEQA. It was prepared by professional planning consultants under contract to the City. The City is the lead agency for the preparation of this EIR, as defined by CEQA (Public Resources Code, Section 21067, as amended), because it has primary discretionary authority with respect to adoption, amendment, and implementation of the proposed GPU. The content of this document reflects the independent judgment of the City. CEQA was originally enacted in 1970 and has been amended since. The legislative intent of these regulations is established in Section 21000 of the California Public Resources Code, as follows:

The Legislature finds and declares as follows:

(a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.

(b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.

(c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.

(d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the State take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.

(e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

(f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.

(g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the State to:

h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.

i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.

j) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.

k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.

l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.

m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.

n) Require governmental agencies at all levels to consider qualitative factors and economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs, and to consider alternatives to proposed actions affecting the environment.

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002, quoted below:

“The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event-specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.”

1.2 – PURPOSE AND SCOPE

The General Plan Update is a long-range planning program that guides growth and development within the City’s Planning Area. It is intended to communicate the City’s vision for its future and establish a policy framework to guide decisions regarding the community’s physical development, while ensuring that the community’s growth will be supported by an adequate range of public services and infrastructure systems. The GPU has been revised with updated development and

land use policy direction, reflects an updated vision regarding housing, circulation, and mobility improvements, and complies with current state law.

The project includes updates to the Zoning Map to implement the General Plan Update. The Zoning Map will be revised to reflect changes to the General Plan Land Use Map, correct inconsistencies between existing zoning and General Plan land use designations, address mapping errors and outdated classifications, and apply updated zoning districts consistent with the City's long-term vision and land use policies.

The GPU and the Zone Map amendment reflects an overall increase in development potential for the entire Planning Area, however, the GPU is a policy document that would not, by itself, authorize any specific development project or other forms of land use approvals or any kind of public facilities or capital facilities expenditures or improvements. As such, a Program EIR is the appropriate type of document to identify the geographic extent of sensitive resources and hazards, along with existing and planned services and infrastructure support systems that occur in the Planning Area. Further, the Program EIR is described in Section 15168 of the CEQA Guidelines as the appropriate analytical framework to assess the cumulative environmental effects of the full plan, in a first-tier level of analysis, to identify broad concerns and sets of impacts, and to define/develop regulatory standards and programmatic procedures that reduce impacts and help achieve environmental goals and objectives.

Later activities proposed pursuant to the goals and policies of the GPU will be reviewed in light of this EIR and may focus on those site-specific and localized environmental issues that could not be examined in sufficient detail as part of this EIR. Advantages of a Program EIR for the GPU include consideration of effects and alternatives that cannot practically be reviewed at the project level, consideration of cumulative impacts that may not be apparent on a project-by-project basis, the ability to enact citywide mitigation measures, and subsequent reduction in paperwork.

1.3 – ORGANIZATION OF THE DRAFT PROGRAM EIR

The Draft Program EIR (DEIR or Draft EIR) contains the primary analysis of potential environmental impacts discussed in the following six sections described below

Section 1.0	Introduction.
Section 2.0	Executive Summary: A brief discussion of the project and summary of project impacts, mitigation measures, and alternatives.
Section 3.0	Project Description: Provides a detailed description of the proposed project and the Environmental Setting/Existing Conditions and project objectives.
Section 4.0	Environmental Impact Analysis: Evaluates impacts of the GPU at a program level and identifies mitigation measures designed to reduce significant impacts, where applicable. This Section includes 20 chapters, each addressing different topical areas (Air Quality, Noise, Transportation, etc.).
Section 5.0	Alternatives: Provides an analysis of three different alternatives to the proposed project.
Section 6.0	CEQA Mandated Sections: Provides an analysis of growth-inducing impacts, significant unavoidable environmental impacts, and irreversible environmental change.

The DEIR appendices include:

- Appendix A: Draft Downey 2045 General Plan Update
- Appendix B: Draft Downey 2045 General Plan Update Goals and Policies
- Appendix C: Notice of Preparation (NOP), including the NOP distribution list and comment letters received on the NOP
- Appendix D: Air Quality and Energy Modeling Data
- Appendix E: Ambient Noise Measurement Data
- Appendix F: Traffic Noise Modeling Data
- Appendix G: Transportation Impact Analysis
- Appendix H: Record of Tribal Consultation

In compliance with Public Resources Code Section 21081.6, a mitigation monitoring and reporting program (MMRP) will be prepared as a separately bound document that will be adopted in conjunction with the certification of the Final EIR. The MMRP, responses to public comments on the Draft EIR, and any revisions to the Draft EIR will be identified in the Final EIR.

1.4 – APPROACH TO EIR ANALYSIS

The approach to the analysis presented in this EIR is programmatic in nature given the broad scope of the General Plan Update. Each environmental issue is analyzed in a similar manner, starting with a discussion of the existing environmental setting, including physical conditions and pertinent planning and regulatory framework. Thresholds of significance are then defined and are used to measure the proposed GPU's potential impacts on the environment. Thresholds of significance are based on a broad list of questions and impact topics set forth in Appendix G of the State CEQA Guidelines.

The EIR analyzes 20 topical areas which examines the broad, long-term environmental effects resulting from the implementation of the goals and policies contained in each of the updated General Plan elements. The assessment of the long-term environmental effects focuses on how the impact in question could occur and whether the goals, policies, or some other aspect of the proposed GPU and Zone change, would reduce or eliminate such impacts. The presence of sensitive environmental resources, hazards in specific areas, and the broad implications of the General Plan throughout the Planning Area are considered in the determination of impact significance. If the analysis indicates that a significant impact could occur, even with the benefits of any proposed goals or policies, mitigation measures are specified.

1.5 – SCOPING AND PUBLIC REVIEW

Notice of Preparation

To define the scope of the investigation of the Program EIR, the City of Downey distributed a Notice of Preparation (NOP) to local, county, state, and federal agencies along with interested private organizations and individuals. The NOP was delivered to the State Clearinghouse and the CEQA-required 30-day review period began on March 13, 2026, and ended on April 13, 2026. The purpose of the NOP is to provide agencies and private entities an opportunity to identify concerns regarding potential impacts of the proposed project, recommend items to be analyzed

in the DEIR, and to provide suggestions concerning ways to avoid significant impacts (Section 15082, CEQA Guidelines). The NOP is included in Appendix A, along with copies of written comments received during the 30-day public review period for the NOP and the NOP distribution list. On April 2, 2026, the City conducted a scoping meeting on the NOP to discuss issues to be addressed in the EIR with members of the public. One representative of a public agency attended the scoping meeting, but did not have any formal comments on the proposed GPU. The written comments received on the NOP during the 30-day review period are summarized in Table 1.1. The comment letters are also included in Appendix C.

Table 1.1: Summary of Comments on the NOP

Commenting Agency/Person	Summary of Comments on the NOP	Section(s) Where Addressed
Los Angeles County Sanitation Districts (LACSD)	• The LACSD states that the Districts own, operate, and maintain the large trunk sewers of the regional wastewater conveyance system and no deficiencies currently exist the Districts' facilities that serve the City. • LACSD requests that details for future individual development within the City be submitted to the Districts for review to determine sufficiency of trunk sewer capacity for each development. • LACSD notes that wastewater generated by the City will be treated at the Los Coyotes Water Reclamation Plant in Cerritos, and provides the treatment capacity of the plant. • LACSD provides the Districts' average wastewater generation factors to be used to estimate the volume of wastewater for future individual development projects. • LACSD notes that the Districts have the power to charge connection fees for capital facility improvements. • LACSD states that all expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the County of Los Angeles, and the available capacity of the Districts' treatment facilities must, therefore, be limited to levels associated with the approved growth identified by SCAG.	4.10 – Hydrology and Water Quality 4.19 – Utilities and Service Systems
California Department of Transportation (Caltrans)	• Caltrans notes that the project should conduct a transportation analysis to determine whether significant transportation impacts would occur, and if impacts are identified, should implement mitigation measures. • Caltrans also notes that a VMT analysis should be prepared as well as any necessary mitigation. Caltrans suggests performing multi-modal access/conflict analysis at specific locations in the City. • Caltrans suggests eliminating car parking requirements and incorporate TDM strategies. Caltrans also recommends that the City include guidelines that encourage the development of Complete Streets improvements. • Caltrans notes that bike infrastructure should be consistent or go above the recommendations in the City's Bicycle Master Plan in terms of providing the highest levels of protection for bicyclists.	4.17 – Transportation

Table 1.1: Summary of Comments on the NOP		
Commenting Agency/Person	**Summary of Comments on the NOP**	**Section(s) Where Addressed**
	• Caltrans notes that the General Plan should be consistent with the updated Los Angeles County Bicycle Master Plan that is expected to be finalized in 2026, and encourages the inclusion of strategies to connect the future Southeast Gateway Line through enhanced transit, walking, and biking networks, as well as through transit-oriented development around the future Gardendale Station. • Caltrans suggests that the City identify multimodal strategies on transit connectivity. • Caltrans states that the PEIR should propose improved mobility strategies, improved zoning codes, and improved regulations and policies and promote multi-family housing near transit stops. Caltrans notes that the PEIR should include measures that would enhance the sustainability of economic growth factors for population growth, employment services, mobility, and housing needs within the city. • Caltrans notes that the General Plan should also address how the City works to achieve an inter-regional network for longer distance travel and freight movement. • Caltrans recommends that the City consider leveraging strategic investments to maintain and modernize a multimodal freight transportation system with innovative approaches, including advanced technology to optimize integrated network efficiency, improve travel time reliability, and achieve sustainable congestion reduction	
South Coast Air Quality Management District (SCAQMD)	• SCAQMD recommends that the City include an evaluation in the Draft EIR of a reasonably foreseeable scenario which reflects the maximum development intensity that would be allowed under the proposed land use designations and associated infrastructure expansion at full buildout and disclose the air quality, greenhouse gas, and health risk implications of this growth to the fullest extent feasible. • SCAQMD states that the City should identify all air pollutant sources related to the Proposed Project and analyze/quantify any and all potential air quality and greenhouse gas impacts that could occur during all phases (including overlapping phases) of construction (including demolition) and operation activities associated with the future development that may result from implementing the Community Plan and making the associated infrastructure improvements identified in the Downey 2045 General Plan. • SCAQMD notes that construction-related emissions should include infrastructure-related activities such as roadway improvements, wastewater and water system improvements, flood control and drainage improvements, utility expansion, and other infrastructure needed to support future growth. • SCAQMD states that air quality and greenhouse gas impacts from indirect sources, such as sources that	4.3 – Air Quality 4.6 – Energy 4.8 – Greenhouse Gas Emissions

Table 1.1: Summary of Comments on the NOP		
Commenting Agency/Person	**Summary of Comments on the NOP**	**Section(s) Where Addressed**
	generate or attract vehicular trips, should be included in the analysis, and emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's air quality significance thresholds for *operation* to determine the level of significance. • SCAQMD recommends the use of SCAQMD's Air Quality Handbook and website when preparing the air quality and greenhouse gas emissions analyses, and to utilize the California Emissions Estimator Model (CalEEMod) software to quantify emissions. • SCAQMD recommends that a mobile emissions health risk assessment be performed if the project would generate diesel emissions from long-term construction or attract diesel-fueled vehicular trips. • SCAQMD notes that because the scale of the project is large and programmatic in nature, the screening tables which contain localized significance thresholds (LSTs) cannot be relied upon to determine localized impacts. Instead, the SCAQMD recommends the City to evaluate the potential localized air quality impacts from the project by conducting air dispersion modeling to determine whether the applicable ambient air quality standards would be exceeded. • SCAQMD recommends that the City evaluate the potential health risks to existing and future sensitive receptors from mobile and stationary sources of toxic air contaminants and disclose those potential health risks in the Draft EIR, and should identify areas where future sensitive land uses may be exposed to elevated levels of diesel particulate matter (DPM) and other air pollutants, and should include planning-level policies, siting considerations, and mitigation measures to reduce exposures. • SCAQMD notes that air permits are required from SCAQMD if implementation of the project would require the use of new stationary and portable sources, including but not limited to emergency generators, fire water pumps, boilers, spray booths, wastewater-related equipment, electrical infrastructure, etc. SCAQMD also notes that if this were the case, the role of SCAQMD would change from a Commenting Agency under CEQA to a Responsible Agency as defined in CEQA Guidelines Section 15381. • SCAQMD states that the PEIR should include a discussion about any new stationary and portable equipment requiring SCAQMD air permits and identify SCAQMD as a Responsible Agency for the Proposed Project, if applicable. • SCAQMD notes that if air permits are required and SCAQMD is identified as a Responsible Agency, the comment letter serve as South Coast AQMD's request to convene a meeting with the Lead Agency as required by	

Table 1.1: Summary of Comments on the NOP		
Commenting Agency/Person	**Summary of Comments on the NOP**	**Section(s) Where Addressed**
	CEQA Guidelines Section 15104 to discuss the scope and content of the environmental information that will need to be included in the PEIR. • Since the project involves local planning and land use decisions, SCAQMD recommends the City to review and consider applying the recommendations contained in the SCAQMD Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, which includes suggested policies that local governments can use in their General Plans or through local planning to prevent or reduce potential air pollution impacts and protect public health. • SCAQMD discusses available strategies to reduce DPM exposure, including building filtration systems; building design, orientation, location; vegetation barriers or landscaping screening, etc.	
City of South Gate	• The City of South Gate notes that Downey and South Gate have a shared boundary, have shared transportation and infrastructure systems, and are communities that are closely connected. • The City of South Gate requests consideration of potential impacts to nearby intersections within South Gate that may experience increased traffic as a result of development. In particular, the following intersections are located within one mile of Downey and may be affected: Firestone Boulevard and Garfield Avenue; Imperial Highway and Garfield Avenue; Century Boulevard and Garfield Avenue; and Gardendale Street and Paramount Boulevard. • In addition, the City of South Gate notes that freeway access points at the I-710 (Firestone Boulevard and Imperial Highway) and I-105 (Garfield Avenue) may also experience increased activity. For this reason, the City of South Gate requests that the PEIR evaluate potential impacts to these intersections, roadway segments, and freeway ramps, particularly with respect to traffic, air quality, and noise. • The City of South Gate expresses its interest in understanding Downey's long-range planning efforts, requests to be involved in any planning and development efforts, and requests that any potential infrastructure impacts be clearly addressed in the PEIR. • The City of South Gate recommends that the PEIR take into account the potential impacts of the City of South Gate's ongoing project to construct a pedestrian and bicycle bridge connecting both sides of Southern Avenue across the Los Angeles River and the I-710 Freeway. • The City of South Gate requests clarification on Figure 5 of the NOP, given that the area appears to lie outside Downey's jurisdiction and within the jurisdiction of South Gate.	4.3 – Air Quality 4.8 – Greenhouse Gas Emissions 4.10 – Hydrology and Water Quality 4.11 – Land Use and Planning 4.13 – Noise 4.16 – Recreation 4.17 – Transportation 4.19 – Utilities and Service Systems

Table 1.1: Summary of Comments on the NOP		
Commenting Agency/Person	**Summary of Comments on the NOP**	**Section(s) Where Addressed**
	• The City of South Gate notes that the planned Metro station in Downey may have impacts on South Gate, and requests that potential effects on South Gate be considered in the PEIR.	

Public Review of Draft EIR

Comments from all agencies and individuals are invited regarding the information contained in the Draft Program EIR. Such comments should explain any perceived deficiencies in the assessment of impacts or provide the information that is purportedly lacking in the Draft Program EIR or indicate where the information may be found. All comments on the Draft Program EIR are to be submitted, by the close of the 45-day public review period to:

Swati Meshram, Deputy Director of Community Development – Planning Division
City of Downey Community Development Department
11111 Brookshire Avenue
Downey, California 90241
generalplan2045@downeyca.org
(562) 904-7154

Following the 45-day period of circulation and public review of the Draft Program EIR, all comments and the City's responses to the comments will be incorporated into a Final Program EIR prior to certification of the document by the City of Downey.

Availability of EIR Materials

All materials related to the preparation of this Program EIR, including information incorporated by reference, are available for public review. The Notice of Preparation and the Draft Program EIR are posted on the City's website: https://www.downeyca.org/our-city/departments/community-development/planning/environmental-planning. To request an appointment to review these materials, please contact Swati Meshram, City of Downey, Planning Division (see contact information above).

1.6 – NATIVE AMERICAN CONSULTATION

On March 12, 2026, the City sent notices to the following eight (8) Native American Tribes/Tribal Representatives to determine if they wished to consult with the City regarding the GPU:

Native American Tribal Group	**Tribal Representative**
Cahuilla Band of Indians	Erica Schenk, Chairperson
Gabrieleno Band of Mission Indians - Kizh Nation	Andrew Salas, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians	Anthony Morales, Chairperson
Gabrielino Tongva Indians of California Tribal Council	Robert Dorame, Chairperson
Gabrielino Tongva Indians of California Tribal Council	Christina Conley, Consultant
Gabrielino/Tongva Nation	Sandonne Goad, Chairperson
Gabrielino-Tongva Tribe	Charles Alvarez, Chairperson

Gabrielino-Tongva Tribe	Sam Dunlap, Cul. Res. Dir.
Santa Rosa Band of Cahuilla Indians	Steven Estrada, Tribal Chairman
Soboba Band of Luiseño Indians	Joe Ontiveros, Hist. Pres. Officer

As of publication of this Draft Program EIR, the 30-day AB 52 and the 90-day SB 18 consultation periods had expired none of the eight tribes had requested formal consultation with the City.

1.7 – CITATION

Preparation of this DEIR and the General Plan Update rely on information from many sources, including the DEIR appendix materials previously listed and numerous other references. Pursuant to Section 15148 of the State CEQA Guidelines, citations from the appendix materials and other sources are provided throughout the EIR. Citations are numbered sequentially and inclusive to each environmental impact topic (Sections 4.1 through 4.20). References are located at the end of each section of this DEIR.

2.0 – EXECUTIVE SUMMARY

This chapter provides a summary description for the City of Downey General Plan Update (”GPU” or "project"), a list of associated environmental issues to be resolved, a summary of significant impacts and mitigation measures associated with the project, and a summary of feasible alternatives to the project, including identification of the environmentally superior alternative.

2.1 – PROJECT LOCATION

The City of Downey is located in southern Los Angeles County, approximately 8.5 miles southeast of Downtown Los Angeles and approximately 10.4 miles north of the Ports of Los Angeles and Long Beach. The City of Downey is bordered by the Cities of Bellflower and Paramount to the south; the City of South Gate to the West; the Cities of Commerce, Bell Gardens and Pico Rivera to the north; and the Cities of Santa Fe Springs and Norwalk to the east. Downey is encircled by multiple freeways that provide access to neighboring cities. Interstate 105 (I-105) transverses the southern boundary towards El Segundo and Los Angeles International Airport (LAX). Interstate 710 (I-710) extends from the seaport in Long Beach to unincorporated East Los Angeles along the City’s western boundary. Interstate 5 (I-5) traverses the northern part of the City, continuing northward into Downtown Los Angeles. Interstate 110 (I-110) runs to the west of the City, connecting Long Beach to Pasadena through Downtown Los Angeles. Five major streets transverse the City: Lakewood Boulevard, Paramount Boulevard, Florence Avenue, Firestone Boulevard, and Imperial Highway. Downey is straddled by the Rio Hondo River on the west and the San Gabriel River on the east.

2.2 – PROJECT DESCRIPTION

The General Plan Update is intended to achieve the land use, transportation, housing, and other goals of the City that reflect the community’s growth over the long-term. Table 2-1 compares existing 2025 conditions with the projected growth for the 2045 horizon year for the Planning Area. As shown in Table 2-1, the 2045 planning horizon projected development for the Planning Area is estimated at approximately 47,510 dwelling units, 142,809 residents, 33,362,427 square feet of non-residential uses, and 51,351 jobs. Therefore, the 2045 planning horizon for the Planning Area is estimated to result in increases of approximately 10,350 dwelling units, 31,483 residents, approximately 2.6 million square feet of non-residential building area, and 6,649 jobs when compared to existing conditions.

Table 2.1: General Plan Update: Comparison of 2025 and 2045

Development Indicator	EXISTING CONDITIONS (2025)	FUTURE CONDITIONS (2045)
Dwelling Units	37,160	47,510
Population	111,326	142,809
Non-Residential Building Square Feet	30,667,500	33,362,427
Employees	44,703	51,351

2.3 – GENERAL PLAN ELEMENTS

The General Plan Update is intended to achieve the land use, transportation, housing, and other goals of the City that reflect the community's growth over the long-term. The City of Downey General Plan update succeeds the last comprehensive general plan adopted 2005 (*Downey Vision 2005*). The General Plan Update incorporates statutory requirements for general plans and guidance provided in the *2019 General Plan Guidelines* provided by the Governor's Office of Land Use and Climate Innovation (LCI); coordinates future development and policies with regional planning efforts and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The EIR incorporates the goals, policies, and objectives of the following Elements from the updated General Plan:

- Land Use Element
- Circulation Element
- Conservation Element
- Environmental Justice Element
- Safety Element
- Noise Element
- Open Space Element
- Design and Historic Resources Element
- Economic Development Element
- Housing Element

These goals, objectives, and policies are intended to maintain various potential environmental effects of the GPU at levels that are less than significant and are considered when evaluating the potential environmental impacts of implementing the General Plan. Sections 4.1 through 4.20 list goals, policies, and objectives from the General Plan relative to the specific environmental issue being evaluated. The Housing Element is updated for the 6th cycle and planned developments identified in the Land Use Element accommodate the Regional Housing Needs Allocation goal of 6,525 housing units, which represents a 17.6% increase from the existing number of housing units in the Planning Area. The GPU also includes Amendments to Article IX (Land Use) of the Downey Municipal Code (Zoning Map and Zoning Text Amendments) to implement the Land Use Element's Land Use Plan.

2.4 – APPROACH TO EIR ANALYSIS

The approach to the analysis presented in this EIR is programmatic in nature given the broad scope of the General Plan Update. Each environmental issue is analyzed in a similar manner, starting with a discussion of the existing environmental setting, including physical conditions and pertinent planning and regulatory framework. Thresholds of significance are then defined and are used to measure the proposed GPU's potential impacts on the environment. Thresholds of significance are based on a broad list of questions and impact topics set forth in Appendix G of the State CEQA Guidelines.

The impact analysis provided for each of the 20 topical areas examines the broad, long-term environmental effects resulting from implementation of the goals and policies contained in each of the updated General Plan elements. The assessment of impacts focuses on how the impact in question could occur and whether the goals, policies, or some other aspect of the proposed Plan would reduce or ameliorate such impacts. The presence of sensitive environmental resources, hazards in specific areas, and the broad implications of the General Plan throughout the Planning Area are considered in the determination of impact significance. If the analysis

indicates that a significant impact could occur, even with the benefits of any proposed goals or policies, mitigation measures are specified.

2.5 – SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

For each of the environmental topics listed above, any *"significant"* project or cumulative impact and associated mitigation measure(s) identified in this EIR are summarized in Table 2-2, Summary of Potentially Significant Impacts and Recommended Mitigation Measures, which follows at the end of this chapter. The summary chart has been organized to correspond with the more detailed impact and mitigation discussions in chapters 4.1 through 4.20 of this Draft EIR. The chart is arranged in four columns: (1) identified impacts, (2) potential significance without mitigation, (3) mitigation measure(s), and (4) the level of impact significance after implementation of the mitigation measure(s). Because the table does not list impacts that are less than significant with no mitigation required, the Impact/Mitigation Measure numbering may be out of sequence.

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Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AIR QUALITY			
Impact AQ-1 – Would the GPU conflict with or obstruct implementation of the applicable air quality plan? Since the projected population growth under the project's 2045 time horizon exceeds the 2020 RTP/SCS growth forecasts used to prepare the 2022 South Coast Air Quality Management Plan, the project could increase the frequency and/or severity of air quality violations in the Basin or otherwise impede attainment of air quality standards in the Basin. This is considered a **potentially significant impact**.	Potentially Significant	See **Mitigation Measures AQ-2A** and **AQ-2B** under **Impact AQ-2** below.	Significant and Unavoidable
Impact AQ-2 – Would the GPU result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard? Due to the built-out nature of the Project Area, construction emissions are speculative with respect to the timing and magnitude of demolition, site preparation, grading, building construction, paving and painting activities that would occur over time. Fugitive dust (PM10) emissions would be greatest during building demolition, site preparation, and grading, due to the disturbances of soil and transport of material and NOx emission would result from the combustion of diesel fuels used to power off road heavy-duty pieces of equipment (e.g. backhoes, bulldozers, excavators, etc.).	Potentially Significant	**Mitigation Measure AQ-2A: Require a Project-level Construction Air Quality Assessment for Conditional uses and New Discretionary Development Projects.** Prior to a discretionary approval by the City for development projects subject to CEQA (meaning, non-exempt CEQA projects), project applicants shall prepare and submit a technical assessment evaluating potential project-specific construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during construction activities. The specific strategies identified for a project	Significant and Unavoidable

Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Reactive Organic Gas or Volatile Organic Compound (VOC) emissions would generally be greatest during architectural activities. The types and quantity of equipment, and duration of construction activities, would be dependent on project-specific conditions. Despite the unknowns, it is plausible that one or more projects developed under implementation of the proposed GPU could exceed one or more of the SCAQMD's construction criteria air pollutant thresholds of significance and the impact could be **potentially significant and requires mitigation**. As shown in Table 4.3-6 of Chapter 4.3 Air Quality), the maximum daily operational emissions associated with the 2045 growth under the Project would result in ROG, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions that exceed SCAQMD-recommended significance thresholds. This is considered a **potentially significant impact**.		shall be included as conditions of project approval, and be incorporated into all appropriate construction bid, engineering, and planning documents prepared for the project. Potential strategies to reduce construction-related emissions include, but are not limited to: • Using heavy-duty off-road construction equipment that meets U.S. EPA Tier IV Final emissions standards (for equipment greater than 50 horsepower), either through original manufacturer's certification or through the use of California Air Resources Board verified diesel emissions control strategies (e.g., a diesel particulate filter). • Using electric equipment, particularly for equipment less than 50 horsepower • Using alternative fuels such as renewable diesel, biodiesel (no more than B20 blend), or liquefied or compressed natural gas biodiesel, • Using smaller equipment that can complete the same construction activities in the same time as standard-sized equipment. • Limiting idling time of diesel-powered construction equipment to two (2) minutes. • Ensuring equipment brought to a site has been properly serviced and maintained in accordance with manufacturer's standards. • Implementing applicable SCAQMD fugitive dust control measures • Using interior and exterior coatings that meet SCAQMD Rule "Low-VOC" or "Super-Compliant" definitions. **Mitigation Measure AQ-2B: Require a Project-level Operational Air Quality Assessment for New**	

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		Discretionary Development Projects. Prior to a discretionary approval by the City for development projects subject to CEQA (meaning non-exempt CEQA projects) project applicants shall prepare and submit a technical assessment evaluating potential project-specific operation air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during operational activities. The specific strategies identified for a project shall be included as conditions of approval, and be incorporated into all appropriate planning documents for the project. Potential strategies to reduce operational emissions include, but are not limited to the following: • Reducing vehicle trips or vehicle miles travelled (VMT) generated by residential and non-residential projects • Reducing or eliminating new natural gas fireplaces and hearths in residential projects • Reducing or eliminating new natural gas appliances in residential and non-residential projects • Reducing or prohibiting gasoline-powered landscaping equipment in residential and non-residential projects • Incorporating clean air vehicle parking, bicycle parking, and electric vehicle and truck charging	

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		infrastructure that meets the additional, voluntary standards established in the version of the CALGreen code in effect at the time the building permit application is submitted for a project • Incorporating appropriate transit-supporting infrastructure into site plans	
Impact AQ-3 – Would the GPU expose sensitive receptors to substantial pollutant concentrations? Construction emissions associated with future development activities facilitated under implementation of the proposed GPU could exceed SCAQMD construction LSTs and cancerogenic and non-cancerogenic threshold maintained and recommended by the SCAQMD. This is considered a **potentially significant impact**.	Potentially Significant	**See Mitigation Measure AQ-2A, Above** **Mitigation Measure AQ-2C:** For individual projects that may be located within Disadvantaged Communities, or that may site new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day, the applicant shall prepare a Health Risk Assessment (HRA) evaluating the potential for sensitive receptors to be exposed to TACs, which shall be required for such individual projects. The HRA shall be prepared in accordance with the policies and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and the South Coast Air Quality Management District (SCAQMD). If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceed the respective thresholds, as established by the SQAQMD at the time a project is considered (i.e., 10 in one million cancer risk and 1 hazard index), the project applicant will be required to identify and demonstrate that best available control technologies to reduce substantial exposure of sensitive receptors to TACs. Examples may include, but are not limited to, air intakes located away from high-volume roadways and/or truck loading zones unless it	Significant and Unavoidable (Construction Emissions Only)

Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		can be demonstrated that these are operational limitations and/or heating, ventilation, and air conditioning (HVAC) systems provided with appropriately sized maximum efficiency rating value (MERV) filters. Mitigation measures identified in the HRA shall be incorporated into the site development plan as a component of the proposed project. Air intake and MERV filter requirements shall be noted on all building plans submitted to the City of Downey Community Development Department.	
Impact AQ-5 – Would the GPU cause substantial adverse cumulative impacts with respect to Air Quality? The Project's 2045 growth and associated construction and operational emissions would not be consistent with the planning assumptions and emissions levels which exceed SCAQMD-recommended CEQA thresholds of significance. This is a **potentially significant impact.**	Potentially Significant	**See Mitigation Measure AQ-2A and AQ-2B, Above**	Significant and Unavoidable
BIOLOGICAL RESOURCES			
Impact BIO-1 – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? Implementation of the GPU could result in significant impacts to listed or otherwise sensitive species or their habitats. This is considered a **potentially significant impact.**	Potentially Significant	**Mitigation Measure BIO-1:** The City shall require a note on demolition or grading plans that construction or other ground-disturbing activities avoid nests of native birds when in active use by implementing protection measures to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act. When applications for development are submitted and where the City has determined a potential for impacts to special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters, projects shall be required to comply with the following mitigation framework:	Less than Significant

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		Prior to the issuance of any permit for future development, a site-specific general biological resources survey shall be conducted to identify the presence of any sensitive biological resources, including any sensitive plant, wildlife species or regulated wetlands and waters. A biological resources report shall be submitted to the City to document the results of the biological resources survey and measures for protecting any resources and surrounding habitat. If potentially significant impacts to sensitive biological resources are identified, mitigation measures and project design features to minimize direct and indirect impacts on sensitive biological resources shall be implemented to reduce the impacts to below a level of significance.	
Impact BIO-2 – Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? Implementation of the GPU could result in significant impacts to riparian habitats or other sensitive natural communities. This is considered a **potentially significant impact.**	Potentially Significant	**See Mitigation Measure BIO-1 above.**	Less than Significant
CULTURAL REOURCES			
Impact CUL-2 – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? Future development pursuant to the General	Potentially Significant	**Mitigation Measure CUL-1:** Prior to approval of discretionary development projects that involve substantial ground disturbance in previously undisturbed areas, or where there is evidence that the project site may contain archaeological, historical, or Tribal Cultural Resources, the City shall require a records search	Less than Significant

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
Plan may involve grading, excavation, or other ground-disturbing activities, which could disturb or damage unknown archaeological resources. This is considered a **potentially significant impact.**		through the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC), as appropriate, to determine the potential for cultural resources. If the records search or project-specific conditions indicate the potential for significant impacts, the applicant shall prepare a cultural resources study conducted by an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards, including consultation with Tribal governments, as appropriate. Where resources are identified, the project shall implement measures to avoid, minimize, or mitigate impacts in accordance with CEQA and applicable City of Downey requirements. **Mitigation Measure CUL-2:** As a condition of approval for discretionary grading permits, the City shall require prior to the start of construction activities, construction employees to be trained in recognizing potentially significant archaeological, paleontological, historic, or Tribal Cultural Resources that may be discovered during ground-disturbing activities. Project proponents will be required to submit verification that all site workers have received sensitivity training prior to commencement of ground-disturbing activities. **Mitigation Measure CUL-3:** Upon discovery of significant archaeological, paleontological, historic, or Tribal Cultural Resources during site development, all activity shall be halted within 100 feet of the find(s) and notify a professional archaeologist, paleontologist, historian, and/or local Tribal government representative California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project (if appropriate) to evaluate the find(s)	

Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		and recommend mitigation procedures, if necessary. Findings and mitigation measures are subject to review and approval by the Community Development Director prior to resuming site development work. The Tribe shall be contacted regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the Tribe(s) and archaeologist disagree on preferred treatment, the ultimate authority shall be the City of Downey Community Development Director.	
Impact CUL-3 – Would the project disturb any human remains, including those interred outside of formal cemeteries? In the unlikely event that buried human remains are uncovered during future development project under the proposed GPU, the project could result in potentially significant impacts to buried human remains. This is considered a **potentially significant impact.**		**Mitigation Measure CUL-4:** If human remains are encountered during ground-disturbing activities, all work within the vicinity of the discovery shall cease immediately. The remains shall be treated in accordance with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, including notification of the County Coroner and, if the remains are determined to be Native American, notification of the Native American Heritage Commission for identification of the Most Likely Descendant and treatment of the remains in accordance with applicable law.	
GREENHOUSE GAS EMISSIONS			
Impact GHG-1 – Would the GPU generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? As shown in Table 4.8-4, the GPU's 2045 growth projection would result in GHG emissions that exceed the adjusted SCAQMD derived plan-efficiency metric. This is	Potentially Significant	See **Mitigation Measure AQ-2B**. **Mitigation Measure GHG-1: Require a Project-level Greenhouse Gas Emissions Assessment for Conditional Uses and New Discretionary Development Projects.** Prior to discretionary approval of a development project subject to CEQA, project applicants for residential	Significant and Unavoidable

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
considered a **potentially significant impact.**		development projects involving more than 30 dwelling units or nonresidential development projects exceeding 50,000 square feet shall prepare and submit to the City for review and approval a project-specific greenhouse gas (GHG) emissions assessment evaluating potential GHG emissions impacts and consistency with applicable State GHG reduction goals. The City may determine that a GHG assessment is required for other projects subject to CEQA based on the City's adopted CEQA Guidelines, significance thresholds, VMT guidelines, or other applicable environmental review procedures in effect at the time of project review. If a project-specific GHG assessment is required and identifies potentially significant GHG emissions, the project shall incorporate feasible measures to reduce emissions and demonstrate consistency with applicable State and local GHG reduction goals. Required measures shall be incorporated into the project as conditions of approval, where appropriate. The assessment shall evaluate the project's consistency with adopted state-wide GHG emissions reduction goals, such as Senate Bill 32, Assembly Bill 1279, or an interpolated GHG emission reduction goal for 2045 that is based on regional data (e.g., an interpolated SCAQMD efficiency metric of 1.0 $MTCO_2e$/yr/SP). If GHG emissions levels are determined to have the potential to be inconsistent with the State GHG reduction goals, the City shall require that applicants for new development projects incorporate strategies to reduce GHG emissions during operational activities. The specific strategies identified for a project shall be included as conditions of approval, and be incorporated into all appropriate planning documents for the project.	

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		Potential strategies to reduce GHG emissions include, but are not limited to: ● Reducing vehicle trips or vehicle miles travelled (VMT) generated by residential and non-residential projects ● Requiring new residential and non-residential development to incorporate on-site renewable energy systems that reduce grid electricity consumption ● Requiring new residential and non-residential projects to incorporate water efficient landscaping and water conservation measures such as low-flow fixtures, grey water systems, etc.	
Impact GHG-3 – Would the GPU cause substantial adverse cumulative impacts with respect to greenhouse gases? The Project's 2045 growth projection and associated GHG emissions could exceed the significance threshold applied in this EIR and pose a conflict with the 2022 Climate Change Scoping Plan of the California Air Resources Board. This is considered a **potentially significant impact.**	Potentially Significant	See **Mitigation Measures AQ-2** and **GHG-1**.	Significant and Unavoidable

Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
HYDROLOGY AND WATER QUALITY			
Impact HYD-2 – Would the GPU substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? The proposed GPU may result in potentially significant short- or long-term impacts to local groundwater supplies. This is considered a **potentially significant impact.**	Potentially Significant	**Mitigation Measure HYD-1: Water Demand Management.** New developments that will be served by the Downey Public Works Department - Utilities Division shall obtain a Can and Will Serve letter verifying that the Utilities Division has sufficient capacity and intends to supply water to the proposed development project. Project applicants shall provide the Utilities Division with the project location, project description, and quantified estimated daily and annual water usage for the project. The quantified estimated daily and annual water usage data shall be calculated by a qualified engineer using state or local generation rates.	Less than Significant
Impact HYD-6 – Would the GPU cause substantial adverse cumulative impacts with respect to hydrology and water quality? The project may result in potentially significant cumulative impacts with respect to ground water supply. This is considered a **potentially significant impact.**	Potentially Significant	See **Mitigation Measure HYD-1**.	Less than Significant
UTILITIES AND SERVICES SYSTEMS			
Impact UTIL-1 – Would the GPU 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, the construction or relocation of which could cause significant environmental effects? Since most of the City's water supply comes from groundwater sources, the growth	Potentially Significant	See **Mitigation Measure HYD-1**.	Less than Significant

Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
represented by the proposed GPU exceeds that upon which the City's UWMP was developed, and long-term local groundwater supply is a **potentially significant impact that requires mitigation**.			
Impact UTIL-2 – Would there be sufficient water supplies available to serve reasonably foreseeable future development in the Planning Area during normal, dry and multiple dry years? The growth represented by the proposed GPU exceeds that upon which the City's UWMP was developed. In addition, it is estimated that the proposed GPU would result in an increase in annual water usage within the Planning Area by approximately 14,812 acre feet per year in 2045 when compared to existing conditions. Therefore, it was determined that long-term local groundwater supply is a **potentially significant impact that requires mitigation**.	Potentially Significant	See **Mitigation Measure HYD-1**.	Less than Significant
Impact UTIL-6 – Would the GPU cause substantial adverse cumulative impacts with respect to utilities and service systems? It was determined that water supply may not be adequate for the full implementation of the GPU in the future. This is considered a **potentially significant impact.**	Potentially Significant	See **Mitigation Measure HYD-1**.	Less than Significant
TRANSPORTATION			
Impact TRAN-1 – Would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b) related to VMT?	Potentially Significant	No feasible mitigation measures are available.	Significant and Unavoidable

Table 2.2
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
It was determined that the proposed GPU would result in VMT in excess of regional thresholds.			
Impact TRAN-5 – Would the project cause substantial adverse cumulative impacts with respect to transportation and traffic? Because VMT is a regional impact, and because the proposed GPU would result in significant and unavoidable VMT impacts, the project could cause substantial adverse cumulative transportation impacts.	Potentially Significant	No feasible mitigation measures are available.	Significant and Unavoidable
TRIBAL CULTURAL RESOURCES			
Impact TRC-2 – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (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?	Potentially Significant	**Mitigation Measure CUL-1:** Prior to approval of discretionary development projects that involve substantial ground disturbance in previously undisturbed areas, or where there is evidence that the project site may contain archaeological, historical, or Tribal Cultural Resources, the City shall require a records search through the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC), as appropriate, to determine the potential for cultural resources. If the records search or project-specific conditions indicate the potential for significant impacts, the applicant shall prepare a cultural resources study conducted by an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards, including consultation with Tribal governments, as appropriate. Where resources are identified, the project shall implement measures to avoid, minimize, or mitigate impacts in accordance with CEQA and applicable City of Downey requirements.	Less than Significant

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		Mitigation Measure CUL-2: As a condition of approval for discretionary grading permits, the City shall require prior to the start of construction activities, construction employees to be trained in recognizing potentially significant archaeological, paleontological, historic, or Tribal Cultural Resources that may be discovered during ground-disturbing activities. Project proponents will be required to submit verification that all site workers have received sensitivity training prior to commencement of ground-disturbing activities. **Mitigation Measure CUL-3:** Upon discovery of significant archaeological, paleontological, historic, or Tribal Cultural Resources during site development, all activity shall be halted within 100 feet of the find(s) and notify a professional archaeologist, paleontologist, historian, and/or local Tribal government representative California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project (if appropriate) to evaluate the find(s) and recommend mitigation procedures, if necessary. Findings and mitigation measures are subject to review and approval by the Community Development Director prior to resuming site development work. The Tribe shall be contacted regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the Tribe(s) and archaeologist disagree on preferred treatment, the ultimate authority shall be the City of Downey Community Development Director. **Mitigation Measure CUL-4:** If human remains are	

Table 2.2 Summary of Potentially Significant Impacts and Recommended Mitigation Measures			
Impacts	**Significance Before Mitigation**	**Mitigation Measures**	**Significance After Mitigation**
		encountered during ground-disturbing activities, all work within the vicinity of the discovery shall cease immediately. The remains shall be treated in accordance with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, including notification of the County Coroner and, if the remains are determined to be Native American, notification of the Native American Heritage Commission for identification of the Most Likely Descendant and treatment of the remains in accordance with applicable law.	

2.6 – ALTERNATIVES TO THE PROPOSED PROJECT

Pursuant to State CEQA Guidelines Section 15126.6, this chapter describes three alternatives to the General Plan Update, including the CEQA-mandated No Project Alternative, and compares the impacts of each alternative to the project. The ability of each alternative to meet the basic project objectives is also described, and the "environmentally superior" alternative among the three is identified, as required by the CEQA Guidelines.

In accordance with CEQA Guidelines Section 15126.6(a), an EIR does not need to evaluate every conceivable alternative. A feasible range of alternatives has been evaluated that will allow decision-makers to make a reasoned choice and that meet most of the project objectives. The project objectives included in Chapter 3, Project Description, are:

1. **Honor the Past, Shape the Future.** Celebrate Downey's heritage by preserving historic places and community traditions, while guiding thoughtful growth that respects the City's character and embraces progress.
2. **Grow Smart to Support Neighborhoods.** Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they're needed most.
3. **Build a Strong, Flexible Economy.** Support a diverse economic base that fosters business growth, revitalizes commercial areas, and promotes long-term prosperity.
4. **Offer Housing for Everyone.** Support a diverse range of housing opportunities that meet the needs of residents of all income levels while maintaining sufficient housing capacity to support future needs and long-term compliance with State housing law.
5. **Plan for Safe, Practical, Connected Travel.** Address the most urgent travel needs, expand alternatives to driving, and plan for a growing, connected community.
6. **Promote Safety and Peaceful Environments.** Enhance lighting, visibility, and public safety presence while reducing noise impacts so the community is secure and comfortable for all users.
7. **Protect Resources and Prepare for the Future.** Plan with climate, conservation, environmental health, and emergency preparedness in mind.
8. **Manage and Invest in Community Resources.** Manage water and natural resources while investing in and supporting parks, recreation, and community programs that enhance quality of life for all residents.
9. **A Healthier Downey for Everyone.** Reduce pollution burdens, expand access to healthy living resources, and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.
10. **Design for Quality and Lasting Identity.** Promote high-quality architecture, attractive streetscapes, and well-designed public spaces that reinforce community character, enhance the visual environment, and ensure new development contributes positively to established neighborhood identity and long-term vitality.
11. **Foster Trust and Connection.** Prioritize meaningful community engagement to strengthen relationships, build transparency, and create an informed, involved community.

In addition to the project objectives cited in the Guiding Principles, the City has the objective to identify and designate sufficient residential and mixed-use residential opportunity sites throughout the City to provide a robust housing capacity beyond the 6th Cycle Regional Housing Needs Assessment (RHNA), thereby maximizing implementation flexibility, accounting for uncertainties in site redevelopment and market conditions, supporting housing production across all income levels, and maintaining long-term compliance with State housing law.

Alternative 1: No Project/Existing General Plan

The No Project/Existing General Plan Alternative (No Project Alternative) assumes that development would occur within the Planning Area that was anticipated under the 2005 General Plan. Development assumptions for this alternative are shown in Table 2.3. As shown in Table 2.3, development under the 2005 General Plan would result in less growth in both residential and nonresidential development when compared to the proposed GPU. Additionally, no new policies, goals, or development standards associated with the proposed GPU would be implemented; the standards, goals, and policies associated with the 2005 General Plan would be applicable. This alternative would also result in fewer employees than the project and would not meet the City's current Regional Housing Needs Allocation (RHNA) allocation for affordable housing units.

Alternative 2: Reduced (-30%) Multifamily Residential Development Alternative

The Reduced Multifamily Residential Development Capacity Alternative reflects a reduced number of residential units and a reduced population (both approximately 30 percent less) compared to those expected under the proposed GPU. Development assumptions for this alternative are shown in Table 2.3. This alternative assumes that policies, goals, or development standards associated with the project would apply to development under this alternative. This alternative would result in the same amount of nonresidential development as the project, and would still allow the City to meet its current RHNA goals.

Environmentally Superior Alternative

None of the alternatives would eliminate or reduce any of the significant impacts of the GPU to less than significant levels. However, Alternative 2, the Reduced Multifamily Residential Development Alternative would reduce potential impacts to the greatest degree while still meeting most of the project objectives and would allow the City to meet its RHNA goals. Alternative 2 would therefore be the "environmentally superior alternative." This conclusion is based on the comparative impact conclusions in Tables 5.1 and 5.2 and the analysis within this chapter.

Table 2.3: Land Use Alternatives Development Assumptions				
			Net Change in Growth Potential (2045)	
Land Use	Existing Conditions (2025)	Proposed GPU (2045)	Alternative 1: No Project / Existing General Plan Development Potential [(a)]	Alternative 2: Reduced (-30%) Multifamily Residential Development Potential
Dwelling Units	37,160	+10,350	+2,905	+7,245
Population	111,326	+31,483	+13,848	+22,038
Nonresidential	30.6 MSF	+2.6 MSF	+0	+2.6 MSF
Employees	44,702	+6,649	+4,900	+6,649

Source: Table 3.4, DEIR Project Description, MIG, 2026
(a) *Downey Vision 2025*-Comprehensive General Plan Update EIR, Table 3.3-1 – Housing/Population/Employment Projections, p. 3-10 (does not project increase in nonresidential square footage).
MSF = million square feet (rounded off)

Table 2.4: Alternative Impacts Compared to Project Impacts		
Impact/Resource	Alternative 1: No Project / Existing General Plan Development Potential	Alternative 2: Reduced (-30%) Multifamily Residential Development Potential
Aesthetics	Similar LTS	Similar LTS
Agriculture and Forest Resources	Similar LTS	Similar LTS
Air Quality	**Reduced SU**	**Reduced SU**
Biological Resources	Similar LTS	Similar LTS
Cultural Resources	Similar LTS	Similar LTS
Energy	Reduced LTS	Reduced LTS
Geology and Soils	Similar LTS	Similar LTS
Greenhouse Gas Emissions	**Reduced SU**	**Reduced SU**
Hazards and Hazardous Materials	Similar LTS	Similar LTS
Hydrology and Water Quality	Similar LTS	Similar LTS
Land Use	Similar LTS	Similar LTS
Mineral Resources	Similar LTS	Similar LTS
Noise	Reduced LTS	Reduced LTS
Population and Housing	Reduced LTS	Reduced LTS
Public Services	Reduced LTS	Reduced LTS
Recreation	Reduced LTS	Reduced LTS
Transportation (VMT)	**Reduced SU**	**Reduced SU**
Tribal Cultural Resources	Similar LTS	Similar LTS
Utilities and Service Systems	Similar LTS	Similar LTS
Wildfire	Similar LTS	Similar LTS

Source: MIG, 2026.
LTS = Less Than Significant Impact
SU = **Significant and Unavoidable Impact**

3.0 – PROJECT DESCRIPTION

The City of Downey 2045 General Plan Update (General Plan Update or GPU) is intended to bring the document into conformance with the requirements of Article 5 (Authority for and Scope of General Plans) of California Government Code and addresses changes to the demographic, economic, and environmental conditions in Downey anticipated to occur through the year 2045. Article 5 requires every city and county to have a general plan that functions as a comprehensive, long-range policy document. The project analyzed in this Program Environmental Impact Report (EIR) consists of the adoption and long-term implementation of the General Plan Update and associated Zoning Map amendments necessary to maintain consistency between the General Plan Land Use Map and the City's zoning designations.

3.1 – BACKGROUND

The City's General Plan was last comprehensively updated in 2005 with a planning horizon of 2025. The current General Plan Update was initiated in Fall 2024 and includes a comprehensive modernization of the City's policy framework. The update includes the addition of a new Environmental Justice Element and substantial revisions to the remaining General Plan elements, including:

- Land Use Element
- Circulation Element
- Conservation Element
- Environmental Justice Element
- Safety Element
- Noise Element
- Open Space Element
- Design and Historic Resources Element
- Economic Development Element
- Housing Element

The Housing Element was last updated and adopted in 2022 and is not included as part of this General Plan Update. The update reevaluates goals, policies, and implementation programs to address current conditions, emerging issues, changes in State law, and community priorities, while retaining and building upon longstanding policy direction that continues to support Downey's character, values, and planning objectives.

The Downey General Plan public engagement and outreach approach focused on guiding public involvement efforts and increasing participation by stakeholders and the general public in updating the General Plan. The Housing Element was updated for the 6th cycle in 2022; land use policy in the Land Use Element accommodates the Regional Housing Needs Assessment goal of 6,525 housing units. As part of the Downey General Plan Update and related Housing Element implementation efforts, the City conducted a multi-phase public and stakeholder engagement program between July 2024 and April 2026 to inform policy development and environmental analysis. Early engagement included **in-person interviews** with City leadership in July 2024, coordinated by City staff and held at City Hall. Participants included the Mayor, Mayor Pro Tem, Planning Commission Chair, and a former Mayor, providing policy direction, institutional knowledge, and insight into community priorities.

Community workshops were also conducted to support development of specific General Plan elements. On August 28, 2024, the City hosted a workshop focused on the Environmental Justice Element at the Columbia Memorial Space Center. Approximately 25 community members attended. Outreach included flyer distribution, door hangers within Disadvantaged Communities and high-density residential areas, social media promotion, and distribution at City facilities and events. Spanish interpretation was provided, and activities and refreshments were offered to support inclusive participation. A second community workshop was held at the same location in April 2026 to present the proposed General Plan Land Use Map and corresponding Zoning Map revisions and solicit public input on the proposed amendments. Over 50 community members attended. A third community workshop is planned in Summer 2026.

In Spring 2025, the City and its consultant team hosted four **pop-up engagement events** at community gatherings and City events, including Golden Park, Downtown Downey, Independence Park, and Apollo Park. These events used interactive displays, maps, and comment tools to gather input on land use, housing, mobility, development patterns, and community values, allowing over 450 community members of all ages and backgrounds to participate in the General Plan Update process in an informal and accessible setting.

To supplement in-person engagement, the City launched a **community questionnaire** as part of the General Plan Update. The questionnaire was available in English and Spanish, in both digital and paper formats, and was promoted through City communications and community events. The survey was open from April 19 through June 30, 2025, and received 886 responses. Questionnaire results are being used to identify community priorities and inform policy development and long-term planning decisions.

3.2 – LOCATION AND SETTING

Location

The City of Downey encompasses approximately 12.8 square miles in southern Los Angeles County, approximately 8.5 miles southeast of Downtown Los Angeles and approximately 10.4 miles north of the Ports of Los Angeles and Long Beach (see Exhibit 3.1). The City of Downey is bordered by the Cities of Bellflower and Paramount to the south; the City of South Gate to the West; the Cities of Commerce, Bell Gardens and Pico Rivera to the north; and the Cities of Santa Fe Springs and Norwalk to the east.

Downey is encircled by multiple freeways that provide access to neighboring cities. Interstate 105 (I-105) transverses the southern boundary towards El Segundo and Los Angeles International Airport (LAX). Interstate 710 (I-710), located outside of the City's boundaries, extends from the seaport in Long Beach to unincorporated East Los Angeles along the City's western boundary. Interstate 5 (I-5) traverses the northern part of the City, continuing northward into Downtown Los Angeles. Interstate 110 (I-110), located outside of the City's boundaries, runs to the west of the City, connecting Long Beach to Pasadena through Downtown Los Angeles. Five major streets transverse the City: Lakewood Boulevard, Paramount Boulevard, Florence Avenue, Firestone Boulevard, and Imperial Highway.

Downey is straddled by the Rio Hondo River on the west and the San Gabriel River on the east (see Exhibit 3.2). The City is served by a Metro "C" Line stop at Lakewood Boulevard and I-105 that commences in Norwalk to the east and terminates at LAX. The General Plan Planning Area encompasses all properties within the incorporated City limits.

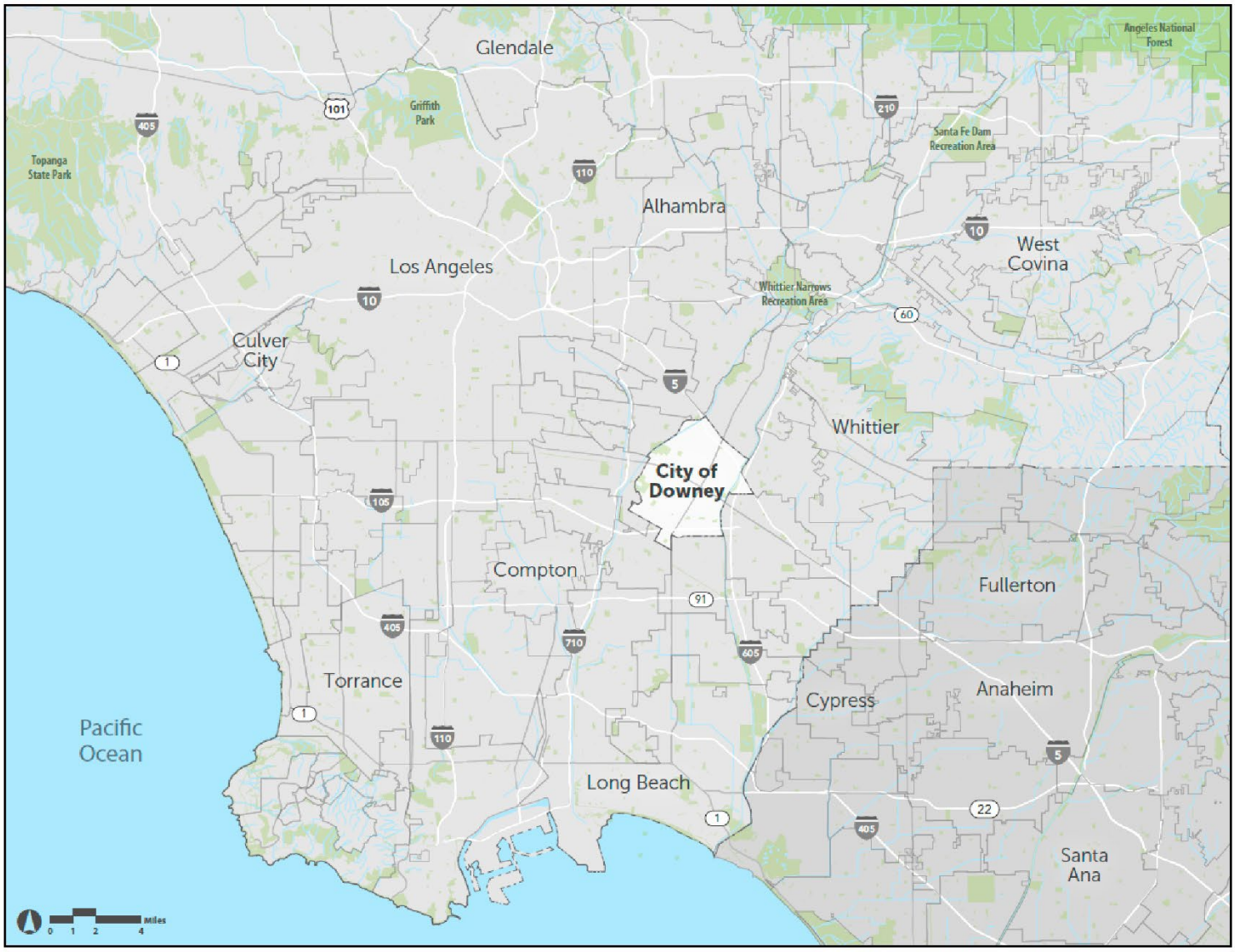


Exhibit 3.1 Regional Context Map

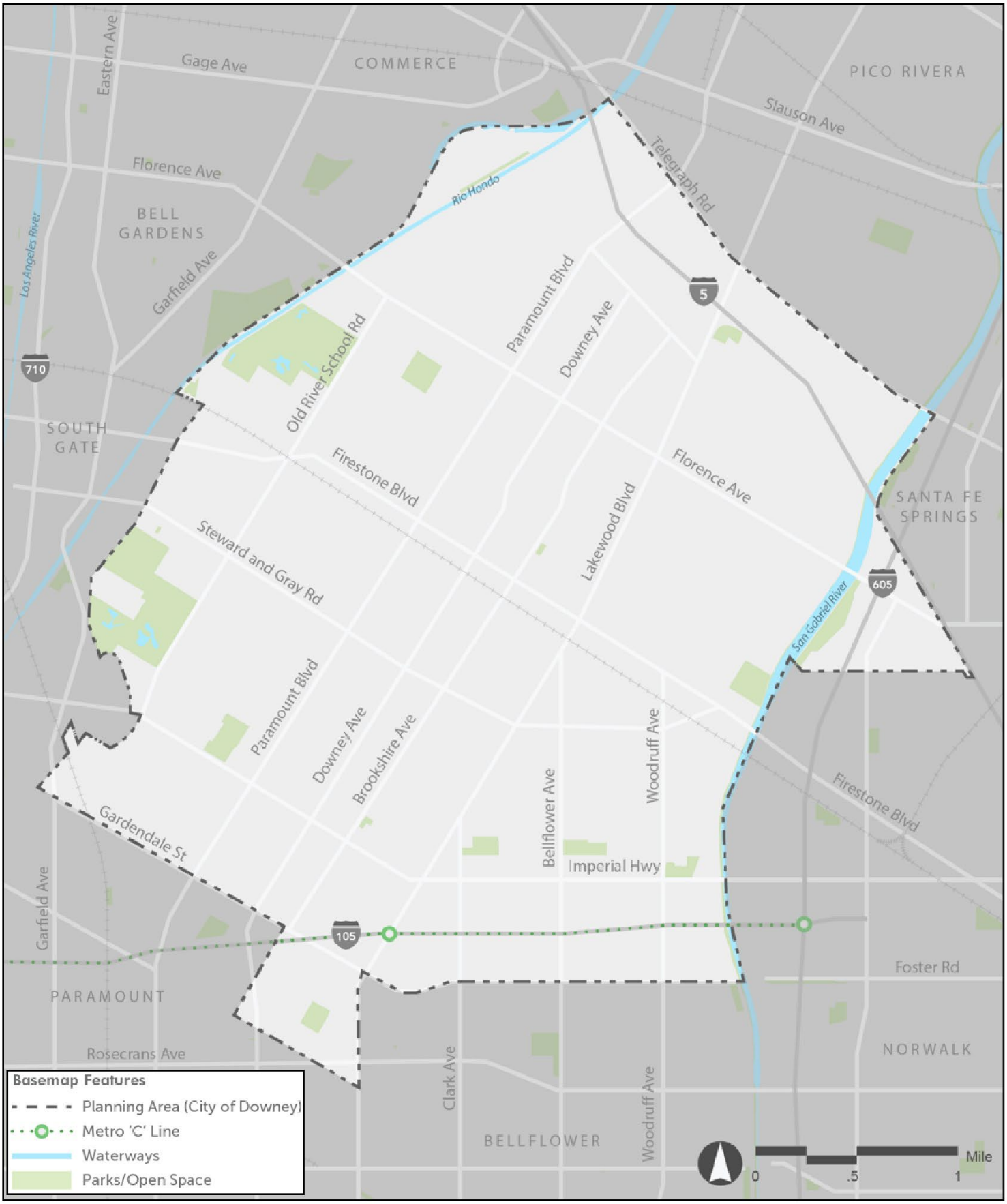


Exhibit 3.2 Planning Area Map

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Downey 2045 General Plan Update and Zoning Text and Map Amendment
Downey, California

3.3 – EXISTING CONDITIONS

Environmental Setting

The City is generally bounded by the Rio Hondo River channel to the west, Telegraph Road to the north, the San Gabriel River channel to the east, and Gardendale Street and Foster Road to the south. Most of the City was developed during the housing boom of the 1950s and 1960s. The City is a largely built-out community with older buildings and very few vacant properties. Since residential uses occupy more than half of the City's land area, Downey is predominately residential in character, while also serving as an important employment, commercial, and civic center within Southeast Los Angeles County. The City also accommodates other land uses such as open space, mixed use, and manufacturing areas. Residential uses are located throughout the City but predominantly concentrated in the northern, eastern, and western portions of the City. Commercial uses are distributed throughout the community, while manufacturing uses are primarily concentrated in the southeastern portion of the City.

According to the State Department of Finance (E-5 City/County Population and Housing Estimates, 1/1/2026), the estimated population of the City at the end of 2025 was 111,326, a 2.2% decrease from the population of 114,355 from the 2020 Decennial Census (DOF, 2026). The State Department of Finance also estimates that the City's housing stock consists of 37,160 housing units, most of which are single-family detached and attached units (22,732). There are 13,503 units in buildings with two or more units, and 354 mobile homes. The Planning Area's urban development is part of the Los Angeles-Long Beach-Anaheim urban area, a densely developed territory with an area of 1,634 square miles and a population of approximately 13 million and encompass residential, commercial, and other non-residential urban land uses of the Los Angeles Basin and adjoining urbanized valleys (US Census, 2025).

The Planning Area is located in the Los Angeles Basin, a coastal alluvial plain nestled between the Santa Monica Mountains, the Pacific Ocean, the Elysian, Repetto, and Puente Hills and the Santa Ana Mountains and San Joaquin Hills (DOI, 1965). Geologically, it occupies the Central Block area of the Los Angeles Basin adjacent to the Newport-Inglewood Fault System. Runoff from the Santa Monica and San Gabriel Mountains to the north is the primary source of the Los Angeles River which recharges the aquifers of the Central Groundwater Basin.

The Planning Area is straddled by the Rio Hondo River on the northwest and the San Gabriel River on the southeast. The portion of the Rio Hondo River that runs along the City's northwest border is completely channelized with concrete. The portion of the San Gabriel River that runs along the City's southeast border is channelized with concrete generally south of Firestone Boulevard and is a soft-bottom channel generally north of Firestone Boulevard to north of Telegraph Road. The Rio Hondo River feeds into the Los Angeles River just west of Downey in the City of South Gate before discharging into the Pacific Ocean at the Port of Long Beach. The San Gabriel River discharges into the Pacific Ocean at Seal Beach.

The storm drain system in Downey, which is maintained by the Utilities Division of the City's Public Works Department, funnels stormwater through a network of mains and catch basins until it is eventually discharged into the Pacific Ocean via the Los Angeles and San Gabriel Rivers.

High concentrations of impervious surfaces in intensive urban areas, like Downey and surrounding vicinities, have contributed to poor water quality from polluted stormwater runoff. Common urban runoff pollutants include sediment, nutrients, pesticides, metals, oil and grease, and pathogens. Consistent with the findings for the Los Angeles County Watershed Management

Program, stormwater runoff from surrounding urbanized areas contributes to impaired water quality in the Los Angeles River and its tributaries.

The entire Planning Area falls within a mapped liquefaction hazard zone. Liquefaction zones are areas where soils may experience the loss of strength and stiffness due to ground shaking, shallow groundwater conditions, and poorly consolidated soils. During an earthquake, the soils can temporarily behave like liquid, causing previously solid ground to become unstable and potentially resulting in settlement or other forms of ground failure.

Existing Land Use (2025)

Downey is a mature and largely built-out community characterized by established neighborhoods, commercial districts, employment centers, civic institutions, and community gathering places. Residential neighborhoods form the foundation of the City and are connected by a network of streets and corridors that provide access to schools, parks, shopping areas, employment centers, and community services. Major commercial destinations, including Stonewood Center, Downey Landing, and Downtown Downey, serve as important retail, entertainment, and civic hubs, while business districts along Florence Avenue, Paramount Boulevard, and Imperial Highway support a diverse mix of commercial and service uses. Industrial areas concentrated in the southeastern portion of the City continue to provide employment opportunities and contribute to the City's economic base. Together, these neighborhoods, corridors, and activity centers create the physical and social framework that defines Downey's character.

Exhibit 3.3 illustrates existing land use patterns within the City as of 2025. Downey's development pattern reflects decades of growth and investment, with residential neighborhoods, commercial centers, industrial districts, schools, parks, and public facilities distributed throughout the community. Historical development decisions have shaped the City's urban form, including its predominantly grid-based street network and the location of major activity centers and transportation corridors. Regional transit access was enhanced with the opening of the Metro C Line (formerly Green Line) station at Lakewood Boulevard and Interstate 105 in 1995.

Existing land use describes the current physical development pattern of the City and may differ from zoning designations, which regulate future development potential. Excluding transportation and utility rights-of-way, Downey contains approximately 5,966 acres distributed among roughly 22,400 parcels. Residential uses occupy the largest share of developed land, accounting for approximately 3,764 acres, or about 63 percent of the City's land area. Single-family detached neighborhoods comprise the majority of residential development, with approximately 3,059 acres devoted to detached homes and an additional 242 acres of attached housing. Multifamily residential uses occupy approximately 463 acres and are generally concentrated along major corridors and near commercial centers.

Residential densities vary throughout the City. Lower-density single-family neighborhoods predominate in the northern, western, and southern portions of Downey and generally range from one to nine dwelling units per acre. Higher-density residential development is located throughout the City, particularly in areas bounded by Florence Avenue, Downey Avenue, Firestone Boulevard, and Paramount Boulevard, as well as along major transportation corridors. These areas typically range from 10 to 24 dwelling units per acre and provide a variety of housing choices for residents.

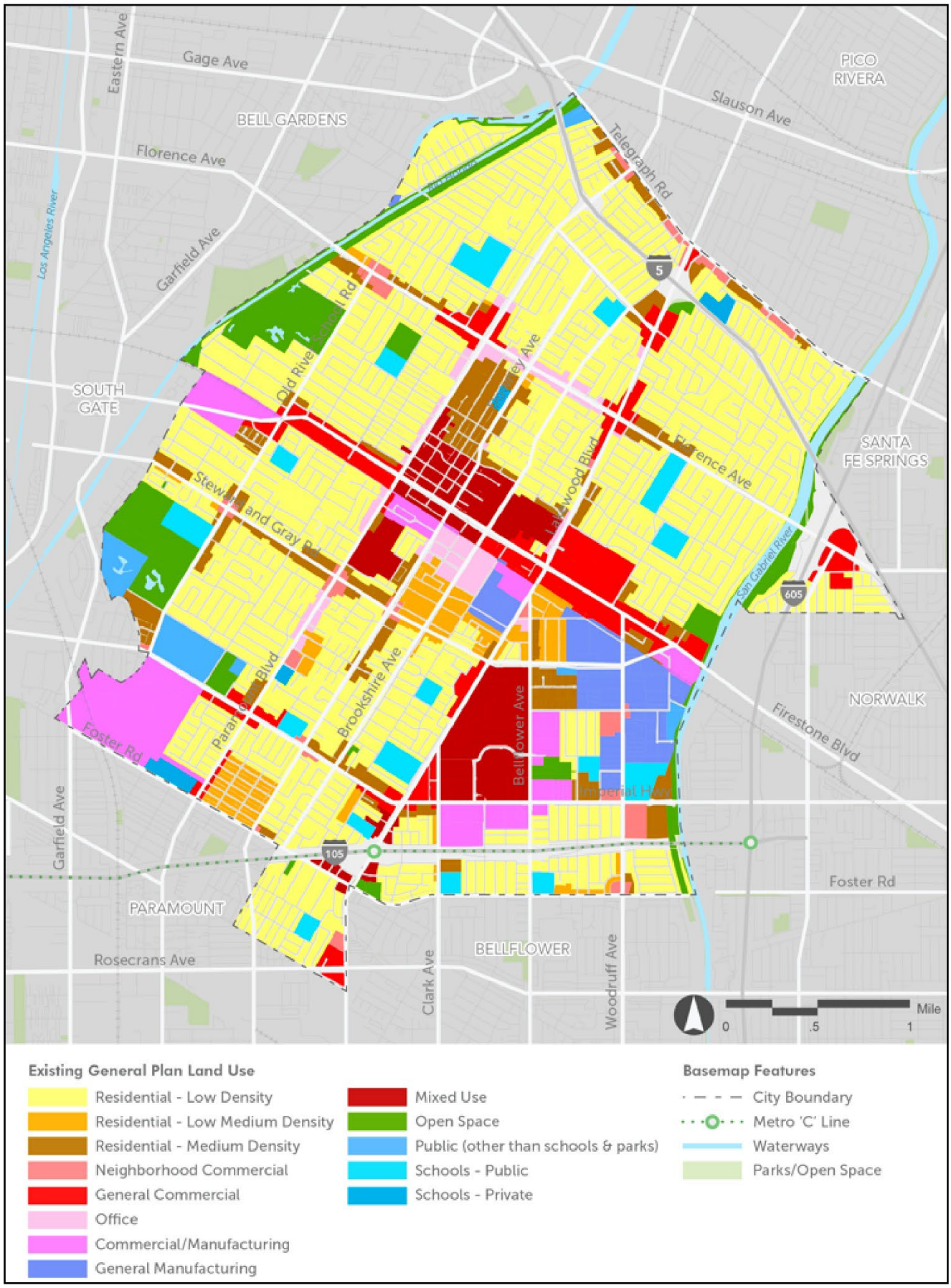


Exhibit 3.3 Existing General Plan Land Use Map (2005)

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Downey, California

Commercial uses, including retail, restaurants, entertainment, and service businesses, occupy approximately 733 acres, while office and professional service uses account for an additional 140 acres. Industrial uses comprise approximately 217 acres and are concentrated primarily in the southeastern portion of the City. Public and institutional uses, including schools, hospitals, civic facilities, and parks, represent a significant component of the City's land use pattern, reflecting Downey's role as a regional center for education, healthcare, and public services. Notable institutional uses include the Rancho Los Amigos National Rehabilitation Center and campuses of the Downey Unified School District located throughout the community.

The City's existing land use inventory is summarized in Table 3.1. As of the end of 2025, Downey contained an estimated 37,160 dwelling units and a population of approximately 111,326 residents within the Planning Area.

Table 3.1: Existing Land Use Development Estimates (2025)

Existing Land Uses (2025)		Net Acres	Established Density	Established FAR	Percent of Total	Dwelling Units [A]	Population [A]	Non-Residential Building Square Feet [B]	Employees [C]
Residential Uses	Single Units - Detached	3059.1	6.8		49.0%	20,801	64,102	-	-
	Single Units - Attached	241.8	6.9		3.9%	1,680	5,972	-	-
	Single Units - SB9 Duplexes	N/A				19	65	-	-
	Accessory Dwelling Units	N/A				813			
	Multiple Units/Mobile Home	462.9	29.9		6.9%	13,847	41,187	-	-
Commercial & Industrial Uses	Retail/Service Commercial	733.2		0.41	10.5%	-	-	13,093,300	12,927
	Hotel	N/A		-				657 rooms	729
	Professional Services (Office)	140.3		0.53	2.2%	-	-	3,226,500	8,528
	Industrial	217.1		0.42	3.5%	-	-	3,954,000	4,242
Public Facilities & Institutional Uses	Public Facilities	234.1		0.12	3.7%	-	-	1,266,400	3,131
	Schools (Education)	408.9		0.27	6.5%	-	-	4,744,900	5,141
	Hospital & Medical (Health Care)	98.8		0.83	1.6%	-	-	3,576,700	9,301
Open Space & Recreation Uses	Parks and Recreation	112.9			1.8%	-	-	49,300	
	Open Space	10.2			0.2%	-	-	-	
	Golf Courses	247.7			4.0%	-	-	174,000	50
	Rivers and Channels (Waterbodies)	83.4			1.3%	-	-	-	
	Other (Cemetery)	8.4			0.1%	-	-	7,000	-
Transportation & Utilities	Transportation/Utilities (Right of Way, Detention Basins, etc.)	114.0			1.8%	-	-	575,400	654
Other	Other, Vacant	73.3			1.2%	-	-	-	-
	Total	**6,245.9**			**98%**	**37,160**	**111,326**	**30,667,500**	**44,703**

Sources: A) California Department of Finance, Demographic Research Unit, May 5, 2025.

B) UrbanFootprint (now LightBox) sources its existing land use data primarily from CoreLogic's parcel and assessor database, which provides detailed property information such as land use codes, ownership, and building characteristics. LightBox integrates this CoreLogic data with zoning, general plan, and land cover datasets to classify each parcel into standardized land use categories. This combined approach allows for consistent, parcel-level land use mapping across jurisdictions, forming a reliable baseline for build-out and planning analyses.

C) Esri Business Analyst employment data is derived from Esri's demographic and economic databases, which integrate information from sources such as the U.S. Census Bureau, American Community Survey (ACS), and the Bureau of Labor Statistics (BLS), along with commercial data from Infogroup. Esri models and allocates employment estimates to specific geographic areas—such as census tracts or block groups—using business listings, workplace addresses, and industry classifications (NAICS codes). This provides a consistent, spatially refined snapshot of employment by industry sector for use in economic and land use analyses.

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Existing General Plan

The currently adopted *Downey Vision 2025* General Plan is organized into nine elements, which present an integrated and internally consistent set of goals, policies, and implementation measures:

- Land Use Element (adopted 2005)
- Circulation Element (adopted 2005)
- Housing Element (adopted 2022)
- Conservation Element (adopted 2005)
- Safety Element (adopted 2005)
- Noise Element (adopted 2005)
- Open Space Element (adopted 2005)
- Design Element (adopted 2005)
- Economic Development Element (adopted 2005)

Table 3.2, Existing General Plan Land Use Designations (2005), gives a general description of each designation along with allowable uses and Exhibit 3.4, Existing General Plan Land Use Map (2005), shows the 12 land use designations of the current General Plan.

Table 3.2: Existing General Plan Land Use Designations (2005)			
Land Use Designation	**Description**	**Acres Total**	**% of Total**
Low Density Residential	The Low Density Residential designation allows typically for detached single-family residential units at densities of 1 to 8.9 housing units per acre, or roughly equivalent to a maximum of one housing unit for a standard 5,000 square foot lot. Based on an average household size of 3.17, the projected population will not exceed 28 persons for each acre in this designation. The corresponding zone for this designation is R-1, Single-Family Residential Zone, which includes several variations based on lot size, such as R-1 5000, R-1 6000, R-1 7500, R-1 8500, and R-1 10,000. The zoning also permits accessory living quarters on properties that are not considered separate dwelling units.	3,168.7	50.7%
Low/Medium Density Residential	The Low/Medium Density Residential designation allows for a range of housing types that involve densities at 9 to 17 housing units per acre, or roughly equivalent to two housing units for each standard 5,000 square foot lot. The housing types consistent with the designation range from two detached units on the same property to attached units (duplex), either placed side by side (in a townhouse floor plan form) or stacked with one on top of another. In certain instances, other housing types such as planned unit developments and second unit developments may be permitted provided that the overall density is not exceeded. Based on an average household size of 3.17, the projected population is 29 to 53 persons for each acre. The corresponding zone for this designation is R-2, Two-Family Residential Zone.	190.6	3.1%
Medium Density Residential	The Medium Density Residential designation allows for a range of housing types that involve densities at 18 to 24 housing units per acre, or roughly equivalent to three housing units for each standard 6,000 square foot lot. The housing types consistent with the designation range from three or more attached (or detached) units on the same property (triplex) to larger apartments to townhouse design condominium to low-rise condominiums, provided that the overall density is not exceeded. Certain nonresidential land uses, such as churches, are considered consistent within this designation. Based on an average household size of 3.17, the projected population is 57 to 76 persons for each acre. The corresponding zone for this designation is R-3, Multiple-Family Residential Zone.	430.1	6.9%
Office	The Office designation allows for professional and medical office uses. The corresponding zone for this designation is C-P, Professional Office Zone. In the vicinity of the PIH Health Downey Hospital (formerly	116.1	1.9%

Table 3.2: Existing General Plan Land Use Designations (2005)			
Land Use Designation	**Description**	**Acres Total**	**% of Total**
	Downey Regional Medical Center) where medical offices and other medical related uses are promoted, the corresponding zone for this designation is H-M, Hospital-Medical Arts Zone. The intensity of the Office designation should fall within a range of floor area ratio (FAR) between 0.5:1 and 5:1.		
Neighborhood Commercial	The Neighborhood Commercial designation allows for commercial uses that generally draws from a customer base from the immediate surrounding neighborhood and not from areas outside the city or region. Consistent with this intent, uses are typically small in scale in terms of floor area size, building height, and operational activities. Examples include grocery stores, dry cleaners, barber shops, bakeries, and convenience markets. Uses are intended to serve adjacent neighborhoods and are intended to be located in "neighborhood nodes" such as properties adjacent to street intersections. The intensity of the Neighborhood Commercial designation should not exceed a FAR of 0.25:1. The corresponding zone for this designation is C-1, Neighborhood Commercial Zone.	91.5	1.5%
General Commercial	The General Commercial designation allows for a full range of commercial uses including shopping centers, automobile dealerships, hotels, offices, and automobile repair. In contrast to the Neighborhood Commercial designation, the General Commercial designation accommodates a broader range of uses that may be larger in scale and serve customers throughout the City and surrounding region, rather than primarily the immediate neighborhood. Since uses consistent with the General Commercial designation are typically more intense, the General Commercial designations are appropriate in areas with larger lot sizes which afford greater buffers to adjacent land uses. The intensity of the General Commercial designation should fall within a range of FAR between 0.25:1 and 4:1. The corresponding zone for this designation is C-2, General Commercial Zone.	366.9	5.9%
Commercial Manufacturing	The Commercial Manufacturing designation is intended to provide greater flexibility for providing land uses that generate employment such as shopping centers, major offices, and light industrial. The intensity of the Commercial Manufacturing designation is within a range of FAR between 0.5:1 and 0.6:1. The corresponding zone for this designation is C-M, Commercial Manufacturing Zone.	380.6	6.1%
General Manufacturing	The General Manufacturing designation is intended for manufacturing, wholesaling, and other industrial land uses.	224.8	3.6%

Table 3.2: Existing General Plan Land Use Designations (2005)			
Land Use Designation	**Description**	**Acres Total**	**% of Total**
	Since uses consistent with the General Manufacturing designation have potential for creating traffic, noise, odor, vibration and other impacts, areas designated Manufacturing should be separated from other land uses by a major natural or physical barrier and screen. The intensity of the Manufacturing designation should not exceed a FAR of 0.6:1. The corresponding zone for this designation is M-1, Light Manufacturing Zone and M-2, General Manufacturing Zone.		
Public	Public uses comprise approximately 8.2% of the total land area. Public and Quasi-public facilities include parks, power line easements, flood control facilities, religious institutions, and similar uses. This designation includes publicly owned lands and properties of quasi-public institutions containing existing or proposed support uses for local, community-wide, or regional support facilities. The corresponding zone for this designation is P, Public Zone.	106.2	1.7%
Open Space	The Open Space designation is intended for areas that provide recreational opportunities, environmental resources, and relief from the urban environment. This designation includes the 106 acres of public parks in the city. The open space designation also includes areas that are utility easements, riverbeds, parks, cemetery and golf courses. The corresponding zone for this designation is O-S, Open Space Zone.	512.9	8.2%
Schools - Public	The School designation is intended for public schools offering K through 12 instruction. The corresponding zone for this designation is P, Public Zone.	227.8	3.69%
Schools - Private	The Private School designation is intended for locating private-operated schools offering education comparable to the K through 12 instruction offered by public schools. Three such areas have been designated by the Land Use Diagram: St. Matthias, St. Raymond, and Our Lady of Perpetual Help. The corresponding zone for this designation is the P, Public Zone.	34.1	0.5%
Mixed Use	The Mixed Use designation integrates residential, commercial, office, and other compatible uses within the same area or building to create vibrant, walkable places, and increase access to transit facilities. The corresponding zone for this designation is M-U, Mixed-Use Zone.	399.2	6.4%
	Total	**6,249.5**	**100%**

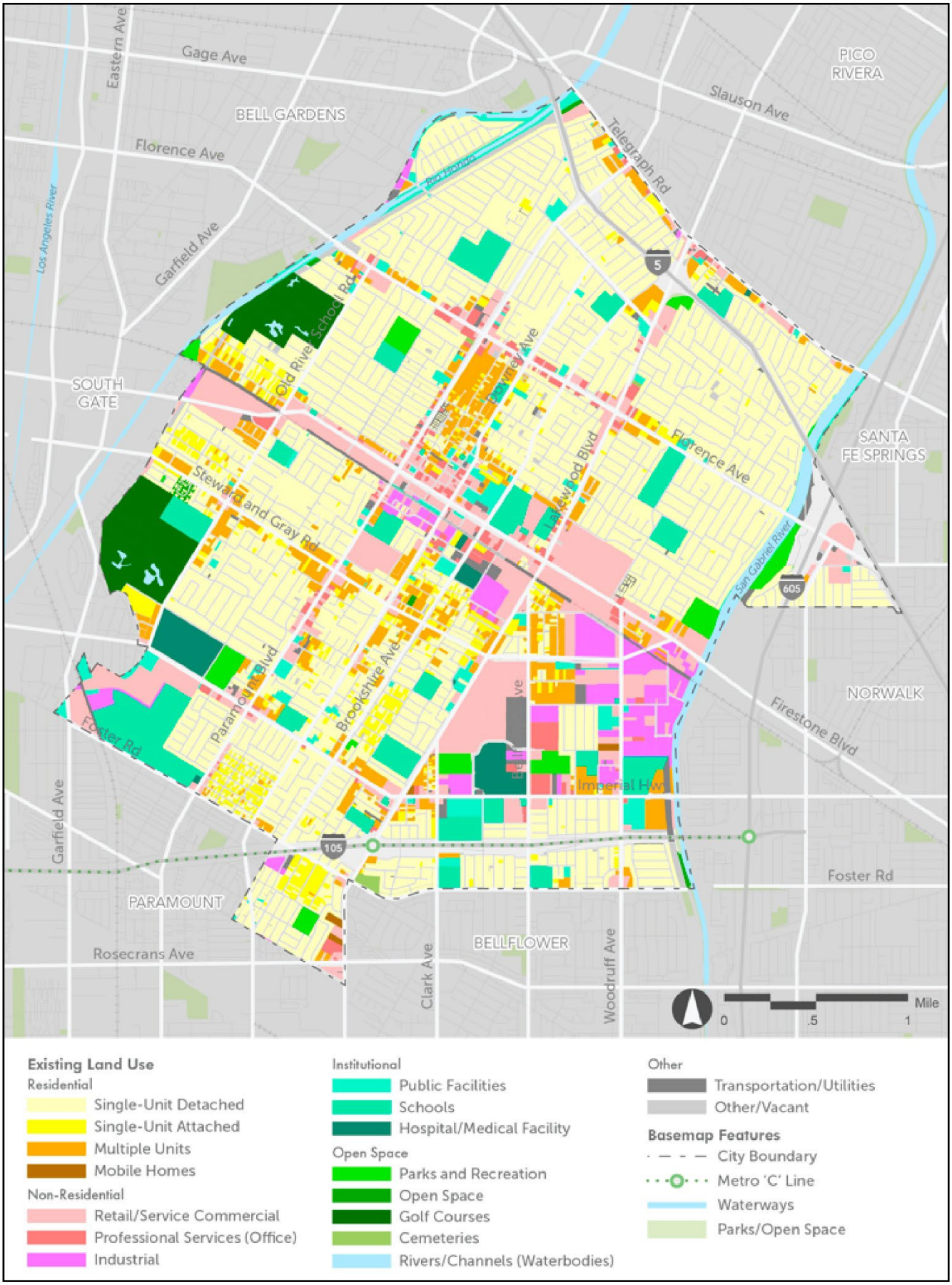


Exhibit 3.4 Existing Land Use (2025)

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3.4 – PROJECT OBJECTIVES

The updated General Plan serves as the blueprint for the City's future growth and development. The overall role of the General Plan is to:

- Define a vision for of what the City desires to be in 20 years.
- Express policy direction in regard to the physical, social, economic, cultural and environmental character of the City.
- Serve as a comprehensive guide for making decisions about land use, circulation, environmental management, parks and recreation, housing, noise, public health and safety.
- Provide the legal foundation for zoning, subdivision and public facilities ordinances, other adopted Citywide plans, compliance with the CEQA decisions and projects, all of which must be consistent with the General Plan.
- Present a clear and easy to understand format that encourages public participation and understanding.

As such, the General Plan must contain goals, policies, and programs that will provide City staff and discretionary bodies with a foundation for decisions on development projects and long-range planning related to physical development and public services. The General Plan Update establishes the following Guiding Principles as objectives for the long-term growth and enhancement of the community:

1. **Honor the Past, Shape the Future.** Celebrate Downey's heritage by preserving historic places and community traditions, while guiding thoughtful growth that respects the City's character and embraces progress.
2. **Grow Smart to Support Neighborhoods.** Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they're needed most.
3. **Build a Strong, Flexible Economy.** Support a diverse economic base that fosters business growth, revitalizes commercial areas, and promotes long-term prosperity.
4. **Offer Housing for Everyone.** Support a diverse range of housing opportunities that meet the needs of residents of all income levels while maintaining sufficient housing capacity to support future needs and long-term compliance with State housing law.
5. **Plan for Safe, Practical, Connected Travel.** Address the most urgent travel needs, expand alternatives to driving, and plan for a growing, connected community.
6. **Promote Safety and Peaceful Environments.** Enhance lighting, visibility, and public safety presence while reducing noise impacts so the community is secure and comfortable for all users.
7. **Protect Resources and Prepare for the Future.** Plan with climate, conservation, environmental health, and emergency preparedness in mind.
8. **Manage and Invest in Community Resources.** Manage water and natural resources while investing in and supporting parks, recreation, and community programs that enhance quality of life for all residents.

9. **A Healthier Downey for Everyone.** Reduce pollution burdens, expand access to healthy living resources, and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.
10. **Design for Quality and Lasting Identity.** Promote high-quality architecture, attractive streetscapes, and well-designed public spaces that reinforce community character, enhance the visual environment, and ensure new development contributes positively to established neighborhood identity and long-term vitality.
11. **Foster Trust and Connection.** Prioritize meaningful community engagement to strengthen relationships, build transparency, and create an informed, involved community.

In addition to the project objectives cited in the Guiding Principles, the City has the objective to identify and designate sufficient residential and mixed-use residential opportunity sites throughout the City to provide a robust housing capacity beyond the 6th Cycle Regional Housing Needs Assessment (RHNA), thereby maximizing implementation flexibility, accounting for uncertainties in site redevelopment and market conditions, supporting housing production across all income levels, and maintaining long-term compliance with State housing law.

3.5 – PROJECT CHARACTERISTICS/GENERAL PLAN UPDATE

The General Plan Update is intended to achieve the land use, transportation, housing, and other goals of the City that reflect the community's growth over the long term.

General Plan Elements

The General Plan Update incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The analyses provided in the EIR consider each of the elements' goals, policies, and objectives of the following chapters in the proposed General Plan. These goals, objectives, and policies are intended to maintain various potential environmental effects of the project at levels that are less than significant and are considered when evaluating the potential environmental impacts of implementing the General Plan. The Housing Element was updated for the 6th cycle in 2022 and planned developments identified in the Land Use Element accommodate the Regional Housing Needs Assessment goal of 6,525 housing units. The 2045 General Plan elements are organized as follows:

1. **Land Use Element.** Guides how land is used and developed to support a balanced mix of housing, jobs, and community amenities.
2. **Circulation Element.** Plans for safe and efficient movement of people and goods via streets, transit, walking, and biking.
3. **Conservation Element.** Promotes the responsible use and protection of natural resources, including water, energy, and air quality.
4. **Environmental Justice Element.** State law requires General Plans to address the fair distribution of community benefits and reduce environmental burdens on all people, regardless of income, race, or ethnicity. Downey's Environmental Justice Element aims to prevent disproportionate impacts on vulnerable communities and promote a more inclusive, healthy, and equitable city.

5. **Safety Element.** Reduces risks from natural and human-made hazards such as earthquakes, flooding, and climate impacts.
6. **Noise Element.** Minimizes the impact of noise on residents, schools, and sensitive uses through planning and design.
7. **Open Space Element.** Protects and enhances parks, recreational areas, and natural spaces for public enjoyment and ecological health.
8. **Housing Element.** Addresses current and future housing needs through policies that support housing production, affordability, and equity. The Housing Element was adopted in 2022 and will not be updated as part of this effort.
9. **Design and Cultural Resources Element.** Encourages high-quality architecture, public spaces, and streetscapes that contribute to a vibrant and welcoming city.
10. **Economic Development Element.** Supports a diverse, resilient economy by attracting investment, expanding job opportunities, and strengthening local businesses.

Proposed Land Use Plan

The Land Use Plan envisions a city that protects what's special about Downey while planning thoughtfully for future change. It promotes complete neighborhoods with diverse housing options, vibrant mixed-use centers and corridors that bring homes, shops, and services closer together, and dynamic employment areas that support local businesses and job growth. These places are connected by safe, accessible streets, public spaces, and civic destinations that strengthen Downey's identity and sense of community. Together, these elements form a land use pattern that supports a thriving economy, housing choice, and enduring community character.

The 2045 General Plan would establish 14 land use designations, two of which would be new designations. The new set of designations (shown in Table 3.3) clearly distinguish the land uses allowed and set forth maximum development density and intensity standards.

For industrial, commercial, and mixed land uses, the designations provide opportunities for distinguishing the level of intensity allowed or desired by adding additional designations. For example, in place of a single commercial or two industrial designations, the 2045 General Plan distinguishes between neighborhood- and community-serving commercial, light or more intense industrial, and mixed-use designations that vary in intensity based on location.

Table 3.3: Downey General Plan Update (2045) Land Use Designations			
Proposed Land Use Categories	**Residential Density**	**FAR: Non-Residential Intensity**	**Purpose**
Low Density Residential (LDR)	1.0 - 8.9 du/ac	NA	To maintain and enhance the character of established suburban neighborhoods with a mix of single-family detached and attached housing. These neighborhoods are primarily composed of single-family detached homes, complemented by attached housing types such as duplexes, triplexes, and townhomes designed in house-form buildings. On select corner parcels, small neighborhood-serving businesses may be permitted to provide daily goods, services, and community gathering spaces.
Medium Density Residential (MDR)	9.0 - 17.0 du/ac	NA	To support the preservation and enhancement of suburban neighborhood character while allowing a broader mix of housing options in areas suited for higher density or where single-family neighborhoods are gradually transitioning. These areas consist primarily of single-unit detached homes and lower-scale multi-unit housing, such as duplexes and small-lot subdivisions. Limited, context-sensitive neighborhood commercial uses may be permitted in select locations—either as stand-alone buildings or as part of mixed-use projects—to provide daily goods, services, and community gathering spaces. New development should reflect established patterns, densities, and scale, with clustered housing encouraged to create common open space and recreational amenities.
High Density Residential (HDR)	18 - 24 du/ac	NA	To provide for multifamily neighborhoods of higher density, typically located adjacent to existing moderate- or higher-density areas. It supports accommodating a broader range of housing choices, reinforcing or transitioning existing development patterns, densities, and scale, and ensuring compatibility with surrounding neighborhoods. Neighborhoods in this designation are generally defined by two- to three-story multi-unit residential buildings, with taller structures allowed where contextually appropriate. Developments should include private and common open space as well as shared or private parking facilities.

Table 3.3: Downey General Plan Update (2045) Land Use Designations			
Proposed Land Use Categories	**Residential Density**	**FAR: Non-Residential Intensity**	**Purpose**
			High-quality design is essential, with on-site active or passive recreation areas and resident amenities required.
Housing Element Residential Overlay 1 (HOU-1)	18 - 40 du/ac	N/A	To allow for higher-density housing on sites identified in the Housing Element, accommodating multifamily development of an urban residential character on key locations within the city. Land uses typically consist of two- to four-story multi-unit residential buildings, with greater building heights permitted where contextually appropriate. High-quality design is essential, ensuring that higher-density living is balanced with open space, community services, and a strong sense of place. Developments must include both private and common areas, shared or private parking facilities, and internal active or passive recreation spaces with resident amenities.
Neighborhood Commercial	N/A	Up to 0.75	To provide for commercial spaces that serve the daily needs of nearby residents. Land uses include low-impact convenience shopping and services such as retail, restaurants, and personal or professional services, with an emphasis on locally serving businesses that are compatible with adjacent neighborhoods. Development should enhance walkability through active frontages and safe pedestrian connections. Uses that may negatively affect residential areas are discouraged; uses should minimize impacts on nearby residential areas with respect to lighting, signage, traffic, odor, noise, and hours of operation.
General Commercial	N/A	0.75	To provide for more intense regional- and local-serving commercial uses and office uses in a pedestrian-oriented, transit ready environment. Land uses include a wide range of commercial businesses serving both local and regional markets, such as retail, services, professional offices, restaurants, entertainment, and hospitality. Flexibility is encouraged to respond to evolving consumer demands but uses should minimize impacts on nearby residential areas with respect to lighting, signage, traffic, odor, noise, and hours of operation. Development should emphasize pedestrian-oriented design and connectivity, including safe

Table 3.3: Downey General Plan Update (2045) Land Use Designations			
Proposed Land Use Categories	**Residential Density**	**FAR: Non-Residential Intensity**	**Purpose**
			access to public transportation, walkable site layouts, and active frontages that foster social interaction and support local businesses. Along major corridors, commercial projects should balance automobile access with the safety and comfort of pedestrians and cyclists. Auto-dependent uses may be permitted where appropriately designed, but auto repair and sales should be limited at highly visible corridor locations.
Office	N/A	1.0 – 2.0	To accommodate professional and administrative activities, including offices for businesses, financial institutions, and service providers. Land uses typically consist of small- to medium-scale office buildings, business centers, and related facilities. Development should support a productive work environment while remaining compatible with nearby residential and commercial areas through thoughtful site design, adequate parking, and convenient transportation access. In locations near major health care facilities, office uses should incorporate pedestrian connections that link employees and visitors to nearby businesses and amenities.
Mixed Use	30-50 du/ac	1.0-4.0	To support a mixed-use setting with compatible residential, office, and commercial uses that meet both neighborhood and community needs in an active, higher-intensity, pedestrian-oriented, and transit-ready environment. It promotes revitalization and intensification of prominent commercial nodes, corridors, and properties, along with the development of higher-density housing. Land uses feature a balanced mix of residential, commercial, and office spaces, integrated either horizontally or vertically. Development may include medium- to high-density housing, along with small- to moderate-scale neighborhood and community-serving commercial uses, as stand-alone projects or within mixed-use buildings. Design should prioritize walkability and transit access through pedestrian-friendly layouts, connections to public transportation, and active frontages that foster social interaction and support local businesses. Auto-related uses should be limited to preserve a pedestrian- and transit-oriented environment. Effective site and building

Table 3.3: Downey General Plan Update (2045) Land Use Designations			
Proposed Land Use Categories	**Residential Density**	**FAR: Non-Residential Intensity**	**Purpose**
			design is essential to integrate different uses while minimizing potential conflicts related to privacy, noise, or parking.
Housing Element Residential Overlay 2 (HOU-2)	30.0 du/ac (intensity varies by base designation)	N/A	Allows for mixed-use and higher-density housing on sites identified in the Housing Element, as well as on additional parcels strategically included to create cohesive nodes. It promotes reinvestment and redevelopment along major commercial corridors while expanding opportunities for new housing. Land uses feature a diverse mix of businesses, workplaces, and homes that coexist in a coordinated, urban setting. The overlay applies to non-industrial and non–single-family (R-1) zoned properties in key areas along Firestone Boulevard, Paramount Boulevard, Telegraph Road, Lakewood Boulevard, Florence Avenue, and Imperial Highway. Properties with demonstrated redevelopment interest in other areas may also be considered. This mix of uses maximizes land efficiency, supports neighborhood vitality, and balances the energy of an urban environment with the comfort of residential living. High-quality design is essential. Projects should provide both private and common areas, shared or private parking facilities, and on-site active or passive recreation spaces and amenities.
Light Industrial (LI)	N/A	0.5 - 2.0	To allow for low-impact manufacturing and industrial activities that support local businesses while minimizing environmental and visual impacts. Land uses typically include light industrial operations such as assembly, distribution, and service uses, with an emphasis on compatibility with surrounding areas. Supporting and complementary commercial retail and service uses are also permitted. Development should be designed to fit the scale and character of nearby uses, with careful site layouts, building design, and screening of loading and truck parking areas to reduce noise and other potential impacts. This designation prioritizes employment-intensive uses that contribute to local economic growth and long-term community stability.
Industrial (I)	N/A	0.5 - 2.0	To allow for industrial uses, including manufacturing and other labor- and capital-intensive activities. Land uses include a broad range of industrial, manufacturing, logistics, and outdoor storage

Table 3.3: Downey General Plan Update (2045) Land Use Designations			
Proposed Land Use Categories	**Residential Density**	**FAR: Non-Residential Intensity**	**Purpose**
			activities, typically occurring in large buildings on larger sites. Supporting or complementary commercial retail and service uses are also permitted. Development should be compatible with surrounding areas through appropriate scale, site layout, and building design. Where industrial areas adjoin residential or other sensitive uses, creative site planning and buffers such as landscaped setbacks, green space, or sound barriers should be used to mitigate noise, traffic, and air quality impacts. Well-designed industrial areas should also enhance the work environment by incorporating green spaces, pedestrian connections, and access to public transportation. Sustainable practices, including energy-efficient systems and modern waste management, are strongly encouraged to reduce environmental impacts. This designation prioritizes employment-intensive uses that strengthen the local economy and promote long-term community stability.
Public/Institutional (PI)	N/A	0.25 - 1.0	Applies to government-owned facilities and quasi-public uses, including spaces managed by private entities for public benefit. Land uses include public and quasi-public facilities such as schools, libraries, fire and police stations, religious institutions, community centers, utilities and infrastructure, major drainage facilities, and government service buildings. If the public or semi-public function of a designated site ends, alternative community-serving uses may be permitted, provided they are compatible with surrounding development and consistent with zoning regulations. Standard parking requirements generally apply to new development; however, reduced parking may be considered to encourage the retention of community resources or to promote transit use. Development should be accessible, sustainable, inclusive, and adaptable to serve a variety of community needs. Building intensity varies by use, but all development should be compatible with surrounding areas in scale, site layout, and design.

Table 3.3: Downey General Plan Update (2045) Land Use Designations			
Proposed Land Use Categories	**Residential Density**	**FAR: Non-Residential Intensity**	**Purpose**
Parks and Open Space (P/OS)	N/A	Building intensity varies by use	Preserves areas for active recreation accessible to all members of the public. Land uses include facilities and spaces dedicated to recreational, natural, and community activities. These range from natural open space to improved areas with recreation fields and courts, playgrounds, community buildings, gardens, and golf courses. Facilities should be accessible, sustainable, inclusive, and adaptable to meet diverse community needs. Permitted uses are limited to active and passive recreation and should enhance community well-being while promoting outdoor engagement. Building intensity varies by use, but all development should be compatible with surrounding areas in scale, site layout, and design.
Specific Plan (SP)	N/A	Density and intensity standards are specified within each plan	Contain precise guidance for land development, and infrastructure for a smaller area and must be consistent with the General Plan. In Downey there are six active Specific Plans. Detailed policy and/or regulatory requirements are contained within each Specific Plan.

Table 3.4 compares existing and projected 2045 land use and demographic information for the City of Downey. Exhibit 3.5, Proposed General Plan Land Use Map, illustrates the 2045 General Plan land use plan. Table 3.5 provides a detailed breakdown of the 2045 land use development estimates for the GPU. The 2045 planning horizon for the Planning Area is estimated to result in increases of approximately 10,350 dwelling units and 2.6 million square feet of non-residential space. An estimated increase of approximately 31,483 residents and 6,649 jobs is projected for the 2045 horizon year.

Table 3.4: General Plan Update: Comparison of 2025 and 2045						
			Existing Conditions (Base Line) - 2025	Future Conditions (Build Out) - 2045	Change	
					Number	Percent
Residential (Housing and Population)	**Dwelling Units**	Single Family	22,500	22,572	72	**0.3%**
		Accessory	813	2,888	2,075	**255.2%**
		Multi-Family	13,847	22,050	8,203	**59.2%**
	Total	**Dwelling Units**	**37,160**	**47,510**	**10,350**	**27.9%**
		Population	**111,326**	**142,809**	**31,483**	**28.3%**
Non-Residential (Building Square Feet and Employees)	Commercial	Building Sq. Ft.	13,093,300	14,265,913	1,172,613	**9.0%**
		Employees	12,927	15,942	3,015	**23.3%**
	Hotels	Rooms	657	957	300	**45.7%**
		Employees	729	1,179	450	**61.8%**
	Office	Building Sq. Ft.	3,226,500	3,692,564	466,064	**14.4%**
		Employees	8,528	9,606	1,078	**12.6%**
	Medical	Building Sq. Ft.	3,576,700	3,673,000	96,300	**2.7%**
		Employees	9,301	9,524	223	**2.4%**
	Industrial	Building Sq. Ft.	3,954,000	4,489,700	535,700	**13.5%**
		Employees	4,242	5,553	1,310	**30.9%**
	Public Facilities	Building Sq. Ft.	6,817,000	7,241,250	**424,250**	**6.2%**
		Employees	8,976	9,548	572	**6.4%**
	Total	**Building Sq. Ft.**	**30,667,500**	**33,362,427**	**2,694,927**	**8.8%**
		Employees	**44,702**	**51,351**	**6,649**	**14.9%**

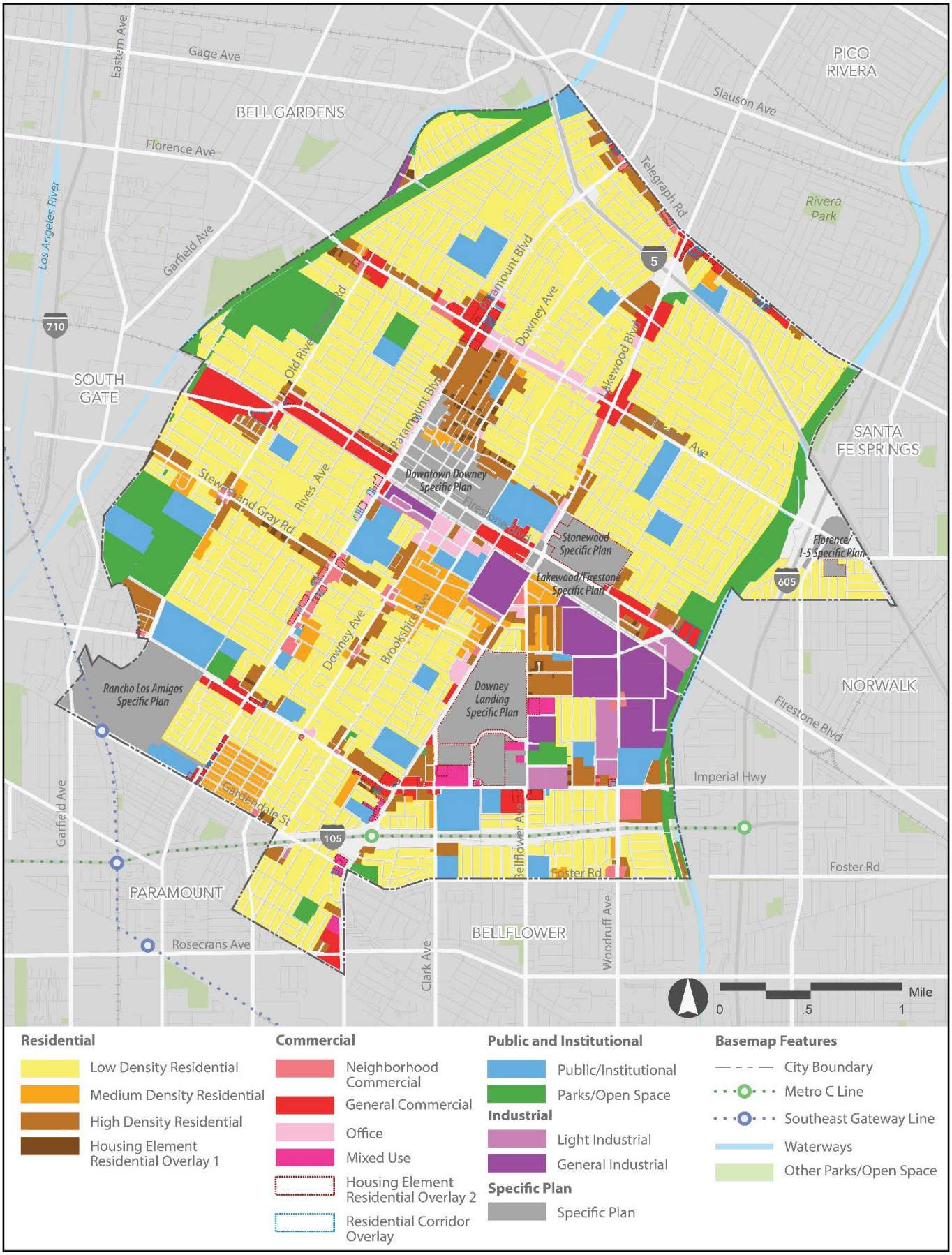


Exhibit 3.5 Proposed General Plan Land Use Map

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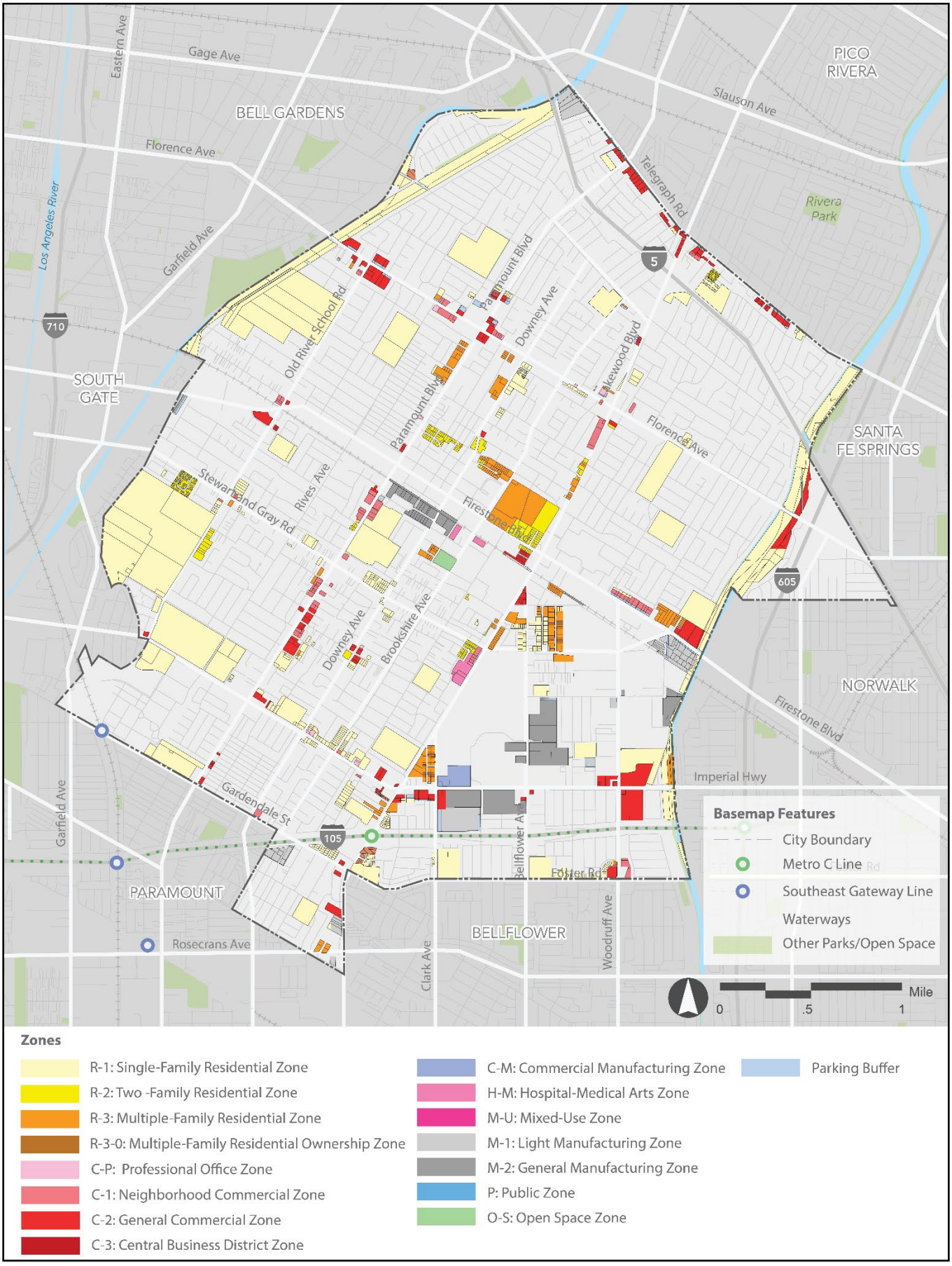
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Downey 2045 General Plan Update and Zoning Text and Map Amendment
Downey, California

Zoning Text and Map Amendment

The General Plan Update includes amendments to the Zoning Map to maintain consistency between the General Plan Land Use Map and, in some instances, existing development patterns throughout the City. Proposed changes include revisions to zoning district boundaries, correction of existing inconsistencies and mapping errors, and expansion of the Housing Overlay Zones in selected areas with creation of a new Residential Corridor Overlay. These amendments are intended to ensure that zoning regulations accurately reflect the land use framework established by the General Plan Update and provide a clear basis for future development and implementation. The current zoning for the parcels that would undergo the proposed zone change are shown in Exhibit 3.6, while changes associated with the proposed zoning district amendments are shown in Exhibit 3.7, and the Housing Overlay Zones are shown in Exhibit 3.8. These amendments are limited to updates to the Zoning Map and do not include substantive changes to the text of the Zoning Code.

Overall, the proposed Zoning Map amendments affect approximately 1,640 parcels encompassing about 1,950 acres throughout the city. The majority of these amendments are consistency updates that align existing zoning with the General Plan Land Use Map rather than introducing new development opportunities. The largest changes involve the Public (P) and Open Space (O-S) zones, totaling approximately 570 acres and 532 acres, respectively, and primarily reflect existing parks, schools, public facilities, and open space corridors along the San Gabriel River and Rio Hondo River. Additional amendments update residential, commercial, mixed-use, manufacturing, and other zoning districts to correct mapping inconsistencies and ensure the Zoning Map accurately reflects existing land uses, public ownership, and the General Plan land use framework.



Zones

- R-1: Single-Family Residential Zone
- R-2: Two -Family Residential Zone
- R-3: Multiple-Family Residential Zone
- R-3-0: Multiple-Family Residential Ownership Zone
- C-P: Professional Office Zone
- C-1: Neighborhood Commercial Zone
- C-2: General Commercial Zone
- C-3: Central Business District Zone
- C-M: Commercial Manufacturing Zone
- H-M: Hospital-Medical Arts Zone
- M-U: Mixed-Use Zone
- M-1: Light Manufacturing Zone
- M-2: General Manufacturing Zone
- P: Public Zone
- O-S: Open Space Zone
- Parking Buffer

Exhibit 3.6 Current Zoning of Proposed Zone Change

Downey 2045 General Plan Update and Zoning Text and Map Amendment
Downey, California

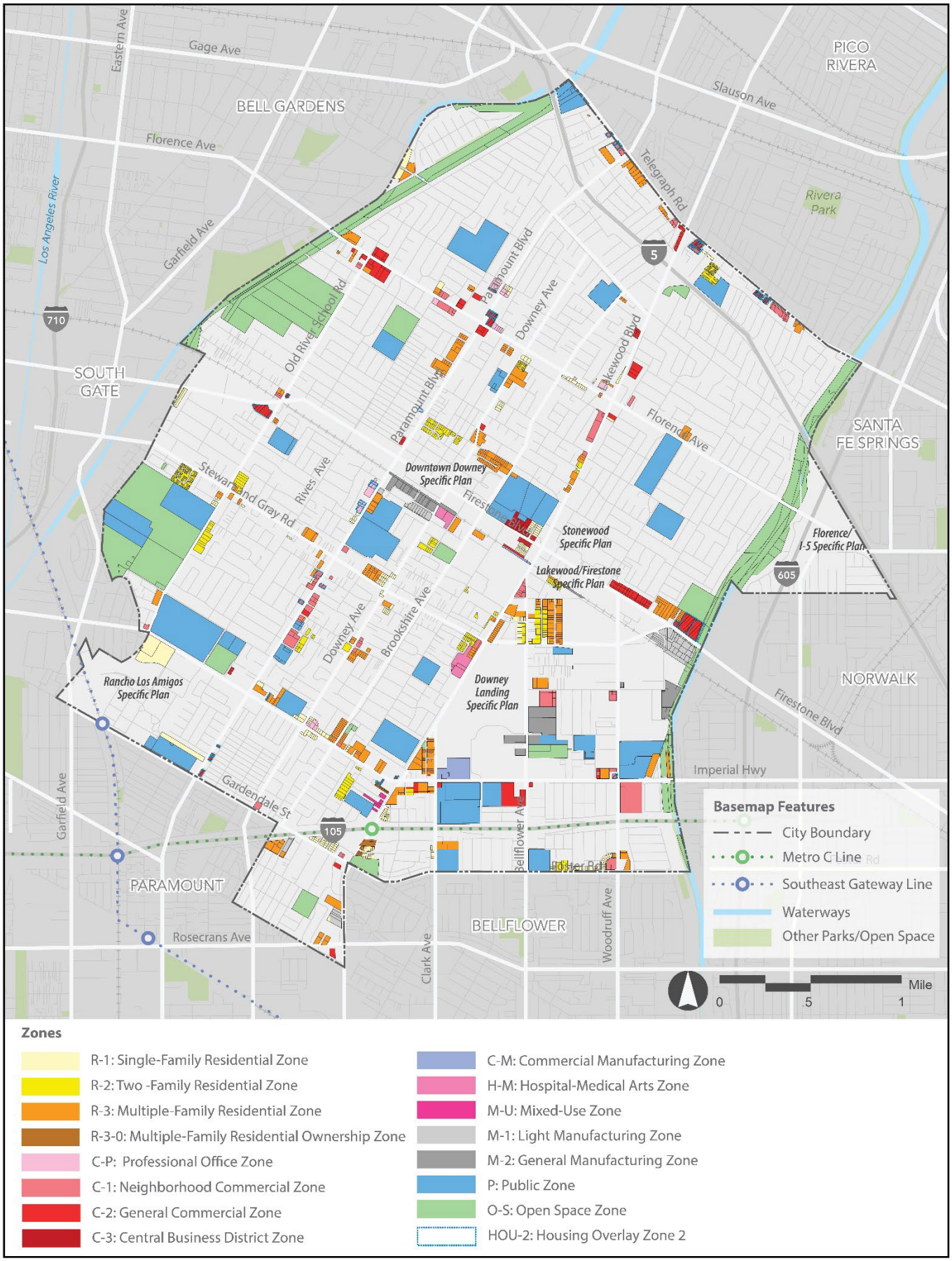
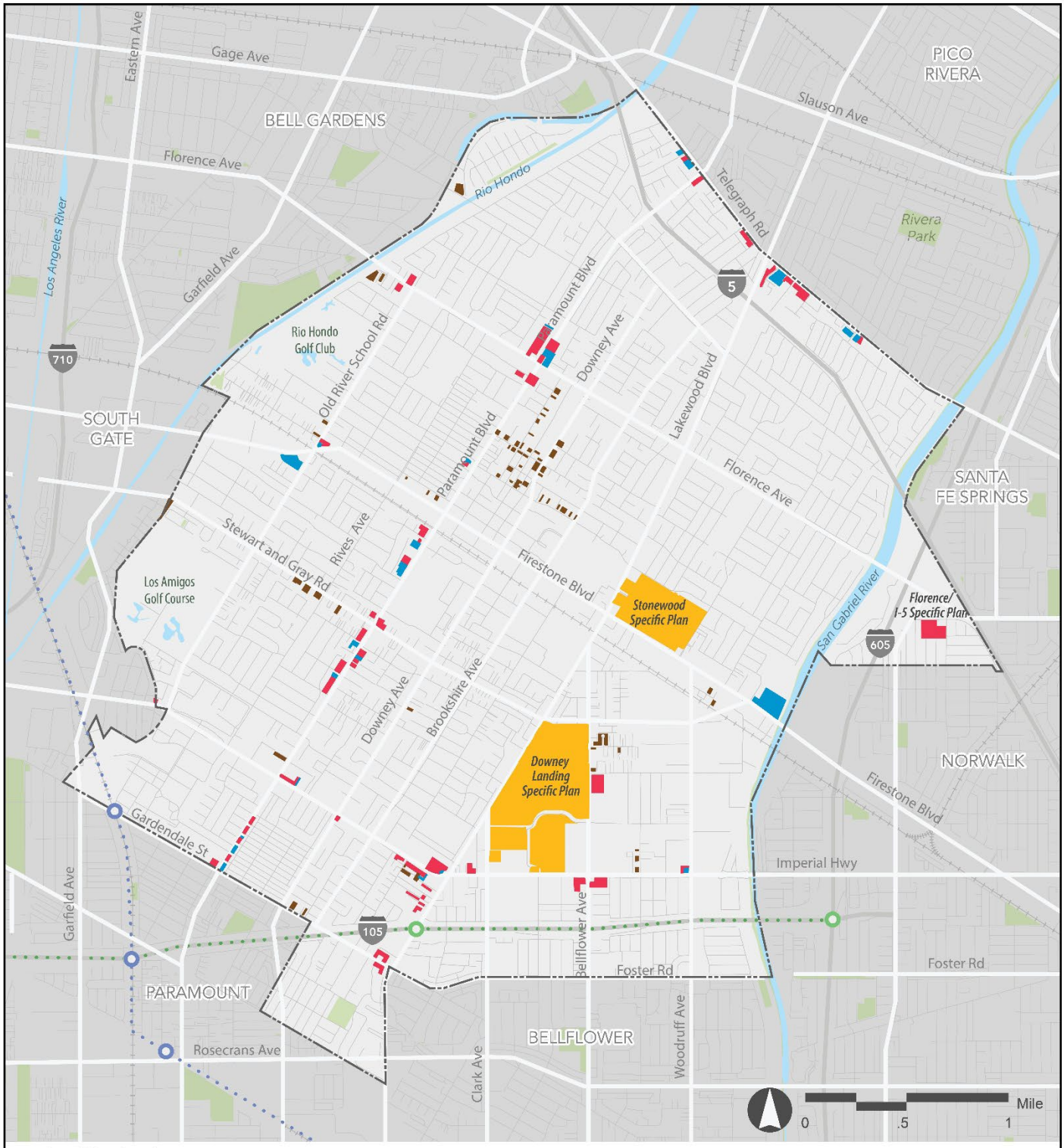


Exhibit 3.7 Proposed Zone Change Map

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Land Use Overlays

- Housing Element Residential Overlay 1
- Housing Element Residential Overlay 2
- Residential Corridor Overlay

Specific Plans

- Specific Plan with Housing Element Residential Overlay 2

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Exhibit 3.8 Housing Overlays

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Downey 2045 General Plan Update and Zoning Text and Map Amendment
Downey, California

Table 3.5: General Plan Update (2045) Land Use Development Estimates

General Plan Land Use (2045)		Acres	Residential Land Use Units								Non-Residential Land Use Building Square Footage and Employees													
			Single-Family		Accessory		Multi-Family		**Total**		Commercial		Office		Hotels		Medical		Industrial		Public		**Total**	
			Units	Pop	Units	Pop	Units	Pop	**Units**	**Pop**	Sq. Ft	Emp	Sq. Ft	Emp	Rms.	Emp	Sq. Ft	Emp	Sq. Ft	Emp	Sq. Ft	Emp	**Sq. Ft**	**Emp**
Residential	Low Density Residential (1-8.9 du/ac) + SB 9	3,122.6	20,232	67,499	2,357	4,796			22,589	72,295														
	Medium Density Residential (9-17.0 du/ac)	222.5	2,215	7,390	168	342	2,972	9,915	5,355	17,647														
	High Density Residential (18-24 du/ac)	379.3			345	702	11,440	31,327	11,785	32,030														
	Housing Element Residential Overlay 1 (18-40 du/ac)	23.8			18	37	2,364	6,553	2,382	6,590														
Commercial and Mixed Use	Neighborhood Commercial (0.25 FAR)	72.6								-	2,055,600	2,220											2,055,600	2,220
	General Commercial (0.25-4.00 FAR)	280.4								-	8,672,100	9,366			807	954							8,672,100	10,320
	Office (0.50-5.00 FAR)	82.1								-			2,859,700	7,078			3,673,000	9,917					6,532,700	16,995
	Mixed Use (24-50 du/ac; 4.00 FAR)	39.6					231	586	231	586	862,500	932	215,600	534									1,078,100	1,465
	Housing Element Residential Overlay 2 (30 du/ac)	51.5					1,200	3,142	1,200	3,142														
	Residential Corridor Overlay (30 du/ac)	26.5					618	1,620	618	1,620														
Industrial	Light Industrial (0.6 FAR)	81.2																	898,600	1,096			898,600	1,096
	Industrial (0.60 FAR)	245.4																	3,208,100	3,914			3,208,100	3,914
Public	Public and Institutional	492.0																			6,331,100	8,547	6,331,100	8,547
Open Space	Parks and Open Space	533.8																						-
Specific Plan	SP - Downey Landing	165.7					851	2,261	851	2,261	435,713	940	212,464	551	150	225							648,177	1,716
	SP - Downtown Downey	97.3	125	332			800	2,125	925	2,457	972,700	1,101	291,800	757					194,500	275	486,400	535	1,945,400	2,668
	SP - Firestone/I-5	26.6					-	-	-	-	28,300												28,300	-
	SP - Lakewood/Firestone	36.5						-	-	-													-	-
	SP - Rancho Los Amigos South Campus	174.9					700	1,860	700	1,860	310,000	351	113,000	293				-	188,500	267	423,750	466	1,035,250	1,377
	SP - Stonewood	62.6					874	2,322	874	2,322	929,000	1,033											929,000	1,033
Right-of-Way	Right-of-Way (e.g., Streets, Sidewalks)	29.0																						-
Total		**6,245.9**	**22,572**	**75,221**	**2,888**	**5,877**	**22,050**	**61,711**	**47,510**	**142,809**	**14,265,913**	**15,942**	**3,692,564**	**9,212**	**957**	**1,179**	**3,673,000**	**9,917**	**4,489,700**	**5,553**	**7,241,250**	**9,548**	**33,362,427**	**51,351**

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3.6 – INTENDED USE OF THIS EIR

The programmatic planning framework proposed in the General Plan Update would not result in the immediate construction of any new development nor entitlement of any new project. All new development within the City would continue to be subject to the City's permitting, approval, and public participation processes. City staff would review subsequent project applications for consistency with the General Plan, applicable Specific Plans, and the Zoning Ordinance, and would prepare appropriate environmental documentation to comply with CEQA and other applicable environmental requirements.

Pursuant to Section 15168 of the State CEQA Guidelines, this EIR is a Program EIR as it relates to the General Plan Update. The goals, policies, land use designations, implementation programs, and other substantive components of the General Plan comprise the "program" evaluated in this Program EIR. Consistent with CEQA, this Program EIR is intended to serve as the basis for environmental review of future projects that implement the General Plan Update. Where appropriate, subsequent projects may tier from this Program EIR pursuant to CEQA Guidelines Sections 15152 and 15168 and Public Resources Code Section 21093, allowing later environmental review to focus on project-specific effects and any new significant environmental impacts not previously addressed. Subsequent activities undertaken by the City and project proponents to implement the General Plan will be examined and consider this Program EIR to determine the appropriate level of environmental review required under CEQA. Subsequent implementation activities may include but are not limited to the items listed below.

- Rezoning properties to achieve consistency with the General Plan
- Updating and approval of Specific Plans and other development plans and planning documents
- Review and approval of general plan amendments, specific plans, and zone changes
- Approval of annexations, tentative maps, variances, conditional use permits, street vacations, and other land use permits and entitlements
- Approval of development agreements
- Approval of facility and service master plans and financing plans
- Approval and funding of public improvement projects
- Issuance of permits and other approvals needed for implementation of the General Plan.
- Issuance of permits and other approvals needed for public works and private development projects

As the Lead Agency, the City also intends this EIR to serve as the CEQA-required environmental documentation for consideration by other Responsible Agencies and Trustee Agencies that may have limited discretionary authority over future projects affected by the General Plan. Following certification of this Program EIR and adoption of the General Plan by the lead agency (City of Downey), other agencies may use this Program EIR in the approval of subsequent implementation activities. These agencies may include but are not limited to those listed below.

Regional and State Agencies

- Los Angeles County Local Agency Formation Commission (LAFCO)
- Los Angeles County Flood Control and Water Conservation District
- Los Angeles County Metropolitan Transportation Authority
- Los Angeles County Sanitation Districts
- Southern California Association of Governments (SCAG)
- California Department of Fish and Wildlife

- California Department of Conservation
- California Department of Housing and Community Development (HCD)
- California Department of Transportation (Caltrans)
- California Department of Toxic Substance Control
- Regional Water Quality Control Board, Los Angeles Region
- South Coast Air Quality Management District

Federal Agencies

- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Services
- U.S. Army Corps of Engineers
- Federal Highway Administration
- Federal Aviation Administration

4.19.5 – REFERENCES

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4.1 – AESTHETICS

This EIR chapter addresses potential project impacts related to adverse effects on scenic vistas, damage to scenic resources, and degradation of the visual character or quality of the Planning Area. Also analyzed are the potential impacts related to substantial light and glare from the project.

4.1.1 – ENVIRONMENTAL SETTING

The City of Downey is located in southern Los Angeles County, approximately 8.5 miles southeast of Downtown Los Angeles, and approximately 10.4 miles north of the Ports of Los Angeles and Long Beach. The City is encircled by multiple freeways that provide access to neighboring cities. Downey is also straddled by the Rio Hondo River on the northwest and the San Gabriel River on the southeast. The portion of the Rio Hondo River that runs along the City's northwest border is completely channelized with cement. The portion of the San Gabriel River that runs along the City's southeast border is completely channelized with cement generally south of Firestone Boulevard and is a soft-bottom channel generally north of Firestone Boulevard. The Planning Area is relatively flat with elevations ranging from 81 feet above mean sea level (AMSL) in the southwest portion of the Planning Area to 140 AMSL in the northeastern portion of the Planning Area. There are no pronounced hillsides within the Planning Area. The Puente Hills are located approximately 5.5 miles east-northeast; the Rancho Palos Verdes hills are located approximately 15 miles to the southwest; the Santa Monica Mountains are located approximately 14 miles to the northwest; and the San Gabriel Mountains are located approximately 15 miles to the northeast.

Scenic Vistas

Typical scenic vistas include views of mountains and hills, large, uninterrupted open spaces, and water bodies. Scenic vistas generally play a large role in the way a community defines itself and also affects development patterns as projects are designed to take advantage of viewsheds. The Downey General Plan does not define scenic vistas or identify any scenic vistas within the City or within view of the City (Downey, 2005). Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks the view of the vista. Second, the vista itself may be altered (i.e., development on a scenic hillside).

The Puente Hills are visible to the northeast, the Rancho Palos Verdes hills to the southwest, and the Santa Monica and San Gabriel Mountains to the northwest and north, respectively. These mountain ranges and hills can be seen from many locations within the Planning Area. However, these views are partially obstructed by existing development, trees, and other urban features.

Scenic Resources

While scenic vistas form a complete viewshed, scenic resources are occurrences of aesthetically pleasing natural features such as rock outcroppings, trees, prominent ridgelines, slopes, and hilltops. Scenic resources can also be man-made, such as architecturally distinctive or historic buildings, historic points of interest, or historic roadways or highways. The Planning Area does not have any examples of natural scenic resources such as rock outcroppings, trees, prominent ridgelines, slopes, or hilltops. In addition, the Planning Area is not located within or in close proximity to a designated state scenic highway. The nearest designated State scenic highway,

State Route/Angeles Crest Highway, is located approximately 18 miles north of the City in the San Gabriel Mountains (Caltrans, 2025).

The Planning Area includes many architecturally distinctive or historic buildings and historic points of interest. These historical resources reflect the Downey community's cultural heritage, representing the achievements, struggles, and values of past community members. They provide a tangible link to the past and help us understand and appreciate our shared history and culture.

One method to document historical resources is through resource designation given by the State of California or the federal government to places and structures that have historical significance. California Historical Landmarks (CHLs) are buildings, sites, or places that have played an important role in the history of California and are recognized as such by the state. California Points of Historical Interest (Points of Interest) are buildings, sites, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value. The California Register of Historical Resources (California Register) includes buildings, sites, structures, objects and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. The National Register of Historic Places (National Register) includes buildings, structures, objects, sites, and districts of local, state, or national significance in American history, architecture, archeology, engineering, and culture.

Currently, there are eight resources in the City of Downey that are designated historical resources, including two resources that are listed in the National Register of Historic Places and six resources that are listed in the California Register of Historical Resources (Downey, 2025).[i] Properties that are listed in the National Register are also automatically listed in the California Register. The two resources listed in the National Register include:

- 7749 Florence Avenue (Casa de Parley Johnson – listed 1986, 1S)
- 10921 Paramount Boulevard (James C. Rives House – listed 1978, 1S)

The six resources listed in the California Register include:

- 10207 Lakewood Boulevard (McDonald's Drive-in Restaurant and Sign – listed 1984, 2S)
- 7447 Firestone Boulevard (Johnie's Broiler, Harvey's Broiler, Bob's Big Boy Broiler – listed 2008, 2S2)
- 12214 Lakewood Boulevard (Building 125, NASA Industrial Plant; Building 126, Hazardous Materials Storage; Building 127, Mechanical Testing Laboratory; Building 120; NASA Industrial Plant; Building 10, NASA Industrial Plant; Building 25, NASA Industrial Plant; Building 42, Maintenance Center and Garage; Building 1, NASA Industrial Plant; Building 130, Ultra-high Temperature Facility; Building 39, Materials Conservation Building; Building 41, NASA Industrial Plant; Building 290, NASA Industrial Plant; Building 11, NASA Industrial Park; Building 11, NASA Industrial Plant; Building 108, NASA Industrial Plant; Building 26, NASA Industrial Plant, Pump House; Building 6, NASA

[i] Information regarding designated resources was obtained from the California Built Environment Resource Directory (BERD), a database maintained by the California Office of Historic Preservation. Note that resources listed in the National Register or formally determined eligible for listing in the National Register are automatically listed in the California Register.

Industrial Plant; Building 228, NASA Industrial Plant; Building 123, NASA Industrial Plant; Building 128; Propellent Test Laboratory – listed 1999, 2S2)

- 7601 Imperial Highway (Rancho Los Amigos Medical Center Computer Center– listed 1996, 2S2)
- Rancho Los Amigos Historic District (south campus of Rancho Los Amigos – listed 1996, 2S2)
- 9140 Brookshire Avenue (Downey Park Apartments - 2S2)

Visual Character

Downey is a completely urbanized area containing very little vacant land and almost no natural open space. Single-unit residential uses dominate most of the land use within the City, followed by commercial, institutional, and industrial land uses. Single-unit residential land uses are distributed citywide. Industrial uses are concentrated in the southern and western portions of the Planning Area, as well as along major corridors. Institutional land uses (i.e., schools, utilities, municipal facilities) exist throughout the City. Commercial land uses are primarily located along the major corridors. Residential development varies in density, with higher densities occurring in pockets throughout the City and single-family development located throughout.

Generally, the age of buildings in Downey tends to be older, with only a few areas featuring construction from 1991 to the present. Many structures in Downey were constructed between 1941 and 1950, with some buildings built between 1921 and 1930, and some dating as far back as 1869 and 1920. In certain areas of Downey, there are concentrations of buildings constructed between 1951 and 1980. More than half of the residences in Downey were built between 1940 and 1959, with less than one percent constructed after 2009.

Night Skies

The Planning Area is generally built out, with scattered open space and very few undeveloped parcels. Night skies in the Planning Area are dominated by urban and suburban lighting. During the day, sunlight reflecting from roadways and structures is a primary source of glare, while nighttime light and glare consist of both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination.

4.1.2 – REGULATORY FRAMEWORK

State

California Scenic Highway Program

Created by the California Legislature in 1963**,** the Scenic Highway Program was established to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. A scenic highway is designated under this program when a local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. When a city or county nominates an eligible scenic highway for official designation, it defines the scenic corridor, which is land generally adjacent and visible to a motorist

on the highway. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to aesthetics that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

Municipal Code

Chapter IX (Land Use) establishes citywide setbacks, parking, sign standards, building height limits, and building densities that affect public and private views except for specific plans that provide separate design and planning standards for development within the specific plan areas. Section 9520.06 (Outdoor Lighting) of Chapter IX requires that all outdoor lighting be "directed, positioned, and/or shielded as not to direct light on any street or abutting property."

4.1.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it:

A. Has a substantial adverse effect on a scenic vista.
B. Substantially damages scenic resources, including but not limited to trees, rock outcroppings or historic buildings within or in close proximity to a state scenic highway.
C. In non-urbanized areas, substantially degrades 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
D. Creates a new source of substantial light or glare that would adversely affect day or nighttime views in the area.
E. Would cause substantial adverse cumulative impacts with respect to aesthetics.

4.1.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to aesthetics, which could result from the implementation of the project, and recommends mitigation measures as needed to reduce significant impacts.

Scenic Vistas

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

Analysis of Impacts

Scenic vistas can generally be defined as natural landscapes that form views of unique flora, geologic, or other natural features that are generally free from urban intrusions. Such resources can be impacted when a structure is built that blocks the view of the vista, or if a development is built on the vista itself. Typical scenic vistas include views of mountains and hills, large, uninterrupted open spaces, and bodies of water. Scenic vistas generally play a large role in the way a community defines itself and effects development patterns as projects are designed to take advantage of viewsheds.

The Puente Hills are visible to the northeast of the Planning Area, the Rancho Palos Verdes hills are visible to the southwest, and the Santa Monica and San Gabriel Mountains are visible to the northwest and north, respectively. These mountain ranges and hills can be seen from many locations within the Planning Area. However, these views are partially obstructed by existing development, trees, and other urban features. Although such obstructions are usually minimal in nature, they do exist, and they are typical of any type of built/urbanized environment. As the Planning Area continues to develop based on the GPU, existing views in the City would continue to have minimal obstruction. Although the GPU would result in somewhat more intensive and higher density uses, impacts over time, if any, on scenic vistas would be minimal given the considerable distance of the Planning Area to these scenic features and the fact that these views are already affected by the existing built environment of the City and region. Therefore, potential impacts of the GPU with respect to scenic vistas would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Scenic Resources/Scenic Highways

Impact AES-2 - Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within or in close proximity to a state scenic highway?

Analysis of Impacts

The nearest official State-designated scenic highway is SR-2, approximately 18 miles north of the Planning Area in the San Gabriel Mountains. Due to the distance and intervening terrain, development within the City of Downey would not be visible to motorists on SR-2.

The Planning Area does not have any examples of natural scenic resources such as rock outcroppings, trees, prominent ridgelines, slopes, and hilltops. The Planning Area does include many architecturally distinctive or historic buildings and historic points of interest; however, none of these historic buildings and points are visible from a state scenic highway.

As discussed in Section 4.1.4.a above, the City does not have extensive scenic vistas outside of the City, nor are there any designated or eligible scenic highways within or proximate to the City. Various goals and policies of the General Plan Update emphasize expanding and maintaining the City's urban tree canopy as well as protecting and preserving Downey's historic buildings. Policy CR-5.3 emphasizes the preservation and protection of mature, heritage, and significant trees

during development projects to maintain aesthetic value in the City. Goal D-8 seeks to ensure Downey's cultural and historic resources are protected, preserved, and celebrated and Policy D-8.3 applies objective design standards for compatible alterations, additions, and infill development near historic resources. Further, Goal D-9 strives for historic resources that are maintained, rehabilitated, and adapted in ways that retain their significance and support community identity. Therefore, implementation and development of the GPU would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway and potential impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Existing Visual Character

Impact AES-3 - Would the project conflict with applicable zoning and other regulations governing scenic quality?

Analysis of Impacts

The Planning Area is fully urbanized. The lifetime of the General Plan Update is approximately 20 years, with a horizon year of 2045. Temporary impacts to the visual character and quality of the Planning Area could occur during discrete construction activities, although they would be limited and temporary in nature. Typical construction activities would include site preparation, grading, installation of public and private utilities, building construction, application of architectural coatings, paving of surface parking areas, public improvements, installation of landscaping, and roadway improvements.

During future construction activities, implementing development project sites would undergo temporary transformations in visual character. For example, at the onset of construction, structures and asphalt parking lots would be demolished and sites would be graded. During future construction, vacant graded sites would be a temporary visual impact to receptors as the pouring of building foundations and framing of buildings during vertical construction would reintroduce permanent vertical forms to the project site. This characterization would also be temporary until building construction, paving and site landscaping are completed.

Visual changes to site-specific development projects would be experienced gradually and development sites would progressively transition from active construction zones to finished development. Due to the temporary nature of construction, the visual changes anticipated during construction stages of future implementing development projects within the Planning Area would not be permanent and would not substantially degrade its visual character or the visual character of surrounding areas.

Goals and policies of the GPU that emphasize preservation and enhancement of Downey's neighborhoods, corridors, and land use districts include:

- Policy LU-2.1: Neighborhood Preservation. Preserve and enhance single-family neighborhoods by maintaining established character, supporting sensitive land use transitions, and ensuring compatible adjacent development.
- Policy LU-2.2: Neighborhood Compatibility and Design. Ensure new residential development reflects neighborhood context through appropriate height, massing, setbacks, building scale, and site design.
- Policy LU-2.3: Residential Scale and Site Integration. Establish development standards that maintain appropriate relationships between building size and lot size.
- Policy LU-3.5: Quality Design. Require high-quality site design, landscaping, architecture, and property maintenance for commercial development and redevelopment.

Additionally, Goal D-1 and its policies aim to foster Downey's neighborhoods, districts, and corridors with a distinct and recognizable visual and cultural identity that reflects community character. Policy D-1.1 seeks to reinforce neighborhood identity through compatible building scale, landscaping, and architectural features that reflect established development patterns. Lastly, Policy D-1.4 aims to ensure consistency in design themes, streetscape treatments, and architectural character across districts and corridors while allowing localized identity.

For the reasons stated above, implementation and development of the GPU would not degrade the existing visual character or quality of the City. With implementation of GPU goals and policies that emphasize preservation and enhancement of Downey's neighborhoods, corridors, and land use districts, future developments would not substantially degrade the existing visual character or quality of the Planning Area and its surroundings. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Light and Glare

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

Analysis of Impacts

Excessive or inappropriately directed lighting can adversely impact night-time views by reducing the ability to see the night sky and stars. Glare can be caused by unshielded or misdirected lighting sources, or reflective surfaces. Impacts associated with glare range from a simple nuisance to potentially dangerous. Sources of daytime glare are typically concentrated in commercial areas and associated parking areas that contain reflective materials such as hi-efficiency window glass, highly polished surfaces, and expanses of pavement. Existing lighting within the Planning Area is typical for urbanized areas during nighttime hours and includes streetlights, traffic signals, security lighting around businesses and homes, auto headlights, and illuminated business signs. New uses and developments may result in an increase in the number

of lighting sources currently within the Planning Area, although, given that it is already developed, such increases are expected to be minimal in nature.

Implementation of the GPU is not anticipated to result in the introduction of substantial new sources of light and glare to the Planning Area that would affect existing daytime views. While future implementing development project components would include windows and other glass features and may include exterior metallic elements and trims (i.e., exterior staircases associated with parking structures, shade structures for retail developments, residential balcony railings, etc.), these elements would be relatively minor in the overall context of the Planning Area and would be similar to existing architectural elements present in the surrounding area. Further, future projects within the Planning Area would be subject to the lighting and glare restrictions of the City of Downey Municipal Code Section 9520.06 (Outdoor Lighting), which requires that all outdoor lighting be "directed, positioned, and/or shielded as not to direct light on any street or abutting property." With adherence to the City's development requirements and regulations, potential impacts with respect to light and glare in the City as a result of implementation of the GPU would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact AES-5 - Would the project cause substantial adverse cumulative impacts with respect to aesthetics?

Analysis of Impacts

Scenic Vistas. A cumulative impact to scenic vistas would occur if the combined visual changes from future development within the Planning Area resulted in the substantial degradation of quality or obstruction of particularly scenic views available from a recognized scenic vista. Project-specific impacts with respect to scenic vistas were determined to be less than significant. As stated in Section 4.1.1 above, views of the San Gabriel Mountains, Santa Ana Mountains, Puente Hills, and Santa Monica Mountains exist within the Planning Area. However, these existing views are partially obstructed by existing development, trees, and roadway features. Although such obstructions are usually minimal in nature, they do exist, and they are typical of any type of built/urbanized environment. Buildout in the City under the GPU would occur over a period of approximately twenty years and at locations throughout the Planning Area. Since the Planning Area is a completely urbanized area that is already developed, it is unlikely that incremental changes from implementation of the GPU would result in cumulative impacts with respect to scenic vistas. Therefore, potential cumulative impacts of the GPU would be less than significant.

Scenic Highways. There are no scenic highways within, adjacent to, or visible from the Planning Area (i.e., no eligible or officially designated state scenic highways). As such, development within the Planning Area would not result in impacts to scenic resources within a state scenic highway, and the proposed GPU would not contribute to a potential cumulative significant impact to a scenic highway. For these reasons, potential impacts of the GPU would be less than significant.

Degrade Visual Character. Construction and operation of future projects within the Planning Area was determined to result in less than significant impacts to the existing visual character and quality of the Planning Area and surrounding area. Future development projects considered in the cumulative scenario would generally be subject to the City's underlying zoning standards that include regulations pertaining to permitted uses, minimum lot dimensions, and maximum building height. The GPU includes policies that emphasize the use of standards and design guidelines. Future projects within the Planning Area would be subject to the GPU which encourages attractive, high quality development. Future development would not result in significant adverse visual changes such that the existing visual character or quality of project sites and their surroundings would be substantially degraded. Potential cumulative impacts of the GPU would be less than significant.

Light and Glare. Project-related impacts with respect to light and glare were determined to be less than significant. Lighting and building materials associated with cumulative development would be subject to review and approval by the City of Downey. If detailed information regarding proposed lighting and building materials are not known during preparation of necessary environmental documentation for cumulative projects, then the adoption of applicant-proposed measures or mitigation measures would likely be required by the City of Downey to ensure that lighting and glare impacts are less than significant. For these reasons, cumulative light and glare impacts of the GPU would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.1.5 – REFERENCES

California Department of Transportation (Caltrans). 2025. Map of Scenic Highways. Web: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways [Accessed December 2025].

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City of Downey. 2025. *Citywide Historic Context Statement and Reconnaissance Survey Findings*. Prepared by Architectural Resources Group. July 28, 2025.

4.2 – AGRICULTURE AND FORESTRY RESOURCES

This EIR chapter addresses potential project impacts related to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. Project impacts related to conflicts with existing zoning for an agricultural use, or a Williamson Act contract are also addressed. Also analyzed are the potential impacts related to the rezoning of forest land or timberland, or the loss of forest land or conversion of forest land to non-forest use. This chapter also analyzes other changes in the existing environment which could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Lastly this chapter evaluates cumulative projects impacts with respect to agricultural and forest resources.

4.2.1 – ENVIRONMENTAL SETTING

Important Farmland

The California Department of Conservation (DOC) maps all lands in the State considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, Farmlands of Local Importance, or Grazing Lands in their Farmland Mapping and Monitoring Program (FMMP)(DOC, 2025a). According to the DOC's Important Farmland Finder, the entire Planning Area is designated as "not mapped" meaning there is no land in the Planning Area considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, Farmlands of Local Importance or Grazing Lands.

Williamson Act Contracts

According to the California Department of Conservation, Williamson Act reports and statistics, no Williamson Act Land Conservation Contract lands exist in Downey or surrounding areas (DOC, 2025b). Properties in the Planning Area are classified as Non-Enrolled Land or Urban and Built-Up Land.

Forest Resources

Forest land is defined in Public Resources Code Section 12220(g) as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits". The Planning Area is built out and contains mostly ornamental trees, grasses, and shrubs common to most urbanized areas in the region. The Planning Area has no forest land, as defined in Public Resources Code Section 12220(g) (CalFire, 2025).

4.2.2 – REGULATORY FRAMEWORK

State

Farmland Mapping and Monitoring Program

Important farmland maps are compiled by the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP), pursuant to the provisions of Section 65570 of the California Government Code. These maps and programs utilize data from the USDA Natural Resource Conservation Service (NRCS) soil survey and current land use information to monitor conversion of important farmland to other uses. The majority of the Planning Area has been mapped by the California Department of Conservation, although no type of farmland is designated within the Planning Area.

California Land Conservation Act/Williamson Act Contract Program

The California Land Conservation Act of 1965, also known as the Williamson Act, was adopted in 1965. This voluntary program allows local governments to enter into contracts with private landowners for the purpose of having their property assessed on the basis of its agricultural production rather than at the current market value. The property owner is thus relieved of having to pay higher property taxes, resulting from conversion of nearby lands to urban uses as long as the contracted land remains in agricultural or related open space use. The purpose of the Williamson Act is to encourage property owners to continue to farm their land with a tax incentive and to prevent the premature conversion of farmland into non-agriculture use. Participation requires that the area consist of 100 contiguous acres of agricultural land under one or more ownerships.

Upon approval of an application by the Board of Supervisors, the agricultural preserve is established, and the land within the preserve is restricted to agricultural and compatible uses for 10 years. Williamson Act contracts are automatically renewed annually for an additional one-year period unless the property owner applies for non-renewal or early cancellation. The Williamson Act also contains limited provisions for cancellation of contracts. Specific findings regarding the non-viability of the agricultural use must be made, and a substantial penalty for the cancellation is assessed. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the act within their jurisdiction. The City of Downey has no land under the Williamson Act, and there are no Williamson Act Contracts within the Planning Area.

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE enforces the laws that regulate logging on privately-owned lands in California. The Forest Practice Act was enacted in 1973 to ensure that logging is done in a manner that will preserve and protect fish, wildlife, forests, and streams. The State Board of Forestry and Fire Protection enacts and enforces additional rules to protect these resources. CAL FIRE ensures that private landowners abide by these laws when harvesting trees. Although there are specific exemptions in some cases, compliance with the Forest Practice Act and Board rules apply to all commercial harvesting operations for landowners. A Timber Harvesting Plan (THP) is the environmental review document submitted by landowners to CAL FIRE outlining what timber is proposed to be harvested, how it will be harvested, and the steps that will be taken to prevent damage to the environment.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to agriculture and forest resources that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.2.3 – SIGNIFICANCE THRESHOLDS

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land including the Forest and Range Assessment Project. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

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.
B. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
C. Conflict with existing zoning for, or cause rezoning of forest land as defined by Public Resources Code 12220(g), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production as defined by Government Code Section 51104(g).
D. Result in the loss of forest land or conversion of forest land to non-forest use.
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.
F. Cause substantial adverse cumulative impacts with respect to agricultural and forest resources.

4.2.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to Important Farmland, Forestland, and Timberland, which could result from the implementation of the GPU and recommends mitigation measures, as needed, to reduce significant impacts.

Important Farmland

Impact AG-1 - Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Analysis of Impacts

The California Important Farmland Finder prepared by the California Department of Conservation does not identify any portion of the Planning Area as containing any prime farmland, unique farmland, or farmland of Statewide Importance. The Important Farmland Finder identifies the entirety of the Planning Area as being "Urban and Built-Up Land" (DOC, 2025a). Therefore, the proposed GPU would not result in the conversion of any such farmland to a non-agricultural use. The majority of the Planning Area is built-up and urbanized with residential, commercial, and industrial uses, with some open space and parks uses. The Planning Area contains no large-scale commercial agricultural uses.

Additionally, GPU goals and policies support urban agriculture. Policy EJ-3.1 supports development of grocery stores, farmers' markets, community-supported agriculture, and other healthy food outlets near residential areas, prioritizing disadvantaged neighborhoods. Policy EJ-3.7 encourages community gardens, urban agriculture programs, and farm-to-community initiatives to improve access to healthy, locally grown food, and promote resident participation in planning, operation, and decision-making to support food security and community engagement. Therefore, the proposed GPU supports existing and future agricultural uses in the Planning Area. Given that no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance exist within the City and that the GPU includes goals and policies related to urban agriculture, impacts would be less than significant.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

Williamson Act Agricultural Contract

Impact AG-2 - Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Analysis of Impacts

The City's Zoning Code does not include any zoning district specifically intended for agricultural uses; however, agricultural uses are permitted within the Open Space zone. The GPU does not include any development projects. As such, the GPU would not conflict with existing zoning for agricultural use. According to the California Department of Conservation, there are no parcels within the City that have entered into a Williamson Act contract (DOC, 2025b). As there are no Williamson Act contracts located within the Planning Area, the project would not conflict with a Williamson Act contract. Additionally, as previously stated, the proposed GPU includes policies intended to preserve existing and support new urban agricultural uses in the City. For these reasons, development under the GPU would not conflict with existing zoning for agricultural uses or a Williamson Act contract, and no impacts would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Forestland/Timberland

Impact AG-3 - Would the project 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 section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Analysis of Impacts

According to the California Department of Forestry and Fire Protection website, no forest land, timberland, or timberland production areas, as defined in the public resources codes (PRC) 12220(g) and 4526 or government code 51104(g), are located within, or adjacent to, the Planning Area (CalFIRE, 2025). In addition, there is no land within the Planning Area that is zoned timberland. The Planning Area is a completely built-out, urbanized area. Therefore, the GPU would not conflict with existing zoning for forest land, timberland, or timberland production areas, or result in the loss or conversion of forest lands to non-forest uses, as none exist.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Loss of Forestland

Impact AG-4 - Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Analysis of Impacts

No forest lands exist in Downey, as it is completely urbanized. The Planning Area primarily consists of residential, commercial, institutional, industrial, and open space/recreation uses, along with public rights-of-way. While no forest land and timber land are present, the City has established goals and policies within the GPU to cultivate an urban forest resource for the community. Goal CR-5 strives for an expanded and resilient tree canopy and landscaped areas that enhance environmental quality and community resilience in the Planning Area. Policy EJ-2.3 seeks to increase urban tree canopy and shaded areas along streets, sidewalks, and public spaces, prioritizing neighborhoods with limited green cover to reduce heat and improve air quality. Policy CR-5.1 seeks to significantly increase tree plantings across public and private areas, prioritizing neighborhoods with limited canopy coverage, and along parks, major street corridors, and river corridors. Policy OS-8.1 aims to increase tree canopy coverage in parks, neighborhoods, and rights-of-way, prioritizing heat-vulnerable and disadvantaged areas. Therefore, the project would not result in the loss of forest land or conversion of forest land to a non-forest use, and no impact would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Conversion of Farmland/Forestland

Impact AG-5 - Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

As discussed above, the City has no Williamson Act contracts and there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Planning Area. The Planning Area contains no large-scale commercial agricultural uses. There is no agricultural zoning within the Planning Area. The GPU includes goals and policies intended to support existing urban agriculture uses and the establishment of new urban agriculture uses within the Planning Area. As such, the GPU would not result in the conversion of farmland to non-agricultural uses. Similarly, while the Planning Area is completely urbanized and contains no forest resources, the GPU contains goals and policies intended to establish a community forest within the Planning Area. Therefore, development as part of the proposed GPU would not result in the conversion of forest land to a non-forest use. For these reasons, the project would have no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact AG-6 - Would the project cause substantial adverse cumulative impacts with respect to Agriculture and Forestry Resources?

Analysis of Impacts

As described above, the project would not result in impacts related to agricultural resources, Prime Farmland, Unique Farmland, or Farmland of Statewide Important, Williamson Act contracts, forest lands, timberland, or Timberland Production areas. Because of the developed nature of the Planning Area and because the GPU would not impact agricultural uses, Farmland, Williamson Act contracts, forest lands, timberland, or Timberland Production areas, the project would not contribute to a cumulatively significant impact related to agriculture and forestry resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation is required.

4.2.5 – REFERENCES

California Department of Conservation (DOC 2025a). Farmland Mapping and Monitoring Program: Important Farmland Finder. Web: https://maps.conservation.ca.gov/DLRP/CIFF/ [Accessed December 2025].

California Department of Conservation (DOC 2020b). Williamson Act Program: Reports and Statistics. Web: https://www.conservation.ca.gov/dlrp/wa/Pages/stats_reports.aspx. [Accessed December 2025].

California Department of Forestry and Fire Protection (CalFIRE). State Inventory of Forest Land. Web: https://www.fire.ca.gov [Accessed December 2025].

City of Downey, 2004. *Downey Vision 2025 Comprehensive General Plan Update Environmental Impact Report*. SCH# 2004031159. July 28, 2004.

City of Downey. 2005. *Downey Vision 2025 General Plan*. Adopted January 25, 2005. Revisions: Housing Element Update; Adopted October 11, 2022.

4.3 AIR QUALITY

This EIR chapter provides information on the project's environmental and regulatory air quality setting and evaluates the potential amount of emissions of regulated air pollutants that could be generated by construction and operation of the project. This EIR section is consistent with the guidance and recommendations contained in the South Coast Air Quality Management District's (SCAQMD) California Environmental Quality Act (CEQA) Air Quality Handbook, as amended and supplemented. Information on existing air quality conditions, federal and state ambient air quality standards, and pollutants of concern was obtained from the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and SCAQMD.

4.3.1 ENVIRONMENTAL SETTING

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality.

Regional Environmental Setting

The U.S. EPA and CARB are the federal and State agencies charged with maintaining air quality in the nation and California, respectively. The U.S. EPA delegates much of its authority over air quality to CARB which has geographically divided the State into 15 air basins for the purposes of managing air quality on a regional basis. An air basin is a CARB-designated management unit with similar meteorological and geographic conditions.

The City of Downey is located in the South Coast Air Basin (Basin) which includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside counties. The basin encompasses approximately 6,745 square miles of coastal plains and is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east.

Air quality in the Basin is managed by the SCAQMD. Pursuant to the California Clean Air Act, the SCAQMD is responsible for bringing air quality within the basin into conformity with federal and state air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. SCAQMD works with federal, state, and local agencies to reduce pollutant emissions through adoption and implementation of rules and regulations. Please refer to Section 4.3.2 for a description of the regulatory setting of the Planning Area as it relates to air quality.

Local Environmental Setting

The climate of the Los Angeles region is classified as Mediterranean, but weather conditions within the Basin are also dependent on local topography and proximity to the Pacific Ocean. The climate is dominated by the Pacific high-pressure system that results in generally mild, dry summers and mild, wet winters. This temperate climate is occasionally interrupted by extremely hot temperatures during the summer, hot dry westerly "Santa Ana" winds during the fall, and storms from the Pacific northwest during the winter. In addition to the Basin's topography and geographic location, El Niño and La Niña patterns in the central Pacific Ocean can also have large effects on weather and rainfall received in the Basin between November and March.

The Pacific high-pressure system drives the prevailing winds in the Basin. The winds tend to blow onshore in the daytime and offshore at night. In the summer, an inversion layer is often created over the coastal areas and increases ozone levels. A temperature inversion is created when a layer of cool air is overlain by a layer of warmer air; this can occur over coastal areas when cool, dense air that originates over the ocean is blown onto land and flows underneath the warmer, drier air that is present over land. In the winter, areas throughout the basin often experience a shallow inversion layer that prevents the dispersion of surface level air pollutants, resulting in higher concentrations of criteria air pollutants such as carbon monoxide (CO) and oxides of nitrogen (NO_X).

In the fall months, the Basin's weather is often impacted by Santa Ana winds. These winds are the result of a high-pressure system over the Nevada-Utah region that overcomes a westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. These winds can be powerful and persistent during these times.

An El Niño condition is a warming of the surface waters of the eastern Pacific Ocean. It is a climate pattern that occurs across the tropical Pacific Ocean that is usually associated with drastic weather occurrences, including enhanced rainfall in Southern California. Conversely, a La Niña condition is the term for cooler than normal sea surface temperatures across the Eastern Pacific Ocean. The Los Angeles region receives less than normal rainfall during La Niña years.

Throughout the Basin, annual average temperatures vary from the low to middle 60s degrees Fahrenheit (^{o} F). Due to a decreased marine influence, the eastern portion of the Basin shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the Basin, with average minimum temperatures of 47° F in downtown Los Angeles and 36° F in San Bernardino. All portions of the Basin have recorded maximum temperatures above 100° F.

Although the climate of the Basin can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of the Basin's climate. Humidity restricts visibility in the Basin. The sulfur dioxide is converted to sulfates and is heightened in the air with high relative humidity. The annual average relative humidity within the Basin is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent with low stratus clouds being a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Rainfall between the months of April and November usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the Basin with frequency being higher near the coast.

In 2024, in the vicinity of the Planning Area, the average maximum daily temperatures ranged from a high of 79 degrees Fahrenheit in August to a low of 48 degrees Fahrenheit in December and January. Annual precipitation was approximately 21 inches, falling mostly from January through March (NOAA, 2025).

Sunlight

Three-quarters of available sunshine is received in the Basin while the remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. The shortest day of the year has approximately ten hours of possible sunshine, while the longest day of the year has approximately 14.5 hours of possible sunshine.

Temperature Inversions

There are two distinct temperature inversion structures that control vertical mixing of air pollution in the Basin. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing that effectively acts as an impervious lid to pollutants over the entire Basin. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO_X and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants within the basin.

Wind Patterns

The distinctive climate of the Basin is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest with high mountains ringing the rest of the Basin.

Wind patterns across the Basin including Downey are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breeze at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

Regulated Air Pollutants

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O_3), particulate matter (PM), which consists of “inhalable coarse” PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM_{10}) and “fine” PM (particles with an aerodynamic diameter smaller than 2.5 microns, or $PM_{2.5}$), CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The U.S. EPA refers to these six common pollutants as “criteria” pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally-based criteria and because they are known to cause adverse human health effects and/or adverse effects on the environment (U.S. EPA 2020a and 2020b).

CARB has also established California Ambient Air Quality Standards (CAAQS) for the six criteria air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS), plus the following additional air pollutants due to their known adverse effects on human

health or the environment (CARB 2020a): hydrogen sulfide (H_2S), sulfates (SO_X), vinyl chloride, and visibility reducing particles.

A description of the air pollutants associated with the proposed GPU and its vicinity is provided below. Air pollutants not commonly associated with the existing or proposed sources in the Planning Area such as hydrogen sulfide and visibility reducing particles, are not described below.

- **Ground-level Ozone**, commonly referred to as smog, is not emitted directly into the atmosphere. It is created from chemical reactions between NO_X and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight (U.S. EPA, 2022a). Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_X and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.
    - **ROG** is a CARB term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and includes several low-reactive organic compounds which have been exempted by the U.S. EPA (CARB, 2004).
    - **VOCs** is a U.S. EPA term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. The term exempts organic compounds of carbon which have been determined to have negligible photochemical reactivity such as: methane, ethane, and methylene chloride (CARB, 2004).
- **Particulate Matter**, also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles (U.S. EPA 2022b).
    - **PM_{10}**, also known as inhalable coarse, respirable, or suspended PM, consists of particles less than or equal to 10 micrometers in diameter (approximately 1/7th the thickness of a human hair). These particles can be inhaled deep into the lungs and possibly enter the bloodstream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease (U.S. EPA 2022b).
    - **$PM_{2.5}$**, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately 1/30th the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects (U.S. EPA 2022b).
- **Carbon Monoxide (CO)** is an odorless, colorless gas that is formed by the incomplete combustion of carbon-based fuels. Motor vehicles are the single largest source of carbon monoxide in the Basin. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can aggravate cardiovascular disease and cause headaches, dizziness, unconsciousness, and even death (U.S. EPA 2022c).
- **Nitrogen Dioxide (NO_2)** is a by-product of combustion. NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to ozone formation.

NO_2 also contributes to the formation of particulate matter. NO_2 can cause breathing difficulties at high concentrations (U.S. EPA, 2022d).

- **Sulfur Dioxide (SO_2)** is one of a group of highly reactive gases known as SO_X. Fossil fuel combustion in power plants and industrial facilities are the largest emitters of SO_2. Short-term effects of SO_2 exposure can include adverse respiratory effects such as asthma symptoms. SO_2 and other SO_X can react to form PM (U.S. EPA 2022e).
- **Sulfates (SO_4^{2-})** are the fully oxidized ionic form of sulfur. SO_4^{2-} are primarily produced from fuel combustion. Sulfur compounds in the fuel are oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Sulfate exposure can increase risks of respiratory disease (CARB 2009).
- **Lead** is a metal found naturally in the environment as well as in manufactured products. Mobile sources used to be the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. EPA established national regulations to gradually reduce the lead content in gasoline, and in 1996, lead was banned from gasoline. As a result of these efforts, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically. Lead can adversely affect multiple organ systems of the body and people of every age group. Lead poisoning in young children can cause brain damage, behavioral problems, and liver or kidney damage. Lead poisoning to adults can cause reproductive problems, muscle and joint pain, nerve disorders and kidney disease (CARB 2016a).

Common criteria air pollutants, such as ozone precursors, SO_2, and PM, are emitted by a large number of sources and have effects on a regional basis (i.e., throughout the Basin). Other pollutants, such as hazardous air pollutants (HAPs; described in more detail below under “Toxic Air Contaminants”), toxic air contaminants (TACs; described in more detail below), and fugitive dust, are generally not as prevalent and/or emitted by fewer and more specific sources. As such, these pollutants have much greater effects on local air quality conditions and local receptors.

Ambient Air Quality Standards and Basin Attainment Status

In general, the NAAQS and CAAQS define “clean” air, and are established at levels designed to protect the health of the most sensitive groups in our communities by defining the maximum amount of a pollutant (averaged over a specified period of time) that can be present in outdoor air without any harmful effects on people or the environment. Air pollutant levels are typically described in terms of concentration, which refers to the amount of pollutant material per volumetric unit of air. Concentrations are typically measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). The U.S. EPA, CARB, and regional air agencies assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories.

- **Attainment**. A region is “in attainment” if monitoring shows ambient concentrations of a specific pollutant are less than or equal to the NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a “maintenance area” for 10 years to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and State laws require nonattainment areas to

develop strategies, implementation plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.

- **Unclassified.** An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 4.3-1 (Ambient Air Quality Standards and Basin Attainment Status) lists the NAAQS and CAAQS and summarizes the Basin's attainment status.

Table 4.3-1: Ambient Air Quality Standards and Basin Attainment Status

Pollutant	Averaging Time[B]	California Standards[A]		National Standards[A]	
		Standard[C]	Attainment Status[D]	Standard[C]	Attainment Status[D]
Ozone	1-Hour (1979)	--	--	240 µg/m^3	Nonattainment
	1-Hour (Current)	180 µg/m^3	Nonattainment	--	--
	8-Hour (1997)	--	--	160 µg/m^3	Nonattainment
	8-Hour (2008)	--	--	147 µg/m^3	Nonattainment
	8-Hour (Current)	137 µg/m^3	Nonattainment	137 µg/m^3	Pending
PM_{10}	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment
	Annual Average	20 µg/m^3	Nonattainment	--	--
$PM_{2.5}$	24-Hour	--	--	35 µg/m^3	Nonattainment
	Annual Average (1997)	--	--	15 µg/m^3	Nonattainment
	Annual Average (Current)	12 µg/m^3	Nonattainment	12 µg/m^3 [D]	Nonattainment
Carbon Monoxide	1-Hour	23,000 µg/m^3	Attainment	40,000 µg/m^3	Attainment
	8-Hour	10,000 µg/m^3	Attainment	10,000 µg/m^3	Attainment
Nitrogen Dioxide	1-Hour	339 µg/m^3	Attainment	188 µg/m^3	Unclassifiable/ Attainment
	Annual Average	57 µg/m^3	Attainment	100 µg/m^3	Attainment
Sulfur Dioxide	1-Hour	655 µg/m^3	Attainment	196 µg/m^3	Attainment
	24-Hour	105 µg/m^3	Attainment	367 µg/m^3	Unclassifiable/ Attainment
	Annual Average	--	--	79 µg/m^3	Unclassifiable/ Attainment
Lead	3-Months Rolling	--	--	0.15 µg/m^3	Nonattainment (Partial)
Hydrogen Sulfide	1-Hour	42 µg/m^3	Attainment	--	
Sulfates	24-Hour	25 µg/m^3	Attainment	--	
Vinyl Chloride	24-Hour	26 µg/m^3	Attainment	--	

Source: CARB 2016b, SCAQMD 2024a, modified by MIG.

(A) This table summarizes the CAAQS and NAAQS and the Basin's attainments status. This table does not present comprehensive information regarding the CAAQS and NAAQS. Each CAAQS and NAAQS has its own averaging time, standard unit of measurement, measurement method, and statistical test for determining if a specific standard has been exceeded. Standards are not presented for visibility reducing particles, which are not concentration-based. The Basin is unclassified for visibility reducing particles.

(B) Ambient air standards have changed over time. This table presents information on the standards previously used by the U.S. EPA for which the Basin does not meet attainment.

(C) All standards are shown in terms of micrograms per cubic meter (µg/m^3) rounded to the nearest whole number for comparison purposes (with the exception of lead, which has a standard less than 1 µg/m^3). The actual CAAQS and NAAQS standards specify units for each pollutant measurement.

(D) On February 7, 2024, the U.S. EPA lowered the primary annual average health-based standard for PM2.5 from 12 µg/m3 to 9 µg/m3. The U.S. EPA generally makes initial attainment/nonattainment designations within 2 years of the issuance of a new standard.

Toxic Air Contaminants

In addition to criteria air pollutants, the U.S. EPA and CARB have classified certain pollutants as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs), respectively. The U.S. EPA has identified 187 HAPs, including such substances as benzene and formaldehyde; CARB also considers particulate emissions from diesel-fueled engines and other substances to be TACs. Since CARB's list of TACs references and includes the U.S. EPA's list of HAPs, this EIR uses the term TAC when referring to HAPs and TACs.

TACs can cause severe health effects at very low concentrations (non-cancer effects), and many are suspected or confirmed carcinogens (i.e., can cause cancer) (CARB 2019b). People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects such as (but not limited to) reduce immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and/or other health problems (U.S. EPA 2020a, CARB 2020b).

A description of the TACs associated with the proposed GPU and its vicinity is provided below.

- **Gasoline-Powered Mobile Sources.** According to the SCAQMD's *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (SCAQMD, 2021), or MATES V, gasoline-powered vehicles emit TACs, such as benzene, which can have adverse health risks. Gasoline-powered sources emit TACs in much smaller amounts than diesel-powered vehicles.
- **Diesel Particulate Matter (DPM)**. Diesel engines emit both gaseous and solid material; the solid material is known as DPM. Almost all DPM is less than 1 µm in diameter, and thus is a subset of $PM_{2.5}$. DPM is typically composed of carbon particles and numerous organic compounds. Diesel exhaust also contains gaseous pollutants including VOCs and NO_x. The primary sources of diesel emissions are ships, trains, trucks, rail yards and heavily traveled roadways. These sources are often located near highly populated areas, resulting in greater DPM related health consequences in urban areas. The majority of DPM is small enough to be inhaled into the lungs and what particles are not exhaled can be deposited on the lung surfaces and in the deepest regions of the lungs where they are most susceptible to injury. In 1998, CARB identified DPM as a toxic air contaminant based on evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure (CARB 2016c). SCAQMD's MATES V study identifies that diesel emissions account for approximately 50% of the total air toxics and cancer risk in the Basin, while Benzene, 1,3-Butadiene, and Carbonyls make up approximately 25% of the cancer risk. Sixty-four percent or more of the cancer risks for the zip codes within the Planning Area are driven by diesel emissions and receptor exposure to those emissions (SCAQMD 2021).
- **PM from Wheel-Rail Interactions**: PM may also be generated from friction between rail and locomotive wheels (wheel-rail interaction). This abrasion process can suspend metals such as iron, chromium, manganese, and copper in the form of PM (CARB 2019b, Loxham et al. 2013); however, the potential for PM to be generated is dependent on the weight of the train and the conditions of the wheels and track on which the train rides. The City contains the Light Rail Metro C Line (Green Line), along Interstate 105 (I-105), the Union Pacific freight rail line that runs parallel along Firestone Boulevard, and the Union Pacific freight rail line in the southwest corner of the City. The Metrolink and freight trains may generate PM from wheel-rail interaction.

- **Oil production** also generates TACs in the form of VOCs (e.g., acetaldehyde, acrolein, benzine, 1,3-butadiene, and propylene), polycyclic aromatic hydrocarbons (e.g., naphthalene and benzo(a)pyrene), metals (e.g., arsenic, cadmium, copper, lead, manganese, mercury, nickel, and zinc), halides (e.g., chlorine), sulfur-containing compounds (e.g., hydrogen sulfide), and DPM.
- **Toxic elements and pollutants** such as butadiene, benzene, perchloroethylene, formaldehyde, acetaldehyde, arsenic, cadmium, and lead are found in the basin (SCAQMD, 2015). Many toxins such as benzene, butadiene, and lead, are associated with refinery and other industrial operations that exist in the Basin.

Local Air Quality Conditions

The SCAQMD monitors air quality within the Basin. Existing levels of ambient air quality and historical trends within the Planning Area are best documented by measurements taken by the SCAQMD. The Planning Area is located in SCAQMD Source Receptor Area (SRA) 5 (Southeast LA County). Air quality monitoring stations usually measure pollutant concentrations at varying heights above ground level depending on the monitoring site and the pollutants being monitored. Therefore, air quality is often referred to in terms of ground-level concentrations. The closest air quality monitoring station is the South San Gabriel Valley Monitoring Station, located in SRA 11 at 4144 San Gabriel River Parkway, Pico Rivera, California (approximately four miles north of the Planning Area). The most recent three years of air quality data for O_3, NO_2, CO, SO_2, and $PM_{2.5}$ from the South San Gabriel Valley monitoring station are provided in Table 4.3-2 (Local Air Quality Conditions (2022-2024).

Table 4.3-2: Local Air Quality Conditions 2022-2024

Pollutant	Ambient Air Standard	Year[(A)]		
		2022	2023	2024
Ozone (O_3)				
Maximum 1-hour Concentration (ppm)		0.123	0.120	0.145
Maximum 8-hr Concentration (ppm)		0.091	0.090	0.093
Number of Days Exceeding State 1-hr Standard	>180 µg/m^3	3	7	10
Number of Days Exceeding State 8-hr Standard	>137 µg/m^3	3	9	12
Days Exceeding Federal 1-hr Standard	>0.124 ppm	0	0	1
Days Exceeding Federal 8-hr Standard	>0.070 ppm	2	7	12
Carbon Monoxide (CO)				
Maximum 1-hr Concentration (ppm)		1.6	1.8	1.9
Maximum 8-hr Concentration (ppm)		1.5	1.3	1.5
Days Exceeding State 1-hr Standard	>23,000 µg/m^3	0	0	0
Days Exceeding Federal/State 8-hr Standard	>10,000 µg/m^3	0	0	0
Days Exceeding Federal 1-hr Standard	>40,000 µg/m^3	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hr Concentration (ppb)		64.5	58.1	62.1
Annual Arithmetic Mean Concentration (ppb)		17.0	15.2	15.9
Days Exceeding State 1-hr Standard	>180 µg/m^3	--	--	--
Coarse Particulate Matter (PM_{10})[(B)]				
Maximum 24-hr Concentration (µg/m^3)		60	57	77
Annual Arithmetic Mean (µg/m^3)		28.9	24.3	25.4

Table 4.3-2: Local Air Quality Conditions 2022-2024				
Pollutant	Ambient Air Standard	Year(A)		
		2022	2023	2024
Samples Exceeding State 24-hr Standard	>50 µg/m^3	4(1%)	2(1%)	10(3%)
Samples Exceeding Federal 24-hr Standard	>150 µg/m^3	0	0	0
Fine Particulates Matter ($PM_{2.5}$)(B)				
Maximum 24-hr Concentration (µg/m^3)		53.8	33.2	61.7
Annual Arithmetic Mean (µg/m^3)		11.3	10.0	12.1
Samples Exceeding Federal 24-hr Standard	>35 µg/m^3	1(1%)	0(0%)	2(2%)

Source: SCAQMD 2025a

(A) "--" indicates data is no available.

(B) There is no PM_{10} data for the South San Gabriel Valley monitoring station, so PM_{10} data from the Central Los Angeles, located approximately 8.5 miles northwest of the Planning Area, is shown instead.

Existing Emissions Levels in the Planning Area

The Planning Area includes the I-5, I-605, I-710, and I-105 along the northern, eastern, western, and southern portions of the City, respectively. Additionally, the Metro C Line (Green Line) runs along the I-105, and a Union Pacific rail line runs east-west through the center of the Planning Area. Trains and vehicles traveling along these transportation corridors contribute to pollutant concentrations in the City. Truck trips from industrial and commercial land uses within the City also contribute to pollutant concentrations within and in proximity of the City. In addition, emissions from stationary sources (e.g., those found at industrial facilities) and area sources (e.g., painting activities, gas stations, construction sites, etc.) contribute to pollutant concentrations throughout the City.

The existing land uses in the Planning Area are summarized in Table 3-1 (Existing Land Use) of the project Description (see Chapter 3). Existing land uses generate emissions from the following sources:

- **Small "area" sources.** Existing land uses generate emissions from small area sources including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals to the atmosphere during product use.
- **Energy use and consumption**. Existing land uses generate emissions from the combustion of natural gas in building water and space heating equipment, as well as industrial processes.
- **Mobile sources.** Existing land uses generate emissions from vehicles travelling to and from the Planning Area.

Existing emissions were estimated using the California Emissions Estimator Model, or CalEEMod, Version 2022.1.1, based on default data assumptions contained within CalEEMod, with the following project-specific modifications:

- **Land Use Development:** The default acreage and square footage for each of the existing land uses within the Planning Area were adjusted to reflect existing development conditions (see Chapter 3, Project Description, Table 3-2).
- **Mobile Sources:**

- **Trip Generation and Distance:** The default weekday and weekend trip generation rates and trip lengths were adjusted based on the total daily VMT data and regional average trip length from the traffic report prepared for the GPU by Ganddini. The model used trip distances of 9.7 miles using the regional average and using this average, scaled the trip generation values from CalEEMod defaults consistent with the total daily VMT data.
- **Emission Factors:** Emission factors were updated from the CalEEMod defaults, which use EMFAC2021 v1.0.1, to emission factors derived from EMFAC 2025 v2.1.0. Please see Appendix D for details. This change was made to the modeling since EMFAC 2025 v2.1.0 reflects the current regulatory environment, such as U.S. EPA revoking California's waivers for Advanced Clean Cars II, Advanced Clean Trucks (ACT), Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions (Warranty Phase 1), and Heavy-Duty Omnibus.

The emissions generated by current land uses in the Planning Area are shown in Table 4.3-3. The emissions are shown for two scenarios:

- **Year 2025 (existing conditions)**, which are based on Year 2026 vehicle fleet characteristics (e.g., vehicle type, age, emission rates).
- **Year 2045 (future conditions)**, which are based on Year 2045 vehicle fleet characteristics and represent the estimated emissions that existing land uses would generate in the future (assuming change in land uses, and using the Year 2045 No Project VMT data from Ganddini's traffic report). This scenario provides an estimate of how emissions would change in the Planning Area as a result of regulations that would reduce motor vehicle emissions in the future, and allows for distinguishing the potential change in emissions that would occur from the proposed change in land uses that would occur with implementation and buildout of the Downey GPU in Year 2045, as opposed to a change in emissions that would occur from regulatory requirements that would be in place whether or not the Downey GPU is adopted.

Table 4.3-3: Downey GPU: Existing Land Use Emissions Estimates

Emissions Source	Maximum Daily Pollutant Emissions (Pounds per Day) (A)							
	ROG	NOx	CO	SO_2	PM_{10}		$PM_{2.5}$	
					Dust	Exhaust	Dust	Exhaust
Year 2026 (Existing Conditions)								
Mobile Sources	11,369	3,371	49,743	18	3,156	45	800	42
Area Sources	12,185	771	22,305	48	--	2,656	--	2,607
Energy	24	427	250	3	--	34	--	34
Year 2026 Total(B)	*23,578*	*4,569*	*72,298*	*69*	*3,156*	*2,735*	*800*	*2,683*
Year 2045 (Future Conditions)								
Mobile Sources	1,295	421	15,256	9	2,818	12	714	11
Area Sources	12,258	771	22,786	48	--	2,657	--	2,608
Energy	24	427	250	3	--	34	--	34
Year 2045 Total(B)	*13,577*	*1,619*	*38,291*	*60*	*2,818*	*2,705*	*714*	*2,652*

Source: MIG 2026, see Appendix D.

(A) Emissions estimated using CalEEMod, V 2022.1.1. Estimates are based on default model assumptions unless otherwise noted in this document. Maximum daily ROG, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions occur during the summer. Maximum daily NO_X emissions occur during the winter.

(B) Totals may not equal due to rounding.

As shown in Table 4.3-3, there is a decrease in mobile source emissions between Year 2023 and Year 2045 conditions. This decrease in emissions is due to improvements in exhaust emission control systems in newer vehicles, along with fewer older vehicles in use. In contrast, PM_{10} and $PM_{2.5}$ dust emissions have a smaller decrease because these emissions are associated with paved road dust, tire and brake wear, etc. and changed with the amount of modeled VMT between the 2026 and 2045 conditions.

Sensitive Receptors

Some people are more affected by air pollution than others. Sensitive air quality receptors include specific subsets of the general population that are susceptible to poor air quality and the potential adverse health effects associated with poor air quality. Both CARB and the SCAQMD consider residences, schools, parks and playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes to be sensitive air quality land uses and receptors (SCAQMD, 2019a; CARB, 2005). In general, the sensitive air quality receptors within the Planning Area include, but are not limited to:

- Existing low- and medium-density residential receptors within the Planning Area;
- Existing elementary, middle, and high schools, and education or institutional facilities; and,
- Existing parks and recreational facilities, including, but not limited to, Apollo Park, Brookshire Children's Park, Dennis the Menace Park, Furman Park, Golden Park, Independence Park, Rio San Gabriel Park, and Wilderness Park.

In addition to existing sensitive receptors in and near the Planning Area, the implementation of the General Plan would result in new, sensitive residential receptors within the Planning Area.

Existing Air Pollution-Related Health Risks

Sensitive air quality receptors are exposed to air pollution associated with transportation sources and with industrial and warehousing activities within and in proximity of the Planning Area. Interstate 5, Interstate 605, Interstate 105 are located in the northern, eastern, and southern portions of the Planning Area, respectively, and Interstate 710 is located approximately 0.5 miles west of the Planning Area. In addition, a Union Pacific rail line runs east-west through the center of the Planning Area. These transportation corridors carry trucks and trains that emit DPM as they operate and cause localized areas of DPM concentrations. There are also stationary sources located throughout the City. CARB indicates there are 21 facilities within the Planning Area that report emissions pursuant to AB 2588 (CARB, 2023). Due to reporting requirements, only four (4) of facilities, which are listed below, were required to report their emissions to the SCAQMD under AB 2588, according to the SCAQMD's 2024 Annual Report on AB 2588 Air Toxics Hot Spots Program (SCAQMD 2025b). Please see Appendix D for a full list of emissions and risks from the facilities, as provided by the CARB database.

Under the State's Air Toxics Hot Spots Information and Assessment Act (AB 2588; see Section 4.3.2) the SCAQMD is required to prepare an annual report of activities related to facilities that emit TACs. According to the SCAQMD's 2024 Annual Report on AB 2588 Air Toxics Hot Spots Program, there were four facilities within and near the Planning Area that were required to report their emissions to the SCAQMD under AB 2588. These facilities that are included the SCAQMD's Annual Report include:

- General Dynamics OTS (DOWNEY) Inc (SCAQMD ID 101380) with a cancer risk value of 9.8 excess cancer chances per million and a non-cancer acute and chronic hazard indices of 0.0 and 0.1, respectively.
- LA Co., Rancho Los Amigos Nat. Rehab Ctr (SCAMQD ID 6384), located on 7601 E IMPERIAL HWY in the southwest portion of the Planning Area with a cancer risk value of 3.1 excess cancer chances per million and non-cancer acute and chronic hazard indices of 0.0 and 0.1, respectively;
- The Boeing Company (SCAQMD ID 800111) with a cancer risk value of 2.3 excess cancer chances per million and non-cancer acute and chronic hazard indices of 0.0 and 0.1, respectively;
- National O-Rings (SCAQMD ID 107350), located on 11634 Patton Road, in the central portion of the Planning Area, with a cancer risk value of 1.5 excess cancer chances per million and non-cancer acute and chronic hazard indices of 0.0.

According to the SCAQMD's MATES V Carcinogenic Risk Map, the Planning Area has an estimated cancer risk ranging between 561 and 594. (SCAQMD, 2021).[i] These cancer risk estimates are orders of magnitude higher than the SCAQMD's significance threshold of 10 cases in one million for cancer risk. These estimates, however, are based upon regional modeling efforts that largely do not account for site specific emission rates and dispersion characteristics that typically result in refined and substantially lower health risk estimates.

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. While CalEnviroScreen was originally developed as part of Senate Bill (SB) 535 and used to identify disadvantaged communities for the purposes of allocating funding from the State's Cap-and-Trade regulation, its application and scope have expanded over the years. The tool uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. The CalEnviroScreen model is made up of four components – two pollution burden components (exposures and environmental effects) and two population characteristics components (sensitive populations and socioeconomic factors). The four components are further divided into 23 indicators. An indicator is a measure of either environmental conditions, in the case of pollution burden indicators, or health and vulnerability factors, in the case of population characteristic indicators.

- **Exposure** indicators are based on the measurements of different types of pollution that people may come into contact with. Exposure indicators include:
    - Air Quality: Ozone
    - Air Quality: $PM_{2.5}$
    - Children's Lead Risk from Housing
    - Diesel Particulate Matter
    - Drinking Water Contaminants

[i] According to the SCAQMD (2021), cancer risk refers to the probability of contracting cancer associated with exposure to a substance. It is expressed as the chance per million population of a cancer case occurring. The cancer risk calculated from model data for the zip codes within the Planning area range from 561 to 594. A risk ranging from 561 to 594 per million means that in a population of one million individuals (exposed over a 70-year lifetime), 561 to 594 additional cancer cases would be expected. For reference, a cancer risk of 594 per million in zip code 90240 (a zip code within the Planning Area) is approximately 92.0% higher than other receptors within the SCAQMD's jurisdiction.

  - Pesticide Use
  - Toxic Releases from Facilities
  - Traffic Density

- **Environmental effects** indicators are based on the locations of toxic chemicals in or near communities. Environmental effects indicators include:
  - Cleanup Sites
  - Groundwater Threats
  - Hazardous Waste Generators and Facilities
  - Impaired Waters
  - Small Air Toxic Sites
  - Solid Waste Sites and Facilities

- **Sensitive population** indicators measure the number of people in a community who may be more severely affected by pollution because of their age or health. Sensitive population indicators include:
  - Asthma
  - Cardiovascular Disease
  - Diabetes
  - Low Birth Weight Infants

- **Socioeconomic factors** indicators are based on community characteristics that result in increased vulnerability to pollutants. Environmental effects indicators include:
  - Educational Attainment
  - Housing Burden
  - Linguistic Isolation
  - Poverty
  - Unemployment

Each census tract receives scores for as many of the 23 indicators as possible, and the scores are then mapped so that different communities can be compared. Percentiles are assigned to each census tract based on the census tract's score in relation to the rest of the state. An area with a high percentile is one that experiences a much higher pollution burden than areas with low scores. For example, if a census tract has an indicator in the 40th percentile, it means that indicator's percentile is higher than 40 percent of the census tracts in the state.

CalEnviroScreen also provides a total (or cumulative) score, which is the product of multiplying the 14 pollution burden components by the 9 population characteristics. This total / cumulative score helps contextualize how multiple contaminants from multiple sources affect people, while taking into account their living conditions (e.g., nonchemical factors such as socioeconomic and health status). Communities that are within the top 25th percentile for total CalEnviroScreen scores (i.e., scoring in the 75th percentile or higher for the cumulative score) are considered disadvantaged communities pursuant to SB 535 (OEHHA, 2021, 2022, and 2026a).

According to the OEHHA Draft CalEnviroScreen 5.0 Map, the Planning Area generally has CalEnviroScreen scores that range from 56 to 96. Of the 26 census tracts[ii] within Downey, approximately 64% have scores in the top 25th percentile, qualifying them as disadvantaged communities based on the SB 535 definition. The Planning Area generally has CalEnviroScreen scores for PM2.5 that are above 95, while ozone percentile scores are generally range from 48 to 54 and diesel PM percentile scores range from 30 to 88 (OEHHA 2026b).

4.3.2 REGULATORY FRAMEWORK

Federal Air Quality Regulations

Federal Clean Air Act

The Federal Clean Air Act (CAA), as amended, provides the overarching basis for both Federal and State air pollution prevention, control, and regulation. The Act establishes the U.S. EPA's responsibilities for protecting and improving the nation's air quality. The U.S. EPA oversees Federal programs for setting air quality standards and designating attainment status, permitting new and modified stationary sources of pollutants, controlling emissions of hazardous air pollutants, and reducing emissions from motor vehicles and other mobile sources. In 1971, to achieve the purposes of Section 109 of the CAA, the U.S. EPA developed primary and secondary NAAQS. Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and public welfare from air pollutants in the atmosphere.

State Air Quality Regulations

California Clean Air Act

In addition to being subject to Federal requirements, air quality in the state is also governed by more stringent regulations under the California Clean Air Act, which was enacted in 1988 to develop plans and strategies for attaining the CAAQS. As discussed above, in California, both the Federal and State Clean Air Acts are administered by CARB. 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 level.

In-Use Off-Road Diesel Equipment Program

CARB's In-Use Off-Road Diesel Equipment regulation is intended to reduce emissions of NO_x and PM from off-road diesel vehicles, including construction equipment, operating within California. The regulation imposes limits on idling; requires reporting equipment and engine information and labeling all vehicles reported; restricts adding older vehicles to fleets; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing exhaust retrofits for PM. The requirements and compliance dates of the off-road regulation vary by fleet size, and large fleets (fleets with more than 5,000 horsepower) must meet average targets or comply with Best Available Control Technology (BACT) requirements beginning in 2014. CARB has off-road anti-idling regulations affecting self-propelled diesel-fueled vehicles of 25 horsepower and up. The off-road anti-idling regulations limit idling on applicable equipment to no more than five minutes, unless exempted due to safety, operation, or maintenance requirements.

[ii] One of the 25 census tracts, Census Tract 6037980012, has a population of only 20 and no applicable data for the majority of indicators. This census tract is not included further in environmental setting discussions.

In 2022, CARB approved amendments requiring the use of renewable diesel fuel starting January 1, 2024. Fleets comprised of Tier 4 Final equipment or zero-emission equipment are exempt from this requirement (CARB 2022b).

On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) regulation (also known as the Truck and Bus Regulation) is intended to reduce the emission of NO_X, PM, and other criteria pollutants generated from existing on-road diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned, and for privately and publicly owned school buses. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Since January 1, 2023, all trucks and buses operating in California, with few exceptions, were required to have 2010 model year engines or newer.

CARB Stationary Diesel Engines – Emission Regulations

In 1998, CARB identified DPM as a TAC. To reduce public exposure to DPM, in 2000, the Board approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan) (CARB 2000). Integral to this plan is the implementation of control measures to reduce DPM such as the control measures for stationary diesel-fueled engines. As such, diesel generators must comply with regulations under CARB's amendments *to Airborne Toxic Control Measure for Stationary Compression Ignition Engines* and be permitted by SCAQMD.

CARB Air Quality and Land Use Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a TAC. CARB's Air Quality and Land Use Handbook is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (CARB 2005). The CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds. Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the Handbook relative to the Planning Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- Within 300 feet of gasoline fueling stations; or
- Within 300 feet of dry cleaning operations (dry cleaning with TACs is being phased out and will be prohibited in 2023). The SCAQMD (Regulation 14, Rule 21) has established emission controls for the use of perchloroethylene, the most common dry-cleaning solvent.

CARB prepared a technical supplement to the Handbook, a *Technical Advisory on Strategies to Reduce Air Pollution Exposure Near High Volume Roadways* (CARB 2017), that provides recommendations for strategies to minimize exposure of the public to air pollutants due to proximity to high volume roadways.

Air Toxics “Hot Spots” Program

State requirements specifically address emissions of air toxics through Assembly Bill (AB) 1807 (known as the Tanner Bill) that established the State Air Toxics “Hot Spots” Program and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code Section 44300 et seq.). Under the Air Toxics Hot Spots Information and Assessment Act of 1987 (or Air Toxics “Hot Spots” Act) and Air Toxics Hot Spots Program, the State (CARB) must collect data on toxic emissions from stationary sources (facilities) throughout the State and ascertain potential health risks that these emissions pose to members of community for developing cancer or for resulting in non-cancer health effects. California’s Children’s Environmental Health Protection Act of 1999 (California Health and Safety Code Section 39606), also requires explicit consideration of infants and children in assessing risks from air toxics. Substances regulated under California’s Air Toxics Hot Spots Program are defined in statute and include a list of substances developed by the following sources:

- International Agency for Research on Cancer (IARC);
- U.S. EPA;
- U.S. National Toxicology Program (NTP);
- CARB Toxic Air Contaminant Identification Program List;
- Hazard Evaluation System and Information Service (HESIS) (State of California);
- Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) list of carcinogens and reproductive toxicants (State of California); and,
- Any additional substance recognized by the State Board as presenting a chronic or acute threat to public health when present in the ambient air.

California Building Industry Association v. Bay Area Air Quality Management District (2015)

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project’s impact on the environment “and not the environment’s impact on the project.” The opinion also holds that when a project has “potentially significant exacerbating effects on existing environmental hazards” those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on “existing conditions” rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project “would worsen existing conditions.” The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA’s scope.

Regional Air Quality Regulations

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California law, established as an association of local governments and agencies that voluntarily

convene as a forum to address regional issues. SCAG encompasses the counties of Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial. SCAG is designated as a Metropolitan Planning Organization (MPO) and as a Regional Transportation Planning Agency. Under SB 375, SCAG, as a designated MPO, is required to prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). RTP/SCS documents are long-range visioning plans that balance future mobility and housing needs with economic, environmental, and public health goals. SCAG's current adopted RTP/SCS, Connect SoCal 2024, was adopted in April 2024. However, the Air Quality Management Plan (AQMP) is based on the land use, transportation components, and growth assumptions of Connect SoCal 2020, SCAG's 2020 RTP/SCS. The AQMP also utilizes the 2020 RTP/SCS data for preparation of air quality forecasts and consistency analyses. See Section 4.8, Greenhouse Gases, for a discussion of Connect SoCal.

SCAQMD Air Quality Management Plan (AQMP)

The SCAQMD is required to prepare an overall plan for air quality improvement, known as an AQMP. The purpose of an AQMP is to bring the basin into compliance with federal and State air quality standards. The SCAQMD 2022 AQMP was adopted on December 2, 2022. The AQMP provides new and revised demonstrations for how the SCAQMD, in coordination with federal, State, regional and local governments will bring the Basin back into attainment for the following NAAQS: 2008 8-hour ozone; 2012 annual PM2.5; 2006 24-hour PM2.5; 1997 8-hour ozone; and 1997 1-hour ozone. To achieve the reductions necessary to bring ambient air quality back into attainment the SCAQMD has identified seven primary objectives for the AQMP, which include:

1. Eliminating reliance on unknown future technology measures to demonstrate future attainment of air quality standards;
2. Calculating and accounting for co-benefits associated with measures identified in other, approved planning efforts (e.g., SCAG RTP/SCS);
3. Developing a strategy with fair-share emission reductions at the federal, State, and local levels;
4. Investing in strategies and technologies that meet multiple objectives regarding air quality, climate change, air toxic exposure, energy, and transportation—especially in disadvantaged communities;
5. Seeking, identifying, and securing significant sources of funding for incentives to implement early deployment and commercialization of zero and near-zero technologies, particularly in the mobile source sector;
6. Enhancing the socio-economic analysis and selecting the most efficient and cost-effective path to achieve multi-pollutant and -deadline targets; and
7. Prioritize non-regulatory, innovative approaches that can contribute to the economic vitality of the region while maximizing emission reductions.

The emission forecasts and demonstrations presented in the 2022 AMQP rely heavily on information contained in other planning and strategy documents. For example, the 2022 AQMP's long-term emissions inventory is based on the growth and land use projections contained in the SCAG's 2020 RTP/SCS. Additionally, the conclusions relating to ozone compliance are based on implementation of measures presented in CARB's Mobile Source Strategy and State Implementation Plan (SIP) strategy. The Mobile Source Strategy outlines a suite of measures targeted at on-road light- and heavy-duty vehicles, off-road equipment, and federal and

international sources. A subset of the statewide strategy is a mobile source strategy for the South Coast SIP. Because the SCAQMD has limited authority in regulating mobile source emissions, coordination and cooperation between SCAQMD, CARB, and the U.S. EPA is imperative to meeting the NOx reductions required to meet ozone standards. Although not incorporated specifically from another planning document strategy, the 2022 AQMP also provides numerous control measures for stationary sources (SCAQMD, 2022).

SCAQMD Rules and Regulations

The SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of business, processes, operations, and products to implement the AQMP and the various federal and State air quality requirements. In general, rules that would be applicable to the GPU could include:

- **Rule 401 (Visible Emissions)** prohibits discharge into the atmosphere from any single source of emission for any contaminant for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade than that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- **Rule 402 (Nuisance)** prohibits discharges of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of 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)** prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent capacity in the air). Rule 403 requires the implementation of Best Available Control Measures and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres.
- **Rule 445 (Wood Burning Devices)** prohibits installation of woodburning devices such as fireplaces and wood-burning stoves in new development unless the development is located at an elevation above 3,000 feet or if existing infrastructure for natural gas service is not available within 150-feet of the development.
- **Rule 481 (Spray Coating Operations)** imposes equipment and operational restrictions during construction for all spray painting and spray coating operations.
- **Rule 1108 (Cutback Asphalt)** prohibits the sale or use of any cutback asphalt containing more than 0.5 percent by volume organic compounds which evaporate at 260°C (500°F) or lower.
- **Rule 1113 (Architectural Coatings)** establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.
- **Rule 1143 (Consumer Paint Thinners and Multi-Purpose Solvents)** prohibits the supply, sale, manufacture, blend, package or repackage of any consumer paint thinner or multi-purpose solvent for use in the District unless consumer paint thinners or other multi-purpose solvents comply with applicable VOC content limits.
- **Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities)** specifies work practice requirements to limit asbestos emissions from building demolitions and renovation activities, including the removal and associated disturbance of asbestos-containing materials. The requirements for demolition and renovation activities include

asbestos surveying, notification, asbestos containing materials removal procedures and time schedules, asbestos containing materials handling and clean-up procedures, and storage, disposal, and land filling requirements for asbestos containing waste materials.

- **Rule 2202 (On-Road Motor Vehicle Mitigation Options)** provides employers with options to reduce mobile source emissions generated from employee commutes. The rule applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period.

Local Air Quality Regulations

City of Downey 2045 General Plan

The City of Downey 2045 General Plan Update includes goals and policies related to air quality (see Appendix B).

4.3.3 SIGNIFICANCE THRESHOLDS

Per the CEQA Guidelines, Appendix G, Environmental Checklist, implementation of the project would have a significant impact related to air quality if it would:

A. Conflict with or obstruct implementation of the applicable air quality plans(s);

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;

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

E. Cause substantial adverse cumulative impacts with respect to air quality.

Consistent with the guidance contained in Appendix G of the State CEQA Guidelines, this EIR relies upon SCAQMD-recommended methods and pollutant thresholds to evaluate whether the project would conflict with or obstruct implementation of an applicable air quality plan, result in a cumulatively considerable net increase of any criteria air pollutant for which the Basin is designated nonattainment, expose sensitive receptors to substantial pollutant concentrations, or result in cumulative or other emissions adversely affecting a substantial number of people.

Regional Significance Thresholds

The SCAQMD's *CEQA Air Quality Handbook's* significance thresholds were used for evaluating the impacts associated with the implementation of the proposed GPU. The SCAQMD has established mass daily thresholds for regional pollutant emissions, as shown in Table 4.3-4.

Table 4.3-4: SCAQMD Regional Emission Significance Thresholds

Air Contaminant	Construction (Maximum Pounds Per Day)	Operation (Maximum Pounds Per Day)
NO_X	100	55
VOC	75	55
PM_{10}	150	150

$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
Source: SCAQMD 2019b		

Carbon Monoxide "Hot Spots" Thresholds

The SCAQMD does not have a current methodology for screening CO hotspots. However, the SCAQMD performed CO modeling as part of its 2003 AQMP at four busy intersections during morning and evening peak hour periods. The busiest intersection studied in the analysis—Wilshire Boulevard and Veteran Avenue—had 8,062 vehicles per hour during morning peak hours, 7,719 vehicles per hour during evening peak hours, and approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour CO concentration for this intersection was 4.6 ppm, which is less than a fourth of the 1-hour CAAQS CO standard (20 ppm) (SCAQMD, 2003a). The BAAQMD screening threshold is generally consistent with the results of the CO modeling conducted for the SCAQMD's 2003 AQMP. Therefore, for purposes of this Report, the project would pose the potential for a CO hotspot if it would exceed the BAAQMD's screening traffic level for peak hour intersection traffic volumes (44,000 vehicles per hour) thereby having the potential to result in CO concentrations that exceed 1-hour State [20 ppm], 1-hour Federal [35 ppm], and/or State and Federal 8-hour [9 ppm] ambient air quality standards for CO.

Toxic Air Contaminant Thresholds

The SCAQMD recommends preparation of a Health Risk Assessment (HRA) for large commercial or industrial projects to determine the specific health risks posed by long-term emissions of TACs from a project. Following OEHHA and SCAQMD guidance, health risks from TAC emissions are estimated based on "Individual Cancer Risk," which is the likelihood that a person exposed to TACs over 70-year lifetime will get cancer or suffer some other "non-cancer" effect (measured by what is called as a "hazard index"). Numerous weighting factors (e.g., age sensitivity factors, breathing rates, etc.) are applied during health risk calculations to account for those members of the public who may be more sensitive to pollution than others (e.g., sensitive receptors). A project is considered to have a significant impact if it results in any of the following:

- A maximum incremental cancer risk greater than or equal to 10 in one million;
- A population-wide cancer burden greater than 0.5 (in areas where cancer risk is greater than or equal to one in a million); or
- A chronic or acute hazard index greater than or equal to 1.0.

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." The opinion also holds that when a project has "potentially significant exacerbating effects on existing environmental hazards" those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project "would worsen existing conditions." The court also found that the limited number of express CEQA provisions that require

analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA's scope.

In another recent Supreme Court Ruling – Sierra Club v. County of Fresno 6 Cal. 5th 502 (2018) – the Supreme Court held that CEQA requires a Lead Agency to make a reasonable effort to provide an appropriate, project-specific context and connection between mass pollutant emissions estimates (i.e., pounds per day or tons per year) and the potential health impacts associated with such emissions estimates, or to explain what is and is not yet known about the GPU's "bare" emissions numbers and their potential adverse health impacts.

Consistent with these court rulings, the impact discussion presented below focuses on the proposed GPU's effect on air quality and existing health risks, rather than the effect of existing air quality and its potential risks on the proposed GPU's residents. The analysis evaluates whether the proposed GPU would create or exacerbate adverse public health risk conditions at sensitive receptor locations, as identified in the SCAQMD's CEQA significance criteria.

4.3.5 IMPACTS AND MITIGATION MEASURES

This section describes potential impacts that could result from implementation of the project and recommends mitigation measures if needed to reduce or eliminate significant air quality impacts.

Consistency with the Applicable Air Quality Plan

Impact AIR-1 – Would the project conflict with or obstruct implementation of the South Coast Air Quality Management District 2022 Air Quality Management Plan?

Analysis of Impacts

As described in Section 4.3.1, the proposed Downey GPU is within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook*, a project is consistent with the AQMP if it:

1) Is consistent with the growth assumptions of the AQMP; and
2) Does not increase the frequency or severity of an air quality standards violation, or cause a new one.

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the 2022 AQMP. Projects that are inconsistent with the AQMP growth assumptions would interfere with attainment of air quality standards because this growth would exceed the growth included in the projections used to formulate the AQMP.

The proposed GPU includes land use designations that support development of up to 31,483 total dwelling units, accommodating a population increase of approximately 31,483 residents, for a total population of up to 142,809 residents by 2045. Employment within the Planning Area would reach 51,351 jobs by 2045.[iii] The comparison of the AQMP's and the proposed GPU's potential growth projections is provided in Table 4.3-5.

[iii] The 2024 RTP/SCS indicates there would be 35,300 occupied households and 52,600 jobs in the City of Downey in 2050. Since the 2022 AQMP is based on the growth assumptions in the 2020 RTP/SCS, these values from the 2024 RTP/SCS are not used in the analysis for Impact AQ-1.

Table 4.3-5: Comparison of RTP/SCS and Downey GPU 2045 Growth Projections			
Scenario	**Population**	**Dwelling Units[(A)]**	**Employment**
GPU	142,809	47,510	51,351
AQMP/ RTP/SCS[(B)]	119,200	35,595	45,800
Within RTP/SCS Growth Assumptions?	No	No	No

Source: SCAG, 2020a

(A) The RTP/SCS dwelling unit data includes only occupied dwelling units, while the Downey GPU dwelling unit data includes both occupied and unoccupied dwelling units. Therefore, to create a direct comparison of the projections within the GPU and RTP/SCS, the vacancy rate for the City of Downey (4.2%) was applied (SCAG 2020b). Using the vacancy rate and the RTP/SCS data of 34,100 occupied households, MIG assumes a total dwelling unit value of 35,595.

(B) The SCAG 2020 RTP/SCS formulates the growth projections which the 2022 AQMP is based on.

As shown in Table 4.3-5, the growth envisioned in the GPU is inconsistent with the totals for population, dwelling units, and employment that the 2020 RTP/SCS projected for 2045. Therefore, from the growth assumption standpoint of Criterion 1, the proposed GPU would be inconsistent with the AQMP.

Consistency Criterion 2 refers to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). Please refer to Section 4.3.1 for a description of the state and federal ambient air quality standards (CAAQS and NAAQS, respectively), and the Basin's attainment status. As described in Section 4.3.1, the Basin is designated nonattainment for national and state O_3, PM_{10}, and $PM_{2.5}$ standards. The analyses of potential emissions under Impact AIR-2 indicates the GPU could result in significant emissions that cannot be mitigated during construction activities, which would include NOx and ROG (precursor emissions to ozone) and PM_{10} and $PM_{2.5}$. The analysis contained under Impact AQ-2 also indicates the operational ROG and NOx emissions (precursor emissions to O_3) as well as PM_{10} and $PM_{2.5}$, associated with implementation of the proposed GPU would exceed the SCAQMD-recommended CEQA thresholds of significance, which have been designed to bring the region into attainment for CAAQS and NAAQS.

Implementation of the proposed GPU would result in population, household, and employment growth that is in excess of that accounted for in the 2022 AQMP. This growth could generate construction and operational emissions of criteria air pollutants, including ROG and NO_X (O_3 precursor pollutants), CO, PM_{10}, and $PM_{2.5}$ that could exceed SCAQMD-recommended thresholds of significance. The SCAQMD, in developing its CEQA significance thresholds, considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003b; page D-3). Even though the mass amount of emissions attributable to a single project (i.e., pounds per day) does not necessarily contribute to air pollution levels measured throughout the Basin and in or near the City, the SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. Since the proposed GPU could result in construction and operational emissions that exceed SCAQMD regional CEQA thresholds, the proposed GPU could increase the frequency and/or severity of air quality violations in the Basin or otherwise impede attainment of air quality standards, particularly national and state ozone standards. This is considered a potentially significant impact.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measure AQ-2A and AQ-2B, below.

Level of Significance After Mitigation

Significant and unavoidable.

Cumulatively Considerable Net Increase in Nonattainment Criteria Air Pollutants

Impact AIR-2 – Would the project result in a cumulatively considerable net increase of any criteria air pollutants for which the South Coast Air Basin is designated non-attainment under an applicable federal or state ambient air quality standard?

Analysis of Impacts

The proposed GPU sets forth the City's vision for the types of development that would occur over the next approximately 20 years. The GPU's proposed land use designations permit higher development intensity within the Planning Area boundaries than compared to the existing General Plan. Criteria air pollutants and other emissions would result from construction activities, and from the operation of residences, businesses, and other land uses within the Planning Area. GPU implementation would generate short-term construction and long-term operational emissions of regulated air pollutants (i.e., criteria air pollutants and TACs). These emissions would be released to the ambient air and disperse according to the topographic and meteorological influences that prevail near the Planning Area and in the greater Basin. The SCAQMD maintains regional significance thresholds to assess how individual projects may affect air quality on a regional scale. The potential for construction and operational emissions associated with GPU implementation to impact air quality is discussed below.

Construction Emissions. The proposed GPU would not directly result in construction of any development or infrastructure; however, future development supported by the GPU would result in short-term construction-related criteria pollutant emissions that have the potential to have an adverse effect on air quality. Short-term criteria air pollutant emissions would occur during demolition, site preparation, grading, building construction, paving, and architectural coating activities associated with specific, new development projects. Emissions would occur from the use of equipment, worker, vendor and hauling trips, and disturbance of onsite soils (fugitive dust). ROG and NO_X emissions are primarily associated with gas and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM_{10} and $PM_{2.5}$) are primarily associated with site preparation and vary depending on factors such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. Typical pieces of construction equipment associated with development and redevelopment projects include bulldozers, graders, excavators, loaders, and trucks.

Although it is not possible to know the exact type, number, location, or duration of future construction projects, future development activities would generally entail demolition, site preparation, grading, building construction, paving, and painting. Fugitive dust (PM_{10}) emissions would typically be greatest during building demolition, site preparation, and grading due to the disturbance of soils and transport of material. NO_X emissions would also result from the combustion of diesel fuels used to power off-road heavy-duty pieces of equipment (e.g., backhoes, bulldozers, excavators, etc.). ROG emissions would generally be greatest during architectural coating activities. The types and quantity of equipment, as well as duration of construction activities, would be dependent on project-specific conditions. Larger projects would require more equipment over a longer timeframe than smaller ones.

Given that the timing and scale of construction activities that could occur under implementation of the proposed GPU is unknown, it is not possible at this time to accurately assess the level of emissions that would be generated by future development and redevelopment activities in the City. It is possible that either no construction could be occurring within the Planning Area at any given time, or multiple projects could be occurring simultaneously. Despite these unknowns, it is plausible that one or more projects developed under implementation of the proposed GPU could have the potential to exceed one or more of the SCAQMD's construction criteria air pollutant threshold of significance. For example, a project involving a substantial amount of demolition, excavation, or grading could have significant NOx or PM_{10} emissions and a project with substantial architectural coating activities could have significant ROG emissions. Therefore, this impact is potentially significant and requires mitigation.

Operational Emissions. The project would accommodate new residential and non-residential land uses. Overall, project implementation would increase residential uses by 10,350 dwelling units and the non-residential uses by approximately 2.7 million square feet in the Planning Area under year 2045 growth conditions.

Growth under the GPU would result in long-term regional emissions of criteria air pollutants associated with the operation of area sources, energy sources, and mobile sources. Area source emissions, which are widely distributed and made of many small emissions sources (e.g., landscaping equipment, consumer products, painting operations, etc.), were modeled according to the size and type of land uses proposed. Energy sources, which include natural gas combustion for heating and other purposes, were also modeled based on the size and type of land uses included in the GPU's proposed 2045 growth forecast. Mobile-source emissions were modeled based on the daily vehicle trips that would result from the proposed GPU. The net change in emissions of regulated air pollutants that would occur with implementation of the GPU was modeled using CalEEMod, V. 2022.1.1. The net change in operational emissions for the GPU was modeled based on the GPU's 2045 growth projection, using default data assumptions provided by CalEEMod, with the following project-specific modifications:

- **Land Use Development:** The default acreage, units, and square footage for proposed development intensities within the Planning Area were adjusted to reflect proposed development conditions (see Chapter 3, Project Description, Table 3-5).
- **Mobile Sources:**
    - **Trip Generation and Distance:** The default weekday and weekend trip generation rates and trip lengths were adjusted based on the total daily VMT data and regional average trip length from the traffic report prepared for the GPU by Ganddini. The model used trip distances of 9.7 miles using the regional average and using this average, scaled the trip generation values from CalEEMod defaults consistent with the total daily VMT data.
    - **Emission Factors:** Emission factors were updated from the CalEEMod defaults, which use EMFAC2021 v1.0.1, to emission factors derived from EMFAC 2025 v2.1.0. Please see Appendix D for details. This change was made to the modeling since EMFAC 2025 v2.1.0 reflects the current regulatory environment, such as U.S. EPA revoking California's waivers for Advanced Clean Cars II, Advanced Clean Trucks (ACT), Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions (Warranty Phase 1), and Heavy-Duty Omnibus.

The net increase in long-term operational emissions that would be generated by GPU growth is shown in Table 4.3-6. As explained in Section 4.3.1, under the "Existing Emissions Levels in the Planning Area" discussion, the net change in emissions evaluated in this EIR is based on the difference between the existing land uses under future year 2045 conditions and the proposed GPU land uses under 2045 growth conditions.

Table 4.3-6: 2045 Project Growth Forecast Operational Emissions (Unmitigated)

Emissions Scenario	Maximum Daily Pollutant Emissions (Pounds per Day)[A]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Project Growth Forecast Operational Emissions in Year 2045 (Downey GPU)						
Mobile Source	1,441	477	17,337	10	3,227	827
Area Sources[B]	15,281	986	28,274	62	3,395	3,333
Energy Sources	28	491	284	3	39	39
Total[B]	16,749	1,953	45,895	75	6,662	4,199
Existing General Plan Land Uses Year 2045 Condition[C]						
Mobile Source	1,295	421	15,256	9	2,830	11
Area Sources	12,258	771	22,786	48	2,657	2,608
Energy Sources	24	427	250	3	34	34
Total[B]	13,577	1,619	38,291	60	5,521	2,652
Net Increase in Emissions Levels						
Mobile Source	146	56	2,081	1	397	816
Area Sources	3,023	215	5,488	14	738	725
Energy Sources	4	64	34	0	5	5
Total[B]	3,172	334	7,604	15	1,141	1,547
SCAQMD CEQA Threshold	55	55	550	150	150	55
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: MIG, 2026 (see Appendix D) and SCAQMD 2019b.
(A) Emissions estimated using CalEEMod, V 2022.1.1. Estimates are based on default model assumptions unless otherwise noted in this document. Maximum daily ROG, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions occur during the summer. Maximum daily NO_X emissions occur during the winter.
(B) Totals may not equal due to rounding.
(C) See Table 4.3-3.

As shown in Table 4.3-6, maximum daily operational emissions associated with potential 2045 growth under the GPU exceed the SCAQMD's recommended regional pollutant thresholds for all pollutants except SO_2. Area sources (e.g., consumer products, gas fireplaces, and landscaping equipment) and mobile sources combined account for almost all net ROG, CO, PM_{10}, and $PM_{2.5}$ emissions, and for approximately 81% of net NO_x emissions, that would occur under the implementation of the GPU, with the remaining 19% of net NO_x emissions attributable to energy sources (e.g., natural gas consumption). Area sources and mobile sources account for, respectively, approximately 95% and 5% of net ROG emissions, 64% and 17% of net NO_x emissions, 72% and 27% of net CO emissions, 65% and 35% of net PM_{10} emissions, and 47% and 53% of net $PM_{2.5}$ emissions. Whereas the increases in mobile source emissions are directly attributable to increases in VMT (associated with more people living and working within the Planning Area), the increases in area sources would be due to a combination of factors, including reapplication of architectural coatings and the use of consumer products (e.g., cleaning products), but is primarily due to increased emissions from hearths. Approximately 87% of the increase in maximum daily area source ROG emissions (2,704 out of 3,096 pounds per day), 98% of the increase in maximum daily area source NO_X emissions (215 of 220 pounds per day), 88% of the increase in maximum daily area source CO emissions (5,264 of 5,970 pounds per day), and 100%

of the increase in maximum daily area source PM_{10} and $PM_{2.5}$ emissions are associated with new hearths.

Emissions from mobile sources are expected to decrease over time, due to vehicle turnover, improvements in emissions technologies, and compliance with regulations. Additionally, the GPU contains numerous policies that would reduce air pollution from vehicles by reducing VMT through the support of mixed-use development, active transportation, and transit, such as Policy C-4.1 (First- and Last-Mile Connectivity), Policy C-4.4 (Promote Public Transit as a Mode of Travel), Policy C-11.1 (Complete Streets Design), Policy CR-9.2 (Clean and Active Transportation), Policy N-1.4 (Low-Emission Vehicles and Active Transportation), Policy EJ-2.2 (Safety and Complete Streets), Policy LU-5.2 (Transit-Oriented Development), Policy LU-5.4 (Metro C Line Station Area), Policy LU-5.5 (Southeast Gateway Transit-Oriented Development), Policy LU-6.2 (Mobility and Access), Policy OS-7.1 (Trail Networks), Policy OS-7.3 (Transit and Active Transportation), Policy OS-7.4 (Trail and Bikeway Networks), Policy D-4.2 (Pedestrian Environment), and Policy C-4.2 (Transit-Enhanced Plan for Development) encourages higher-density, mixed-use development along transit corridors to support frequent, reliable, and convenient service, while reducing dependence on single-occupancy vehicles. Furthermore, the GPU contains policies that would reduce mobile source emissions from vehicles by supporting electric vehicles. Policy C-9.3 (Low-Carbon and Resilient Transportation) promotes electrification of vehicles and infrastructure, Policy C-5.7 (Regional Collaboration) support zero emission freight corridors, Policy N-1.4 (Low-Emission Vehicles and Active Transportation) and Policy CR-9.2 (Clean and Active Transportation) encourage the adoption of electric vehicles, Policy EJ-1.10 (Truck and Transportation Emissions) supports the electrification of freight and public transit vehicles, and Policy C-4.5 (Reduced-Emission Transit Infrastructure Planning) supports the transition to an electric bus fleet.

Nevertheless, as described in Section 4.3.1, the South Coast Air Basin is designated nonattainment for national and state ozone standards, and NOx and ROG are ozone precursor pollutants. Additionally, the Basin is in nonattainment for state PM_{10} standards and national and state $PM_{2.5}$ standards. The exceedances of SCAQMD operational thresholds for ROG, NOx, PM_{10}, and $PM_{2.5}$ represent potentially significant impacts that require mitigation.

Level of Significance Before Mitigation

Potentially significant construction and operational impacts.

Mitigation Measures

AQ-2A: Require a Project-level Construction Air Quality Assessment for Conditional uses and New Discretionary Development Projects.

Prior to a discretionary approval by the City for development projects subject to CEQA (meaning, non-exempt CEQA projects), project applicants shall prepare and submit a technical assessment evaluating potential project-specific construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during construction activities. The specific strategies identified for a project shall be included as conditions

of project approval, and be incorporated into all appropriate construction bid, engineering, and planning documents prepared for the project. Potential strategies to reduce construction-related emissions include, but are not limited to:

- Using heavy-duty off-road construction equipment that meets U.S. EPA Tier IV Final emissions standards (for equipment greater than 50 horsepower), either through original manufacturer's certification or through the use of California Air Resources Board verified diesel emissions control strategies (e.g., a diesel particulate filter).
- Using electric equipment, particularly for equipment less than 50 horsepower
- Using alternative fuels such as renewable diesel, biodiesel (no more than B20 blend), or liquefied or compressed natural gas biodiesel,
- Using smaller equipment that can complete the same construction activities in the same time as standard-sized equipment.
- Limiting idling time of diesel-powered construction equipment to two (2) minutes.
- Ensuring equipment brought to a site has been properly serviced and maintained in accordance with manufacturer's standards.
- Implementing applicable SCAQMD fugitive dust control measures.
- Using interior and exterior coatings that meet SCAQMD Rule "Low-VOC" or "Super-Compliant" definitions.

AQ-2B: Require a Project-level Operational Air Quality Assessment for New Discretionary Development Projects.

Prior to a discretionary approval by the City for development projects subject to CEQA (meaning non-exempt CEQA projects) project applicants shall prepare and submit a technical assessment evaluating potential project-specific operation air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during operational activities. The specific strategies identified for a project shall be included as conditions of approval, and be incorporated into all appropriate planning documents for the project. Potential strategies to reduce operational emissions include, but are not limited to the following:

- Reducing vehicle trips or vehicle miles travelled (VMT) generated by residential and non-residential projects
- Reducing or eliminating new natural gas fireplaces and hearths in residential projects
- Reducing or eliminating new natural gas appliances in residential and non-residential projects
- Reducing or prohibiting gasoline-powered landscaping equipment in residential and non-residential projects
- Incorporating clean air vehicle parking, bicycle parking, and electric vehicle and truck charging infrastructure that meets the additional, voluntary standards established in the version of the CALGreen code in effect at the time the building permit application is submitted for a project
- Incorporating appropriate transit-supporting infrastructure into site plans

Level of Significance After Mitigation

Significant and unavoidable.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

Impact AIR-3 – Would the project expose sensitive receptors to substantial pollutant concentrations?

Analysis of Impacts

Growth projected to occur under the GPU could expose existing and new sensitive receptors to substantial concentrations of criteria air pollutants and TAC emissions that pose adverse health effects. The potential for the proposed GPU to expose sensitive receptors to substantial pollutant concentrations is evaluated below.

CO Hotspots. Based on the travel demand forecast modeling conducted for the GPU by Ganddini, the estimated maximum number of vehicles moving through any road segment under the GPU's 2045 growth project would be approximately 8,310 vehicles per hour (Ganddini 2026).[iv] This level of traffic is substantially below the screening threshold of 44,000 vehicles per hour for a CO hotspot analysis (See Section 4.3.3). Therefore, the GPU would not cause or significantly contribute to CO concentrations that exceed State or Federal ambient air quality standards for CO. This impact would be less than significant.

Construction Emissions. As discussed under Impact AQ-2, future development activities facilitated under implementation of the proposed GPU would generate emissions, including emissions of DPM (a TAC), during construction activities. These emissions would occur intermittently over the approximately 20-year growth period associated with the GPU. Although specific details regarding project development within the Planning Area are not known at this time, it is possible that one or more projects developed under implementation of the proposed GPU could have the potential to exceed SCAQMD thresholds of significance for cancerogenic and non-cancerogenic health risks (see Section 4.3.3). This represents a potentially significant impact.

Operational Emissions. In addition to criteria air pollutant and TAC emissions on a local scale, receptor exposure to elevated concentrations of criteria air pollutants (e.g., CO, O_3, and PM) is capable of causing adverse health effects on heart, lung, and other organ systems. As described under Impact AIR-2, the proposed GPU would generate cumulatively considerable ROG and NOx emissions, which are precursors for O_3, and for PM_{10} and $PM_{2.5}$ emissions – pollutants for which the region is designated nonattainment. However, operational emissions would not expose receptors to substantial operational pollutant concentrations, as described below.

In the amicus brief filed by the SCAQMD on the California Supreme Court's decision in *Sierra Club versus County of Fresno*, the SCAQMD noted that, "[it] takes a large amount of additional precursor emissions [e.g., NOx] to cause a modeled increase in ambient ozone levels… a project emitting only 10 tons per year of NOx or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models used to determine ozone

[iv] The maximum hourly number of vehicles along any road segment under 2045 Project conditions was estimated based on intersection with the highest ADT (Florence Avenue, with 45,900 trips between Old School Road and Paramount Boulevard and Paramount Boulevard, with 37,200 trips between Gallatin Road and Florence Avenue). A value of ten percent (10%) of the average daily trips was used as an approximation of peak hour traffic.

levels…" (SCAQMD 2015). Although implementation of the GPU is anticipated to increase ROG, NO_X, and PM emissions within the Planning Area and greater SCAG region, any analysis linking potential adverse health risks to corresponding pollutant concentrations would be speculative for several reasons.

First to estimate potential adverse health effects from regional emissions, it is necessary to have information on the sources of the ozone precursor emissions, such as the location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors exposed to the emissions (SCAQMD 2015). While the general nature of the emissions sources occurring with implementation of the proposed GPU is known (i.e., area source, energy source, mobile source), the specific location of these sources within the Planning Area is not known, nor is other information, including source emission rate, exit velocity, operating characteristics (e.g., daytime or nighttime, seasonal or steady-state), etc.

Second, approximately five percent of the ROG emissions estimated to occur under net 2045 growth would be from mobile sources (i.e., vehicle trips) that would potentially travel on numerous local and regional roadways throughout the Planning Area and beyond that would be subject to varying meteorological and topographical influences. These emissions would be subject to small scale air patterns, such as those formed as wind passes between buildings and other anthropogenic features (e.g., cars), creating eddies and other turbulence that affect pollutant transport. The remaining approximately 95 percent of ROG emissions would be attributable to area sources, including hearths, consumer products, landscaping equipment, and architectural coatings. Approximately 87 percent of net maximum daily ROG emissions would be attributable to hearths, 10 percent to the additional use of consumer products, 2 percent to landscaping equipment, and 1 percent to architectural coatings. Area sources including hearths would vary in temporal and spatial distribution throughout the Planning Area. Furthermore, sources such as consumer products and architectural coatings may be used indoors as well as outdoors – the rate at which they are used, as well as operational characteristics of how they are used (e.g., windows opened or closed) – would affect the rate and manner that they are dispersed in accordance with wind circulation patterns in their vicinity.

Third, as mentioned previously, the SCAQMD has stated (SCAQMD 2015, pgs. 10-11):

> *"For the so-called criteria pollutants, such as ozone, it may be more difficult to quantify health impacts . . . It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources . . . Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes . . . However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NOx by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_X or VOC emissions from relatively small projects."*

As noted previously, the total estimated increase in ROG emissions associated with implementation of the GPU is estimated to be approximately 3,096 pounds per day under unmitigated conditions, or approximately 0.8% of the ROG increase identified by the SCAQMD in its amicus brief filed on the California Supreme Court's decision in *Sierra Club versus County of Fresno*. As such, the increase in ROG emissions is anticipated to increase O_3 concentrations

more likely in the parts per trillion range, rather than the parts per billion range. This is a magnitude of order less than the change identified by the SCAQMD.

Finally, adverse health effects associated with receptor exposure to criteria air pollutant concentrations are cumulative in nature. In other words, any potential health effects associated with GPU operational emissions would also need to be considered in light of background pollutant emissions. As discussed previously in this EIR chapter, there are many efforts being undertaken at the state and regional level to reduce criteria air pollutant emissions from stationary and mobile sources. These actions are anticipated to reduce pollutant concentrations throughout the Planning Area and Basin over the next few decades. Therefore, even if the proposed GPU does increase emissions in and in proximity of the Planning Area, criteria air pollutant concentrations in the region could still be lower in the future than they are currently due to the advancement of cleaner technologies.

As described above, it would be speculative to transform the mass increase in criteria air pollutant emissions that could occur with implementation of the proposed GPU into quantifiable health risks for several specific reasons, including the uncertain location of emission points, velocity of emissions, the meteorology and topography of the area (which could affect the transport rate and photochemical reactions needed to produce ozone), and background criteria air pollutant emissions in the future. However, given that the GPU's operational emissions are far less than that modeled by the SCAQMD for its 2012 AQMP, which showed a relatively minor decrease in criteria air pollutant concentrations for a large amount of mass emissions, emissions associated with implementation of the proposed GPU would not expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant.

Exacerbation of Existing Sources of Pollution. GPU growth would generally add new residential development in the Planning Area and could place new sensitive receptors in proximity to existing sources of emissions, such as the I-5 Freeway, the I-605 Freeway, the I-105 Freeway, the I-710 Freeway, Union Pacific rail lines, and local stationary sources of emissions. Portions of the city are located adjacent to these highways and freeways. Although the project itself would not expose sensitive receptors to substantial pollutant concentrations associated with mobile source emissions, the scale and extent of exposure of future development under the amended general plan to mobile sources of TACs cannot be known at this time, and impacts would be potentially significant, and Mitigation Measure AQ-2C has been incorporated requires project- and site-specific Health Risk Assessments (HRAs).

Per the ruling by the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015), projects are not required to analyze how existing conditions might impact a project's future users or residents. As such, this analysis does not focus on potential, future receptor exposure to existing emissions from existing sources of pollutants in and near the Planning Area. Rather, it focuses on the incremental increase in pollutant concentrations and associated impacts (including adverse health impacts) that could occur if existing operations were to change as a result of GPU growth.

The GPU generally would add new residential development, mainly through accessory dwelling units and multifamily residential units, and nonresidential development, through commercial, industrial, office, hotel, public facility, and medical uses (see Table 3-3 of the Project Description). Most of the proposed non-residential building space would be commercial, with a net increase of approximately 1.2 million square feet of commercial building space, followed by industrial (535,700 square feet), office (466,064 square feet), hotel (300 units), public facilities (424,250 square feet), and medical (96,300 square feet). Land uses such as residential, hotel, office, public

facilities, medical uses, and some commercial uses generally do not include major sources of operational criteria air pollutant emissions (e.g., stationary sources associated with industrial developments). Mixed-use developments also generally do not include major sources of operational criteria air pollutant emissions due to land-use conflicts with residential dwelling units on top of or in the immediate proximity of the non-residential land uses associated with the mixed-use development.

The GPU's approximate 0.5 million square foot increase in industrial building space could involve the operation of stationary equipment and diesel-powered trucks. However, policies in the GPU (e.g., Policy LU-1.3: Land Use Compatibility, Policy EJ-1.2: Industrial and Commercial Impacts, Policy EJ-1.3: Development Review for Sensitive Areas, and Policy EJ-1.4: Vegetation and Green Buffers) seek to reduce land use conflicts between industrial activities and sensitive receptors and calls for industrial and high-intensity commercial uses near sensitive receptors to reduce air quality impacts. This impact would be less than significant.

Additional Information on Existing Sources of Pollutants. The proposed GPU could result in new sensitive receptors being exposed to significant sources of TAC emissions. The CARB *Air Quality and Land Use Handbook* recommends avoiding the siting of new sensitive land uses (e.g., residences, schools, etc.) within:

- 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry cleaning operations;
- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

A review for gas stations and dry cleaning facilities within the Planning Area indicates there may be approximately 15 dry cleaning facilities and multiple gas station facilities located within the Planning Area. The I-5, I-605, I-105, and I-710, as well as the Union Pacific rail lines and the Metro C Line are located within the Planning Area. There are existing residential receptors near these facilities, in some cases within 500 feet, and the proposed GPU would locate some new residences within 500 feet of these locations. However, the GPU contains policies that would limit the placement of residential uses near existing industrial operations (Policy S-3.4: Placement of Sensitive Uses), apply enhanced review standards for industrial or commercial uses near sensitive receptors (Policy EJ-1.3: Development Review for Sensitive Areas), call for industrial or commercial uses near sensitive receptors to mitigate air quality impacts (Policy EJ-1.2: Industrial and Commercial Impacts), use buffers between pollution sources such as freeways, railroads, and industrial areas and residential receptors (Policy LU-1.3: Land Use Compatibility and Policy EJ-1.4: Vegetation and Green Buffers), design truck routes, limit idling, and electrify freight to reduce residential exposure to trucks (Policy EJ-1.10: Truck and Transportation Emissions), and monitor and evaluate facilities that generate TAC emissions to reduce exposure risks (Policy S-3.5: Toxic Air Emissions Monitoring).

As identified in Section 4.3.1, approximately 64% of census tracts within the Planning Area are considered disadvantaged communities based on the SB 535 scoring definition. The proposed GPU could result in the placement of additional, residential receptors within these census tracts that are exposed to high levels of pollution; however, as noted above, the City would implement various policies to help control existing sources of pollutants and reduce receptor exposure to those pollutants.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See **Mitigation Measures AQ-2A** above.

AQ-2C: For individual projects that may be located within Disadvantaged Communities, or that may site new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day, the applicant shall prepare a Health Risk Assessment (HRA) evaluating the potential for sensitive receptors to be exposed to TACs, which shall be required for such individual projects. The HRA shall be prepared in accordance with the policies and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and the South Coast Air Quality Management District (SCAQMD). If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceed the respective thresholds, as established by the SQAQMD at the time a project is considered (i.e., 10 in one million cancer risk and 1 hazard index), the project applicant will be required to identify and demonstrate that best available control technologies to reduce substantial exposure of sensitive receptors to TACs. Examples may include, but are not limited to, air intakes located away from high-volume roadways and/or truck loading zones unless it can be demonstrated that these are operational limitations and/or heating, ventilation, and air conditioning (HVAC) systems provided with appropriately sized maximum efficiency rating value (MERV) filters. Mitigation measures identified in the HRA shall be incorporated into the site development plan as a component of the proposed project. Air intake and MERV filter requirements shall be noted on all building plans submitted to the City of Downey Community Development Department.

Level of Significance After Mitigation

Significant and unavoidable.

CO Hotspots: Not applicable.

Construction Emissions: There is uncertainty regarding the specific nature of construction activities that would be facilitated under implementation of the proposed GPU. Despite the implementation of Mitigation Measure AQ-2A, which requires the preparation of project-specific air quality analysis prior to the construction of any new development and incorporation of mitigation if emissions levels are shown to be above SCAQMD-recommended thresholds of significance for cancerogenic and non-cancerogenic risks, as well as SCAQMD LSTs, it cannot be definitively known or stated at this time that all future development projects occurring under implementation of the proposed GPU would be able to reduce potential risks and localized construction air pollutant emissions to levels that are below SCAQMD thresholds. Therefore, with regard to localized criteria air pollutant and TAC emissions generated during future construction activities, this impact would be significant and unavoidable even with the incorporation of feasible mitigation measures.

Exacerbation of Existing Sources of Pollutants: Less than significant impact after incorporation of Mitigation Measure AQ-2C.

Additional Information on Existing Sources of Pollutants: Not applicable.

Odors

Impact AIR-4 – Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Analysis of Impacts

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations, such as manufacturing uses that produce chemicals, paper, etc. (e.g., asphalt batch plants, chemical manufacturing plants, composting/green waste facilities, painting/coating operations. The GPU does not propose such sources.

Construction occurring within the Planning Area could produce odors from fuel combustion or solvents/paints used. These odors would be temporary, quickly disperse, and would not affect a substantial number of people.

Under the 2045 growth projection, the GPU would increase the amount of residential and non-residential development in the city, including multi-family development that could be located close to retail, restaurant, and other commercial land uses that may generate localized sources of odors that may or may not be objectionable to nearby residential land uses; however, locating future receptors in proximity of sources of odors would not constitute a CEQA impact. The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." Therefore, even if receptors are located in proximity of existing sources of odor, this would be a case of how the existing environment would impact the project, which is (generally) not an assessment required under CEQA.

The GPU does not permit or authorize any new, major sources of potential odors (e.g., wastewater treatment plant), and odor impacts would be less than significant with standard environmental review practices.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact AIR-5 – Would the project cause substantial adverse cumulative impacts with respect to air quality?

Analysis of Impacts

As described in Section 4.3.1, the Basin is designated nonattainment for national and State O_3 standards, national and State $PM_{2.5}$ standards, and national PM_{10} standards. The SCAQMD, in

developing its CEQA significance thresholds, considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003b; page D-3). The SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant.

The growth that could occur under the GPU's 2045 growth conditions would be inconsistent with the 2020 RTP/SCS growth forecasts and, as discussed under Impact AQ-2, could result in construction and operational emissions that exceed the SCAQMD's recommended regional CEQA thresholds. Although the mass amount of emissions attributable to a single project (i.e., pounds per day) does not necessarily contribute to air pollution levels measured within the Basin and in or near the City, the SCAQMD, in developing its CEQA significance thresholds, considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD 2003b; page D-3). The SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. Since potential growth under the GPU would be inconsistent with current AQMP projections and could lead to construction and operational emissions that exceed SCAQMD regional CEQA thresholds, the proposed GPU could increase the frequency and/or severity of air quality violations in the Basin or otherwise impede attainment of air quality standards, particularly national and state O_3, PM_{10}, and $PM_{2.5}$ standards. This is considered a potentially significant impact.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measures AQ-2A and AQ-2B.

Level of Significance After Mitigation

Significant and unavoidable.

4.3.6 REFERENCES

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4.4 – BIOLOGICAL RESOURCES

This EIR chapter addresses whether the project would cause a substantial adverse effect on special status wildlife species. This chapter also addresses potential substantial project effects on riparian habitat/sensitive natural communities and on state or federally protected wetlands. Project impacts related to substantial interference with wildlife movement or use of wildlife nurseries is also addressed. Also addressed are potential conflicts with local policies protecting biological resources or with the provision of an adopted habitat conservation plan. Lastly, potential cumulative biological resources impacts from the project are addressed.

4.4.1 – ENVIRONMENTAL SETTING

The City of Downey is almost completely developed, with very little undeveloped open space or open space not dedicated to parks and recreation land uses. The Planning Area is relatively flat, with elevations ranging from 81 feet above mean sea level (AMSL) in the southwest portion of the Planning Area to 140 AMSL in the northeastern portion of the Planning Area. Downey has no Significant Ecological Areas (SEAs) designated by Los Angeles County Department of Regional Planning (LACDRP) within the Planning Area (LACDRP, 2025). The Downey Vision 2025 General Plan does not identify any unique biological resources within the Planning Area.

The City of Downey is between the Rio Hondo River on the northwest and the San Gabriel River on the southeast. The portion of the Rio Hondo River that runs along the City's northwest border is completely channelized with concrete. The portion of the San Gabriel River along the southeast border is channelized with concrete generally south of Firestone Boulevard and is a soft-bottom channel generally north of Firestone Boulevard to north of Telegraph Road.

Sensitive Wildlife and Plant Species

Since the City of Downey has been largely developed for several decades, suitable habitat for rare or sensitive species is limited within much of the Planning Area. The Planning Area is urbanized, and due to the existing level of disturbance within the Planning Area, vegetation is primarily ruderal and ornamental, and no sensitive plant species are expected to be encountered. Wildlife expected within the Planning Area would be primarily non-sensitive wildlife that generally inhabit disturbed urban areas (such as raccoons, squirrels, coyotes, rats, common bird species, etc.).

The Planning Area is located on the South Gate and Whittier, California 7.5-minute series United States Geological Survey (USGS) topographic quadrangle maps. Table 4.4-1 shows sensitive species that have been recorded in the California Natural Diversity Database (CNDDB) for the South Gate and Whittier topographic quadrangles (which encompasses the Planning Area and adjacent areas). All these species have low potential to occur and/or are not expected to occur within the Planning Area due to the marginally suitable habitat available or lack of habitat.

The nearest potentially extant populations of species identified in the database search are expected to be outside of the Planning Area within or near unchannelized portions of the Los Angeles River.

Table 4.4-1: Federal- and State-Listed Species and Other Special Status Species				
Type	**Scientific Name**	**Common Name**	**Status**	**Occurrence in Planning Area**
Amphibians	*Spea hammondii*	Western spadefoot	SSC	Low potential to occur in Planning Area.
Birds	*Aquila chrysaetos*	Golden eagle	FP, WL	Low potential to occur in Planning Area
	Athene cunicularia	Burrowing owl	SSC	Low potential to occur in Planning Area.
	Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FT, SE	Low potential to occur in Planning Area.
	Empidonax traillii extimus	Southwester willow flycatcher	FE, SE	Low potential to occur in Planning Area.
	Setophaga petechia	Yellow warbler	SSC	Low potential to occur in Planning Area.
	Spizella breweri	Brewers sparrow	FT	Low potential to occur in Planning Area.
	Polioptila calfornica californica	Coastal California gnatcatcher	FT	Low potential to occur in Planning Area.
	Vireo bellii pusillus	Least Bell's vireo	FE, SE	Low potential to occur in Planning Area.
Mammals	*Myotis velifer*	Cave myotis	SSC	Low potential to occur in Planning Area.
	Taxidea taxus	American badger	SSC	Low potential to occur in Planning Area.
Reptiles	*Anniella stebbinsi*	Southern California legless lizard	SSC	Low potential to occur in Planning Area.
	Phrynosoma blainvillii	Coast horned lizard	SSC	Low potential to occur in Planning Area.
Plants	*Centromadia parryi ssp. australis*	Southern tarplant	1B.1	Low potential to occur in Planning Area.
	Navarretia protrata	Prostrate vernal pool navarretia	1B.2	Low potential to occur in Planning Area.
	Orcuttia californica	California Orcutt grass	FE, SE, 1B.1	Low potential to occur in Planning Area.
	Phacelia stellaris	Brands star phacelia	1B.1	Low potential to occur in Planning Area.

Source: California Natural Diversity Database. December 2025 (South Gate and Whittier Quadrangles)
Relevant Species Status Codes:
FE = Federally listed as endangered; FT = Federally Threatened ; FSC = Federal Special Concern Species (a "term-of-art" for former Category 2 candidates);
ST = State Threatened; SE = State-listed as Endangered; SCE = State Candidate Endangered; SSC = California Special Concern species by CDFW;
1B.1 = Plants rare, threatened, or endangered in California and elsewhere, seriously threatened in California; 1B.2 = Plants rare, threatened, or endangered in California or elsewhere, fairly threatened in California; 4.2 = Plants of limited distribution, fairly threatened in California.

Sensitive Natural Communities and Habitats

Vegetation communities within the Planning Area include only "*Developed or Disturbed"* land (CNDDB, 2025). This category refers to areas of the Planning Area that have been modified by human activity. The vegetation communities found here are generally composed of non-native ornamental trees and shrubs. Commonly planted landscape ornamentals within the Planning Area include species such as Canary Island Pine (*Pinus canariensis*), blue gum (*Eucalyptus globulus*), sweet gum *(Liquidambar styraciflua)*, oleander *(Nerium oleander)* mock orange (*Pittosporum*

tobira), African daisy *(Dimorphotheca sinuate),* rosemary *(Rosmarinus officinalis*), and fountain grass *(Pennisetum setaceum*) to name a few. Non-native herbs [such as cheeseweed (*Malva parviflora*), prostrate knotweed (*Polygonum aviculare*), sow thistle (*Sonchus oleraceus*), wild radish (*Raphanus sativus*)] and grasses [e.g., (*Bromus* spp.), Johnsongrass (*Sorghum halepense*), and Bermuda grass (*Cynodon dactylon*)] are found throughout the Planning Area on vacant parcels.

Since the City is largely developed, sensitive natural communities are limited within the Planning Area and are not expected to occur within the most developed areas of the City. The City's park system consists of 13 parks totaling approximately 122 acres. Two golf courses within the Planning Area, Rio Hondo Municipal Golf Course and Los Amigos Golf Course, total approximately 236 acres of open space. Except for Wilderness Park, the City's parks and open space facilities provide low or marginal quality habitat for biological resources. Wilderness Park, located between the San Gabriel River and Interstate 605 just south of Florence Avenue, includes two ponds totaling approximately 1.93 acres of Freshwater Pond habitat, classified by USFWS as a Palustrine System with an Unconsolidated Bottom that is Permanently Flooded. Other parks and recreation uses within the Planning Area provide very limited habitat, but trees and other plantings may support migrating songbirds, raptors, and other wildlife known to occupy disturbed urban environments.

Riparian/Wetland Habitats

According to the USFWS, the soft-bottom portion of the San Gabriel River that runs through the Planning Area between Firestone Boulevard and just north of Telegraph Road is comprised of approximately 700 acres of riverine habitat classified as an Intermittent Streambed that is Seasonally Flooded (USFWS, 2025). This portion of the San Gabriel River also includes approximately 1.38 acres of Freshwater Emergent Wetland habitat classified as an Emergent Palustrine System, and approximately 4.18 acres of Freshwater Forested/Shrub Wetland habitat classified as a Seasonally Flooded Palustrine System. As discussed above, Wilderness Park includes two ponds totaling approximately 1.93 acres of Freshwater Pond habitat classified by USFWS as a Palustrine System with an Unconsolidated Bottom that is Permanently Flooded. Just outside of the Planning Area, within the Los Angeles River, wetland areas can be found that are significantly more substantive than any features within the Planning Area. Wetlands and jurisdictional waters are regulated by federal, state, and local agencies, as described in section 4.4.2 below.

4.4.2 – REGULATORY FRAMEWORK

Federal

<u>Endangered Species Act (FESA) (1973)</u>

FESA provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under FESA. FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA NMFS), (3) prohibitions against "taking" (meaning harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take". FESA also discusses recovery plans and the designation of critical habitats for listed

species. Section 7 requires Federal agencies, in consultation with, and with the assistance of the USFWS or NOAA NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Both the USFWS and NOAA NMFS share the responsibility for the administration of FESA.

Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10

The U.S. Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. §§ 703–712; 50 CFR Part 10), implements international treaties for the conservation of migratory birds and is administered by the USFWS. The MBTA prohibits the unauthorized take, possession, import, export, transport, sale, purchase, barter, or offer for sale of protected migratory birds, as well as their parts, nests, and eggs. The list of species protected under the MBTA is codified at 50 CFR § 10.13 and applies only to native migratory bird species; certain non-native, human-introduced species, such as European starling (*Sturnus vulgaris*) and rock pigeon (*Columba livia*), are excluded.

As of April 2025, the current USDOI interpretation is that the MBTA does not prohibit accidental or incidental take of migratory birds associated with otherwise lawful activities (USDOI 2017, 2025). However, intentional take of protected migratory birds, active nests, eggs, or young remains prohibited unless authorized by permit, such as for scientific collection, depredation control, or nest removal under limited circumstances. The MBTA does not provide or require a general incidental take permit for accidental or incidental take associated with otherwise lawful construction activities. This interpretation does not affect compliance obligations under other applicable federal or state wildlife protection laws, including the Bald and Golden Eagle Protection Act, the federal ESA, and California Fish and Game Code Sections 3503, 3503.5, and 3513.

The Clean Water Act Sections 404 and 401

The United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under section 404 of the Clean Water Act (CWA) (33 USC 1344). Waters of the United States are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent or “blueline” streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33 CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under section 404 include fill for development, water resource projects (e.g., dams and levees), infrastructure developments (e.g., highways, rail lines, and airports), and mining projects. Section 404 of the CWA requires a federal permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a water quality certification from the state in which the discharge originates. The discharge is required to comply with the applicable water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The EPA has delegated responsibility for the protection of water quality in California to the

State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

State

California Endangered Species Act (CESA)(1984)

CESA expands on the original Native Plant Protection Act (NPPA) of 1977 and enhances legal protection for plants, but the NPPA remains part of the California Fish and Game Code (CFGC). To align with FESA, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into CESA as threatened species but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The California Department of Fish and Wildlife (CDFW) implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the California Natural Diversity Database (CNDDB), a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities. During the CEQA review process, CDFW is given the opportunity to comment on the potential of the proposed Project to affect listed plants and animals.

Fully Protected Species and Species of Special Concern

The classification of "fully protected" was CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The CFGC sections (fish at §5515, amphibians and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with "fully protected" species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

Species of special concern (SSC) are broadly defined as animals not listed under FESA or CESA, but which are nonetheless of concern to CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by CDFW, land managers, consulting biologists, and others. It is intended to focus attention on these species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

California Fish and Game Code sections 3503 and 3513

According to section 3503 of the CFGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take

or possession of any migratory non-game bird. Disturbances that cause nest abandonment and/or loss of reproductive effort are considered "take" by CDFW.

California Fish and Game Code Sections 1600-1603

Under section 1602 of CFGC, CDFW has authority over any proposed activity that may substantially modify a river, stream, or lake. CDFW requires notification for any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. The CDFW typically considers a river, stream, or lake to include its riparian vegetation, but it may also extend to its floodplain. The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life". This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72).

In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself."

If the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be prepared, which includes reasonable conditions necessary to protect those resources. The applicant may then proceed with the activity in accordance with the final LSAA. Section 1602 does not extend to isolated wetlands and waters, such as small ponds not located on drainages.

Native Plant Protection Act (1977) (CFGC §§ 1900 through 1913)

The NPPA enacted the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by the CDFW, which has the authority to designate native plants as endangered or rare and to protect them from "take."

Sensitive Plants – California Native Plant Society

The California Native Plant Society (CNPS), a non-profit plant conservation organization, publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California. The Inventory assigns plants to the following categories:

- 1A Presumed extinct in California;
- 1B Rare, threatened, or endangered in California and elsewhere;
- 2 Rare, threatened, or endangered in California but more common elsewhere;
- 3 Plants for which more information is needed – A review list; and

- 4 Plants of limited distribution – A watch list.

Additional endangerment codes are assigned to each taxon as follows:

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

Plants on Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that qualify for listing by CDFW and/or other state agencies (e.g., California Department of Forestry and Fire Protection). As part of the CEQA process, such species should be fully considered, as they meet the definition of threatened or endangered under the NPPA and Sections 2062 and 2067 of the CFGC. CRPR 3 and 4 species are considered to be plants about which more information is needed or are uncommon enough that their status should be regularly monitored. Such plants may be eligible or may become eligible for state listing, and CNPS and CDFW recommend that these species be evaluated for consideration during the preparation of CEQA documents.

Sensitive Natural Communities

Sensitive natural communities are habitats that are either unique in constituent components, of relatively limited distribution in the region, or of particularly high wildlife value. These communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFW or the USFWS. The CNDDB identifies several natural communities as rare, which are given the highest inventory priority. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G)

Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) program of the CDFW takes a broad-based ecosystem approach to plan for the protection and perpetuation of biological diversity. The NCCP program, established pursuant to the 1991 NCCP Act (Fish and Game Code 2003) is broader in its orientation and objectives than CESA or FESA. While CESA and FESA are designed to identify and protect species that have already declined in significant numbers, the NCCP program seeks to prevent species listing by focusing on the long-term stability of wildlife and plant communities.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Porter-Cologne Act) (California Water Code section 13260) requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the “waters of the state” to file a report of discharge” with the RWQCB through an application for waste discharge. The RWQCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs (e.g. section 404 of the CWA).

Section 401 of the Clean Water Act

Regional Water Quality Conservation Boards (RWQCBs) regulate activities in "waters of the state", including wetlands, through section 401 of the CWA. "Waters of the state" are defined by the Porter-Cologne Water Quality Control Act (see below) as "any surface water or groundwater, including saline waters, within the boundaries of the state." While the USACE administers permitting programs that authorize impacts to "waters of the US," any USACE permit authorized for a project would be invalid unless the RWQCB has issued a project-specific water quality certification or waiver of water quality. A water quality certification requires a finding by the RWQCB that the activities permitted by the USACE will not violate water quality standards individually or cumulatively over the term of the issued USACE permit.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to biological resources that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

City of Downey Municipal Code and Local Resource Protection Requirements

The City's Municipal Code includes provisions that serve to protect biological resources through stormwater, urban runoff, and street tree protection requirements. Article V, Chapter 7 of the Municipal Code regulates stormwater and urban runoff pollution and incorporates the City's Watershed Management Program (WMP) as an enforceable element of the applicable Los Angeles Regional Water Quality Control Board Municipal Separate Storm Sewer System (MS4) Permit. Consistent with the MS4 Permit and the City's Low Impact Development (LID) requirements, new development and redevelopment projects are required to incorporate project-specific stormwater pollution control measures, including LID best management practices (BMPs), into project plans to reduce pollutant loads, runoff volume, and hydromodification effects to the maximum extent feasible. For planning priority projects, including projects located in or directly adjacent to an environmentally sensitive area where stormwater runoff is likely to affect a sensitive biological species or habitat and the project would create 2,500 square feet or more of impervious surface, the Municipal Code requires post-construction stormwater controls. Applicable projects must be designed to minimize impervious surfaces and control runoff through infiltration, evapotranspiration, bioretention, rainfall harvest and use, biofiltration, or other approved BMPs, and approved plans must include long-term maintenance and inspection responsibilities for structural and treatment control BMPs.

Article VII, Chapter 6 of the City of Downey Municipal Code, Street Tree Preservation and Protection, establishes requirements for the preservation, maintenance, removal, replacement, and construction-period protection of City street and median trees. The chapter recognizes street and median trees as aesthetic, economic, and environmental resources that contribute to the City's urban forest and natural environment and requires that such trees be protected from unlawful removal, trimming, vandalism, or damage. The chapter also authorizes the City to require protective measures for street trees during development and construction activities, and to require replacement where trees are removed or damaged in violation of the chapter.

City of Downey Urban Forest Master Plan

The City of Downey Urban Forest Management Plan (UFMP) provides the vision, goals, and strategies the City actively pursues toward growing and maintaining a sustainable urban forest. The UFMP is a guiding policy document that provides a framework over a 40-year period to reach its vision, with guiding principles, goals, and strategies set at short-term (1-5 years), medium-term (6-10 years), and long-term (11+ years). The UFMP guiding principles and goals reflect the City's priorities and the outcomes they plan to achieve. The strategies are the specific steps the City will take to measure its progress toward achieving its vision. The UFMP is based on the current City environmental and economic conditions, which may change in nominal or more significant ways during the implementation period. As such, the UFMP is an evolving management plan that is reviewed periodically against the current conditions and updated and adapted, as appropriate to meet the needs of the City and its residents.

4.4.3 – SIGNIFICANCE THRESHOLDS

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

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 CDFW or USFWS.

C. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

F. Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

G. Would the project cause substantial adverse cumulative impacts with respect to biological resources?

4.4.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to biological resources which could result from the implementation of the GPU and recommends mitigation measures as needed to reduce significant impacts.

Special Status Species Protections

Impact BIO-1 – Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or

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

Analysis of Impacts

Since Downey is largely developed, no populations of rare or sensitive species are known to occur within the City limits. Wildlife expected within the Planning Area would be non-sensitive wildlife that generally inhabit disturbed urban areas (such as raccoons, squirrels, coyotes, rats, common bird species, etc.). The Planning Area is located within the South Gate, California 7.5-minute series United States Geological Survey (USGS) topographic quadrangle map. Table 4.4-1 shows sensitive species that have been recorded in the California Natural Diversity Database (CNDDB) for the South Gate topographic quadrangle (which encompasses the Planning Area and adjacent areas). All of these species have low potential to occur and/or are not expected to occur within the Planning Area due to the marginally suitable habitat available or lack of habitat.

An approximately 1.5-mile portion of the San Gabriel River totaling approximately 700 acres, and two freshwater ponds at Wilderness Park totaling approximately 1.93 acres, provide the only potential wetland habitat for wildlife species within the Planning Area (USFWS, 2025a). These habitats would not be impacted by development facilitated by implementation of the GPU either directly or indirectly because no such development would occur within the River. Impacts to nesting birds would be less than significant with implementation of the requirements of the Migratory Bird Treaty Act.

Further the Conservation Element of the proposed GPU includes various goals and policies intended to protect wildlife species in Downey.

- Goal CR-4 and its policies strive for urban biodiversity and habitat connectivity supporting diverse wildlife and ecological function.
- Policy CR-4.1 seeks to expand native vegetation and create microhabitats in parks, river corridors, and landscaped areas to support small mammals, birds, pollinators, and other beneficial insects.
- Policy CR-4.3 promotes coexistence with wildlife by protecting habitats, minimizing human-wildlife conflicts, and maintaining healthy populations of native species.
- Policy CR-4.4 requires construction or other ground disturbing activities to avoid nests of native birds when in active use by implementing protection measures in compliance with the California Fish and Game Code and the Migratory Bird Treaty Act.
- Policy CR-4.6 seeks to treat the San Gabriel and Rio Hondo River corridors as essential ecological greenways and prioritizing native habitat restoration to support biodiversity.
- Policy CR-4.7 promotes the use of native landscaping in public and private spaces to support wildlife.
- Goal CR-5 aims for an expanded and resilient tree canopy and landscaped areas to enhance environmental quality in the City.
- Policy CR-5.4 strives to enhance the environmental benefits of urban trees for wildlife habitat in the City.

Nonetheless, implementation of the GPU could still result in significant impacts to listed or otherwise sensitive species or their habitats and incorporation of Mitigation Measure BIO-1 is required to reduce impacts to less than significant.

Level of Significance Before Mitigation
Potentially significant impact.

Mitigation Measures

BIO-1: The City shall require a note on demolition or grading plans that construction or other ground-disturbing activities avoid nests of native birds when in active use by implementing protection measures to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act.

When applications for development are submitted and where the City has determined a potential for impacts to special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters, projects shall be required to comply with the following mitigation framework:

Prior to the issuance of any permit for future development, a site-specific general biological resources survey shall be conducted to identify the presence of any sensitive biological resources, including any sensitive plant, wildlife species or regulated wetlands and waters. A biological resources report shall be submitted to the City to document the results of the biological resources survey and measures for protecting any resources and surrounding habitat. If potentially significant impacts to sensitive biological resources are identified, mitigation measures and project design features to minimize direct and indirect impacts on sensitive biological resources shall be implemented to reduce the impacts to below a level of significance.

Level of Significance After Mitigation

Less than significant impact.

Sensitive Natural Communities

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

Analysis of Impacts

The Planning Area is almost entirely urbanized, with no sensitive natural communities are known to occur. According to the CDFW, vegetation communities within the Planning Area include only "*Developed or Disturbed"* land (CDFW, 2025a). This category refers to areas of the Planning Area that have been modified by human activity. The vegetation communities found here are generally composed of non-native ornamental trees and shrubs.

Parks within the Planning Area may be used by migrating songbirds, raptors, and other wildlife known to occupy disturbed urban environments. As discussed in Impact BIO-1 above, sensitive plant and animal species have low potential to occur and/or are not expected to occur within the

Planning Area due to the lack of habitat. As also discussed, an approximately 1.5-mile portion of the San Gabriel River totaling approximately 700 acres, and two freshwater ponds at Wilderness Park totaling approximately 1.93 acres, provide the only potential wetland habitat for wildlife species within the Planning Area. The GPU does not provide for any development within the river or park; thus, neither the river nor the park would be disturbed by future development.

Further, the Conservation Element includes various policies intended to protect and preserve natural habitats within the City. Policy CR-4.1 seeks to expand native vegetation and create microhabitats in parks, river corridors, and landscaped areas. Policy CR-4.4 strives to restore natural processes through native plantings, pollinator gardens, shaded refuges, and small wetlands. Policy CR-4.5 aims to integrate pollinator-supportive vegetation into City parks, joint-use school sites, and landscaped area. Policy CR-4.6 seeks to treat the San Gabriel and Rio Hondo River corridors as essential ecological greenways and prioritize native habitat restoration to support biodiversity.

Nonetheless, implementation of the GPU still result in potentially significant impacts on riparian habitat or other sensitive natural communities of concern to federal or state resource agencies, and incorporation of Mitigation Measure BIO-1 is required to reduce impacts to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

BIO-1: The City shall require a note on demolition or grading plans that construction or other ground-disturbing activities avoid nests of native birds when in active use by implementing protection measures to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act.

When applications for development are submitted and where the City has determined a potential for impacts to special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters, projects shall be required to comply with the following mitigation framework:

Prior to the issuance of any permit for future development, a site-specific general biological resources survey shall be conducted to identify the presence of any sensitive biological resources, including any sensitive plant, wildlife species or regulated wetlands and waters. A biological resources report shall be submitted to the City to document the results of the biological resources survey and measures for protecting any resources and surrounding habitat. If potentially significant impacts to sensitive biological resources are identified, mitigation measures and project design features to minimize direct and indirect impacts on sensitive biological resources shall be implemented to reduce the impacts to below a level of significance.

Level of Significance After Mitigation

Less than significant impact.

Wetlands

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

Analysis of Impacts

As stated above, an approximately 1.5-mile portion of the San Gabriel River totaling approximately 700 acres, and two freshwater ponds at Wilderness Park totaling approximately 1.93 acres, provide the only potential wetland habitat for wildlife species within the Planning Area. However, these areas would not be directly impacted by future development under the GPU.

The Conservation Element includes Policy CR-4.6, which recognizes the San Gabriel and Rio Hondo River corridors as essential ecological greenways and prioritize native habitat restoration to support biodiversity.

Further, as part of protections for stormwater runoff, the Municipal Code Chapter 7 regulates stormwater and urban runoff pollution and incorporates applicable requirements of the Los Angeles Regional Water Quality Control Board MS4 Permit and the City's Watershed Management Program. New development and redevelopment projects are required to prepare a project-specific Urban Runoff Mitigation Plan and, where applicable, implement post-construction Low Impact Development (LID) best management practices (BMPs). Projects located in or directly adjacent to, or discharging directly to, an environmentally sensitive area are subject to post-construction stormwater control requirements where runoff is likely to affect a sensitive biological species or habitat and the project would create 2,500 square feet or more of impervious surface area. Future projects would be required to incorporate applicable LID and stormwater BMPs into project plans to reduce stormwater runoff-related impacts.

For these reasons, implementation of the GPU would not result in significant impacts to State or federally protected wetlands, vernal pools, or similar water-related features.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Fish and Wildlife Movement

Impact BIO-4 – 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?

Analysis of Impacts

Although the City is located within proximity of the Los Angeles, Rio Hondo, and San Gabriel River systems, these facilities do not provide habitat that support the significant movement of fish or wildlife species within or through the City or region. Due to its densely developed urban setting, the Planning Area does not contain any important natural biological communities, protected wildlife corridors, or protected wildlife nursery sites.

Individual development projects pursuant to the GPU would be evaluated with respect to potential impacts to wildlife movement, as part of the City's CEQA procedures, so that potentially significant impacts can be identified, along with design alternatives and/or mitigation measures to avoid or reduce impacts. As part of the CEQA review process, future projects that propose the removal of trees during the nesting bird season would be required to perform preconstruction nesting bird surveys and implement avoidance measures pursuant to the requirements of the Migratory Bird Treaty Act. By-right development, which is not subject to CEQA evaluation, must complete the City's Objective Design Standards checklist and adhere to all building permit requirements, zoning codes, and related planning documents. This would protect the movement of native resident or migratory birds or established native resident or migratory wildlife corridors or linkages by specifying appropriate buffers required to avoid sensitive habitats that could be used as corridors.

Further, the Conservation Element includes goals and policies intended to protect and enhance wildlife connectivity in the City. Goal CR-4 and its policies strive for urban biodiversity and habitat connectivity supporting diverse wildlife and ecological function. Policy CR-4.2 strives to enhance linkages between parks, green spaces, and river corridors to facilitate wildlife movement. Policy CR-4.6 recognize the San Gabriel and Rio Hondo River corridors as essential ecological greenways, prioritizing native habitat restoration to support migratory bird populations. These policies would further prevent impacts to wildlife movement and corridors.

For these reasons, no significant impacts to fish and wildlife movement would be expected as part of implementation of the GPU.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Conflicts with Local Biological Resources Plans

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

Analysis of Impacts

The City of Downey Urban Forest Management Plan (UFMP) provides the vision, goals, and strategies the City actively pursues toward growing and maintaining a sustainable urban forest. The UFMP is a guiding policy document that provides a framework over a 40-year period to reach its vision, with guiding principles, goals, and strategies set at short-term (1-5 years), medium-term (6-10 years), and long-term (11+ years). The UFMP guiding principles and goals reflect the City's priorities and the outcomes they plan to achieve. The strategies are the specific steps the City will take to measure its progress toward achieving its vision. The UFMP is based on the current City environmental and economic conditions, which may change in nominal or more significant ways during the implementation period. As such, the UFMP is an evolving management plan that is reviewed periodically against the current conditions and updated and adapted, as appropriate to meet the needs of the City and its residents.

Article VII, Chapter 6 (Street Tree Preservation and Protection) of the City's Municipal Code seeks to preserve and protect street and median trees of the City that are of aesthetic, economic and environmental importance and to provide for the replacement of trees to maintain the community's urban forest and natural environment. Section 7628 requires the protection of trees during construction or repair of buildings and outlines other measures to manage and implement the City's tree ordinance. Future development under the GPU would be required to adhere to the requirements and prohibitions of Article VII, Chapter 6 of the Municipal Code.

Further, the Conservation Element contains Goal CR-5, which states the City will strive for an expanded and resilient tree canopy in the City to enhance environmental quality and community resilience. Policy CR-5.3 seeks to protect and preserve mature, heritage, and significant trees during development, construction, and public projects to maintain ecological value.

With continued application of the City's tree preservation ordinance and implementation of GPU goals and policies, existing and future trees within the Planning Area would continue to support a variety of bird species tolerant of human activity and proximity.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Habitat Conservation Plans

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

Analysis of Impacts

According to the California Department of Fish and Wildlife, Natural Community Conservation Planning (NCCP) Program website, Downey is not located within an adopted or proposed NCCP (CDFW, 2025b). According to the U.S. Fish and Wildlife Service's Habitat Conservation Plan (HCP) website, the City of Downey is not located within any designated local, regional, or state habitat conservation plan (USFWS, 2025b). As such, GPU implementation would not result in any conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact BIO-7 – Would the project cause substantial adverse cumulative impacts with respect to Biological Resources?

Analysis of Impacts

As outlined in Impact BIO-6 above, the Planning Area does not contain any significant biological resources that would be impacted because of GPU implementation, including sensitive habitat or habitat that could support listed or otherwise sensitive species. The GPU would not contribute to substantial adverse cumulative impacts to biological resources, as the Planning Area is a developed urban area and no natural areas are targeted for development under the GPU. Therefore, cumulative impacts to biological resources from future development under the GPU would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

4.4.5 – REFERENCES

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4.5 – CULTURAL RESOURCES

This EIR chapter addresses potential project impacts related to substantial adverse changes in the significance of historical and archaeological resources. Project impacts related to disturbance of buried human remains are also analyzed in this chapter, as are potential cumulative project impacts with respect to cultural resources.

4.5.1 – ENVIRONMENTAL SETTING

Historical Setting

During the early Spanish era of California, the site of Downey was originally part of the 300,000 acre Manuel Nieto Land Grant. In 1834, the Nieto heirs split up this grant, and the portion between the banks of the Rio Hondo and San Gabriel River became Rancho Santa Gertrudes (Downey, 2025). Spurred by gold fever at the age of 22, John Gately Downey, an Irish immigrant, traveled from the East Coast to California. Ten years later (1860-1862), Downey was governor of the state in a nation entering its most tumultuous period as the Civil War broke out. Downey was instrumental in aligning California firmly on the side of the Union. At the end of his gubernatorial term, he returned to Los Angeles and made plans to divide his 17,000-acre Rancho Santa Gertrudes into small farms nestled along the banks of the San Gabriel River. The subdivision began in 1865.

Governor Downey's acquisition of Rancho Santa Gertrudes marked a shift in the primary use of the area (Downey, 2025). Rancho Gertrudes had been an open cattle range; it was changed to citrus and other crops which prospered for almost ninety years. John Downey divided the land into agricultural plots and new residents fleeing the aftermath of the Civil War developed a community. By 1873, the Southern Pacific Railroad built a line to this area between two settled areas called Gallatin and College Settlement and laid the foundations for a future city which marked a new era of prosperity for what became known as Downey City.

By the turn-of-the-century, Downey was the undisputed center of the business and social life of the area (Downey, 2005). In 1903, the Downey Board of Trade (later renamed the Downey Chamber of Commerce) was organized. Downtown Downey contained a Sunkist packing plant, a department store, banks, restaurants and mercantile shops. It was also the site of Downey Union High School and Downey Grammar School. In the 1920s, wooden Victorian and Craftsman buildings were gradually replaced with Downey's first masonry structures. Only a few of these early buildings still exist.

In 1929, inventor E.M. Smith purchased the 73-acre Hughan Ranch located about one mile south of the Downey Depot (Downey, 2005). His company, Emsco Aircraft, converted the ranch into an airstrip. Smith, whose family had reaped a fortune from a drill bit patent for oil exploration, pioneered aviation in Downey. Downey had taken its first step towards establishing a rich history of aviation and aerospace that spans more than 70 years.

The Second World War laid the foundation for establishing a strong aviation industry in Downey; and by the 1950's this industry had become a significant economic factor for Downey (Downey, 2025). During the war, Vultee Aircraft was Downey's largest employer, producing 15% of all of America's military aircraft by 1945. The company was a pioneer in the use of women in

manufacturing positions and was the first aircraft company to build airplanes on a powered assembly line (Downey, 2025). Vultee eventually became a part of North American Aviation whose facilities were the birthplace of the systems for the Apollo Space Program.

Prior to World War II, Downey's population was only 12,000 (Downey, 2005). However, by the late 1950s, the population swelled to over 80,000 as most of the surrounding agricultural areas were replaced by residential subdivisions, commercial centers and industrial developments. On December 17, 1956, the community of Downey, having a population of approximately 90,000 people living within an area of 11.5 square miles, became the 50th incorporated city in Los Angeles County. At that time, Downey had an assessed value of about $100,000,000 and consisted of some of the finest new homes in Southeastern Los Angeles County and 110 industrial firms, employing over 21,000 persons.

After the closure of the Rockwell (Formerly North American Aviation) plant in 1999, the site was demolished, and now features the Columbia Memorial Space Center, the Downey Landing shopping center, the Promenade at Downey shopping center (former site of Downey Studios), Kaiser Permanente Hospital, and a city recreation park.

Historical Resources

The Planning Area includes many architecturally distinctive or historic buildings and historic points of interest. These historical resources reflect the Downey community's cultural heritage, representing the achievements, struggles, and values of past community members. They provide a tangible link to the past and help us understand and appreciate our shared history and culture.

One method of identifying and recognizing historical resources is through designation programs administered by the State of California or the federal government for properties, sites, and structures that have historical significance.

California Historical Landmarks (CHLs) are buildings, sites, or places that have played an important role in the history of California and are officially designated by the State of California.

California Points of Historical Interest (Points of Interest) are buildings, sites, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value.

The California Register of Historical Resources (California Register) includes buildings, sites, structures, objects and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

The National Register of Historic Places (National Register) includes buildings, structures, objects, sites, and districts of local, state, or national significance in American history, architecture, archeology, engineering, and culture.

Currently, there are eight resources in the City of Downey that are designated historical resources, including two resources that are listed in the National Register of Historic Places and six resources that are listed in the California Register of Historical Resources (Downey, 2025).[1] Properties that

[1] Information regarding designated resources was obtained from the California Built Environment Resource Directory (BERD), a database maintained by the California Office of Historic Preservation. Note that resources listed in the

are listed in the National Register are also automatically listed in the California Register. The two resources listed in the National Register include:

- 7749 Florence Avenue (Casa de Parley Johnson – listed 1986, 1S)
- 10921 Paramount Boulevard (James C. Rives House – listed 1978, 1S)

The six resources listed in the California Register include:

- 10207 Lakewood Boulevard (McDonald's Drive-in Restaurant and Sign – listed 1984, 2S)
- 7447 Firestone Boulevard (Johnie's Broiler, Harvey's Broiler, Bob's Big Boy Broiler – listed 2008, 2S2)
- 12214 Lakewood Boulevard (Building 125, NASA Industrial Plant; Building 126, Hazardous Materials Storage; Building 127, Mechanical Testing Laboratory; Building 120; NASA Industrial Plant; Building 10, NASA Industrial Plant; Building 25, NASA Industrial Plant; Building 42, Maintenance Center and Garage; Building 1, NASA Industrial Plant; Building 130, Ultra-high Temperature Facility; Building 39, Materials Conservation Building; Building 41, NASA Industrial Plant; Building 290, NASA Industrial Plant; Building 11, NASA Industrial Park; Building 11, NASA Industrial Plant; Building 108, NASA Industrial Plant; Building 26, NASA Industrial Plant, Pump House; Building 6, NASA Industrial Plant; Building 228, NASA Industrial Plant; Building 123, NASA Industrial Plant; Building 128; Propellent Test Laboratory – listed 1999, 2S2)
- 7601 Imperial Highway (Rancho Los Amigos Medical Center Computer Center– listed 1996, 2S2)
- Rancho Los Amigos Historic District (south campus of Rancho Los Amigos – listed 1996, 2S2)
- 9140 Brookshire Avenue (Downey Park Apartments - 2S2)

Archaeological Resources

Before the arrival of Spanish settlers in the 1700s, the area that would later become Downey was inhabited by the Tongva People, the indigenous people of the Los Angeles Basin and the Southern Channel Islands (NAHC, 2025). The Amupunga, Huunga, and Tajauta villages were located in and around what is today, Downey. The area was seized from the native population by Spanish soldiers and missionaries, and in 1784, King Carlos III of Spain granted 75,000 acres of land to Juan Jose Dominguez. Dominguez would build his home, the Dominguez Rancho Adobe, in what is now the unincorporated community of Rancho Dominguez.

The indigenous Tongva people were relocated to Spanish missions and by 1806 were forced into labor by Spanish settlers and missionaries. The area was part of the early Spanish rancho of Jose Manuel Nieto, the holder of the largest Spanish land grant in California, stretching from the Pacific Ocean to the Puente Hills. Puente Hills, located approximately 5 miles northeast of Downey in an unincorporated area just north of the City of Whittier, contains archaeological and paleontological resources that pre-date Spanish and Mexican land grants, dating back thousands of years and reflecting Native American settlement patterns.

National Register or formally determined eligible for listing in the National Register are automatically listed in the California Register.

Given the long history of Native American settlement in the region, followed by Spanish and Mexican rule, there is a moderate probability of finding prehistoric (archaeological) resources in the Planning Area. While the City of Downey today is almost entirely urbanized and developed, given the history of the area there is a probability of finding archaeological resources in the Planning Area, especially at depths below grade not previously disturbed by development activities.

4.5.2 – REGULATORY FRAMEWORK

Federal

National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) (16 U.S.C §§ 470 et seq.) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO), provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assist Native American tribes in preserving their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). NHPA establishes the nation's policy for historic preservation and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (i.e., historic properties) prior to undertakings**.**

Section 106 of the Federal Guidelines

Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP and SHPO must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings. The Section 106 process also gives Federally recognized Native American Tribes the chance to consult and comment on the project before it can be finalized.

National Register of Historic Places

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, or association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 45 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation

State

California Environmental Quality Act (CEQA)

CEQA provides criteria to evaluate whether a building, structure, object, or site is significant. Under CEQA Guideline §15064.5(a), historic resources include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.)

(2) A resource included in a local register of historical resources, as defined in §5020.1(K) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of §5024.1 (g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, providing the lead agency's determination is supported by substantial evidence in light of the whole record.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res.

Code §5024.1, Title 14 CCR, Section 4852) including the following: (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (B) Is associated with the lives of persons important in our past; (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to §5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in §5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code §5020.1(j) or 5024.1. In accordance with CEQA, properties designated or eligible at all levels are deserving of protection by a lead agency when any undertaking proposes to demolish or alter any such property.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change (CA Public Resources Code)." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria (Public Resources Code):

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has elapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

California Historical Landmarks (CHLs)

CHLs are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource must also be approved for designation by the County Board of Supervisors or the City or Town Council in whose jurisdiction it is located, be recommended by the State Historical Resources Commission, or be officially designated by the Director of California State Parks. The specific standards in use now were first applied in the designation of CHL No. 770. CHLs No. 770 and above are automatically listed in the CRHR. To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

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

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest (Point or Points) designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a Landmark, the Point designation will be retired. In practice, the Point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

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

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

Native American Heritage Commission, Public Resources Code Sections 5097.9–5097.991

Section 5097.91 of the Public Resources Code (PRC) established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.9 of the PRC, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a

discovery of Native American human remains from a county coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection Act (NAGPRA) is consistent with the federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains, and cultural items be treated with dignity and respect," the California NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Senate Bill (SB) 18

California Government Code, Section 65352.3 incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB18 requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

Assembly Bill (AB) 52

Specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. The bill makes the above provisions applicable to CEQA projects that have a notice of preparation or a notice of negative declaration filed or mitigated negative declaration on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1., 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California Public Resources Code (PRC), relating to Native Americans.

Health and Safety Code, Sections 7050 and 7052

Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease, and the county

coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code, Section 622.5

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Local

City of Downey Historical Building Code

Ordinance 26-1539 (Chapter 9 – Downey Historical Building Code of the Downey Municipal Code) formally adopts the California Historical Building Code (CHBC) Title 24, Part 8 (2025 Edition) to regulate qualified historical structures or sites.

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to cultural resources that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.5.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it:

A. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?
B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
C. Disturb any human remains, including those interred outside of dedicated cemeteries?
D. Would the project cause substantial adverse cumulative impacts with respect to cultural resources?

4.5.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to historic resources, archaeological resources, and human remains which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Historic Resources

Impact CUL-1 – Would the project cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?

Analysis of Impacts

The Planning Area has a long-established history of settlement and contains numerous historic era structures and sites with the potential for future registration on a State or National registry. Since Downey is a mature community, many structures and objects are more than 50 years old and may also potentially be considered historical resources. However, since age is only one of many factors that determine historical significance, not all structures and objects more than 50 years old may be historically significant. Further analysis to determine impacts, if any, on historical resources shall be conducted at the development review stage prior to project approval. The GPU would not result in the demolition of any existing structures.

The proposed Design and Cultural Resources Element includes goals and policies related to structures and objects that are considered potentially historical resources as defined on CEQA Guidelines Section 15064.5.

- Goal D-8: Cultural and historic resources that are protected, preserved, and celebrated.
- Policy D-8.1: Historic Preservation Framework. Develop and implement a historic preservation framework that identifies and encourages the protection of local historic resources.
- Policy D-8.3: Design Standards for Historic Resources. Apply objective design standards for compatible alterations, additions, and infill development near historic resources.
- Goal D-9: Historic resources that are maintained, rehabilitated, and adapted in ways that retain their significance and support community identity.
- Policy D-9.1: Adaptive Reuse. Encourage adaptive reuse of historic buildings to support economic viability while retaining historic character.
- Policy D-9.2: Owner Incentives. Provide incentives for owners of historic resources, including Mills Act contracts, historic building code alternatives, and tax credits.
- Policy D-9.3: Flexibility for Non-Conforming Uses. Allow flexibility for nonconforming uses in historic resources to encourage preservation.
- Policy D-9.4: Demolition Review. Require careful review of proposed demolitions of historic resources and consider preservation alternatives.
- Policy D-9.5: Integrated Review. Integrate historic preservation into building and planning review processes to maintain resource integrity.
- Goal D-11: City-owned, archaeological, and Tribal Cultural Resources that are properly managed, protected, and celebrated.
- Policy D-11.1: Stewardship of City-Owned Resources: Ensure City-owned historic resources are preserved and maintained as examples of best practices.
- Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.
- Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.
- Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California

Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

Additionally, future development under the proposed GPU would be subject to the restrictions of the Downey Historical Building Code and the California Historical Building Code which regulate qualified historical structures or sites in the City and State, respectively. With implementation of GPU goals and policies intended to protect historic resources, and the City's development requirements to review CEQA documents for impacts to historic resources, potential impacts to historic resources by future development within the Planning Area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Archaeological Resources

Impact CUL-2 – Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Analysis of Impacts

Prior to European contact, the Planning Area was inhabited for many thousands of years by the Tongva People that inhabited a village called Sejatnga near the current City of Whittier and the San Gabriel River. Development began in the Downey area in the first half of the 19th century, but the surrounding area is known to contain archaeological resources that pre-date Spanish and Mexican land grants. Areas that could have the potential for discovery include undeveloped land or when replacing buildings that have shallow foundations. Most of the City is heavily developed, greatly reducing the potential for the discovery of previously uncovered archaeological resources.

Additionally, the Design and Cultural Resources Element of the GPU includes:

- Policy D-11.1: Stewardship of City-Owned Resources: Ensure City-owned historic resources are preserved and maintained as examples of best practices.
- Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.
- Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.
- Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

However, future development pursuant to the General Plan may involve grading, excavation, or other ground-disturbing activities, which could disturb or damage unknown archaeological

resources. As such, implementation of the project could result in potentially significant impacts to archaeological resources and incorporation of Mitigation Measures CUL-1 through CUL-3 is required to reduce potential impacts to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

CUL-1: Prior to approval of discretionary development projects that involve substantial ground disturbance in previously undisturbed areas, or where there is evidence that the project site may contain archaeological, historical, or Tribal Cultural Resources, the City shall require a records search through the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC), as appropriate, to determine the potential for cultural resources. If the records search or project-specific conditions indicate the potential for significant impacts, the applicant shall prepare a cultural resources study conducted by an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards, including consultation with Tribal governments, as appropriate. Where resources are identified, the project shall implement measures to avoid, minimize, or mitigate impacts in accordance with CEQA and applicable City of Downey requirements.

CUL-2: As a condition of approval for discretionary grading permits, the City shall require prior to the start of construction activities, construction employees to be trained in recognizing potentially significant archaeological, paleontological, historic, or Tribal Cultural Resources that may be discovered during ground-disturbing activities. Project proponents will be required to submit verification that all site workers have received sensitivity training prior to commencement of ground-disturbing activities.

CUL-3: Upon discovery of significant archaeological, paleontological, historic, or Tribal Cultural Resources during site development, all activity shall be halted within 100 feet of the find(s) and notify a professional archaeologist, paleontologist, historian, and/or local Tribal government representative California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project (if appropriate) to evaluate the find(s) and recommend mitigation procedures, if necessary. Findings and mitigation measures are subject to review and approval by the Community Development Director prior to resuming site development work. The Tribe shall be contacted regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the Tribe(s) and archaeologist disagree on preferred treatment, the ultimate authority shall be the City of Downey Community Development Director.

Level of Significance After Mitigation

Less than significant.

Human Remains

Impact CUL-3 – Would the project disturb any human remains, including those interred outside of formal cemeteries?

Analysis of Impacts

One formal cemetery exists in Downey: the Downey Cemetery District, located at 9073 Gardendale Street. This cemetery has established boundaries, and it is unlikely that burials at these cemeteries would be found outside the established boundaries. The Planning Area is almost completely urbanized, and any buried remains have likely been uncovered as part of previous development activities. However, it is still possible that human remains could be discovered during excavation for development, especially on previously undisturbed land or when replacing buildings that have shallow foundations.

Section 7050.5 of the California Health and Safety Code (CHSC) requires that, if human remains (or remains that may be human) are discovered on a project site during grading or earthmoving, the construction contractors, project archaeologist, and/or designated Native American Monitor shall immediately stop all activities within 100 feet of the find. The project proponent must then immediately inform the County Coroner and the City of the find. The coroner is permitted to examine the remains under CHSC Section 7050.5(b) to determine if the remains are those of a Native American. If human remains are determined as those of Native American origin, the applicant must comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the Native American Heritage Commission (NAHC) as outlined in Public Resources Code Section (PRC) 5097. The coroner then contacts the NAHC to determine the Most Likely Descendant (MLD) who will conduct an inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains is to be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts, in consultation with the property owner and the lead agency (in this case the City of Downey). CEQA requires the City and any project developer, including the City if it is a public works project, to comply with the CHSC Section 7050.5 and PRC 5097 if human remains are found during excavation.

Nonetheless, in the unlikely event that buried human remains are uncovered during future development project under the proposed GPU, the project could result in potentially significant impacts to buried human remains and requires incorporation of Mitigation Measure CUL-4 to reduce potential impacts to less than significant. Implementation of Mitigation Measure CUL-4 and compliance with existing state regulations (CHSC Section 7050.5 and PRC 5097) with respect to disturbing human remains, including those interred outside of a formal cemetery, would result in less than significant impacts from development under the GPU.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

CUL-4: If human remains are encountered during ground-disturbing activities, all work within the vicinity of the discovery shall cease immediately. The remains shall be treated in accordance with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, including notification of the County Coroner and, if

the remains are determined to be Native American, notification of the Native American Heritage Commission for identification of the Most Likely Descendant and treatment of the remains in accordance with applicable law.

Level of Significance After Mitigation

Less than Significant.

Cumulative Impacts

Impact CUL-4 - Would the project cause substantial adverse cumulative impacts with respect to cultural resources?

Analysis of Impacts

On a cumulative level, impacts to cultural resources from both the City and the surrounding jurisdictions of Los Angeles County should be considered. The region contains numerous cultural resources which, as with all cultural resources, are non-renewable. Damaging, disturbing, or destroying cultural resources results in a permanent loss of resources that can never be replaced, and future projects with impacts to cultural resources from all surrounding jurisdictions contribute to the cumulative impact to cultural resources.

As previously described, the GPU Design and Cultural Resources Element includes goals and policies intended to ensure that Downey's historic and archaeological resources are protected and preserved. Consistent with federal and State laws, the General Plans of the surrounding jurisdictions have similar goals and policies to protect cultural resources within their boundaries as well. Finally, State law requires the City and surrounding jurisdictions to notify Native American representatives if tribal human remains are found. By adopting the GPU goals and policies, following required laws and regulations, and continuation of the City's required CEQA review of all development projects, the potential cumulative impacts to cultural resources would be minimized, and future development in Downey pursuant to the GPU would not make a significant contribution to any cumulative regional impacts on cultural resources.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.5.5 – REFERENCES

California Health and Safety Code, Section 7050.5.

California Public Resources Code Section 5097.

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4.6 ENERGY

This section addresses energy impacts associated with implementation of the Downey General Plan Update (GPU). Energy resources are closely tied to impacts discussed in the Air Quality and Greenhouse Gas (GHG) sections of this document, Sections 4.3 and 4.8, respectively. Many of the number values presented herein reflect values derived from the air quality emissions modeling conducted for the project. Refer to Appendix D for detailed air quality and GHG emissions estimates and information on energy usage (MIG, 2026).

4.6.1 ENVIRONMENTAL SETTING

Electricity

Electricity is the flow of electrical power or charge (i.e., the movement of electrons between atoms). It is produced by converting sources of primary energy such as coal, natural gas, nuclear, hydropower, wind, and solar, into electrical power through various means. Generators and solar photovoltaic (PV) cells are two of the primary pieces of equipment used to produce and supply electricity to the grid. The following describes the processes through which electricity is generated by these pieces of equipment.

- **Generators.** Turbine generators convert mechanical or chemical energy into electricity. At its simplest form, an electrical generator is an electromagnet, moving wire near a magnet to direct the flow of electricity. Turbine generators do this by using a moving fluid (e.g., water, steam, combustion gases, or air) to push rotator blades that are attached to a generator. The rotation of magnets and wires within the generator produces an electromagnetic current, directing electrical flow.
- **Solar Photovoltaic Cells.** Solar photovoltaic (PV) cells convert solar energy directly into electricity. They are made up of semiconductor material that absorbs sunlight and generates an electrical current. This current is captured and transferred to wires so that it can be utilized at a different location.

Electricity production can be grouped into two main categories: electricity generated from renewable sources (e.g., solar and wind) and electricity generated from non-renewable sources (e.g., fossil fuel combustion). Table 4.6-1 and Table 4.6-2 summarize the primary renewable and non-renewable sources of electricity, respectively, as well as how the energy from the various sources is converted into electricity.

Table 4.6-1: Renewable Sources of Electricity Production	
Source	**Electricity Production Process**
Wind	Wind can be converted to electricity through the use of a wind turbine (historically referred to as "windmills"). Electricity from this source is produced when wind causes the turbine's blades to turn. The amount of electricity generated by a wind turbine is dependent on a number of factors, but is primarily related to how much wind energy can be collected at a given time. Wind turbines with longer blades have the capacity to generate more electricity than those with smaller blades, because they can collect more of the wind's energy. A small wind turbine could generate a similar output as a larger one, but the smaller one would need to be subject to higher wind speeds. Wind power plants, or wind farms, are composed of multiple wind turbines spread out over a large area.
Solar	The sun’s energy can be converted into electricity by using solar PV cells, which produce electricity when photons from the solar energy are absorbed by the semiconductor material in the PV cell. Electrons are dislodged from the semiconductor material and absorbed by electrical conductors, which are connected in an electrical circuit. Electricity flows through the electrical circuit to an external device, such as a battery or an inverter.(A) Solar energy production can be increased with additional PV cells. PV cells can be connected in solar panels, and groups of solar panels can be connected into a solar array. One PV cell may power small devices such as calculators, small solar arrays may power individual residential or commercial buildings, and large arrays may produce power for utilities.
Hydroelectric	Hydroelectric energy is produced by using a naturally-flowing water source (e.g., from a river or dam) to spin the blades of a turbine, which is typically located on or adjacent to the body of water. Water is piped from a location upstream of the facility, through the turbine, and released back into the environment on the downstream side of the facility. The amount of electricity produced by a hydroelectric generator can be regulated by controlling the amount of water flowing through the turbine at a given time (e.g., greater water flow would produce more electricity).
Geothermal	Geothermal energy is produced by utilizing underground high-temperature hydrothermal resources to create steam (or superheat evaporate and other working fluid) that turns a turbine. Hot water is piped in one side of the system, used to turn the turbine, then piped back to a cooling tower before being piped underground. These power plants can pipe steam or hot water from wells that reach up to two miles into the earth.

Source: U.S. EIA 2022, 2023a, 2023b, 2024b

(A) An inverter is a device that converts the type of electricity that is produced by PV cells (direct current, or DC, electricity) to the type of electricity that is used in appliances or in an electrical grid (alternating current, or AC electricity).

Table 4.6-2: Non-Renewable Sources of Electricity Production	
Source	**Electricity Production Process**
Fossil Fuels	Combusting fossil fuels releases energy that can be harnessed and turned into electricity. The change in air pressure as a result of burning the material can be used to create a mechanical process that rotates a generator (e.g., using the hot air from the combusted material to move rotator blades within a generator or pistons within an internal combustion engine). Fossil fuels are hydrocarbons formed from plant and animal remains that were placed under heat and pressure from layers of sand, silt, and rock. Fossil fuels can include coal, crude oil, and natural gas. Petroleum products such as gasoline and diesel are produced from refining fossil fuels.
Nuclear	Nuclear reactors convert energy to electricity by using the heat from a nuclear reactor to evaporate water (i.e., producing steam) that rotates a turbine. Although nuclear energy is not renewable, it is often considered "green" and considered alongside renewable sources because it is a carbon-free source of electricity.
Source: U.S. EIA 2022a	

Electricity production relies on different energy sources and technologies. A combination of the renewable and nonrenewable energy sources described above are used to generate electricity. Electricity is measured in watts, a unit of power. Watts may be described in various quantities using kilo-, mega-, and giga-, prefixes, which correspond to one-thousand, one-million, and one-billion of something, respectively. For context, these prefixes are typically used in the following contexts when describing electricity production and consumption.

- **Watts** are used as a measurement for small devices. For example, the solar powered calculator may use 1 Watt. A lightbulb may use 50 Watts.
- **Kilowatts (kW),** or 1,000 Watts, are typically used to describe large appliance and building-scale electricity consumption. For example, the average Californian household consumed 6,174 kWh of electricity in 2019 (CEC 2021a).
- **Megawatts (MW),** are 1,000 kW, or one million Watts. Megawatts may be used when discussing utility systems. For example, from October 2024 to November 2024, the U.S. added 5,845 MW of summer solar power generating capacity (U.S. EIA 2024c).
- **Gigawatts (GW),** are 1,000 MW, one million kW, or one billion watts. Gigawatts may be used when discussing statewide electricity generation. For example, in 2021, California generated 194,127 GWh of electricity in-state (CEC2023a).

Electricity use over time can be measured in watt-hours (Wh), where, for example, one kWh is the equivalent of one kW generated or consumed over the course of one hour. For example, if a 50 W lightbulb on for one hour would consume 5 Wh (or 0.05 kWh) of electricity. If it burned for 100 hours, it would consume 5 kWh of electricity.

Natural Gas

Natural gas is a fossil fuel-based energy source typically found between layers of rock or with deposits of crude oil. Natural gas can be extracted by drilling in wells or fracking. After extraction, natural gas is sent to a processing facility and then to storage or to natural gas companies.

Biomethane, also known as renewable natural gas, can be used as a substitute for fossil natural gas. Biomethane is a gas formed from the decomposition of organic matter, composed primarily

of methane and carbon dioxide. It can be produced from solid waste landfills, wastewater treatment plants, food waste, organic waste, and livestock farms. Biomethane is then treated to remove contaminants and gases such as carbon dioxide until the methane content is greater than 90% (U.S. EPA 2024).

Natural gas can be measured in units such as therms or British thermal units (Btu), which are quantities of heat, or cubic feet, which is a volume. The U.S. Energy Information Administration defines a Btu as the quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit) (U.S. EIA 2023a). One therm is the equivalent of 100,000 Btu. Since heat quantity and volume cannot be converted directly, there is not one conversion rate between therms and cubic feet. However, the units can be converted if the heat content per volume is known. The average heat content of natural gas in 2020 was approximately 1,037 Btu per cubic foot (U.S. EIA 2024d).

Transportation

Fuels used for transportation may include diesel, gasoline, natural gas, electricity, or hydrogen. Diesel, gasoline, and natural gas fuels traditionally have been refined from crude oil. Combusting these fuel sources in an engine releases energy that can be transferred into making an object move (e.g., rotating a vehicle's driveshaft or a boat's propeller). Diesel, which can also be biomass based,[i] typically is used in larger pieces of equipment, such as trucks, trains boats, buses, farm equipment, and construction equipment. Gasoline (which may be blended with other liquids, such as ethanol), electricity, and hydrogen fuel cells[ii] are primarily used to power passenger vehicles.

Historical and Current Energy Production and Consumption Habits

Total U.S. energy consumption has increased in recent decades; however, per capita energy consumption has generally decreased since 2000. This is due to factors such as greater energy efficiency in appliances, vehicles, and utility scale electricity generation and a reduction in energy-intensive manufacturing (U.S. EIA 2022c). The following describes historical energy production and consumption trends in the U.S.

National

Electricity

The mix of energy sources for U.S. electricity generation has shifted in recent decades, but has primarily consisted of electricity generated from natural gas, coal, nuclear, hydroelectric, wind, and solar energy sources. Table 4.6-3 and Figure 4.6-1 depict the overall quantity and make-up of electricity of electricity production in the U.S. over the last six years.

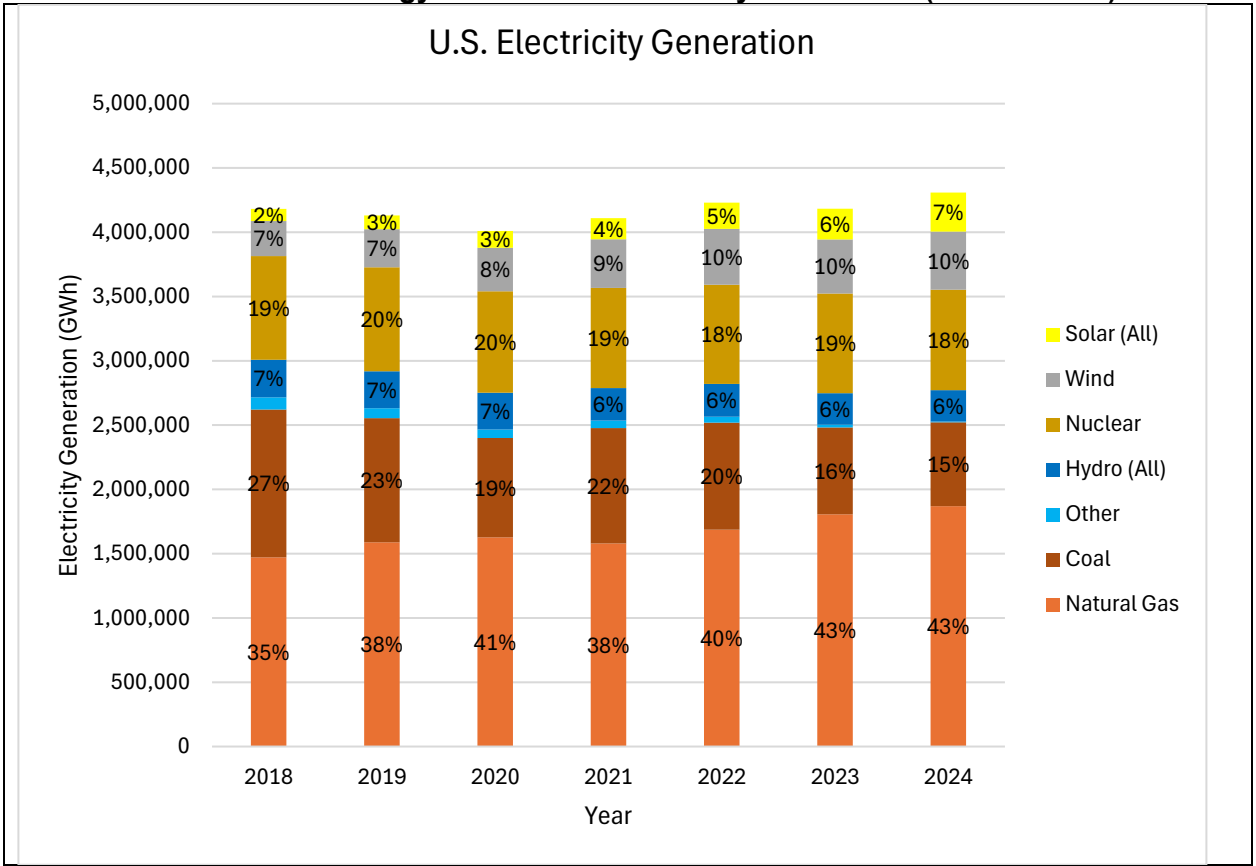
[i] Biodiesel and renewable diesel are both produced from non-petroleum sources such as vegetable oil and animal fat. Biodiesel is consumed after it is blended with petroleum diesel. While renewable diesel may also be blended with petroleum diesel, renewable diesel can be transported and consumed directly without needing to be blended with petroleum.

[ii] Hydrogen fuel cells can produce electricity by combining hydrogen and oxygen atoms.

Table 4.6-3: United States Electricity Generation (2018 to 2024)							
	Electricity Produced Per Calendar Year (Million GWh)						
Energy Source	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Natural Gas	1,472	1,589	1,627	1,579	1,687	1,806	1,870
Coal	1,149	965	773	898	832	675	652
Nuclear	807	809	790	780	772	775	782
Hydroelectric	293	288	285	252	255	245	243
Wind	273	296	338	378	434	421	452
Solar	93	107	131	164	205	239	304
Other(A)	94	77	66	59	46	22	6
Total Electricity	4,181	4,131	4,010	4,110	4,231	4,183	4,309
Fossil Fuels(B)	*2,621*	*2,553*	*2,400*	*2,477*	*2,519*	*2,481*	*2,522*
Non-Hydroelectric Renewables(C)	*366*	*403*	*469*	*543*	*639*	*660*	*756*
Total Carbon Free Electricity(D)	*1,466*	*1,500*	*1,544*	*1,574*	*1,666*	*1,680*	*1,780*

Sources: U.S. EIA 2026
(A) "Other" sources include electricity production from petroleum coke and liquids, other gases, geothermal, and biomass.
(B) Fossil fuels include natural gas and coal.
(C) Non-hydroelectric renewables include wind and solar.
(D) Carbon-free energy sources consist of nuclear, hydroelectric, and renewable fuels

Exhibit 4.6-1:
United States Energy Sources for Electricity Generation (2018 to 2024)



Source: U.S. EIA 2026
Note: The percentages for "Other" sources are not depicted in the figure, but generally include electricity production from petroleum coke and liquids, other gases, geothermal, and biomass. Annual values for the "Other" energy sources ranged from less than one percent in 2024 to 2% in 2018, 2019, and 2020.

As shown in Table 4.6-3 and Figure 4.6-1, electricity production had some variability between 2018 and 2024, but mainly fluctuated between approximately 4,000 and 4,200 million GWh of production on an annual basis.

Electricity production from fossil fuels (natural gas and coal), while remaining the predominant source of energy for electricity, decreased from a combined composition of approximately 63% in 2018 to approximately 59% in 2024. It should also be noted that there was a large shift away from coal and toward natural gas over this timeframe. Whereas the total contribution from coal and natural gas to electricity production during 2018 were approximately 27% and 35%, respectively, during 2024, this changed to a contribution of 15% and 43% for natural gas and coal, respectively.

Nuclear power plants were the second largest generator of electricity nation-wide, while electricity from renewable sources (e.g., solar, wind, hydroelectric) comprised less than a quarter of all electricity production. The overall electricity contribution from wind and solar energy almost doubled over the 2018 to 2024 timeframe.

Natural Gas

Natural gas consumption nationwide has increased in recent decades. In 1990, the U.S. consumed 198 trillion therms of natural gas, which increased to approximately 217 trillion therms in 2021 (U.S. EIA 2012 and 2022f).

Transportation Fuels

Petroleum products (e.g., gasoline and diesel) historically have been the predominant form of energy used within the transportation sector. Annual consumption of gasoline in the transportation sector increased from approximately 85.7 billion gallons per year in 1970 to approximately 131.1 billion gallons per year in 2023, an approximately 53% increase (U.S. EIA 2024f). Gasoline consumption has fluctuated slightly since 2007 (i.e., increasing and decreasing) but has generally remained at or around 135 billion gallons per year, deviating only from the trend at the start of the COVID-19 pandemic in 2020. The use of diesel fuel increased at a substantially faster rate across the 1970 to 2023 timeframe, from approximately 11.3 billion gallons of consumption in 1970 to approximately 45.4 billion gallons in 2023, a 400% increase (U.S. EIA 2024f). Unlike gasoline consumption, which is still slightly down from pre-COVID-19 levels, diesel consumption has generally remained constant. Although petroleum productions are the primary forms of energy used within the transportation sector, other fuels are used to lesser extents, including jet fuel (also petroleum), natural gas, biofuels, and other sources (e.g., fuel oil, lubricants, propane, and electricity).

In 2022, petroleum products (gasoline, diesel, and jet fuel) accounted for approximately 90% of energy consumption in the transportation sector nationwide (U.S. EIA 2024f). Gasoline is currently the main transportation fuel used in the U.S., accounting for approximately 52% of energy consumption in the transportation sector, and is followed by diesel at 22% and jet fuel at 12%. Electricity accounted for less than one percent energy consumption in the U.S. transportation sector in 2021 (U.S. EIA 2023e).

State

According to the U.S. EIA, California, the most populous state in the U.S., represents 12 percent of the total national population, has the largest economy, and is second only to Texas in total energy consumption. However, California has one of the lowest per capita energy consumption

levels in the U.S. This is a result of California's mild climate, extensive efforts to increase energy efficiency, and implementation of alternative technologies. California leads the nation in electricity generation from solar, geothermal, and biomass resources (U.S. EIA 2024g).

Electricity

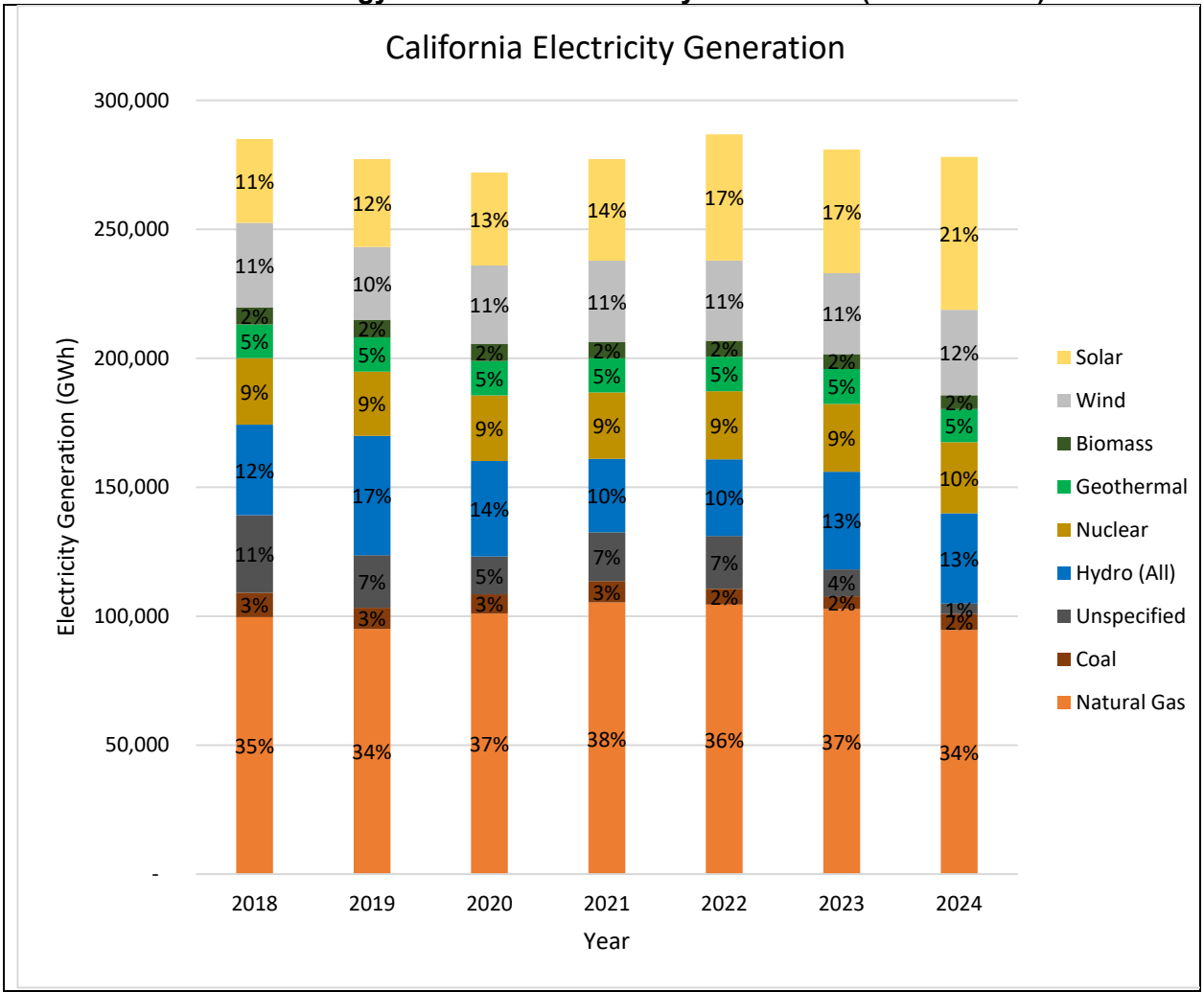
California low per capita energy consumption levels is in part attributable to its extensive efforts to increase energy efficiency. The State legislature has passed several bills that require retail-energy suppliers to increase the amount of renewable electricity supplied to customers. California's annual electricity generation and the sources that created it for the 2018 through 2024 calendar years are presented below in Table 4.6-4 and Figure 4.6-2.

Table 4.6-4: California Electricity Generation (2018 to 2024)

Energy Source	Electricity Produced Per Calendar Year (Thousand GWh)						
	2018	2019	2020	2021	2022	2023	2024
Natural Gas	100	95	101	105	104	103	95
Coal	9	8	7	8	6	5	6
Petroleum / Other	<1	<1	1	1	<1	<1	<1
Nuclear	26	25	25	26	26	26	28
Hydroelectric	35	46	37	28	30	38	35
Wind	33	28	30	32	31	31	33
Solar	33	34	36	39	49	48	59
Biomass	7	7	7	6	6	6	5
Unspecified(A)	30	20	15	19	20	10	4
Total Electricity(B)	285	278	273	278	287	281	278
Fossil Fuels(C)	*110*	*104*	*109*	*114*	*111*	*108*	*101*
Non-Hydroelectric Renewables(D)	*85*	*82*	*86*	*90*	*100*	*99*	*111*
Total Carbon Free Electricity(E)	*146*	*154*	*149*	*145*	*156*	*163*	*173*

Sources: CEC 2026a
(A) "Unspecified" power is power that could not be traced to a facility, and would include a mix of fuel types
(B) Totals may not equal due to rounding
(C) Fossil fuels include natural gas and coal.
(D) Non-hydroelectric renewables include wind and solar.
(E) Carbon-free energy sources consist of nuclear, hydroelectric, and renewable fuels.

Exhibit 4.6-2:
California Energy Sources for Electricity Generation (2018 to 2024)



Sources: CEC 2026a
Note: Unspecified power is power that could not be traced to a facility and would include a mix of fuel types.

As shown in Table 4.6-4 and Figure 4.6-2, overall electricity generation throughout California varied between 2018 and 2024, but mainly fluctuated between approximately 272 and 287 thousand GWh on an annual basis.

Electricity production from natural gas and coal power plants has fluctuated between 36% and 41% of the total energy supply. Biomass, geothermal, nuclear, and wind sources have remained relatively constant at 2%, 5%, 9 to 10, and 11%, respectively, and hydroelectric power has fluctuated between 10% and 17% of total energy supply. Electricity from unspecific imports has decreased, while electricity generated from solar sources has almost doubled, from 11% to 21% of total energy supply. California has increased its carbon-free energy supply from approximately 51% of total energy in 2018 to 62% in 2024.

Similar to U.S. electricity generation, California electricity generation has shifted, with renewable energy sources increasing. However, while the direction of the shift in energy sources on the national and statewide level is the same, the state differs from U.S. energy consumption in the scale of this shift. For example, California's energy mix used for electricity generation contains

over twice the amount of renewable fuels as the U.S.[iii] California also uses a lower percentage of fossil fuels mainly due to its low coal consumption.

Natural Gas

Annual natural-gas consumption in the State has fluctuated since the 1970s, but has generally remained at or around 2,100 billion cubic feet per year since the 1990s (U.S. EIA 2024h). Although California has historically accounted for approximately 7% of annual nationwide natural gas consumption, its reserves and production constitute less than 1% of the total United States (U.S. EIA n.d. and U.S. EIA 2025).

In 2023, California consumed about 2,087 billion cubic feet of natural gas, with the majority of that consumption attributable to the industrial sector (31%, including natural gas power plants) followed by the residential (22%) and commercial (12%) sectors (U.S. EIA 2024i). In 2020, approximately 88% of Californian homes used natural gas in some building system capacity, including clothes washer (77% of homes) and/or cooking appliance(s)[iv] (70% of homes) (U.S. EIA 2023f, U.S. EIA 2023g).

Transportation

California's transportation sector consumed 77.4 million Btu of energy per capita in 2023, which was the 20th most efficient state in the nation in terms of transportation energy per capita (U.S. EIA, 2025).

California's production of gasoline and diesel fuels supplies both in- and out-of-state demand; however, most gasoline and diesel fuel sold in California for motor vehicles is refined within the state to meet state-specific formulations required by CARB (i.e., these fuels typically are not imported from out of state). Crude oil extraction and production has been decreasing since the mid-1980s (from a peak of approximately 402 million barrels in 1986 to 124 million barrels in 2023) and is projected to continue to decline (CEC n.d.). According to taxable sales figures available from the California Department of Tax and Fee Administration, statewide gasoline sales have decreased from approximately 14,703 million gallons in 2014 to approximately 13,565 million gallons in 2023 (an approximately 7.5% reduction); however, this trend has not been linear. Gasoline sales increased from 2014 to 2017, remained relatively constant between 2017 and 2019, and decreased in the 2020 to 2023 timeframe. This decrease is most likely attributable to the shelter-in-place orders imposed due to the COVID-19 pandemic, but is also likely associated with vehicle turnover (i.e., from older, less fuel efficient cars to newer models) across the same timeframe (CDTFA n.d.). Statewide diesel fuel sales have generally increased, from approximately 2,776 million gallons in 2014 to approximately 2,982 million gallons in 2023 (an approximately 7% increase) (CDFTA n.d.).

In 2022, California reached a milestone 1 million zero emissions vehicles (ZEVs) sold, accounting for 40% of all ZEVs operating in the U.S. (Office of Governor Gavin Newsom 2022). By November 2024, California reached another milestone 2 million ZEVs sold and in the third quarter of 2024, 26.4% of all new vehicle sales in the state were ZEVs (Office of Governor Gavin Newsom 2024). Most of the ZEVs sold to date have been electric vehicles; however, vehicles powered by

[iii] Whereas approximately 33% of electricity in California is from wind and solar, only 13% of electricity generated in the greater U.S. is from renewable sources.

[iv] Cooking appliances includes natural gas ranges, cooktops, and ovens; natural gas outdoor grills are not included in this metric.

hydrogen fuel cells have also been expanding in availability and use, with 14,429 hydrogen fuel cell vehicles actively registered in California as of April 2024 (CARB 2024).

Transportation fuels are not used equally across different vehicle types in the state. For example, whereas light-duty vehicles (e.g., cars and pick-up trucks) are mainly powered by gasoline and electricity, medium- and heavy-duty vehicles (e.g., work trucks, semi-trucks, etc.) are generally powered by diesel. Natural gas can also be used as a fuel source in trucks and buses. Table 4.6-5 below shows a breakdown of state-wide vehicle population in 2026, by fuel type.

Table 4.6-5: California Transportation Fuels by Vehicle Type (2026)

Vehicle Type	Fuel Type				
	Gasoline	Diesel	Natural Gas	Electricity	Plug-in Hybrid(A)
Medium- and heavy-duty trucks	9.0%	87.0%	2.8%	1.1%	0.0%
Light heavy-duty trucks	50.8%	48.3%	0.0%	0.9%	0.0%
Buses	31.8%	43.9%	20.6%	3.7%	0.0%
Light-duty vehicles	89.2%	0.7%	0.0%	8.2%	1.9%

Source: EMFAC2025
(A) Plug-in hybrid vehicles are powered by gasoline and electricity.

Although each vehicle category may use several different fuel types, the majority of trucks in 2026 used diesel; most buses mostly used gasoline, diesel, and natural gas; and the majority of light duty vehicles used gasoline.

Local

Electricity

There are no electricity consumption numbers available for the City of Downey. In 2024, Los Angeles County consumed approximately 64,896 GWh of electricity, about 23.9% of the state's electricity consumption. The non-residential sector made up approximately 67% of County-wide consumption while the residential sector made up approximately 33% of County-wide consumption (CEC 2025a).

Natural Gas

Los Angeles County consumed approximately 2,830 million therms of natural gas in 2024, accounting for approximately 25% of statewide consumption. The non-residential sector made up approximately 62% of County-wide consumption, while the residential sector made up approximately 38% (CEC, 2025b).

SoCalGas provides natural gas service at the Project area. SoCalGas is the principal distributor of natural gas in Southern California and provides natural gas for residential, commercial, and industrial markets. The annual natural gas sale of SoCalGas to all markets in 2026 was approximately 4,959 million therms (CEC, 2025b).

4.6.2 REGULATORY FRAMEWORK

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy and Policy Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the act also includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum. The United States Environmental Protection Agency (U.S. EPA) is responsible for developing and implementing regulations to ensure transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007 (EISA), the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one; and
- EISA required the U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHG than the petroleum fuel it replaces (U.S. EPA 2015).

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Federal Vehicle Standards

In 2009, the NHTSA issued a final rule regarding fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016. The regulations were modified in 2010, 2011, 2016, 2018, 2020, and 2023. In December 2025, NHTSA signed the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rule III for Model Years 2022–2031 Passenger Cars and Light Trucks which proposes less stringent standards. The proposal would set fuel economy standards that increase from model year 2022 standards at a rate of 0.5 percent through model year 2026, followed by an increase of 0.25 percent per year through model year 2031. With this proposed rule, NHTSA projects an average fleet fuel economy of 34.5 miles per gallon in model year 2031. The comment period for the SAFE Vehicle Rule III ended in February 2026, and the rule is currently pending.

State

Title 24 Energy Standards

Title 24 of the California Code of Regulations, known as the Building Standards Code, governs the design, construction, alteration and maintenance of buildings to ensure maximum safety, energy efficiency and sustainability of buildings in California. The code is organized into 12 different parts, including:

Part 6 of the Title 24 California Code of Regulations is referred to as the Building Energy Efficiency Standards (BEES, or Energy Code). The Energy Code first adopted energy efficiency standards for residential and non-residential development in 1978 in response to a legislative mandate to reduce energy consumption in the State. The standards are updated on an approximately three-year cycle to allow for the consideration and inclusion of new energy efficiency technologies and methods. The current 2025 Energy Code went into effect on January 1, 2026, and focused on expanding standards for electric heat pumps, encouraging electric-readiness, and strengthening ventilation standards (California Energy Commission 2026b).

Part 11 of the Title 24 California Code of Regulations is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to “improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality” (CDHCD n.d.). The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). CALGreen contains both mandatory and voluntary measures. For non-residential land uses there are 39 mandatory measures including, but not limited to, exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to nonresidential land uses, for a total of 36 additional elective measures.

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of

transportation, land use, and housing to reduce sprawl and ultimately reduce GHG emissions and other air pollutants. SB 375 tasks the California Air Resources Board (CARB) to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In August 2010, CARB released the proposed GHG reduction targets for the MPOs. The proposed reduction targets for the Southern California Association of Governments (SCAG) region were 8% by year 2020 and 13% by year 2035. In September 2010 and February 2011, the 8% and the 13% targets were adopted, respectively. SCAG's Regional Council adopted 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) on April 7, 2016, which updated the 2012 RTP/SCS.

In March 2018, CARB established new regional GHG reduction targets for SCAG and other MPOs in the state (CARB n.d.). The new SCAG targets are an 8% reduction in per capita passenger vehicle GHG reductions by 2020 and a 19% reduction by 2035. On May 7, 2020, SCAG adopted "Connect SoCal", the 2020-2045 RTP/SCS, for federal transportation conformity purposes only. On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal, and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is designed to meet the regional GHG reduction targets for SCAG that were identified by CARB in 2018 (SCAG 2020a).

Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal contains 10 primary goals, as detailed below:

1. Encourage regional economic prosperity and global competitiveness.
2. Improve mobility, accessibility, reliability, and travel safety for people and goods.
3. Enhance the preservation, security, and resilience of the regional transportation system.
4. Increase person and goods movement and travel choices within the transportation system.
5. Reduce greenhouse gas emissions and improve air quality.
6. Support healthy and equitable communities.
7. Adapt to a changing climate and support an integrated regional development pattern and transportation network.
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options.
10. Promote conservation of natural and agricultural lands and restoration of habitats.

Connect SoCal's "Core Vision" centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs, and transit closer together and increasing investment in transit and complete streets. The Core Vision includes: Sustainable Development, System Preservation and Resilience, Demand and System Management, Transit Backbone, Complete Streets, and Goods Movement (SCAG 2020b).

In April 2024, SCAG's Regional Council adopted Connect SoCal 2024, (2024 RTP/SCS) an update to Connect SoCal 2020 that planned development in the region through 2050 (SCAG 2024). Connect SoCal 2024 updates assumptions from Connect SoCal 2020. The Regional Growth Forecast in Connect SoCal 2024 projects a 30% higher household growth during the 2020s than was projected in Connect SoCal 2020. Connect SoCal 2024 also shifts the categories of regions that can accommodate jobs and housing from Priority Growth Areas (PGAs) to Priority Development Areas (PDAs). While PGAs and PDAs have substantial overlap, PDAs do not include Job Centers and High-Quality Transit Areas that helped compose the PGAs.

Compared to Connect SoCal 2020's PGAs, SoCal 2024's PDAs include a greater percentage of new households and a substantially lower percentage of new jobs in a larger total land area.[v] Connect SoCal 2024 projects that approximately 66% of new households and 54% of new jobs between 2019 and 2050 will be located in PDAs. PDAs in Connect SoCal 2024 include Neighborhood Mobility Areas (NMAs), Transit Priority Areas (TPAs), Livable Corridors, and Spheres of Influence (SOIs). Connect SoCal 2024 is projected to achieve the region's targets for reducing greenhouse gases from automobiles and light-duty trucks by 19% per capita, from 2005 levels, by 2035.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. In 2006 under Senate Bill 107, California's 20 percent by 2010 RPS goal was codified.

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring "[a]ll retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed CARB, under its AB 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020. In October 2015, Governor Brown signed SB 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the state's electricity from renewable sources by 2030."

The State's RPS program was further strengthened by the passage of SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50% and 60% renewable energy to retail end-use customers by 2026 and 2030, respectively, and requires 100% of all electricity supplied come from renewable and zero-carbon sources by 2045.

[v] Connect SoCal 2020 anticipated that from 2016 to 2045, approximately 64% of households and 74% of new jobs would occur in PGAs, which comprised approximately 4% of the SCAG region's total land area. Connect SoCal 2024 anticipated that from 2019 to 2050, approximately 66% of household growth and 54% of employment growth would occur in PDAs, which comprise approximately 8.2% the SCAG region's total land area. 36% of household growth was located in more than one priority area and outside environmental constraint areas in Connect SoCal 2020 compared to 39% in Connect SoCal 2024.

Executive Order B-55-18, AB 1279, and SB 1020

On September 10, 2018, Governor Brown signed Executive Order B-55-18, to achieve carbon neutrality by moving California to 100% clean energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forest land. On September 16, 2022, Governor Newsom signed into law AB 1279, the California Climate Crisis Act, and SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022. AB 1279 codified California's 2045 carbon neutrality goal and established a GHG emission reduction target of 85% below 1990 levels. SB 1020 set targets for the retail sale of electricity of 90% clean electricity by 2035 and 95% by 2040, and 100% by 2045. It also set a target for 100% clean electricity for electricity serving state agencies by 2035.

Low Carbon Fuel Standard Regulation (LCfS)

CARB initially approved the LCFS regulation in 2009, identifying it as one of the nine discrete early action measures in the *2008 Scoping Plan* to reduce California's GHG emissions. The LCFS regulation defines a Carbon Intensity, or "CI," reduction target (or standard) for each year. The initial LCFS regulation required a reduction of at least 10 percent in the CI of California's transportation fuels by 2020. In 2018, CARB approved amendments to the LCFS regulation, which included requiring a 20 percent reduction in carbon intensity by 2030, adding new crediting opportunities to promote ZEV adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector. In 2024, LCSF amendments were created that went into effect July, 2025. These amendments included strengthening the carbon intensity reduction targets to a 30 percent reduction in carbon intensity by 2030 and a 90 percent reduction in carbon intensity by 2045, adding medium- and heavy-duty ZEVs to ZEV infrastructure programs, and added sustainability requirements for crop-based fuels (CARB 2025).

Sustainable Freight Plan

The California Sustainable Freight Plan was finalized and released by state agencies, including CARB in July 2016 and provides a recommendation on a high-level vision and broad direction to the Governor to consider for State agencies to utilize when developing specific investments, policies, and programs related to the freight transport system that serves our State's transportation, environmental, and economic interests (CARB 2016). The Sustainable Freight Plan includes recommendations on:

- A long-term 2050 vision and guiding principles for California's future freight transportation system.
- Targets for 2030 to guide the State toward meeting the Vision.
- Opportunities to leverage State freight transport system investments.
- Actions to initiate over the next five years to make progress towards the Targets and the Vision.
- Pilot projects to achieve on-the-ground progress in the near-term.
- Additional concepts for further exploration and development, if viable.

Advanced Clean Trucks Program

The Advanced Clean Trucks (ACT) regulation was approved by CARB on June 25, 2020. The main components of the regulation are manufacturers' ZEV sales requirements and a one-time reporting requirement for large entities and fleets. Promoting the development and use of advanced clean trucks would help CARB achieve its emission reduction strategies as outlined in the SIP, Sustainable Freight Action Plan, SB 350, and AB 32. In 2025, Congress revoked California's waiver needed for the Advanced Clean Trucks regulation.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The Program combines the control of smog, soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards.

Executive Order B-48-18, issued by Governor Brown in January 2018, establishes a target to have five million ZEVs on the road in California by 2030. This Executive Order is supported by the State's 2018 ZEV Action Plan Priorities Update, which expands upon the State's 2016 ZEV Action Plan. While the 2016 plan remains in effect, the 2018 update functions as an addendum, highlighting the most important actions State agencies are taking in 2018 to implement the directives of Executive Order B-48-18.

EO N-79-20, issued by Governor Newsom in September 2020, set a goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. It also set a goal that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks. In addition, this EO set a goal to transition to 100 percent zero-emission off-road vehicles and equipment in the state by 2035 where feasible.

In August 2022, CARB approved the Advanced Clean Cars II program, which sets requirements for ZEV sales and codifies the light-duty vehicle goals in EO N-79-20. The regulation requires new light duty vehicle sales will be 35% zero emission or plug in hybrid electric vehicles in 2026, 68% in 2030, and 100% in 2035.

In 2025, Congress revoked California's Clean Air Act waiver that allows for the enforcement of the Clean Cars II regulations. In response, in June 2025, Governor Newsom signed Executive Order N-27-25, which reaffirms California's commitment to accelerating zero emission technology consistent with the targets of EO N-79-20. CARB is in the process of developing light-duty vehicle emissions standards consistent with State and federal law.

Advanced Clean Fleets Regulation

On April 28, 2023, CARB approved Advanced Clean Fleets (ACF), a rule that requires fleets of medium- and heavy-duty vehicles to transition to zero-emission vehicles. ACF applies to all drayage trucks, to high priority fleets, (i.e., fleets that have at least $50 million in gross annual revenue or fleets that operate 50 or more medium- and heavy-duty vehicles), and to government fleets. The regulation places requirements on both the sale and operation of medium- and heavy-duty vehicles. Regarding the sale of vehicles, ACF requires manufacturers to sell only zero-emission medium- and heavy-duty vehicles starting in 2036. For the operation of vehicles, the regulation sets different timelines depending on the type of fleet. New drayage trucks must be

zero-emission starting January 1, 2024. Existing diesel-powered drayage trucks may continue to operate until 2035, after which only zero-emission drayage trucks may operate. This structure will be implemented by the CARB Online System, which registers drayage trucks in the State.

High-priority fleets and federal fleets can choose between two options to meet the zero-emission requirements: a Model Year Schedule or a ZEV Milestone schedule. Under the Model Year Schedule, high-priority fleets and federal government fleets would purchase only zero-emission trucks starting in 2024 and would remove internal combustion powered trucks at the end of their useful life starting in 2025. Alternatively, the ZEV Milestone schedule sets requirements for a percentage of the total fleet to be zero-emission at specified years, depending on the type of vehicle. For example, under the ZEV Milestone option, box trucks and yard tractors would need to have zero-emission vehicles consist of 10% of the fleet by 2025, 50% of the fleet by 2031, and 100% by 2035. Specialty vehicles would have a longer timeline, and would need to reach 100% zero-emission vehicles by 2042. State and local government fleets may also choose the ZEV Milestone option. If state and local governments do not choose the ZEV Milestone option, new fleet purchases are required to be 50% zero-emission[vi] starting in 2024 and 100% zero-emission by 2027.[vii]

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes goals and policies related to energy that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

Clean Power Alliance

In October 2017, the City Council adopted an ordinance which authorized Downey to join the Clean Power Alliance, which purchases electrical power for residents and businesses with a higher percentage of renewable energy than Southern California Edison (SCE). Customers may opt out and remain with SCE.

Energy Action Plan

The City of Downey Energy Action Plan was adopted in 2015. The plan identifies current and future measures that would reduce energy consumption and GHG emissions from municipal and community-wide operations. The plan identifies the following main objectives:

- Create a long-term vision for energy efficiency
- Identify and categorize City energy use and greenhouse gas emissions
- Highlight the City's major energy-using facilities
- Establish reduction targets for energy efficiency
- Prioritize goals, policies, and actions to achieve energy reductions

[vi] State and local governments may meet the ACF requirements with near-zero-emission vehicles until 2035. After 2035, only zero-emission vehicle purchases would apply to the requirements.

[vii] If fleets have 10 or fewer vehicles or are in designated counties, zero-emission purchasing requirements would start later, in 2027.

- Develop implementation plan for the identified goals, policies, and actions

The Energy Action Plan had set a goal to reduce municipal energy use 15% by 2020 and provided Action Steps to reduce municipal energy use, which included energy efficiency retrofit projects.

The Energy Action Plan additionally contains the following policies and guidelines:

- **Assembly Bill 32:** The City of Downey will be consistent with Assembly Bill 32 and the greenhouse gas emission reduction goals.
- **Assembly Bills 1890 & 995.** The City of Downey will follow the "loading order" established under AB 1890 and 995 which prioritizes energy efficiency
- **Federal and State Energy Efficiency Requirements.** The City of Downey shall adhere to federal and state- level energy efficiency requirements for both new and existing buildings.
- **Energy Efficiency in New Construction**. Incorporate a clearly defined set of energy efficiency requirements into the City's Owner Project Requirements and Basis of Design Documents. For all future new construction or major modernization projects, City should utilize the services provided by the Savings By Design (SBD) program, which encourages energy- efficient building design and construction practices, wherever feasible.
- **Leadership in Energy and Environmental Design (LEED).** City will continue to encourage LEED in new construction and major modernization projects wherever feasible.
- **Building Commissioning and Retro-Commissioning.** For all future capital projects, the City intends to incorporate building commissioning into the project requirements. For all existing buildings, the City will identify those that can benefit from retro-commissioning. To the extent economically feasible and technically practicable, the City should plan on undergoing an retro-commissioning process in order of priority.
- **Environmental Preferred Purchasing (EEP) Policy.** By adhering to the LA County EPP policy, the City of Downey will help reduce its negative impact on the environment, lower pollution levels from its operations, protect public health, and improve the environmental quality of the Downey community.
- **Energy Star.** Energy Star standards shall be considered in all purchasing decisions made by the City of Downey, wherever applicable.
- **Support Staff Training.** Department leaders should encourage staff to participate in energy efficiency training made available by various organizations.

4.6.3 SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act, the GPU could result in a significant impact related to energy if it would:

A. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation;

B. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency;

C. Cause substantial adverse cumulative impacts with respect to energy.

4.6.4. IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to energy resources.

Energy Consumption

Impact ENG-1 – Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Analysis of Impacts

Implementation of the proposed GPU would increase the demand for electricity and natural gas within the Planning Area and increase gasoline and diesel consumption in the region during construction and operation of new land use developments.

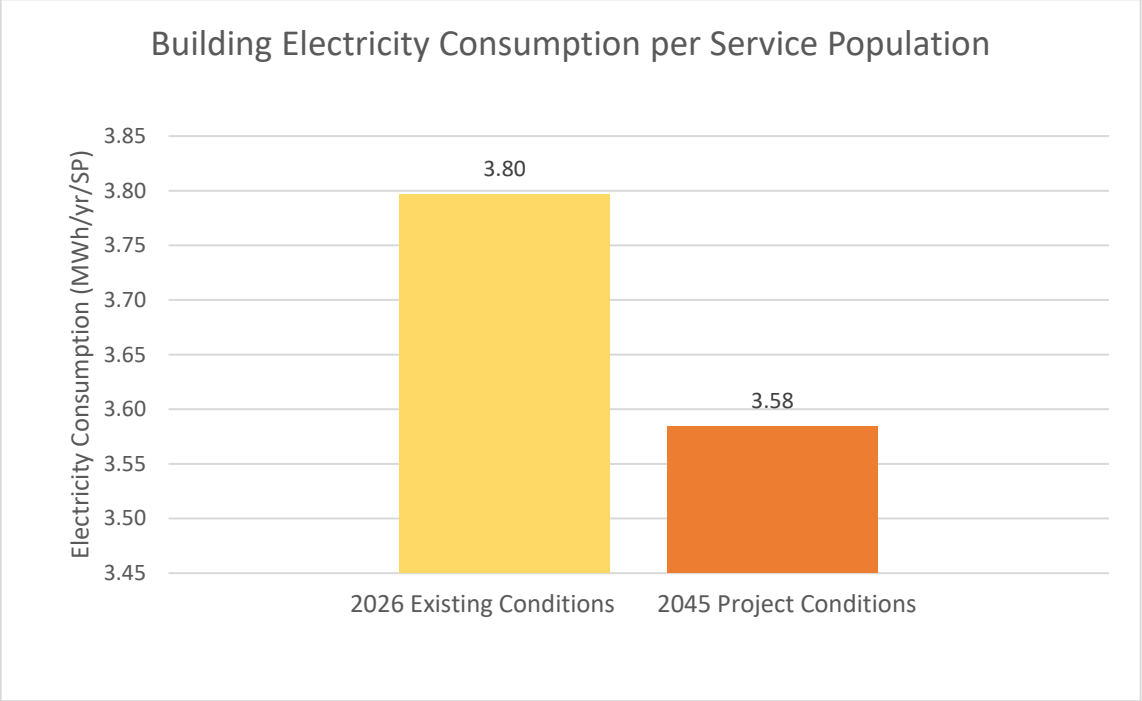
Electricity Use. Temporary electric power would be required at various construction sites throughout the city as growth occurs under GPU. Electricity would be consumed by lighting and electronic equipment (e.g., computers) located in trailers used by construction crews, and by small, off-road equipment (e.g., compressors) used during development activities. However, the electricity used for such activities would be temporary and would have a negligible contribution to the overall energy consumption.

Development facilitated by the GPU would require electricity for multiple uses, including but not limited to building heating and cooling, lighting, appliance use (e.g., washer, dryer, microwave, etc.), and other electronics (e.g., televisions). Electricity generation was estimated in CalEEMod using default values for existing and proposed land uses. Table 4.6-6 summarizes changes in electricity consumption that would occur over the next approximately 20 years of growth envisioned by the GPU.

Table 4.6-6: Estimated Operational Change in Electricity Consumption (2026 vs. 2045 GPU)

Metric	Electricity Consumption (MWh/yr)		
	2026	2045	Change
Total Electricity Consumption (MWh/yr)	635,845	717,322	+81,477
Service Population (SP)(A)	167,487	200,136	+32,649
Electricity Consumption Efficiency (MWh/yr/SP)	3.80	3.58	-0.21

Source: MIG, 2026 (see Appendix D).
(A) Service population is the sum of the number of residents and number of jobs in the Planning Area.



Source: MIG, 2026 (see Appendix D).
(B) Service population is the sum of the number of residents and number of jobs in the Planning Area.

As shown in Table 4.6-6, building electricity consumption in 2045 is expected to increase by approximately 81,477 MWh/yr compared to 2026 conditions; however, on an efficiency basis, electricity consumption would decrease by approximately 5.6%, from 3.80 MWh/yr/Service Population (SP) to 3.58 MWh/yr/SP. Although growth would be occurring pursuant to the GPU, new development and land use turnover would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6 and 11, which would decrease estimated electricity consumption in new and/or retrofitted structures.

In addition, the GPU contains policies that promote energy efficiency, such as:

- Policy S-7.4 (Energy Efficiency and Grid Reliability)
- Policy CR-7.1 (Energy Efficiency)
- Policy CR-7.3 (Compliance with Energy Standards)
- Policy CR-8.2 (Passive and Renewable Energy Design)
- Policy CR-8.4 (Holistic Sustainability Approaches)
- Policy D-6.1 (Building Orientation and Form)
- Policy D-6.4 (Durable and Sustainable Materials)
- Policy CR-9.3 (Energy and Building Efficiency)

Policy S-7.4 would improve energy efficiency and renewable energy through work with programs and utilities. Policies CR-7.1 and CR-9.3 would improve energy efficiency through changes in

municipal operations and buildings. For this reason, the electrical energy that would be consumed by the proposed GPU is not considered unnecessary, inefficient, or wasteful.

Natural Gas Use. Substantial natural gas consumption is not anticipated to occur during construction activities that could occur with GPU implementation. Fuels used for construction would generally consist of diesel and gasoline, which are discussed in the next subsection. Potential natural gas use during construction activities would not substantially contribute to overall energy consumption in the city since natural gas typically is not used to power construction equipment, and would not be unnecessary, inefficient, or wasteful.

Natural gas consumption from development associated with the GPU would be required for purposes such as space and water heating in buildings. CalEEMod was used to estimate natural gas consumption associated with GPU implementation. Table 4.6-7 summarizes estimated changes in natural gas consumption over the next approximately 20 years of growth envisioned by the GPU.

Table 4.6-1: Estimated Operational Change in Natural Gas Consumption (2026 vs. 2045)

Metric	Natural Gas Consumption (MMBtu)		
	2026	2045	Change
Total Natural Gas Consumption	1,654,189	1,900,391	+246,202
Service Population (SP)	167,487	200,136	+32,649
Natural Gas Consumption Efficiency (MMBtu/yr/SP)	9.88	9.50	-0.38

Source: MIG, 2026 (See Appendix D)

Based on the demand calculations shown in Table 4.6-7, natural gas consumption in the Planning Area in 2045 is expected to increase by approximately 246,202 MMBtu compared to 2026 conditions; however, on an efficiency basis, natural gas consumption is estimated to decrease by approximately 3.9% from 9.88 MMBTU/yr/SP to 9.50 MMBTU/yr/SP percent.

Although growth would occur within the Planning Area over the next approximately 20 years, new development and land use turnover would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6 and 11, which would decrease the rate at which natural gas consumption would occur in new and/or retrofitted structures (compared to older buildings that were built to prior building code standards that are less energy efficient).

Additionally, GPU Policies CR-7.2 (Renewable Energy Deployment) and CR-8.2 (Passive and Renewable Energy Design) would reduce natural gas consumption through promoting renewable energy. Policies CR-7.1 (Energy Efficiency) CR-7.3 (Compliance with Energy Standards) would improve energy efficiency. For these reasons, natural gas consumption by proposed land uses in the GPU is not considered to be unnecessary, inefficient, or wasteful.

Diesel and Gasoline Fuel Use. Diesel and gasoline fuels, also referred to as petroleum in this subsection, would be consumed during construction activities as the city grows pursuant to GPU land use policy. Fuel use by construction equipment would be the primary energy resource consumed during development activities, and vehicle miles associated with the transportation of construction materials (e.g., deliveries) and worker trips would also result in petroleum consumption. Whereas on-site, heavy-duty construction equipment and delivery trucks would predominantly use diesel fuel, construction workers would generally rely on gasoline-powered vehicles to travel to and from construction sites. State regulations such as LCFS would reduce the carbon intensity of transportation-related fuels, and all construction projects would be required

to comply with CARB's Airborne Toxic Control Measures, which restrict heavy-duty diesel vehicle idling to five minutes. Since petroleum use during construction would be temporary at each location and required to conduct development activities, it would not be unnecessary, wasteful, or inefficient.

Vehicle fuel consumption associated with GPU implementation would occur over the next approximately 20 years and would primarily be attributable to people traveling to or from the city for work, shopping, school, or other reasons. The amount of diesel and gasoline vehicle fuel consumption in the City under existing 2026 and forecasted 2045 growth conditions are shown in Table 4.6-8.

Table 4.6-2: Estimated Vehicle Fuel Consumption Changes (2026 vs. 2045)

Fuel / Metric	2026	2045	Change(A)
Total Fuel Consumption			
Total Diesel Consumption (gal/yr)	9,563,437	14,459,162	+4,895,725
Total Gasoline Consumption (gal/yr)	60,739,702	37,163,023	-23,576,679
Total Electricity Consumption (kWh/yr)	54,619,861	228,912,432	+174,292,571
Total Hydrogen Consumption (kg/yr)	412,601,364	445,306,136	+32,704,771
Fuel Consumption per Service Population			
Service Population	167,487	200,136	+32,649
Diesel Consumption Efficiency (gal/yr/SP)	57	72	+15
Gasoline Consumption Efficiency (gal/yr/SP)	363	186	-177
Electricity Consumption Efficiency (kWh/yr/SP)	326	1,144	+818
Hydrogen Consumption Efficiency (kg/yr/SP)	2,463	2,225	-238

Source: MIG, 2026 (See Appendix D)
(A) Totals may not equal due to rounding.

As shown in Table 4.6-8, annual diesel and gasoline fuel consumption in 2045 is anticipated to be approximately 14,459,162 and 37,163,023 gallons, respectively, while annual electricity consumption is anticipated to be approximately 228,912,432 kWh. Compared to 2026, this represents approximately 4,895,725 additional gallons of diesel fuel consumed annually, approximately 23,576,679 fewer gallons of gasoline fuel consumed annually, and approximately 174,292,571 more kWh of electricity consumed annually.[viii] Hydrogen fuel cell vehicles, which are responsible for only approximately 1% of vehicle miles traveled under both 2026 and 2045 conditions, would consume approximately 412 million kilograms of hydrogen in 2026 and approximately 445 million kilograms of hydrogen in 2045.

On a service population basis, overall diesel consumption is expected to increase by approximately 27% (from 57 gallons of fuel/yr/SP in 2026 to 72 gallons of fuel/yr/SP in 2045) and overall gasoline consumption is expected to decrease by approximately 49% (from 363 gallons of fuel/yr/SP in 2026 to 186 gallons of fuel/yr/SP in 2045). Total petroleum consumption per service population would decrease by approximately 39% (from 420 gallons of gasoline and diesel/year/SP in 2026 to 258 gallons/year/SP in 2045). While diesel consumption would increase, the GPU contains policies that would reduce diesel consumption through designing efficient truck routes, limiting idling, and supporting electrification of freight and public transit vehicles (see Policy C-5.5, Designated Truck Routes and Policy EJ-1.10, Truck and Transportation Emissions). Furthermore, total petroleum consumption and petroleum consumption per service population would decrease in 2045 compared to 2026 due to the decrease in gasoline consumption. Total

[viii] These estimates are based on average fuel economy in Los Angeles (SC) sub-area during the 2045 calendar year.

gasoline consumption and consumption per service population would decrease under the proposed GPU (see Table 4.6-8). This reduction is primarily associated with mandated increases in fuel efficiency and fleet turnover from regulations that require and encourage fuel efficiency (e.g., LCfS, see Section 4.6.2).

The approach also includes efforts to support and accelerate the number of plug-in hybrids and ZEVs in California. In addition, per the requirements identified in SB 375, CARB adopted a regional goal for the SCAG or reducing per-capita GHG emissions from 2005 levels by 8% by 2020 and 19% by 2035 for light-duty passenger vehicles. In addition, the GPU's proposed land uses includes increased density and mixed use development, which typically generates lower amounts of vehicle trips and associated fuel consumption.

The GPU contains land use policies that would reduce petroleum consumption by supporting mixed-use development, active transportation, and public transit use:

- Policy LU-5.2 (Transit-Oriented Development)
- Policy LU-5.4 (Metro C Line Station Area)
- Policy LU-5.5 (Southeast Gateway Transit-Oriented Development)
- Policy CR-9.2 (Clean and Active Transportation),
- Policy N-1.4 (Low-Emission Vehicles and Active Transportation)
- Policy EJ-2.2 (Safety and Complete Streets)
- Policy LU-6.2 (Mobility and Access), Policy C-1.1 (Pedestrian Safety Enhancements)
- Policy C-2.1 (Sidewalk Completion and Maintenance)
- Policy C-2.3 (Intersection and Crossing Improvements)
- Policy C-3.1 (Protected and Safe Bicycle Facilities)
- Policy C-3.2 (Bicycle Safety Education)
- Policy C-3.3 (Bicycle Parking and Transit Connections)
- Policy C-4.1 (First- and Last-Mile Connectivity), Policy C-4.3 (Transit Infrastructure and Amenities)
- Policy C-4.4 (Promote Public Transit as a Mode of Travel)
- Policy C-4.5 (Reduced-Emission Transit Infrastructure Planning)

As such, actual petroleum fuel consumption in the City of Downey could be lower in 2045 than estimated in Table 4.6-8.

The increase in electricity consumption per service population is associated with the projected increase in EV usage and additional EV infrastructure[ix] which is in line with the state's ZEV goals. For example, CARB's EMFAC2025 database shows approximately 9% EVs in the LA-South Coast area increasing to approximately 30% EVs in 2045. The increase in EVs and decrease in

[ix] The increase in EVs and EV infrastructure is supported by the GPU with policies such as Policy C-9.3 (Low-Carbon and Resilient Transportation), Policy N-1.4 (Low-Emission Vehicles and Active Transportation), and Policy CR-9.2 (Clean and Active Transportation). EV infrastructure expansion would include distribution system upgrades such as transformer upsizing and conduit installations.

petroleum usage would have a beneficial effect in terms of energy consumption as state regulations require an increasing share of renewable and carbon free electricity. Vehicle fuel consumption as part of operation of the proposed GPU would not be considered unnecessary as the GPU would include additional housing and employment to meet the needs of the Planning Area. As described above, fuel consumption would become more efficient over time and, as the state transitions to EVs, would utilize renewable or carbon-free energy. Therefore, vehicle consumption would not be inefficient or wasteful.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None Required.

Renewable Energy

Impact ENG-2 – Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Analysis of Impacts

The GPU would not conflict with nor obstruct a state or local plan adopted for the purposes of increasing renewable energy or energy efficiency. The Title 24 California Code of Regulations contains energy efficiency standards for residential and non-residential buildings. These standards address electricity and natural gas efficiency in lighting, water, heating, and air conditioning, as well as the effects of the building envelope (e.g., windows, doors, walls, and roofs, etc.) on energy consumption. The latest update to these standards, codified in the 2025 Title 24 California Code of Regulations, establishes mandatory renewable energy and energy efficiency standards that apply to various building systems, components, and uses.

The City would enforce the 2025 Title 24 California Code of Regulations during design review and project approval processes (and over time, any subsequent updates to Title 24). Other state plans, such as increasing the RPS portfolio (i.e., increasing the percentage of renewable electricity in accordance with state requirements described in Section 4.6.2), and increasing fuel efficiency and the number of electric vehicles on the road, would be implemented at the state level. The GPU would not impede the implementation of any of these actions. On the local level, local government fleets would continue to comply with the Advanced Clean Fleets regulation, which the GPU would not conflict with. Additionally, the GPU would be consistent with the 2015 Energy Action Plan. The Energy Action Plan was adopted to create a long-term plan for energy efficiency, identify how energy is consumed, establish reduction targets for municipal energy, and establish policies to accomplish energy efficiency targets. The Energy Action Plan’s energy reduction target had an end timeline of 2020 and is no longer directly applicable to the GPU. However, the policies within the Energy Action Plan are still applicable.

Table 4.6-9: Downey Energy Action Plan Consistency Evaluation	
Energy Action Plan Policy	**GPU Consistency**
Assembly Bill 32: The City of Downey will be consistent with Assembly Bill 32 and the greenhouse gas emission reduction goals.	Consistent. The GPU would follow State law, including AB-32.
Assembly Bills 1890 & 995. The City of Downey will follow the 'loading order' established under AB 1890 and 995 which prioritizes energy efficiency.	Consistent. The GPU would follow State law, including AB 1890 and AB 995. The GPU also contains policies that supports energy efficiency, such as Policy CR-7.1 (Energy Efficiency).
Federal and State Energy Efficiency Requirements. The City of Downey shall adhere to federal and state- level energy efficiency requirements for both new and existing buildings.	Consistent. The GPU would follow federal and state requirements. The GPU also contains Policy CR-7.3 (Compliance with Energy Standards) that requires new buildings, as well as retrofits and major renovations to existing buildings, to meet or exceed state energy standards.
Energy Efficiency in New Construction. Incorporate a clearly defined set of energy efficiency requirements into the City's Owner Project Requirements and Basis of Design Documents. For all future new construction or major modernization projects, City should utilize the services provided by the Savings By Design (SBD) program, which encourages energy- efficient building design and construction practices, wherever feasible and practical.	Consistent. The GPU is consistent with the goal of energy efficient building design through Goal CR-8 (Sustainable Building Practices Enhancing Resilience, Reducing Environmental Impacts, and Supporting Climate Adaptation), Policy CR-8.2 (Passive and Renewable Energy Design), and Policy CR-8.4 (Holistic Sustainability Approaches). Future development under the GPU would follow City energy requirements and would not conflict with the goal of energy-efficient construction practices.
Leadership in Energy and Environmental Design (LEED). City will continue to encourage LEED in new construction and major modernization projects wherever feasible.	Consistent. The GPU would not conflict with developments obtaining LEED certification. Additionally, energy efficiency policies contained in the GPU are consistent with many LEED requirements. For example, Policy CR-7.2 (Renewable Energy Deployment), Policy CR-8.2 (Passive and Renewable Energy Design), and Policy CR-8.4 (Holistic Sustainability Approaches) support renewable technology, energy-efficient building designs, and energy-efficient appliances, and Policy CR-8.3 (Climate-Responsive and Resilient Design) supports climate resiliency in new development and public spaces.
Building Commissioning and Retro-Commissioning. For all future capital projects, the City intends to incorporate building commissioning into the project requirements. For all existing buildings,	Consistent. The GPU would not conflict with or obstruct City commissioning or retro-commissioning work. Development under the GPU would follow project requirements set by the

Table 4.6-9: Downey Energy Action Plan Consistency Evaluation	
Energy Action Plan Policy	**GPU Consistency**
the City will identify those that can benefit from retro-commissioning. To the extent economically feasible and technically practicable, the City should plan on undergoing an retro-commissioning process in order of priority.	City, including any potential requirements for building commissioning.
Environmental Preferred Purchasing (EEP) Policy. By adhering to the LA County EPP policy, the City of Downey will help reduce its negative impact on the environment, lower pollution levels from its operations, protect public health, and improve the environmental quality of the Downey community.	Consistent. The GPU promotes energy efficiency in City operations through Policies CR-7.1 (Energy Efficiency) and CR-9.3 (Energy and Buildings Efficiency).
Energy Star. Energy Star standards shall be considered in all purchasing decisions made by the City of Downey, wherever applicable.	Consistent. The GPU promotes energy efficiency in City operations through Policies CR-7.1 and CR-9.3. Additionally, Policy CR-8.4 provides that all development and redevelopment projects incorporate sustainability strategies including energy efficient appliances.
Support Staff Training. Department leaders should encourage staff to participate in energy efficiency training made available by various organizations.	Not Applicable. The policy recommends City staff participate in energy efficiency training. Although the policy is not directly applicable to the GPU, the GPU still contains policies, such as Policy CR-9.3 (Energy and Buildings Efficiency), that support energy efficiency at the municipal level.

Since the GPU would comply with applicable State standards and not impede any plan related to increasing renewable energy or energy efficiency, this impact would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to energy?

Analysis of Impacts

The proposed GPU would result in new development over time that would consume electricity, natural gas, and transportation fuels during construction and operations (Impact ENG-1). The energy consumption due to development activities would combine with the energy consumption

from other past, present, and reasonably foreseeable projects. For the purposes of this cumulative energy analysis, the geographic extent for potential cumulative electricity and natural gas impacts is limited to the service territories for the Planning Area's electricity (Southern California Edison) and natural gas (Southern California Gas) service providers, while the geographic extent for cumulative transportation fuel impact is considered to be statewide.

- Cumulative Electricity and Natural Gas Impacts: The GPU would not result in the unnecessary, inefficient, or wasteful use of energy resources because it incorporates policies that reduce total energy consumption, decrease reliance on fossil fuels, and increase on-site renewable energy. In addition, future development projects in the city would be constructed in an orderly, purposeful, and efficient manner in compliance with all applicable design guidelines, design standards, and energy code rules and regulations. Cumulative development projects, at a minimum, would be subject to State energy efficiency standards (e.g., BEES, CALGreen Code) that conserve energy throughout each provider's service territory. Therefore, the Project would not result in a cumulative considerable contribution to cumulative energy consumption impacts.
- Transportation Fuel Impacts: The GPU would not result in the unnecessary, inefficient, or wasteful use of transportation fuels because it includes a land use plan and policies that enhance non-vehicular access and reduce VMT. Cumulative development projects would also consume transportation fuels, but over time, cumulative fuel consumption is expected to decrease due to State regulations pertaining to vehicle emissions standards and fuel content requirements (e.g., LCFS Program). Therefore, the Project would not result in a cumulative considerable contribution to cumulative energy consumption impacts.

As described under Impact ENG-2, the GPU would not conflict with a plan, policy, or regulation, pertaining to renewable energy or energy efficiency in a manner that could result in a significant physical effect on the environment. As such, the GPU would not have the potential to result in a cumulative considerable contribution to conflicts with renewable energy and energy efficiency plans.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

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4.9 – GEOLOGY AND SOILS

This EIR chapter addresses potential project impacts related substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), and landslides. Project impacts related to substantial soil erosion or the loss of top soil are also addressed, as are the potential impacts related to unstable soil, expansive soil, and soils incapable of supporting the use of septic tanks or alternative wastewater disposal systems. Further, this chapter analyzes potential project impacts to paleontological resources. Lastly, this chapter evaluates potential cumulative project impacts related to geology and soils.

4.7.1 – Environmental Setting

The City of Downey is subject to earthquakes and earthquake-induced hazards such as ground shaking and liquefaction. Hazard vulnerability assessment requires the analysis of many factors, including population and property distribution, event frequency, susceptibility, infrastructure, and disaster preparedness.

Seismic Hazards

Seismicity is a well-known hazard of Southern California. The region straddles the Earth's two largest tectonic plates: the northwest-moving Pacific plate and southwest-trending North American plate (DOC, 2024). Movement along this boundary has resulted in many earthquakes from the region's numerous faults. Small tremors generally result in mild ground shaking, with few adverse effects on structures and landforms. However, significant earthquakes can produce strong ground shaking, surface rupture, liquefaction, landslides, and other secondary hazards that may cause wide-scale damage to properties and result in loss of life. Modern building codes and seismic design standards have substantially reduced earthquake risks for newer structures; however, older structures in Downey that were constructed prior to the adoption of modern building codes may be more vulnerable to damage during a major earthquake.

Faults

Alquist-Priolo earthquake fault zones are regulatory zones surrounding the surface traces of active faults in California. According to the California Department of Conservation (DOC), no active faults transect the City of Downey (DOC, 2025). The nearest active faults are the Puente Hills blind thrust system, located approximately 7.5 miles northeast of the City, and the Newport-Inglewood-Rose Canyon fault zone, located approximately 7.9 miles to southwest (see Exhibit 4.7-1). Both faults are associated with designated Alquist-Priolo Earthquake Fault Zones, although the Puente Hills blind thrust fault does not have a surface expression. Neither fault traverses the Planning Area; however both are capable of generating strong ground shaking within the City. Both faults are associated with Alquist-Priolo Earthquake Fault Zones, although the Puente Hills blind thrust system does not have a surface expression. The most recent major earthquake on the Puente Hills blind thrust system was the Whittier Narrows earthquake in 1987, with a magnitude of 5.9 on the Richter scale. While both faults are associated with designated Alquist-Priolo Earthquake Fault Zones, the Puente Hills blind thrust fault does not have a surface expression. The most recent major earthquake on the Newport-Inglewood-Rose Canyon fault zone was the Long Beach earthquake in 1933 with a magnitude of 6.4.

Landslides and Liquefaction

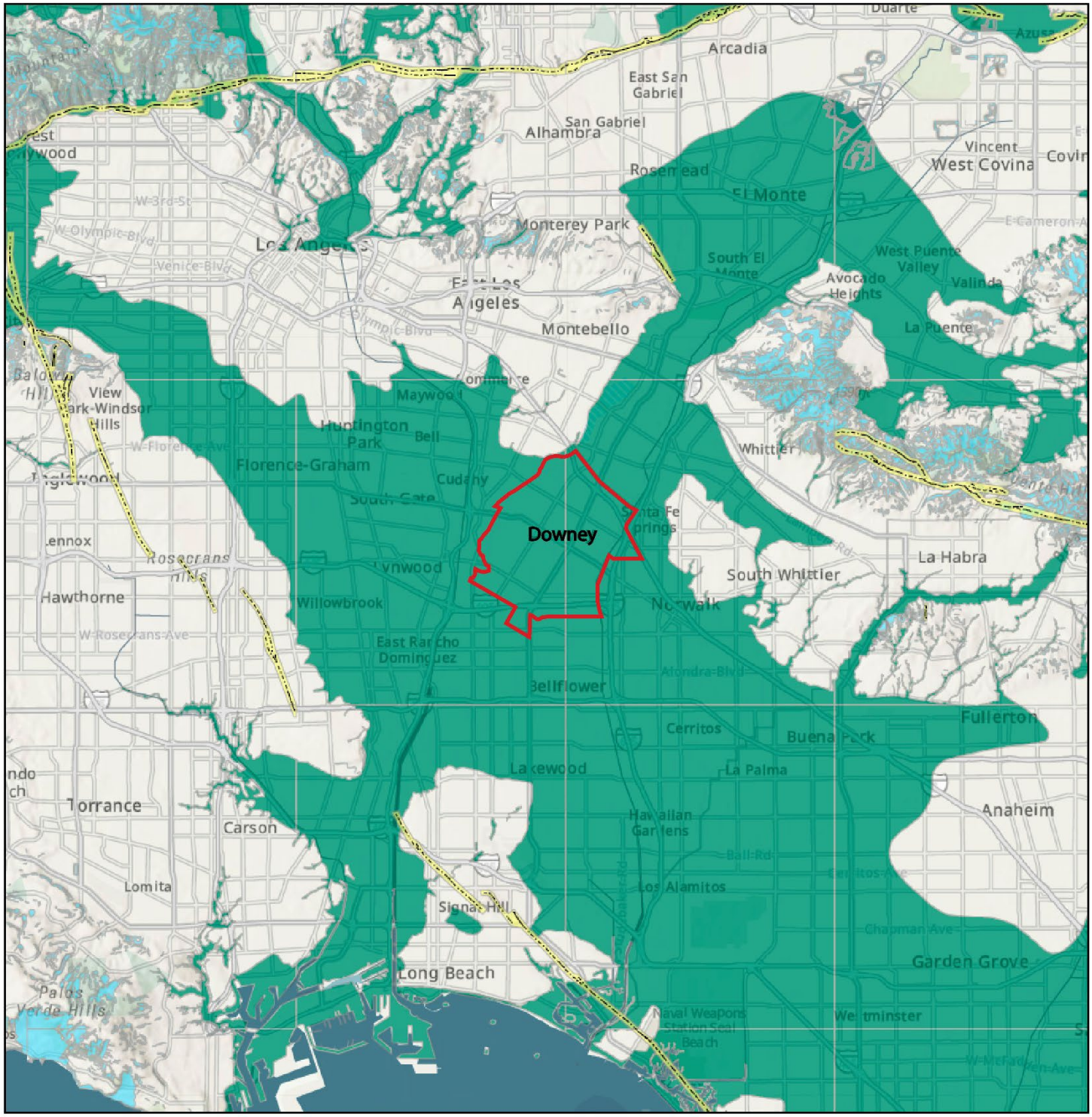
Landslides can be attributed to a number of factors, including steep slopes, unstable terrain, and proximity to earthquake faults. The City of Downey is in the Los Angeles Basin and is characterized by a relatively flat topography. As shown in Exhibit 4.7-1, the City is not located within proximity to any mountains, cliffs, hills or slopes that could expose properties to landslides. Furthermore, the City is not mapped within a State-designated earthquake-induced landslide hazard zone. As such, the Planning Area is not considered susceptible to landslides.

Liquefaction is a form of ground failure that occurs when saturated soils temporarily lose strength and stiffness due to intense seismic ground shaking, causing the soil to behave like liquid. Liquefaction typically occurs in loose, saturated granular materials, with saturated silt and clay contents, at shallow groundwater tables less than 50 feet from the surface. According to the California Department of Conservation, the entire City of Downey is susceptible to liquefaction and ground failure from seismically induced ground shaking (see Exhibit 4.7-1) (DOC, 2025).

Paleontological Resources

Downey is within the South Gate Quadrangle and the Los Angeles Basin (DOC, 2025). The South Gate Quadrangle is covered by alluvial sediments of Quaternary age. Older alluvial fan sediments of Pleistocene age are associated with the Montebello Hills and Dominguez Hills. Elsewhere across most of the quadrangle are the younger alluvial fan sediments of Holocene and late Pleistocene age. The sediments described consist of varying proportions of sand, gravel, silt, and clay.

The City is highly urbanized, and most of the of the Planning areas have been previously disturbed by development activities. The General Plan 2025 EIR does not identify any known paleontological resources or sites within the Planning Area. Downey contains no unique geologic features. No known paleontological resources have been documented within the Planning Area as a result of previous development activities.



Source: California DOC

http://www.migcom.com • 951-787-9222

Exhibit 4.7-1 Seismic Hazards Map

Downey 2045 General Plan Update
Downey, California

4.7.2 – REGULATORY FRAMEWORK

Federal

National Earthquake Hazards Reduction Program

Established by Congress in 1977, the National Earthquake Hazards Reduction Program (NEHRP) leads the federal government's efforts to reduce the fatalities, injuries, and property losses caused by earthquakes. The four basic NEHRP goals are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

In its initial NEHRP authorization, and in subsequent reauthorizations, Congress has recognized that several key federal agencies can contribute to earthquake mitigation efforts.

Federal Antiquities Act of 1906

This act protects paleontological resources on federal lands under Subsection 8.16.2.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults and published maps showing these zones. Buildings for human occupancy are not permitted to be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. The potential for ground surface rupture is present along any of the branches. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and is not allowed within 50 feet of the trace of an active fault.

Seismic Hazard Mapping Act

The Alquist-Priolo Earthquake Fault Zoning Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. In 1990, the State passed the Seismic Hazards Mapping Act (SHMA), which addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The California Geological Survey (CGS) is the principal State agency charged with implementing the Act. Pursuant to the SHMA, the CGS is directed to provide local governments with seismic hazard zone maps that identify areas susceptible to liquefaction, earthquake-induced landslides and other ground failures. The goal is to minimize loss of life and property by identifying and mitigating seismic hazards. The seismic hazard zones delineated by the CGS are referred to as "zones of required investigation." Site-specific geological hazard investigations are required by the SHMA when construction projects fall within these areas.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more State-mapped hazard areas.

California Building Code

State regulations protecting structures from seismic hazards are contained in the California Code of Regulations, Title 24, Part 2 (Vol 1 & 2) (the California Building Code (CBC)), which is updated on a triennial basis. These regulations apply to public and private buildings in the State. Provisions of the CBC address (among other topics) fire safety, access for disabled persons, and seismic-resistant construction design.

California Public Resources Code Chapter 1.7, Section 5097.5 (Stats. 1965, c. 1136, p. 2792)

This code defines any unauthorized disturbance or removal of a fossil site or fossil remains on public land as a misdemeanor and specifies that State agencies may undertake surveys, excavations, or other operations as necessary on State lands to preserve or record paleontological resources under Subsection 8.16.2.2

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to geology and soils that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.7.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it:

A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
    i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
    ii) Strong seismic ground shaking.
    iii) Seismic-related ground failure, including liquefaction.
    iv) Landslides.
B. Result in substantial soil erosion or the loss of topsoil.
C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

D. Be located on expansive soil, as defined in Table 1806.2 of the International Building Code (Adopted by the CBC), creating substantial direct or indirect risks to life or property.

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

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

G. Would the project cause substantial adverse cumulative impacts with respect to Geology and Soils.

4.7.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to geology and soils which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Fault Rupture or Ground-shaking Effects

Impact GEO-1 – Would the project directly or indirectly cause potential substantial adverse effects, including the risk of 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides?

Analysis of Impacts

Fault Rupture. The Alquist-Priolo Earthquake Fault Zoning Act restricts development on active fault zones and requires the State Geologist to identify active faults and determine what, if any, construction is allowed in these zones. No active faults traverse the Planning Area. As described in section 4.7.1, the nearest active faults are the Puente Hills blind thrust system, located approximately 7.5 miles to the northeast, and the Newport-Inglewood-Rose Canyon fault zone, located approximately 7.9 miles to the southwest. Given the location of these faults, the Planning Area would not be subject to fault rupture; however, as described below, the Planning Area would be subject to substantial ground shaking in the event of an earthquake.

Strong Seismic Ground Shaking. The Planning Area is located in seismically active Southern California, and the greater Los Angeles region straddles two tectonic plates. Many fault zones transect the region in proximity to Downey, including the San Andreas, San Fernando, San Jacinto, Sierra Madre, and Whittier-Elsinore Faults. Faults in the Los Angeles Basin area are considered active and have the potential to generate strong ground shaking and cause widespread damage in the region in the event of an earthquake. Future development in the Planning Area would be exposed to geologic and seismic conditions that may present a potentially significant impact in the event of an earthquake. Older buildings are at increased risk of damage and/or destruction if they were built prior to new seismic building codes and have not been retrofitted.

Liquefaction. Liquefaction-induced ground failure has historically been a major cause of earthquake damage in Southern California. As illustrated in Exhibit 4.7-1 above, the entirety of

the Planning Area lies within a liquefaction zone. Given the scale of development within the City, a seismic event has the potential to have a detrimental impact on existing development throughout the City, including residences and businesses.

Landslides. There are no landslide zones mapped within the Planning Area, and there are no significant slopes which could have the potential for landslide risks (see Exhibit 4.7-1).

Future development within the Planning Area would be required to follow building standards to ensure the safety of occupants and surrounding properties. The City of Downey has adopted and incorporated the 2025 California Building Code (CBC) into its Municipal Code (Article 8 Building Regulations, Chapter 1 Downey Building Code, Section 8000). Future development projects would be required to adhere to the design and repair requirements of the CBC. Additionally, the 2025 California Fire Code (CFC) has guidelines on building design and construction based on seismic constraints and expected ground shaking and ground failure throughout California. Through the City's existing development review process, development projects would be evaluated against the seismic design constraints of all pertinent building codes prior to approval of construction permits.

The General Plan Safety Element includes:

- Goal S-1: Reduce the risk of damage, injury, and loss of life from seismic and geologic hazards through safe building design, reliable infrastructure, and effective emergency readiness.
- Policy S-1.1: Safe Development and Construction. Ensure that new development and major renovations meet current seismic safety standards and incorporate appropriate geotechnical design practices.
- Policy S-1.2: Retrofit of Vulnerable Structures: Encourage the retrofit of older buildings, critical facilities, and utilities to reduce risk from earthquakes and related ground failure.
- Policy S-1.5: Hazard Mapping and Monitoring. Maintain and use up-to-date hazard maps and data to guide land use decisions and infrastructure investments.

GPU Goals and Policies would provide for the information on seismic risks, safe practices, emergency facilities, and evacuation routes to be available through public awareness programs, and ensuring safety through seismic rehabilitation of existing structures, avoiding unstable ground for development, and incorporating seismically safe designs into new buildings and structures.

The Municipal Code requires assessments of potential geologic and soil constraints for new development by requiring site-specific geotechnical investigations. With implementation of General Plan goals and policies, the City's development review process, and all applicable Municipal Code regulations, potential impacts related to substantial adverse effects on future development within the Planning Area would be reduced to less than significant levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Soil Erosion

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

Analysis of Impacts

The Planning Area is generally flat and highly developed with limited undeveloped areas that include school fields, landscaping, and vacant lots. Because the City is relatively flat, risk of erosion from steep slopes is minimal. Wind and rain in areas of exposed soils would be controlled by Municipal Code requirements in Chapter 7 (Stormwater and Urban Runoff Pollution and Conveyance Controls).

The Regional Water Quality Control Board (RWQCB) regulates the discharge of storm water from municipalities and activities within their jurisdiction including construction. The City is a signatory of the Los Angeles County Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharge. The requirements include guidance and regulations for construction-related erosion control, including the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for projects which would disturb one or more acres. The requirements also include appropriate best management practices (BMPs) to help prevent substantial soil erosion or the loss of topsoil.

In addition, the City's Municipal Code Chapter 7 (Stormwater and Urban Runoff Pollution and Conveyance Controls) ensures the City would review all project plans and impose conditions as required to safeguard water quality and erosion control prior to the issuance of either a building permit or grading plan approval. The City's development review process would evaluate proposed development against established BMPs and other water quality-related guidelines, many of which are designed to control runoff and erosion.

With implementation of standard water quality regulatory permitting requirements, and guidelines for erosion control in the Municipal Code, potential impacts related to erosion from future development within the Planning Area would be reduced to less than significant levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Unstable Geologic Unit

Impact GEO-3 – Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Analysis of Impacts

The underlying geology within the Planning Area consists of alluvial fan deposits, formed when a fast flowing stream flattens, slows, and spreads out. These deposits consist largely of sand, silt, gravel, and to a lesser extent, clay. The Planning Area has experienced moderate ground shaking in the past from regional earthquakes, and the entirety of the Planning Area is considered to be

at risk of liquefaction as a result of seismic activity. These soil conditions combined with strong ground shaking create a potential for lateral spreading, subsidence, or possibly liquefaction in certain portions of the City.

As previously discussed above, Downey has no steep slopes or areas where previous occurrence of landslide movement or local topographic, geological, geotechnical and subsurface water conditions have been documented. Some portions of the Planning Area may be subject to soil settlement or may have expansive soils. Localized subsidence relating to excessive regional groundwater withdrawal is also a potential hazard.

Due to the presence of local and regional faults and soil conditions, portions of the Planning Area may experience subsidence, lateral spreading, or collapse during strong seismic events in addition to the potential for liquefaction or other soil constraints. These seismic-related conditions could affect structures and their occupants of future development under the GPU. However, the General Plan Safety Element includes:

- Goal S-1: Reduce the risk of damage, injury, and loss of life from seismic and geologic hazards through safe building design, reliable infrastructure, and effective emergency readiness.
- Policy S-1.1: Safe Development and Construction. Ensure that new development and major renovations meet current seismic safety standards and incorporate appropriate geotechnical design practices.
- Policy S-1.2: Retrofit of Vulnerable Structures: Encourage the retrofit of older buildings, critical facilities, and utilities to reduce risk from earthquakes and related ground failure.
- Policy S-1.5: Hazard Mapping and Monitoring. Maintain and use up-to-date hazard maps and data to guide land use decisions and infrastructure investments.

GPU goals and Policies would provide for information on seismic risks, safe practices, emergency facilities, and evacuation routes to be available through public awareness programs, and for protection through seismic rehabilitation of existing structures, avoidance of unstable ground for development, and incorporation of seismically safe designs into new buildings and structures.

In addition, the Municipal Code requires appropriate assessments of potential geologic and soil constraints for new development. Finally, the CBC and the City have guidelines on building design and construction based on onsite soil constraints. During the City's existing development review process, proposed development projects are evaluated in consideration of actual onsite geologic or soil constraints and all pertinent building codes.

With implementation of General Plan goals and policies and applicable building codes, potential impacts related to seismically induced constraints on future development within the Planning Area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Expansive Soil

Impact GEO-4 – Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?

Analysis of Impacts

As previously indicated, the Planning Area contains possible soil constraints, including the potential for expansive soils. In areas where soils have a high clay content, the potential exists for expansion when the soil becomes saturated with water. This type of soil constraint could affect structures and their occupants of future development.

However, the Municipal Code requires appropriate assessments of potential geologic and soil constraints for new development. The CBC and the City have guidelines on building design and construction based on onsite soil constraints. During the City's existing development review process, proposed development projects are evaluated in consideration of actual onsite geologic or soil constraints and all pertinent building codes.

With implementation of applicable building codes, potential impacts related to seismically induced constraints on future development within the Planning Area would be reduced to less than significant levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Alternative Waste Water Systems

Impact GEO-5 – Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?

Analysis of Impacts

Local soils conditions influence the feasibility and placement of septic or similar wastewater treatment systems. However, the entire Planning Area is served by a municipal sewer system connected to the Los Angeles County Sanitation Districts' system. Any future development pursuant to the GPU would connect to this system. Municipal Code Chapter VII-2 Section 7220.10 (Connecting Cesspools and Septic Tanks) states that no person "shall connect, or cause to be connected, any cesspool, seepage pit, or septic tank to any main line sewer or to any house lateral." Therefore, impacts related to soils that are incapable of supporting septic tanks or alternative wastewater disposal systems would not occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Paleontological Resources

Impact GEO-6 – Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Analysis of Impacts

Development within the Planning Area would require site preparation, grading, and construction operations. The City of Downey is completely developed and there are very few sites within the City that have not been previously disturbed by development activities. The current General Plan does not identify any known paleontological resources or sites within the City, and there are no unique geologic features within the City of Downey. Previous development within the City has not uncovered any paleontological resources. This suggests a low potential for encountering fossils in areas that have already been developed. Because the Planning Area is completely urbanized, it is considered unlikely that previously undisturbed paleontological resources (fossil evidence of life from past geologic time frames) would be encountered as a result of future development projects implemented as part of the project. The GPU does not contain any goals, policies, or implementation programs related to paleontological resources. With implementation of the City's existing development review process, and given the low potential for paleontological discovery within the Planning Area, potential impacts related to paleontological resources from future development within the Planning Area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact GEO-7 – Would the project cause substantial adverse cumulative impacts with respect to Geology and Soils?

Analysis of Impacts

The Planning Area is in a seismically active area. The Los Angeles region straddles two tectonic plates and contains many fault zones, including the Newport – Inglewood Fault Zone that runs along the western edge of the Planning Area. The Planning Area is subject to ground shaking from local and regional faults and localized areas may experience liquefaction, subsidence, expansive soils, or other seismic or soil constraints. Due to its location and physical conditions, future development in the Planning Area would be subject to geologic and seismic constraints which may represent a potentially significant impact on future structures and could affect previously undiscovered paleontological resources as well.

State law requires that the Safety Elements of city general plans, including Downey, address potential geologic and seismic constraints. As previously described, Goal S-1 and its policies would ensure that the information on seismic risks, safe practices, emergency facilities, and evacuation routes are available through public awareness programs, and ensuring safety through seismic rehabilitation of existing structures, avoiding unstable ground for development, and incorporating seismically safe designs into new buildings and structures. In addition, the General Plans for the surrounding cities and the County General Plan are all required to identify potential risks from geologic and seismic conditions and contain goals and policies to address these risks and protect the public. These goals and policies are intended to be consistent with state law and are similar to those of Downey's General Plan. In addition to local general plans, the CBC and City have guidelines on building design and construction based on seismic constraints and expected ground shaking and ground failure throughout California.

In these ways, potential cumulative impacts to future development from geologic, seismic, and soil constraints would be minimized. Future development in the City of Downey under the GPU would not make a significant contribution to any cumulative regional impacts on geologic, seismic, soil, or paleontological resources and cumulative impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.7.5 – REFERENCES

California Department of Conservation (DOC). California Geological Survey Regulatory Maps: South Gate and Whittier Quadrangles. Web: https://www.conservation.ca.gov/cgs/maps-data/ [Accessed November 2025].

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4.8 GREENHOUSE GASES

This section describes the existing greenhouse gases (GHG) setting of the Planning Area; identifies associated regulatory requirements; evaluates the potential GHG and climate change impacts of the Downey General Plan Update (GPU) and identifies mitigation measures related to implementation of the project. The methodologies and assumptions used in the preparation of this section follow guidance from the South Coast Air Quality Management District (SCAQMD). Information on existing GHG emissions levels and applicable Federal and State regulations were obtained from the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and SCAQMD. This GHG analysis has been closely coordinated with the Air Quality and Energy analyses in Sections 4.3 and 4.6 of this EIR. Please refer to Appendix D for detailed air quality and GHG emissions estimates (MIG, 2026).

4.8.1 ENVIRONMENTAL SETTING

Climate Change

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term "climate change" is preferred over the term "global warming" because "climate change" conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (°F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet, and without it, life as we know it on Earth would not exist. Human activities since the beginning of the industrial revolution (approximately 275 years) have been adding to the natural greenhouse effect by increasing the gases in the atmosphere that "trap" energy, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

Gases that "trap" heat in the atmosphere and affect regulation of the Earth's temperature are known as "greenhouse gases". Many chemical compounds in the Earth's atmosphere exhibit the GHG property. GHG allows sunlight to enter the atmosphere freely. When the sunlight strikes the Earth's surface, it is either absorbed or reflected back toward space. Earth, or materials near the Earth's surface, that have absorbed energy from sunlight warm up during the daytime and emit infrared radiation back toward space during both the daytime and nighttime hours. GHG absorbs this long-wave, infrared radiation and helps keep the energy in the Earth's atmosphere.

GHG that contribute to climate regulation are a different type of pollutant than criteria or hazardous air pollutants because climate regulation is global in scale, both in terms of causes and effects. Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide, or CO_2), and off-gassing from low-oxygen environments such as swamps or exposed permafrost (methane or CH_4). However, GHG emissions from human activities such as fuel combustion (e.g., CO_2) and refrigerant use (e.g., hydrofluorocarbons, or HFCs) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. Human production of GHG has increased steadily since pre-industrial times (approximately pre-1880), and atmospheric CO_2 concentrations have increased from a pre-industrial value of 280 parts per million (ppm) in the early 1800s to approximately 425 ppm in October 2025 (NOAA, 2025). The effects of increased GHG concentrations in the atmosphere include increasing shifts in temperature and precipitation patterns and amounts, reduced ice and snow cover, sea level rise, and acidification of oceans. These effects in turn will impact food and water supplies, infrastructure, ecosystems, and overall public health and welfare.

The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific GHGs—CO_2, CH_4, nitrous oxide (N_2O), and sulfur hexafluoride (SF_6)—and two groups of gases— hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). These GHG are the primary GHG emitted into the atmosphere by human activities. Water vapor is also a common GHG that regulates the Earth's temperature; however, the amount of water vapor in the atmosphere can change substantially from day to day, whereas other GHG emissions remain in the atmosphere for longer periods of time. Black carbon consists of particles emitted during combustion; although a particle and not a gas, black carbon also acts to trap heat in the Earth's atmosphere. The most common GHG are described below.

- **Carbon Dioxide (CO_2)** is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of CO_2 from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO_2 at the sea surface. CO_2 is also released from plants during wildfires. Volcanic eruptions release a small amount of CO_2 from the Earth's crust. Human activities that affect CO_2 in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels used for electricity generation and transportation are the largest source of CO_2 emissions in the United States. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO_2. Emissions from industrial activities also emit CO_2 such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.
- **Methane (CH_4)** is emitted from human activities and natural sources. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause CH_4 releases include fossil fuel

production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50% of global CH_4 emissions are human generated. Releases from animal digestive processes at agricultural operations are the primary source of human-related CH_4 emissions. CH_4 is produced from landfills as solid waste decomposes. CH_4 is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases CH_4. Wetlands are the primary natural producers of CH_4 because the habitat is conducive to bacteria that produce CH_4 during decomposition of organic material.

- **Nitrous Oxide (N_2O)** is emitted from human sources such as agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N_2O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N_2O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of N_2O, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.
- **Sulfur Hexafluoride (SF_6)** is commonly used as an electrical insulator in high-voltage electrical transmission and distribution equipment such as circuit breakers, substations, and transmission switchgear. Releases of SF_6 occur during maintenance and servicing as well as from leaks of electrical equipment.
- **Hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs)** are entirely human made and are mainly generated through various industrial processes. These types of gases are used in aluminum production, semiconductor manufacturing, and magnesium production and processing. HFCs and PFCs are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons.

GHG can remain in the atmosphere long after they are emitted. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 28, which means that one molecule of CH_4 has 28 times the effect on global warming as one molecule of CO_2. Multiplying the estimated emissions for non-CO_2 GHG by their GWP determines their CO_2 equivalent (CO_2e), which enables a project's combined GWP to be expressed in terms of mass CO_2 emissions. The GWP and estimated atmospheric lifetimes of the common GHG are shown in Table 4.8-1.

Table 4.8-1: Global Warming Potential (GWP) of Common GHG (100-Year Horizon)

GHG	Lifetime (years)	GWP[(A)]
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	28
Nitrous Oxide (N_2O)	114	265
HFC-23	270	12,400
HFC-134a	14	1,3,00
HFC-152a	1.4	138
PFC-14	50,000	6,630
PFC-116	10,000	11,100
Sulfur Hexafluoride (SF_6)	3,200	23,500

Source: IPCC 2014
GWPs are based on the United Nations Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report.

Climate Change and California

The 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) identified anticipated impacts to California due to climate change through extensive modeling efforts. General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevada Mountain Range.
- Some reduction in precipitation is likely by the middle of the century.
- Sea levels will rise up to an estimated 55 inches.
- Extreme events such as heat waves, wildfires, droughts, and floods will increase.
- Ecological shifts of habitat and animals are already occurring and will continue to occur (CNRA, 2009).

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections and the interpretation. The potential impacts of global climate change in California are detailed below.
In January 2018, the CNRA adopted *Safeguarding California Plan: 2018 Update*, which built on nearly a decade of adaptation strategies to communicate current and needed actions the State government should take to build climate change resiliency. It identified hundreds of ongoing actions and next steps that State agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations. The 2018 update also had two new chapters and incorporated a feature showcasing the many linkages among policy areas. A new “Climate Justice” chapter highlighted how equity is woven throughout the entire plan (CNRA, 2018).

The CNRA updated Safeguarding California with the 2021 California Climate Adaptation Strategy, which focused on the following six priorities:

- Strengthening protections for climate vulnerable communities
- Bolstering public health and safety to protect against increasing climate risks
- Building a climate resilient economy
- Accelerating nature-based climate solutions and strengthen climate resilience of natural systems
- Making decisions based on the best available climate science; and
- Partnering and collaborating to leverage resources

The 2021 update contained goals and actions to address each priority, and integrated climate actions from statewide climate action plans, sector-based strategies, regionally focused strategies, and state stewardship plans.

The CNRA released the Draft California Climate Adaptation Strategy in May 2024. The Draft update builds on the priorities and actions of the 2021 California Climate Adaptation Strategy, and includes additional new metrics and actions across the six priorities. For example, the 2024 draft contains new actions to analyze and address the effects of extreme heat and new metrics for investing in forest management (CNRA, 2024).

Carbon Sequestration

Carbon sequestration is the process by which plants absorb CO_2 from the atmosphere and store it in biomass like leaves and grasses. Agricultural lands, forests, and grasslands can all sequester carbon dioxide, or emit it. The key is to determine if the land use is emitting CO_2 faster than it is absorbing it. Young, fast-growing trees are particularly good at absorbing more than they release and are known as a sink. Agricultural resources often end up being sources of carbon release because of soil management practices. Deforestation contributes to carbon dioxide emissions by removing trees, or carbon sinks, that would otherwise absorb CO_2. Forests are a crucial part of sequestration in some parts of the world, but not much in the United States. Another form of sequestration is geologic sequestration. This is a manmade process that results in the collection and transport of CO_2 from industrial emitters (i.e. power plants) and injecting it into underground reservoirs.

Statewide GHG Emissions

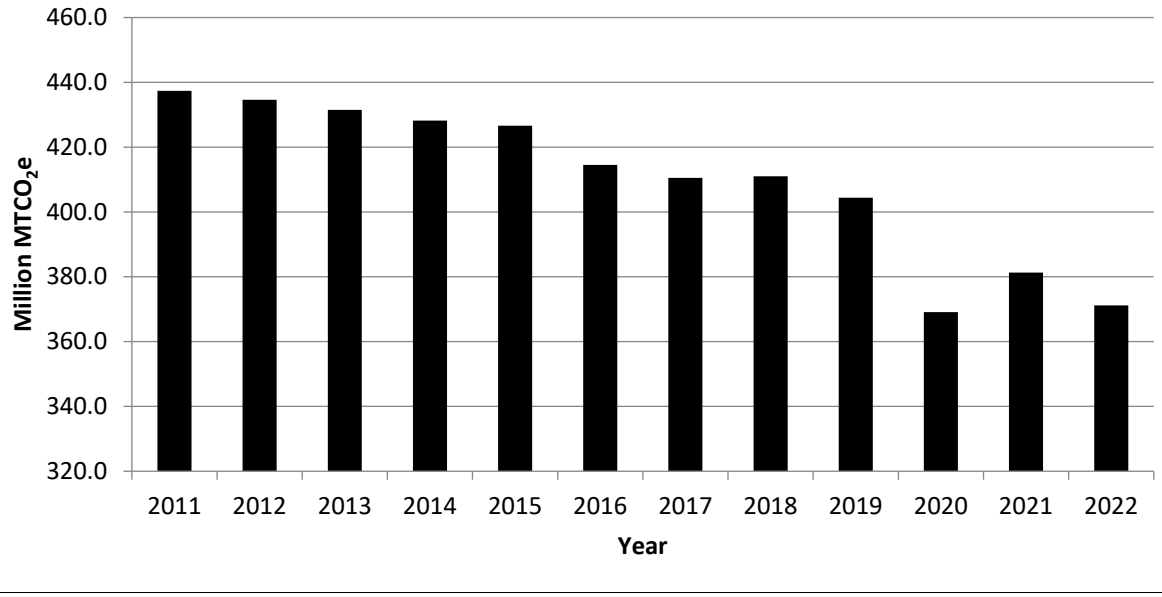
CARB prepares an annual statewide GHG emission inventory using regional, State, and federal data sources, including facility-specific emissions reports prepared pursuant to the State's Mandatory GHG Reporting Program. The statewide GHG emission inventory helps CARB track progress towards meeting the State's Assembly Bill (AB) 32 GHG emissions target of 431 million metric tons of CO_2 equivalents ($MTCO_2e$), as well as establish and understand trends in GHG emissions.[i]

Statewide GHG emissions for the 2011 to 2022 time period are shown in Table 4.8-2. Statewide GHG emissions have generally decreased over the last decade, with 2022 levels (371 million $MTCO_2e$) approximately 15.1% less than 2011 levels (438 million $MTCO_2e$) and below the State's 2020 reduction target of 431 million $MTCO_2e$. The transportation sector (140 million $MTCO_2e$) accounted for more than one-third (approximately 38%) of the state's total GHG emissions inventory (371 million $MTCO_2e$) in 2022. Statewide GHG emissions for the 2011 to 2022 time period are shown in Table 4.8-2.

Table 4.8-2: 2011-2022 Statewide GHG Emissions (in Million $MTCO_2e$)

Scoping Plan Sector	Year											
	'11	**'12**	**'13**	**'14**	**'15**	**'16**	**'17**	**'18**	**'19**	**'20**	**'21**	**'22**
Agriculture	34	35	34	34	33	32	32	32	31	32	31	30
Commercial/Residential	46	39	39	36	37	38	38	38	41	39	39	40
Electric Power	89	99	94	90	86	71	64	65	60	60	62	60
High GWP	15	16	17	18	19	19	20	21	21	21	21	21
Industrial	86	81	83	85	83	81	81	82	81	73	74	73
Recycling and Waste	8	8	8	8	8	8	8	8	8	9	8	8
Transportation	159	157	157	158	161	165	166	165	162	136	146	140
Total Million $MTCO_2e^{(A)}$	**438**	**436**	**432**	**428**	**427**	**414**	**410**	**411**	**404**	**369**	**381**	**371**

[i] CARB approved use of 431 million $MTCO_2e$ as the state's 2020 GHG emission target in May 2014. Previously, the target had been set at 427 million $MTCO_2e$.



Source: CARB 2024
(A) Totals may not equal due to rounding. CARB inventory uses GWPs based on the United Nations' IPCC's 4th Assessment Report.

Existing Planning Area GHG Emissions

The existing land uses within the Planning Area contribute to existing city, regional, and statewide GHG emissions. The Planning Area's existing GHG emissions, presented below in Table 4.8-3 (Existing (2026) GHG Emissions in the Planning Area), were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1. GHG emissions generated within the Planning Area primarily come from the area, energy, and mobile sources described in Section 4.3.1, Air Quality (Environmental Setting), as well as the following additional sources specific to GHG emissions:

- **Energy use and consumption:** Emissions generated from purchased electricity and natural gas. As estimated using CalEEMod, the existing land uses in the Planning Area use and consume approximately 635,845 megawatt hours (MWh) of electricity per year and 1,654,189 million-British Thermal Units (MMBtus) of natural gas per year.
- **Mobile Sources:** The existing land uses in the Planning Area are estimated to generate 4,259,481 total vehicle miles travelled (VMT) per day (Ganddini 2026) and approximately 1,512,525,184 VMT per year.
- **Solid waste disposal:** Emissions generated from the transport and disposal of waste generated by land uses. CalEEMod estimates approximately 96,169 tons of solid waste are generated per year by the people working and living within the Planning Area.
- **Water/wastewater:** Emissions from electricity used to supply water to land uses, and treat the resulting wastewater generated. As estimated in CalEEMod, existing land uses within the Planning Area use approximately 9,286 million gallons of water per year (4,628 million gallons of indoor water and 4,659 million gallons of outdoor water consumption per year).

The Planning Area's existing GHG emissions were estimated using default data assumptions provided by CalEEMod with the project-specific modifications described in Section 4.3.1. The Planning Area's existing GHG emissions are summarized in Table 4.8-3 (Existing Land Use GHG Emissions Estimates) below. The emissions are shown for two scenarios:

- **Year 2026 (Existing Conditions)**, which are based on Year 2026 vehicle fleet characteristics (e.g., vehicle type, age, emission rates) and represent the emissions levels that existed at the time the Downey GPU was prepared.
- **Year 2045 (Future Conditions)**, which are based on Year 2045 vehicle fleet characteristics and forecast carbon intensities (including utility-specific integration of renewable energy) and represent the projected emissions that existing land uses would generate in the future (assuming no change in land uses and using the VMT for 2045 no project conditions provided in Ganddini's traffic report). This scenario provides an estimate of how emissions would change in the Planning Area as a result of regulations that would reduce motor vehicle emissions in the future and allows for distinguishing the potential change in emissions that would occur from the proposed change in land uses that would occur with implementation and buildout of the Downey GPU in Year 2045, as opposed to a change in emissions that would occur from regulatory requirements that would be in place whether or not the Downey GPU is adopted.

Table 4.8-3: Existing Land Use GHG Emissions Estimates

Source	GHG Emissions (Metric Tons / Year)			
	CO_2	CH_4	N_2O	Total $MTCO_2e$
Existing Land Use Operational Emissions in Year 2026 (Current Conditions)				
Area	12,734	12	0	13,076
Energy	187,619	17	1	188,445
Mobile	641,012	94	47	658,139
Refrigerants	--	--	--	502
Waste	8,581	858	0	30,022
Water	10,298	151	4	15,179
Total Existing GHG(A)	860,244	1,132	52	905,362
Service Population (SP)(B)				167,487
Existing GHG Efficiency ($MTCO_2e$ / SP)				5.40
Existing Land Use Operational Emissions in Year 2045 (Future Conditions)				
Area	12,953	12	0.2	13,295
Energy	162,986	17	1	163,812
Mobile	345,866	15	22	352,844
Refrigerants	--	--	--	511
Waste	8,581	858	<0.1	30,022
Water	8,119	151	3.7	13,000
Total Existing GHG(A)	538,506	1,053	27	573,484
Service Population (SP)(B)				169,083
Existing GHG Efficiency ($MTCO_2e$ / SP)				3.39

Source: MIG, 2026 (see Appendix D)
(A) Totals may not equal due to rounding.
(B) Service Population is defined as the sum of the number of residents and number of jobs supported by the Downey GPU (CAPCOA, 2010).

4.8.2 REGULATORY FRAMEWORK

This section summarizes key federal, state, and city statutes, regulations, and policies that would apply to the project. Global climate change resulting from GHG emissions is an ongoing environmental concern being discussed at the international, national, and statewide levels. At each level, agencies are considering strategies to control emissions of gases that contribute to global climate change.

International and Federal

International Regulation and the Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the "United Nations' Framework Convention on Climate Change" agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHG in the United States. The plan currently consists of more than 50 voluntary programs for member nations to adopt. In 1997, the United States (U.S.) was a signatory to the Kyoto Protocol; however, the treaty was not sent to Congress for ratification. Thus, while a signatory to the Kyoto Protocol, the U.S. is not an official party to this international agreement and is not subject to any emission reductions goals established pursuant to the Kyoto Protocol. Although the U.S. is not a party to this agreement, the GHG targeted for reduction by the Kyoto Protocol are also targeted under federal and State GHG reporting and emissions reduction programs.

Federal Regulation and the Clean Air Act

On December 7, 2009, the U.S. EPA issued an endangerment finding that current and projected concentrations of the six Kyoto GHGs in the atmosphere (CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs) threaten the public health and welfare of current and future generations. This finding came in response to the Supreme Court ruling in *Massachusetts v. EPA*, which found that GHGs are pollutants under the Federal Clean Air Act. As a result, the U.S. EPA issued its GHG Tailoring Rule in 2010, which applies to facilities that have the potential to emit more than 100,000 $MTCO_2e$. In 2014, the U.S. Supreme Court issued its decision in *Utility Air Regulatory Group v. EPA* (No. 12-1146), finding that the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a "major" source required to obtain a permit pursuant to the "Clean Air Act's Prevention of Significant Deterioration" or "Title V" operating permit programs. The U.S. EPA's Greenhouse Gas Reporting Program required facilities that emit 25,000 $MTCO_2e$ or more of GHG to report their GHG emissions to the U.S. EPA to inform future policy decision makers. In September 2025, the EPA proposed amending the Greenhouse Gas Reporting Program to remove reporting obligations for most large facilities and delay reporting requirements for remaining facilities. The proposed reconsideration is currently undergoing the rulemaking process.

In February 2026, the U.S. EPA finalized a rule to rescind the 2009 endangerment finding. Without the endangerment finding, the U.S. EPA does not have the authority to regulate GHG emissions, and therefore the U.S. EPA also rescinded its GHG regulations for light-, medium-, and heavy-duty on-highway vehicles and engines.

Federal Vehicle Standards

In 2009, the National Highway Transportation Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011 and, in 2010, the U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016. The legislation was modified in 2010, 2011, 2016, 2018, and 2020. In July 2023, the NHTSA issued a proposal to further update and improve fuel economy standards for passenger cars and light trucks. The standards proposed by NHTSA call for a 2% per year improvement in fuel efficiency for passenger cars and a 4% per year improvement for light trucks. These standards would begin for model year 2027 and ramp up through model year 2032, potentially reaching an average fleet fuel economy of 58 miles per gallon by 2032. NHTSA's proposal also calls for a 10% improvement per year for commercial pickup trucks and work vans (with gross vehicle weight ratings of more than 8,500 pounds and less than 14,001 pounds) beginning in model year 2030 and ramping up through model year 2035. However, in December 2025, NHTSA signed the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rule III for Model Years 2022–2031 Passenger Cars and Light Trucks which proposes to set fuel economy standards that increase from model year 2022 standards at a rate of 0.5 percent through model year 2026, followed by an increase of 0.25 percent per year through model year 2031. With this proposed rule, NHTSA projects an average fleet fuel economy of 34.5 miles per gallon in model year 2031. As of January 2026, the SAFE Vehicle Rule III is in the public comment period.

State

Assembly Bill 32 (California Global Warming Solutions Act) and Related GHG Goals

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 establishes the caps on statewide greenhouse gas emissions proclaimed in Executive Order (EO) S-3-05 and established the timeline for meeting State GHG reduction targets. The deadline for meeting the 2020 reduction target was December 31, 2020.

As part of AB 32, CARB determined 1990 GHG emissions levels and projected a "business-as-usual" (BAU)[ii] estimate for 2020, to determine the amount of GHG emission reductions that would need to be achieved. In 2007, CARB approved a statewide 1990 emissions level and corresponding 2020 GHG emissions limit of 427 million $MTCO_2e$ (CARB 2007). In 2008, CARB adopted its *Climate Change Scoping Plan*, which projects 2020 statewide GHG emissions levels of 596 million $MTCO_2e$ and identifies numerous measures (i.e., mandatory rules and regulations and voluntary measures) that will achieve at least 174 million $MTCO_2e$ of GHG reductions and bring statewide GHG emissions to 1990 levels by 2020 (CARB 2009).
EO B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase renewable electricity to 50 percent.
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner.
- Reduce petroleum use in cars and trucks by up to 50 percent.

[ii] BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies.

- Reduce emissions of short-lived climate pollutants.
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

By directing State agencies to take measures consistent with their existing authority to reduce GHG emissions, EO B-30-15 establishes coherence between the 2020 and 2050 GHG reduction goals set by AB 32 and seeks to align California with the scientifically established GHG emissions levels needed to limit global warming below two degrees Celsius.

To reinforce the goals established through EO B-30-15, Governor Brown signed Senate Bill (SB) 32 and AB 197 on September 8, 2016. SB 32 made the GHG reduction target (to reduce GHG emissions by 40 percent below 1990 levels by 2030) a requirement, as opposed to a goal. AB 197 gives the Legislature additional authority over CARB to ensure the most successful strategies for lowering emissions are implemented and requires CARB to, "protect the State's most impacted and disadvantaged communities …[and] consider the social costs of the emissions of greenhouse gases."

On September 16, 2022, Governor Newsom signed into law AB 1279, the California Climate Crisis Act, which codified California's 2045 carbon neutrality goal and established a GHG emission reduction target of 85% below 1990 levels by 2045.

CARB Scoping Plan

The CARB Scoping Plan is the comprehensive plan primarily directed at identifying the measures necessary to reach the GHG reduction targets stipulated in AB 32. The key elements of the 2008 Scoping Plan were to expand and strengthen energy efficiency programs, achieve a statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners (including seven states in the United States and four territories in Canada) in the Western Climate Initiative, establish transportation-related targets, and establish fees. CARB estimated that implementation of these measures would achieve at least 174 million $MTCO_2e$ of reductions and reduce statewide GHG emissions to 1990 levels by 2020 (CARB 2009).

The continued implementation of existing plans, policies, and regulations adopted for the purposes of reducing GHG emissions remain critical for achieving the State's 2030 and 2045 GHG reduction goals. For example, the 2022 Scoping Plan identifies a goal of achieving a per capita vehicle miles traveled (VMT) reduction of at least 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045, which is related to the implementation of SB 375 and recommendations provided by the Scoping Plan's Environmental Justice Advisory Committee. The most current 2022 Scoping Plan also acknowledges that, "local governments are also frequently the sources of innovative and practical climate solutions that can be replicated in other areas. Their efforts to reduce GHG emissions within their jurisdictions are vital to achieving the state's near-term air quality and long-term climate goals… and can also provide important co-benefits such as improved air quality, local economic benefits, healthier and more sustainable communities, and improved quality of life."

Low Carbon Fuel Standard Regulation

CARB initially approved the Low Carbon Fuel Standard (LCFS) regulation in 2009, identifying it as one of the nine discrete early action measures in the 2008 Scoping Plan to reduce California's GHG emissions. The LCFS regulation is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce

GHG emissions and decrease petroleum dependence in the transportation sector. The LCFS regulation defines a Carbon Intensity, or "CI," reduction target (or standard) for each year, which the rule refers to as the "compliance schedule."

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California Senate Bill (SB) 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce GHG emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies. For local implementation, see "Regional – Southern California Association of Governments Connect SoCal Plan" below.

Renewable Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The State's RPS program was further strengthened by the passage of SB 100 in 2018 which revised the State's RPS Program to require retail sellers of electricity to serve 50% and 60% of the total kWh sold to retail end-use customers be served by renewable energy sources by 2026 and 2030, respectively, and requires 100% of all electricity supplied come from renewable sources by 2045.

Executive Order B-55-18, AB 1279, and SB 1020

On September 10, 2018, Governor Brown signed Executive Order B-55-18, to achieve carbon neutrality by moving California to 100% clean energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forest land. On September 16, 2022, Governor Newsom signed into law AB 1279, the California Climate Crisis Act, and SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022. AB 1279 codified California's 2045 carbon neutrality goal and established a GHG emission reduction target of 85% below 1990 levels. SB 1020 set targets for the retail sale of electricity of 90% clean electricity by 2035 and 95% by 2040, and 100% by 2045. It also set a target for 100% clean electricity for electricity serving state agencies by 2035.

Sustainable Freight Plan

The Sustainable Freight Plan was adopted by CARB in July 2016 and provides a recommendation on a high-level vision and broad direction to the Governor to consider for State agencies to utilize when developing specific investments, policies, and programs related to the freight transport system that serves our State's transportation, environmental, and economic interests. The Sustainable Freight Plan includes recommendations on a long-term 2050 vision and guiding principles for California's future freight transportation system.

Advanced Clean Trucks Program

The Advanced Clean Trucks (ACT) regulation was approved by CARB on June 25, 2020. The main components of the regulation are manufacturers' ZEV sales requirements and a one-time reporting requirement for large entities and fleets. Promoting the development and use of advanced clean trucks would help CARB achieve its emission reduction strategies as outlined in the SIP, Sustainable Freight Action Plan, SB 350, and AB 32. In 2025, Congress revoked California's waiver needed for the Advanced Clean Trucks regulation.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the ZEV regulations. The Program combines the control of smog, soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California's ACC Program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions. In August 2022, CARB approved the Advanced Clean Cars II program, which sets requirements for ZEV sales and codifies the light-duty vehicle goals in EO N-79-20. The regulation requires new light duty vehicle sales will be 35% zero emission or plug in hybrid electric vehicles in 2026, 68% in 2030, and 100% in 2035. In 2025, Congress revoked California's Clean Air Act waiver that allows for the enforcement of the Clean Cars II regulations. In response, in June 2025, Governor Newsom signed Executive Order N-27-25, which reaffirms California's commitment to accelerating zero emission technology consistent with the targets of EO N-79-20. CARB is in the process of developing light-duty vehicle emissions standards consistent with State and federal law.

Advanced Clean Fleets Regulation

On April 28, 2023, CARB approved Advanced Clean Fleets (ACF), a rule that requires fleets of medium- and heavy-duty vehicles to transition to zero-emission vehicles. ACF applies to all drayage trucks, to high priority fleets, (i.e., fleets that have at least $50 million in gross annual revenue or fleets that operate 50 or more medium- and heavy-duty vehicles), and to government fleets; however, in January 2025, CARB withdrew its request for a waiver and authorization to implement the ACF rule, and is no longer enforcing the parts of the regulation that required a federal waiver. As such, the ACF only applies to state and local government fleets, which can choose between two options to meet the zero-emission requirements: a ZEV Milestone schedule or a Model Year Schedule. The ZEV Milestone schedule sets requirements for a percentage of the total fleet to be zero-emission at specified years, depending on the type of vehicle.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to greenhouse gases that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

Clean Power Alliance

In October 2017, the City Council adopted an ordinance which authorized Downey to join the Clean Power Alliance, which purchases electrical power for residents and businesses with a higher percentage of renewable energy than Southern California Edison (SCE). Customers may opt out and remain with SCE.

Energy Action Plan

The City of Downey Energy Action Plan was adopted in 2015. The plan identifies current and future measures that would reduce energy consumption and GHG emissions from municipal and community-wide operations. Please refer to Section 4.6.2 for a more detailed description of the Energy Action Plan.

4.8.3 SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. Per the CEQA Guidelines, implementation of the project would have a significant impact related to GHG emissions if it would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
B. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?
C. Would the project cause substantial adverse cumulative impacts with respect to greenhouse gases?

4.8.4 IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to GHG emissions and potential conflicts with a plan, policy, or regulation adopted for the purposes of reducing GHG emissions which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

GHG Emissions

Impact GHG-1 – Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Analysis of Impacts

Implementation of the Downey GPU would result in construction and operational activities that would generate GHG emissions. As explained in more detail in Section 4.3, Air Quality, the planned land use changes that could occur under buildout conditions of the GPU would result in an additional 10,350 dwelling units and 31,483 residents. The proposed GPU would also increase the amount of non-residential building space by approximately 2.7 million square feet and accommodate approximately 6,649 new jobs within the Planning Area (see Table 3.4 in the Project Description).

Construction Impacts. The growth from implementation of the GPU would result in construction activities that would generate GHG emissions primarily from fuel combustion in equipment during demolition, site preparation, grading, building construction, paving, and architectural coating activities and in worker, vendor, and haul trips to and from future development projects. Construction activities would occur intermittently at different sites within the Planning Area over the next approximately 20 years. Construction activities would cease to emit GHG upon completion, unlike operational emissions that would be continuous year after year until the project is decommissioned. As described under Impact AQ-2, the timing and methods of construction activities that would occur for future development projects is unknown. Due to these unknown variables, construction emissions were not estimated for the proposed GPU.

Operational Impacts. Growth from the GPU would result in additional operational GHG emissions, primarily from mobile, energy, and area sources. Mobile sources, including vehicle trips to and from land uses within the City, would result primarily in emissions of CO_2, with emissions of methane (CH_4) and nitrogen dioxide (NO_2) also occurring in minor amounts. In addition to mobile sources, GHG emissions would also be generated from natural gas usage, electricity use, water conveyance and use, wastewater treatment, and solid waste disposal. Natural gas use would result in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use associated with both the physical usage of the development, as well as the energy needed to transport water/wastewater, would result in the production of GHGs if the electricity is generated through non-renewable sources (i.e., combustion of fossil fuels). Solid waste generated by land uses within the Planning Area would contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy when transporting and managing the waste. In addition, landfilling, the most common waste management practice, results in the release of CH_4 from the decomposition of organic materials.

Potential operational GHG emissions resulting from operation of the land uses proposed by the GPU were estimated using CalEEMod, Version 2022.1.1. The modeling assumes GPU growth consistent with the land use development intensities described in Impact AQ-2 (i.e., obtained from Table 3-2 and Table 3-5 of the Project Description). The modeling is based on default data assumptions contained in CalEEMod, with the project-specific modifications described under Impact AQ-2.

The total unmitigated GHG emissions estimated to occur under projected 2045 growth conditions are shown below in Table 4.8-4 and compared against the potential GHG emissions that could exist in 2045 if the GPU were not approved.[iii] As described above, the SCAQMD recommends the use of an efficiency threshold for plan-level analysis in which potential emissions levels are

[iii] Although CEQA generally requires an evaluation of impacts associated with project implementation against the conditions that exist at the time the Notice of Preparation (NOP) is published, CEQA Guidelines Section 15125(a)(2) allows a lead agency to, "…use projected future conditions (beyond the date of project operations) baseline as the sole baseline for analysis only if it demonstrates with substantial evidence that use of existing conditions would be either misleading or without informative value to decision makers and the public." Existing conditions GHG emissions for Year 2023 (current baseline conditions)) and Year 2045 (future conditions) have been provided in Section 4.8.1. As shown in Table 4.8-3 and described in Section 4.8.1, the existing land uses within the Planning Area would benefit from regulatory actions at the State level (i.e., vehicle and fuel efficiency standards and cleaner electricity), which would continue to reduce emissions over the next approximately 20 years, even if the GPU is not approved or implemented. Therefore, to provide a conservative assessment of emissions associated with implementation of the proposed GPU, GHG emissions associated with operation of the existing land uses in 2045 are compared against those proposed under the GPU in 2045. This provides a more conservative assessment of emissions because the existing land use GHG emissions in 2023 were greater than those shown for the existing land uses shown in 2045 (see Table 4.8-3).

considered in terms of how many GHG emissions would be produced by each resident and employee using a project's facilities. Thus, the adjusted 2045 project-level efficiency target of 1.0 $MTCO_2e$/yr/SP is the primary contextual factor considered in evaluating the significance of the GPU's GHG emissions changes.

As shown in Table 4.8-4, with implementation of the GPU, the Planning Area would emit approximately 655,480 $MTCO_2e$ annually by 2045. Dividing through by the Planning Area's service population (200,136 residents and employees) results in an efficiency metric of 3.28 $MTCO_2e$/yr/SP for 2045. Although this GHG efficiency level does not meet the adjusted target for 2045 (1.0 $MTCO_2e$/yr/SP), it does show an approximately 3% reduction from existing and future baseline conditions (3.39 $MTCO_2e$/yr/SP).

Table 4.8-4: Unmitigated GPU GHG Emissions

Source	GHG Emissions ($MTCO_2e$ / Year)		
	Existing Land Uses (2045)[A]	Downey GPU Land Uses (2045)	Net Change
Area	13,295	16,597	+3,302
Energy	163,812	186,624	+22,812
Mobile	352,844	403,179	+50,335
Refrigerants	511	653	+142
Waste	30,022	33,451	+3,429
Water	13,000	14,977	+1,977
Total[B]	573,484	655,480	+81,996
Service Population (SP)	169,083	200,136	+31,053
$MTCO_2e$/yr/SP	3.39	3.28	-0.12
SCAQMD Tier 4 2035 Plan Level Efficiency Threshold	4.1	4.1	--
SCAQMD Tier 4 Adjusted 2045 Plan Level Efficiency Threshold	1.0	1.0	--
Exceeds Threshold?	**Yes**	**Yes**	**--**

Source: MIG, 2026 (see Appendix D).
(A) See Table 4.8-3 for existing GHG emissions in the Planning Area.
(B) Totals may not equal due to rounding.

The primary source of GPU GHG emissions would be mobile sources, which represent approximately 62% of total annual GHG emissions occurring under 2045 growth conditions. The next highest source of GPU GHG emissions would be energy sources, which would represent approximately 28% of total annual GHG emissions.

As shown in Table 4.8-4, the GPU's 2045 growth projection would result in GHG emissions that exceed the adjusted SCAQMD derived plan-level efficiency metric. This is considered to be a potentially significant impact.

The GPU includes goals and policies that promote mixed-use developments, transit-oriented development, active transportation, electric vehicle technology, and other actions that reduce transportation-related GHG emissions. Policies that reduce transportation-related GHG emissions include Policy CR-9.1 (Emissions Management), Policy CR-9.2 (Clean and Active Transportation), Policy C-5.6 (Clean Freight and Logistics), Policy C-5.7 (Regional Collaboration), and Policy C-9.3 (Low-Carbon and Resilient Transportation). The GPU also includes goals and policies that promote energy efficiency and renewable energy (see Section 4.6). Although the GPU contains numerous goals and policies that would promote efficient and sustainable

development, further actions to reduce GHG emissions are required. Accordingly, the City would implement Mitigation Measures GHG-1 to reduce the quantity of GHG emissions generated under implementation of the GPU. Although Mitigation Measure GHG-1 would require a project-level evaluation for future discretionary projects proposed under implementation of the GPU, it cannot be assured future development projects would be able to mitigate their emissions in line with state-wide goals. Since the GHG emissions associated with the GPU would not meet the interpolated SCAQMD efficiency metric of 1.0 $MTCO_2e/yr/SP$, this impact would be significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

GHG-1: Require a Project-level Greenhouse Gas Emissions Assessment for Conditional Uses and New Discretionary Development Projects. Prior to discretionary approval of a development project subject to CEQA, project applicants for residential development projects involving more than 30 dwelling units or nonresidential development projects exceeding 50,000 square feet shall prepare and submit to the City for review and approval a project-specific greenhouse gas (GHG) emissions assessment evaluating potential GHG emissions impacts and consistency with applicable State GHG reduction goals. The City may determine that a GHG assessment is required for other projects subject to CEQA based on the City's adopted CEQA Guidelines, significance thresholds, VMT guidelines, or other applicable environmental review procedures in effect at the time of project review. If a project-specific GHG assessment is required and identifies potentially significant GHG emissions, the project shall incorporate feasible measures to reduce emissions and demonstrate consistency with applicable State and local GHG reduction goals. Required measures shall be incorporated into the project as conditions of approval, where appropriate.

The assessment shall evaluate the project's consistency with adopted state-wide GHG emissions reduction goals, such as Senate Bill 32, Assembly Bill 1279, or an interpolated GHG emission reduction goal for 2045 that is based on regional data (e.g., an interpolated SCAQMD efficiency metric of 1.0 $MTCO_2e/yr/SP$). If GHG emissions levels are determined to have the potential to be inconsistent with the State GHG reduction goals, the City shall require that applicants for new development projects incorporate strategies to reduce GHG emissions during operational activities. The specific strategies identified for a project shall be included as conditions of approval, and be incorporated into all appropriate planning documents for the project. Potential strategies to reduce GHG emissions include, but are not limited to:

- Reducing vehicle trips or vehicle miles travelled (VMT) generated by residential and non-residential projects
- Requiring new residential and non-residential development to incorporated on-site renewable energy systems that reduce grid electricity consumption
- Requiring new residential and non-residential projects to incorporate water efficient landscaping and water conservation measures such as low-flow fixtures, grey water systems, etc.

Level of Significance After Mitigation

Significant and unavoidable.

Impact GHG-2 – Would the proposed GPU conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases?

The State has numerous plans, policies, and regulations that are intended to directly or indirectly reduce GHG emissions and support attainment of the GHG emissions reduction targets established by AB 32, SB 32, and AB 1279, however, in general, most State programs and regulations intended to directly or indirectly reduce GHG emissions do not apply to the proposed GPU. For example, State regulations for reducing the carbon content of transportation fuels (Low Carbon Fuel Standard, or LCFS) apply to fuel manufacturers and distributors, the State's Advanced Clean Fleets regulation applies to government fleets, and State regulations for increasing the renewable energy content in retail electric sales (Renewables Portfolio Standard Program, or RPS) apply to retail sellers of electricity. Although these regulations do not apply to the proposed GPU, the GPU would nonetheless benefit from the state's implementation of these regulations. The plans, policies, and regulations that are most relevant to the GPU include the Title 24 Building Energy Efficiency Standards (BEES) and CalGreen Code, and the 2022 Climate Change Scoping Plan.

Title 24 BEES and *CALGreen Code.* The Title 24 BEES and the CALGreen code both establish mandatory renewable energy and energy efficiency standards that apply to various building systems, components, and uses. The GPU includes Policy CR-7.3 (Compliance with Energy Standards) which acknowledges and reinforces these requirements, as well as encourage efficiency improvements that have the potential to go beyond mandatory requirements, such as Policy CR-7.1 (Energy Efficiency) and Policy CR-9.3 (Energy and Buildings Efficiency). Future development projects would be reviewed for consistency with GPU policies and would comply with all mandatory, applicable BEES and CalGreen Code requirements in effect at the time a building permit application is submitted. Thus, the GPU would not conflict with the Title 24 BEES or the CALGreen code.

CARB Scoping Plan. 2022 Climate Change Scoping Plan is a state-level plan intended to integrate policies, programs, and investments to achieve the State's climate change goals.

The plan does not contain any applicable, mandatory policy or requirement that applies to specific, individual projects. Rather, the plan primarily relies upon the ability of State agencies, primarily CARB and the CEC, to uphold and implement existing legislation and develop new plans and strategies to sequester, trap, and store emitted carbon emissions. Once developed, GHG reductions achieved by the State's plans, policies, and regulations would be realized at the local level. Although the plan's framework is statewide in nature, it does discuss potential voluntary actions that could be undertaken at a local level to support the State's climate goals.[iv] The discussion of potential local actions is geared towards the preparation of climate action plans and residential and mixed-use land use plans, such as the proposed GPU. Voluntary standards are not required for a project or plan, nor enforceable. Nonetheless, for information purposes only, the Scoping Plan identifies three specific strategies/areas to address key emissions sectors and align local actions with State climate goals: 1) transportation electrification, 2) VMT reduction, and 3) building decarbonization. As described below, the proposed GPU would be consistent with these strategies and thus would not impede the implementation of the Scoping Plan.

[iv] This discussion is located in Scoping Plan Appendix D.

- Transportation electrification strategies include converting local government fleets to zero emission vehicles and creating a jurisdiction-specific "ecosystem" to support the deployment of zero emissions vehicles statewide, such as permit streamlining, infrastructure siting, consumer education, and or preferential parking policies. Implementation of the GPU would consist of private development, which would be required to meet the mandatory EV charging requirements stipulated in the CalGreen Code. The GPU also includes policies to promote electric vehicles and electric vehicle infrastructure. Policy C-9.3 (Low-Carbon and Resilient Transportation) promotes electrification of vehicles and infrastructure, Policy N.1-4 (Low-Emission Vehicles and Active Transportation) and Policy CR-9.2 (Clean and Active Transportation) encourage the adoption of electric vehicles, Policy EJ-1.10 (Truck and Transportation Emissions) supports the electrification of freight and transit vehicles, and Policy C-4.4 (Promote Public Transit as a Mode of Travel) supports the transition to an electric bus fleet. The GPU would therefore support transportation electrification.
- VMT reduction strategies include reducing or eliminating minimum parking standards in new developments, implementing complete streets policies, increasing public access to clean mobility options (e.g., electric shuttles, bikes, and transit), implementing parking pricing or transportation demand management pricing strategies, and amending zoning and development codes to enable mixed-use, walkable, and compact infill development. The GPU includes policies that promote VMT reductions, including policies that reduce VMT by supporting transit or active transportation, such as Policy C-4.4 (Promote Public Transit as a Mode of Travel), Policy CR-9.2 (Clean and Active Transportation), Policy N.1-4 (Low-Emission Vehicles and Active Transportation), Policy EJ-2.2 (Safety and Complete Streets), Policy OS-7.1 (Trail Networks), Policy OS-7.3 (Transit and Active Transportation), Policy OS-7.4 (Trail and Bikeway Networks), Policy D-4.2 (Pedestrian Environment), and Policy C-4.2 (Transit-Enhanced Plan for Development). The GPU also builds on the City's Active Transportation Plan to expand the City's bicycle network and implement pedestrian improvement projects. The GPU, therefore, would be consistent with the Scoping Plan's voluntary local VMT reductions actions.
- Building decarbonization strategies include energy efficiency retrofits, electrification of appliances and equipment, policies and incentives to reduce electrical loads from equipment plugged into outlets (such as Energy Start equipment, occupancy sensors, power strips, etc..), and facilitating deployment of renewable energy production and distribution and energy storage. The GPU includes policies that promote building decarbonization strategies, including Policy CR-7.3 (Compliance with Energy Standards) and Policy CR-9.3 (Energy and Buildings Efficiency). Therefore, the GPU would not conflict with the Scoping Plan's voluntary local building decarbonization actions.

SCAG 2024 RTP/SCS. As described in Section 4.8.2, Connect SoCal is a growth strategy and transportation plan that demonstrates how the SCAG region will meet its GHG reduction target through the year 2045. Many of the measures included in the RTP/SCS are focused on the expansion of, and access to, mass transit (e.g., light rail, commuter rail, bus rapid transit, etc.), planning growth around livable corridors, and locating new housing and job growth in high quality transit areas. Collectively, these land use plans, in conjunction with measures at the state-level to improve fuel efficiency standards, are designed to meet CARB's SB 375 goal for the SCAG region (reducing per capita GHG emissions in the region by 8% by 2020 and 19 percent by 2035, as compared to 2005 levels.

The GPU would not conflict with or interfere with the implementation of Connect SoCal because it includes numerous policies that support the plan's mobility, community development, environmental, and economic implementation strategies that rely on local jurisdiction support. For example, GPU Policy C-11.1 (Complete Street Design) and Policy EJ-2.2 (Safety and Complete Streets) call for the City to implement a complete streets approach to street design consistent with Connect SoCal mobility strategies. Goal LU-5 (Lively Mixed-Use Areas Near Transit That Provide Opportunities to Live, Work, Shop, and Celebrate Community Life) supports housing in areas with existing services and transit infrastructure and Policy EJ-2.4 (Community Facilities Upgrades) encourages investment in equitable access to public services, consistent with Connect SoCal community development strategies. Goal CR-9 (Air Quality Improvement and Greenhouse Gas Reduction to Protect Public Health and Mitigate Climate Change Impacts) Policy CR-9.1 (Emissions Management), Policy CR-9.2 (Clean and Active Transportation), Policy CR-9.3 (Energy and Buildings Efficiency), and Policy CR-9.4 (Climate Adaptation and Resilient Infrastructure) includes efforts to reduce emissions and improve climate resilience, and Policy LU-5.2 (Transit-Oriented Development) promotes transit-oriented development that reduce dependence on private vehicles, consistent with Connect SoCal environmental implementation strategies. Policy C-5.6 (Clean Freight and Logistics) encourages zero-emission fleets and smart logistics consistent with Connect SoCal economic implementation strategies.

As discussed above, the GPU would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHGs. This impact would be less than significant.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to greenhouse gases?

Analysis of Impacts

As stated at the beginning of Section 4.8.4, global climate change is the result of GHG emissions worldwide; individual projects do not generate enough GHG emissions to influence global climate change. Thus, the analysis of GHG emissions is by nature a cumulative analysis focused on whether an individual project's contribution to global climate change is cumulatively considerable. As described under Impacts GHG-1 and GHG-2, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions but would generate GHG emissions that exceed the project specific GHG efficiency threshold (1.0 $MTCO_2e/SP/yr$) used to provide context for the magnitude of potential GHG emissions levels with the GPU. Accordingly, the proposed project would result in a cumulatively considerable and significant GHG emissions contribution even after the incorporation of mitigation measures.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measure GHG-1.

Level of Significance After Mitigation

Significant and unavoidable.

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List of Acronyms, Abbreviations, and Symbols	
Acronym, Symbol, Abbreviation	**Description**
AB	Assembly Bill
ACC	Advanced Clean Cars
BAU	Business-As-Usual
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Commission
CEC	California Energy Commission
CFC	Chlorofluorocarbon
C_H4	Methane
CNRA	California Natural Resources Agency
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
EIR	Environmental Impact Report
EO	Executive Order
EV	Electric Vehicle
GHG	Greenhouse Gases
GPU	General Plan Update
GWP	Global Warming Potential
HFC	Hydrofluorocarbon
HQTA	High Quality Transit Area
IAQ	Indoor Air Quality
LCFS	Low Carbon Fuel Standard
LEV	Low-Emission Vehicle
NMA	Neighborhood Mobility Area
MMBTU	Million British Thermal Units
MPO	Metropolitan Planning Organization
$MTCO_2e$	metric tons of CO_2 equivalents
MWh	Megawatt-hours
N_2O	Nitrous Oxide
PFC	Perfluorocarbon
Ppm	parts per million
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SOI	Sphere of Influence
SP	Service Population
TDM	Transportation Demand Management

TPA	Transit Priority Area
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Travelled
Working Group	SCAQMD GHG Significance Threshold Working Group
ZEV	Zero Emission Vehicle
ZNE	Zero Net Energy
°F	Degrees Fahrenheit
%	Percent

4.9 – HAZARDS AND HAZARDOUS MATERIALS

This EIR chapter addresses potential project impacts related to the creation of a significant hazard to the public from the transport, use, handling, disposal or upset of hazardous materials or hazardous waste This chapter also addresses hazards related to school sites, airports, wildland fires, and emergency evacuation.

4.9.1 – ENVIRONMENTAL SETTING

Hazardous materials are substances or chemicals that are capable of having a harmful effect on human health or the environment. Hazardous materials are used in everyday activities from painting houses to fueling cars. Facilities that transport, generate, or treat hazardous waste must report their activities to the California and U.S. Environmental Protection Agency (EPA) and comply with waste management standards.

Contaminated Sites

The federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), informally known as Superfund, allows the EPA to clean up contaminated sites by assigning liability and ensuring responsible parties either remediate the site or reimburse the government for EPA-led efforts. When no viable responsible party can be identified, Superfund allocates the public funds to the EPA for remedial action of contaminated sites. Contaminated sites pose serious health risks for adjacent populations, with threats of harmful elements infiltrating air, water, and soil. Superfund sites refer to areas where hazardous waste has been dumped, stored improperly, or otherwise ill-managed. These sites may include manufacturing facilities, processing plants, landfills, and mining sites.

A brownfield is a land area that has a presence or potential presence of a hazardous substance, pollutant, or contaminant, which makes it more difficult and expensive to develop and often requires more complicated procedures to ensure the health and safety of future occupants/users. According to the California Department of Toxic Substances (DTSC) *EnviroStor* tracking system, there are 17 contaminated sites located within the Planning Area (DTSC, 2025a). According to EnviroStor, five of the sites have a DTSC status of “Inactive – Needs Evaluation,” five of the sites have a DTSC status of “Inactive – Withdrawn,” and seven of the sites have a DTSC status of “Refer: Other Agency.”

Leaking Underground Storage Tanks

Underground storage tanks are used to store petroleum and other hazardous materials. Leaking underground storage tanks (LUST) can contaminate surrounding soil, groundwater, or surface waters. Once the leak is registered and confirmed, immediate response actions must be taken to minimize or eliminate the source of the release and to reduce the potential harm to human health, public safety, and the environment. The U.S. EPA monitors underground storage tank systems (UST). Until the mid-1980s, most USTs were made of bare steel and thus were likely to corrode over time, allowing content to leak into the surrounding environment. Tanks may store hazardous materials like petroleum or harmful chemicals, which pose major concerns for potential groundwater contamination. In addition to affecting drinking water, a leaking UST poses fire and explosion risk depending on the contents.

According to the California Department of Toxic Substances *Cortese List Data Sources*, and *GeoTracker* data management system for sites that impact water quality, there are 85 LUST cleanup sites within the Planning Area, (DTSC, 2025b; SWRCB, 2025). However, 82 of these sites are listed as "Completed – Case Closed" with no further action required. The remaining three sites are listed as either "Open – Remediation" or "Open – Assessment and Interim Remedial Action." The sites are; the G&M Oil Station located at 9581 Imperial Highway East (T0603799300), the Los Angeles County Department of Water and Power (DWP) Road MD4 Hollydale located at 11282 South Garfield Avenue (T10000002891), and the Rancho Los Amigos Hospital (South Campus) located at 7600 Amigos Avenue (T0603701265). While DTSC manages some cleanup sites, LUST sites fall under the jurisdiction of the California State Water Board and its Regional Water Boards.

Site Cleanup Program Sites

A Site Cleanup Program (SCP) site is a non-federally owned site contaminated by a broader range of pollutants (including solvents, metals, and petroleum) from other sources, where the State Water Board's SCP provides oversight for investigation and cleanup. While DTSC manages some cleanup sites, SCP sites fall under the jurisdiction of the California State Water Board and its Regional Water Boards. According to the California Department of Toxic Substances *Cortese List Data Sources*, and *GeoTracker* data management system for sites that impact water quality, there are 22 SCP sites within the Planning Area. However, 9 of these sites are listed as "Completed – Case Closed". The remaining 13 sites are listed as either "Open – Inactive", "Open – Remediation", "Open – Site Assessment", or "Open – Assessment and Interim Remedial Action" (A&IRA)The Global ID number, site type, status, and location of these sites is listed in Table 4.9-1 below.

Table 4.9-1: Open Cleanup Program Sites within the Planning Area

Site Name	Global ID	Status	Address
Astro Pak	SL2044E1590	Open – Remediation	8700 Cleta St.
DFCU Promenade	T10000021322	Open – Site Assessment	10000 ½ Apollo Way
Downey Building Products	SL204261526	Open – A&IRA	11445 Dolan Ave.
Downey Business Center	T10000015611	Open – A&IRA	9828 Firestone Blvd.
Downey Industrial Center	T10000011452	Open – A&IRA	9300-9400 Hall Rd.
Hinderlighter Heat Transfer	SLT4L6181842	Open – Inactive	9629 Nance Ave.
Hutchinson Seal Corporation	SL0603793957	Open – A&IRA	11634 Patton Rd.
Kaiser Permanente Hospital	T10000003467	Open – Site Assessment	9353 Imperial Highway
Rose Cleaners	T10000020182	Open – Inactive	10033 Paramount Blvd.
Spartan Lacquer and Paint	SLT4L3021797	Open – A&IRA	9255 East Imperial Highway
Standard Brands Paint Co.	SLT4L1121768	Open – Inactive	8635 East Florence Ave.
Star Cleaners	T10000011943	Open – A&IRA	11916 Paramount Blvd.
Texaco/Equilon	T0603785207	Open – Inactive	7740 Firestone Blvd. East

Source: DTSC GeoTracker, 2025.
Note: A&IRA = Assessment and Interim Remedial Action

Hazardous Waste and Toxic Release

Hazardous waste includes large quantity waste generators, transfer facilities which temporarily store waste, and transporters which move hazardous waste from one site to another. These sites are typically found in industrial areas and along transportation corridors. Waste byproducts might contain harmful chemicals, which could further contaminate air, water, and soil in

proximate areas. Studies have found that such facilities are often located near poorer neighborhoods and communities of color.

The South Coast Air Quality Management District (SCAQMD) collects emissions data from stationary sources of pollutants through the Air Toxics Hot Spots program. This program identifies facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels. The Air Toxic Hot Spots program quantifies criterial and toxic pollutants. Criteria air pollutants are air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM_{10} and $PM_{2.5}$. Toxic air pollutants (TAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or to cause adverse environmental effects. According to the California Environmental Protection Agency, there are no large quantity waste generators, transfer facilities, or transporters located within the Planning Area (Cal EPA, 2025).

Hazardous Waste and Substances Site List

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency (Cal EPA) to develop at least annually an updated Cortese List. The California Department of Toxic Substances Control (DTSC), the State Water Resources Control Board (SWRCB) and other State and local government agencies are responsible for the information contained in the Cortese List. The Cortese list consists of:

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database;
- List of Leaking Underground Storage Tank Sites from the State Water Board's GeoTracker database;
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" Cease and Desist Orders and Cleanup and Abatement Orders; and,
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

As previously detailed, there are three Open LUST sites and 13 Open SCP sites within the Planning Area. However, the Planning Area does not contain any Hazardous Waste and Substances sites, solid waste sites identified by the Water Board, active CDOs and CAOs, or hazardous waste facilities subject to corrective action as identified by DTSC.

Airport Hazards

There are no airports located within the City of Downey and the Planning Area is not located within close proximity to any airport. The nearest airport to the Planning Area, the Compton-Woodley Airport, is located approximately 4.55 miles southwest of the Planning Area in the City of Compton.

Wildfire Hazards

According to the CALFIRE Fire Hazard Severity Zone Maps, the Planning Area is not located in an area of high fire threat (CALFIRE, 2025). Because the City of Downey is an urbanized community, structural fires rather than wildland fires represent the greatest fire risk to the Planning Area and surrounding areas.

4.9.2 – REGULATORY FRAMEWORK

Federal

U.S. Environmental Protection Agency (EPA)

Regulates chemical and hazardous materials use, storage, treatment, handling, transport, and disposal practices; protects workers and the community (along with CalOSHA, see below) and integrates the Federal Clean Water Act and Clean Air Act into California Legislation.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Adopted in 1980, CERCLA was developed to remove contamination of water, air, and land resources from past chemical disposal practices. Also known as the “Superfund Act,” CERCLA contains a list of sites referred to as Superfund sites, where there is an imminent threat to human health. CERCLA collects taxes from the chemical and petroleum industries to clean abandoned or uncontrolled hazardous sites using short term and long-term techniques.

The Resources Conservation and Recovery Act (RCRA)

Federal law that regulates hazardous wastes from a ‘cradle-to-grave’ approach, meaning that all hazardous wastes are tracked and strictly regulated from generation to disposal, and waste generators are required to report use or transport of hazardous wastes to the EPA. Hazardous waste generators range from small producers such as dry cleaners and automobile repair facilities to larger producers such as hospitals and manufacturing operations. The EPA categorizes Small Quantity Generators (SQG) as those facilities that produce between 100 and 1,000 kilograms (kg) of hazardous waste per month. Facilities producing less than 100 kg of hazardous waste per month are not subject to RCRA. Large Quantity Generators (LQG) produce 1,000 kg or more hazardous waste per month. LQG and SQG facilities are subject to the storage and transportation requirements of RCRA.

The Federal Emergency Planning and Community Right-To-Know Act (EPCRA)

Enacted to inform communities and residents of chemical hazards in their area, EPCRA requires the US EPA to maintain and publish a list of toxic chemical releases, known as the Toxic Release Inventory (TRI). Facilities required to report include industrial uses that manufacture, process, or use significant amounts of chemicals. Reporting includes types and amounts of chemicals that are released each year into the air, water, and land or transferred off-site. Listing as a TRI facility doesn’t necessarily mean that releases are harmful to humans or the environment.

Federal Occupational Safety and Health Administration (OSHA)

Establishes and enforces Federal regulations related to health and safety of workers exposed to toxic and hazardous materials. OSHA also sets health and safety guidelines for construction activities and manufacturing facility operations.

U.S. Department of Transportation (DOT)

Regulates the shipment of hazardous material. DOT also administers the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify conflicting state, local, and federal regulations. HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous (along with EPA) when they pose unreasonable risks to health, safety, or property.

Standardized Emergency Management System and National Incident Management System (SEMS)

According to the State's SEMS, local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. When a major incident occurs the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic situations. This on-scene authority rests with the local emergency services organization and the incident commander.

State

California Occupational Safety and Health Administration (CalOSHA)

Responsible for promulgating and enforcing State health and safety standards and implementing Federal OSHA Laws. For example, CalOSHA's regulatory scope includes provisions to minimize the potential for release of asbestos and lead during construction and demolition activities.

California Environmental Protection Agency (Cal EPA)

The Cal EPA implements and enforces a statewide hazardous materials program known as the Certified Unified Program Agency (CUPA) established by Senate Bill 1802 to enable counties and local government to enforce the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs for hazardous materials:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control, and Countermeasure Plans
- Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs

- California Fire Code, Hazardous Materials Management Plans, and Hazardous Material Inventory Statements

CUPAs are accountable for carrying out responsibilities previously handled by approximately 1,300 different state and local agencies.

CalEPA Office of Emergency Services (CalEPA/OES)

Cal/EPA establishes regulations governing the use of hazardous materials in the State to protect air, water, and soil. OES coordinates State and local agencies and resources for educating, planning, and warning citizens of hazardous materials and related emergencies, including organized response efforts in case of emergencies.

CALFIRE, Office of the State Fire Marshal (CAL FIRE-OSFM)

The Office of the State Fire Marshal evaluates and provides technical assistance for the Hazardous Material Management Plan (HMMP), the Hazardous Materials Inventory Statement (HMIS) and the Aboveground Petroleum Storage Act (APSA) Programs. The HMMP and HMIS Program are closely tied to the Business Plan Program.

California Fire Code

The City has adopted the most current version of the California Fire Code, with amendments to address specific local conditions and needs. These provisions include construction standards and fire hydrant requirements, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for minimum fire flow rates for water mains, specifications for exterior materials, and construction methods for structures located in the wildland-urban interface (WUI). These regulations pertain to any new building located within a Local Agency ‘Very High Fire Hazard Severity Zone’ or within a State Responsible ‘Moderate,’ ‘High,’ or ‘Very High Fire Hazard Severity Zone.’

California Hazardous Waste Control Law

The California Hazardous Waste Control Law is administered by the California EPA to regulate hazardous wastes. Although the Hazardous Waste Control Law is generally more stringent than RCRA, until the federal EPA approves the California Hazardous Waste Control Program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

The California Code of Regulations (CCR) 22 CCR Section 66261.10 provides that waste has “hazardous” characteristics if it has the following effects: [a](1) a waste that exhibits the characteristics may: (A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed or otherwise managed.

According to 22 CCR (Article 11, Chapter 3), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or are being stored prior to proper disposal. Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances.

Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric (battery) acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which reacts violently with water) may cause explosions or generate gases or fumes.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as “mixed wastes.” Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses (22 CCR 66251.1 et seq.).

California Department of Toxic Substances Control (DTSC)

DTSC regulates hazardous substances and wastes, oversees remedial investigations, protects drinking water from toxic contamination, and warns the public that could potentially be exposed to listed carcinogens. DTSC evaluates and provides technical assistance for the Hazardous Waste Generator Program, including Onsite Treatment (Tiered Permitting) and the Resource Conservation Recovery Act (RCRA). In addition, EnviroStor is DTSC’s data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further.

Underground Tank Regulations

Title 23, Division 3, Chapter 16 (Underground Tank Regulations) of the California Code of Regulations identifies the regulations applicable to new and existing underground storage tanks. These regulations establish monitoring, maintenance, reporting, abatement, and closure procedures for all underground storage tanks in the state. These regulations are administered by the Los Angeles Regional Water Quality Control Board.

California Highway Patrol (CHP)

The CHP has primary regulatory responsibility for the transportation of hazardous wastes and materials.

Cortese List

California Government Code Section 65962.5 established the "Cortese List", which requires state agencies to compile a list of all properties affected by hazardous waste and develop a framework for how they will continue to be monitored and addressed by the State. A site's presence on the list has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA). This statute was enacted over 20 years ago, and some of the provisions refer to agency activities that are no longer being implemented and in some cases the information to be included in the Cortese List does not exist.

California Porter Cologne Water Quality Control Act

Division 7 of the California Water Code (Water Code) identifies the enforcement and implementation rights of the Regional Water Quality Control Board to remedy discharges to surface waters or groundwater that would or could violate water quality standards. Standard remedies include issuance of Cease and Desist Orders and cleanup and abatement procedures.

Code of Regulations Title 22

Title 22 of the California Code of Regulations contains all applicable State and Federal laws governing hazardous wastes in the State. Title 22 is more stringent and broader in its coverage of wastes than Federal law. Chapter 51 (Site Remediation) identifies the minimum standards of performance for site investigations and response actions performed by the private sector in site cleanup efforts.

Hazardous waste is any waste with properties that make it potentially dangerous or harmful to human health or the environment. Hazardous waste is defined in one of two ways. Waste is considered hazardous if it appears on one of the five lists created pursuant to the Federal Resource Conservation Recovery Act (RCRA). The lists are known as the F-, K-, P-/U-, and M-lists and reflect non-specific source waste, source-specific waste, discarded commercial chemical products, discarded mercury-containing products, respectively. A waste may also be categorized as hazardous if it exhibits one of the four characteristics of hazardous materials: ignitibility, corrosivity, reactivity, and toxicity.

Because of its toxicity, solid wastes containing certain levels of lead are considered hazardous and must be handled, transported, and disposed of in accordance with Federal and State law. In California, two thresholds have been established by State regulation to determine if a waste is hazardous due to its lead content. The Total Threshold Limit Concentration (TTLC) establishes a threshold of 1,000 milligrams (mg) of lead per one kilogram (kg) of waste. The Soluble Threshold Limit Concentration (STLC) establishes a threshold of 5 mg of lead per liter (L) of waste extract solution. Hazardous Waste must be disposed of at Class I landfills that are specifically designed to accept hazardous waste.

California Asbestos Standards in Construction

The California Division of Occupational Safety and Health (Cal/OSHA) enforces the California Asbestos Standards in Construction (8 CCR Section 1529). These standards regulate exposure to asbestos in all construction work including demolition of structures. These regulations establish entry and exit procedures after working in asbestos contaminated areas and establish specific control measures designed to protect workers depending on the type of asbestos they

are handling. Such procedures include minimum air circulations, use of respirators, wetting of materials, clothing laundering, construction and demolition equipment requirements, and shielding specifications. Notification procedures are also in place that require building owner and employee noticing as well as external and internal hazard signage. All asbestos workers are required to complete training programs and register as an asbestos contractor, depending on the type of asbestos being removed. Medical examination requirements are also required to monitor worker health, generally on an annual basis.

California Construction Safety Orders for Lead

Title 8, Section 1532.2 (Lead) of the California Code of Regulations establishes the requirements for any construction worker who may be exposed to lead during demolition or salvage, removal or encapsulation, new construction, and cleanup activities. The construction safety orders establish an action level of 30 micrograms of lead per cubic meter (μg/cm^3) of air calculated over an 8-hour time-weighted average without regard for the use of a respirator, meaning this is the limit where safety protocols must be initiated, such as use of a respirator. Under no circumstance may a worker be exposed to 50 μg/cm^3 over an 8-hour weighted period. These regulations require implementation of engineering and work practice controls such as respiratory protection, protective clothing, housekeeping, hygiene practices, and signage requirements to meet worker exposure limits. Medical monitoring and training requirements are also identified.

Assembly Bill 2948

In response to the growing statewide concern of hazardous waste management, State Assembly Bill 2948 (Tanner, 1986) enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction.

Hazardous Materials Business Plan (CERS Annual Submittal)

In 1986, the California Governor's Office of Emergency Services (Cal OES) established the Hazardous Materials Business Plan (HMBP) Program, which prevents or minimizes damage to the public and the environment from a release of hazardous materials. Under the Program, California businesses that handle hazardous materials were required to submit an HMBP each year. Assembly Bill 1429, which was passed on July 9, 2019, requires a business with a facility that is not required to submit Tier II information pursuant to the above-mentioned federal provision and is not subject to the provisions governing those aboveground storage tanks to submit their business plan once every three years, instead of annually. However, the Los Angeles County Code of Ordinance, Section 12.64.030 still requires all hazardous materials handlers operating under the jurisdiction of Los Angeles County must electronically certify, or submit an updated HMBP, including the hazardous materials inventory, site map, contingency plan, and the employee training plan information via the Statewide information management system which is also known as the California Environmental Reporting System (CERS).

Emergency Services Act

Under the Emergency Services Act, the State of California developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of

the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards, Air Quality Management Districts, and county disaster response offices.

The Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act requires facilities to disclose to the State and Local Emergency Planning Committee the quantities and type of toxic chemicals stored. To avoid multiple reports to various agencies, the California Health and Safety Code requires notification of chemical inventory to the Administering Agency (DTSC). Notification of chemical inventory is accomplished through completion of a Hazardous Materials Business Plan and inventory.

Regional

Regional Water Quality Control Board (RWQCB)

One of nine regional boards in the State, the Los Angeles Regional Water Quality Control Board (RWQCB) protects surface and groundwater quality from pollutants discharged or threatened to be discharged to the Waters of the State. The RWQCB issues and enforces National Pollutant Discharge Elimination System (NPDES) permits and regulates leaking underground storage tanks and other sources of groundwater contamination.

South Coast Air Quality Management District (SCAQMD)

The SCAQMD regulates the demolition of buildings and structures that may contain asbestos. The SCAQMD is vested with the authority to regulate airborne pollutants through both inspection and law enforcement and shall be notified 10 days in advance of any proposed demolition or abatement work.

South Coast Air Quality Management District Rule 1403

Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of asbestos containing material (ACM). This rule is generally designed to protect uses surrounding demolition or renovation activities from exposure to asbestos emissions. Rule 1403 requires any facility being demolished or renovated be tested for the presence of all friable and Class I and Class II non-friable ACM. Rule 1403 also establishes notification procedures, removal procedures, handling operations, and warning label requirements.

Environmental Site Assessment (ESA) Procedures

A Phase I ESA is the initial investigation phase of a process established by the American Society for Testing and Materials Standards (ASTM), as adequate due diligence by new purchasers of properties or their lenders prior to site development. Phase I ESAs are often required by lenders prior to property development by private parties to establish that the buyer has exercised due diligence in purchasing the site. If a Phase I ESA indicates evidence of site contamination, a Phase II ESA would be required prior to site development. The Phase II ESA includes collection of original samples of soil, groundwater, or building materials to measure and

analyze quantities of various contaminants. The most frequent substances tested for are petroleum hydrocarbons, heavy metals, pesticides, solvents, asbestos, and mold. Appropriate cleanup levels for each contaminant, based on current and planned land use, would be determined in accordance with professional procedures adopted by the lead agency (e.g., DTSC, RWQCB, SCAQMD, CUPA).

County

Los Angeles County Fire Department (LACFD), Certified Unified Program Agency (CUPA)

The LACFD Health Hazardous Materials Department is a CUPA under the state that administers the following programs within Los Angeles County; the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program (Cal-ARP), the Aboveground Storage Tank Program and the Underground Storage Tank Program. CUPAs and Program Agencies (PAs) throughout the state created a partnership and formed the California CUPA Forum. Together, members of the California CUPA Forum and representatives of local, state and federal agencies established the Unified Program Administration and Advisory Group (UPAAG) to effectively address policy decisions, training and problem solving. The UPAAG's goals and objectives are listed in the UPAAG Strategic Plan. The Unified Program consolidates the administration, permit, inspection, and enforcement activities of the following environmental and emergency management programs:

- Aboveground Petroleum Storage Act (APSA) Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- Hazardous Material Management Plan (HMMP) and Hazardous Material Inventory Statements (HMIS) (California Fire Code)
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- Underground Storage Tank Program

State agency partners involved in the implementation of the Unified Program are responsible for setting program element standards, working with CalEPA to ensure program consistency and providing technical assistance to CUPAs and PAs.

Multi-Hazard Functional Plan

The County's Multi-Hazard Functional Plan addresses the planned response to extraordinary emergency situations associated with natural and human caused disasters, technological incidents, and national security operations. Individuals and departments assigned emergency responsibilities within this plan will have prepared appropriate supporting plans and related Standard Operating Procedures.

Health Hazardous Materials Division

In May 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program in the Department of Health Services. The program focuses on inspection of businesses that generate hazardous waste, hazardous materials inspections, criminal investigations, site mitigation oversight, and emergency response operations. On July

1, 1991, the program was transferred to the Fire Department's Health Hazardous Materials Division (HHMD). The HHMD's mission is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Los Angeles County Fire HHMD administers the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program for the City of Downey. Senate Bill 1082 (1993) established the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program." The Unified Program consolidates, coordinates, and standardizes the following hazardous materials and hazardous waste programs (Program Elements):

- Hazardous Waste Generation (including onsite treatment under Tiered Permitting);
- Aboveground Petroleum Storage Tanks (only the Spill Prevention Control and Countermeasure Plan or "SPCC");
- Underground Storage Tanks (USTs);
- Hazardous Material Release Response Plans and Inventories;
- California Accidental Release Prevention Program (Cal ARP); and
- Uniform Fire Code Hazardous Material Management Plans and Inventories.

Household Hazardous and E-Waste Program

The Sanitation Districts of Los Angeles County have established the Household Hazardous and Electronic Waste (E-Waste) Collection Program to provide County residents a legal and cost-free way to dispose of unwanted household chemicals that cannot be disposed of in the regular trash. The Household Hazardous and E-Waste Program allows residents to dispose of the following household chemicals and E-Waste.

- Household Chemicals
- Motor oil, oil filters, brake fluid
- Used antifreeze
- Paint, paint thinner, turpentine
- Cleaners with acid or lye
- Pesticides or herbicides
- Household batteries or car batteries
- Pool chemicals
- CRTs, old TVs, misc. electronics
- Mercury thermometers or thermostats
- Fluorescent light bulbs
- Used needles or sharps (In a Sharps container or sturdy box labeled "SHARPS")
- Unwanted or expired prescriptions

LA Sanitation & Environment (LASAN) has established permanent collection sites throughout the County known as S.A.F.E. Centers (Solvents/Automotive/Flammables/Electronics).

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to hazards and hazardous materials that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.9.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

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.

F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

H. Would the project cause substantial adverse cumulative impacts with respect to hazards and hazardous materials.

4.9.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to hazards and hazardous materials which could result from the implementation of the General Plan Update (GPU) and recommends mitigation measures as needed to reduce significant impacts.

Transport, Use, and Disposal Hazards

Impact HAZ-1 – Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Analysis of Impacts

Implementation of the GPU would result in an increase in residential dwelling units and non-residential building space within the Planning Area. Construction associated with the implementation of the GPU would likely involve the use and disposal of chemical agents, solvents, paints, and other hazardous materials associated with construction activities. The amount of these chemicals present during construction would be limited, would comply with existing government regulations, and would not be considered a significant hazard.

Hazardous materials associated with operation of residential and non-residential uses could include, for example, liquid chemical products (e.g., household cleaners), used motor oil, building maintenance supplies, paints and solvents, pesticides, or other similar materials. The limited quantity of such products would not generate significant hazardous emissions or involve the use of acutely hazardous materials that could pose a significant threat to the environment. The U.S. and California Departments of Transportation regulate the designation of routes appropriate for the transportation of hazardous materials/wastes.

Additionally, the transportation of hazardous materials is regulated by the issuance of permits to the transporter. Such permits are issued by the California Department of Health Services, through the County of Los Angeles Health Department. The City would require all new development to follow applicable federal, state, regional, county, and local regulations and guidelines regarding the storage, handling and disposal of hazardous waste. In addition, all hazardous materials are required to be stored and handled according to manufacturer's directions and local, state, and federal regulations.

Further, the Environmental Justice and Safety Elements of the GPU include goals and policies intended to reduce impacts to the public or the environment through the routine transport, use, or disposal of hazardous materials. Goal EJ-1 and its policies aim to reduce exposure to pollution, hazardous materials, and environmental health risks, with emphasis on neighborhoods facing the highest burdens. Policy EJ-1.5 calls for the City to coordinate with regulatory agencies to monitor ongoing compliance of facilities that handle hazardous materials or generate toxic releases. Policy EJ-1.6 prioritizes remediation and reuse of contaminated or underutilized sites within disadvantaged communities to reduce long-term exposure risks and encourage community reinvestment. Policy EJ-1.8 prohibits the establishment or expansion of heavy polluting land uses, including facilities that generate significant air emissions, hazardous materials, or toxic releases, in proximity to residential areas, schools, parks, and other sensitive receptors.

Furthermore, Goal S-3 strives to reduce the risk to public health, property, and the environment from the storage, use, transport, and emission of hazardous materials through responsible management, prevention, and remediation practices. Policy S-3.1 calls for safe and responsible management of hazardous materials, including storage, transport, treatment, recycling, and disposal, consistent with all applicable federal, state, and local regulations. Policy S-3.3 calls for new or existing facilities that use hazardous materials to incorporate design and operational measures that protect nearby sensitive uses such as schools, hospitals, childcare centers, and residential area. Policy S-3.4 limits the placement of sensitive uses near existing industrial operations or hazardous materials users unless effective safeguards and mitigation measures are in place to prevent conflicts or exposure risks. Policy S-3.5 calls for the City to monitor and evaluate facilities that generate toxic air contaminants or hazardous emissions to reduce exposure risks and protect nearby sensitive land uses. Policy S-3.6 calls for monitoring compliance with state and federal standards for the design, installation, and operation of storage tanks to minimize risks of leaks and exposure.

For the above reasons, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Hazardous Materials

Impact HAZ-2 – Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Analysis of Impacts

There are three sites designated by DTSC as either "Open – Remediation" or "Open – Assessment and Interim Remedial Action" within the City of Downey. The sites are: the G&M Oil Station located at 9581 Imperial Highway East (T0603799300); the Los Angeles County Department of Water and Power (DWP) Road MD4 Hollydale located at 11282 South Garfield Avenue (T10000002891), and the Rancho Los Amigos Hospital (South Campus) located at 7600 Amigos Avenue (T0603701265). Additionally, as shown in Table 4.9-1, there are 13 sites within the Planning Area designated by DTSC as either "Open – Inactive", "Open – Remediation", "Open – Site Assessment", or "Open – Assessment and Interim Remedial Action."

Future development of these sites would require completion of remediation measures to assure hazardous materials are not released into the environment. Issuance of construction permits for future development of these sites would be contingent upon project applicants providing the necessary proof of completed remediation measures. Remediation of these sites would be completed in accordance with all applicable federal, state, and local regulations regarding the proper removal and/or treatment of hazardous materials or contaminants. Remediation of these sites would include preliminary site assessment, site investigation, proposal and selection of cleanup actions, implementation of the selected remedy, and post-remediation monitoring. All technical submittals would be supervised and signed by a California-licensed Professional Geologist or Civil Engineer, with work conforming to specific guidelines and data reported electronically via GeoTracker. Compliance with existing regulations related to remediation of sites designated as Open LUST or SCP cases would ensure that impacts related to these sites would be less than significant with implementation of the project.

Demolition of older existing structures within the Planning Area would involve removal and disposal of building materials which could result in the release of hazardous materials such as asbestos containing materials (ACM) or lead based paint (LBP) into the environment. ACM were used on a widespread basis in building construction prior to and into the 1980s; therefore, ACM could be present on the project site and may need to be handled following specific regulations/guidelines described below. Asbestos generally does not pose a threat when it remains intact. When asbestos is disturbed it becomes airborne and can be inhaled.

SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) requires work practices that limit asbestos emissions from building demolition and renovation activities, including the removal and disturbance of ACM (SCAQMD, 2025). This rule is designed to protect uses and persons adjacent to demolition or renovation activity from exposure to asbestos emissions. Rule 1403 requires a certified inspector to survey any facility being demolished or renovated for the presence of all friable and Class I and Class II non-friable ACM. Project applicants must also notify SCAQMD of their intent to perform demolition or renovation of any buildings that may contain asbestos prior to demolition and requires that all ACM be removed prior to any demolition.

Rule 1403 also establishes notification procedures, removal procedures, handling and clean-up procedures, storage, disposal, landfilling requirements, and warning label requirements, including high efficiency particulate air (HEPA) filtration, the “glovebag” method, wetting, and some methods of dry removal that must be implemented when disturbing appreciable amounts of ACM (more than 100 square feet of surface area). All ACM would be disposed of at a waste disposal site operated in accordance with Rule 1403. Project applicants would also be required to ensure the safety of construction workers involved in the ACM removal by complying with all California Asbestos Standards in Construction, including, but not limited to minimum air circulations, use of respirators, wetting of materials, clothing laundering, construction and demolition equipment requirements, and shielding specifications. Adherence to SCAQMD Rule 1403 would ensure that impacts related to the potential release of ACM would be less than significant.

Similar to exposure to asbestos, exposure of construction workers to lead-based paint during demolition activities is also of concern. Improper disposal of lead-based paint could also contaminate soil and subsurface groundwater in and under landfills not properly equipped to handle hazardous levels of this material. Exposure of surrounding land uses to lead from demolition activities is generally not a concern because demolition activities do not result in appreciable emissions of lead (DTSC, 2025c). The primary emitters of lead are industrial processes. Any lead-based paint utilized on the exterior and interior of existing buildings within the Planning Area would generally remain inside the structures or close to the exterior of the buildings and would be removed during demolition.

Due to the age of many buildings within the Planning Area it is possible that lead-based paint could be disturbed as a result of future development under the GPU. However, 8 CCR Section 1532.1 (California Construction Safety Orders for Lead) would be followed for the demolition of all existing structures requiring exposure assessment and compliance measures to keep worker exposure below action levels. Development projects under the GPU would also be subject to Title 22 requirements for the disposal of solid waste contaminated with excessive levels of lead. Testing, monitoring, containment, and disposal of lead-based materials would comply with all Cal/OSHA standards and regulations under California Construction Safety Orders for Lead section 1532. Adherence to standard regulations would ensure that impacts related to the release of lead based paints would be less than significant.

The potential for upset and accident conditions involving the release of hazardous materials into the environment would also be addressed through application of goals and policies contained in the Circulation, Environmental Justice, and Safety Elements of the GPU. Policy C-13.3 seeks to implement advanced monitoring, inspection, and preventive maintenance programs to detect vulnerabilities and address system needs proactively. Policy EJ-1.6 prioritizes remediation and reuse of contaminated or underutilized sites to reduce long term exposure risks. Policy EJ-1.7 promotes assessment and mitigation of lead hazards in homes built before the 1960s. Policy S-

3.2 strives to ensure that sites with known or potential contamination are properly assessed and remediated before reuse or redevelopment, and to plan future uses of these sites that align with cleanup requirements and site conditions. Policy S-3.6 calls for monitoring compliance with state and federal standards for the design, installation, and operation of storage tanks to minimize risks of leaks and exposure.

Finally, the City's standard development review process would continue to ensure that future development projects would prepare a Phase 1 Environmental Site Assessment (ESA), where appropriate, in order to prevent accidental release of hazardous materials into the environment during construction activities. By complying with established local, State and federal environmental site assessment procedures, laws, and regulations; by adhering to the requirements of the GPU goals and policies; and by following applicable Phase 1 ESA requirements, potential hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials would be reduced to less than significant levels.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Emit Hazardous Emissions

Impact HAZ-3 – 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?

Analysis of Impacts

There are multiple schools within the Planning Area. During construction activities, new development projects within the Planning Area could use and dispose of chemical agents, solvents, paints, and other hazardous materials. However, the amount of these chemicals present during construction would be limited, would comply with existing government regulations, and would not be considered a significant hazard.

New development within the Planning Area is expected to be primarily residential and commercial uses, which are not uses that emit hazardous materials or emissions. Hazardous materials associated with new residential and commercial uses could include, for example, liquid chemical products (e.g., household cleaners), used motor oil, building maintenance supplies, paints and solvents, and pesticides. The limited quantity of such products would not generate significant hazardous emissions or involve the use of acutely hazardous materials that could pose a significant threat to schools within the Planning Area. In addition, individual discretionary development applications would be required to undergo project-specific CEQA review, which would include an evaluation of each project's potential impacts on schools.

Further, Environmental Justice Element Policy EJ-1.8 prohibits the establishment or expansion of heavy polluting land uses, including facilities that generate significant air emissions, hazardous materials, or toxic releases, in proximity to schools.

Finally, the City's standard development review process would continue to ensure that future development projects would prepare a Phase 1 Environmental Site Assessment (ESA), where appropriate, to prevent emission of hazardous materials during ground-disturbing activities. By complying with established local, State and federal environmental site assessment procedures, laws, and regulations; by adhering to the requirements of the GPU goals and policies; and by following applicable Phase 1 ESA requirements, potential risks associated with hazardous emissions or handling of hazardous materials within one-quarter mile within an existing or school would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Hazardous Material Sites

Impact HAZ-4 – Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Analysis of Impacts

The City of Downey contains numerous sites that are included on the Cortese list required by Government Code Section 65962.5. The vast majority of these sites are now closed following remediation and cleanup. However, there are three LUST sites designated by DTSC as either "Open – Remediation" or "Open – Assessment and Interim Remedial Action" and there are 13 SCP sites within the Planning Area designated by DTSC as either "Open – Inactive", "Open – Remediation", "Open – Site Assessment", or "Open – Assessment and Interim Remedial Action."

Future development of these sites would require completion of remediation measures to assure hazardous materials are not released into the environment. Issuance of construction permits for future development of these sites would be contingent upon project applicants providing the necessary proof of completed remediation measures. Remediation of these sites would be completed in accordance with all applicable federal, state, and local regulations regarding the proper removal and/or treatment of hazardous materials or contaminants. Remediation of these sites would include preliminary site assessment, site investigation, proposal and selection of cleanup actions, implementation of the selected remedy, and post-remediation monitoring. All technical submittals would be supervised and signed by a California-licensed Professional Geologist or Civil Engineer, with work conforming to specific guidelines and data reported electronically via GeoTracker.

Compliance with existing regulations would ensure that development activities on these sites would not create a significant hazard to the public or the environment. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Airport Hazards

Impact HAZ-5 – Would the project be 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, resulting in a safety hazard or excessive noise for people residing or working in the Specific Plan area?

Analysis of Impacts

There are no airports located within the City of Downey and the Planning Area is not located within close proximity to any airport. The nearest airport to the Planning Area, the Compton-Woodley Airport, is located approximately 4.55 miles southwest of the Planning Area, and there are no parts of the City located within the Airport's influence areas. Since there are no aircraft influence areas that affect the Planning Area, no impacts related to an airport or private airstrip are anticipated as a result of implementation of the GPU.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Adopted Response and/or Evacuation Plans

Impact HAZ-6 – Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Analysis of Impacts

As shown in the Los Angeles County Department of Public Works Disaster Route Maps and the City's Hazard Mitigation Plan maps, Florence Avenue, Bellflower Boulevard, Lakewood Boulevard north of Bellflower Boulevard, and Imperial Highway serve as principal evacuation routes connecting the City of Downey with Interstate 5 to the north/northeast, Interstate 605 to the east, Interstate 105 to the south, and Interstate 710 to the north (LA County Department of Public Works, 2008). These principal accessways are all well-maintained and would continue to support an evacuation function for occupants of the Planning Area under the GPU. In any disaster warranting evacuation, the exact emergency routes used would depend on a number of variables, including the type, scope, and location of the incident.

Additionally, the Safety Element of the GPU includes Goal 4 and its policies which strive for effective community preparedness and coordinated emergency response to protect life, property, and critical services during disasters. Policy S-4.1 strives to keep the City's Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP) up to date, consistent

with state and federal standards, and integrated across departments. Policy S-4.2 seeks to ensure collaboration among city departments and with regional, state, and federal partners to strengthen disaster preparedness, response, and recovery. Policy S-4.3 aims to provide ongoing community outreach and training programs, such as CERT and Downey Alerts, to promote individual and neighborhood preparedness. Policy S-4.4 aims to identify, maintain, and protect critical facilities and infrastructure needed to support emergency response and community recovery during and after disasters. Policy S-4.5 calls for the City to maintain reliable, redundant communication systems, including mass notification platforms, to deliver timely and accurate emergency information to the public. Policy S-4.6 calls for the Downey Police Department to coordinate with the Los Angeles County Fire Department and regional emergency management agencies to identify, maintain, and improve evacuation routes that ensure safe, efficient movement of people during emergencies. Policy S-4.9 seeks to utilize and maintain emergency management technologies, data systems, and decision-support tools—such as real-time monitoring, geographic information systems mapping, mass notification platforms, and interagency data sharing—to enhance situational awareness, coordination, and effective response during emergencies. Policy S-5.10 aims to reduce congestion-related delays to emergency response by prioritizing emergency vehicle mobility through roadway design, traffic operations, and coordinated land use and transportation planning. Finally, Policy S-6.5 strives for continued coordination with businesses and regional agencies to prevent and safely manage hazardous materials incidents and industrial fire risks.

While it is possible that there may be temporary and limited circulation changes required during discrete periods of time associated with specific construction projects under implementation of the GPU, these changes would be temporary and would be of a nature that would still allow for evacuation in the event of an emergency. Emergency access would be maintained to all properties within project limits and the surrounding vicinity during construction. After construction is completed, proper access routes to developments within the Planning Area would be provided, and these access routes would be designed in accordance with existing emergency response and/or evacuation plans and the California Fire Code. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Wildland Fires

Impact HAZ-7 – Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Analysis of Impacts

Generally, the greatest potential for wildfire hazards occurs in areas adjacent to abundant natural vegetation. According to the CALFIRE Fire Hazard Severity Zone Maps, the Planning Area is not located in an area of high fire threat. Because the City of Downey is an urbanized community, structural fires rather than wildland fires represent the greatest fire risk to the Planning Area and surrounding areas. As it relates to structural and urban fire protection, the

Safety Element of the GPU includes Policy S-6.3 which promotes fire-safe building design and ongoing maintenance through fire code enforcement, building inspections, and public education. Because the Planning Area is not at risk of wildfire impacts, the GPU would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, impacts related to wildfire would not occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact HAZ-8 – Would the project cause substantial adverse cumulative impacts with respect to hazards and hazardous materials?

Analysis of Impacts

Some impacts related to hazards and hazardous materials are often site-specific and not cumulative in nature because each project area has unique considerations that would be subject to uniform site development and construction standards. Exceptions to this include impacts that have the potential to contaminate the wider environment, such as water basins, or impacts that increase the potential of wildfire, or decrease the ability to evacuate an area.

The routine use, handling, and transport of hazardous materials is regulated at the State, federal, and local level, and is frequently site-specific. Compliance with these regulations and mitigations at the project level would ensure there is no cumulative impact to the public, or to schools within or in close proximity to the Planning Area.

There are several sites within the Planning Area that are included on the Cortese list. However, compliance with existing regulations governing remediation of these sites would ensure that development within the Planning Area would not have the potential to cause a release of hazardous material into the environment, which could have a significant cumulative impact.

Since there are no aircraft influence areas in the City, there would be no cumulative impact associated with a safety hazard or excessive noise for people residing or working in the Specific Plan area.

There is the potential that multiple projects could be located along emergency routes, each slowing or interfering with an emergency response plan or emergency evacuation plan that, when considered together, create a significant impact. However, in addition to individual CEQA analysis, the City will ensure as part of its development review process, that projects along emergency routes do not have the potential to have a cumulative effect, would not permit projects with the potential to occur simultaneously along those routes, and would stagger projects as necessary in order to allow emergency routes to flow freely.

There are no areas of wildland within or adjacent to the Planning Area; therefore, individual development projects would not result in cumulative wildfire impacts.

The GPU contains goals and policies designed to ensure future development would not result in significant environmental impacts regarding hazards and hazardous materials. In addition, it is assumed other surrounding jurisdictions have similar GPU goals and policies as they generally reflect compliance with state laws regarding various hazards and hazardous materials.

Compliance with existing State, federal, and local laws and regulations, compliance with the requirements of the GPU, and ensuring that projects with the capacity for cumulative impacts are mitigated on a project level if occurring simultaneously would result in a less than significant cumulative impact related to hazards and hazardous materials. Therefore, implementation of the GPU would not result in a cumulatively considerable impact.

Level of Significance Before Mitigation

Less than significant cumulative impact.

Mitigation Measures

None required.

4.9.5 - REFERENCES

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4.10 – HYDROLOGY AND WATER QUALITY

This EIR chapter addresses potential impacts water quality standards or waste discharge requirements from implementation of the proposed General Plan Update (GPU or project). Also addressed are impacts related to groundwater supplies and sustainable management of the groundwater basin. This chapter further addresses potential project impacts related to alteration of existing drainage patterns in the area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces. Additionally, this chapter analyzes the risks of release of pollutants due to inundation and potential conflicts with the water quality control plan or sustainable groundwater management plan for the area. Lastly, this chapter analyzes potential cumulative hydrology and water quality impacts from the project.

4.10.1 – ENVIRONMENTAL SETTING

Water Supply

Water supplies are provided to the Planning Area by the City of Downey Public Works Department – Utilities Division. According to the 2020 Urban Water Management Plan (UWMP), the City receives nearly 100 percent of its water from one main source– groundwater from the Central Groundwater Basin (Basin) (Downey, 2025a). The Central Basin consists of four sections: the Los Angeles Forebay, the Montebello Forebay, the Whittier Area, and the Pressure Area. The Planning Area is located over the Central Groundwater Basin Pressure Area which contains several aquifers that, in turn, are confined by numerous aquicludes (WRDSC, 2004), geologic formation or stratum with clayey or other non-porous materials that confine water in an adjacent aquifer. The California Department of Water Resources does not identify the Central Basin as being in overdraft (as of 2020).

The City's water supply is supplemented with imported water that can be purchased from the Central Basin Municipal Water District (CBMWD) for emergencies in the event that system demands exceed the production capacity of the City's groundwater wells, and recycled water supplies from CBMWD. According to the 2020 UWMP, the City's Utilities Division provided water to a service population of approximately 110,556 persons in 2025 and is projected to have a service population of approximately 117,081 by 2045. The City had a projected water demand of 14,520 acre-feet per year (AFY) in 2025, and is projected to have a demand of 17,243 AFY by the year 2045. The City projects that, under the current General Plan, water supplies are adequate to meet normal domestic needs within the Planning Area under the normal, dry, and multiple dry water years.

Wastewater

The City of Downey owns, operates, and maintains the sanitary sewer collection system that serves the Planning Area (Downey, 2025b). The wastewater generated in Downey is collected by trunk sewers owned, operated, and maintained by the Los Angeles County Sanitation Districts (LACSD). Some of the District trunk sewers in the City also convey wastewater from upstream cities, and some of the trunk sewers simply pass through the City without collecting any wastewater generated in Downey. A portion of the sewer system in the City of Pico Rivera drains Pico Rivera and Downey flows through a 1,510-foot sewer that runs along the border between the two cities before entering a District trunk sewer. The City's collection system is

comprised of approximately 193 miles of sewer mains, 4,552 manholes, one lift station, and other associated facilities. The City's gravity sewers are all composed of vitrified clay pipe ranging from 6 to 21 inches in diameter, over 90 percent of which are 8 inches. There are approximately 22,500 sewer accounts in the City. The City also owns and operates the Blandwood Road and True Avenue lift station, which was constructed in 2017 and replaced two older lift stations.

Wastewater from Downey is conveyed to and treated at either the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) located in the City of Carson, the Los Coyotes WRP (LCWRP) in Cerritos, or one of six water reclamation plants (WRPs) as part of the Joint Outfall System (JOS). The JOS is a regional, interconnected system of facilities providing wastewater collection and treatment for residential, commercial and industrial users in 73 cities. The system includes the A.K. Warren Facility in Carson (treatment capacity of 400 million gallons per day) and the following six satellite WRPs:

- Whittier Narrows WRP
- Los Coyotes WRP
- San Jose Creek WRP
- Long Beach WRP
- Pomona WRP
- La Cañada WRP

Approximately two-thirds of the wastewater in the JOS is treated at the A.K. Warren Facility, which carries out primary and secondary treatment prior to discharge into the ocean. The remaining one-third is treated in the six satellite WRPs. At these plants, the wastewater goes through a three-stage treatment process consisting of primary, secondary, and tertiary treatment stages. After tertiary treatment, water is available for use to recycled water customers, used for groundwater recharge, or discharged into the ocean. The City owns and operates approximately 7 miles of recycled water main and receives its recycled water from CBMWD who receives it from LACSD. Recycled water is used within the City's service area for landscape irrigation, dual plumbing (i.e. toilets, urinals), and at the Rio Hondo Golf Course and Wilderness Park for their lakes and ponds.

Upon collection of wastewater from the cities of Los Angeles County, wastewater undergoes primary treatment. In this stage, water is collected in long concrete tanks that act as a river. Primary treatment refers to the removal of macroscopic waste particles in the water. Light materials will flow to the top and heavier materials will sink to the bottom. Both the light and heavier materials can be removed and are sent to the A.K. Warren Facility for disposal. The A.K. Warren Facility treats an average of 260 million gallons of wastewater per day. Following treatment, the water is discharged through a network of outfalls extending one and a half miles off the Palos Verdes Peninsula at a depth of approximately 200 feet.

Per City of Los Angeles Bureau of Engineering Sewer Design Manual, average per capita wastewater flow in the Los Angeles area is estimated at 60 gallons per capita per day (GPCD). It is estimated that between 20 and 30 percent of the City's effluent is treated annually to recycled water standards equally through each of the six satellite WRPs in the Joint Outfall System. The remaining wastewater is estimated to be treated at either the A.K. Warren Facility or the Los Coyotes Facility and discharged to the ocean. No wastewater is treated or disposed in the City's service area as LACSD treats and disposes all of the City's wastewater.

Watershed

The Planning Area is primarily located in the Los Angeles (LA) River Watershed. The LA River Watershed is one of the largest in the region at 824 square miles; the river is 55 miles long. It is also one of the most diverse in terms of land use patterns. Approximately 324 square miles of the watershed are covered by forest or open space land including the area near the headwaters which originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed.

After leaving the mountains, the LA River flows through the San Fernando Valley past heavily developed residential and commercial areas. From the Arroyo Seco, north of downtown Los Angeles, to the confluence with the Rio Hondo, the river flows through industrial and commercial areas and is bordered by rail yards, freeways, and major commercial and government buildings. From the Rio Hondo to the Pacific Ocean, the river flows through industrial, residential, and commercial areas, including major refineries and petroleum products storage facilities, major freeways, rail lines, and rail yards serving the Ports of Los Angeles and Long Beach.

A majority of the approximately 100 National Pollutant Discharge Elimination System (NPDES) discharges go directly to the Los Angeles River. Of the 1,319 dischargers enrolled under the general industrial storm water permit in the watershed, the largest numbers occur in the cities of Los Angeles (many within the community of Sun Valley), Vernon, South Gate, Long Beach, Compton, and Commerce. Wholesale trade-durable goods, fabricated metal products, trucking and warehousing, and chemicals and allied products are a large component of these businesses based on their Standard Industrial Classification (SIC) codes. The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the County before emptying into the Pacific Ocean at the Ports of Los Angeles and Long Beach.

Stormwater

There are 35 miles of storm drains within the City of Downey, as well as two storm water lift stations and six dry wells. Stormwater collected in the Planning Area is conveyed to a network of mains and catch basins owned, operated, and maintained by the Los Angeles County Flood Control District (LACFCD). Stormwater from this network discharges into the Pacific Ocean via the Los Angeles River and its tributaries, such as the Rio Hondo and San Gabriel Rivers. High concentrations of impervious surfaces in intensive urban areas, like Downey and surrounding vicinities, has contributed to poor water quality from polluted stormwater runoff. Key sources of contamination include sediment, nutrients, pesticides, metals, oil and grease, and pathogens. The Los Angeles County Watershed Management reports that the lower portion of the Los Angeles River Watershed has impaired water quality due to polluted storm water runoff conveyed from the surrounding urban areas. Impairments to water quality are similar throughout the region and include a number of metals, ammonia, trash, coliform bacteria, algae, oil, the insecticide chlorpyrifos, as well as other pesticides, and volatile organics. Storm water run-off from roadways and parking lots along the river are also a major contributor to poor water quality. Other sources of these pollutants include building materials, such as galvanized steel, that are exposed to rain.

The City is covered by the Los Angeles County NPDES permit. This permit is administered by the Los Angeles Regional Water Quality Control Board. As required by the NPDES permit, the City has developed a Storm Water Quality Management Plan (SQMP) to improve and protect the quality of storm water runoff within Downey. The SQMP is implemented by City ordinances, requirements, and policies that govern public and private construction projects, site

management, and operations. In order to discourage the dumping of waste in sewers, storm drains, or dumps, the City of Downey Public Works Department works in conjunction with Los Angeles County to hold one-day Household Hazardous Waste disposal events in the City. Outside of these events, Downey residents can take household hazardous materials to permanent hazardous waste collection centers throughout the County. The Department also operates an oil recycling program to encourage residents to recycle their used motor oil and used oil filters. The program provides public education information on the environmental hazards of dumping used motor oil and door-to-door collection.

Flooding

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rates Maps (FIRM) system, the City of Downey is located in Zone X, which is characterized as an area with reduced flood risks due to levees (FEMA, 2025). The terms "100-year flood zone" and "500-year flood zone" refer to the statistical probability of a severe flood condition occurring during a period of extreme rainfall or runoff once every 100 or 500 years (FEMA, 2025). A 100-year flood event refers to a flood that has a 1 in 100 chance of occurring with the same or greater intensity in any given year. Contrary to its name, a 100-year flood can happen in any year.

Typically, portions of the City of Downey have been prone to occasional urban flooding due to debris accumulation in storm drains and aged drainage systems. Otherwise, the City of Downey has long had a high degree of flood protection due to the construction of dams along the San Gabriel and Rio Hondo Rivers and the channelization of the Los Angeles River in the 1950s. The Los Angeles County Drainage Area Project, through the County of Los Angeles Department of Public Works, further reduced potential overflow by increasing the flood carrying capacity of the lower Los Angeles River, the Rio Hondo just to the west of Downey, and the lower portion of the San Gabriel River just to east of Downey. Completed in 2001, the height of 21 miles of existing levees was raised and modifications were made to railroad, traffic, utility and pedestrian bridges. Since the completion of the preventative measures, Downey property owners in the floodplain are no longer required to purchase flood insurance.

Dam Inundation

The City of Downey Natural Hazards Mitigation Plan (NHMP) indicates that the Whittier Narrows Dam, on the San Gabriel River at the southern end of the San Gabriel Valley, could potentially affect the City of Downey in the event of a dam failure. The Dam is located approximately 3.7 miles upstream from Downey in the City of Pico Rivera. Dams fail for a variety of reasons, including sub-standard construction materials/techniques, spillway design error, geological instability, poor maintenance, and earthquakes, and therefore recurrence probabilities are unknown. State jurisdiction dams are regulated by the California Department of Water Resource's Division of Safety of Dams (DSOD) and each dam undergoes inspection on an annual basis to ensure it is safe, performing as intended, and is not developing issues.

In 2017, the United States Army Corps of Engineers (USACE) determined that the 60-year-old Whittier Narrows Dam is structurally unsafe and poses a potentially catastrophic risk to the communities along the San Gabriel River floodplain, including the City of Downey, which is geographically located in the flood inundation area should a dam failure occur. For this reason, the USACE has also reclassified the Whittier Narrows Dam as the agency's highest dam priority nationally because of the risks "due to the combination of loss of life with a very high likelihood of failure only when filled by a rare flood event." Such a storm event has only a 1 in 900 (i.e.,

0.1%) chance of occurring in any given year. The NHMP indicates that, in the event of a dam failure, flood waters would reach Downey in approximately two to six hours with an average depth of five to ten feet and resulting in loss of life and damage to structures, roads, and utilities.

4.10.2 – REGULATORY FRAMEWORK

Federal

Clean Water Act Section 404

The United States Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, aquifers, and coastal areas. The CWA focuses on the protection of surface water, but certain sections also apply to groundwater. Under the CWA, the United States Environmental Protection Agency (EPA) sets national standards and effluent limitations, and delegates many regulatory responsibilities to the California State Water Resources Control Board (SWRCB).

The CWA authorizes the EPA to regulate water quality in California by controlling the discharge of pollutants to water bodies from point and non-point sources through the National Pollution Discharge Elimination System (NPDES). In Los Angeles County NPDES permits are administered by the Los Angeles Regional Water Quality Control Board (RWQCB Region 4), a division of the State Water Resources Control Board (SWRCB). The Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Water Board 2020) is the master policy document that drives the management of water quality and NPDES permits.

NPDES permits are adopted to address the water quality and flow-related impacts of stormwater runoff. It is a comprehensive permit, which regulates activities related to construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. It also requires a public education program, implementing targeted pollutant reduction strategies, and a monitoring program to help characterize local water quality conditions and to begin evaluating the overall effectiveness of the permit's implementation.

Stormwater Discharge for Construction Sites

Dischargers whose projects disturb one (1) or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ.

Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling or excavation but does not include regular maintenance activities. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP), identifying potential sources of pollution and specifying runoff controls during construction for the purpose of minimizing the discharge of pollutants in stormwater from the construction area. The SWPPP must list best management practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. Construction-related BMPs are a set of specific guidelines for reducing pollutants (including sedimentation and turbidity) in stormwater discharges and runoff both during construction and post-construction.

Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a

sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. The permit also includes post-construction standards with the requirement for all construction sites to match pre-project hydrology to ensure that the physical and biological integrity of aquatic ecosystems is maintained. This "runoff reduction" approach is analogous in principle to Low Impact Development (LID) and serves to protect related watersheds and water bodies from both hydrologic-based and pollution impacts associated with the post-construction landscape. Section 404 of the CWA requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) creates maps classifying levels of flood risk or flood zones for designated areas. The maps are called Flood Insurance Rate Maps (FIRMs) and are utilized to determine the need and rate of flood insurance. Flood zones are determined based on historical data on the likelihood of flood inundation. The 100-year flood zone, also classified as Zones A, AO and AE, is the area of flooding expected to have a one percent chance of occurring every year.

NPDES Program

The National Pollutant Discharge Elimination System (NPDES) program requires permitting for activities that discharge pollutants into waters of the United States. This includes discharges from municipal, industrial, and construction sources. Generally, these permits are issued and monitored under the oversight of the State Water Resources Control Board (SWRCB) and administered by each regional water quality control board. A brief discussion of these permit types is presented below:

Municipal Permits. Municipal separate storm sewer systems (MS4) are issued permits based on the size of the municipality. MS4 permit requirements include reduction of pollutant discharges to the "maximum extent practicable" and protection of water quality. Requirements also include identification of major outfalls and pollutant loads and control of discharges from new development and redevelopment. To address these objectives, municipalities are required to prepare stormwater management plans. Although the NPDES program does not regulate nonpoint sources of pollution, the Los Angeles Basin RWQCB has other programs in place to address nonpoint sources.

Industrial Permits: The State Water Resources Control Board issues the Industrial General Permit that regulates discharges from 10 broad categories of industrial activities. The permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and monitoring program to implement water quality objectives through use of the best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT).

Construction Permits: Construction activities that disturb one acre or more (whether a single project or part of a larger development) are required to obtain coverage under the State's General Permit for Discharges of Storm Water Associated with Construction Activity. The activities covered under the Construction General Permit include clearing, grading, and other disturbances. The permit requires preparation of a SWPPP and implementation of Best Management Practices (BMPs) with a monitoring program.

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

Section 10 of the Rivers and Harbors Act of 1899 states, “That the creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is hereby prohibited; and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary of War; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same” (EPA 2020).

State

Porter-Cologne Act (California)

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne) the State Water Resources Control Board (SWRCB) has authority over State water rights and water quality policy. Porter-Cologne also established nine RWQCBs to oversee water quality on a day-to-day basis at the local/regional level. RWQCBs engage in a number of water quality functions in their respective regions.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

NPDES Regulations

The federal Clean Water Act allows individual States to operate their own NPDES programs provided such programs meet minimum Federal requirements. The Los Angeles Regional Water Quality Control Board issues the municipal stormwater National Pollutant Discharge Elimination System permit, MS4, which encompasses the City of Downey.

The objective of Order No. 01-182 is to protect the beneficial uses of receiving waters in Los Angeles County. To meet this objective, the Order requires that the Los Angeles Countywide Stormwater Quality Management Plan (SQMP) specify Best Management Practices (BMPs) that would be implemented to reduce the discharge of pollutants in stormwater to the maximum extent practicable. Further, Permittees are to assure that stormwater discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality, standards and objectives

nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited.

Permit No. CAS004001 requires implementation of a Stormwater Quality Management Plan, which provides specific guidelines to control, reduce and monitor discharges of waste to storm drain systems. The emphasis of the Stormwater Quality Management Plan is pollution prevention through education, public outreach, planning and implementation as source control BMPs first and structural and treatment control BMPs second.

Standard Urban Stormwater Mitigation Plan

The Standard Urban Stormwater Mitigation Plan (SUSMP) was developed as part of the Los Angeles Regional Water Quality Control Board's Municipal Stormwater Program. The Standard Urban Stormwater Mitigation Plan addresses stormwater pollution from certain types of new development and redevelopment. The Standard Urban Stormwater Mitigation Plan specifies the minimum required Best Management Practices (BMPs) that must be used for a designated project. Additional BMPs may be required on certain targeted categories of projects based on these regulations at the discretion of the City. Applicable project applicants are required to incorporate appropriate Standard Urban Stormwater Mitigation Plan requirements into their development plans.

California Water Plan

Required by the California Water Code Section 10005(a), the California Water Plan, prepared by the State Department of Water Resources (DWR), is the state government's strategic plan for managing and developing water resources statewide for current and future generations and provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The California Water Plan, which is updated every five years, presents basic data and information on California's water resources, including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The California Water Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs. The goal for the California Water Plan Update is to meet California Water Code requirements, while receiving broad support among those participating in California's water planning, and serving as a useful document for the public, water planners throughout the state, legislators, and other decision-makers.

Colbey-Alquist Floodplain Management Act

The Colbey-Alquist Floodplain Management Act encourages local governments to plan, adopt and enforce land use regulations for floodplain management, in order to protect people and property from flooding hazards. This act also identifies requirements which jurisdictions must meet in order to receive state financial assistance for flood control.

State Resolution No. W-4976

In recent years, the State of California has been experiencing dry weather conditions due to less rainfall in the area, thus, at times causing a statewide drought emergency. In an effort to promote water conservation efforts, Resolution No. W-4976 was adopted by the California Public Utilities Commission on February 27, 2014 to establish procedures for water

conservation measures in order to ensure a reduction in consumption. Since many water utility agencies or companies secure their water supply from multiple sources, including water wholesalers, surface water and/or groundwater; the adoption of this mandate has affected how water utility districts plan their service distribution while encountering various levels of water supply adjustments within each service area.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen Code), Part 11 of the California Building Standards Code (Title 24) is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. The CALGreen Code provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

Low Impact Development

The State of California adopted sustainability as a core value for all California Water Boards' activities and programs on January 20, 2005. Low Impact Development (LID) practices benefit water supply and contribute to water quality protection by taking a different approach to development and using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The amount of impervious surface, infiltration, water quality, and infrastructure costs can all be addressed by LID techniques, tools, and materials. LID practices include: bioretention facilities or rain gardens, grass swales and channels, vegetated rooftops, rain barrels, cisterns, vegetated filter strips, and permeable pavements.

Senate Bill X7-7

The Water Conservation Act of 2009 (Senate Bill X7-7 or SB-X7-7) was enacted in November 2009 and requires that all water suppliers increase their water use efficiency. There are 18 actions in this bill that DWR is responsible for. These are called "projects" that affect urban water suppliers, agricultural water suppliers, or both. There are also a few projects that are DWR's reporting responsibilities. Completing some of these projects requires a public process, some require rulemaking, some require another process. Even for the projects that were only considered reporting, DWR often chose to work with interested parties to make sure that affected suppliers and other community members were well represented. Four basic groups were formed and consulted to complete these projects:

- Agency Team – a team of other state and federal agencies' representatives
- Commercial, Institutional, and Industrial Task Force (CII Task Force) – a team of different types of commercial, institutional, and industrial representatives, along with representatives from concerned non-profits and technical experts.
- Urban Stakeholder Committee (USC) – a team representing urban water suppliers, concerned non-profits, and technical experts
- Agricultural Stakeholder Committee (ASC)- a team representing agricultural water suppliers, concerned non-profits, and technical experts

Making Conservation a California Way of Life

Making Conservation a California Way of Life is a new way of managing urban water use. The regulation establishes unique efficiency goals for each Urban Retail Water Supplier in California and provides those suppliers flexibility to implement locally appropriate solutions. As part of the state's all-of-the-above strategy to expand storage, develop new water supplies, and promote more efficient water use, this regulation seeks to cultivate long-term practices that help communities adapt to California's ongoing water challenges. The regulation will lessen the need for the emergency water use reduction targets that were important in recent droughts. As part of the regulation, urban retail water suppliers - not individual households or businesses - will be held to "urban water use objectives." An urban water use objective is the sum of standard-based budgets for a subset of water uses, such as residential outdoor use.

Model Water Efficient Landscape Ordinance

MWELO (Model Water Efficient Landscape Ordinance) is California's statewide mandate for water conservation. A MWELO permit and plan check are triggered if a project requires a building permit, plan check, or design review and includes either new landscapes or rehabilitated landscapes. MWELO applies specifically to new construction projects with 500 square feet or more of landscape area, and rehabilitated landscapes of 2,500 square feet or more. The ordinance requires a maximum applied water allowance, highly efficient irrigation systems, limits on high-water turf areas, and the use of compost and mulch to retain soil moisture. Local cities and counties implement and enforce their own ordinances, which must be at least as strict as the state's MWELO.

Regional

Los Angeles Regional Basin Plan

The California legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality, including the Porter–Cologne Act and portions of the CWA, to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The Los Angeles RWQCB is responsible for the protection of the beneficial uses of waters within the coastal watersheds of Los Angeles and Ventura counties, including the Project area. The Water Quality Control Plan for the Los Angeles Region, and Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code Sections 13240–13247). The Los Angeles RWQCB Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWRCB in its state-wide water policies. The Porter-Cologne Act also provides the RWQCBs with authority to include within their basin plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

More specifically, the Basin Plan: (i) identifies beneficial uses for surface and ground waters, (ii) includes narrative and numerical water quality objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (iii) describes implementation programs and other actions that are necessary to achieve the

water quality objectives established in the Basin Plan. The Basin Plan is continually being updated to include amendments related to implementation of TMDLs of potential pollutants or water quality stressors, revisions of programs and policies within the Los Angeles RWQCB region, and changes to beneficial use designations and associated water quality objectives.

Construction General Permit (SWRCB Order 2009-0009-DWQ, as amended)

For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit applies to all projects in which construction activity disturbs one acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which would include and specify water quality BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB.

Activities that disturb more than one acre of land require coverage under the Construction General Permit. Waste Discharge Requirements for the Discharge of Groundwater from Construction and Project Dewatering to Surface Waters in the Coastal Watersheds of Los Angeles and Ventura County (Los Angeles RWQCB Order no. R4-2018-0125). This general order is intended to authorize discharges of treated or untreated groundwater generated from permanent or temporary dewatering operations or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits. Discharges from facilities to waters of the United States that do not cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any applicable state or federal water quality objectives/criteria or cause acute or chronic toxicity in the receiving water are authorized discharges in accordance with the conditions set forth in this Order. To demonstrate coverage under the order, dischargers must submit documentation to show that the discharge would not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, or any other discharge prohibition listed in the order. In addition, discharges must perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The sample shall be analyzed, and the data compared to the water quality screening criteria for the constituents listed in the order, and if results show exceedance of water quality screening criteria, the discharge will be required to treat the wastewater to acceptable standards prior to discharge.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to hydrology and water quality soils that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

City of Downey 2020 Urban Water Management Plan

The City of Downey Public Works Department is the water supplier for the City and is required to prepare a Plan every five years in accordance with the Urban Water Management Planning Act (UWMP) Act established in 1983. The UWMP Act is included in the California Water Code (CWC) under Sections 10610 through 10656. The UWMP Act requires water agencies to develop UWMPs which provide a framework for long-term water planning and information regarding long-term resource planning to ensure sufficient water supplies are available to meet existing and future demands. Urban water suppliers are required to report, describe, and evaluate water deliveries and uses, water supply sources, efficient water uses, demand management measures, and water shortage contingency planning.

City of Downey Municipal Code

Chapter 7 of the City's Municipal Code addresses stormwater and urban runoff pollution control and conveyance controls, including the following parameters:

- Illicit Connection and Illicit Discharge Prohibition (Section 5703)
- Control of Pollutants and Runoff and from Sites Requiring a Stormwater Activities Permit (Section 5704)
- BMP Requirements for Urban Runoff Reduction (Section 5705)
- Source Control for New Development (Section 5706)
- Source Controls for Specific Development Categories (Section 5707)
- Standard Urban Stormwater Mitigation Plan (SUSMP) – development projects (Section 5707.5)
- Urban Runoff Reduction Requirements (Section 5708)

4.10.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

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; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; (iv) impede or redirect flood flows.

D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

F. Cause substantial adverse cumulative impacts with respect to hydrology or water quality.

4.10.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to biological resources which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts to less than significant levels.

Degrade Surface or Groundwater Quality

Impact HYD-1 - Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Analysis of Impacts

Runoff from the Planning Area eventually reaches the LA River which has impaired water quality due to pollutants, including metals (copper, lead, zinc) and selenium that are carried by stormwater. Metals are common stormwater pollutants associated with roads and parking lots. Other sources of these pollutants include building materials (such as galvanized steel) that are exposed to rain. Water quality in the Planning Area and surrounding jurisdictions is regulated by a number of federal, State, and county laws and regulations. The City of Downey is a co-permittee in the Los Angeles County National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit. According to FEMA, the entire Planning Area is designated as Zone X – an area with reduced flood risk due to levee. To comply with the NPDES permit and reduce stormwater pollution, the City has implemented the following measures:

- Plan Review and implementation of Construction and Post-Construction Water Quality Best Management Practices (BMPs) for Development and Redevelopment;
- Low Impact Development (LID) Ordinance and Regenerative Street Sweeping; and
- Participation in the Gateway Region of Los Angeles LID BMP Program.

Future development within the Planning Area under implementation of the GPU could also result in increased runoff and pollutant contributions to local drainages and groundwater supplies. Since 2014, many of the laws and policies governing water quality and groundwater supplies have been updated or given additional support to provide more stringent measures to protect surface and groundwater supplies given the historic droughts that have occurred in California since the last City General Plan was adopted in 2005. One of the most specific laws regarding groundwater is the Sustainable Groundwater Management Act signed into law in 2014. As such, the continued implementation of several regulatory/agency mechanisms by which water quality, waste discharge, surface water, and groundwater is protected by law and policy, including the Sustainable Groundwater Management Act and the Construction General Permit, would ensure that future development under the GPU would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

The City's existing development review process evaluates proposed private projects against water quality and permitting requirements of the affected federal, State, and regional agencies. The City's development review process requires preparation of Storm Water Pollution Control Plans for short-term water quality management for individual project construction, as well as Water Quality Management Plans for long-term water quality management for project operation before any grading permits are issues. All future development projects under implementation of the GPU would undergo the development review process and be required to implement the standard pollution control measures listed above.

Additionally, the Conservation Element of the GPU includes goals and policies intended to protect water quality. Goal CR-1 and its policies aim for effective water systems that protect environmental quality, provide flood control, and support ecological restoration and recreational access. Policy CR-1.1 strives to protect and improve water quality in the Rio Hondo and San Gabriel River corridors by using natural systems and green infrastructure to capture, filter, and treat urban runoff before it reaches downstream areas.

Implementation of the General Plan goals and policies described above, continued application of the City's development review process, and compliance with existing federal, State, and regional water quality standards, would ensure that future development under the GPU would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Therefore, potential impacts related to local and regional water quality from future development within the Planning Area under the GPU would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Impacts to Groundwater Supply and Recharge

Impact HYD-2 – 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?

Analysis of Impacts

The estimated future population for the City's service area was based on projections obtained from the Southern California Association of Governments (SCAG). The SCAG data incorporates demographic trends, existing land use, general plan land use policies, and input and projections from the Department of Finance (DOF) and the US Census Bureau at the time those documents were prepared (circa 2020). The City's 2020 UWMP indicates that these population estimates were used to prepare its water consumption estimates. According to the 2020 UWMP, the City's Utilities Division provided water to a service population of approximately 112,068 persons in 2020 and is projected to have a service population of approximately 117,081 by 2045, which represents an estimated population increase of approximately 5,013 within the City's service area. The City had a projected water demand of 14,520 acre-feet per year (AFY) in 2025, and is projected to have a demand of 17,243 AFY by the year 2045. Additionally, the City projects,

under the existing General Plan, that water supplies are adequate to meet normal domestic water demands in the Planning Area under normal years, single dry years, and a five-consecutive-year drought conditions between 2020 and 2045.

Table 3.4 in Section 3, Project Description, provides a comparison of existing Planning Area characteristics from 2025 and those estimated for 2045. Table 3.4 estimates the Planning Area's population will increase from 111,326 in 2025 to 142,809 by 2045, which is an estimated increase of 31,483. This increase could also result in water demand of approximately 17,596 AFY in the City by 2045.[i] This projected increase would be in excess of that estimated in the City's UWMP to adequately supply future growth under the proposed GPU. The City currently has 16,554 AFY of water rights. Should future water usage increase above this amount (for example, in excess of 17,500 AFY), the City has the ability to lease additional water rights to make up the difference and deliver the water to its customers utilizing its groundwater wells which have the capacity to accommodate this usage. Additionally, the 2020 UWMP was adopted around 2021-22 and must be updated every five years according to state law, so it is due to be revised in the near future. When the UWMP is next updated, the latest projections from the proposed GPU would need to be incorporated. Since most of the Planning Area's water supply comes from groundwater sources, the growth represented by the proposed GPU exceeds that upon which the City's UWMP was developed. Until the City updates its UMWP to incorporate the new growth projections, the proposed GPU may result in potentially significant short- or long-term impacts to local groundwater supplies. Therefore, Mitigation Measure HYD-1 is incorporated to help assure there will be adequate groundwater supplies for future occupants of the Planning Area.

In addition, the Conservation Element includes various goals and policies intended to maintain groundwater supplies. Goal CR-2 and its policies strive for reliable and sustained groundwater as a critical resource for Downey and the region. Policy CR-2.1 seeks to safeguard local groundwater supplies from contamination and overuse through monitoring programs, pollution controls, and safe land use practices near recharge areas. Policy CR-2.2 aims to enhance aquifer replenishment through stormwater capture, green infrastructure, purple pipe systems, and integration with regional recharge facilities. Policy CR-4.8 promotes the use of climate-appropriate native landscaping in public and private spaces to support local wildlife and reduce water demand. Policy CR-4.9 seeks to safeguard the Central Groundwater Basin from contamination, and implement green infrastructure projects that collect, filter, and infiltrate stormwater to enhance local groundwater recharge. Policy CR-5.5 promotes the use of native and drought-tolerant plants, reduced water demand, and integrated green infrastructure features into both public and private landscapes.

Further, Goal CR-6 and its policies strive for long-term water sustainability through conservation, protection, and efficient management of local water resources. Policy CR-6.1 promotes water-efficient fixtures, conservation practices, and public education programs across municipal, residential, and commercial sectors to reduce overall water use. Policy CR-6.2 supports the use of reclaimed water (purple pipe systems) for irrigation and other non-potable applications wherever feasible to reduce reliance on potable water supplies. By reducing water consumption and helping remediate existing groundwater contamination, these goals and policies help the City to secure its groundwater supply into the future. Future development projects under the proposed GPU that would include 500 square feet or more of landscape and

[i] The 2020 UWMP states that the City of Downey's actual water use rate in fiscal year 2019-2020 was 110 gallons per capita per day.

projects that would include rehabilitated landscapes of 2,500 square feet or more would be required to comply with the State MWELO ordinance for water efficient landscaping.

Lastly, future development within the Planning Area under the proposed GPU could also result in increased runoff and pollutant contributions to local drainages and groundwater supplies. As such, the continued implementation of several existing regulatory/agency mechanisms by which water quality, waste discharge, surface water, and groundwater is protected by law and policy, including the Sustainable Groundwater Management Act and the Construction General Permit, would ensure that future development under the GPU would not impede sustainable groundwater management of the basin.

With incorporation of Mitigation Measure HYD-1, implementation of GPU goals and policies aimed at reducing water consumption and protecting groundwater supplies and continued regulatory compliance with State and regional water quality standards, development within the Planning Area under the GPU would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

HYD-1: **Water Demand Management.** New developments that will be served by the Downey Public Works Department - Utilities Division shall obtain a Can and Will Serve letter verifying that the Utilities Division has sufficient capacity and intends to supply water to the proposed development project. Project applicants shall provide the Utilities Division with the project location, project description, and quantified estimated daily and annual water usage for the project. The quantified estimated daily and annual water usage data shall be calculated by a qualified engineer using state or local generation rates.

Level of Significance After Mitigation

Less than significant.

Impacts to Drainage Patterns, Erosion, Siltation, or Water Quality

Impact HYD-3 – 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; (i) result in substantial erosion or siltation on-or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; (iv) impede or redirect flood flows?

Analysis of Impacts

The Planning Area is generally flat and highly developed, with the only permeable areas of the City being parks, athletic fields, and landscaping around buildings and in parking lots. Stormwater in the Planning Area is collected via a municipal stormwater conveyance system before feeding into facilities operated and maintained by the Los Angeles County Sanitation Districts (LACSD). The Planning Area is located between concrete drainage channels on the east and west. There is an approximately 1.85-mile long portion of the San Gabriel River from just north of Firestone Boulevard to north of Telegraph Road that is a soft-bottom channel. There is no significant anticipated risk of erosion resulting from steep slopes because the planning area is flat, or from wind and rain in areas of exposed soils within the Planning Area because there is very little undeveloped land with exposed soils in the City. Additionally, the GPU does not include any specific development or project that would substantially alter existing drainage patterns in the Planning Area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces.

The Regional Water Quality Control Board (RWQCB) regulates the discharge of stormwater from municipalities and activities within their jurisdiction including construction activities. The City is a signatory of the Los Angeles County Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharge. The requirements include guidance and regulations for construction-related erosion control, including the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for projects which would disturb one or more acres. The requirements also include appropriate best management practices (BMPs) that should be included to help prevent substantial soil erosion or the loss of topsoil. Typical construction BMPs to prevent soil erosion include: covering exposed soil with mulch or temporary vegetation (like hydroseeding); installing silt fences along perimeters; diverting stormwater runoff with drainage channels; grading slopes to reduce steepness; using erosion control blankets on slopes; and establishing permanent vegetation once construction is complete. All of these BMPs are aimed at minimizing soil disturbance and protecting exposed areas from rain impact and water flow during construction activities.

Future development resulting from implementation of the GPU has the potential to expose surface soils during construction and, as a result, local soils may be subject to erosion or loss of topsoil during development. Development may also increase downstream runoff by increasing impervious surfaces on specific sites. However, future projects developed within the Planning Area under the GPU would be assessed on a site-specific basis. Potential impacts would be required to be analyzed in subsequent project-level CEQA documentation, and, if necessary, potential impacts mitigated. Future development projects would be required to adhere to local, State, and federal laws and policies regulating impacts to streams, rivers, and drainage patterns through the area that may also lead to an increase in impervious surfaces.

In addition, the City's Municipal Code, Chapter 7 (Storm Water and Urban Runoff Pollution and Conveyance Controls), requires the City to review all project plans and impose conditions as required to safeguard water quality and erosion control prior to the issuance of either a building permit or grading plan approval. Municipal Code Chapter 7 incorporates the MS4 Permit requirement for the City of Downey to implement the Watershed Management Program (WMP) as an enforceable element of the permit. Chapter 7 also seeks to protect and improve water quality receiving waters by: reducing illicit discharges to the municipal stormwater system to the maximum extent practicable; eliminating illicit connections to the municipal stormwater system; eliminating spillage, dumping, and disposal of pollutant materials into the municipal stormwater system; and reducing pollutant loads in stormwater and urban runoff, from land uses and activities identified in the municipal NPDES permit. Downey's LID Program also requires residential, commercial, and industrial construction projects to capture, infiltrate, or reuse rainfall

on-site. The goal is to mimic natural hydrology, reduce pollution, and replenish the region's groundwater supply. The City's development review process would evaluate proposed development against established BMPs and other water quality-related guidelines, many of which are designed to control runoff and erosion. In addition, the City's development review process would examine potential increases in runoff from development sites and require post-development runoff to not exceed pre-development levels through project design such as the use of detention/retention basins, pipes, swales, etc.

The GPU also includes various goals and policies aimed at minimizing stormwater and urban runoff impacts. The Circulation Element includes Infrastructure Goal C-14 and its policies which seek to ensure stormwater and drainage infrastructure are climate-adaptive and effectively managed to reduce flood risk and protect public safety. Policy C-14.1 calls for the City to operate, maintain, and upgrade stormwater and drainage systems in the City to ensure adequate capacity during major storm events, reduce flood risk, and protect life and property. Policy C-14.3 calls for the City to coordinate stormwater planning, infrastructure improvements, and flood management strategies with regional stormwater and flood control agencies to enhance system performance, manage watershed-level impacts, and improve regional resilience. Policy C-14.4 calls for the City to coordinate stormwater and drainage planning with development projects to ensure adequate system capacity, minimize runoff impacts, and reduce potential flooding.

Additionally, the Safety Element includes Goal S-2 and its policies which seek to ensure that the community is protected from property damage, infrastructure disruption, and public safety hazards through effective flood management and safe development practices. Policy S-2.1 calls for the City to maintain and improve the city's storm drain and flood control infrastructure to reduce localized flooding and protect developed areas. Policy S-2.2 calls for the City to ensure that new development and redevelopment incorporate drainage, green infrastructure, and flood protection measures consistent with local, state, and federal standards. Policy S-2.3 calls for the City to collaborate with Los Angeles County Flood Control District, Caltrans, and other agencies to manage regional drainage systems and mitigate flood risks.

Further, the Conservation Element of the GPU includes Goal CR-1 and its policies which strive for effective water systems that protect environmental quality and balance flood control and support ecological restoration and recreational access. Policy CR-1.1 seeks to protect and improve water quality in the Rio Hondo and San Gabriel River corridors by using natural systems and green infrastructure to capture, filter, and treat urban runoff before it reaches downstream areas. Lastly, Policy CR-3.1 aims to incorporate LID techniques, including vegetated channels, bioswales, permeable pavements, rain gardens, and green streets in public and private projects to manage stormwater on-site, reduce flooding, enhance groundwater recharge, and support urban biodiversity.

With implementation of GPU goals and policies aimed at minimizing stormwater and urban runoff impacts, continued regulatory compliance with State and regional water quality standards, and guidelines for erosion control in the Municipal Code, development within the Planning Area under the GPU would not result in significant impacts related to drainage patterns, erosion, siltation, flooding, stormwater drainage capacity, polluted runoff, or impeded/redirected flood flows.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Pollutant Risk from Site Inundation

Impact HYD-4 – Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Analysis of Impacts

As outlined in Section 4.10.1, based on hazard maps, the City of Downey is located in Zone X, which is characterized as an area with reduced flood risks due to levees. The terms "100-year flood zone" and "500-year flood zone" refer to the statistical probability of a severe flood condition occurring during a period of extreme rainfall or runoff once every 100 or 500 years. A 100-year flood event refers to a flood that has a one percent chance of occurring with the same or greater intensity in any given year. Contrary to its name, a 100-year flood can happen in any year. Typically, portions of the City of Downey have been prone to occasional urban flooding due to debris accumulation in storm drains and aged drainage systems. Otherwise, the City of Downey has long had a high degree of flood protection due to the construction of dams along the San Gabriel and Rio Hondo Rivers and the channelization of the Los Angeles River in the 1950s. The Los Angeles County Drainage Area Project, through the County of Los Angeles Department of Public Works, further reduced potential overflow by increasing the flood carrying capacity of the lower Los Angeles River, the Rio Hondo just to the west of Downey, and the lower portion of the San Gabriel River just to east of Downey. Completed in 2001, the height of 21 miles of existing levees was raised and modifications were made to railroad, traffic, utility and pedestrian bridges. Since the completion of the preventative measures, Downey property owners in the floodplain are no longer required to purchase flood insurance. For these reasons, the Planning Area is not subject to flood hazards that could risk release of pollutants due to project inundation.

As outlined in Section 4.10.1, the Whittier Narrows Dam poses an inundation threat to the City of Downey. If the dam were to fail, the portions of the City that would be inundated would include industrial and commercial uses. While the proposed GPU does not include any specific project that would risk release of pollutants due to property inundation, it would allow for industrial and commercial uses in the Planning Area that could have the potential to release pollutants due to property inundation. However, all future projects within the Planning Area would be required to adhere to the County of Los Angeles's NPDES permit (see Section 4.10.2) regulating impacts and potential pollutant discharge within flood hazard or tsunami inundation areas.

At its closest point, the City of Downey is approximately 14 miles from the Pacific Ocean and at an elevation of at least 76 feet above mean sea level. Therefore, it is unlikely any tsunami event affecting the Pacific Ocean coast would reach the Planning Area and risk release of pollutants due to project inundation. There are no large bodies of water or reservoirs within or in close proximity to the Planning Area that could result in seiche and the release of pollutants due to project inundation. Based on available evidence, it is unlikely the Planning Area would face any significant pollutant contamination or release during flood, tsunami, or seiche conditions. Therefore, no significant impacts to pollutant discharge in flood or tsunami inundation zones are anticipated from the implementation of the updated 2045 General Plan within the Planning Area.

Continued implementation of the County NPDES permit requirements and implementation of the goals and policies of the proposed GPU would ensure that potential impacts related to polluted inundation would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Project Compliance with Water Quality and Groundwater Management Plans

Impact HYD-5 – Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Analysis of Impacts

Surface Water Quality Plan. The Los Angeles Regional Water Quality Control Board (RWQCB) is responsible for the protection of the beneficial uses of waters within the coastal watersheds of Los Angeles and Ventura counties, including the City of Downey. The Water Quality Control Plan for the Los Angeles Region (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the LA Regional Board's Basin Plan. The Basin Plan is continually being updated to include amendments related to implementation of the total maximum daily load[ii] (TMDL) of specific potential pollutants or water quality stressors, revisions of programs and policies within the Los Angeles RWQCB region, and changes to beneficial use designations and associated water quality objectives. The RWQCB can prohibit or limit water discharges based on particular conditions, areas, or types of waste. The Basin Plan: (i) identifies beneficial uses for surface and ground waters, (ii) includes narrative and numerical water quality objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (iii) describes implementation programs and other actions that are necessary to achieve the water quality objectives established in the Basin Plan. The current General Plan and the GPU both require the City and future development within the Planning Area to be consistent with the Basin Plan. Therefore, the GPU would not conflict with or obstruct implementation of a water quality control plan.

Construction General Permit. For stormwater discharges associated with construction activities in the state, the State Water Resources Control Board (SWRCB) has adopted the Construction General Permit (CGP) to avoid and minimize water quality impacts from such activities.[iii] The CGP requires the development and implementation of a stormwater pollution prevention plan (SWPPP) which would include and specify water quality Best Management Practices (BMPs) to prevent pollutants from contacting stormwater and keep erosion from moving off site into receiving waters. Through the City's development review process, future development in the Planning Area must comply with the various requirements of the Basin Plan, the City's LID

[ii] TMDL is a regulatory term in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards

[iii] SWRCB Order 2009-0009-DWQ, as amended

program, and the CGP. In this way, future development in the Planning Area under the GPU would have less than significant impacts on surface water management plans.

Groundwater Management Plan. The Water Replenishment District of Southern California (WRD) was formed in 1959 to protect local groundwater supply and quality. The Central Basin is within the WRD and managed by the Central Basin Watermaster. Through the City's development review process, future development in the Planning Area must comply with the various requirements of the Central Basin Watermaster. In this way, future development in the Planning Area under the GPU would have less than significant impacts on groundwater management plans.

Lastly, the GPU includes various goals and policies intended to help manage water quality. The Conservation Element of the proposed GPU strives for effective water systems that protect environmental quality, balance flood control, and support ecological restoration and recreation access. Policy CR-1.1 seeks to protect and improve water quality in the Rio Hondo and San Gabriel River corridors by using natural systems and green infrastructure to capture, filter, and treat urban runoff before it reaches downstream areas. Further, Conservation Element Goal CR-3 strives for integrated green infrastructure to provide environmental, social, and climate benefits throughout the urban environment. Policy CR-3.1 seeks to incorporate LID techniques, including vegetated channels, bioswales, permeable pavements, rain gardens, and green streets in public and private projects to manage stormwater on-site, reduce flooding, enhance groundwater recharge, and support urban biodiversity. Additionally, Policy CR-4.9 aims to safeguard the Central Groundwater Basin from contamination, and implement green infrastructure projects that collect, filter, and infiltrate stormwater to enhance local groundwater recharge. Design Element Policy D-6.3 seeks to include green infrastructure in site planning, such as permeable pavements, bioswales, planted retention areas, and rain gardens, to manage runoff while enhancing streetscapes, plazas, and open spaces. Finally, Circulation Element Infrastructure Policy C-9.2 seeks to incorporate bioswales, permeable pavement, and stormwater capture systems into transportation projects to improve water management and environmental sustainability.

Therefore, implementation of the GPU goals and policies outlined above, and continued compliance with existing State and local regulations, would ensure that the GPU would not result in impacts to implementation of water quality control plans or sustainable groundwater management plans.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact HYD-6 - Would the project cause substantial adverse cumulative impacts with respect to hydrology and water quality?

Analysis of Impacts

The Planning Area and surrounding communities contain water-related hazards and surface and groundwater resources that must be protected. State law requires that the Safety Elements of city general plans, including Downey, address potential flooding, erosion, changing drainage patterns, and other water-related hazards. The GPU identifies ways the City will coordinate with other agencies to protect surface and groundwater supplies. The GPU also contains goals and policies which acknowledge these potential risks and require structures and infrastructure to provide adequate levels of safety for the community.

In addition, the General Plans for the surrounding cities and the County General Plan are all required to identify potential risks from flooding, geologic and seismic conditions and contain goals and policies to address these risks and protect the public. These goals and policies are intended to be consistent with state law and are similar to those of the City's General Plan. In addition to local general plans, various state laws including CEQA require the City as a lead agency to identify potential water-related hazards related to new development and protect important water resources as development occurs in the future. Local water districts must prepare Urban Water Management Plans and Groundwater Sustainability Plans are required to provide long-term protection for both surface and groundwater supplies for the region.

In these ways, potential cumulative impacts from future development related to flooding and water-related hazards would be minimized through compliance with existing regulations and implementation of General Plan goals and policies that address these risks, and important regional water resources would be protected. Therefore, future development in the Planning Area under the GPU would not make a significant contribution to any cumulative regional impacts on flooding or other water-related hazards and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.10.5 – REFERENCES

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4.11 – LAND USE AND PLANNING

This EIR chapter addresses land use and planning impacts associated with the General Plan Update (GPU). Issues of interest include land use and planning impacts identified by the CEQA Guidelines, including whether implementation of the General Plan would physically divide an established community or 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.

4.11.1 – ENVIRONMENTAL SETTING

The City of Downey is bordered by the cities of Bellflower and Paramount to the south; the Cities of Lynwood, South Gate, and Cudahy to the west; the Cities of Bell Gardens and Pico Rivera to the north; and the Cities of Santa Fe Springs and Norwalk to the east. The City is well connected to the regional transportation network through several major freeways that provide access to surrounding communities and employment centers. Interstate 105 (I-105) runs along the City's southern boundary and provides east-west access between Norwalk, El Segundo, and Los Angeles International Airport. Interstate 710 (I-710) extends from the Port of Long Beach to East Los Angeles along the City's western boundary. Interstate 5 (I-5) traverses the northern part of the City, continuing northward into Downtown Los Angeles. Interstate 110 (I-110), outside of the City's boundary, west of the City, connecting Long Beach and Pasadena through Downtown Los Angeles. Downey lies between the Rio Hondo River on the west and the San Gabriel River on the east. The City is served by a Metro C Line (formerly the Green Line) Lakewood Boulevard Station and I-105, which provides transit service between Norwalk and LAX.

Existing Land Uses

Existing land use and development plans and regulations provide a starting point for understanding past planning efforts that have shaped and continue to shape the City of Downey. Relevant documents include the 2025 General Plan, Zoning Code, and various Specific Plans. Existing land uses reflect the current condition of Downey's built environment, which may not always align with the current zoning map and zoning code. Downey's land area is comprised of approximately 22,408 parcels, covering approximately 5,966 acres, not including transportation and utility rights-of-way (Table 3.1). Most development is residential (3,802.4 acres), following by 873 acres of commercial, 217 acres of industrial, and 73 acres comprise the other land uses. Exhibit 3.4 depicts the existing land use distribution in Downey.

Residential Land Uses and Housing Density

According to the 2025 General Plan Land Use Element, approximately 63% of the City is developed with three residential land use designations: low density, low/medium density, and medium density. The Low Density Residential designation allows typically for detached single-family residential units at densities of 1 to 8.9 housing units per acre, or approximately equivalent to a maximum of one housing unit for a standard 5,000 square foot lot. The corresponding zone for this designation is the R-1, Single Family Residential Zone, which includes several variations based on lot size, such as R-1 5000, R-1 6000, R-1 7500, R-1 8500, and R-1 10,000. The zoning also permits accessory living quarters on properties that are not considered separate dwelling units.

The Low/Medium Density Residential designation allows for a range of housing types that involve densities at 9 to 17 housing units per acre, or roughly equivalent to two housing units for each standard 5,000 square foot lot. The corresponding zone for this designation is R-2, Two Family Residential Zone. The housing types consistent with the designation range from two detached units on the same property to attached units (duplex), either placed side by side (in a townhouse floor plan form) or stacked with one on top of another. In certain instances, other housing types such as planned unit developments and second unit developments may be permitted provided that the overall density is not exceeded.

The Medium Density Residential designation allows for a range of housing types that involve densities at 18 to 24 housing units per acre, or roughly equivalent to three housing units for each standard 6,000 square foot lot. The corresponding zone for this designation is the R-3, Medium Density Multiple-Family Residential Zone. The housing types consistent with the designation range from three or more attached (or detached) units on the same property (triplex) to larger apartments to townhouse design condominium to low-rise condominiums, provided that the overall density is not exceeded. Certain nonresidential land uses, such as churches, are considered consistent within this designation.

Office, Commercial, and Manufacturing Land Uses

According to the 2025 General Plan Land Use Element, office uses represent approximately 0.5% of the City's total land area. The Office designation allows for professional and medical office uses. The corresponding zone for this designation is C-P, Commercial - Professional Office zone. In the vicinity of the PIH Health Downey Hospital (formerly Downey Regional Medical Center) where medical offices and other medical related uses are promoted, the corresponding zone for this designation is the H-M, Hospital-Medical Arts Zone.

Commercial land uses comprise approximately 5.9% of the total land area. The Neighborhood Commercial designation allows for commercial uses that generally draws a customer base from the immediate surrounding neighborhood and not from areas outside the city or region. Consistent with this intent, uses are typically small in scale in terms of floor area size, building height, and operational activities. Examples include grocery stores, dry cleaners, barber shops, bakeries, and convenience markets. Uses are intended to serve adjacent neighborhoods and are intended to be located in "neighborhood nodes" such as properties adjacent to street intersections. The corresponding zone for this designation is the C-1, Neighborhood Commercial Zone. The intensity of the Neighborhood Commercial designation should not exceed a Floor Area Ratio (FAR) of 0.25:1.

The General Commercial designation allows for a full range of commercial uses including shopping centers, automobile dealerships, hotels, offices, and automobile repair. In contrast to the Neighborhood Commercial designation, the General Commercial designation accommodates a broader range of uses that may be larger in scale and serve customers throughout the City and surrounding region, rather than primarily the immediate neighborhood. The corresponding zone for this designation is the C-2, General Commercial Zone. Since uses consistent with the General Commercial designation are typically more intense, the General Commercial designations are appropriate in areas with larger lot sizes which afford greater buffers to adjacent land uses. The intensity of the General Commercial designation should fall within a range of FAR between 0.25:1 and 4:1.

Industrial land uses account for approximately 5.5% of the total land area. The Commercial Manufacturing designation is intended to provide greater flexibility for providing land uses that

generate employment such as shopping centers, major offices, and light industrial. The corresponding zone for this designation is C-M, Commercial Manufacturing Zone.

The Manufacturing designation is intended for manufacturing, wholesaling, and other industrial land uses. The corresponding zones for this designation are the M-1, M-2, Light/General Manufacturing Zones. Since uses consistent with the Manufacturing designation have potential for creating traffic, noise, odor, vibration and other impacts, areas designated Manufacturing should be separated from other land uses by a major natural or physical barrier and screen.

Public Facilities and Schools

Public and Quasi-public facilities include schools, parks, power line easements, flood control facilities, religious institutions, and similar uses. This designation includes publicly owned lands and properties of quasi-public institutions containing existing or proposed support uses for local, community-wide, or regional support facilities. The School designation is intended for public schools offering K through 12 instruction. The corresponding zone for this designation is the Public School subzone of the O-S, Open Space. The Private School designation is intended for locating private-operated schools offering education comparable to the K through 12 instruction offered by public schools. Three such areas have been designated by the Land Use Diagram: St. Pius-Matthias, St. Raymond, and Our Lady of Perpetual Help. The corresponding zone for this designation is the Private School subzone of the O-S, Open Space.

Open Space Uses

The Open Space designation is intended for areas that provide recreational opportunities, environmental resources, and relief from urban environment. This designation includes approximately 106 acres of public parks. The open space designation also includes areas for utility easements, riverbeds, parks, cemetery, and golf courses.

4.11.2 – REGULATORY FRAMEWORK

State

State Planning Law

State planning law (California Government Code Section 65300) requires every city in California to adopt a comprehensive, long-term general plan for the physical development of the city and its sphere of influence. State law further requires that a general plan consist of an integrated and internally consistent set of goals and policies organized into topic based elements and are guided by a long range community vision. State law requires that a general plan address seven elements (land use, circulation, housing, conservation, open space, noise, and safety and incorporate additional topics required by subsequent legislation, including Environmental Justice and climate resilience. While state law establishes minimum requirements, local jurisdictions retain discretion regarding how these topics are organized and presented within the General Plan.

Additionally, on September 30, 2008, Assembly Bill 1358 (AB 1358), the California Complete Streets Act, was signed into law, and became effective January 1, 2011. AB 1358 integrates complete streets into the larger planning framework of the general plan by requiring jurisdictions to amend their circulation elements to plan for a balanced multimodal transportation network.

Regional

Southern California Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. SCAG encompasses the counties of Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial. SCAG is designated as a Metropolitan Planning Organization (MPO) and as a Regional Transportation Planning Agency. SCAG is responsible for regional planning in the Southern California area. As SCAG is the largest MPO in the United States, it has sub-regional councils of government to provide for the subregions' land use and transportation planning at a more local level. The sub-regional council for Downey is the Gateway Cities Council of Governments (GCCOG). SCAG provides a framework to coordinate local and regional decisions regarding future growth and development and prepares future growth forecasts for the region. As the designated MPO for the area, SCAG is mandated by the federal government to research and develop plans for transportation, growth management, hazardous waste management, and air quality based on the regional growth projections. Under Senate Bill 375 (SB 375), SCAG, as a designated MPO, is required to prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). RTP/SCS documents are long-range visioning plans that balance future mobility and housing needs with economic, environmental, and public health goals. SCAG's current adopted RTP/SCS, Connect SoCal 2024, was adopted in April 2024.

SCAG's Connect SoCal 2024

As part of developing a Sustainable Communities Strategy per SB 375, SCAG is required to include a "forecasted development pattern for the region." This Forecasted Regional Development Pattern identifies where people, households, and employment are anticipated to be located through 2050. The Regional Growth Forecast assumes the region will be successful in alleviating much of the latent housing demand that has built up over past decades by projecting 30 percent higher household growth during the 2020s that is approximately 30 percent higher than projected in Connect SoCal 2020. This reflects changes to State and local housing-policies, as well as stronger housing production trends in recent years, including accessory dwelling units, which have historically been undercounted. In contrast to past planning cycles, where local review typically resulted in lower household growth forecasts and higher job growth forecasts, the locally reviewed Connect SoCal 2024 household forecast was 2.3 percent higher than the preliminary version developed with a demographic panel of experts. Additionally, 39 percent of the household growth projected in Connect SoCal 2024 is located within more than one priority growth area and outside environmental constraint areas, compared to36 percent in Connect SoCal 2020.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to land use and planning that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.11.3 – SIGNIFICANCE THRESHOLDS

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the Specific Plan could result in a significant impact if it:

A. Physically divides an established community.

B. Causes 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.

C. Causes substantial adverse cumulative impacts with respect to land use and planning.

4.11.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to land use and planning that could result from the implementation of the GPU and recommends mitigation measures as needed to reduce significant impacts.

Established Communities

Impact LAND-1 – Would the project physically divide an established community?

Analysis of Impacts

The physical division of an established community typically refers to the construction of a physical feature (such as a new freeway, railway, or other large transportation projects) or the removal of a means of access (such as a bridge) that would impede or restrict movements within a community. It also may refer to policies that limit or preclude access between adjacent areas or neighborhoods within a city. The GPU would not result in the construction of any new roadways, City rights-of-way, or other linear features that would physically divide an established neighborhood. Similarly, the GPU would not result the removal of any means of access within the Planning Area. The GPU is a policy document designed to direct long-term growth within the Planning Area; it does not propose major circulation changes that would restrict access to any particular areas of the City. The GPU includes several goals and policies in the Circulation, Design, Environmental Justice, and Open Space Elements intended to facilitate travel within the Planning Area with a variety of modes of access (transit, pedestrian sidewalks, and bicycle facilities), which would enhance mobility connections within the City and create complete neighborhoods. These include Goals C-2, C-3, C-11, and D-2, and Policies C-11.1, EJ-2.2, and OS-7.1. Additionally, Land Use Element Policy LU-1.1 requires the City to preserve established residential communities. Finally, the GPU does not include policies that would limit or preclude access between adjacent areas or neighborhoods within the Planning Area. Therefore, implementation of proposed GPU goals and policies would ensure the GPU would not divide an established community and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Plan Conflicts

Impact LAND-2 – 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?

Analysis of Impacts

This section includes a discussion of potential conflicts between the General Plan and applicable non-City planning documents described in Section 4.11.2 above. It should be noted that policy conflicts do not, in and of themselves, constitute a significant environmental impact. Policy inconsistency is a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse *physical* impact. Planning documents pertaining to specific technical topics (e.g., Air Quality) are discussed in those topical sections of this Draft EIR. The Draft General Plan Land Use Map is included with the Project Description (Section 3.0).

Connect SoCal 2024. The SCAG Regional Council adopted the Connect SoCal 2024 in April 2024. The long-range visioning plan identifies several goals from the Connect SoCal 2020 intended to help carry out the vision for improved mobility, a strong economy, and sustainability. These goals, and the GPU's relationship to these goals, are presented in Table 4.11-1 (Connect SoCal 2024 Consistency Analysis). As shown in Table 4.11-1, implementation of the General Plan would not cause a significant environmental impact due to a conflict with any regional (SCAG) land use-related policies adopted for the purpose of avoiding or mitigating an environmental effect.

Table 4.11-1: Connect SoCal 2024 Consistency Analysis

Connect SoCal 2024	Consistency Analysis
RTP/SCS G1: Align the plan investments and policies with improving regional economic development and competitiveness.	**Consistent.** Implementation of the General Plan would result in the development of up to 10,350 new residential housing units, up to 6,649 new employees, and up to 2.6 million square feet of net new nonresidential building area within the General Plan Planning Area. The GPU includes Land Use Element Goal LU-4 and its policies which strive for a dynamic mix of businesses and employment-generating uses that provide quality jobs and sustain a strong local economy. The GPU also includes Economic Development Element Goal ED-2 and its policies which seek growth in support of local businesses and entrepreneurship. Goal ED-3 and its policies aim to attract and retain targeted industries and higher-wage jobs. Goal ED-4 and its policies strive for continuous economic development marketing and investment attraction. Lastly, Goal ED-5 and its policies strive for growth in the tourism, hospitality, and visitor-serving sectors. For these reasons, the GPU aligns with the RTP/SCS goal of aligning plan investments and policies with improving regional economic development and competitiveness.
RTP/SCS G2: Maximize mobility and access for all people and goods in the region.	**Consistent.** The GPU includes various goals and policies intended to maximize mobility and access for all people and goods in the region. Land Use Element Policy LU-6.2 which seeks to design new developments, urban form patterns, and land uses to prioritize safe, accessible, and connected walking and biking routes that link schools, parks, employment areas, and transit stops. The GPU also includes Circulation Element Policy C-2.4 which promotes walking as a mode of travel, and

Table 4.11-1: Connect SoCal 2024 Consistency Analysis	
Connect SoCal 2024	**Consistency Analysis**
	Policy C-4.4 which promotes public transit as a mode of travel. Goal C-5 and its policies seek to ensure goods movement is efficient, sustainable, and compatible with neighborhood livability. Policy C-6.2 aims to balance mobility, access, and safety on local and collector streets to preserve neighborhood character while supporting essential travel. Further, Goal C-10 and its policies aims to ensure mobility systems are smart, innovative, technologically integrated, and adaptive. Policy C-10.2 seeks to explore pilot programs for new mobility opportunities, while Policy C-10.3 aims to use mobility data to guide planning decisions, ensure equitable access, and monitor the performance of emerging mobility technologies. For these reasons, the GPU aligns with the RTP/SCS goal of maximizing mobility and access for all people and goods in the region.
RTP/SCS G3: Ensure travel safety and reliability for all people and goods in the region.	**Consistent.** The GPU includes Circulation Element Goal C-1 and its policies which seek to ensure streets are safe and universally accessible for all people. Policy C-1.1 prioritizes pedestrian safety through high-visibility crosswalks, leading pedestrian intervals, protected left-turn and right-turn phases, and curb extensions. It will ensure intersections near schools, parks, and transit stops are designed to reduce conflicts between vehicles and pedestrians. Policy C-1.2 seeks to implement traffic calming and roadway safety improvements where warranted based on traffic engineering studies and safety data to reduce vehicle speeds and improve safety for all users. Policy C-1.4 strives for the safe and efficient movement of people and goods by maintaining a street system that provides safe and efficient movement for all users, including vehicles, pedestrians, bicyclists, transit riders, and freight traffic. Policy C-3.1 encourages development of protected and safe bicycle spaces to improve safety and connectivity. Policy C-4.3 seeks to pursue improvement to transit stops and related facilities that enhance passenger comfort, safety and accessibility, and the overall effectiveness of transit services. Policy C-6.2 aims to balance mobility, access, and safety on local and collector streets to preserve neighborhood character while supporting essential travel. Goal C-8 and its policies seek to ensure railroad crossings are efficient, safe, and minimize delays for all modes of travel. Policy C-10.1 seeks to deploy adaptive traffic signals, connected vehicle technologies, and mobility management systems to enhance safety and optimize traffic flow across all modes. Policy C-11.1 seeks to ensure all street projects balance the needs of pedestrians, bicyclists, transit riders, and motorists while incorporating safety, comfort, and environmental enhancements. Lastly, Environmental Justice Element Policy EJ-2.2 strives for safety-focused street improvements, including traffic calming, crosswalks, and bike/pedestrian enhancements, to reduce hazards and support active transportation in disadvantaged areas. For these reasons, the GPU aligns with the RTP/SCS goal of ensuring travel safety and reliability for all people and goods in the region.
RTP/SCS G4: Preserve and ensure a sustainable regional transportation system.	**Consistent.** The GPU includes Circulation Element Goal C-4 and its policies which aim to ensure transit systems are accessible, reliable, and seamlessly connected regionally. Policy C-4.1 seeks to enhance access to transit through improved sidewalks, bike lanes, and microtransit connections that link neighborhoods to bus stops and light rail stations. Policy C-4.2 encourages higher-density, mixed-use development along transit corridors to support frequent, reliable, and convenient service, while reducing dependence on

Table 4.11-1: Connect SoCal 2024 Consistency Analysis	
Connect SoCal 2024	**Consistency Analysis**
	single-occupancy vehicles. Policy C-4.3 aims to pursue improvement to transit stops and related facilities that enhance passenger comfort, safety and accessibility, and the overall effectiveness of transit services. Policy C-4.4 encourages public transit use as a practical and convenient alternative to driving, improving mobility for all residents and reducing vehicle miles traveled (VMT). Policy C-4.5 aims for the City to coordinate with transit service providers to transition to zero-emission fleets and related infrastructure as part of future transmit improvements in accordance with State mandates. Finally, Economic Development Element Policy ED-1.2 encourages mixed-use development along commercial corridors and near transit stations to integrate housing, retail, and employment opportunities. For these reasons, the GPU aligns with the RTP/SCS goal of preserving and ensuring a sustainable regional transportation system.
RTP/SCS G5: Maximize the productivity of our transportation system.	**Consistent.** The GPU includes Land Use Element Goal LU-5 and its policies which strive for lively mixed-use areas near transit that provide opportunities to live, work, shop, and gather. Policy LU-5.2 encourages transit-supportive development that integrates housing, employment, services, and public spaces near major transit facilities. Policy LU-5.4 promotes transit-oriented, mixed-use development within one-half mile of the C Line station by directing higher-density housing and commercial uses to nearby commercial areas. Policy LU-5.5 seeks to support transit-oriented, mixed-use development at the planned Southeast Gateway within the southern portion of the Los Amigos Campus, supporting higher-density housing, employment uses, and supportive services that leverage regional transit access. Policy LU-7.2 encourages transit-oriented, mixed-use development at the Rancho Los Amigos Campus and the Southeast Gateway area that integrates employment, housing, services, and public spaces, while respecting the area's history. Goal C-8 and its policies seek to ensure railroad crossings are efficient, safe, and minimize delays for all modes of travel. For these reasons, the GPU aligns with the RTP/SCS goal of maximizing the productivity of our transportation system.
RTP/SCS G6: Protect the environment and health for our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	**Consistent.** The GPU includes Circulation Element Goal C-2 and its policies which seeks to ensure pedestrian networks are complete, accessible, connected, and supportive of daily life. Policy C-2.4 promotes walking as a mode of travel. Goal C-3 and its policies seeks to ensure that bicycle networks are expanded, continuous, protected, and integrated into the City. Policy C-3.4 promotes cycling as a safe, practical, and appealing alternative to vehicle trips to reduce congestion and vehicle emissions. The GPU also includes Conservation Element Goal CR-9 and its policies which seek air quality improvement and greenhouse gas reduction to protect public health and mitigate climate change impacts. Policy CR-9.1 seeks to reduce mobile, stationary, and industrial sources of pollutants to improve air quality, protect public health, and mitigate climate change impacts. Policy CR-9.2 promotes public transit, bicycle and pedestrian infrastructure, electric vehicle adoption, and enforce anti-idling regulations to reduce transportation-related emissions. Further, Land Use Element Goal LU-6 and its policies strive for inclusive, healthy communities where housing, work, and amenities are conveniently accessible. Policy LU-6.1 promotes pleasant, safe, and walkable environments as a priority in new

Table 4.11-1: Connect SoCal 2024 Consistency Analysis	
Connect SoCal 2024	**Consistency Analysis**
	development and redevelopment. Policy LU-6.2 seeks to design new developments, urban form patterns, and land uses to prioritize safe, accessible, and connected walking and biking routes that link schools, parks, employment areas, and transit stops. Policy LU-6.3 encourages development patterns that reduce reliance on private vehicles and support walking, bicycling, and transit use. Environmental Justice Policy EJ-1.1 seeks to implement land use and transportation strategies that reduce public exposure to toxic air contaminants, including measures that decrease reliance on automobile travel, reduce vehicle emissions, and promote cleaner transportation options. For these reasons, the GPU aligns with the RTP/SCS goal of protecting the environment and health for residents by improving air quality and encouraging active transportation.
RTP/SCS G7: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent.** The GPU includes Conservation Element Goal CR-7 and its policies which strive for community sustainability reflect in waste reduction, energy efficiency, and water conservation. Policy CR-7.1 aims to improve energy efficiency across municipal operations, residential buildings, and commercial sectors to reduce demand, lower greenhouse gas emissions, and support community sustainability. Policy CR-7.2 supports rooftop solar, energy storage, electrification projects, and other renewable energy technologies to reduce reliance on fossil fuels and advance local sustainability goals. Policy CR-7.3 calls for new development, retrofits, and major renovations to meet or exceed state energy standards, including California Title 24, to maintain high efficiency and environmental performance. Further, Conservation Element Policy CR-8.2 promotes the integration of passive solar strategies, energy-efficient building orientation, rooftop solar installations, energy storage, and other renewable energy technologies to reduce energy demand, lower greenhouse gas emissions, and improve building performance. The Safety Element includes Policy S-7.4 calls on the City to collaborate with regional utilities and programs such as the Clean Power Alliance to expand renewable energy, improve efficiency, and increase backup power capacity for critical facilities. For these reasons, the GPU aligns with the RTP/SCS goal of actively encouraging and creating incentives for energy efficiency.
RTP/SCS G8: Encourage land use and growth patterns that facilitate transit and active transportation.	**Consistent.** The GPU includes Land Use Element Goal LU-5 and its policies which strive for lively mixed-use areas near transit that provide opportunities to live, work, shop, and celebrate community life. Policy LU-5.2 encourages transit-supportive development that integrates housing, employment, services, and public spaces near major transit facilities. Policy LU-5.4 promotes transit-oriented, mixed-use development within one-half mile of the C Line station by directing higher-density housing and commercial uses to nearby commercial areas. Policy LU-5.5 seeks to support transit-oriented, mixed-use development at the planned Southeast Gateway within the southern portion of the Rancho Los Amigos Campus, supporting higher-density housing, employment uses, and supportive services that leverage regional transit access. Policy LU-7.3 encourages transit-oriented, mixed-use development at the Rancho Los Amigos Campus and Southeast Gateway area that integrates employment, housing, services, and public spaces, while respecting the area's history. Goal C-8 and its policies seek to ensure railroad crossings are efficient, safe, and minimize delays for all modes of travel. For these reasons,

Table 4.11-1: Connect SoCal 2024 Consistency Analysis	
Connect SoCal 2024	**Consistency Analysis**
	the GPU aligns with the RTP/SCS goal of encouraging land use and growth patterns that facilitate transit. The GPU includes Circulation Element Goal C-2 and its policies which seek to ensure pedestrian networks are complete, accessible, connected, and supportive of daily life. Policy C-2.4 promotes walking as a mode of travel. Goal C-3 and its policies seeks to ensure that bicycle networks are expanded, continuous, protected, and integrated into the City. Policy C-3.4 promotes bicycling as a mode of travel. The GPU also includes Conservation Element Goal CR-9 and its policies which seek air quality improvement and greenhouse gas reduction to protect public health and mitigate climate change impacts. Policy CR-9.1 seeks to reduce mobile, stationary, and industrial sources of pollutants to improve air quality, protect public health, and mitigate climate change impacts. Policy CR-9.2 promotes public transit, bicycle and pedestrian infrastructure, electric vehicle adoption, and enforce anti-idling regulations to reduce transportation-related emissions. Further, Land Use Element Goal LU-6 and its policies strive of inclusive, health communities where housing, work, and amenities are conveniently accessible. Policy LU-6.1 encourages safe, and walkable environments as a priority in new development and redevelopment. Policy LU-6.2 seeks to design new developments, urban form patterns, and land uses to prioritize safe, accessible, and connected walking and biking routes that link schools, parks, employment areas, and transit stops. Policy LU-6.3 encourages development patterns that reduce reliance on private vehicles and support walking, bicycling, and transit use. For these reasons, the GPU aligns with the RTP/SCS goal of encouraging land use and growth patterns that promote active transportation.
RTP/SCS G9: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent.** The GPU includes Circulation Element Goal C-4 and its policies which aim to ensure transit systems are accessible, reliable, and seamlessly connected regionally. Policy C-4.1 seeks to enhance access to transit through improved sidewalks, bike lanes, and microtransit connections that link neighborhoods to bus stops and light rail stations. Policy C-4.2 encourages higher-density, mixed-use development along transit corridors to support frequent, reliable, and convenient service, while reducing dependence on single-occupancy vehicles. Policy C-4.3 aims to pursue improvement to transit stops and related facilities that enhance passenger comfort, safety and accessibility, and the overall effectiveness of transit services. Policy C-4.4 encourages public transit use as a practical and convenient alternative to driving, improving mobility for all residents and reducing vehicle miles traveled (VMT). Policy C-4.5 calls for the City to coordinate with transit service providers transition to zero-emission fleets and related infrastructure as part of future transit improvements in accordance with State mandates. The GPU also aims to increase active transportation and use of transit in the area, which would have the indirect effect of added security at existing and future transportation facilities via the increased presence of pedestrians, transit users, cyclists, and other visitors to the area. For these reasons, the GPU aligns with the RTP/SCS goal maximizing the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

The GPU is a comprehensive update to the existing General Plan. Changes to the 2005 Land Use Element include updates to goals, policies, and programs, land use designations, the stated intent of each designation, and certain development standards. The GPU includes goals, policies, and programs that will provide City staff and discretionary bodies with a foundation for decisions for long-range planning related to physical development and public services. The GPU establishes development capacity for various land uses and serves as a policy guide for determining the appropriate physical development and community services in the City. Therefore, implementation of the GPU would not cause a significant environmental impact due to a conflict with any land use policy adopted for the purpose of avoiding or mitigating an environmental effect.

Zoning Ordinance. The City's Zoning Ordinance details land use regulations and development standards. Consistent with State law, the Zoning Ordinance would need to be updated as needed to be consistent with the changes in the GPU. These revisions would ensure that development standards would be consistent with the development patterns identified within the General Plan. GPU implementation would not cause a significant environmental impact due to a conflict with any land use policy adopted for the purpose of avoiding or mitigating an environmental effect.

In addition, the GPU includes several goals and policies in seven different Elements (Land Use, Environmental Justice, Open Space, Design and Historic Resources, and Circulation), along with the Housing Element, which would help the City be consistent with various regional and local planning efforts, including the SCAG 2020-2045 RTP/SCS, and providing a variety of travel modes within the Planning Area such as transit, pedestrian sidewalks, and bicycle lanes. Goals C-1, C-2, C-3, C-4, C-8, C-9, C-10, C-11, EJ-1, EJ-2, LU-5, LU-7, OS-7, CR-9, D-2, D-4 and D-7, along with their supporting policies, help achieve this consistency. Therefore, with adherence to the above goals and policies, implementation of the GPU would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Growth Projections

Connect SoCal 2024 includes growth projections for cities and counties within the region. Forecasts from SCAG show very limited population growth in Downey for the study period evaluated in this analysis. SCAG's growth forecasts project the City of Downey's population to increase from 114,900 in the year 2019 to 119,200 in the year 2045, an increase of 4,300 persons. SCAG also projects the number of households in Downey to increase from 34,700 in 2019 to 35,300 in 2045, an increase of 600 households. Finally, SCAG estimates that the number of employees in the City would increase from 50,900 in 2019 to 52,600 in 2050, an increase of 1,700 employees.

The GPU includes land use designations that support development of up to 10,350 new residential dwelling units, accommodating an additional population of 31,483 residents by 2045. The GPU would also allow for up to 2.6 million square feet of non-residential development. Employment within the City would increase by up to 6,649 employees under the GPU. While these figures represent maximum build-out potential based on land use policy, 2045 is indicated as the horizon year for planning purposes. Whether this level of development would occur over the next 20 or so years will depend on many factors not within the City's control, foremost the willingness of private property owners to pursue redevelopment and market conditions (e.g., labor and materials costs, interest rates). Nonetheless, the anticipated growth pursuant to GPU land use policy would exceed SCAG's growth potential accounted for by the 2020-2045 RTP/SCS. As such, from a strict numbers standpoint the population and housing growth from the General Plan would exceed the RTP/SCS growth projection for the City. However, as shown in Table 4.11-1

above, the project is consistent with and supports all applicable goals of the current RTP/SCS, and would therefore be consistent with the Plan.

Because managed, desired growth is a key GPU objective, population growth within the City under the GPU would not be unplanned. Additionally, the GPU would help the City achieve its remaining sixth cycle Regional Housing Needs Assessment (RHNA) objective. For these reasons, the GPU 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 and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact LAND-3 – Would the project cause substantial adverse cumulative impacts with respect to land use and planning?

Analysis of Impacts

Anticipated population growth in Los Angeles County would result in land use changes at the regional level. GPU implementation would result in additional capacity for future housing units and non-residential square footage, which would help to meet anticipated regional demand by directing development within the City. The GPU includes several policies to provide for long-term sustainable development to consider air quality, health of residents, existing infrastructure networks, and services. The GPU also includes goals and policies to balance development with the preservation of environmental systems and open space areas. Lastly, the GPU would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. For these reasons, implementation of the GPU would not cause a substantial adverse cumulative impact with respect to land use and planning.

Level of Significance Before Mitigation

Less Than Significant.

Mitigation Measures

None required.

4.11.5 – REFERENCES

City of Downey. 2004. *Downey Vision 2025 Comprehensive General Plan Update Environmental Impact Report*. SCH# 2004031159. July 28, 2004.

City of Downey. 2005. *Downey Vision 2025 General Plan*. Adopted January 25, 2005. Revisions: Housing Element Update; Adopted October 11, 2022.

Southern California Association of Governments (SCAG). Connect SoCal 2024: 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Adopted April 2024.

4.12 – MINERAL RESOURCES

This EIR chapter addresses potential project impacts related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Project impacts related to the loss of availability of a local important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan are also addressed. Lastly this chapter evaluates cumulative project impacts related to mineral resources.

4.12.1 – ENVIRONMENTAL SETTING

Mineral Resource Zones

Minerals refer to aggregate resources, or rock, sand, and gravel, energy-producing fields, including oil, gas, and geothermal substances, and related mining operations. The California Department of Conservation (DOC) classifies land in the state into mineral resource zones based on the known or inferred mineral resource potential of that land (DOC, 2025a). The Planning Area is located in the San Gabriel Valley Production-Consumption (P-C) Region of the greater Los Angeles metropolitan area (DOC, 2025b).

Land in the Planning Area has been classified by the California Division of Mines and Geology (CDMG) according to the presence or absence of significant sand and gravel deposits (suitable for use in construction-grade aggregate). The land classification is presented in the form of maps showing Mineral Resource Zones (MRZ). There are four MRZ classifications, MRZ-1 through MRZ-4 as described below:

- MRZ-1 are areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2 are areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
- MRZ-3 are areas containing mineral deposits the significance of which cannot be evaluated from available data.
- MRZ-4 are areas where availability information is inadequate for assignment to any other MRZ-zone.

According to the California Department of Conservation, the entire Planning Area is classified MRZ-1 meaning there are no significant mineral deposits present in these areas. There are no portions of the Planning Area that are designated MRZ-2, MRZ-3, or MRZ-4. As such, there are no areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists within the Planning Area.

Oil Wells

According to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources, there are no active oils wells within the Planning Area, while there are several idle and plugged oil wells within the Planning Area (DOC, 2025c). An active well is one which is currently in operation or may be restored to operation, with a capability to produce oil. Idle wells are wells that are not producing, but are capable of being reactivated. Plugged wells are plugged and abandoned wells that are permanently sealed.

4.12.2 – REGULATORY FRAMEWORK

State

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA) was enacted by the California legislature to promote the conservation of the State's mineral resources and to ensure adequate reclamation of mined lands. Among other provisions, SMARA requires the State Geologist to classify land in California into Mineral Resource Zones (MRZ), according to the known or inferred mineral potential of the land. The process is based solely on geology, without regard to existing land use or land ownership. Upon completion of each study, the State Geologist submits the mineral land classification report to the State Mining and Geology Board, which transmits the information to appropriate local governments that maintain jurisdictional authority in mining, reclamation, and related land-use activities. Local governments are required to incorporate the report and maps into their general plans and consider the information when making land use decisions.

SMARA addresses the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. The Act applies to anyone, including government agencies, engaged in surface mining operations in California, including federally managed lands that disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. Regulated mining activities include prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials.

The California Department of Conservation, Division of Mines and Geology (DMG) 'Mineral Land Classification Project' publishes mineral resource maps which have proven to be of value in land use planning and mineral conservation. This is an ongoing process with updates taking place approximately every 10 years. DMG is also in the process of identifying lands throughout the County with the potential for mineral resource recovery and will be used by the County in identifying new mineral resource areas to help ensure their preservation.

4.12.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

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.

B. Result in the loss of availability of a local important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

C. Would the project cause substantial adverse cumulative impacts with respect to mineral resources?

4.12.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to the loss of availability of a known mineral resource that is of value to the region and the residents of the state and the loss of availability of a locally-important mineral resource recovery site.

Loss of Statewide or Regional Mineral Resources

Impact MIN-1 – 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?

Analysis of Impacts

According to the Department of Conservation, the entire Planning Area is classified MRZ-1 meaning there are no significant mineral deposits present in these areas. As such, there are no areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists within the Planning Area. According to the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, there are no active oil wells located within the Planning Area (DOC, 2025c). However, there are several "Idle" wells located in the Planning Area, which are wells that are not producing, but are capable of being reactivated. The GPU does not include physical changes to or the rezoning of any active or idle well locations, or the development of new wells within the Planning Area. Wells must be precisely located and evaluated by the California Geologic Energy Management Division (CalGEM) before building permits can be issued. Applicants must submit a City-approved site plan for the development to CalGEM for review and approval. There are no other significant mineral resources located within the Planning Area. For these reasons, the project would not result in a loss of availability of a known mineral resource that would be of value to the region or the state and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Loss of Locally Important Mineral Resources

Impact MIN-2 – Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Analysis of Impact

According to the Department of Conservation, the entire Planning Area is classified MRZ-1 meaning there are no significant mineral deposits present in these areas. Therefore, there are no areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists within the Planning Area. As previously stated, there are several idle wells and no active oil wells located within the Planning Area. The GPU does not include physical changes to or the rezoning of any active or idle well

locations, or the development of new wells within the Planning Area. There are no significant mineral resources located within the Planning Area. For these reasons, the project would not result in a loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact MIN-3 – Would the project cause substantial adverse cumulative impacts with respect to mineral resources?

Analysis of Impacts

The project would not result in significant impacts related to mineral resources. Because of the developed nature of the Planning Area, and because the project would not have a significant impact on mineral resources, there would also be no cumulative impacts with respect to mineral resources.

Level of Significance Before Mitigation

No cumulative impact.

Mitigation Measures

None required.

4.12.5 – REFERENCES

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources. (DOC). 2025a. *California Geological Survey (CGS) Warehouse: Mineral Land Classification*. Web: https://maps.conservation.ca.gov/cgs/minerals/ [Accessed December 2025].

_____. 2025b. *DOC Maps: Mines and Minerals*. Web: https://maps.conservation.ca.gov/mineralresources/ [Accessed December 2025].

_____. 2025c. *DOGGR Well Finder*. Web: http://maps.conservation.ca.gov/doggr/index.html#close [Accessed December 2025].

City of Downey, 2004. *Downey Vision 2025 Comprehensive General Plan Update Environmental Impact Report*. SCH# 2004031159. July 28, 2004.

City of Downey. 2005. *Downey Vision 2025 General Plan*. Adopted January 25, 2005. Revisions: Housing Element Update; Adopted October 11, 2022.

4.13 NOISE

The following section of the EIR provides pertinent background information on the nature of sound and vibration transmission; describes the existing noise environment in the Planning Area; summarizes applicable noise guidelines, standards, and regulations; and evaluates potential noise and vibration impacts that could result from implementation of the proposed project. Where necessary, this section includes mitigation measures that would reduce noise and vibration impacts associated with the project.

4.13.1 FUNDAMENTALS OF ENVIRONMENTAL ACOUSTICS

Noise is generally defined as unwanted sound and is widely recognized as a form of environmental degradation. Airborne sound is the rapid fluctuation of air pressure above and below atmospheric pressure. The frequency (pitch), amplitude (intensity or loudness), and duration of a sound all contribute to the effect on a listener, or receptor, and whether or not the receptor perceives the sound as “noisy” or annoying.

Pitch is the height or depth of a tone or sound and depends on the frequency of the vibrations by which it is produced. Sound frequency is expressed in terms of cycles per second, or Hertz (Hz). Humans generally hear sounds with frequencies between 20 and 20,000 Hz and perceive higher frequency sounds, or high pitch noise, as louder than low-frequency sound or sounds low in pitch. Sound intensity or loudness is a function of the amplitude of the pressure wave generated by a noise source combined with the reception characteristics of the human ear. Atmospheric factors and obstructions between the noise source and receptor also affect the loudness perceived by the receptor. Sound pressure levels are typically expressed on a logarithmic scale in terms of decibels (dB). A dB is a unit of measurement that indicates the relative amplitude (i.e., intensity or loudness) of a sound, with 0 dB corresponding roughly to the threshold of hearing for the healthy, unimpaired human ear.

Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 dBs represents a ten-fold increase in acoustic energy, while 20 dBs is 100 times more intense, 30 dBs is 1,000 times more intense, and so on. In general, there is a relationship between the subjective noisiness or loudness of a sound and its intensity, with each 10 dB increase in sound level perceived as approximately a doubling of loudness. Due to the logarithmic basis, decibels cannot be directly added or subtracted together using common arithmetic operations:

$$50\ decibels + 50\ decibels\ \neq 100\ decibels$$

Instead, the combined sound level from two or more sources must be combined logarithmically. For example, if one noise source produces a sound power level of 50 dBA, two of the same sources would combine to produce 53 dB as shown below.

$$10 * 10log\left(10^{\left(\frac{50}{10}\right)} + 10^{\left(\frac{50}{10}\right)}\right) = 53\ decibels$$

In general, when one source is 10 dB higher than another source, the quieter source does not add to the sound levels produced by the louder source because the louder source contains ten times more sound energy than the quieter source.

Sound Characterization

Although humans generally can hear sounds with frequencies between 20 and 20,000 Hz, most of the sounds humans are normally exposed to do not consist of a single frequency, but rather a broad range of frequencies perceived differently by the human ear. In general, humans are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. Instruments used to measure sound, therefore, include an electrical filter that enables the instrument's detectors to replicate human hearing. This filter, known as the "A-weighting" or "A-weighted sound level," filters low and very high frequencies, giving greater weight to the frequencies of sound to which the human ear is typically most sensitive. Most environmental measurements are reported in dBA, meaning decibels on the A-scale. See Table 4.13-1 for a list of common noise sources and their A-weighted noise levels.

Sound levels are usually not steady and vary over time. Therefore, a method for describing either the average character of the sound or the statistical behavior of the variations over a period of time is necessary. The continuous equivalent noise level (L_{eq}) descriptor is used to represent the average character of the sound over a period of time. The L_{eq} represents the level of steady-state noise that would have the same acoustical energy as the time-varying noise measured over a given time period. L_{eq} is useful for evaluating shorter time periods over the course of a day. The most common L_{eq} averaging period is hourly, but L_{eq} can describe any series of noise events over a given time period.

Variable noise levels are the values that are exceeded for a portion of the measured time period. Thus, the L_{01}, L_{10}, L_{50}, and L_{90} descriptors represent the sound levels exceeding 1%, 10%, 50%, and 90% of the time the measurement was performed. The L_{90} value usually corresponds to the background sound level at the measurement location.

When considering environmental noise, it is important to account for the different responses people have to daytime and nighttime noise. In general, during the nighttime, background noise levels are generally quieter than during the daytime but also more noticeable due to the fact that household noise has decreased as people begin to retire and sleep. Noise exposure over the course of an entire day is described by the day/night average sound level, DNL (or L_{dn}), and the community noise equivalent level (CNEL), descriptors. Both descriptors represent the 24-hour noise exposure in a community or area. For DNL, the 24-hour day is divided into a 15-hour daytime period (7 AM to 10 PM) and a 9-hour nighttime period (10 PM to 7 AM), and a 10 dB "penalty" is added to measure nighttime noise levels when calculating the 24-hour average noise level. For example, a 45 dBA nighttime sound level would contribute as much to the overall day-night average as a 55 dBA daytime sound level. The CNEL descriptor is similar to DNL, except that it includes an additional 5 dBA penalty for noise events that occur during the evening time period (7 PM to 10 PM). The artificial penalties imposed during DNL and CNEL calculations are intended to account for a receptor's increased sensitivity to noise levels during quieter nighttime periods.

Table 4.13-1:Typical Noise Levels		
Common Outdoor Activities	**Noise Level (dBA)**	**Common Indoor Activities**
	110	Rock Band
Jet flyover at 1,000 feet	105	
	100	
Gas lawn mower at 3 feet	95	
	90	
Diesel truck at 50 feet at 50 mph	85	Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime	75	
Gas lawn mower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area	65	Normal speech at 3 feet
Heavy traffic at 300 feet	60	
	55	Large business office
Quiet urban daytime	50	Dishwasher next room
	45	
Quiet urban nighttime	40	Theater, large conference room
Quiet suburban nighttime	35	
	30	Library
Quite rural nighttime	25	Bedroom at night
	20	
	15	Broadcast/recording studio
	10	
	5	
Typical threshold of human hearing	0	Typical threshold of human hearing
Source: Caltrans, 2013		

Sound Propagation

The energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out and travels away from the noise-generating source. The strength of the source is often characterized by its "sound power level." Sound power level is independent of the distance a receiver is from the source and is a property of the source alone. Knowing the sound power level of an idealized source and its distance from a receiver, the sound pressure level at a specific point (e.g., a property line or a receiver) can be calculated based on geometrical spreading and attenuation (noise reduction) as a result of distance and environmental factors, such as ground cover (asphalt vs. grass or trees), atmospheric absorption, and shielding by terrain or barriers.

For an ideal "point" source of sound, such as mechanical equipment, the energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out in a spherical pattern and travels away from the point source. Theoretically, the sound level attenuates, or decreases, by 6 dB with each doubling of distance from the point source. In contrast, a "line" source of sound, such as roadway traffic or a rail line, spreads out in a cylindrical pattern and theoretically attenuates by 3 dB with each doubling of distance from the line source; however, the sound level at a receptor location can be modified further by additional factors. The first is the presence of a reflecting plane such as the ground. For hard ground, a reflecting plane typically increases A-weighted sound pressure levels by 3 dB. If some of the reflected sound is absorbed by the surface, this increase will be less than 3 dB. Other factors affecting the predicted sound pressure level are often lumped together into a term called "excess attenuation." Excess attenuation is the amount of additional attenuation that occurs beyond simple spherical or cylindrical spreading. For sound propagation outdoors, there is almost always excess attenuation, producing lower levels than what would be predicted by spherical or cylindrical spreading. Some examples include attenuation by sound absorption in air; attenuation by barriers; attenuation by rain, sleet, snow, or fog; attenuation by grass, shrubbery, and trees; and attenuation from shadow zones created by wind and temperature gradients. Under certain meteorological conditions, like fog and low-level clouds, some of these excess attenuation mechanisms are reduced or eliminated due to noise reflection.

Noise Effects

Noise effects on human beings are generally categorized as:

- Subjective effects of annoyance, nuisance, and/or dissatisfaction
- Interference with activities such as speech, sleep, learning, or relaxing
- Physiological effects such as startling and hearing loss

Most environmental noise levels produce subjective or interference effects; physiological effects are usually limited to high noise environments such as industrial manufacturing facilities or airports.

Predicting the subjective and interference effects of noise is difficult due to the wide variation in individual thresholds of annoyance and past experiences with noise; however, an accepted method to determine a person's subjective reaction to a new noise source is to compare it with the existing environment without the noise source, or the "ambient" noise environment. In general, the more a new noise source exceeds the ambient noise level, the more likely it is to be considered annoying and to disturb normal activities.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness that would almost certainly cause an adverse response from community noise receptors.

Groundborne Vibration and Noise

Vibration is the movement of particles within a medium or object such as the ground or a building. Vibration may be caused by natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or humans (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources are usually characterized as continuous, such as factory machinery, or transient, such as explosions.

As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency; however, unlike airborne sound, there is no standard way of measuring and reporting amplitude. Vibration amplitudes can be expressed in terms of velocity (inches per second) or discussed in dB units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are usually discussed in terms of peak particle velocity (PPV) in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage. Vibration can impact people, structures, and sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments, such as electron microscopes.

Common sources of vibration within communities include construction activities and railroads. Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used.

Groundborne noise is noise generated by vibrating building surfaces such as floors, walls, and ceilings that radiate noise inside buildings subjected to an external source of vibration. The vibration level, the acoustic radiation of the vibrating element, and the acoustical absorption of the room are all factors that affect potential groundborne noise generation.

4.13.2 ENVIRONMENTAL SETTING

The City's existing General Plan Noise Element notes that noise in Downey is primarily from vehicle travel, including roadways, trains, and aircraft, but is also generated from stationary sources such as machinery and HVAC systems. Each of these sources and their impacts on the noise environment of Downey are summarized below.

Measured Ambient Noise Levels

The existing ambient noise levels at the Planning Area were monitored on May 6, 2026, to May 7, 2026. Ambient noise levels were measured with a Larson Davis Soundtrack LxT Type 1 and a Piccolo Type 2 sound level meter. Conditions during the monitoring were generally during the daytime, with daily temperatures between the low-to-mid 60s (at night) and 78 degrees Fahrenheit (during the daytime). Winds were generally calm, at approximately 5 to 11 miles per hour.

The ambient noise monitoring conducted for this EIR included one (1) long-term (LT) and five (5) short-term (ST) measurements at locations throughout the Planning Area. Sites were generally selected in order to obtain data on different land uses and major noise sources, as well as for geographic coverage of the City. Locations were selected to provide direct observations of existing noise sources at and near the Planning Area, determine ambient noise levels at and near the Planning Area, and evaluate potential changes in noise levels at sensitive receptors (see "Noise Sensitive Receptors" below) and at other receptors near projected land use or density changes. Specific selection considerations for each monitoring location (e.g., land uses or noise sources the location is representative of) are included in the description of the ambient noise monitoring locations.

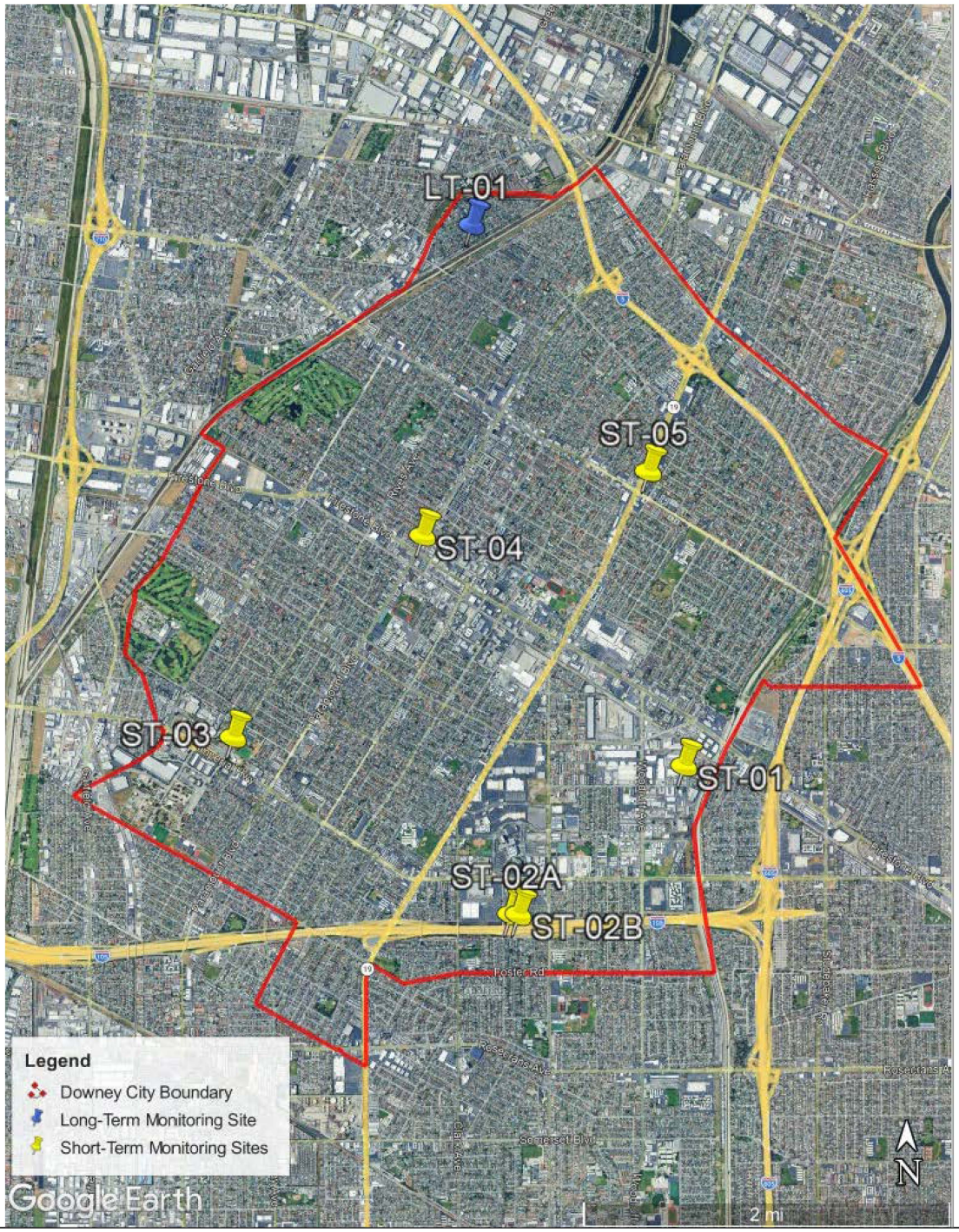
The ambient noise monitoring locations are shown in Exhibit 4.13-1 and described below.

- LT-01 was in Treasure Island Park at 9300 S Bluff Rd, Downey, CA 90240, which borders residential uses to the north. The ambient noise measured at LT-1 is considered representative of daytime and nighttime noise levels in residential and park land uses.
- ST-01 was at the southeast corner of the intersection of Washburn Road and Pangborn Avenue, approximately 28 feet south of the centerline of Washburn Road. The ambient noise measured at ST-1 is considered representative of daytime noise levels in industrial land uses.
- ST-02A was at the northeast corner of the intersection of Ardis Avenue and Angell Street, approximately 30 feet east of the centerline of Ardis Avenue. ST-02A was located approximately 200 feet south of the centerline of Interstate 105 and the LA Metro light rail. The Metro Green Line was observed twice during the monitoring session. The ambient noise measured at ST-2A is considered representative of daytime noise levels for the freeway and light rail.
- ST-02B was along Angell Street, approximately 50 feet east of ST-2A. As with ST-2A, ST-2B was located approximately 200 feet south of the centerline of Interstate 105 and the LA Metro light rail. While the ST-2A monitor collected data of unobstructed noise levels from the I-105 and light rail, ST-2B collected data of noise levels from behind a concrete masonry unit wall that shielded residents from freeway noise levels. The ambient noise measured at ST-2B is therefore considered representative of residential noise levels along the I-105. It is noted that the majority of residential uses along the I-105 are located across

local roadways, and would generally have an additional 50 feet of distance attenuation, resulting in lower noise levels.

- ST-03 was at the northeast corner of the intersection of Imperial Highway and Rives Avenue, approximately 95 feet northeast of the centerline of Imperial Highway. The ambient noise measured at ST-3 is considered representative of daytime noise levels for the commercial, park, and medical uses along Imperial Highway.
- ST-04 was at the southern corner of the intersection of Paramount Boulevard and Firestone Boulevard, approximately 40 feet southeast of the centerline of Paramount Boulevard. ST-04 was also located approximately 300 feet northeast of the Union Pacific rail line; however, no trains were observed during the monitoring session. The ambient noise measured at ST-4 is considered representative of daytime noise levels along Paramount Boulevard and Firestone Boulevard.
- ST-5 was at the northeast intersection Lakewood Boulevard and Florence Avenue, approximately 40 feet north of the centerline of East Florence Avenue and approximately 150 feet southeast of the centerline of Lakewood Boulevard. The ambient noise measured at ST-5 is considered representative of daytime noise levels along the retail and residential portions of Florence Avenue.

Exhibit 4.13-1
Ambient Noise Monitoring Location



Source: MIG 2026

Based on observations made during the ambient noise monitoring, the existing noise environment in the project area consists primarily of transportation noise sources (motor vehicles and aircraft), with machinery also contributing to noise levels in industrial areas.

Table 4.13-2: Measured Long-Term Ambient Noise Levels (dBA) in the Planning Area					
		Measured Range in Hourly Noise Levels (dBA L_{eq})[A]			
Day / Site	Duration	Daytime (7 AM to 7 PM)	Evening (7 PM to 10 PM)	Nighttime (10 PM to 7 AM)	Calculated CNEL[B]
Wednesday, May 6, 2026 to Thursday, May 7, 2026					
LT-1	24 Hours	50.8 – 56.3	52.9 – 56.3	47.7 - 53.8	58.6

Source: MIG, 2026 (see Appendix F)
(A) Values are the lowest and highest measured average hourly values during the listed time.
(B) The 24-hour CNEL value is calculated by applying a 5 dB penalty to measured evening noise levels and a 10 dB penalty to measured nighttime noise levels. The CNEL is calculated for the period of approximately 6:15 PM on Wednesday, May 6 to 6:15 PM on Thursday, May 7, 2026.

Table 4.13-3: Measured Short-Term Ambient Noise Levels (dBA) in the Planning Area							
		Measured Noise Levels (dBA)					
Site	Duration	L_{eq}[A]	L_{min}[B]	L_{90}[C]	L_{50}[C]	L_{8}[C]	L_{max}[B]
Thursday, May 7, 2026 (3:39 PM to 4:09 PM)							
ST-1	30 minutes	71.3	51.7	65.4	69.2	75.7	87.5
LT-1	30 minutes	49.4	38.8	43.6	47.2	53.3	62.4
Thursday, May 7, 2026 (4:21 PM to 4:56 PM)							
ST-2A	35 minutes	73.4	64.8	71.6	73.1	75.4	89.5
LT-1	35 minutes	51.7	38.3	44.1	49.7	55.8	65.6
Thursday, May 7, 2026 (4:57 PM to 5:03 PM)							
ST-2B	5 minutes	62.5	56.8	60.1	62.1	65.0	76.2
LT-1	5 minutes	54.4	42.2	47.8	53.4	58.2	62.2
Thursday, May 7, 2026 (5:20 PM to 6:00 PM)							
ST-3	40 minutes	68.6	49.5	65.8	68.2	71.0	79.5
LT-1	40 minutes	53.6	36.7	46.2	51.3	57.7	65.9
Thursday, May 7, 2026 (6:11 PM to 6:51 PM)							
ST-4	40 minutes	70.4	56.0	66.8	69.3	73.5	88.1
LT-1	40 minutes	54.2	37.4	45.1	51.3	58.7	69.6
Thursday, May 7, 2026 (7:04 PM to 7:34 PM)							
ST-5	30 minutes	71.5	60.7	68.5	70.9	74.0	89.5
LT-1	30 minutes	54.4	38.9	45.4	51.1	58.8	67.2

Source: MIG, 2026 (see Appendix F)
(A) The L_{eq} value represents the equivalent steady-state noise level that would contain the same amount of acoustical energy as the time-varying noise level during the listed period.
(B) The L_{min} and L_{max} represent the lowest and highest instantaneous noise levels measured during the listed period, respectively.
(C) Values represent the noise level exceed a certain percentage of the period, e.g., L_{90} is the noise level that was exceeded 90% of the time for the listed period.

As summarized in Table 4.13-2 and Table 4.13-3, measured daytime noise levels were generally higher in the areas near freeways and busier roadways such as the I-105 (ST-2A), Imperial Highway (ST-03), Firestone Boulevard and Paramount Boulevard (ST-04), and Lakewood Boulevard and Florence Avenue (ST-05), as well as industrial areas (ST-01).

Freeway and Local Traffic Noise

The Planning Area includes the I-5, I-605, I-710, and I-105 along the northern, eastern, and southern portions of the City, respectively. These freeways are the dominant source of noise in their immediate vicinity. Traffic noise on surface streets is also a significant source of noise within the City. Major roadways in the Planning Area that contribute to relatively high noise levels include

Paramount Boulevard, Lakewood Boulevard, Telegraph Road, Florence Avenue, Firestone Boulevard, and Imperial Highway. Noise levels along these roadways are influenced by a number of variables including traffic volumes, the percentage of truck traffic, vehicle speeds, the time distribution of traffic, and gradient of the roadway. The highest level of traffic noise is found along the major arterial roadways that have relatively high traffic volumes and high vehicle travel speeds (i.e., 40 miles per hour).

Existing and Future Baseline Modeled Traffic Noise Levels

Existing (Year 2026) traffic noise levels were computed using the U.S. Department of Transportation Federal Highway Administration's (FHWA) Traffic Noise Model (TNM), Version 3.2. The model uses traffic volume, vehicle mix, vehicle speed, roadway geometry, and other variables to compute 24-hour traffic noise levels at user-defined receptor distances from the roadway center. The TNM modeling conducted for this EIR incorporates worst-case assumptions about motor vehicle traffic and noise levels; specifically, calculations are based on "hard" site conditions and do not incorporate any natural or artificial shielding.

Average daily traffic (ADT) volume information was obtained from the traffic analysis prepared for the proposed GPU (see Section 4.17, Transportation). Traffic noise levels were estimated for typical daytime (7AM to 7PM), evening (7PM to 10PM), and nighttime (10PM to 7AM) hours. The time-of-day distributions and the mix of automobiles, medium trucks, heavy duty trucks assigned to the roadway system were obtained from the traffic analysis (Ganddini 2026). Roadway segments were modeled as straight-line segments without any flow controls. Modeled noise levels, therefore, represent free-flow traffic conditions. Vehicles were assumed to travel the posted speed limit on each modeled roadway segment.

The traffic analysis prepared for the GPU also includes an analysis of future traffic conditions that would occur in Year 2045 based on continued implementation of the City's current General Plan at the land use development intensities permitted by the current General Plan. The future baseline Year 2045 traffic noise levels were estimated using the same methodology as described for the existing year 2026 traffic noise analysis. Traffic noise levels were computed using TNM, Version 3.2 and the same roadway geometry factors and time of day distributions assumed for 2026 traffic noise levels; however, traffic volumes and fleet mix percentages were updated based on specific information for future Year 2045 conditions identified in the traffic and traffic analysis prepared for the GPU.

Modeled traffic noise levels for existing (Year 2026) and future (Year 2045) baseline traffic noise levels are shown in Table 4.13-4. Refer to Appendix E for detailed information on existing traffic noise modeling assumptions.

Table 4.13-4: Existing (2026) and Future (2045) Baseline Traffic Noise Levels

	Year 2026		Year 2045		Net Change	
Road / Segment	**ADT**	**CNEL[(A)]**	**ADT**	**CNEL[(A)]**	**ADT**	**CNEL**
Paramount Blvd						
Telegraph Rd to I-5 Freeway	32,900	71.1	35,400	70.5	2,500	-0.6
I-5 Freeway to Gallatin Rd	42,500	72.3	43,600	71.5	1,100	-0.8
Gallatin Rd to Florence Ave	34,600	71.7	36,900	71.1	2,300	-0.6
Florence Ave to Firestone Blvd	30,900	70.9	33,700	70.4	2,800	-0.5
Firestone Blvd to Stewart & Gray Rd	27,300	70.3	28,200	69.5	900	-0.8
Stewart & Gray Rd to Imperial Hwy	27,700	70.0	29,900	69.5	2,200	-0.5
Imperial Hwy to Gardendale St	25,400	69.9	26,800	69.4	1,400	-0.5

Table 4.13-4: Existing (2026) and Future (2045) Baseline Traffic Noise Levels						
	Year 2026		Year 2045		Net Change	
Road / Segment	ADT	CNEL[(A)]	ADT	CNEL[(A)]	ADT	CNEL
Lakewood Blvd						
Telegraph Rd to I-5 Freeway	46,600	72.7	47,900	71.3	1,300	-1.4
I-5 Freeway to Gallatin Rd	39,400	71.9	41,100	70.6	1,700	-1.3
Gallatin Rd to Florence Ave	32,300	71.3	32,300	69.9	0	-1.4
Florence Ave to Firestone Blvd	29,600	70.8	29,600	69.4	0	-1.4
Firestone Blvd to Stewart & Gray Rd	19,700	69.3	19,700	67.9	0	-1.4
Stewart & Gray Rd to Imperial Hwy	31,700	70.6	31,700	69.6	0	-1
Imperial Hwy to I-105 Freeway	31,600	70.8	31,600	69.9	0	-0.9
Foster Rd to Rosecrans Ave	30,800	70.8	30,800	69.9	0	-0.9
Telegraph Rd						
City Limits to Paramount Blvd	23,900	70.9	23,900	70.6	0	-0.3
Paramount Blvd to Lakewood Blvd	31,200	72.3	31,200	72.0	0	-0.3
Lakewood Blvd to City Limits	27,700	70.7	27,700	70.3	0	-0.4
Florence Ave						
City Limits to Old River School Rd	37,800	71.6	42,400	71.3	4,600	-0.3
Old River School Rd to Paramount Blvd	42,300	72.2	45,200	71.8	2,900	-0.4
Paramount Blvd to Lakewood Blvd	38,200	71.7	41,700	71.3	3,500	-0.4
Lakewood Blvd to I-605 Freeway	35,400	72.7	38,700	72.4	3,300	-0.3
Firestone Blvd						
City Limits to Old River School Rd	46,800	71.7	49,200	69.8	2,400	-1.9
Old River School Rd to Paramount Blvd	29,900	69.1	33,200	67.4	3,300	-1.7
Paramount Blvd to Lakewood Blvd	30,000	69.3	31,400	67.4	1,400	-1.9
Lakewood Blvd to Woodruff Ave	17,900	67.5	19,300	65.7	1,400	-1.8
Stewart & Gray Rd to City Limits	46,400	72.8	46,400	71	0	-1.8
Imperial Hwy						
Old River School Rd to Paramount Blvd	37,700	72.0	37,700	70.3	0	-1.7
Paramount Blvd to Lakewood Blvd	31,900	70.9	31,900	69.2	0	-1.7
Lakewood Blvd to Woodruff Ave	36,200	71.9	36,200	70.3	0	-1.6
Woodruff Ave						
Firestone Blvd to Imperial Hwy	17,700	69.1	17,700	66.3	0	-2.8
Old River School Rd						
Florence Ave to Firestone Blvd	18,300	67.9	18,300	66.9	0	-1.0
Stewart & Gray Rd to Imperial Hwy	12,400	66.2	12,400	65.2	0	-1.0
Downey Ave						
Florence Ave to Firestone Blvd	11,100	63.3	11,100	61.8	0	-1.5
Stewart & Gray Rd to Imperial Hwy	14,100	66.1	14,100	64.9	0	-1.2
Brookshire Ave						
Florence Ave to Firestone Blvd	14,700	65.2	14,700	63.0	0	-2.2
Stewart & Gray Rd to Imperial Hwy	13,400	65.8	13,400	64.0	0	-1.8
Gallatin Rd						
Paramount Blvd to Lakewood Blvd	10,500	64.8	10,500	63.2	0	-1.6
Stewart & Gray Rd						
Old River School Rd to Paramount Blvd	16,700	67.0	16,700	65.3	0	-1.7
Paramount Blvd to Lakewood Blvd	23,200	68.3	23,200	66.6	0	-1.7
Lakewood Blvd to Woodruff Ave	27,100	70.2	27,100	68.7	0	-1.5
Gardendale St						
Garfield Ave to Paramount Blvd	11,300	64.3	11,300	62.6	0	-1.7
Paramount Blvd to Lakewood Blvd	21,600	67.0	21,600	65.2	0	-1.8
Foster Rd						

Table 4.13-4: Existing (2026) and Future (2045) Baseline Traffic Noise Levels						
	Year 2026		Year 2045		Net Change	
Road / Segment	ADT	CNEL(A)	ADT	CNEL(A)	ADT	CNEL
Lakewood Blvd to Woodruff Ave	33,300	70.9	33,300	69.4	0	-1.5
Bellflower Ave						
Stewart & Gray Rd to Imperial Hwy	22,000	70.0	22,000	67.6	0	-2.4
Source: MIG, 2025 (see Appendix E) (A) CNEL values for road segments are estimated 50 feet from the center of the nearest travel direction.						

The results of the traffic noise modeling indicate that existing traffic noise levels within the City are highest (i.e., 70 CNEL or higher) along Paramount Boulevard, Lakewood Boulevard, Telegraph Road, Florence Avenue, Firestone Boulevard, Imperial Highway, Stewart and Gray Road, Foster Road, and Bellflower Avenue.

The City established land use compatibility guidelines in the Noise Element of the 2005 General Plan, which consist of the following designations:

- Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insultation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insultation features included in the design.
- Clearly Unacceptable:[1] New construction or development should generally not be undertaken.

For example, low-density residential is considered Normally Acceptable up to 60 CNEL, Conditionally Acceptable from 55 CNEL to 70 CNEL, Normally Unacceptable from 70 CNEL to 75 CNEL, and Clearly Unacceptable at noise levels higher than 75 CNEL. Multi-family residential is considered Normally Acceptable up to 65 CNEL, Conditionally Acceptable from 60 CNEL to 70 CNEL, Normally Unacceptable from 70 CNEL to 75 CNEL, and Clearly Unacceptable at noise levels higher than 75 CNEL. Schools, libraries, churches, hospitals, and nursing homes are considered Normally Acceptable up to 70 CNEL, Conditionally Acceptable from 60 CNEL to 70 CNEL, Normally Unacceptable from 70 CNEL to 80 CNEL, and Clearly Unacceptable at noise levels higher than 80 CNEL.

The land use compatibility guidelines continue unchanged in the GPU, with the exception of the office buildings, business, commercial, and professional land use category, which increased the limit of its Normally Acceptable threshold from 70 CNEL to 75 CNEL, and the change in name from Clearly Unacceptable to Conditionally Unacceptable for the highest noise level compatibility designation. The modeling shows that the existing conditions may exceed the land use compatibility guidelines established by the City. Specifically, the modeling shows:

[1] Land use compatibility guidelines in the 2005 General Plan refer to this land use compatibility status as Clearly Unacceptable, while the GPU refers to it as Conditionally Unacceptable.

- Year 2026 traffic noise levels along the modeled segments of Paramount Boulevard are approximately 70 CNEL to 72 CNEL at a distance of 50 feet from the center of the roadway. Commercial, commercial/manufacturing, low-density and medium-density residential, mixed-use, office, and school uses are present along Paramount Boulevard. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use designation for office and commercial uses and within Normally Unacceptable land use compatibility designation (70 to 75 CNEL for residential and school uses) identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease between approximately 0.5 dBA to 0.8 dBA, due to a predicted decrease in the percent of truck trips.
- Year 2026 traffic noise levels along the modeled segments of Lakewood Boulevard are approximately 69 to 73 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, commercial, office, open space, mixed-use, manufacturing, and school land uses are present along Lakewood Boulevard. The estimated Year 2026 traffic noise levels are within Conditionally Acceptable land use compatibility designation for commercial, manufacturing, and office uses, and within the Normally Unacceptable land use compatibility designation for residential, mixed-use, open space uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by approximately 0.9 to 1.4 dBA due to a predicted decrease in the percentage of truck trips on Lakewood Boulevard.
- Year 2026 traffic noise levels along the modeled segments of Telegraph Road are estimated to be approximately 71 CNEL to 72 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, commercial, open space, and public land uses are present along Telegraph Road. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use compatibility designation for commercial uses and within the Normally Unacceptable land use compatibility designation for residential, public, and open space land uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by less than 0.5 dBA due to a predicted decrease in the percentage of truck trips on Telegraph Road.
- Year 2026 traffic noise levels along the modeled segments of Florence Avenue are estimated to be approximately 72 CNEL to 73 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, commercial, office, schools, and open space land uses are present along Florence Avenue. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use compatibility designation for commercial and office uses, and within the Normally Unacceptable land use compatibility designation for residential, school, and open space uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by less than 0.5 dBA due to a predicted decrease in the percentage of truck trips on Florence Avenue.
- Year 2026 traffic noise levels along the modeled segments of Firestone Boulevard are estimated to be between approximately 68 CENL to 73 CNEL at a distance of 50 feet from the center of the roadway. Low-density residential, mixed-use, commercial, manufacturing, and open space land uses are present along Firestone Boulevard. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use compatibility designation for commercial, mixed-use, and office uses, and within the Normally Unacceptable land use compatibility designation for residential and open space uses identified in the City's existing General Plan. Year 2045 traffic noise levels are

estimated to decrease by approximately 1.7 to 1.9 dBA due to a predicted decrease in the percentage of truck trips on Firestone Boulevard.

- Year 2026 traffic noise levels along the modeled segment of Imperial Highway are estimated to be approximately 71 CNEL to 72 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, commercial, manufacturing, public, school, and open space land uses are present along Imperial Highway. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use compatibility designation for commercial and manufacturing and Normally Unacceptable for residential, public, school, and open space land uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by approximately 1.6 to 1.7 dBA due to a predicted decrease in the percentage of truck trips on Firestone Boulevard.
- Year 2026 traffic noise levels along the modeled segment of Woodruff Avenue are estimated to be approximately 69 CNEL at a distance of 50 feet from the center of the roadway. Medium-density residential, commercial, manufacturing, and school land uses are present along Woodruff Avenue. The estimated Year 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for commercial, manufacturing, and school land uses and within the Conditionally Acceptable land use compatibility designation for residential land uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by approximately 2.8 dBA due to a predicted decrease in the percentage of truck trips on Woodruff Avenue.
- Year 2026 traffic noise levels along the modeled segment of Old River School Road are estimated to be approximately 66 CNEL to 68 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, commercial, and open space land uses are present along Old River School Road. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use compatibility designation for residential, commercial, and open space land uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease of approximately 1 dBA due to a predicted decrease in the percentage of truck trips on Old River School Road.
- Year 2026 traffic noise levels along the modeled segment of Downey Avenue are estimated to be approximately 63 CNEL to 66 CNEL at a distance of 50 feet from the center of the roadway. Residential, commercial, mixed-use, school, and office land uses are present along Downey Avenue. The estimated Year 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for medium density residential land uses from Florence Avenue to Firestone Boulevard and for school, mixed-use, office, and commercial uses, and Conditionally Acceptable land use compatibility designation for low density residential uses from Florence Avenue to Firestone Boulevard and low and medium density residential land uses from Florence and Gray Road to Imperial Highway. Year 2045 traffic noise levels are estimated to decrease by approximately 1.2 to 1.5 dBA due to a predicted decrease in the percentage of truck trips on Downey Avenue.
- Year 2026 traffic noise levels along the modeled segment of Brookshire Avenue are estimated to be approximately 65 CNEL to 66 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, mixed-use, office, and open space land uses are present along Brookshire Avenue. The estimated Year 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for office and open space uses identified in the City's existing General Plan and within the Conditionally Acceptable land use designation for residential and mixed-use land uses.

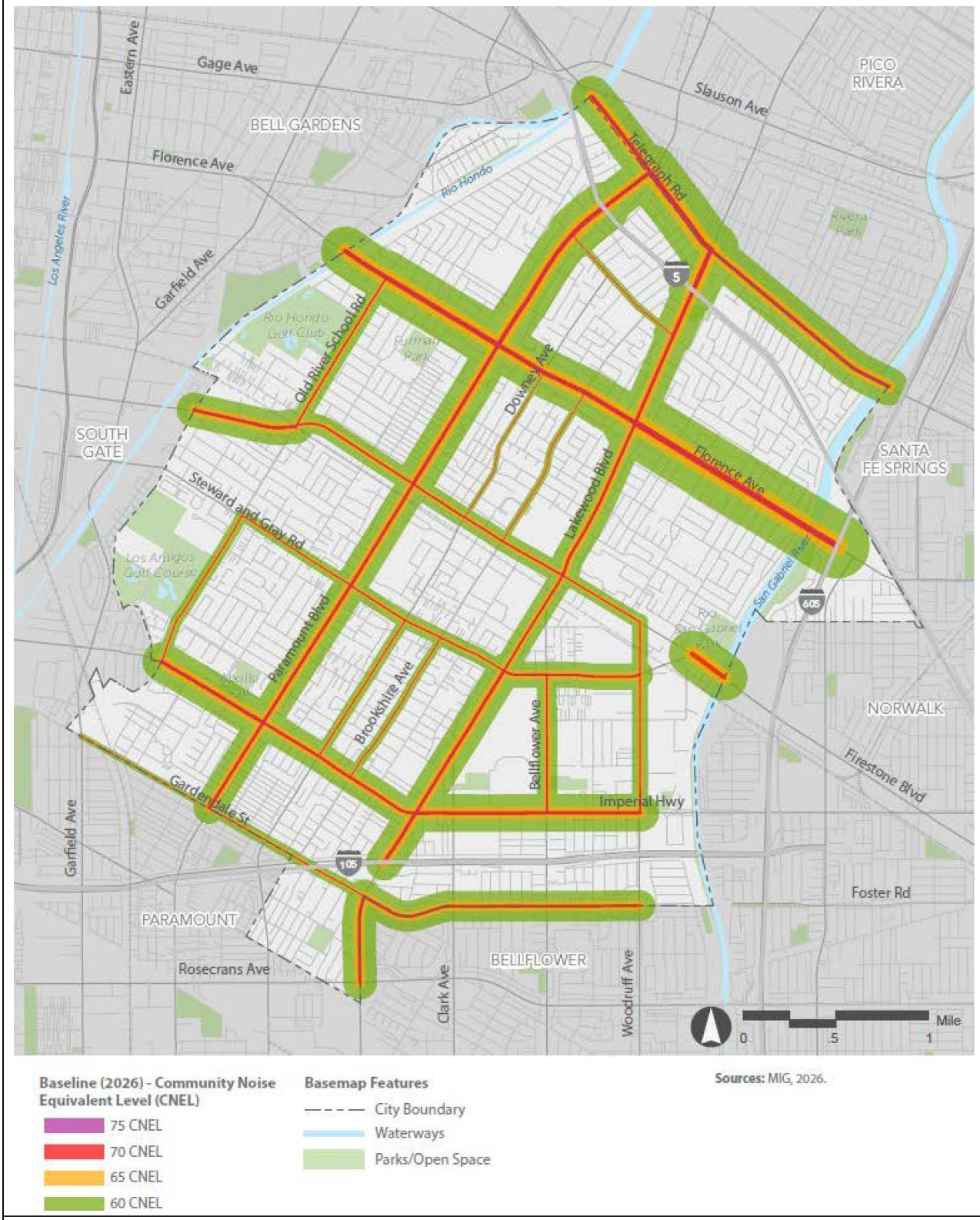
Year 2045 traffic noise levels are estimated to decrease by approximately 1.8 to 2.2 dBA due to a predicted decrease in the percentage of truck trips on Brookshire Avenue.

- Year 2026 traffic noise levels along the modeled segment of Gallatin Road are estimated to be approximately 65 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, commercial, and school land uses are present along Gallatin Road. The estimated Year 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for commercial and school uses and within the Conditionally Acceptable land use designation for residential uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by approximately 1.6 dBA due to a predicted decrease in the percentage of truck trips on Gallatin Road.
- Year 2026 traffic noise levels along the modeled segments of Stewart and Gray Road are approximately 67 CNEL to 70 CNEL at a distance of 50 feet from the center of the roadway. Low-density and medium-density residential, mixed-used, commercial, manufacturing, and public uses are present along Stewart and Gray Road. The estimated Year 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for commercial and manufacturing land uses, within the Conditionally Acceptable land use designation for residential uses between Old River School Road and Lakewood Boulevard, and Normally Unacceptable land use designation for residential uses between Lakewood Boulevard and Woodruff Avenue, mixed-use, and public land uses identified in the City's existing General Plan. Year 2045 traffic noise levels are estimated to decrease by approximately 1.5 to 1.7 dBA due to predicted decrease in the percentage of truck trips on Stewart and Gray Road.
- Year 2026 traffic noise levels along the modeled segments of Gardendale Street are approximately 64 CNEL to 67 CNEL at a distance of 50 feet from the center of the roadway. Low-density, low-medium density, and medium-density residential, commercial, manufacturing, mixed-use, and school land uses are present along Gardendale Street. The estimated Year 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for commercial, manufacturing, school, and medium density residential land uses identified in the City's existing General Plan and within the Conditionally Acceptable land use designation for low density residential and mixed-use land uses. Year 2045 traffic noise levels are estimated to decrease by approximately 1.7 to 1.8 dBA due to predicted decrease in the percentage of truck trips on Gardendale Street.
- Year 2026 traffic noise levels along the modeled segments of Foster Road are approximately 71 CNEL at a distance of 50 feet from the center of the roadway. Low-density and low-medium density residential, commercial, open space, and school land uses are present along Foster Road. The estimated Year 2026 traffic noise levels are within the Conditionally Acceptable land use compatibility designation for commercial land uses identified in the City's existing General Plan and within the Normally Unacceptable land use designation for residential, open space, and school land uses. Year 2045 traffic noise levels are estimated to decrease by approximately 1.5 dBA due to predicted decrease in the percentage of truck trips on Foster Road.
- Year 2026 traffic noise levels along the modeled segments of Bellflower Boulevard are approximately 70 CNEL at a distance of 50 feet from the center of the roadway. Medium-density residential, commercial, manufacturing, mixed-use, and open space land uses are present along Bellflower Boulevard. The estimated 2026 traffic noise levels are within the Normally Acceptable land use compatibility designation for commercial, manufacturing,

and open space land uses and within the Conditionally Acceptable land use designation for residential and mixed-use land uses. Year 2045 traffic noise levels are estimated to decrease by approximately 2.4 dBA due to predicted decrease in the percentage of truck trips on Bellflower Avenue.

Noise contours for existing traffic noise levels (Year 2026) are shown in Exhibit 4.13-2 below.

Exhibit 4.13-2
Existing Traffic Noise Contours (2026)



Source: MIG 2026

Railroads

The Planning Area contains three railroad lines: the Light Rail Metro C Line (Green Line), along Interstate 105 (I-105), the Union Pacific freight rail line that runs parallel along Firestone Boulevard, and the Union Pacific freight rail line in the southwest corner of the City located within the Rancho Los Amigos South Campus Specific Plan's planning area. Railroad noise is generated from a variety of sources. The locomotive engine's propulsion system generates noise from mechanical and electrical systems as well as exhaust pipes. The interaction of wheels with the track produces various noises, particularly where the wheel encounters a flaw or defect along smooth wheel / track surfaces. Finally, train horns and railroad crossing warning devices generate short but loud (up to 105 dBs for train horns) alerts pursuant to federal safety regulations.

The Metro C Line runs west-east through the southern portion of the Planning Area and is in the center median of I-105. It carries approximately 120 trains per day (LA Metro 2026). Based on ambient noise measurements in the vicinity of the Metro C Line made in May 2026 (see ST-02A in 'Measured Ambient Noise Levels'), trains traveling the Metro C Line produce a noise level of approximately 75 dBA L_{eq} at 200 feet from the center of the rail line. These noise levels were consistent with the measured freeway traffic noise levels observed during the monitoring at ST-02A, which resulted in an L_{eq} of 73.4 dBA and L_{max} of 89.5 dBA.

The rail line running parallel along Firestone Boulevard (i.e., Union Pacific's Patata Industrial Lead branch line) and the rail line in the southwest corner of the City (i.e., the San Pedro branch line) are used by freight trains. The Patata Industrial Lead branch line rail line runs northwest-southeast through the central portion of the Planning Area, and is located at grade level. There are at-grade rail crossings located within the Planning Area at the intersection of Stewart and Gray Road, Woodruff Avenue, Lakewood Boulevard, Brookshire Avenue, Downey Avenue, Paramount Boulevard, and Old River School Road/Firestone Boulevard. The San Pedro branch line is also located at grade level, and has an at-grade rail crossing along the southern boundary of the Planning Area where the rail line intersects with Gardendale Street.

Airports and Heliports

The closest airport, Compton/Woodley Airport, is located approximately 5 miles southwest of the Planning Area. Additionally, the Planning Area is located approximately two miles east of the Saint Francis Medical Center heliport, and two miles west of the Norwalk Sheriff Station heliport. Downey is also in the flight path for Los Angeles International Airport (LAX), which is located 12 miles west of the Planning Area.

Stationary Sources

The city of Downey has a large number of stationary noise sources located within its boundaries. These noise sources are typical of those found in an urban setting. Noises associated with industrial and commercial operations include truck traffic and machinery noise. The existing General Plan notes that there are issues with stationary noise sources from industrial and commercial activities near residential or other sensitive uses.

Noise Sensitive Receptors

Noise-sensitive receptors are buildings or areas where unwanted sound or increases in sound may have an adverse effect on people or land uses. Residential areas, motels and hotels, hospitals and health care facilities, school facilities, and parks are examples of noise receptors

that could be sensitive to changes in existing environmental noise levels. In addition to existing sensitive noise receptors, the proposed GPU would add new residential land uses to the Planning Area.

4.13.3 REGULATORY FRAMEWORK

Federal

Federal Transit Administration (FTA)

The FTA's 2018 Transit Noise and Vibration Impact Assessment Manual provides guidance on when a construction noise assessment may be needed for a project, whether a qualitative or quantitative noise assessment may be required, and what construction-related noise impact criteria may be appropriate for a project. The FTA guidance identifies that a construction noise assessment may not be required for small projects such as small building construction that is similar in scale to surrounding development. The guidance also identifies that a qualitative assessment may be required for projects with less than one month of construction time in a noise sensitive area, while a quantitative assessment may be required for projects more than one month of construction in noise sensitive areas or if particularly noise equipment will be used. Finally, for quantitative assessments, the FTA manual recommends construction noise impact criteria, expressed in dBA, that vary based on the type of construction noise assessment conducted for a project. The FTA's construction noise impact criteria are summarized in 4.13-5.

Table 4.13-5: FTA Construction Noise Criteria

Land Use	General Analysis Criteria(A)		Detailed Analysis Criteria(B)		
	Daytime $L_{eq(1hr)}$	Nighttime $L_{eq(1hr)}$	Daytime $L_{eq(8hr)}$	Nighttime $L_{eq(8hr)}$	30-Day Average L_{dn}
Residential	90 dBA	80 dBA	80 dBA	70 dBA	75 dBA
Commercial	100 dBA	100 dBA	85 dBA	85 dBA	80 dBA(C)
Industrial	100 dBA	100 dBA	90 dBA	90 dBA	85 dBA(C)

Source: FTA 2018, Table 7-2 and Table 7-3

(A) A general analysis is warranted for projects in an early assessment stage when the equipment roster and schedule are undefined and only a rough estimate of construction noise levels is practical.

(B) A detailed analysis is warranted when many noise sensitive sites are adjacent to a construction project or where contractors are faced with stringent local ordinances or heightened public concerns expressed in early outreach efforts.

(C) Standard is $L_{eq(24hr)}$ instead of L_{dn}.

The FTA's 2018 Transit Noise and Vibration Impact Assessment Manual also sets groundborne vibration annoyance criteria for general assessments. The criteria vary by the type of building being subjected to the vibrations, and the overall number of vibration events occurring each day. Category 1 buildings are considered buildings where vibration would interfere with operation, even at levels that are below human detection. These include buildings with sensitive equipment, such as research facilities and recording studios. Category 2 buildings include residential lands and buildings where people sleep, such as hotels and hospitals. Category 3 buildings consist of institutional land uses with primarily daytime uses. The FTA standards vary for "frequent" events (occurring more than 70 times per day, such as a rapid transit project), "occasional" events

(occurring between 30 to 70 times per day), and "infrequent" events (occurring less than 30 times per day). The FTA's vibration annoyance criteria are summarized in Table 4.13-6.

Table 4.13-6: FTA Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category/Type	Impact Level (Velocity Decibels)		
	Frequent Events	Occasional Events	Infrequent Events
Category 1 – Buildings with sensitive equipment	65 VdB	65 VdB	65 VdB
Category 2 – Buildings where people sleep	72 VdB	75 VdB	80 VdB
Category 3 – Institutional buildings	75 VdB	78 VdB	83 VdB

Source: FTA 2018

State

Assembly Bill 1307

Assembly Bill (AB) 1307 was signed into law in September 2023. The bill adds new Section 20185 to the Public Resources Code, establishing that, for the purposes of CEQA, 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." AB 1307 defines residential or mixed-use housing projects to mean a project consisting of residential uses only or a mix of residential and non-residential uses, with at least two-thirds of the square footage of the development designated for residential uses.

California Building Standards Code

The California Building Standards Code is contained in Title 24 of the California Code of Regulations and consists of 11 different parts that set various construction and building requirements. Part 2, California Building Code, Section 1206, Sound Transmission, establishes sound transmission standards for interior walls, partitions, and floor/ceiling assemblies between adjacent dwelling units and sleeping units and between dwelling units and sleeping units and adjacent public areas. In summary, this code section requires:

- **Airborne Sound:** Walls, partitions, and floor-ceiling assemblies separating dwelling units and sleeping units from each other or from public or service areas shall have a sound transmission class (STC) of not less than 50 if laboratory tested or have a Normalized Isolation Class of not less than 45 if field tested (Section 1206.2).
- **Structure-borne Sound:** Floor-ceiling assemblies between dwelling units and sleeping units or between a dwelling unit or sleeping unit and a public or service area within the structure shall have an impact insulation class rating of not less than 50 if laboratory tested or have a Normalized Impact Sound Rating of not less than 45 if field tested. Impact sound insulation is not required for floor-ceiling assemblies over nonhabitable rooms or spaces not designed to be occupied such as garages, mechanical rooms, and storage areas (Section 1206.3).

- **Allowable Interior Noise Levels:** Interior noise levels attributable to exterior noise sources shall not exceed 45 DNL or CNEL (as set by the local General Plan) in any habitable room.[2].

The California Green Building Standards (CALGreen) Code is Part 11 of the California Building Standards Code. Chapter 5, Nonresidential Mandatory Measures, Section, establishes acoustical control requirements for non-residential buildings.[3] In summary, this code section requires:

- **Prescriptive Exterior Noise Transmission Control:** Wall and roof-ceiling assemblies that are part of the building envelope within the 65 CNEL noise contour of an airport or within the 65 DNL or 65 CNEL noise contour of a freeway, expressway, railroad, industrial source, or fixed-guideway source, shall meet a composite STC rating of at least 50 (with exterior windows a minimum STC of 40) or a composite Outdoor-Indoor Sound Transmission Class (OITC) of no less than 40 (with exterior windows a minimum OITC of 30) (Section 5.507.4.1). Buildings exposed to a noise of 65 dB L_{eq} (1-hour) during any hour of operation shall have wall and roof-ceiling assemblies meeting a composite STC of at least 45 (or OITC of at least 35), with exterior windows a minimum STC of 40 (or OITC 30) (Section 5.507.4.1.1).
- **Performance Method Exterior Noise Transmission Control:** For buildings located within the 65 DNL, 65 CNEL, or 65 db L_{eq} (1-hour) areas described above, wall and roof-ceiling assemblies shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an L_{eq} (1-hour) of 50 dBA in occupied areas during any hour of operation (Section 5.507.4.2). This requirement shall be documented by preparing an acoustical analysis documenting interior sound levels prepared by personnel approved by the architect or engineer of record.
- **Interior Sound Transmission:** Wall and floor assemblies separating tenant spaces and tenant spaces and public spaces shall have an STC of at least 40 (Section 5.507.4.3).

<u>California Department of Transportation (Caltrans)</u>

The California Department of Transportation's (Caltrans) Transportation and Construction Vibration Guidance Manual provides a summary of vibration criteria that have been reported by researchers, organizations, and governmental agencies (Caltrans 2020). Chapters Six and Seven of this manual summarize vibration detection and annoyance criteria from various agencies and provide Caltrans' recommended guidelines and thresholds for evaluating potential vibration impacts on buildings and humans from transportation and construction projects. These thresholds are summarized in Table 4.13-7 and Table 4.13-8.

[2] Title 24, Part 2, Section 202, Definitions, defines "habitable space" to be "space for living, sleeping, eating, or cooking." Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

[3] Section 5.507.4 excepts buildings with few or no occupants or where occupants are not likely to be affected by exterior noise from the non-residential acoustical control requirements, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures, and utilities buildings.

Table 4.13-7
Caltrans' Vibration Threshold Criteria for Building Damage

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.12 to 0.2
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
Source: Caltrans 2020		

Table 4.13-8
Caltrans' Ground-Borne Vibration Impact Criteria for Human Response

Human Response	Maximum PPV (in/sec)	
	Transient	Continuous
Slightly perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severe/Disturbing	2.0	0.7 (at 2 Hz) to 0.17 (at 20 Hz)
Very disturbing	--	3.6 (at 2 Hz) to 0.4 (at 20 Hz)
Source: Caltrans 2020		

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to noise that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

City of Downey Municipal Code

The City of Downey Municipal Code Article IV Public Welfare, Morals, and Policy, Chapter 6, Unnecessary Noises, establishes the following:

- **Section 4600.1 Noises: Prima Facie Violations.** Any noise in excess of 100 decibels at a point 25 feet or more from the source of the noise shall be deemed to be a prima facie violation of the provisions of Section 4600 of this chapter.
- **Section 4600.2 Noises: Equipment and Machinery.**
    - (a)No person shall use, operate, or permit to be used or operated within any R-1, R-2, or R-3 Zone, as defined in Chapter 1 of Article IX of this code, any power tool, machine, or equipment, or any other tool, machine, or equipment, between the hours of 10:00 p.m. and 7:00 a.m. in such a manner that the noise therefrom disturbs or interferes with the peace, comfort, or welfare of the neighboring inhabitants.
    - (b) No person shall use, operate, or permit to be used or operated within any commercial (C) or manufacturing (M) Zone, as defined in Chapter 1 of Article IX of this code, which is within 300 feet of a residential use, any power tool, machine, or equipment, or any other tool, machine, or equipment, between the hours of 10:00

p.m. and 7:00 a.m. in such a manner that the noise therefrom disturbs or interferes with the peace, comfort, or welfare of the neighboring residential inhabitants.

- **Section 4606 Noise Regulations. 4606.1 Declaration of Policy.** The Council finds and declares that noise is a major source of environmental pollution which represents a threat to the serenity and quality of life in the City. Excess noise often has an adverse physiological and psychological effect on human beings, thus contributing an economic and social loss to the community. Accordingly, it is the policy of the Council to establish standards for noise level limits for the various time periods and areas within the City. Noise in excess of the limits provided in this chapter shall constitute a public nuisance.
- **Section 4606.3. Maximum Permissible Noise Levels by Sound Sources Across Property Boundaries.**
    - (a) All activities to which this chapter is applicable shall be conducted in such a manner that any noise produced shall not create a disturbance. The maximum permissible sound pressure level measured at the property boundary of any land use in Subsection (b) of this section from any noise source not operating on a public right-of-way shall constitute prima facie evidence of a public nuisance when such noise level exceeds five db(A) above the ambient noise level at any period during the course of a 24 hour day.
    - (b) If the alleged noise source is of a continuous nature and cannot reasonably be discontinued for a time period wherein the ambient noise level can be determined, the maximum permissible steady noise level by sound sources across the property boundary of any land use cited below may be less, but not greater than the noise levels replicated below in Table 4.13-9.
- **Section 9536. Limitations On Construction Noise.**

- (a) Construction on private property shall be limited to 7:00 A.M. to 7:00 P.M Monday through Saturday, and construction shall be prohibited on Sundays and federal holidays when a construction site is located within 500 feet of a residential use. All other construction shall adhere to Section 4606 of the DMC. Extended construction hours may be permitted, subject to a Temporary Use of Land Permit.

Table 4.13-9: Municipal Code Noise Limits

Land Use	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
Residential	55 db(A)	45 db(A)
Commercial	65 db(A)	65 db(A)
Manufacturing	70 db(A)	70 db(A)

Notes:

(A) If any parcel of real property is developed and used for multiple land uses, the lower land use noise level standard shall apply.

(B) In the hours between 7:00 a.m. to 10:00 p.m., the noise levels may be adjusted by the inclusion of the following factors when applicable:
(1) Noise source operated 12 minutes per hour or less + 5 db(A)
(2) Noise source operated three minutes per hour or less + 10 db(A)
(3) Noise source operated one minute per hour or less + 15 db(A)

(C) Impulsive sounds, pure tone, or sounds with a cyclically varying amplitude shall be considered a public nuisance when such noises are at a sound pressure level of five db(A) less than those listed in this table, with the inclusion of the corrective factors when applicable.

- **Section 4606.4 Exemptions.** Any activity to the extent preempted from regulation by State or Federal law, bells, chimes, or carillons while being used in conjunction with religious services, emergency energy release devices, emergency work authorized by the City, special events authorized by the City, unamplified human voice, and warning systems used to protect the public health, safety, or welfare are exempted from the standards in Chapter 6: Unnecessary Noise.
- **Section 4606.5 Construction Projects.** Construction, repair or remodeling equipment and devices and other related construction noise sources shall be exempted from the provisions of this chapter provided a valid permit for such construction, repair, or remodeling shall have been obtained from the City. In any circumstance other than emergency work, no repair or remodeling shall take place between the hours of 9:00 p.m. of one day and 7:00 a.m. of the following day, and no repair or remodeling shall exceed 85 db(A) across any property boundary at any time during the course of a 24-hour day.

4.13.4 SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of CEQA, the project has the potential to result in significant impacts if it would result in:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

B. Generation of excessive groundborne vibration or groundborne noise levels; or

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, expose people residing or working in the project area to excessive noise levels.

4.13.5. IMPACTS AND MITIGATION MEASURES

This section describes potential noise and vibration impacts associated with implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Existing Noise Regulations

Impact NOISE-1 – Would the project result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Analysis of Impacts

Project implementation would involve construction that would result in temporary noise generation, primarily from the use of heavy-duty construction equipment.

The project allows for more high-density residential developments and institutional, commercial, industrial development, and allows for an increase in the overall amount of development (both

residential units and non-residential square footage) within the Planning Area. As described in Chapter 3, Project Description (see Table 3-3), the proposed GPU is estimated to increase residential dwelling units (+10,350 units), hotel space (+300 units), commercial building space (+1,172,613 square feet), office uses (+466,064 square feet), public facilities (+424,250 square feet), industrial uses (+ 535,700 square feet), and medical uses (+ 96,300 square feet) in the Planning Area compared to existing conditions. The proposed change in land uses, which would occur over an approximately 20-year period, is expected to increase population (+31,483 residents) and jobs (+6,649 jobs) in the Planning Area.

Future individual construction and development projects would occur throughout the Planning Area over the approximately 20-year span of the GPU. These projects could occur on any property (based on land uses allowed by the GPU) and could affect existing or future land uses, including areas near potentially sensitive residential, commercial, park, or school land uses. The specific timing location and scale of future development is unknown but would include the full range of construction activities including: staging, demolition, site preparation (e.g., land clearing), fine and mass grading, utility trenching, foundation work (e.g., excavation, pouring concrete pads, drilling for piers), material deliveries (requiring travel along City roads), building construction (e.g., framing, concrete pouring, welding), paving, coating application, and site finishing work. In general, these activities would involve the use of worker vehicles, delivery trucks, dump trucks, and heavy-duty construction equipment such as (but not limited to) backhoes, tractors, loaders, graders, excavators, rollers, cranes, material lifts, generators, and air compressors. These types of construction activities would generate noise and vibration from the following sources:

- Heavy equipment operations at different work areas. Some heavy equipment would consist of mobile equipment such as a loader and excavator that would move around work areas; other equipment would consist of stationary equipment (e.g., cranes or material hoists/lifts) that would generally operate in a fixed location until work activities are complete. Heavy equipment generates noise from engine operation, mechanical systems, and components (e.g., fans, gears, propulsion of wheels or tracks), and other sources such as back-up alarms. Mobile equipment generally operates at different loads, or power outputs, and produces higher or lower noise levels depending on the operating load. Stationary equipment generally operates at a steady power output that produces a constant noise level.
- Vehicle trips, including worker, vendor, and haul truck trips. These trips are likely to primarily occur on freeways such as I-105, I-605, I-710 and I-5 and on key arterial roadways like Paramount Boulevard, Florence Avenue, Firestone Boulevard, and Imperial Highway.

Table 4.13-10 presents the typical noise levels associated with the typical types of construction equipment that could be used in the Planning Area for future individual projects.

Table 4.13-10: Typical Construction Equipment Noise Levels (dBA)								
Equipment	Reference Noise Level at 50 Feet (L_{max})[A]	Percent Usage Factor[B]	Predicted Noise Levels (L_{eq}) at Distance[C]					
			50 Feet	100 Feet	200 Feet	300 Feet	400 Feet	500 Feet
Auger Drill Rig	85	0.2	78	72	66	62	60	58
Backhoe	80	0.4	76	70	64	60	58	56
Boring Jack Power Unit	80	0.5	77	71	65	61	59	57
Bulldozer	85	0.4	81	75	69	65	63	61
Compact roller	80	0.2	73	67	61	57	55	53
Compressor	80	0.4	76	70	64	60	58	56
Concrete Mixer	85	0.4	81	75	69	65	63	61
Crane	85	0.16	77	71	65	61	59	57
Delivery Truck	84	0.4	80	74	68	64	62	60
Excavator	85	0.4	81	75	69	65	63	61
Front End Loader	80	0.4	76	70	64	60	58	56
Generator	82	0.5	79	73	67	63	61	59
Horizontal Boring Hydraulic Jack	80	0.25	74	68	62	58	56	54
Impact Pile Driver (low)	95	0.2	88	82	76	72	70	68
Impact Pile Driver (high)	101	0.2	94	88	82	78	76	74
Man Lift	85	0.2	78	72	66	62	60	58
Paver	85	0.5	82	76	70	66	64	62
Pneumatic tools	85	0.5	82	76	70	66	64	62
Pumps	77	0.5	74	68	62	58	56	54
Roller	85	0.2	78	72	66	62	60	58
Scraper	85	0.4	81	75	69	65	63	61
Tractor	84	0.4	80	74	68	64	62	60
Vacuum Truck	85	0.4	81	75	69	65	63	61

Sources: Caltrans 2013 and FHWA 2017

(A) L_{max} noise levels based on manufacturer's specifications.

(B) Usage factor refers to the amount of time the equipment produces noise over the time period.

(C) *Estimate does not account for any atmospheric or ground attenuation factors. Calculated noise levels based on Caltrans, 2009: L_{eq} (hourly) = L_{max} at 50 feet – 20log (D/50) + 10log (UF), where: L_{max} = reference L_{max} from manufacturer or other source; D = distance of interest; UF = usage fraction or fraction of time period of interest equipment is in use.*

Construction noise impacts generally occur when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time. Demolition, site preparation, and grading phases typically result in the highest temporary noise levels due to the use of heavy-duty equipment such as bulldozers, excavators, graders, loaders, scrapers, and trucks. As shown in Table 4.13-10, the worst-case L_{eq} and L_{max} noise levels associated with the operation of typical construction equipment are predicted to be approximately 82 and 85 dBA, respectively, at a distance of 50 feet from the equipment operating area. At an active construction site, it is not uncommon for two or more pieces of construction equipment to operate at the same time and in close proximity. The concurrent operation of two or more pieces of construction equipment would result in noise levels of approximately 85 to 88 dBA at a distance of 50 feet from equipment

operating areas[4]. While not typical, noise levels for construction activities that require the use of an impact pile driver could reach 94 dBA at a distance of 50 feet from equipment operations.

The magnitude of each individual future project's temporary and periodic increase in ambient noise levels would be dependent upon a number of project-specific factors that are not known at this time, including: the amount and type of equipment being used; the distance between the area where equipment is being operated and the location of the specific land use or receptor where noise levels are being evaluated; the time of day construction activities are occurring; the presence or absence of any walls, buildings, or other barriers that may absorb or reflect sound waves; the total duration of the construction activities; and the existing ambient noise levels near construction areas. For example, a noise level of 85 dBA L_{max} would be similar to typical L_{max} levels measured throughout the Planning Area (see Table 4.13-4), but sustained L_{eq} levels of 85 dBA would be approximately 12 dBA to 16 dBA above daytime ambient conditions in industrial areas and along key roadways (e.g., ST-1, ST-2A, and ST-3 through ST-5), approximately 23 dBA to 32 dBA in residential areas and park areas (e.g., ST-2B and LT-1). Typically, sustained construction noise levels of 80 to 85 dBA or higher would require the implementation of construction noise control practices such as staging area restrictions (e.g., siting staging areas away from sensitive receptors), equipment controls (e.g., covered engines and use of electrical hook-ups instead of generators), and/or the installation of temporary noise barriers of sufficient height, size (length or width), and density to achieve targeted noise reductions. Construction noise controls, however, would be dependent on project-specific equipment characteristics and the extent to which construction activities would occur near noise-sensitive receptors and land uses.

The Downey Municipal Code Section 4606.5 (Construction Projects) limits the hours of construction, repair, and remolding activities from 7 AM to 9 PM and Section 9536 (Limitations on Construction Noise) further restricts hours of construction activities between 7 AM to 7 PM for projects on private property that are within 500 feet of residential uses, ensuring construction activities do not occur during the most sensitive time periods (e.g., evening and nighttime periods). Additionally, Section 4606.5 establishes a limit of 85 dBA across any property line at any time of the day for repair or remodeling projects, which would generally consist of less intense activities than construction work. As discussed above, the use of typical construction equipment is not anticipated to exceed 85 dBA at a distance of 50 feet. Furthermore, the proposed GPU contains policies designed to reduce construction noise levels. Policy N-2.1 (Construction and Operational Noise) would reduce construction noise by limiting the hours of construction, encouraging quieter construction equipment and practices, and enforcing noise standards, and Policy N.2-2 (Mixed-Use Development Noise) would require mixed-use projects to incorporate design and construction techniques that reduce noise and vibration between residential and non-residential uses. Lastly, Policy N-4.1 requires project-specific noise studies and mitigation.

Although future development under the GPU would result in construction activities that could temporarily increase ambient noise levels near sensitive receptors, such activity would occur in accordance with the City's existing Municipal Code requirements and proposed GPU policies and would not result in noise levels that exceed applicable standards. This impact is considered less than significant.

Level of Significance Before Mitigation

[4] As shown in Table 4.13-10, a single bulldozer provides a sound level of 81 dBA Leq at a distance of 50 feet; when two identical sound levels are combined, the noise level increases to 84 dBA Leq and when three identical sound levels are combined, the noise level increases to 86 dBA Leq. These estimates assume no shielding or other noise control measures are in place at or near the work areas.

Less than significant.

Mitigation Measures

None Required.

Impact NOISE-2 – Would the project result in generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Analysis of Impacts

Project implementation could have the potential to change the existing types and intensity of land uses within the Planning Area. These potential land use changes could increase the number of residents and employees. This possible increase in population and employment could lead to increased vehicle traffic on the local roadway system, which could result in traffic-related noise levels that pose land use compatibility issues or result in a substantial permanent increase in traffic-related noise levels throughout the Planning Area. Project implementation could also involve increases in stationary noise and other sources of noise within the Planning Area. These potential effects are evaluated below.

Increases in Traffic and Rail Noise Levels. The City contracted with a professional transportation consulting firm (Ganddini) to conduct travel demand modeling associated with the proposed GPU land use changes (Ganddini 2026); see Chapter 4.17, Transportation, and Appendix F). The travel demand modeling prepared for the GPU provides a sufficient level of detail to generally evaluate the potential future increases in traffic-related noise levels associated with projected growth.

Future 2045 GPU traffic noise levels were computed using the same methodology (TNM Version 3.2) and data sources used to calculate existing (Year 2026) and future (Year 2045) baseline traffic noise levels without the GPU (see Section 4.13.2), but with the traffic data for the Year 2045 with GPU condition.

Future transportation noise contours and the distances to the modeled transportation noise CNEL contours are shown in Table 4.13-11 and Exhibit 4.13-3. In addition, Table 4.13-12 summarizes the net change in Year 2045 ADT and traffic noise levels that would occur with implementation of the GPU. Refer to Appendix E for detailed transportation noise modeling results.

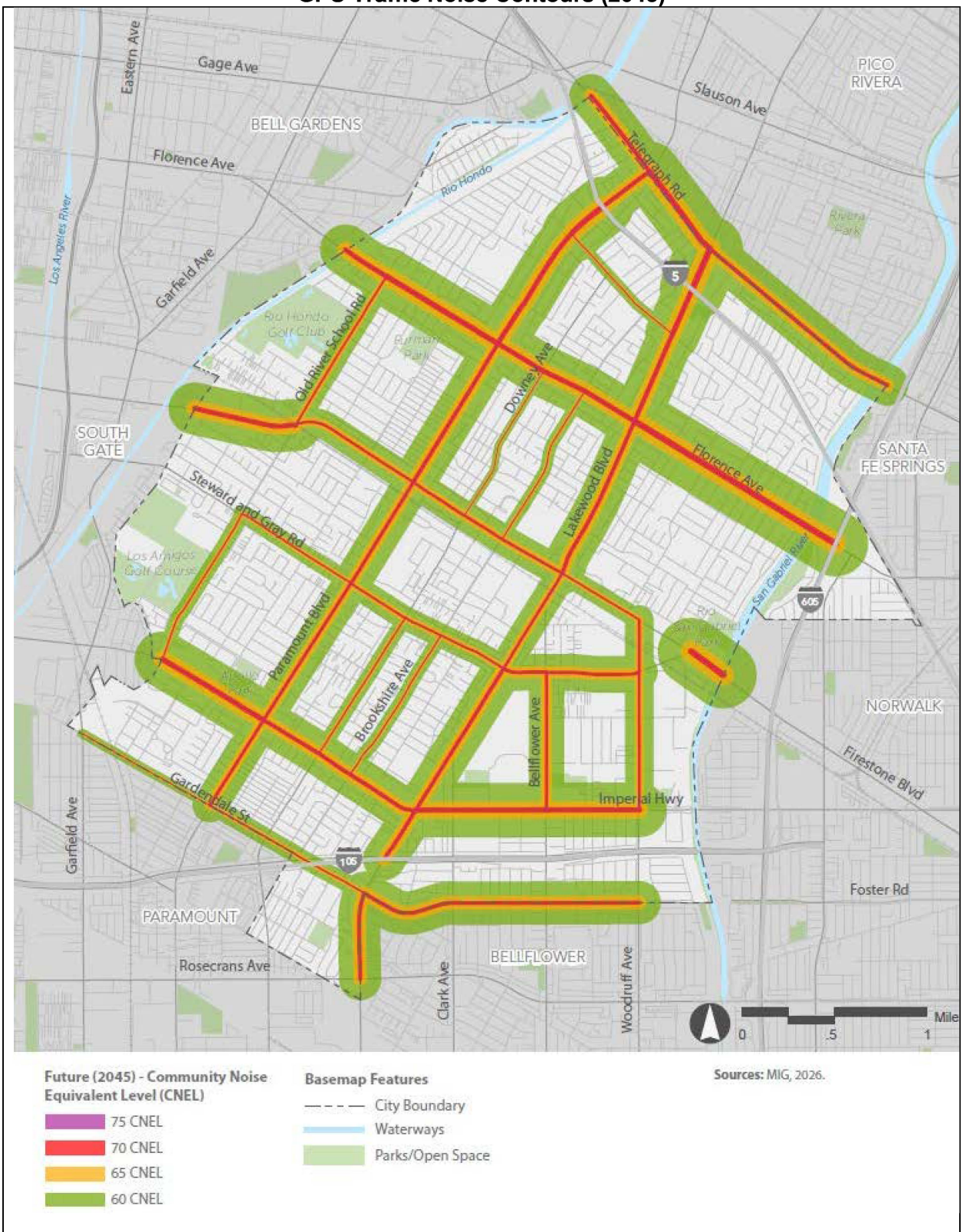
Table 4.13-11: City of Downey With GPU Transportation Noise Contour Distances (2045)

Road or Rail Segment	Predicted CNEL at 50 Feet (dBA)	CNEL Contour and Distance from Road Centerline in Feet			
		75	70	65	60
Paramount Blvd					
Telegraph Rd to I-5 Freeway	70.6	18	57	182	574
I-5 Freeway to Gallatin Rd	71.6	23	72	229	723
Gallatin Rd to Florence Ave	71.1	20	64	204	644
Florence Ave to Firestone Blvd	70.3	17	54	169	536
Firestone Blvd to Stewart & Gray Rd	69.6	14	46	144	456
Stewart & Gray Rd to Imperial Hwy	69.7	15	47	148	467
Imperial Hwy to Gardendale St	69.5	14	45	141	446

Table 4.13-11: City of Downey With GPU Transportation Noise Contour Distances (2045)					
Road or Rail Segment	Predicted CNEL at 50 Feet (dBA)	CNEL Contour and Distance from Road Centerline in Feet			
		75	70	65	60
Lakewood Blvd					
Telegraph Rd to I-5 Freeway	71.4	22	69	218	690
I-5 Freeway to Gallatin Rd	70.5	18	56	177	561
Gallatin Rd to Florence Ave	69.8	15	48	151	477
Florence Ave to Firestone Blvd	69.3	13	43	135	426
Firestone Blvd to Stewart & Gray Rd	68.2	10	33	104	330
Stewart & Gray Rd to Imperial Hwy	69.8	15	48	151	477
Imperial Hwy to I-105 Freeway	70.1	16	51	162	512
Foster Rd to Rosecrans Ave	69.8	15	48	151	477
Telegraph Rd					
City Limits to Paramount Blvd	70.6	18	57	182	574
Paramount Blvd to Lakewood Blvd	72	25	79	251	792
Lakewood Blvd to City Limits	70.3	17	54	169	536
Florence Ave					
City Limits to Old River School Rd	71.4	22	69	218	690
Old River School Rd to Paramount Blvd	71.8	24	76	239	757
Paramount Blvd to Lakewood Blvd	71.4	22	69	218	690
Lakewood Blvd to I-605 Freeway	72.7	29	93	294	931
Firestone Blvd					
City Limits to Old River School Rd	69.9	15	49	155	489
Old River School Rd to Paramount Blvd	67.6	9	29	91	288
Paramount Blvd to Lakewood Blvd	67.5	9	28	89	281
Lakewood Blvd to Woodruff Ave	66.1	6	20	64	204
Stewart & Gray Rd to City Limits	71.2	21	66	208	659
Stewart & Gray Rd					
Old River School Rd to Paramount Blvd	65.3	5	17	54	169
Paramount Blvd to Lakewood Blvd	66.6	7	23	72	229
Lakewood Blvd to Woodruff Ave	68.7	12	37	117	371
Imperial Hwy					
Old River School Rd to Paramount Blvd	70.4	17	55	173	548
Paramount Blvd to Lakewood Blvd	69.3	13	43	135	426
Lakewood Blvd to Woodruff Ave	70.3	17	54	169	536
Woodruff Ave					
Firestone Blvd to Imperial Hwy	66.6	7	23	72	229
Old River School Rd					
Florence Ave to Firestone Blvd	66.9	8	24	77	245
Stewart & Gray Rd to Imperial Hwy	65.2	5	17	52	166
Downey Ave					
Florence Ave to Firestone Blvd	61.8	2	8	24	76
Stewart & Gray Rd to Imperial Hwy	64.9	5	15	49	155
Brookshire Ave					
Florence Ave to Firestone Blvd	63	3	10	32	100
Stewart & Gray Rd to Imperial Hwy	64	4	13	40	126
Gallatin Rd					

Table 4.13-11: City of Downey With GPU Transportation Noise Contour Distances (2045)					
Road or Rail Segment	**Predicted CNEL at 50 Feet (dBA)**	**CNEL Contour and Distance from Road Centerline in Feet**			
		75	**70**	**65**	**60**
Paramount Blvd to Lakewood Blvd	63.1	3	10	32	102
Gardendale St					
Garfield Ave to Paramount Blvd	62.6	3	9	29	91
Paramount Blvd to Lakewood Blvd	65.3	5	17	54	169
Foster Rd					
Lakewood Blvd to Woodruff Ave	69.4	14	44	138	435
Bellflower Ave					
Stewart & Gray Rd to Imperial Hwy	67.6	9	29	91	288
Source: MIG, 2026 (see Appendix E) *(A) CNEL values for road segments are estimated 50 feet from the center of the nearest travel direction.*					

Exhibit 4.13-3
GPU Traffic Noise Contours (2045)



Source: MIG 2026

Table 4.13-12: Future (2045) Traffic Noise Levels With and Without the GPU						
Road / Segment	Year 2045 No GPU		Year 2045 With GPU		Net Change	
	ADT	CNEL[(A)]	ADT	CNEL[(A)]	ADT	CNEL
Paramount Blvd						
Telegraph Rd to I-5 Freeway	35,400	70.5	36,200	70.6	800	0.1
I-5 Freeway to Gallatin Rd	43,600	71.5	44,800	71.6	1,200	0.1
Gallatin Rd to Florence Ave	36,900	71.1	37,200	71.1	300	0.0
Florence Ave to Firestone Blvd	33,700	70.4	34,000	70.3	300	-0.1
Firestone Blvd to Stewart & Gray Rd	28,200	69.5	29,500	69.6	1,300	0.1
Stewart & Gray Rd to Imperial Hwy	29,900	69.5	31,300	69.7	1,400	0.2
Imperial Hwy to Gardendale St	26,800	69.4	28,000	69.5	1,200	0.1
Lakewood Blvd						
Telegraph Rd to I-5 Freeway	47,900	71.3	49,100	71.4	1,200	0.1
I-5 Freeway to Gallatin Rd	41,100	70.6	40,300	70.5	-800	-0.1
Gallatin Rd to Florence Ave	32,300	69.9	32,300	69.8	0	-0.1
Florence Ave to Firestone Blvd	29,600	69.4	29,600	69.3	0	-0.1
Firestone Blvd to Stewart & Gray Rd	19,700	67.9	21,400	68.2	1,700	0.3
Stewart & Gray Rd to Imperial Hwy	31,700	69.6	34,100	69.8	2,400	0.2
Imperial Hwy to I-105 Freeway	31,600	69.9	33,900	70.1	2,300	0.2
Foster Rd to Rosecrans Ave	30,800	69.9	30,800	69.8	0	-0.1
Telegraph Rd						
City Limits to Paramount Blvd	23,900	70.6	23,900	70.6	0	0.0
Paramount Blvd to Lakewood Blvd	31,200	72.0	31,200	72.0	0	0.0
Lakewood Blvd to City Limits	27,700	70.3	27,700	70.3	0	0.0
Florence Ave						
City Limits to Old River School Rd	42,400	71.3	42,900	71.4	500	0.1
Old River School Rd to Paramount Blvd	45,200	71.8	45,900	71.8	700	0.0
Paramount Blvd to Lakewood Blvd	41,700	71.3	42,800	71.4	1,100	0.1
Lakewood Blvd to I-605 Freeway	38,700	72.4	41,200	72.7	2,500	0.3
Firestone Blvd						
City Limits to Old River School Rd	49,200	69.8	49,800	69.9	600	0.1
Old River School Rd to Paramount Blvd	33,200	67.4	34,300	67.6	1,100	0.2
Paramount Blvd to Lakewood Blvd	31,400	67.4	31,900	67.5	500	0.1
Lakewood Blvd to Woodruff Ave	19,300	65.7	21,200	66.1	1,900	0.4
Stewart & Gray Rd to City Limits	46,400	71	47,600	71.2	1,200	0.2
Imperial Hwy						
Old River School Rd to Paramount Blvd	37,700	70.3	37,700	70.4	0	0.1
Paramount Blvd to Lakewood Blvd	31,900	69.2	31,900	69.3	0	0.1
Lakewood Blvd to Woodruff Ave	36,200	70.3	36,200	70.3	0	0.0
Woodruff Ave						
Firestone Blvd to Imperial Hwy	17,700	66.3	18,800	66.6	1,100	0.3
Old River School Rd						
Florence Ave to Firestone Blvd	18,300	66.9	18,300	66.9	0	0.0
Stewart & Gray Rd to Imperial Hwy	12,400	65.2	12,400	65.2	0	0.0
Downey Ave						
Florence Ave to Firestone Blvd	11,100	61.8	11,100	61.8	0	0.0
Stewart & Gray Rd to Imperial Hwy	14,100	64.9	14,100	64.9	0	0.0
Brookshire Ave						

Table 4.13-12: Future (2045) Traffic Noise Levels With and Without the GPU						
Road / Segment	**Year 2045 No GPU**		**Year 2045 With GPU**		**Net Change**	
	ADT	**CNEL(A)**	**ADT**	**CNEL(A)**	**ADT**	**CNEL**
Florence Ave to Firestone Blvd	14,700	63.0	14,700	63.0	0	0.0
Stewart & Gray Rd to Imperial Hwy	13,400	64.0	13,400	64.0	0	0.0
Gallatin Rd						
Paramount Blvd to Lakewood Blvd	10,500	63.2	10,500	63.1	0	-0.1
Stewart & Gray Rd						
Old River School Rd to Paramount Blvd	16,700	65.3	16,700	65.3	0	0.0
Paramount Blvd to Lakewood Blvd	23,200	66.6	23,200	66.6	0	0.0
Lakewood Blvd to Woodruff Ave	27,100	68.7	27,600	68.7	500	0.0
Gardendale St						
Garfield Ave to Paramount Blvd	11,300	62.6	11,300	62.6	0	0.0
Paramount Blvd to Lakewood Blvd	21,600	65.2	21,600	65.3	0	0.1
Foster Rd						
Lakewood Blvd to Woodruff Ave	33,300	69.4	33,400	69.4	100	0.0
Bellflower Ave						
Stewart & Gray Rd to Imperial Hwy	22,000	67.6	22,000	67.6	0	0.0

Source: MIG, 2026 (see Appendix E) and Ganddini 2026
(A) CNEL values for road segments are estimated 50 feet from the center of the nearest travel direction

As shown in Table 4.13-12, the results of the traffic noise modeling indicate that traffic noise levels within the Planning Area would continue to be highest along major travel corridors such as Paramount Boulevard, Lakewood Boulevard, Florence Avenue, Firestone Boulevard, and Imperial Highway, as well as along corridors in industrial areas that would have a higher percentage of truck traffic, such as Telegraph Road. All modeled road segments would exceed the 60 CNEL land use compatibility level established as Normally Acceptable in the proposed GPU for low density residential and the majority of modeled segments[5] would exceed the 65 CNEL land use compatibility level established as Normally Acceptable for multi-family residential, mixed-use, and lodging. Approximately 38% of road segments would exceed the 70 CNEL standard established as Conditionally Acceptable for residential, mixed-use, and lodging, and Normally Acceptable for schools, libraries, religious institutions, hospitals, and parks.

Traffic noise modeling indicates the GPU would not increase traffic noise levels by more than 0.4 dBA, as compared to future 2045 baseline conditions on any modeled roadway segment. Additionally, over half of roadways (53%) would experience no change or a slight decrease (i.e., -0.1 dBA) in noise levels. The GPU, therefore, would not substantially increase traffic volumes or traffic noise levels along roadways. This impact is considered a less than significant impact.

As discussed above, the proposed GPU would not result in a significant increase in traffic noise levels in the Planning Area. This impact is considered less than significant.

Increases in Stationary and Other Sources of Noise. Stationary and other sources of noise in the Planning Area include, but are not limited to, landscape and building maintenance activities, stationary mechanical equipment (e.g., pumps, generators, HVAC units), garbage collection activities, commercial and industrial activities, and other stationary and area sources such as people's voices, amplified music, and public address systems.

[5] Downey Avenue, Brookshire Avenue, Gallatin Road, and part of Gardendale Street were the only modeled roadways that would not exceed the 65 CNEL standard.

Noise generated by residential or commercial uses is generally short-term and intermittent. Industrial uses may generate noise on a more continual basis due to the types of their activities. The GPU would increase the number of residential dwelling units, accessory units, commercial development, and industrial development within the Planning Area, and introduce a mixed-use development designation. Mixed-used development, in which residential and commercial uses are integrated into a single development project, tend to have higher noise levels associated with the mix of land uses contained within them. Additionally, higher density and an overall increase in development could also contribute to higher noise levels. Future planned development could result in new stationary and area sources as well as exposure of new sensitive land uses to existing stationary and area sources.

The City's Municipal Code Section 4600.2 (Noises: Equipment and Machinery) regulates equipment and machinery by restricting the hours of use for tools, machines, or equipment that causes a disturbance in residential zones, or in commercial and manufacturing zones within 300 feet of a residential use. Additionally, Section 4606.3 sets a maximum noise level at a property boundary of any residential, commercial, or manufacturing land use of five dBA above ambient noise levels, or 55 dBA between 7AM and 10 PM and 45 dBA between 10 AM and 7 AM for residential land uses, and 65 dBA for commercial uses and 70 dBA for manufacturing land uses at any time.

Additionally, the proposed GPU contains policies for reducing noise levels from stationary sources. Policy N-2.3 (Industrial Noise Near Residential Areas) would require noise control measures, including equipment enclosures, operational restrictions, and buffering through structural barriers and would promote site design and building techniques to reduce noise exposure at residential uses from adjacent industrial land uses. Policy N-3.2 (Non-Residential Noise Controls) would reduce noise from non-residential uses by limiting operational hours, loading activities, and equipment placement at non-residential uses located near noise-sensitive land uses. The proposed GPU would also reduce exposure using noise barriers, site and building design strategies, and buffers (see Policies N-3.3: Hospital Noise Environments, N-3.4: Residential Noise Environments, N-3.5: Sensitive Uses from Freeway Noise, N-3.6: Infrastructure and Design for Noise Reduction, and N-3.7: Multi-Benefit Infrastructure and Site Design). Multiple policies (e.g., Policy N-3.1: Noise-Sensitive Uses, Policy N-3.3: Hospital Noise Environments, Policy N-4.1: Noise in Development Review, Policy N-4.2: Noise Analysis, Policy N-4.3: Noise Mitigation, and Policy N-4.4: Noise Planning for Redevelopment and Infill) would reduce exposure to stationary and other sources by considering noise in planning and siting and reducing noise conflicts. Future stationary sources would comply with City standards, and therefore would not expose people to a substantial permanent increase in noise levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Ground-borne Vibration and Noise Levels

Impact NOISE-3– Would the project result in generation of excessive groundborne noise levels?

Analysis of Impacts

Temporary Construction Vibration Levels. Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Vibration generated by construction equipment spreads through the ground and diminishes with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and at high levels can cause sleep disturbance in places where people normally sleep or annoyance in buildings that are primarily used for daytime functions and sleeping (e.g., a hospital). Ground vibration can also potentially damage the foundations and exteriors of existing structures even if it does not result in a negative human response. Pile drivers and other pieces of high-impact construction equipment are generally the primary cause of construction-related vibration impacts. The use of such equipment is generally limited to sites where there are extensive layers of very hard materials (e.g., compacted soils, bedrock) that must be loosened or penetrated to achieve grading and foundation design requirements. The need for such methods is usually determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with foundation design recommendations and the construction methods needed to safely permit development of a site.

Construction equipment and activities are categorized by the nature of the vibration they produce. Equipment or activities typical of continuous vibration include excavation equipment, static compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of transient (single-impact) or low-rate, repeated impact vibration include impact pile drivers, and crack-and-seat equipment. Pile driving and blasting activities produce the highest levels of ground vibration and can result in structural damage to existing buildings. Since individual project-specific information is not available at this time, potential short-term construction-related vibration impacts can only be evaluated based on the typical construction activities associated with residential, commercial, and industrial development.

Future development as a result of the project could occur in primarily urban settings where land is already disturbed and, therefore, is not likely to require blasting, which is typically used to remove unwanted rock or earth. Standard construction equipment (e.g., bulldozers, trucks, jackhammers) generally does not cause vibration that could cause structural or cosmetic damage but may be felt by nearby receptors. Table 4.13-13 presents the typical types of equipment that could be used for future development activities in the Planning Area.

Table 4.13-13: Ground-Borne Vibration and Noise from Typical Construction Equipment						
Equipment	Peak Particle Velocity (in/sec) (A)			Velocity Decibels (VdB) (B)		
	25 feet	50 feet	100 feet	25 feet	50 feet	100 feet
Small bulldozer	0.003	0.001	0.001	58	49	40
Jackhammer	0.035	0.016	0.008	79	70	61
Rock Breaker	0.059	0.028	0.013	83	74	65
Loaded truck	0.076	0.035	0.017	86	77	68
Auger Drill Rig	0.089	0.042	0.019	87	78	69
Large bulldozer	0.089	0.042	0.019	87	78	69
Vibratory Roller	0.210	0.098	0.046	94	85	76
Impact Pile Driver (typical)	0.644	0.300	0.140	104	95	86
Sonic Pile Driver (typical)	0.170	0.079	0.037	93	84	75

Sources: Caltrans 2020b and FTA 2018

(A) PPV calculated as: PPV(D)=PPV(ref)*(25/D)^1.1 where PPV(D)= Estimated PPV at distance; PPVref= Reference PPV at 25 ft; D= Distance from equipment to receiver; and n= ground attenuation rate (1.1).

(B) Estimated Lv calculated as: Lv(D)=Lv(25 feet)-30Log(D/25) where Lv(D)= estimated velocity level in decibels at distance, Lv(25 feet)= RMS velocity amplitude at 25 ft; and D= distance from equipment to receiver.

As shown in Table 4.13-13, specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. Vibration levels dissipate rapidly with distance, such that even typical impact pile driving activities would result in vibration levels below Caltrans' recommended 0.5 PPV threshold for transient vibration-induced damage in historic, older buildings at a distance of greater than approximately 35 feet; all other activities would be below Caltrans' threshold for transient vibration-induced damage in historic, older buildings at a distance of 25 feet. For human responses, maximum impact pile driving activities would result in ground-borne vibration and noise levels below Caltrans' threshold for a distinctly perceptible response (0.24 PPV) and the FTA's vibration standard for infrequent events at residential lands (80 VdB) at a distance of approximately 150 feet and 300 feet, respectively. All other activities may be barely to distinctly perceptible when occurring within approximately 150 feet of sensitive land uses. Most construction equipment does not operate in the same location for prolonged periods of time. Therefore, even if construction equipment were to operate near a building where receptors may feel vibration, it would only be for a temporary amount of time and would not be considered excessive. Furthermore, setback requirements and project-specific review for impacts to historical resources would ensure vibrations would not damage historic buildings. This impact is considered less than significant.

Operations-Related Ground borne Vibration Levels. The GPU does not include plans for the expansion of freight or light rail, and is not anticipated to increase vibration levels these sources. The GPU also contains policies that would reduce operational vibration. Policy N-2.2 (Mixed-Use Development Noise) would reduce vibration levels between non-residential and residential uses, and Policy N-3.6 (Infrastructure and Design for Noise Reduction) would promote the use of vibration-isolating materials to reduce exposure to vibration. This impact is considered less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Excessive Airport-related Noise Levels

Impact NOISE-4 – For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Analysis of Impacts

The closest airport, the Compton/Woodley Airport, is a public general aviation airport located approximately 5 miles southwest of the Planning Area. The Planning Area is located outside of the Compton/Woodley Airport's 65 CNEL contour. Additionally, the GPU contains Policy N.1-3 (Aviation Noise) which seeks to reduce noise levels from commercial aircraft, private aircraft, and helicopters through coordination, regulation, and monitoring. There are no airports within two miles of the Planning Area, and people residing or working in the Planning Area would not be exposed to excessive airport noise levels. This impact would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Other Planning Considerations (Potential Effects of the Environment on the Project)

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." Pursuant to this ruling, a Lead Agency is not required to analyze how existing conditions might impact a project's existing or future population except where specifically required by CEQA; however, a Lead Agency may elect to disclose information relevant to a project even if it is not considered an impact under CEQA. Furthermore, the GPU set noise standards for receiving land uses which require evaluation for consistency and compliance even if such evaluation is not required by CEQA to be identified as a physical impact of the project. Accordingly, this section discusses the existing noise and vibration environment and the degree to which the existing environment is compatible and consistent with City goals, policies, and standards for future development.

Traffic Noise and Land Use Compatibility. The existing ambient noise levels vary depending on location. As described in Table 4.13-2 above, most residential land uses along arterial roadways currently have noise levels greater than 60 CNEL and 65 CNEL, the land use compatibility level established in the proposed GPU as normally acceptable for low-density and multi-family residential uses, respectively. Additionally, most roadways exceed 70 CNEL, the land use compatibility level established for schools, libraries, churches, hospitals, and nursing homes. These roadways would continue to exceed the proposed compatibility standard under 2045

Project conditions, and the GPU has the potential to site new residential and mixed-use projects in the vicinity of roadways with high traffic noise levels.

As discussed in Section 4.13.3, the City's proposed updated Noise Element contains policies that seek to reduce noise exposure from vehicle traffic, specifically freight, located near sensitive noise receptors. Policy C-1.2 (Traffic Calming Measures) and Policy EJ-2.2 (Safety and Complete Streets) would reduce traffic noise levels by reducing vehicle speed through traffic calming measures. Policy N-1.1 (Roadway and Vehicular Noise) and Policy C-6.1 (Discourage Regional Cut-Throughs) would reduce noise through traffic management. Policy N-1.4 (Low-Emission Vehicles and Active Transportation) and Policy C-5.6 (Clean Freight and Logistics) would reduce vehicle noise through the promotion of electric vehicles, which generate less noise than internal combustion engine vehicles, and through traffic management and smart logistics systems. Finally, policies that reduce land use conflicts with industrial uses and residential areas (e.g., Policy C-5.8: Minimize Truck Impacts) would reduce noise levels from freight traffic on local roadways. Additionally, policies throughout the GPU to increase active transportation, reduce vehicle miles traveled, and support electric vehicles would reduce noise from passenger vehicles.

Furthermore, as described in Section 4.13.1, pursuant to the State noise standards, California Building Code, Section 1207.4, new residential structures would be required to be constructed such that interior noise levels do not exceed 45 dBA CNEL. Standard construction techniques and materials are commonly accepted to provide a minimum exterior to interior noise attenuation (i.e., reduction) of 22–25 dBA with all windows and doors closed (HUD 2009a and 2009b).[6] These interior noise reductions would be adequate for some developments occurring under the GPU to meet interior noise standards. New residential and mixed-use developments along major roadways, such as Paramount Boulevard, could require additional noise attenuation design features since traffic noise levels along these roadways are estimated to exceed 70 CNEL under future conditions with and without the GPU. Adherence to the State's mandatory noise standards would ensure residential and mixed-use structures within the Planning Area meet or exceed the 45 dBA CNEL standard.

As discussed above, the GPU includes residential and mixed-use land uses that may be exposed to traffic noise levels above acceptable levels; however, the GPU establishes City policies to provide protection from excessive noise levels and development would adhere to the State's noise standards. For these reasons, the GPU would not expose existing or future noise sensitive land uses to unacceptable noise levels.

Rail Noise and Land Use Compatibility. The proposed GPU does not authorize nor does it increase any freight rail operation because such operations are outside the jurisdictional authority of the City. Nonetheless, the 2024 California State Rail Plan anticipates an expansion of rail services over the next decade and an increase in passenger travel and freight traffic (Caltrans 2024), and the proposed GPU could result in changes in land use type and or intensity near rail corridors, as the GPU would site mixed-use and residential land uses adjacent to the Union Pacific freight rail line.

[6] The U.S. Department of Housing and Urban Development (HUD) Noise Guidebook and supplement (2009a, 2009b) includes information on noise attenuation provided by building materials and different construction techniques. As a reference, a standard exterior wall consisting of 5/8-inch siding, wall sheathing, fiberglass insulation, two by four wall studs on 16-inch centers, and 1/2-inch gypsum wall board with single strength windows provides approximately 35 dBs of attenuation between exterior and interior noise levels. This reduction may be slightly lower (2-3 dBs) for traffic noise due to the specific frequencies associated with traffic noise. Increasing window space may also decrease attenuation, with a reduction of 10 dBs possible if windows occupy 30% of the exterior wall façade.

As discussed under Section 4.13.3, the GPU contains policies that reduce noise exposure from transportation, including rail, and includes policies that emphasize the reduction of transportation-related noise impacts on residential and other sensitive land uses. Specifically, Policy LU-1.3 (Land Use Compatibility) would provide appropriate buffers between sensitive land uses (residences, schools, and recreation areas) and major sources of noise, pollution, and emissions, including freeways and industrial operations, Policy N-1.2 (Rail Noise) would lower noise exposure from rail noise sources, and Policy EJ-1.4 (Vegetation and Green Buffers) would incorporate buffers between residential receptors and rail lines which would reduce exposure to rail noise. Furthermore, new development projects would be expected to meet City noise standards through appropriate, project-specific evaluation and design considerations. For these reasons, the proposed GPU would not expose new development to unacceptable rail noise levels.

Exposure to Operational Ground borne Vibration Levels The proposed GPU could facilitate the construction of new residential and mixed-use projects near existing freight and Metro rail lines. With regard to vibration impacts on new development near railroads, human disturbance is the primary concern. It is extremely rare for vibration levels from trains passing to result in structural damage to buildings, particularly new construction (FTA 2018).

The FTA's *Transit Noise and Vibration Impact Assessment* document provides recommended ground-borne vibration criteria for general environmental assessments. The vibration criteria vary according to the sensitivity of the land use and the frequency of vibration events (i.e., number of trains passing by the sensitive land use). As discussed above, the Metro C Line carries more than 100 light rail trains per day.

The freight train activity along the Union Pacific freight rail line would be considered an occasional event (i.e., 30 to 70 trains passing by in one day). For occasional events such as freight train activity, the criteria generally vary between 65 Vdb for buildings where vibration would interfere with interior operations (e.g., highly sensitive research facilities, hospitals), to 75 VdB for residences and buildings where people normally sleep, to 78 VdB for land uses with primarily daytime uses. Highly sensitive research facilities are not specifically anticipated under the proposed GPU. Hospitals space included in the Rancho Los Amigos South Campus Specific Plan could be part of buildout conditions. Potential hospital space would be located approximately 0.5 miles from the nearest rail line, and would not exceed the 65 VdB threshold. Therefore, the 65 VdB threshold is not considered further in this analysis.

The FTA's guidance document contains generalized ground surface vibration curves derived from vibration measurements of transit systems in North America (FTA 2018, Figure 6-4). Based on these vibration prediction curves, proposed residential and mixed use development within approximately 150 feet[7] of the centerline of a freight rail line could be exposed to vibration levels that exceed the FTA's recommended threshold of 75 VdB for residences exposed to occasional vibration events. Similarly, other proposed land uses within approximately 100 feet of a freight rail line could be exposed to vibration levels that exceed the FTA's recommended threshold of 78 VdB for land uses with primarily daytime occupancy. The GPU includes residential and other uses within 150 feet of the centerline of the freight rail line, such as the Medium Density Residential land uses along Firestone Boulevard between Lakewood Boulevard and Paramount Boulevard, that could be exposed to excessive vibration levels.

[7] The 150-foot threshold is based on calculations for the portion of the Union Pacific rail line that is located at ground level.

Light rail activity along the Metro C Line would be considered a frequent event. For frequent events such as light rail activity, the criteria for residences and building where people normally sleep would be 72 VdB and the criteria for land uses with primarily daytime uses would be 75 VdB. While these standards are more stringent than the criteria for occasional events that apply to freight rail, the light rail would generate less vibration than freight rail. Although the Metro C Line light rail line would have the potential to exceed thresholds for receptors within approximately 60 feet of the rail centerline and for primarily daytime land uses within approximately 40 feet, there are no residential or other noise sensitive land uses within 150 feet of the rail centerline as the Metro C Line runs between the I-105 east and westbound lanes.

The actual vibration levels perceived by receptors adjacent to the City's freight rail lines would be contingent on several factors, including the type of locomotive power (e.g., diesel locomotive or diesel multiple unit), the type of train using the line (e.g., freight or commuter), the speed of the vehicle (vibration estimates are based on 50 mph travel speeds), and actual subsurface conditions between the rail line and the receptor. Additionally, the actual vibration exposure to proposed land uses would depend on site-specific conditions, including the distance buildings are set back from the property line and, for mixed-use land uses, the distance to the portions of the land use where people would normally sleep.

As described above, future planned development along Firestone Boulevard could result in residential and institutional buildings within 150 feet of the Union Pacific freight rail, which, therefore, could be exposed to vibration levels that exceed FTA criteria. However, new development within 150 feet would exceed the GPU's noise compatibility guidelines, and vibration would be assessed as part of a site-specific evaluation.

Cumulative Impacts

Would the project cause substantial adverse cumulative impacts with respect to noise or vibration?

Analysis of Impacts

For purposes of this cumulative noise and vibration analysis, the geographic context is limited to the extent of potential noise impacts caused by the proposed project that could combine with other relevant cumulative developments. Although construction and stationary source noise may theoretically be audible far from the source, in practice ambient noise from wind, roadway traffic, and other land uses is substantially louder than equipment operating hundreds or thousands of feet away. Therefore, the geographic context is limited to the area within approximately 1,000 feet of development under the GPU and the roadways used to travel to and from these sites.

Project implementation would result in construction noise and vibration as individual development projects are constructed over time (Impact NOISE-1 and NOISE-3). Construction noise and vibration from individual development projects could combine (when within 1,000 feet of each other); however, each individual development would be subject to City's construction hour limitations, which would protect existing and future residents from potential substantial, temporary increases in ambient noise and ground-borne vibration levels associated with construction activities. For these reasons, the proposed project would not make a cumulatively considerable contribution to cumulative construction noise or vibration impacts at on- or off-site receptor locations near future development projects.

The GPU would result in long-term increases in vehicle trips and traffic-related noise levels (Impact NOISE-2); however, these vehicle trips would not generate significant increases in traffic noise levels on a cumulative basis. The GPU could also result in stationary and other sources of operational noise associated with future development. The City's Municipal Code sets forth noise limitations for residential, commercial, and manufacturing land uses (see Table 4.13-9) and the GPU includes policies incorporate noise analysis and mitigation into new development projects through Policy N-4.2 (Noise Analysis) and Policy N-4.3 (Noise Mitigation) and to consider operational noise impacts and noise compatibility during the development process through Policy N.4-1 (Noise in Development Review) and Policy N.4-4 (Noise Planning for Redevelopment and Infill). In addition, the GPU contains policies maintain and enforce the City's noise standards through Policy N-5.1 (Noise Management), Policy N-5.3 (Enforcement), Policy N-5.4 (Regional Coordination), Policy N-5.5 (Smart Noise Management), Policy N-5.6 (Targeted Noise Monitoring), and Policy N-5.-7 (Noise Education and Community Outreach). Finally, policies under Goal N-2 (Limited Noise Impacts from Stationary Sources) and Goal N-3 (Noise-Sensitive Land Uses Protected From Excessive Noise) reduce noise exposure to residential receptors from industrial uses and other stationary sources. Therefore, future operations would not make a cumulatively considerable contribution to a significant cumulative operational noise impact.

The GPU does not propose or support any large vibration-inducing equipment or land use activities and would not result in excessive ground-borne vibration levels that have the potential to combine with vibration levels from other project within or outside of the Planning Area (Impact NOISE-3). No cumulative operational vibration impact would occur.

The GPU would not expose people living or working at candidate housing sites to excessive airport-related noise levels (Impact NOISE-4). This impact is project-specific and would not combine with any other project. No cumulative impact would occur.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.13.6 REFERENCES

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4.14 – POPULATION AND HOUSING

This EIR chapter assesses the potential to induce unplanned population growth in the Planning Area, The potential to displace existing residents or housing are also analyzed. Lastly, this chapter analyzes the project's potential cumulative population and housing impacts.

4.14.1 – ENVIRONMENTAL SETTING

The Planning Area includes a mix of residential, commercial, industrial, institutional, and open space uses along with roadway rights-of-way. As of 2025, the City of Downey had 22,408 parcels encompassing approximately 5,966 acres (Downey, 2025). A description of population, housing, and employment characteristics within the Planning Area is provided below.

Population

The California Department of Finance estimates that the January 2025 population for Los Angeles County and the City of Downey were 9,876,811 and 111,326 residents, respectively (DOF, 2025). The Southern California Association of Governments (SCAG) develops socioeconomic estimates and growth projections including population, households, and employment. These estimates and projections provide the analytical foundation for SCAG's transportation planning and other programs. The growth forecast used for SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2024-2050 RTP/SCS) (SCAG, 2024) for Los Angeles County and the City of Downey are included in Table 4.14-1 (Population Forecasts). It should be noted that the 2024-2050 RTP/SCS is now referred to as "Connect SoCal". As shown in Table 4.14-1, continued population growth is anticipated by SCAG at both the county and city level. Population growth at the county level from 2025 to 2045 is projected to be approximately 18.2%, while during the same period it is projected to be approximately 6.6% for the City of Downey.

Table 4.14-1: Population Forecasts

	2025	2045	Growth Rate
County of Los Angeles	9,876,811	11,674,000	18.2%
City of Downey	111,326	119,200	7.1%

Source: DOF, 2025; 2020-2045 RTP/SCS Final Growth Forecast by Jurisdiction, SCAG.

Housing

According to the California Department of Finance, as of January 1, 2025 there were approximately 3,726,527 housing units within Los Angeles County and approximately 37,160 housing units within the City of Downey (DOF, 2025). As noted above, SCAG develops socioeconomic estimates and growth projections including population, households, and employment. Table 4.14-2 (Household Forecasts) shows the anticipated growth in households for both Los Angeles County and the City of Downey. As shown in Table 4.14-2, household growth at the county level from 2025 to 2045 is projected to be approximately 10.5%, while during the same period household growth is projected to decline by approximately 8.2% for the City of Downey.

Table 4.14-2: Household Forecasts			
	2025	**2045**	**Growth Rate**
County of Los Angeles	3,726,527	4,119,000	10.5%
City of Downey	37,160	34,100	-8.2%
Source: DOF, 2025; 2020-2045 RTP/SCS Final Growth Forecast by Jurisdiction, SCAG.			

Employment

As of 2025, SCAG estimated that there were 5,131,000 employees in Los Angeles County and 50,900 employees in the City of Downey. Table 4.14-3 (Employment Forecasts) shows the anticipated growth in employment for both Los Angeles County and the City of Downey. As shown in Table 4.14-3, employment growth at the county level from 2025 to 2045 is projected to be approximately 4.9%, while during the same period it is projected to increase by approximately 2.5% for the City of Downey.

Table 4.14-3: Employment Forecasts			
	2025	**2045**	**Growth Rate**
County of Los Angeles	5,131,000	5,382,000	4.9%
City of Downey	44,702	45,800	2.5%
Source: DOF, 2025; 2020-2045 RTP/SCS Final Growth Forecast by Jurisdiction, SCAG.			

4.14.2 – REGULATORY FRAMEWORK

Federal

U.S. Department of Housing and Urban Development (HUD)

HUD oversees the Federal Housing Administration (FHA), the largest mortgage insurer in the world, and regulates housing industry business. HUD also provides Project-Based Rental Assistance and other rental assistance programs, which provide support for low and very low-income households.

State

California Department of Housing and Community Development (HCD)

HCD enforces standards for housing construction, maintenance of farmworker housing, and manufactured / factory-built homes. HCD also proposes amendments to California's residential building standards for new construction to the California Building Standards Commission and helps train local governments to better understand new requirements. HCD works with regional governments to determine their housing needs and reviews every city and county's housing element of the general plan to determine compliance with state law.

Housing Element Law (California Government Code Article 10.6)

The state has established detailed legal requirements for the General Plan Update (GPU) Housing Element beyond Section 65300. State Law requires each city and county to prepare and maintain a current Housing Element as part of the community's GPU to attain a Statewide Goal of providing "decent housing and a suitable living environment for every California family." Under

State law, Housing Elements must be updated every eight years and reviewed by the California Department of Housing and Community Development (HCD).

California Department of Finance Demographic Research Unit

The Demographic Research Unit uses population data to establish appropriation limitations; distribute various federal program funds and aid in the planning and evaluation of programs. State agencies and departments, local governments, the federal government, school districts, public utilities, the private sector, and the public use the data. Staff provide demographic research and analysis, produce current population estimates, and future projections of population and school enrollment, and disseminate U.S. Census data.

Regional

Los Angeles County Development Authority (LACDA)

The former Housing Authority of the County of Los Angeles (HACoLA) was consolidated into the Los Angeles County Development Authority (LACDA). The LACDA is a public agency is a public agency established under California law that administers affordable housing, community development, and housing assistance programs throughout Los Angeles County. The LACDA administers the Housing Choice Voucher (Section 8) Program in participating cities, including Downey, and supports the development, preservation, rehabilitation, and financing of affordable housing opportunities. The City coordinates with the LACDA on housing-related initiatives and works collaboratively to promote affordable housing opportunities for Downey residents.

Southern California Association of Governments (SCAG)

Southern California Association of Governments (SCAG) is a joint powers authority, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments. SCAG developed regional growth forecasts for its 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS) (Southern California Association of Governments, 2020) for Los Angeles County and the City of Downey. It should be noted that the 2020-2045 RTP/SCS is now referred to as “Connect SoCal”).

Regional Housing Needs Assessment (RHNA)

RHNA **i**s developed through a process directed by SCAG. The RHNA represents the number of housing units divided into various household income categories–that have been calculated to represent the City’s “fair share” of the regional housing need during the Housing Element planning period. By law, the City is required to show in the Housing Element that adequate sites are available to accommodate construction of new housing units consistent with the RHNA.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to population and housing that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.14.3 – SIGNIFICANCE THRESHOLDS

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

A. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

B. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

C. Cause substantial adverse cumulative impacts with respect to population and housing?

4.14.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to population and housing that could result from the implementation of the GPU and recommends mitigation measures as needed to reduce significant impacts.

Population Growth

Impact POP-1 – Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Analysis of Impacts

The General Plan does not include the extension of roads or any other infrastructure. Although the GPU doesn't include specific policies related to population growth, the plan does include multiple goals and policies that aim to maintain and enhance the housing and job stock of the City to increase opportunities for current and future residents. As described below, the Land Use and Economic Development Elements of the GPU include specific goals and policies that aim to retain and grow housing and employment within the Planning Area.

Goal LU-2 and its policies aim for stable, high quality neighborhoods that reflect diverse housing types and respect established character. Policy LU-2.4 supports higher-density housing in areas with access to transit, services, and employment, including corridors and commercial areas. Policy, LU-3.3 promotes mixed-use development that increases housing supply, supports economic vitality, and creates walkable environments. Goal LU-4 aims for a mix of businesses and employment-generating use that provide quality jobs and sustain a strong local economy. Policy LU-4.1 encourages investment in employment-generating uses that build upon and strengthen existing medical, office, and industrial clusters to support economic growth and innovation. Policy LU-4.3 protects industrial lands for job generating uses while supporting modernization that reinforces industry clusters and prioritizes operational compatibility with surrounding areas. Policy LU-4.4 promotes the development and expansion of medical, health technology, and related industries in areas near major healthcare institutions to enhance healthcare services, foster innovation, and create quality employment opportunities. Policy LU-4.5 encourages the attraction and expansion of medical research, laboratory, and outpatient uses within the established Biomedical Overlay to support healthcare innovation and high-quality employment opportunities. Lastly, Policy LU-4.6 prioritizes land uses within employment areas

that support productivity, job creation, and community benefit, and discourage uses that provide limited economic or community benefit.

Goal LU-5 and its policies strive for lively mixed-use areas near transit that provide opportunities to live, work, shop, and celebrate community life. Policy LU-5.2 encourages transit-supportive development near major transit facilities that integrates housing, employment, services, and public spaces. Policy LU-5.4 encourages transit-oriented, mixed-use development within one-half mile of the C Line station by directing higher-density housing and commercial uses to nearby commercial areas. LU-5.5 supports transit-oriented, mixed-use development at the planned Southeast Gateway within the southern portion of the Rancho Los Amigos Campus, supporting higher-density housing, employment uses, and supportive services that leverage regional transit access.

Goal LU-7 strives for strategic districts and corridors that support growth, investment, and connectivity. Policy LU-7.3 encourages transit-oriented, mixed-use development at the Rancho Los Amigos Campus and the Southeast Gateway area that integrates employment, housing, services, public spaces while respecting the area's history.

Goal ED-1 seeks continued redevelopment of under-used properties to elevate revenue and jobs generating potential. Policy ED-1.1 encourages the redevelopment, infill, and intensification of underutilized commercial and industrial properties to support long-term economic growth in a built-out urban environment. Policy ED-1.2 encourages mixed-use development along commercial corridors and near transit stations to integrate housing, retail, and employment opportunities. Goal ED-3 seeks to attract and retain targeted industries and higher wage jobs. Policy ED-3.1 promotes the attraction of industries that provide higher-wage employment, including office, professional services, healthcare, technology, and innovation-driven sectors. Policy ED-3.4 supports the expansion of healthcare and medical services by encouraging the growth of hospitals, medical offices, and related health industries. Support their efforts to grow employment opportunities and reinforce Downey's role as a regional healthcare hub. Goal ED-6 seeks to align economic development with community character. Policy ED-6.2 aims to coordinate economic development strategies with housing growth, land use planning, and transportation infrastructure to enhance job access and vibrant neighborhoods.

In addition to the goals and policies of the proposed GPU, the existing Housing Element that was adopted in 2022 includes goals and policies intended to improve the housing supply in Downey. Goal H-1 seeks to preserve and improve the existing housing supply in the City. Further, Goal H-2 encourages a variety of housing types to meet the existing and future needs of City residents. Goal H-3 seeks to provide housing assistance where needed. Goal H-4 seeks to remove governmental constraints to developing housing. Goal H-5 promotes equal housing opportunities by encouraging the use of barrier-free architecture in new housing developments and by providing Fair Housing Services.

The GPU does not determine the rate of growth in Downey, rather, it allows for growth as it occurs based on market forces in accordance with the City's policies for type, intensity, and location as set forth in the GPU. The Planning Area is almost completely urbanized with very little vacant land. Any new development that would occur under the proposed GPU would consist of infill development and/or redevelopment of vacant or existing uses.

The City is planning for population growth and has incorporated policies to match this forecasted growth. To meet the physical needs of growth, the City will prioritize infrastructure improvements, property maintenance and code compliance, and public services provision in high-need areas. To

accommodate and manage future growth, the City will support development that promotes a balanced mix of residential, commercial, industrial, and open space uses it to meet the community's evolving needs while ensuring that public facilities, services, and infrastructure remain adequate and sustainable. Direct physical impacts from increased population and housing growth would be less than significant. The potential indirect environmental effects associated with population growth are addressed in other topical area chapters in the EIR, specifically:

- Air Quality
- Energy
- Greenhouse Gases
- Hydrology and Water Quality
- Noise
- Public Services
- Recreation
- Transportation
- Utilities and Services

The GPU would not induce significant population growth unplanned by the City that would not otherwise occur in Downey; therefore, the overall impacts of the GPU regarding population growth would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation is required.

Housing Growth

Impact POP-2 – Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Analysis of Impacts

The GPU does not propose any policies that are intended to directly or indirectly result in displacement or demolition of any permanent or temporary residential structures, or otherwise result in displacement of people or businesses. Overall, the GPU policies would increase the number of housing units in the Planning Area. According to SCAG estimates, the City's housing stock consisted of 34,700 total units and the City was the place of employment for 50,900 workers in 2019 (SCAG, 2024).

The SCAG 6th Cycle RHNA Plan allocated the City of Downey an additional 6,525 units as part of its Housing Element Update. Overall, the City has the ability to adequately accommodate its RHNA obligation, as the GPU anticipates an increase of 10,350 dwelling units within the Planning Area as part of the GPU. Future development within the City would not result in the displacement of current residents or the demolition of homes, and would not induce substantial housing growth unplanned by the City based on the GPU.

Over time, some older existing structures might be removed due to deterioration. Others may be replaced by more efficient and valuable land uses. Redevelopment could occur whether the proposed GPU is adopted or not; therefore, the proposed GPU would have no direct effect involving displacement of housing or businesses. Additionally, there are no specific policies included within the GPU requiring or encouraging demolition of existing structures, so the impact would be less than significant.

The GPU accounts for the potential displacement of existing Downey residents with inclusion of Land Use Element Goal LU-1 which strives for growth and change that serves community needs, is compatible with long-established land use patterns, preserves fiscal stability, and enhances quality of life. Policy LU-1.1 seeks to concentrate growth along major corridors and in mixed-use districts to preserve established residential neighborhoods, support efficient infrastructure use, and encourage transit use.

The General Plan does not determine the rate of housing growth in Downey, rather, it allows for growth as it occurs based on market forces in accordance with the City's policies for type, intensity, and location as set forth in the GPU. The Planning Area is almost completely urbanized with very little vacant land. Any new development that would occur under the proposed GPU would consist of infill development and/or development of vacant land within the Planning Area.

The City is planning for housing growth and has incorporated policies to match this forecasted growth. To meet the physical needs of growth, the City will prioritize infrastructure improvements, property maintenance and code compliance, and public services provision in high-need areas. To accommodate and manage future growth, the City will support development that promotes a balanced mix of residential, commercial, industrial, and open space uses it to meet the community's evolving needs while ensuring that public facilities, services, and infrastructure remain adequate and sustainable. To plan for the intensification of land use, the City has adopted policies to encourage infill development, including revitalization of underutilized and vacant infill properties closest to available infrastructure and community services.

For the reasons stated above, the GPU would not induce significant housing growth unplanned by the City that would not otherwise occur in Downey. Therefore, the overall impacts of the GPU regarding housing growth would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Growth

Impact POP-3 – Would the project cause substantial adverse cumulative impacts with respect to population and housing?

Analysis of Impacts

Implementation of the GPU would result in increased residential density which would increase the population of the City. The City would ensure that existing regulations and land use policies are

implemented to avoid or reduce an identified potential environmental impact. Population growth in the City is anticipated to occur regardless of policies or goals set out in the GPU. In most cases, no one goal, policy, or implementation measure ("policy" for short) is expected to completely avoid or reduce an identified potential environmental impact. Nonetheless, the collective benefits of the policies discussed above would result in less than significant impacts related to population and housing growth on a regional basis. This conclusion is consistent with the purpose and use of a program EIR for the GPU (see EIR Introduction, Chapter 1).

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.14.5 – REFERENCES

California Department of Finance (DOF). 2025. *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2025.* Web: https://dof.ca.gov/forecasting/demographics/estimates/ [Accessed December 2025].

City of Downey, 2004. *Downey Vision 2025 Comprehensive General Plan Update Environmental Impact Report*. SCH# 2004031159. July 28, 2004.

City of Downey. 2005. *Downey Vision 2025 General Plan*. Adopted January 25, 2005. Revisions: Housing Element Update; Adopted October 11, 2022.

Southern California Association of Governments (SCAG). Connect SoCal 2024. 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Demographics and Growth Forecast Technical Report. Adopted April 4, 2024.

4.15 – PUBLIC SERVICES

This EIR chapter addresses potential project impacts related to the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. Project impacts related to fire protection, police protection, public school, parks and recreation facilities, and other public facilities such as libraries are evaluated in this chapter. Lastly, this chapter evaluates potential cumulative public services impacts from the project.

4.15.1 – ENVIRONMENTAL SETTING

Fire Protection

The City of Downey Fire Department provides fire protection services in the Planning Area (Downey, 2025a). The Fire Department operates four fire stations located throughout the City:

- Fire Station #1 is centrally located at 12222 Paramount Boulevard.
- Fire Station #2 is located in the southern portion of the City at 9556 Imperial Highway.
- Fire Station #3 is located in the northern portion of the City at 9900 Paramount Boulevard.
- Fire Station #4 is located in the eastern portion of the City at 9349 Florence Avenue.

These stations house four paramedic-engine companies, one truck company, two paramedic squads, four basic life support ambulances, one urban search and rescue unit, and one command vehicle. The Department consists of six divisions: Administration, Operations, Emergency Medical Services, Prevention, Communications, and Emergency Preparedness. In fiscal year 2024-2025, the Fire Department responded to 13,088 emergency incidents.

The Operations Division's primary responsibility is the protection of life, property, and the environment. Its workforce is distributed over three platoons and currently comprises 63 sworn firefighters, 18 of whom are licensed paramedics. It is the department’s largest division, accounting for approximately 75% of personnel staff. Daily Platoon staffing consists of 21 personnel who respond to emergency incidents and requests for service within the City. The on-duty battalion chief is responsible for all emergency operations during a 24-hour shift.

Fire service delivery is evenly divided throughout the City by four fire stations capable of arriving at the scene of an emergency within five minutes of the call. Each fire station houses a paramedic engine company staffed with four firefighters, two of which are licensed paramedics. A four-person ladder truck responds to structure fires and rescues. A technical rescue unit is available for specialized rescue incidents.

Police Protection

The Downey Police Department (DPD) provides police protection services and is located at 10911 Brookshire Avenue (Downey, 2025b). The DPD consists of three divisions: Field Operations, Administration, and Investigative. The Field Operations Division is the largest division in the Department, accounting for nearly 70% of personnel. Field Operations consists of Uniform Patrol,

Traffic, Communications, and Special Operations. It comprises two shifts, each under the direction of a Watch Commander, responsible for providing 24-hour patrol and first response to crimes and requests for service. Estimated response times to service calls for the DPD are one to two minutes for emergency calls and five to eight minutes for non-emergency calls. The DPD strives to maintain a minimum ratio of one police officer per 1,000 residents. The DPD currently has 137 sworn officers, 70 of whom are uniformed patrol officers. PDP responds to an average of 1,000 service calls per month. With a current City population of approximately 111,261, the DPD maintains a ratio of 1.23 officers per 1,000 residents.

Public Schools

The Planning Area is served by the Downey Unified School District (DUSD). The DUSD serves most of the City of Downey, as well as portions of the cities of Bell Gardens, Bellflower, and South Gate (DUSD, 2025a). DUSD has 13 elementary schools, four middle schools, three high schools, and an adult school, serving a population of approximately 22,661 students (Catanzano, 2026). According to DUSD's 2022 *Facility Master Plan*, enrollment is projected to be approximately 22,227 students by 2028-2029. Exhibit 4.15-1 shows the location of each school.

Parks and Recreation Facilities

According to the City of Downey Parks and Open Space Master Plan, the City has 122 acres of parkland consisting of 13 parks (Downey, 2016). The City's General Plan includes classifications for three park types, but it does not include park classification definitions. The Parks and Open Space Master Plan utilizes the current park classification system of Pocket, Neighborhood, and Community Park to identify uses and acceptable features of each type of facility. According to the City's General Plan, Independence Park, Apollo Park, and Furman Park are identified as neighborhood parks. Based on the following definitions, these parks will change from a Neighborhood Park to Community Park classification. Also defined by the Master Plan are two subcategories of Community Park, Community Sports Park and Civic Center Community Park, as well as two other facility types, joint use school facilities and special use facilities. The definitions are as follows:

- **Pocket Park:** Pocket parks are typically urban open park space at a very small scale. Usually only a few house lots in size or smaller, pocket parks can be tucked into and scattered throughout the urban fabric where they serve the immediate local population. These parks act as scaled-down neighborhood parks and often offer amenities such as turf, planters, walkways, plazas, play areas for children, and picnic facilities. Pocket parks do not provide restroom facilities or on-site parking. These are less than approximately two acres in size and generally are:
    - Small parks where neighborhood involvement in activities and programming is most appropriate and
    - Small public spaces or beauty spots which are small islands within the urban environment and present opportunities to enhance the City's character and identity.
- **Neighborhood Park:** Neighborhood parks typically serve the surrounding neighborhood for multiple uses. Park development may include play areas, small fields, benches, picnic tables, and improved paths but may not have restroom facilities or parking. Geographic range of users is up to one-half-mile. Downey Neighborhood Parks encompass two to eight acres.

- **Community Park:** Community parks meet the recreational needs of several neighborhoods and may also preserve unique landscapes and open spaces. These parks serve multiple uses and provide recreational facilities and restrooms and accommodate group activities that neighborhood parks cannot. Community park sites should be accessible by arterial and/or collector streets and include parking. Community parks accommodate many activities that serve the entire City. In Downey, community parks are typically greater than eight acres in size. Sub-categories include:
    - **Community Sports Park:** Community sports parks primarily function as dedicated facilities for group sports and may have soccer fields, baseball and softball fields, basketball courts, and other sports facilities, and typically provide parking and restroom facilities; they also may provide other support facilities such as concession stands.
    - **Civic Center Community Park:** The Civic Center Park is a planned facility that does not easily fit in typical classifications. Its small size is similar to a pocket park, and during typical days it will be utilized in a similar manner as a pocket park only by the immediate population. However, it may host events for the entire community, functioning more like a community park. The Downtown Specific Plan identifies smaller spaces that may in the future be developed into smaller open space areas/plazas. Due to their proximity to the downtown area, many of these spaces may also fall into this category of park.
- **Joint Use Facilities:** These park spaces, generally owned and operated in conjunction with DUSD, supplement community parks, serving broader citywide recreation needs. The parks contain various assets, often for active recreation, and are programmed accordingly. Restroom facilities and parking are generally provided for users.

Table 4.15-1 lists the size and features of existing and planned public parks and recreation facilities within Downey, including each park classification.

Existing and Planned Recreation Facilities

Parks and open space opportunities exist throughout the City, including facilities for active and passive recreation such as baseball fields, basketball courts, soccer fields, tennis courts, a dog park, and a skate park. City facilities have developed over several decades and as a result, many park sites such as Apollo and Wilderness Parks are well known within the community. Downey has continued to move forward to meet the needs of the community with the development of newer facilities such as Discovery Sports Complex and the Ranco Los Amigos Sports Complex. Exhibit 4.15-1 shows the location of each existing and planned public park and recreation facility.

School Facilities

Since 1978, the City has had a joint use agreement with DUSD that allows the City to use of all school facilities. In June, 1986, the City and DUSD entered into an agreement to build a swimming pool at Downey High School. The two agencies proportionally share costs to operate the pool. Under the terms of the agreement, the City has the opportunity to utilize the pool during the week of spring break and on the first day of summer break following the last day of school in May through the last day of summer break prior to the first day of school in August. The City and DUSD also entered into an agreement for the Columbus School Sports Fields in July, 2001. Under the terms of the agreement, the City receives full use of the facility during non-school hours in exchange for providing facility maintenance. DUSD pays for all utilities.

Many DUSD campuses have outdoor play areas, sports fields, and swimming pools that are not directly used by the City but by the sports and community organizations of Downey. In recent years, schools have become more concerned about security and unauthorized access to school campuses and have restricted public access during after school hours through measures such as fencing and locked gates. Table 4.15-1 lists existing facilities at DUSD schools, and Exhibit 4.15-1 identifies the locations.

Other Recreational Facilities

Non-public facilities play a large role in meeting the recreational needs of Downey residents, as the array of programs and facilities they provide is substantial. A limited network of additional private facilities are available, consisting of churches, clubs, private schools, and golf courses, such as the Los Amigos Golf Course operated by the County of Los Angeles. Numerous private fitness and dance businesses operate in Downey, such as LA Fitness, Downey Dance Studio, and Nifty after Fifty, a fitness club aimed at the older generation. Some programs are offered through cooperative agreements with the City, while others are not. The City offers a variety of recreational programming, such as ice-skating, utilizing Iceland at Paramount, a privately operated ice rink near Downey. The Parks and Open Space Master Plan does not provide a detailed inventory of private and commercial facilities since the City neither owns, operates, nor maintains them. These recreation resources are therefore not credited toward satisfaction of the City's acreage or facility goals for public parks or recreation programming. However, as they do fill a recreation role, these facilities may individually be able to address certain specific identified needs in the Downey area.

Trails and Connectivity

In the Downey Parks and Open Space Master Plan, connectivity is defined primarily as the pedestrian and bicycle access available to parks within the community, as well as the walkability of a park's internal trail system. Downey is shouldered by the San Gabriel River Bike Path, the Rio Hondo Bike Path, and Los Angeles River Bike Path, all Class I facilities. The City currently has 5.7 miles of Class I bike trails. The City of Downey Bicycle Master Plan (adopted 2015) identifies and proposes an additional 11.52 miles of Class II and 18.9 miles of Class III bike trails. Exhibit 4.15-2 identifies existing and planned trails from the Bicycle Master Plan. The City has also initiated several projects to develop circular walking trails around major park facilities. The completed additional development of a circular park pathway of decomposed granite surface provides the opportunity for casual walkers and runners, promoting Downey's Healthy program. Table 4.15-3 provides a summary of the Connectivity Inventory, which looked at:

- Location on a Metro bus/DowneyLink bus stop
- Amount of internal walking paths; percentage of park accessible by walking paths
- Amount of parking spaces/handicapped spaces
- Proximity to bike paths
- Proximity to residential areas
- Barriers to pedestrian access within and surrounding the park

Exhibit 4.15-1: Existing and Planned Parks and Recreation Facilities and Schools

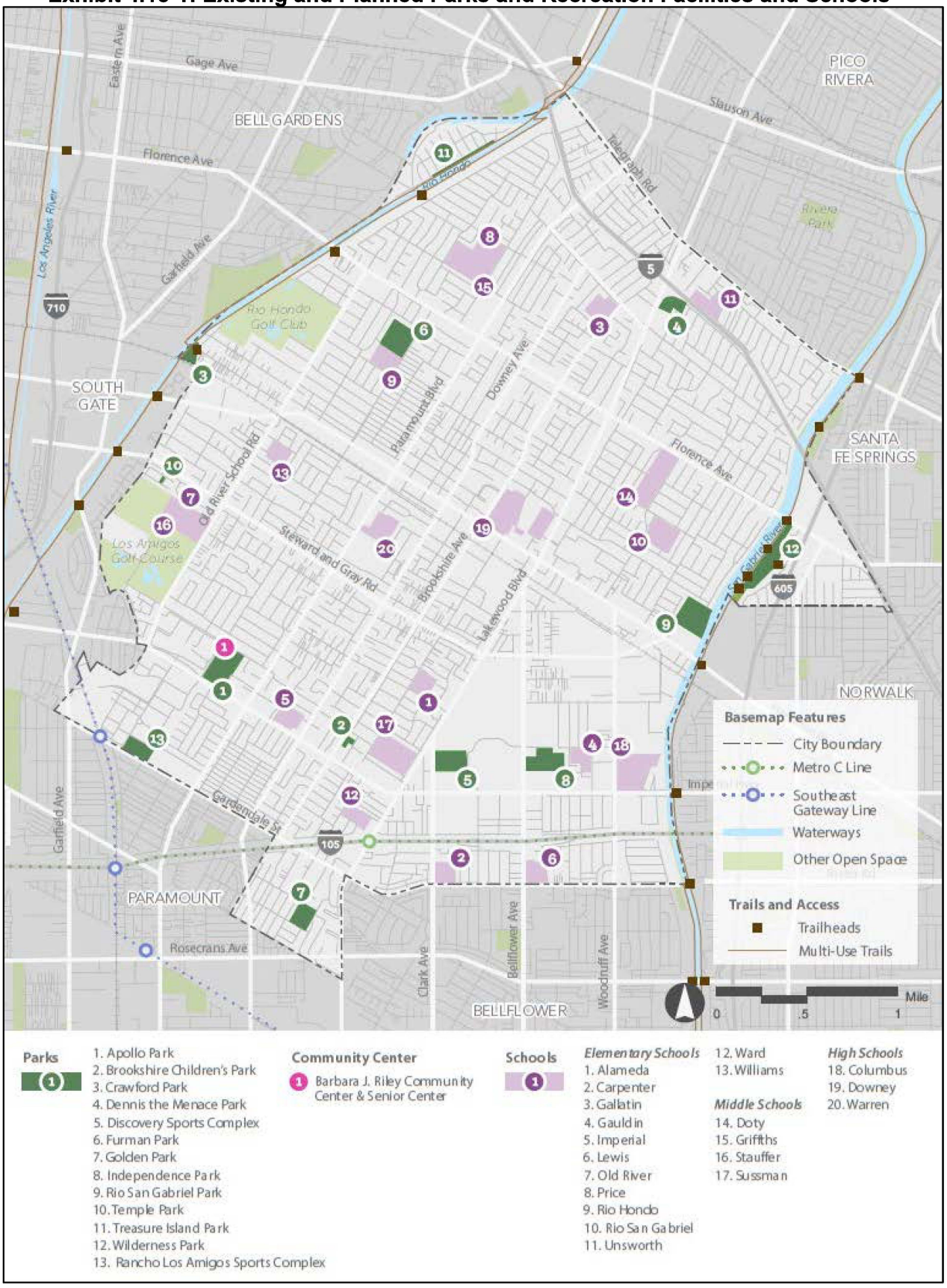


Table 4.15-1: Existing and Planned Parks and Recreation Facility Inventory

KEY	FACILITY	ADDRESS/LOCATION	PARK TYPE	Parkland Acreage	PASSIVE FACILITIES																			SPORTS FACILITIES										
	DOWNEY PARK AND RECREATION FACILITIES				Barbeques	BandShell	Benches (stand alone)	Bike Rack	Concession Building	Community Building	Dance Room	Dog Park	Drinking Fountain	Exercise Equipment	Kitchen	Lake	Open Passive Turf	Parking	Playground / Tot Lot	Picnic Shelters / Gazebos	Picnic Tables (includes two benches)	Restroom	Trails - Internal Park	Trail - Linkage	Baseball	Basketball (indoor-in Gymnasium)	Basketball (outdoor)	Football Field	Handball Court	Softball	Skate Park	Soccer Field	Swimming Pool	Tennis Court	Volleyball
Existing Parks																																		
1	Apollo Park (Includes exterior elements of Barbara J. Riley Community & Senior Center & McCaughan Gymnasium)	12544 Rives Ave	Community Park	17.2	10		31	3	1	Y	Y		4				Y	298	1		56	2	Y		3 P [1]	1 P	2L	1 O P		3 P [1]		1 O P			5 L P
2	Brookshire Children's Park	12520 Brookshire Ave.	Pocket Park	1.2	2		6						1					0	1	2	7		Y												
3	Crawford Park	7000 Dinwiddie	Neighborhood Park	2.3	4		3						1				Y	6	1		5			Y			1/2 ct								
4	Dennis the Menace Park	9125 Arrington Ave.	Neighborhood Park	6.2	4		9			1			2				Y	49	2	1	23	1													
5	Discovery Sports Complex	12400 Columbia Way	Community Sports Park	12.7			4		1				3					137				1			2 L P [11]			1 O P		2 L P [11]		2 L P			
6	Furman Park	10419 Rives Ave.	Community Park	14.4	11		15	1	1	3 [6]			5	Y	Y		Y	49	2	2	29	1	Y		2 P [7]		1 full P					1 O P		4	
7	Golden Park	8840 Golden Ave	Community Park	8.1	5		4	1	1	2			1		Y		Y	78	1	3	21	2 [3]	Y		1		1 full P	1O	1						
8	Independence Park	12334 Bellflower Blvd.	Community Park	10.2	5		24	1	2	1			3					145	1		4	2								2 P L [4]	1			8L	
9	Rio San Gabriel Park	9612 Ardine St.	Community Park	15.7	5		12		1	1		Y	4				Y	144	1	4	12	2	Y [2]				1 full	1 O L P		2L [5]		1 L O P [5]			
10	Temple Park	7132 Cole St.	Pocket Park	0.4			2										Y	0	1																
11	Treasure Island Park	9300 Bluff Rd.	Neighborhood Park	3.8	4		8						1				Y	26	1	2	12		Y	Y											
12	Wilderness Park	10999 Little Lake Rd.	Community Park	24.6	8		14			1			5		Y	2	Y	133	1	3	36	2 [3]	Y	Y											
Planned Park Facilities																																		
13	Civic Center Park (Part of Civic Center Master Plan)	3rd Street/Civic Center Drive	Civic Center Community Park	1.2		Y				Y							Y	Y	Y			Y												
Existing Community Centers																																		
14	Barbara J. Riley Community & Senior Center (Refer to Apollo Park for Exterior Facilities)	7810 Quill Drive	Special Use Facility					1					1	Y	Y			Y				Y												

DEFINITIONS L = Lighted P = Practice Field/Court O=Overlay Field Used for Games by Organized Youth Sports Leagues

(1) Three Fields; One Field Lighted. Additional Tee Ball Field. Used for softball/baseball.
(2) Walking trail completed during assessment.
(3) Restrooms inside building.
(4) One of two softball fields lighted. Two additional small fields.
(5) Overlay soccer and football played on same field.
(6) Five structures on site: Two modular YMCA buildings, one main building not in use (proposed to be used by YMCA), one classroom building, one multipurpose meeting room building.
(7) Additional Tee Ball Fields (2).
(8) Parking available at the High School.
(9) Open turf with space for three large fields; 13 fields used of varying sizes for different age groups.
(10) Ten small full courts and two large full court basketball courts. Two of four soccer fields are overlay.
(11) Two ball fields utilized by baseball and softball.
(12) Limited Parking Available.
(13) Open grass area could be used for soccer.
(14) Ballfield has backstop/team beanches with grass infield.
(15) Ballfield has grass infield.
(16) Tee ball backstop, grass field.
(17) Grass Volleyball.
(18) Playground includes swingsets only.

Table 4.15-2: School Facilities Inventory

DOWNEY SCHOOL FACILITIES			PASSIVE FACILITIES			SPORTS FACILITIES										
			Open Passive Turf	Parking	Playground / Tot Lot	Baseball	Basketball (indoor-in Gymnasium)	Basketball (outdoor)	Football Field	Handball Court	Softball	Skate Park	Soccer Field	Swimming Pool	Tennis Court	Volleyball
KEY	FACILITY	ADDRESS/LOCATION														
Existing Schools																
15	Alameda Elementary School	8613 Alameda Street	Y	Y	2			2 full		2			1 [13]			
16	Carpenter Elementary School	9439 Foster Road	Y	Y	1 [18]	1 [14]		6 full		3			1 [13]			2 [17]
17	Columbus High School/Downey Adult School	12330 Woodruff Ave.	N	Y	1	3 P					1 L		3 O P			
18	Doty Middle School aka East Middle School	10301 Woodruff Ave.	N	Y [12]		2 P		12 full [10]	1 O				4 O [10]			
19	Downey High School (Pool also called Downey Community Aquatics Center)	11040 Brookshire Ave	N	Y [8]		3	1	4 full	1 L				1 O	1	8	
20	Gallatin Elementary School	9513 Brookshire Avenue	Y	Y	2	1 [15]		6 full		2			1 [13]			
21	Gauldin Elementary School	9724 Spry Street	Y	Y	1	1		2 full; 4 half					1 [13]			
22	Griffiths Middle School	9633 Tweedy Lane	N	Y		2 P		4 - full + 8-1/2 ct					3 O P [9]			
23	Imperial Elementary School	8133 Imperial Highway	Y	Y	3			6 half		2			1 [13]			
24	Lewis Elementary School	13220 Bellflower Blvd.	Y	Y	3			3 full		4			1 [13]			
25	Old River Elementary School	11995 Old River School Road	Y	Y	1	1 [16]		4 full		3			1 [13]			
26	Price Elementary School	9525 Tweedy Lane	Y	Y	3	1 [15]		5 full; 2 half		2			1 [13]			
27	Rio Hondo Elementary School	7731 Muller St	N	Y [12]	3	2 P		2 - full + 4 - 1/2 ct		2						
28	Rio San Gabriel Elementary School	9338 Gotham	Y	Y	2	1 [15]		4 full		4			1 [13]			2 [17]
29	Stauffer Middle School aka West Middle School	11985 Old River School Road	N	Y	1	4 P		9 full								
30	Sussman Middle School aka South Junior High School	12500 Birchdale Avenue	N	Y		2		10 full		1			3			
31	Unsworth Elementary School	9001 Lindsey Avenue	Y	Y	2	1 [14]		2 full		2			1 [13]			
32	Ward Elementary School	8851 Adoree Street	Y	Y	3	1 [15]		2 full		1			1 [13]			
33	Warren High School	8141 De Palma Street	N	Y		2	1	6 - full + 2 - 1/2 ct	1 L					2	8	
34	Williams Elementary School	7530 Arnett St	Y	Y	2	1 [15]		3 full		2			1 [13]			

DEFINITIONS L = Lighted P = Practice Field/Court O=Overlay Field Used for Games by Organized Youth Sports Leagues

(1) Three Fields; One Field Lighted. Additional Tee Ball Field. Used for softball/baseball.

(2) Plans in place for walking trail.

(3) Restrooms inside building.

(4) One of two softball fields lighted. Two additional small fields.

(5) Overlay soccer and football played on same field.

(6) Five structures on site: Two modular YMCA buildings, one main building not in use (proposed to be used by YMCA), one classroom building, one multipurpose meeting room building.

(7) Additional Tee Ball Fields (2).

(8) Parking available at the High School.

(9) Open turf with space for three large fields; 13 fields used of varying sizes for different age groups.

(10) Ten small full courts and two large full court basketball courts. Two of four soccer fields are overlay.

(11) Two ball fields utilized by baseball and softball.

(12) Limited Parking Available.

(13) Open grass area could be used for soccer.

(14) Ballfield has backstop/team beanches with grass infield.

(15) Ballfield has grass infield.

(16) Tee ball backstop, grass field.

(17) Grass Volleyball.

(18) Playground includes swingsets only.

Exhibit 4.15-2: Existing and Planned Bicycle Trails

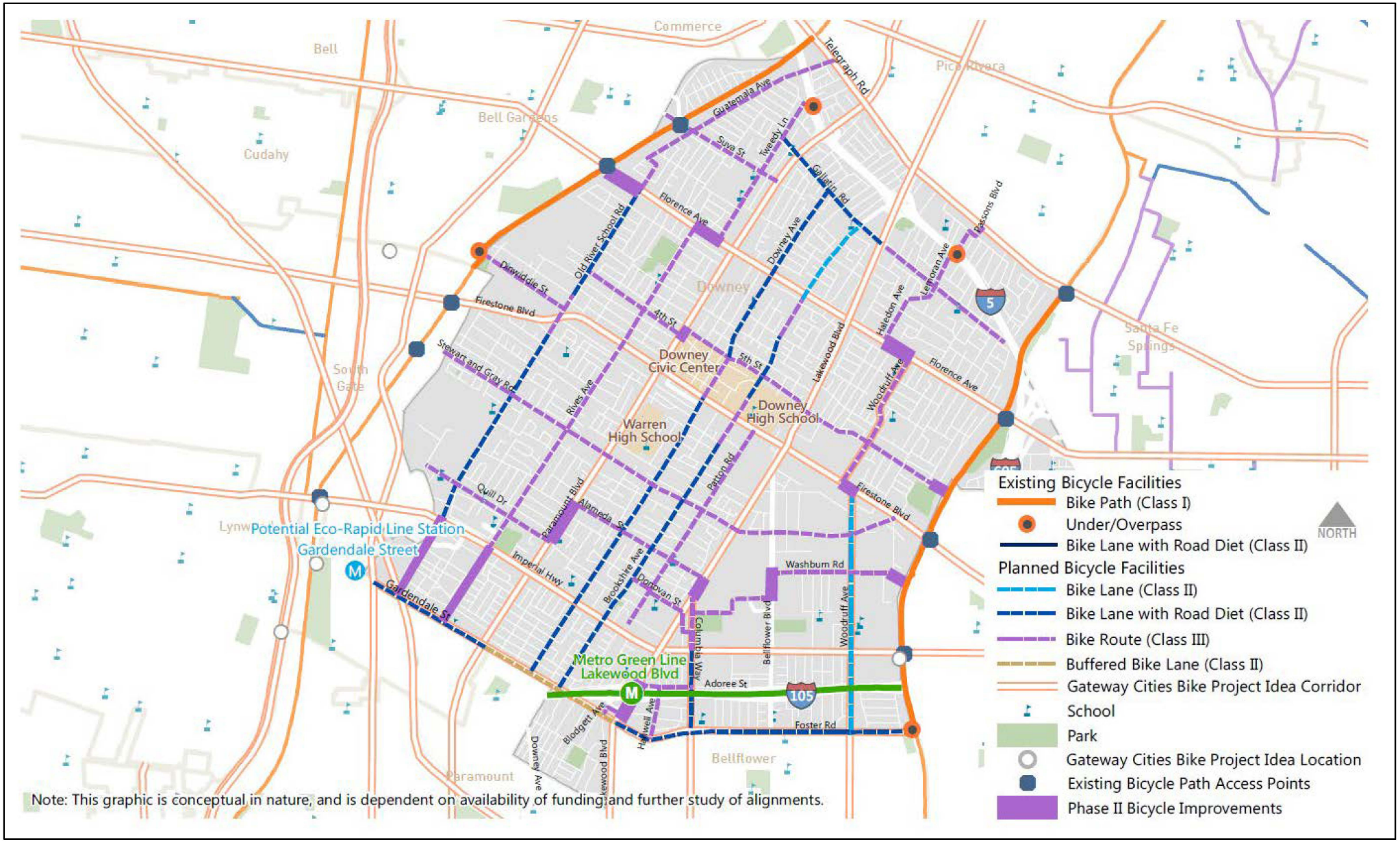


Table 4.15-3: Connectivity Inventory

CONNECTIVITY AND ACCESS		CONNECTIVITY/ACCESS												
		Metro Bus Stop	DowneyLink Stop	Distance to Nearest Metro Bus (Approx.)	Distance to Nearest DowneyLink Bus (Approx.)	Internal Walking Path Distance (linear feet)*	Recreational Walking/Jogging Path Distance (linear feet)*	Total Parking Spaces on Site (including Handicapped)	Handicapped Spaces	Bike Path Adjacent	Sidewalks Adjacent to Park	% Park Accessible by Walking Paths (0%, 0-25%,25-50%, 50-75%, 75%-100%, 100%)	Located Within/Adjacent to Residential Area	Barriers to Pedestrian Access
KEY	FACILITY													
1	Apollo Park (includes exterior elements of Barbara J. Riley Community & Senior Center & McCaughan Gymnasium)	Y	Y	0	0	6,500'	3,650'	298	23	N	Y	75%-100%	Y	Arterial Streets: Imperial Highway, Paramount Blvd., Old River School Road
2	Brookshire Children's Park	N	Y	0	580'	700'	0	0	0	N	Y	50-75%	Y	Arterial Streets: Imperial Highway, Lakewood Blvd., Brookshire Ave.
3	Crawford Park	N	N	3,250'	3,250'	250'	0	6	0	Y	Y	1-25%	Y	Train tracks to south; Rio Hondo to the west.
4	Dennis the Menace Park	N	N	1,625'	1,625'	1,250'	0	49	2	N	N	25-50%	Y	5 Freeway to north; Lakewood Blvd. to the west; Internal park fencing limits access to the west; Shopping center limits access from the south.
5	Discovery Sports Complex	N	Y	1,250'	300'	725'	0	137	8	N	Y	50-75%	N	Arterial Streets: Lakewood Blvd, Imperial Highway, Bellflower Blvd. Kaiser Permanente to the east.
6	Furman Park	N	Y	1,400'	0	5,050'	3,750'	49	3	N	Y	75%-100%	Y	Arterial Streets: Old River School, Florence Ave., Paramount Ave. Residential backyards to the west; school (fencing) to the south.
7	Golden Park	N	Y	1,400'	0	2,046'	1,400'	78	4	N	Y	50-75%	Y	105 Fwy; Arterial Streets: Downey, Rosecrans, Lakewood Blvd.
8	Independence Park	N	N	850'	850'	2,125'	0	145	8	N	Y	50-75%	Y	Arterial Streets: Bellflower, Woodruff, Imperial Highway. Tennis courts are internal park barrier. Commercial buildings to the south and north; park maintenance to north.
9	Rio San Gabriel Park	N	N	700'	1,550'	1,000'	0	144	6	Y	Y	1-25%	Y	Arterial Streets: Firestone Blvd. San Gabriel River to the east; provides access and also limits neighborhood connectivity; commercial to the south.
10	Temple Park	N	N	2,500'	2,500'	325'	0	0	0	N	Y	75%-100%	Y	Arterial Streets: Stewart & Gray, Old River School. Rio Hondo to the west. Golf Course to south.
11	Treasure Island Park	N	Y	1,600'	0	2,150'	2,150'	26	1	Y	N	100%	Y	5 Fwy to the northeast. Rio Hondo: provides access to bike path, but also limits neighborhood connectivity. Suva Street crossing provides some access to communities to southeast of river.
12	Wilderness Park	N	Y	800'	0	7,500'	6,000'	133	7	Y	Y	75%-100%	Y	San Gabriel River to the east, provides access and also limits access to communities to the west. 605 freeway is partial barrier to the east, but access provided via Cecilia St. underpass.

*Internal path distance reflects all internal park pathways including those used for recreational walking/jogging; recreational walking/jogging paths only reflect pathways used for recreational walking/jogging.

Note: All distances are approximate.

Parkland Level of Service Ratios

Level of Service (LOS) is a common metric used in park and recreation planning to describe whether a city has a sufficient amount of park land and/or recreation facilities. LOS is a numerical guideline presented as a ratio that compares the amount of land (in acreage) or facilities (in units) to the population. The LOS states how much acreage, or how many units, should exist in an area based on how many people live there. For parkland, it is a ratio of acres per 1,000 people served. For facilities, it is a ratio of 1 facility per number of people served.

According to the State Department of Finance (E-5 City/County Population and Housing Estimates, 1/1/2026), the estimated population of the City of Downey at the end of 2025 was 111,326. The City of Downey has approximately 122 acres of parkland, resulting in a park ratio of 1.05 acres of parkland per 1,000 Downey residents (DOF, 2025). Relative to state averages, this is a low level of service. Most cities in California strive to provide a minimum of 3.0 acres per 1,000 residents, as advised in California's Quimby Act. The California Quimby Act gives cities or counties the right, by ordinance, to require land dedication or impose in-lieu fees (or a combination) to acquire land for neighborhood and community parks as a condition of approval for residential subdivision development. [Note: Joint-use sites and trail corridors are not counted toward Quimby requirements.]

Relative to national averages, Downey is similarly deficient in parkland. Data provided by the National Recreation and Park Association (NRPA) shows that for jurisdictions of similar populations as Downey (100,000 to 250,000 residents), the median level of service is 10.3 acres per 1,000 residents and the lower quartile level of service is 6.3 acres per 1,000 residents. Downey's 1.05 acres per 1,000 residents is thus significantly lower than national averages. In order to achieve a level of service ratio of 3.0 acres per 1,000 residents, the City of Downey would need a total of 336 acres of parkland. With only 122 acres of parkland, the City currently has a parkland deficit of 219 acres based on a standard of 3.0 acres of parkland per 1,000 residents identified in the City's General Plan.

Parkland Access

In urbanized areas like the City of Downey, parkland access (e.g., percentage of residents within a 10-minute walk) is a more appropriate measure than the traditional parkland ratio (acres per 1,000 residents) because it moves toward equitable, usable, and high-quality access for all residents. While ratios measure overall quantity, they ignore geographic barriers, safety, and actual availability in disadvantaged neighborhoods, focusing on proximity and equitable distribution instead. The following are key reasons parkland access is a more appropriate measure than parkland ratio:

- **Equitable Distribution:** Park access measures show that a city can have a high overall parkland ratio while large areas of the city lack any nearby parks.
- **Convenience and Usage:** A 10-minute walk (roughly one-half mile) is the accepted standard for park use. Even if a city has high acreage per capita, residents are unlikely to use a park that is far away.
- **Overcoming Barriers:** Modern access metrics consider barriers like highways, trains, or rivers that hinder access, whereas ratios do not.
- **Equity and Demographics:** Access metrics allow cities to target resources at neighborhoods with low income, low canopy coverage, and high population density.

- **Improved Health Outcomes:** Studies find that "nearby nature" (access) is more closely linked to increased physical activity and better health than the total amount of parkland.

Exhibit 4.15-3 shows the location of parks within Downey, as well as one-half mile access radii and potential park expansion opportunities. As shown in Exhibit 4.15-3, many communities in the northern and central portions of the City of Downey lack one-half mile access to parks.

Other Public Facilities

Public community facilities provide essential services to communities, including information, events, recreation, classes, and places to gather. These facilities can include libraries, community centers, wellness centers, and recreational buildings. Libraries can serve as cultural and community hubs, anchoring surrounding development and bringing diverse groups together in one space. Downey City Library is located at 11121 Brookshire Avenue, which is part of the Downey Civic Center. Community centers offer residents opportunities to stay active and engage with fellow community members. They serve as inclusive meeting places, promoting a culture of health and well-being within the communities they serve. Community centers in Downey include the Barbara J. Reilly Community and Senior Center and Bernabe Community Center.

4.15.2 – REGULATORY FRAMEWORK

Federal

Standardized Emergency Management System and National Incident Management System (SEMS)

According to the State's SEMS, local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. When a major incident occurs the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic situations. This on-scene authority rests with the local emergency services organization and the incident commander. Additional information regarding the City's SEMS program can be found in Section 4.9 Hazards and Hazardous Waste.

State

California Building Code

The 2025 California Building Code (CBC) became effective January 1, 2023, including Part 9 of Title 24, the California Fire Code. Section 701A.3.2 of the CBC requires that new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, comply with all sections of the chapter.

Exhibit 4.15-3: Downey Parks Access Map



California Health and Safety Code (Sections 13000 et seq.)

This code establishes State fire regulations, including regulations for building standards (also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Fire Code

The City has adopted the most recent California Fire Code, with amendments to address specific local conditions and needs. These provisions include construction standards and fire hydrant requirements, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for minimum fire flow rates for water mains.

Quimby Act (1975)

The Quimby Act allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land, donate conservation easements, or pay fees towards parkland.

State Public Park Preservation Act (California Public Resource Code Section 5400 – 5409)

The State Public Park Preservation Act is the primary instrument for protecting and preserving parkland in California. Under the act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, is provided to replace the parkland acquired. This works toward no net loss of parkland and facilities.

Regional

Los Angeles County Office of Emergency Management (OEM)

The OEM has the responsibility of comprehensively planning for, responding to and recovering from large-scale emergencies and disasters that impact Los Angeles County. OEM's work is accomplished in partnership and collaboration with first response agencies and non-profit, private sector and government partners.

Education Code Section 17620

The code allows school districts to assess fees on new residential and commercial construction within their respective boundaries. These fees can be collected without special city or county approval, to fund the construction of new school facilities necessitated by the impact of residential and commercial development activity. In addition, these fees can also be used to fund the reconstruction of school facilities or reopening schools to accommodate development-related enrollment growth. Fees are collected prior to the issuance of a building permit by the responsible jurisdiction.

Leroy F. Green School Facilities Act (1998)

California Government Code Section 65995 sets base limits and additional provisions for school districts to levy development impact fees and to help fund expanded facilities to house new pupils that may be generated by the development project. Sections 65996(a) and (b) state that such

fees collected by school districts provide full and complete school facilities mitigation under CEQA. The school district that serves the Planning Area has adopted these fees for commercial and industrial uses, and these fees may be adjusted by the District.

Quimby Act (1975)

The Quimby Act allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land, donate conservation easements, or pay fees towards parkland.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to public services that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.15.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

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

   i) Fire protection;
   ii) Police protection;
   iii) Schools;
   iv) Parks; and
   v) Other public facilities.

B. Cause substantial adverse cumulative impacts with respect to public services.

4.15.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to public services which could result from the implementation of the project and includes mitigation measures if needed to reduce significant impacts.

New or Altered Government Services

Impact PUB-1 – Would the GPU result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause

significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire Protection

Analysis of Impacts

The GPU would accommodate approximately 10,225 new housing units and 3,123,754 square feet of new non-residential development. While the project would result in increased development capacity compared to the existing General Plan, the growth anticipated pursuant to the project would occur over the course of a 20-year or longer planning horizon and would be incremental. Growth would result in an increase in demand for fire protection services and related facilities. As the City grows, so will its long-term need for fire protection services.

The Downey Fire Department has four fire stations serving the City. As of 2025, the department employed 68 sworn fire personnel, and average response time was 6 minutes, 28 seconds (Hildebrand 2026). In 2019, Measure S instituted a ½-cent sales tax for modernization of public facilities, including fire stations. Between 2019 and 2022, the Fire Department addressed gaps in its existing facilities, renovating and modernizing all four fire stations. Further, the Downey Forward 2030 Strategic Plan and 2024 Hazard Mitigation Plan (HMP) are being implemented to address aging infrastructure, staffing demands, and high-volume emergency calls. The 2024 HMP emphasizes mitigating earthquake, flood, and windstorm hazards, while the 2030 Strategic Plan includes specific goals for public safety, with progress tracked through quarterly updates.

The nationwide Insurance Services Office (ISO) provides communities with Public Protection Classification (PPC) ratings of urban and suburban fire department protection (ISO, 2021). The ratings are on a scale of 1 to 10 (with 1 being the best) based on the capabilities of the fire department's services and facilities (e.g., dispatch, water supply, fire suppression equipment, etc.). The Downey Fire Department has an ISO Class 1 PPC rating, which is the highest possible rating. This rating reflects the Department's strong fire suppression capabilities.

The GPU Public Safety Element includes Goal S-6 and its policies which strive to maintain prompt and effective fire protection services that prevent loss of life, reduce property damage, and ensure rapid response to emergencies.

- Policy S-6.1: Service Levels Responsive to Population Growth. Ensure adequate staffing, equipment, and facilities to provide timely and effective fire protection and emergency medical response throughout the city.
- Policy S-6.2: Development Coordination. Ensure Fire personnel continues to participate in project reviews to ensure that new and redeveloped properties provide sufficient fire access, water supply, and life-safety systems.
- Policy S-6.3: Structural and Urban Fire Prevention. Promote fire-safe building design and ongoing maintenance through fire code enforcement, building inspections, and public education.

To serve future growth, new and/or additional fire protection resources would be needed to maintain established response times. The anticipated growth that would result from the project would likely increase the number of fire responses in the City, which would increase the need for equipment and personnel. Therefore, the City's costs to maintain facilities and equipment as well as train and equip fire personnel would also increase. In addition, the redistribution and increase

of the population and traffic density into areas proposed for growth, such as commercial corridors and activity centers, could necessitate the reassignment of certain resources pertaining to fire protection services. The costs of additional fire protection personnel and materials are anticipated to be offset through increased revenues and fees, including property and sales taxes, generated by future residential and nonresidential development allowed under the General Plan 2045. In addition, future projects would be reviewed by the City on an individual basis and would need to comply with any impact fee requirements in effect when the review is conducted and necessary permits are issued.

According to the Downey Fire Department, the anticipated increase in dwelling units and non-residential square footage pursuant to the proposed GPU would not result in substantial adverse physical impacts associated with 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 public services (Rasmussen, 2026).

The project-specific environmental impacts of constructing new or expanded fire protection facilities to support the growth anticipated under the GPU cannot be determined at this time because it is not known at this time when such facilities would be required or what the exact nature of these facilities would be. As a result, project-specific assumptions would be speculative. However, it can be expected that construction and operation of future new or expanded fire protection facilities would have similar impacts as would construction and operation of other types of new development allowed under the General Plan 2045.

If construction or expansion of fire protection facilities to accommodate additional personnel or equipment become necessary, CEQA review and compliance with local, state, and federal laws would be required. New facilities would be located consistent with specified land use designations and would be subject to goals and policies of the General Plan 2045. These policies would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this PEIR.

Implementation of the General Plan goals and policies and continued implementation of the HMP and Strategic Plan would avoid the need for new or physically altered fire protection facilities Impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

None Required.

ii. Police Protection

Analysis of Impacts

The Downey Police Department (DPD) provides police protection services for the City. Implementation of the General Plan 2045 would add an estimated 10,350 housing units, 31,483 residents, 2.6 million square feet of nonresidential uses, and 6,649 employees to the City, increasing the demand for police protection services. The projected increase in population and

employment could add to the number of service calls received and the number of patrols and staff from DPD necessary to service the Planning Area.

As per correspondence with Police Captain Michael Parino, the DPD consists of 137 sworn officers and 77 full- and part-time professional support staff (Parino, 2026). With 137 authorized sworn officers in the DPD, the ratio of officers to citizens is approximately 1:813, based on a population of 111,326 people. If the projected population in 2045 is 142,809, then the DPD would need 39 more officers to maintain the same ratio of officers to residents.

DPD's total service area is approximately 12.8 square miles. The current average response time is between four and six minutes for emergency calls, and between nine and 11 minutes for non-emergency calls. At this time, the City does not anticipate needing to expand existing police facilities or build new police facilities to support the potential population and land use intensity increases that could occur pursuant to the proposed GPU (Parino, 2026). However, should the number of service calls increase substantially as a result of General Plan buildout, DPD might need to increase the number of sworn officers and professional support staff, which could result in the need for new or expanded police protection facilities.

To serve future growth, new and/or additional police protection resources would be needed to maintain established service ratios. The anticipated growth that would result from the project would likely increase the number of police responses in the City, which would increase the need for equipment and personnel. Therefore, the City's costs to maintain facilities and equipment as well as train and equip police personnel would also increase. In addition, the redistribution and increase of the population and traffic density into areas proposed for growth, such as commercial corridors and activity centers, could necessitate the reassignment of certain resources pertaining to police protection services. The costs of additional police personnel and materials are anticipated to be offset through increased revenues and fees, including property and sales taxes, generated by future residential and nonresidential development allowed under the General Plan 2045. In addition, future projects would be reviewed by the City on an individual basis and would need to comply with any impact fee requirements in effect when the review is conducted and necessary permits are issued.

The potential increase in population that is anticipated under the proposed GPU would occur incrementally over the next 20 years. Therefore, impacts to police services are anticipated to be adequately funded by an increase in tax revenues over an extended period of time, relative to the increase in development intensity. Although there is no direct fiscal mechanism ensuring that funding for police services from the general fund will grow exactly proportional to the increased need for services, development over time would increase contributions to the general fund through tax revenues and are expected to grow in rough proportion to any increase in residential dwelling units and/or nonresidential floor area in Downey. Additional police personnel and resources would be provided through the annual budget and DPD review process. Annually, DPD needs would be assessed and budget allocations revised accordingly to ensure that adequate levels of service are maintained throughout the city. Additional resources and personnel funded by an increase in tax revenue would maintain the level of service needed to support the increase in growth.

The project-specific environmental impacts of constructing new or expanded police facilities to support the growth anticipated under the GPU cannot be determined at this time because it is not known at this time when such facilities would be required or what the exact nature of these facilities would be. As a result, project-specific assumptions would be speculative. However, it can be expected that construction and operation of future new or expanded police facilities would

have similar impacts as would construction and operation of other types of new development allowed under the General Plan 2045.

If construction or expansion of police facilities to accommodate additional personnel or equipment become necessary, CEQA review and compliance with local, state, and federal laws would be required. New facilities would be located consistent with specified land use designations and would be subject to goals and policies of the General Plan 2045. These policies would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this PEIR. Proposed policies include those requiring construction best management practices to limit land disturbance, development review to protect significant biological resources, air pollution mitigation measures, promotion of water- and energy-efficient construction and landscaping, implementation of noise mitigation measures, and management of archaeological materials found during development. Due to the minimal effects that the development of new facilities could have on the environment with compliance with existing regulations and proposed General Plan policies, the proposed GPU would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities and impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

None Required.

iii. Public Schools

Analysis of Impacts

The Planning Area is served by DUSD, which operates 13 elementary schools, four middle schools, three high schools, and an adult school. DUSD also serves smaller portions of the cities of Bell Gardens, Bellflower, and South Gate. DUSD currently serves a student population of approximately 22,661 students, and enrollment is projected to be approximately 22,227 students by 2028-2029.

DUSD relies on bond measures to fund facilities maintenance, improvements, and expansion. In recent years, bond measures have funded upgrades and expansion at the middle and high schools and DUSD currently is in the process of upgrading/expanding its elementary schools. The upgrades/improvements to existing DUSD facilities that have been implemented through bond measure funding in recent years are anticipated to be sufficient to serve the potential increase in students that could occur with buildout of the proposed GPU. As growth occurs, there will be an incremental impact on the student body population; however, the District would continue to pursue funding opportunities through bond measures to fund necessary future upgrades/expansion of District facilities (Catanzano, 2026).

Future development within the Planning Area under would be required to pay development impacts fees per California Government Code Section 65995. Payment of school impact fees in accordance with California Government Code Section 65995 and/or Education Code Section 17620 is deemed to constitute full and complete mitigation for potential impacts to schools caused by development. As of 2026, DUSD fees are $5.17 per square foot of residential development

and $0.84 per square foot of commercial/industrial development. Residential additions under 500 square feet are not subject to school fees.

Although the City is not responsible for directly planning, funding, constructing, or operating schools, continued collection of development impact fees by the City per DUSD authorization, combined with DUSD's use of bond measures, would provide funding new or altered school facilities; impact would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

None Required.

iv. Parks and Recreation Facilities

Analysis of Impacts

As detailed in section 4.16-1, the City of Downey has 122 acres of parkland consisting of 13 parks. With a 2025 population of 111,326, Downey provides approximately 1.10 acres of parkland per 1,000 residents. According to National Recreation and Park Association, a typical park and recreation agency should offer at least 3.0 acres of parkland per 1,000 residents. Additionally, most cities in California strive to provide a minimum of 3.0 acres per 1,000 residents, as advised in California's Quimby Act. To meet this standard, Downey would therefore need to provide an additional 214 acres of parkland.

The proposed GPU could potentially result in a population of 142,809 residents in the City of Downey by the year 2045. Implementation of the GPU would, as a result, decrease the existing park ratio of 1.10 acres per thousand residents to a ratio of 0.85 acres per thousand residents, which could have the indirect effect of increasing demand on existing neighborhood and regional parks and other recreational facilities.

As outlined in the GPU, the City is anticipating new development and population growth as part of its long-term vision and redevelopment. As the City grows, so will the demand on its existing facilities and the need for new parks and recreational programs. As such, there would be an incremental increase in the use of recreational facilities in tandem with the anticipated increase in the City's population over the 20-year life of the Plan. It is assumed that the City and other responsible actors would monitor the reliability of the City's recreational facilities, and assess whether over the lifespan of the GPU, the need arises for the expansion or construction of new facilities.

In recent years, urbanized cities like Downey have increasingly adopted metrics for assessing parkland access, such as how far residents must walk or bike to reach a park, and the overall quality and condition of amenities once they arrive. In Downey, access to parks and recreation opportunities is a top priority among residents. However, as shown in Exhibit 4.16-3, access mapping shows that some areas still lack a park within a 10-minute walk. For this reason, the proposed GPU highlights areas where access is limited and explores opportunities to close those gaps so that all residents can benefit from nearby, high-quality outdoor spaces.

The City of Downey is in the process of updating its 2016 Parks and Open Space Master Plan. The updated Master Plan will be used as an implementation tool for the management and development of parks and recreation facilities and programs through the year 2045. Additionally, it will be utilized by the City to determine how to best meet the future needs of the community through development, redevelopment, expansion, and enhancement of the City's parks system, open spaces, trails, recreation facilities, and programs.

The Parks and Open Space Master Plan also includes Maintenance and Operations recommendations to meet the needs identified in the Recreation Facility Needs Assessment. As a result of these recommendations, the City is currently working towards implementing and developing the following system-wide improvements/changes:

- A lifecycle maintenance plan for buildings and park amenities. This should be built into daily operations, yearly capital improvement plans, and budgetary requests to maximize the value and useful life of these assets.
- A soil management plan which includes regular soil testing in order to avoid issues with plant die-back and sparse or soggy turf conditions.
- A volunteer park adoption/maintenance program such that it includes training for the volunteers as Park Stewards. The program could include regular fix up/clean-up days and enlist the help of community organizations such as scouts, park users, sports clubs, etc. to maintain and enhance various elements of the park system. Currently, the City has a limited volunteer program with approximately 55 teens from middle school through high school age. The teens work with youth at the park programs, summer day camps and special events. They also volunteer for various City departments in City Hall, City special events such as the Healthy Downey-TLC 5K, Street Faire, Hall of Fame, Kids Day, Pumpkin Patch, Tree Lighting, and many more.
- Evaluate opportunities to “naturalize” many existing facilities including the elimination of turf in areas of little public use and development of native demonstration gardens.
- Establish policies appropriate for the installation and management of synthetic playing fields including:
    - Synthetic fields should be installed only at facilities which also could have lights for night-time play.
    - Synthetic fields should be budgeted as a fixed asset and fully depreciated over the life of the “carpet.”
    - A policy that states synthetic fields will be open for play except under extreme weather conditions.
- Continue to expand the “Yellow Swing Program” for those with disabilities, as seen at Brookshire Children’s Park, Rio San Gabriel Park, Temple Park, and Treasure Island Park, to additional neighborhood and community parks as part of the regular playground maintenance/replacement program. The Yellow Swing is a swing seat designed to help meet the American Disabilities Act guidelines for playground equipment in public applications.
- Installation and operation of a centrally-controlled irrigation system such as the Rainbird IQ irrigation central control system. This system provides cost-effective, multiple-site centralized irrigation control from a single computer and will allow staff to monitor and control irrigation operation at multiple remote sites. IQ communication capabilities eliminates travel to remote sites for programming changes or adjustments. Manual

operation and programming functions that were performed only at the site irrigation controller can now be completed from the IQ central computer. Purchase of the system should be incorporated into the future park system upgrades.

- Develop a Maintenance Manual detailing park maintenance and operation tasks on a daily, weekly, monthly, etc. basis. The Maintenance Manual should include existing specifications as well as:
    - Clear written maintenance objectives and frequency of care for each amenity is needed based on the desired outcomes for a quality visitor experience in maintaining the parks for aesthetics, safety, recreation and sustainability including:
    - Landscape bed design, planting and maintenance standards
    - Landscape turf and right of way mowing and maintenance standards
    - Tree and shrub planting and maintenance standard
    - Equipment maintenance and replacement standard
    - Chemical application standard
    - Formalized and scheduled park facility inspections including playgrounds, specialized facilities such as skate parks, high use visitor areas and buildings
    - Design standards for the development of park features such as sports fields, trails and buildings
    - Preventative maintenance plan developed for all park locations
- Establish an Estimated Annual Water Use (EAWU) for various hydrozones such as turf, sports fields and shrub beds utilizing the Water Use Classifications of Landscape Species (WUCOLS IV) developed through the California Department of Water Resources and University of California, Davis.
- Consider development of a Community Garden program to provide opportunities for City residents to participate in the program and to reduce on-going operation and maintenance costs for developed parkland.
- Convert park irrigation systems to recycled water when practicable to reduce demand on the potable water supply. (Specific park conversions have been evaluated by City staff and have been included in park plans for development, see Exhibit 5.2-1). Appendix tab A3.5-1
- Develop a process of evaluation and refinement to measure park maintenance success through established performance standards. Examples of what this should include are:
    - Established park maintenance standards and frequency rates and tracking over several years
    - Establish and track the cost per acre for each park and park type and tracking over several years
    - Establish a minimum of training hours per year per employee with re-evaluation of success of training and new requirements due to legislative changes
    - Establish and track replacement schedules for equipment and other fixed assets
- Develop a Sustainable Performance System with responsibility for the program potentially handled by a dedicated Conservation Coordinator. The performance system should include at a minimum:
    - Native Plant Policy
    - Track Utilities—Partnership with utilities
    - Recycling Program
    - Green Waste Composting

- Demonstration Gardens
- Use of Alternative Energy Sources
- Integrated Pest Management Program reflective of consistently changing needs of an urban park system
- Habitat Development beyond mitigation sites
- Community Gardens
- Public Education and Outreach
- Stormwater retention
- Drought-tolerant/Water-wise plants and irrigation systems

The Parks and Open Space Master Plan recommendations include identification of opportunity sites that can help alleviate the City's need for additional open space and fill some of the access gaps that currently exist in parts of the City. It should be noted that while these opportunity sites will provide additional park space and amenities for the community, the sizes of the parcels limit their development potential. Additionally, while these sites have been identified by the Master Plan, additional sites will continue to be considered as opportunities when available.

In recent years, the City improved and/or expanded five parks, including Wilderness Park, Apollo Park, Dennis the Menace Park, Golden Park, and Rio San Gabriel Park. Most of the City's need for bicycling trails can be met through the realization of the Bicycle Master Plan. Conversion of existing, highly-used grass sports fields to synthetic turf would provide additional playing time, a higher quality field of play, and less maintenance.

Funding for maintenance and operation of Downey's park and recreation facilities and programs are currently provided by user fees for recreation programs and facility use, as well as the City's General Fund. The Quimby Act is a widely used source of funding which enables local government to exact dedication of land or in-lieu fees from new residential development to maintain a minimum ratio of park land to population. However, this applies only to residential subdivisions and does not address additional park demands created through the construction of new units on existing lots or to condominium conversions. As Downey is essentially built-out, the Quimby Act presents limited opportunity for future funding opportunities.

Development Impact Fees (AB 1600 fees) on development is another option for local agencies. The fees or exactions are based on the premise that new development generates new demand for park and recreation facilities. The fees only apply to new development and may only be assessed for new capital cost related to the development. A defined nexus or benefit/beneficiary relationship must be established. The fees are paid by the developer to offset costs for the infrastructure caused by new development. The fees are not limited to the cost of land and can be assessed for improvements. Some cities have used this fee mechanism to assess a capital equipment fee to acquire the equipment needed to maintain the new parks. The fees are often used in combination with development agreements. The advantages of impact fees, sometimes called mitigation fees, are that they can be assessed for non-subdivision land uses. Fees can be assessed under the premise that tourists, employers, and employees all benefit from and use community parks. This allows for assessment of commercial and industrial development. Once the nexus is established that proves the need for additional facilities because of new development, a fee program can be implemented. The fee cannot be assessed to subsidize existing shortfalls or benefit existing residents. Park in-lieu fees have been minimal for several years. The low amount is reflective of the residential build-out of Downey, meaning Development Impact Fees present a limited opportunity for funding in the future.

The Parks and Open Space Master Plan also provides information on alternative funding sources including non-profit foundation development, grants, development impact fees, development agreements, bonds, Certificates of Participation, and fund raising events, user fees, corporate sponsorship of events, adopt-a-park programs, volunteer labor, sales tax increases, Special District Assessments, taxes, concessions, user group contributions, joint use agreements with the School District, and sale or lease of surplus lands. In coordination with the Public Works Maintenance Division and Park and Recreation staff, the Master Plan identifies master planned facilities, capital replacement, and capital outlay requirements to assist with planned cash and debt management.

The proposed GPU includes various goals and policies intended to slow the deterioration of existing parks and recreation facilities, identify new recreation opportunities, and provide additional parks and recreation services to the residents of Downey:

- Goal OS-1 and its policies which strive for a comprehensive and equitable park system that meets the diverse needs of all Downey residents.
- Policy OS-1.1: Joint-Use Access. Strengthen partnerships with schools and institutions to standardize joint-use agreements, opening playgrounds, athletic fields, and recreational facilities to the public during non-school hours to relieve pressure on high-density neighborhoods.
- Policy OS-1.2: Strategic Acquisition and Conversion. Identify opportunities to acquire new parkland or repurpose underutilized public and institutional sites, including utility easements, surplus parking, and municipal property, into pocket parks, plazas, community gardens, and flexible green spaces.
- Policy OS-1.3: Neighborhood-Scale Green Spaces. Prioritize pocket parks and neighborhood parks within one-half-mile of neighborhoods to provide immediate access to play areas, social hubs, and informal gathering spaces, particularly in underserved and disadvantaged communities.
- Policy OS-1.4: Municipal Sites into Public Amenities: Redesign underutilized areas around public facilities into functional micro-parks, plazas, and community gathering spaces that enhance neighborhood character and provide recreational opportunities.
- Policy OS-1.5: Youth-Oriented Multi-Use Spaces: Design parks, plazas, and recreational areas with flexible, multi-use zones, well-lighted paths, and seating to serve as safe “third spaces” for youth recreation, mentorship, and socialization.
- Goal OS-2 seeks community facilities serving as multi-purpose hubs for learning, recreation, arts, and wellness.
- Policy OS-2.1: Upgrade and Maintain Facilities. Invest in modernization and ongoing maintenance of community facilities to provide safe, flexible, and welcoming spaces for recreation, learning, arts, and wellness activities.
- Policy OS-2.9: Promote Multi-Purpose and Flexible Use: Design or adapt all community facilities to accommodate a variety of activities simultaneously, including recreation, education, arts, wellness, and civic events, to maximize community benefit.
- Goal OS-3 strives for diverse, inclusive, and responsive recreation programs that serve all ages, abilities, and interests.

- Policy OS-3.4: Provide Flexible Program Delivery. Offer programs at varied times and locations, using multiple formats such as drop-in, seasonal, intergenerational, and virtual options to maximize participation and convenience.
- Policy OS-3.5: Maintain Adaptable Spaces for Programming. Design and manage parks, community facilities, and shared-use spaces to be flexible, multi-purpose, and equipped to support evolving recreation programs, special events, and cultural activities.
- Goal OS-7 aims for an interconnected network of trails, pathways, and active transportation corridors.
- Policy OS-7.1: Trail Networks. Complete missing links in trails and active transportation networks to provide seamless pedestrian and bicycle connections to regional assets such as the Rio Hondo and San Gabriel River corridors.
- Policy OS-7.2: Physical Barriers. Improve crossings, underpasses, and infrastructure along arterial streets, freeways, and rail lines to enhance connectivity and safe access to parks and open spaces.
- Policy OS-7.4: Trail and Bikeway Networks. Develop off-street trails, greenways, and bikeways that link parks, community facilities, and urban centers while supporting active commuting and recreation.
- Goal OS-9 and its policies which aim for high-quality, safe, and accessible recreational infrastructure.
- Policy OS-9.1: Maintain and Upgrade Facilities: Invest in maintenance, repairs, and infrastructure upgrades to meet modern safety, functional, and aesthetic standards across all parks and recreational spaces.
- Policy OS-9.3: Multi-Use and Flexible Spaces. Design recreational areas to accommodate diverse programs, community events, sports, and social gatherings that can adapt to changing community needs.
- Policy OS-9.4: Partnerships. Coordinate with schools, institutions, and community organizations to increase access, programming, and use of parks, trails, and recreational facilities.
- Policy CR-2.4: Spreading Grounds Recreation and Access. Enhance public access to spreading grounds by incorporating landscaped trails, pocket parks, and multi-use pathways, promoting opportunities for hiking, walking, and biking while educating the community on local water conservation and the benefits of outdoor recreation.
- Policy EJ-2.4: Community Facilities Upgrades. Invest in the maintenance, expansion, and programming of libraries, recreation centers, parks, and other community facilities in areas with high vulnerability to ensure equitable access to public services.
- Policy EJ-3.3: Parks, Recreation, and Physical Activity. Expand and enhance parks, open space, trails, recreation programs, and active living facilities. Ensure that residents of all ages and abilities, particularly in underserved neighborhoods, have safe and convenient access to opportunities for physical activity.
- Policy EJ-3.9: Mobile and Flexible Recreation Programs. Provide traveling or pop-up recreation programs that deliver physical activity opportunities directly to neighborhoods lacking nearby parks or facilities.

These goals and policies would enhance and expand open space and recreation opportunities within the Planning Area but would not have an adverse physical effect on the environment since nearly all of the Planning Area is already developed and within an urbanized area. Further, even if the City identifies new opportunities for open space, which is challenging given the built-out nature, the limited opportunities available would mean that any expansion of existing facilities would be limited in scope and would not result in significant adverse environmental impacts. Lastly, all open space/recreation improvements would take place on already developed property and would create little or no additional impacts regarding other topics (e.g., noise, air quality, traffic, etc.).

Implementation of the Maintenance and Operations recommendations of the Parks and Open Space Master Plan, continued collection of development fees, identification of alternative funding sources for park maintenance, and adherence to GPU goals and policies would avoid substantial adverse physical impacts associated with parks and recreation facilities, the construction of which could cause significant environmental impacts. Therefore, this impact would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

None Required.

v. Other Public Facilities

Analysis of Impacts

Other public facilities in Downey include libraries and community centers. Downey City Library is located at 11121 Brookshire Avenue, which is part of the Downey Civic Center. Community centers in Downey include the Barbara J. Reilly Community and Senior Center.

City residents, employees, and customers may incrementally increase the use of the City's library and community center services; however, the increase is not expected to be significant relative to citywide demand due to societal changes in the demand and type of library services needed by the public and the continued expansion of personal information services from the internet. The City and other responsible parties would be responsible for assessing growth in demand for such public facilities as the City grows. If the growth potential from the proposed GPU would be such that demand for these services would require the provision of new or physically altered facilities, such provisions would be made by the City and other responsible parties. As such, it is anticipated that existing public facilities are able to adequately accommodate any incremental increase in demand due to implementation of the proposed GPU.

Further, the Open Space Element includes Policy OS-2.7, which directs the City to modernize the library to expand technology, study and meeting spaces, literacy, workforce, and cultural programs, while improving accessibility and parking to strengthen its role as a community hub space. With implementation of these policies, the proposed GPU would have less than significant impacts on libraries and other public facilities.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

None Required.

Cumulative Impacts

Impact PUB-2 – Would the GPU cause substantial adverse cumulative impacts with respect to public services?

Analysis of Impacts

The proposed GPU does not include specific development projects. Development projects in the Planning Area would generally increase the land use intensities in the service areas for Fire and Police Protection services, potentially causing incremental and cumulative increases in the number of calls for fire and/or police protection services. Development of residential projects would lead to incremental increases in the number of students served by DUSD. Development of residential projects in the Planning Area would also lead to increases in the number of people using City park and library facilities.

The increase in demand for public services in the City attributable to the GPU would be incremental as growth occurs. Projects constructed over the life of the Plan would be required to be developed in accordance with applicable fire codes and emergency access requirements. Compliance with such requirements would help prevent and/or alleviate most fire-related emergencies and help facilitate more expedient emergency response (adequate fire flows, turning radii, width of emergency accesses). Similarly, GPU goals and policies have been designed to improve public safety through design practices, expanded resources and community engagement. These strategies are anticipated to lessen demand for both fire and police protection services within the Planning Area.

Population growth is anticipated over the lifespan of the GPU, which in turn would lead to an increase in the student population of the Planning Area. Existing DUSD facilities are considered adequate to accommodate an increase in student attendance, and it is not likely that any new facilities would be required as a result of development pursuant to the proposed GPU. Payment of established school impact fees is considered full mitigation for potential impacts in this regard. Therefore, the proposed GPU would not result in significant cumulative impacts to school facilities.

Potential cumulative impacts with respect to incremental increases in demand for parks would be offset through implementation of the Maintenance and Operations recommendations of the Parks and Open Space Master Plan, continued collection of development fees, identification of alternative funding sources for park maintenance, and adherence to GPU goals and policies. Finally, cumulative impacts to libraries and other public facilities would be less than significant through continued assessment of demands and improvements in technology that will ease direct demand on these facilities.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.15.5 – REFERENCES

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4.16 – RECREATION

This EIR chapter addresses potential project impacts related to the deterioration of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated are also addressed. Also analyzed are the potential project impacts from the construction or expansion of recreational facilities which could have an adverse physical effect on the environment. Lastly, this chapter evaluates cumulative impacts with respect to recreation.

4.16.1 – ENVIRONMENTAL SETTING

According to the City of Downey Parks and Open Space Master Plan, the City has 122 acres of parkland consisting of 13 parks (Downey, 2016). The General Plan includes classifications for three park types, but it does not include park classification definitions. The 2016 Parks and Open Space Master Plan utilizes the current park classification system of Pocket, Neighborhood, or Community Park to identify uses and acceptable features of each type of facility. According to the General Plan, Independence Park, Apollo Park, and Furman Park are identified as neighborhood parks. Based on the following definitions, these parks will change from a Neighborhood Park to Community Park classification. Also defined by the Master Plan are two subcategories of Community Park—Community Sports Park and Civic Center Community Park—as well as two other facility types: joint use school facilities and special use facilities. The definitions include:

- **Pocket Park**: Pocket Parks are typically urban open park space at a very small scale. Usually only a few house lots in size or smaller, pocket parks can be tucked into and scattered throughout the urban fabric where they serve the immediate local population. These parks act as scaled-down neighborhood parks and often offer a variety of amenities, including turf, planters, walkways, plazas, play areas for children, and picnic facilities. Pocket Parks do not provide restroom facilities or on-site parking. These are less than two acres in size. Pocket Parks generally are:
    - Small parks where neighborhood involvement in activities and programming is most appropriate
    - Small public spaces or beauty spots which are small islands within the urban environment and present opportunities to enhance the City's character and identity.
- **Neighborhood Park**: Neighborhood Parks typically serve the surrounding neighborhood for multiple uses. Park development may include play areas, small fields, benches, picnic tables, and improved paths but may not have restroom facilities or parking. Geographic range of users is up to one-half mile. Downey Neighborhood Parks are approximately two to eight acres in size.
- **Community Park**: Community Parks meet the recreational needs of several neighborhoods and may also preserve unique landscapes and open spaces. These parks serve multiple uses and provide recreational facilities, restrooms, and accommodate group activities not provided in Neighborhood Parks. Community Park sites should be accessible by arterial and/or collector streets and include parking. Community Parks in Downey provide many activities that serve the entire City. Downey Community Parks are typically greater than eight acres in size. Additional Community Park sub-categories include:

  - **Community Sports Park:** Community Sports Parks primarily function as dedicated facilities for group sports. Community Sports Parks may have soccer fields, baseball and softball fields, basketball courts, and other sports facilities, and typically provide parking and restroom facilities; they also may provide other support facilities such as concession stands.
  - **Civic Center Community Park:** Civic Center Park is a planned facility that does not easily fit in typical classifications. Its small size is similar to a pocket park, and during typical days it will be utilized in a similar manner as a pocket park only by the immediate population. However, it may host events for the entire community, functioning more like a community park. The Downtown Specific Plan identifies smaller spaces that may in the future be developed into smaller open space areas/plazas. Due to their proximity to the downtown area, many of these spaces may also fall into this category of park.
- **Joint Use Facilities:** These parks, owned and/or managed by DUSD, supplement Community Parks and serve broader citywide recreation needs. The parks contain various assets, often for active recreation, and are programmed accordingly. Restroom facilities and parking are generally provided for users. The geographic range of users for joint-use facilities is citywide.

Parks and open space opportunities exist citywide, including facilities for active and passive recreation such as baseball fields, basketball courts, soccer fields, tennis courts, a dog park, and a skate park. Downey has continued to move forward to meet the needs of the community with the development of newer facilities, such as Discovery Sports Complex. Table 4.16-1 lists the size and features of existing and planned public parks and recreation facilities, including each park classification.

School Facilities

Since 1978, the City has had a joint use agreement with DUSD that allows the City to utilize all school facilities. In June, 1986, the City and DUSD entered into an agreement to build a swimming pool at Downey High School. The two proportionally share pool operation costs. Under the terms of the joint use agreement, the City has the opportunity to utilize the pool during the week of spring break and on the first day of summer break following the last day of school in May through the last day of summer break prior to the first day of school in August. The City and DUSD also entered into an agreement for the Columbus School Sports Fields in July, 2001. Under the terms of the agreement, the City receives full use of the facility during non-school hours in exchange for providing facility maintenance. DUSD pays for all utilities.

Many campuses have outdoor play areas, sports fields, and swimming pools not directly used by the City but by the sports and community organizations of Downey. In recent years, schools have become more concerned about security and unauthorized access to school campuses and have restricted public access during after school hours through measures such as fencing and locked gates. Table 4.16-1 lists the existing facilities at DUSD schools and Exhibit 4.16-1 identifies school locations.

Table 4.16-1: Existing and Planned Parks and Recreation Facility Inventory

DOWNEY PARK AND RECREATION FACILITIES					PASSIVE FACILITIES																			SPORTS FACILITIES										
KEY	FACILITY	ADDRESS/LOCATION	PARK TYPE	Park and Acreage	Barbeques	Bandshell	Benches (stand alone)	Bike Rack	Concession Building	Community Building	Dance Room	Dog Park	Drinking Fountain	Exercise Equipment	Kitchen	Lake	Open Passive Turf	Parking	Playground / Tot Lot	Picnic Shelters / Gazebos	Picnic Tables (includes two benches)	Restroom	Trails - Internal Park	Trail - Linkage	Baseball	Basketball (indoor-in Gymnasium)	Basketball (outdoor)	Football Field	Handball Court	Softball	Skate Park	Soccer Field	Swimming Pool	Tennis Court	Volleyball
Existing Parks																																		
1	Apollo Park (Includes exterior elements of Barbara J. Riley Community & Senior Center & McCaughan Gymnasium)	12544 Rives Ave	Community Park	17.2	10		31	3	1	Y	Y		4				Y	298	1		56	2	Y		3 P[1]	1 P	2L	1 O P		3 P[1]		1 O P			5 L P
2	Brookshire Children's Park	12520 Brookshire Ave.	Pocket Park	1.2	2		6						1					0	1	2	7		Y											
3	Crawford Park	7000 Dinwiddie	Neighborhood Park	2.3	4		3						1				Y	6	1		5			Y			1/2 ct							
4	Dennis the Menace Park	9125 Arrington Ave.	Neighborhood Park	6.2	4		9			1			2				Y	49	2	1	23	1												
5	Discovery Sports Complex	12400 Columbia Way	Community Sports Park	12.7			4		1				3					137				1			2 L P [11]			1 O P		2 L P [11]		2 L P			
6	Furman Park	10419 Rives Ave.	Community Park	14.4	11		15	1	1	3[6]			5	Y	Y		Y	49	2	2	29	1	Y		2 P[7]		1 full P					1 O P		4	
7	Golden Park	8840 Golden Ave	Community Park	8.1	5		4	1	1	2			1		Y		Y	78	1	3	21	2[3]	Y		1		1 full P	1O	1						
8	Independence Park	12334 Bellflower Blvd.	Community Park	10.2	5		24	1	2	1			3					145	1		4	2								2 P L [4]	1			8L	
9	Rio San Gabriel Park	9612 Ardine St.	Community Park	15.7	5		12		1	1		Y	4				Y	144	1	4	12	2	Y[2]				1 full	1 O L P		2L[5]		1 L O P[6]			
10	Temple Park	7132 Cole St.	Pocket Park	0.4			2										Y	0	1															
11	Treasure Island Park	9300 Bluff Rd.	Neighborhood Park	3.8	4		8						1				Y	26	1	2	12		Y	Y											
12	Wilderness Park	10959 Little Lake Rd.	Community Park	24.6	8		14			1			5		Y	2	Y	133	1	3	36	2[3]	Y	Y										
Planned Park Facilities																																		
13	Civic Center Park (Part of Civic Center Master Plan)	3rd Street/Civic Center Drive	Civic Center Community Park	1.2		Y				Y							Y	Y	Y			Y												
Existing Community Centers																																		
14	Barbara J. Riley Community & Senior Center (Refer to Apollo Park for Exterior Facilities)	7810 Quill Drive	Special Use Facility					1					1	Y	Y			Y				Y												

DEFINITIONS L = Lighted P = Practice Field/Court O=Overlay Field Used for Games by Organized Youth Sports Leagues

(1) Three Fields; One Field Lighted. Additional Tee Ball Field. Used for softball/baseball.
(2) Walking trail completed during assessment.
(3) Restrooms inside building.
(4) One of two softball fields lighted. Two additional small fields.
(5) Overlay soccer and football played on same field.
(6) Five structures on site: Two modular YMCA buildings, one main building not in use (proposed to be used by YMCA), one classroom building, one multipurpose meeting room building.
(7) Additional Tee Ball Fields (2).
(8) Parking available at the High School.
(9) Open turf with space for three large fields; 13 fields used of varying sizes for different age groups.
(10) Ten small full courts and two large full court basketball courts. Two of four soccer fields are overlay.
(11) Two ball fields utilized by baseball and softball.
(12) Limited Parking Available.
(13) Open grass area could be used for soccer.
(14) Ballfield has backstop/team beanches with grass infield.
(15) Ballfield has grass infield.
(16) Tee ball backstop, grass field.
(17) Grass Volleyball.
(18) Playground includes swingsets only.

Exhibit 4.16-1: Existing and Planned Parks and Recreation Facilities and Schools

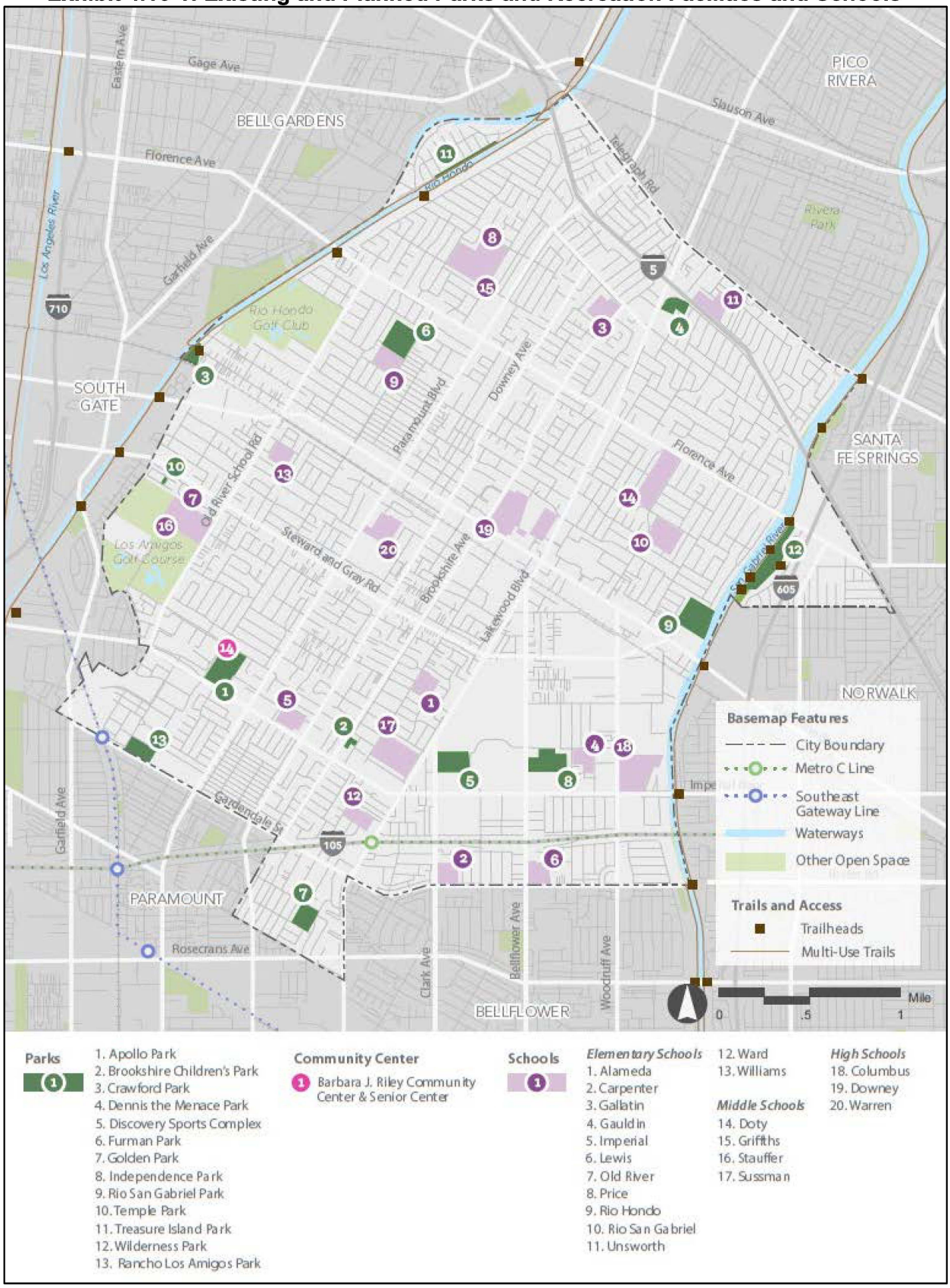


Table 4.16-2: School Facilities Inventory

DOWNEY SCHOOL FACILITIES			PASSIVE FACILITIES			SPORTS FACILITIES										
			Open Passive Turf	Parking	Playground / Tot Lot	Baseball	Basketball (indoor-in Gymnasium)	Basketball (outdoor)	Football Field	Handball Court	Softball	Skate Park	Soccer Field	Swimming Pool	Tennis Court	Volleyball
KEY	FACILITY	ADDRESS/LOCATION														
Existing Schools																
15	Alameda Elementary School	8613 Alameda Street	Y	Y	2			2 full		2			1 [13]			
16	Carpenter Elementary School	9439 Foster Road	Y	Y	1 [18]	1 [14]		6 full		3			1 [13]			2 [17]
17	Columbus High School/Downey Adult School	12330 Woodruff Ave.	N	Y	1	3 P					1 L		3 O P			
18	Doty Middle School aka East Middle School	10301 Woodruff Ave.	N	Y [12]		2 P		12 full [10]	1 O				4 O[10]			
19	Downey High School (Pool also called Downey Community Aquatics Center)	11040 Brookshire Ave	N	Y [8]		3	1	4 full	1 L				1 O	1	8	
20	Gallatin Elementary School	9513 Brookshire Avenue	Y	Y	2	1 [15]		6 full		2			1 [13]			
21	Gauldin Elementary School	9724 Spry Street	Y	Y	1	1		2 full; 4 half					1 [13]			
22	Griffiths Middle School	9633 Tweedy Lane	N	Y		2 P		4 - full + 8-1/2 ct					3 O P [9]			
23	Imperial Elementary School	8133 Imperial Highway	Y	Y	3			6 half		2			1 [13]			
24	Lewis Elementary School	13220 Bellflower Blvd.	Y	Y	3			3 full		4			1 [13]			
25	Old River Elementary School	11995 Old River School Road	Y	Y	1	1 [16]		4 full		3			1 [13]			
26	Price Elementary School	9525 Tweedy Lane	Y	Y	3	1 [15]		5 full; 2 half		2			1 [13]			
27	Rio Hondo Elementary School	7731 Muller St	N	Y [12]	3	2 P		2 - full + 4 - 1/2 ct		2						
28	Rio San Gabriel Elementary School	9338 Gotham	Y	Y	2	1 [15]		4 full		4			1 [13]			2 [17]
29	Stauffer Middle School aka West Middle School	11985 Old River School Road	N	Y	1	4 P		9 full								
30	Sussman Middle School aka South Junior High School	12500 Birchdale Avenue	N	Y		2		10 full		1			3			
31	Unsworth Elementary School	9001 Lindsey Avenue	Y	Y	2	1 [14]		2 full		2			1 [13]			
32	Ward Elementary School	8851 Adoree Street	Y	Y	3	1 [15]		2 full		1			1 [13]			
33	Warren High School	8141 De Palma Street	N	Y		2	1	6 - full + 2 - 1/2 ct	1 L					2	8	
34	Williams Elementary School	7530 Arnett St	Y	Y	2	1 [15]		3 full		2			1 [13]			

DEFINITIONS L = Lighted P = Practice Field/Court O=Overlay Field Used for Games by Organized Youth Sports Leagues

(1) Three Fields; One Field Lighted. Additional Tee Ball Field. Used for softball/baseball.

(2) Plans in place for walking trail.

(3) Restrooms inside building.

(4) One of two softball fields lighted. Two additional small fields.

(5) Overlay soccer and football played on same field.

(6) Five structures on site: Two modular YMCA buildings, one main building not in use (proposed to be used by YMCA), one classroom building, one multipurpose meeting room building.

(7) Additional Tee Ball Fields (2).

(8) Parking available at the High School.

(9) Open turf with space for three large fields; 13 fields used of varying sizes for different age groups.

(10) Ten small full courts and two large full court basketball courts. Two of four soccer fields are overlay.

(11) Two ball fields utilized by baseball and softball.

(12) Limited Parking Available.

(13) Open grass area could be used for soccer.

(14) Ballfield has backstop/team beanches with grass infield.

(15) Ballfield has grass infield.

(16) Tee ball backstop, grass field.

(17) Grass Volleyball.

(18) Playground includes swingsets only.

Other Recreational Facilities

Non-public facilities supplement residents' recreational needs, as the array of programs and facilities they provide is substantial. Private facilities include those at churches, clubs, private schools, and golf courses such as Los Amigos Golf Course operated by the County of Los Angeles. Private fitness and dance businesses operate in Downey, such as LA Fitness, Downey Dance Studio, and Nifty after Fifty, a fitness club aimed at the older generation. Some programs are offered through cooperative agreements with the City, while others are not. The City offers ice skating recreational programming utilizing Paramount Iceland, a privately operated ice rink near Downey.

The Parks and Open Space Master Plan does not provide a detailed inventory of private and commercial facilities since the City does not own, operate, or maintain them. These recreation resources are therefore not credited toward satisfaction of the City's facility goals for public parks or recreation programming. However, as they do fill a recreation role, these facilities may individually be able to address certain specific identified needs in the Downey area.

Trails and Connectivity

The Downey Parks and Open Space Master Plan defines connectivity as the level of pedestrian and bicycle access to parks within the community, as well as the walkability of a park's internal trail system. The City of Downey is shouldered by the San Gabriel River Bike Path, the Rio Hondo Bike Path, and Los Angeles River Bike Path, all Class I facilities. The City currently has 5.7 miles of Class I bike trails. The City of Downey Bicycle Master Plan (adopted 2015) identifies and proposes an additional 11.52 miles of Class II and 18.9 miles of Class III bike trails. Exhibit 4.16-2 identifies existing and planned trails. The City has also initiated several projects to develop circular walking trails around major park facilities. The completed additional development of a circular park pathway of decomposed granite surface provides the opportunity for walkers and runners, promoting Downey's Healthy program. Table 4.16-3 summarizes the Connectivity Inventory, which looked at:

- Location on a Metro bus/DowneyLink bus stop
- Amount of internal walking paths; percentage of park accessible by walking paths
- Amount of parking spaces/handicapped spaces
- Proximity to bike paths
- Proximity to residential areas
- Barriers to pedestrian access within and surrounding the park

Parkland Level of Service Ratios

Level of Service (LOS) is a common metric used in park and recreation planning to describe whether a city has a sufficient amount of park land and/or recreation facilities. LOS is a numerical guideline presented as a ratio that compares the amount of land (in acreage) or facilities (in units) to the population. The LOS states how much acreage, or how many units, should exist in an area based on how many people live there. For parkland, it is a ratio of acres per 1,000 people served. For facilities, it is a ratio of 1 facility per number of people served.

According to the State Department of Finance (E-5 City/County Population and Housing Estimates, 1/1/2026), the estimated population of the City of Downey at the end of 2025 was 111,326. The City of Downey has approximately 122 acres of parkland, resulting in a park ratio

of 1.10 acres of parkland per 1,000 Downey residents (DOF, 2025). Relative to state averages, this is a low level of service. Most cities in California strive to provide a minimum of 3.0 acres per 1,000 residents, as advised in California's Quimby Act. The California Quimby Act gives cities or counties the right, by ordinance, to require land dedication or impose in-lieu fees (or a combination) to acquire land for neighborhood and community parks as a condition of approval for residential subdivision development. [Note: Joint-use sites and trail corridors are not counted toward Quimby requirements.]

Relative to national averages, Downey is similarly underserving parkland to its residents. Data provided by the National Recreation and Park Association (NRPA) shows that for jurisdictions of similar populations as Downey (100,000 to 250,000 residents), the median level of service is 10.3 acres per 1,000 residents and the lower quartile level of service is 6.3 acres per 1,000 residents. Downey's 1.10 acres per 1,000 residents is thus significantly lower than national averages. In order to achieve a level of service ratio of 3.0 acres per 1,000 residents, the City of Downey would need a total of 336 acres of parkland. With only 122 acres of parkland, the City currently has a parkland deficit of 214 acres based on a standard of 3.0 acres of parkland per 1,000 residents identified in the City's General Plan.

Parkland Access

In urbanized areas like the City of Downey, parkland access (e.g., percentage of residents within a 10-minute walk) is a more appropriate measure than the traditional parkland ratio (acres per 1,000 residents) because it better ensures equitable, usable, and high-quality access for all residents. While ratios measure overall quantity, they ignore geographic barriers, safety, and actual availability in disadvantaged neighborhoods, focusing on proximity and equitable distribution instead. The following are key reasons parkland access is a more appropriate measure than parkland ratio:

- **Equitable Distribution:** Park access measures show that a city can have a high overall parkland ratio while large areas of the city lack any nearby parks.
- **Convenience and Usage:** A 10-minute walk (roughly a half-mile) is the accepted standard for park use. Even if a city has high acreage per capita, residents are unlikely to use a park that is far away.
- **Overcoming Barriers:** Modern access metrics consider barriers like highways, trains, or rivers that hinder access, whereas ratios do not.
- **Equity and Demographics:** Access metrics allow cities to target resources at neighborhoods with low income, low canopy coverage, and high population density.
- **Improved Health Outcomes:** Studies find that "nearby nature" (access) is more closely linked to increased physical activity and better health than the total amount of parkland.

Exhibit 4.16-3 shows the location of parks within Downey as well as half-mile access radii and potential park expansion opportunities. As shown in Exhibit 4.16-3, many communities in the northern and central portions of the City of Downey lack half-mile access to parks.

Exhibit 4.16-2: Existing and Planned Bicycle Trails

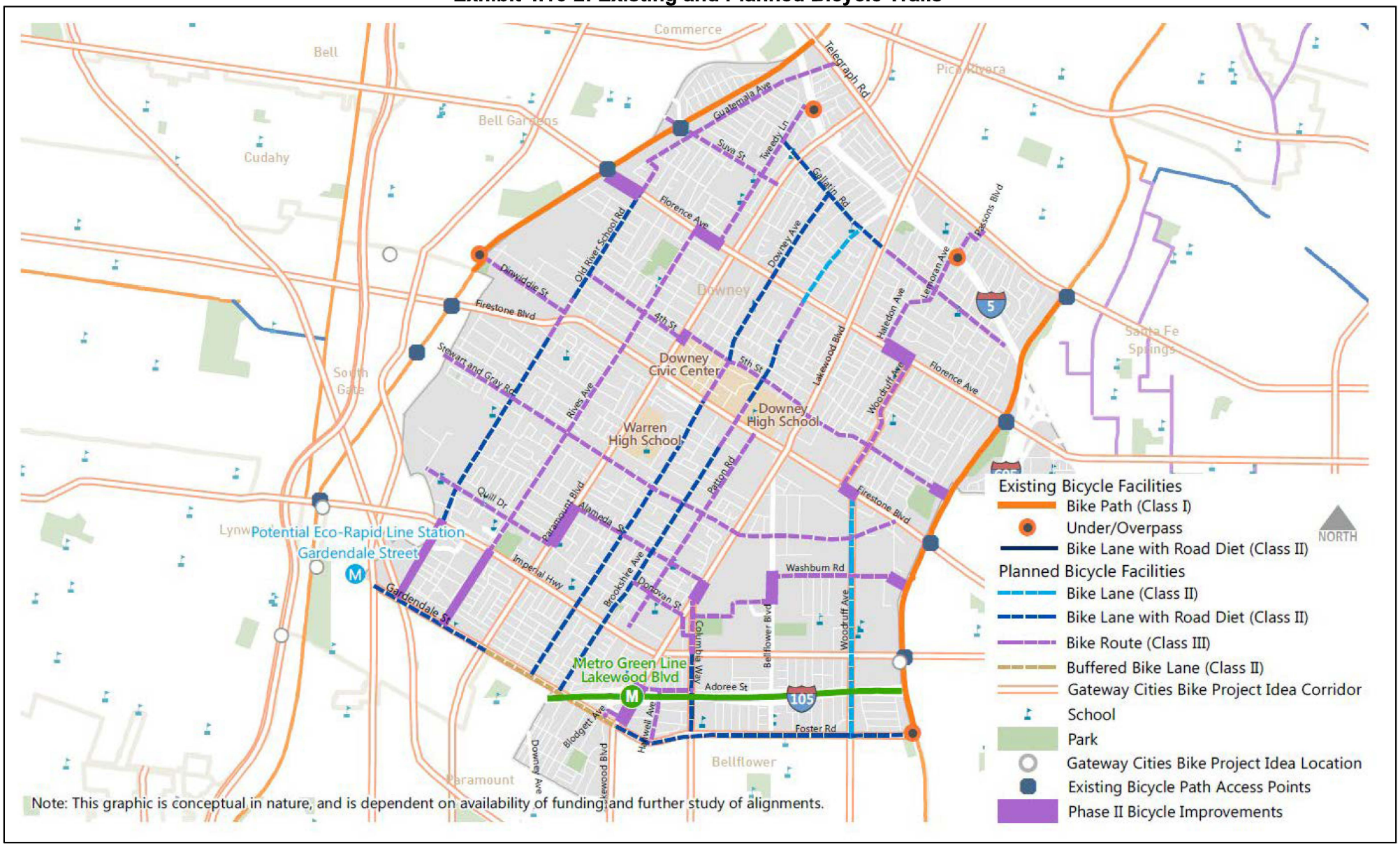


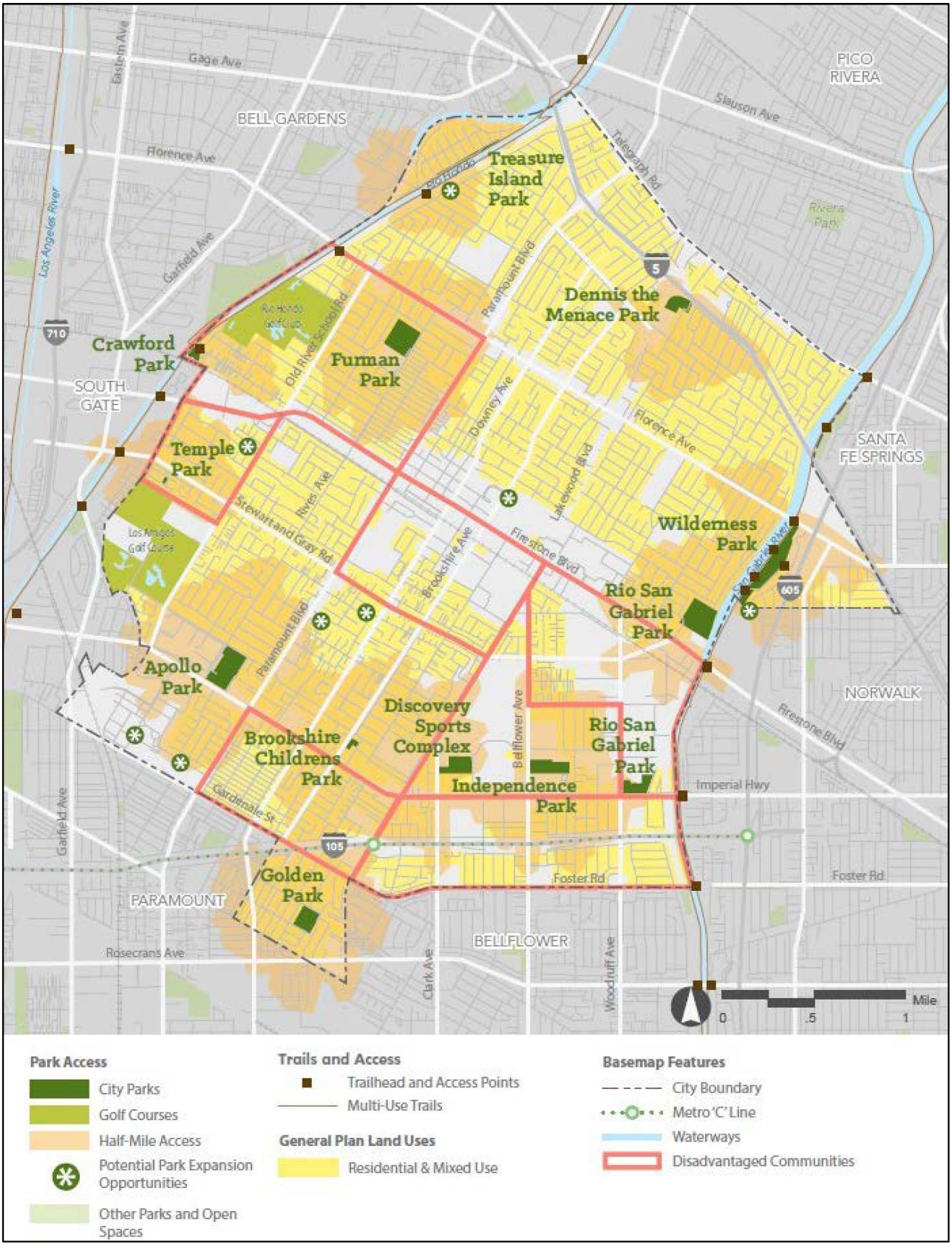
Table 4.16-3: Connectivity Inventory

CONNECTIVITY AND ACCESS		CONNECTIVITY/ACCESS												
		Metro Bus Stop	DowneyLink Stop	Distance to Nearest Metro Bus (Approx.)	Distance to Nearest DowneyLink Bus (Approx.)	Internal Walking Path Distance (linear feet)*	Recreational Walking/Jogging Path Distance (linear feet)*	Total Parking Spaces on Site (including Handicapped)	Handicapped Spaces	Bike Path Adjacent	Sidewalks Adjacent to Park	% Park Accessible by Walking Paths (0%, 0-25%,25-50%, 50-75%, 75%-100%, 100%)	Located Within/Adjacent to Residential Area	Barriers to Pedestrian Access
KEY	FACILITY													
1	Apollo Park (includes exterior elements of Barbara J. Riley Community & Senior Center & McCaughan Gymnasium)	Y	Y	0	0	6,500'	3,650'	298	23	N	Y	75%-100%	Y	Arterial Streets: Imperial Highway, Paramount Blvd., Old River School Road
2	Brookshire Children's Park	N	Y	0	580'	700'	0	0	0	N	Y	50-75%	Y	Arterial Streets: Imperial Highway, Lakewood Blvd., Brookshire Ave.
3	Crawford Park	N	N	3,250'	3,250'	250'	0	6	0	Y	Y	1-25%	Y	Train tracks to south; Rio Hondo to the west.
4	Dennis the Menace Park	N	N	1,625'	1,625'	1,250'	0	49	2	N	N	25-50%	Y	5 Freeway to north; Lakewood Blvd. to the west; Internal park fencing limits access to the west; Shopping center limits access from the south.
5	Discovery Sports Complex	N	Y	1,250'	300'	725'	0	137	8	N	Y	50-75%	N	Arterial Streets: Lakewood Blvd, Imperial Highway, Bellflower Blvd. Kaiser Permanente to the east.
6	Furman Park	N	Y	1,400'	0	5,050'	3,750'	49	3	N	Y	75%-100%	Y	Arterial Streets: Old River School, Florence Ave., Paramount Ave. Residential backyards to the west; school (fencing) to the south.
7	Golden Park	N	Y	1,400'	0	2,046'	1,400'	78	4	N	Y	50-75%	Y	105 Fwy; Arterial Streets: Downey, Rosecrans, Lakewood Blvd.
8	Independence Park	N	N	850'	850'	2,125'	0	145	8	N	Y	50-75%	Y	Arterial Streets: Bellflower, Woodruff, Imperial Highway. Tennis courts are internal park barrier. Commercial buildings to the south and north; park maintenance to north.
9	Rio San Gabriel Park	N	N	700'	1,550'	1,000'	0	144	6	Y	Y	1-25%	Y	Arterial Streets: Firestone Blvd. San Gabriel River to the east; provides access and also limits neighborhood connectivity; commercial to the south.
10	Temple Park	N	N	2,500'	2,500'	325'	0	0	0	N	Y	75%-100%	Y	Arterial Streets: Stewart & Gray, Old River School. Rio Hondo to the west. Golf Course to south.
11	Treasure Island Park	N	Y	1,600'	0	2,150'	2,150'	26	1	Y	N	100%	Y	5 Fwy to the northeast. Rio Hondo: provides access to bike path, but also limits neighborhood connectivity. Suva Street crossing provides some access to communities to southeast of river.
12	Wilderness Park	N	Y	800'	0	7,500'	6,000'	133	7	Y	Y	75%-100%	Y	San Gabriel River to the east, provides access and also limits access to communities to the west. 605 freeway is partial barrier to the east, but access provided via Cecilia St. underpass.

*Internal path distance reflects all internal park pathways including those used for recreational walking/jogging; recreational walking/jogging paths only reflect pathways used for recreational walking/jogging.

Note: All distances are approximate.

Exhibit 4.16-3: Downey Park Access Map



4.19.2 – REGULATORY FRAMEWORK

State

Quimby Act (1975)

The Quimby Act allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land, donate conservation easements, or pay fees towards parkland.

State Public Park Preservation Act (California Public Resource Code Section 5400 – 5409)

The State Public Park Preservation Act is the primary instrument for protecting and preserving parkland in California. Under the act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This ensures a no net loss of parkland and facilities.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to recreation that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.16.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

A. 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.

B. Include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment.

C. Cause substantial adverse cumulative impacts with respect to recreation.

4.16.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to recreation facilities which could result from the implementation of the project and includes mitigation measures if needed to reduce significant impacts.

Existing Recreation Facilities

Impact REC-1 – 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?

Analysis of Impacts

As detailed in section 4.16-1, the City of Downey has 122 acres of parkland consisting of 13 parks. With a 2025 population of 111,326, Downey provides approximately 1.10 acres of parkland per 1,000 residents. According to National Recreation and Park Association, a typical park and recreation agency should offer at least 3.0 acres of parkland per 1,000 residents. Additionally, most cities in California strive to provide a minimum of 3.0 acres per 1,000 residents, as advised in California's Quimby Act. To meet this standard, Downey would therefore need to provide an additional 214 acres of parkland.

The proposed GPU could potentially result in a population of 142,809 residents in the City of Downey by the year 2045. Implementation of the GPU would, as a result, decrease the existing park ratio of 1.10 acres per thousand residents to a ratio of 0.85 acres per thousand residents, which could have the indirect effect of increasing demand on existing neighborhood and regional parks and other recreational facilities.

As outlined in the GPU, the City is anticipating new development and population growth as part of its long-term vision and redevelopment. As the City grows, so will the demand on its existing facilities and the need for new parks and recreational programs. As such, there would be an incremental increase in the use of recreational facilities in tandem with the anticipated increase in the City's population over the 20-year life of the Plan. It is assumed that the City and other responsible actors would monitor the reliability of the City's recreational facilities, and assess whether over the lifespan of the GPU, the need arises for the expansion or construction of new facilities.

In recent years, urbanized Cities such as Downey have increasingly adopted more appropriate measures for measuring parkland access, such as how far residents must walk or bike to reach a park, and the overall quality and condition of amenities once they arrive. In Downey, access to parks and recreation opportunities is a top priority among residents. However, as shown in Exhibit 4.16-3, access mapping shows that some areas still lack a park within a 10-minute walk. For this reason, the proposed GPU highlights areas where access is limited and explores opportunities to close those gaps ensuring all residents can benefit from nearby, high-quality outdoor spaces.

The City of Downey is currently in the process of updating its Parks and Open Space Master Plan, which was originally adopted in November 2016. The updated Master Plan will be used as an implementation tool for the management and development of parks and recreation facilities and programs through the year 2045. Additionally, it will be utilized by the City to determine how to best meet the future needs of the community through development, redevelopment, expansion, and enhancement of the City's parks system, open spaces, trails, recreation facilities, and programs.

The Parks and Open Space Master Plan also includes Maintenance and Operations recommendations to meet the needs identified in the Recreation Facility Needs Assessment. As a result of these recommendations, the City is currently working towards implementing and developing the following system-wide improvements/changes:

- A lifecycle maintenance plan for buildings and park amenities. This should be built into daily operations, yearly capital improvement plans, and budgetary requests to maximize the value and useful life of these assets.

- A soil management plan which includes regular soil testing in order to avoid issues with plant die-back and sparse or soggy turf conditions.
- A volunteer park adoption/maintenance program such that it includes training for the volunteers as Park Stewards. The program could include regular fix up/clean-up days and enlist the help of community organizations such as scouts, park users, sports clubs, etc. to maintain and enhance various elements of the park system. Currently, the City has a limited volunteer program with approximately 55 teens from middle school through high school age. The teens work with youth at the park programs, summer day camps and special events. They also volunteer for various City departments in City Hall, City special events such as the Healthy Downey-TLC 5K, Street Faire, Hall of Fame, Kids Day, Pumpkin Patch, Tree Lighting, and many more.
- Evaluate opportunities to "naturalize" many existing facilities including the elimination of turf in areas of little public use and development of native demonstration gardens.
- Establish policies appropriate for the installation and management of synthetic playing fields including:
    - Synthetic fields should be installed only at facilities which also could have lights for night-time play.
    - Synthetic fields should be budgeted as a fixed asset and fully depreciated over the life of the "carpet."
    - A policy that states synthetic fields will be open for play except under extreme weather conditions.
- Continue to expand the "Yellow Swing Program" for those with disabilities, as seen at Brookshire Children's Park, Rio San Gabriel Park, Temple Park, and Treasure Island Park, to additional neighborhood and community parks as part of the regular playground maintenance/replacement program. The Yellow Swing is a swing seat designed to help meet the American Disabilities Act guidelines for playground equipment in public applications.
- Installation and operation of a centrally-controlled irrigation system such as the Rainbird IQ irrigation central control system. This system provides cost-effective, multiple-site centralized irrigation control from a single computer and will allow staff to monitor and control irrigation operation at multiple remote sites. IQ communication capabilities eliminates travel to remote sites for programming changes or adjustments. Manual operation and programming functions that were performed only at the site irrigation controller can now be completed from the IQ central computer. Purchase of the system should be incorporated into the future park system upgrades.
- Develop a Maintenance Manual detailing park maintenance and operation tasks on a daily, weekly, monthly, etc. basis. The Maintenance Manual should include existing specifications as well as:
    - Clear written maintenance objectives and frequency of care for each amenity is needed based on the desired outcomes for a quality visitor experience in maintaining the parks for aesthetics, safety, recreation and sustainability including:
    - Landscape bed design, planting and maintenance standards
    - Landscape turf and right of way mowing and maintenance standards
    - Tree and shrub planting and maintenance standard
    - Equipment maintenance and replacement standard
    - Chemical application standard

  - Formalized and scheduled park facility inspections including playgrounds, specialized facilities such as skate parks, high use visitor areas and buildings
  - Design standards for the development of park features such as sports fields, trails and buildings
  - Preventative maintenance plan developed for all park locations

- Establish an Estimated Annual Water Use (EAWU) for various hydrozones such as turf, sports fields and shrub beds utilizing the Water Use Classifications of Landscape Species (WUCOLS IV) developed through the California Department of Water Resources and University of California, Davis.
- Consider development of a Community Garden program to provide opportunities for City residents to participate in the program and to reduce on-going operation and maintenance costs for developed parkland.
- Convert park irrigation systems to recycled water when practicable to reduce demand on the potable water supply. (Specific park conversions have been evaluated by City staff and have been included in park plans for development, see Exhibit 5.2-1). Appendix tab A3.5-1
- Develop a process of evaluation and refinement to measure park maintenance success through established performance standards. Examples of what this should include are:
  - Established park maintenance standards and frequency rates and tracking over several years
  - Establish and track the cost per acre for each park and park type and tracking over several years
  - Establish a minimum of training hours per year per employee with re-evaluation of success of training and new requirements due to legislative changes
  - Establish and track replacement schedules for equipment and other fixed assets
- Develop a Sustainable Performance System with responsibility for the program potentially handled by a dedicated Conservation Coordinator. The performance system should include at a minimum:
  - Native Plant Policy
  - Track Utilities—Partnership with utilities
  - Recycling Program
  - Green Waste Composting
  - Demonstration Gardens
  - Use of Alternative Energy Sources
  - Integrated Pest Management Program reflective of consistently changing needs of an urban park system
  - Habitat Development beyond mitigation sites
  - Community Gardens
  - Public Education and Outreach
  - Stormwater retention
  - Drought-tolerant/Water-wise plants and irrigation systems

The Parks and Open Space Master Plan recommendations also include identification of opportunity sites that can help alleviate the City's need for additional open space and fill some of the access gaps that currently exist in parts of the City. It should be noted that while these opportunity sites will provide additional park space and amenities for the community, the sizes of

the parcels limit their development potential. Additionally, while these sites have been identified by the Master Plan, additional sites will continue to be considered as opportunities when available.

In recent years, the City improved and/or expanded five parks, including Wilderness Park, Apollo Park, Dennis the Menace Park, Golden Park, and Rio San Gabriel Park. Most of the City's need for bicycling trails can be met through the realization of the Bicycle Master Plan. Much of the City's need for playgrounds can be accommodated with existing School District playground facilities and development of new playgrounds at opportunity sites. Conversion of existing, highly-used grass sports fields to synthetic turf would provide additional playing time, a higher quality field of play, and less maintenance.

Funding for maintenance and operation of Downey's park and recreation facilities and programs are currently provided by user fees for recreation programs and facility use, as well as the City's General Fund. The Quimby Act is a widely used source of funding which enables local government to exact dedication of land or in-lieu fees from new residential development to maintain a minimum ratio of park land to population. However, this applies only to residential subdivisions and does not address additional park demands created through the construction of new units on existing lots or to condominium conversions. As Downey is essentially built-out, the Quimby Act presents limited opportunity for future funding opportunities.

Development Impact Fees (AB 1600 fees) on development is another option for local agencies. The fees or exactions are based on the premise that new development generates new demand for park and recreation facilities. The fees only apply to new development and may only be assessed for new capital cost related to the development. A defined nexus or benefit/beneficiary relationship must be established. The fees are paid by the developer to offset costs for the infrastructure caused by new development. The fees are not limited to the cost of land and can be assessed for improvements. Some cities have used this fee mechanism to assess a capital equipment fee to acquire the equipment needed to maintain the new parks. The fees are often used in combination with development agreements. The advantages of impact fees, sometimes called mitigation fees, are that they can be assessed for non-subdivision land uses. Fees can be assessed under the premise that tourists, employers, and employees all benefit from and use community parks. This allows for assessment of commercial and industrial development. Once the nexus is established that proves the need for additional facilities because of new development, a fee program can be implemented. The fee cannot be assessed to subsidize existing shortfalls or benefit existing residents. Park in-lieu fees have been minimal for several years. The low amount is reflective of the residential build-out of Downey, meaning Development Impact Fees present a limited opportunity for funding in the future.

The Parks and Open Space Master Plan also provides information on alternative funding sources including non-profit foundation development, grants, development impact fees, development agreements, bonds, Certificates of Participation, and fund raising events, user fees, corporate sponsorship of events, adopt-a-park programs, volunteer labor, sales tax increases, Special District Assessments, taxes, concessions, user group contributions, joint use agreements with the School District, and sale or lease of surplus lands. In coordination with the Public Works Maintenance Division and Park and Recreation staff, the Master Plan identifies master planned facilities, capital replacement, and capital outlay requirements to assist with planned cash and debt management.

The proposed GPU includes various goals and policies intended to slow the deterioration of existing parks and recreation facilities, identify new recreation opportunities, and provide additional parks and recreation services to the residents of Downey:

- Goal OS-1 and its policies which strive for a comprehensive and equitable park system that meets the diverse needs of all Downey residents.
- Policy OS-1.1: Joint-Use Access. Strengthen partnerships with schools and institutions to standardize joint-use agreements, opening playgrounds, athletic fields, and recreational facilities to the public during non-school hours to relieve pressure on high-density neighborhoods.
- Policy OS-1.2: Strategic Acquisition and Conversion. Identify opportunities to acquire new parkland or repurpose underutilized public and institutional sites, including utility easements, surplus parking, and municipal property, into pocket parks, plazas, community gardens, and flexible green spaces.
- Policy OS-1.3: Neighborhood-Scale Green Spaces. Prioritize pocket parks and neighborhood parks within one-half-mile of neighborhoods to provide immediate access to play areas, social hubs, and informal gathering spaces, particularly in underserved and disadvantaged communities.
- Policy OS-1.4: Municipal Sites into Public Amenities: Redesign underutilized areas around public facilities into functional micro-parks, plazas, and community gathering spaces that enhance neighborhood character and provide recreational opportunities.
- Policy OS-1.5: Youth-Oriented Multi-Use Spaces: Design parks, plazas, and recreational areas with flexible, multi-use zones, well-lighted paths, and seating to serve as safe “third spaces” for youth recreation, mentorship, and socialization.
- Goal OS-2 seeks community facilities serving as multi-purpose hubs for learning, recreation, arts, and wellness.
- Policy OS-2.1: Upgrade and Maintain Facilities. Invest in modernization and ongoing maintenance of community facilities to provide safe, flexible, and welcoming spaces for recreation, learning, arts, and wellness activities.
- Policy OS-2.9: Promote Multi-Purpose and Flexible Use: Design or adapt all community facilities to accommodate a variety of activities simultaneously, including recreation, education, arts, wellness, and civic events, to maximize community benefit.
- Goal OS-3 strives for diverse, inclusive, and responsive recreation programs that serve all ages, abilities, and interests.
- Policy OS-3.4: Provide Flexible Program Delivery. Offer programs at varied times and locations, using multiple formats such as drop-in, seasonal, intergenerational, and virtual options to maximize participation and convenience.
- Policy OS-3.5: Maintain Adaptable Spaces for Programming. Design and manage parks, community facilities, and shared-use spaces to be flexible, multi-purpose, and equipped to support evolving recreation programs, special events, and cultural activities.
- Goal OS-7 aims for an interconnected network of trails, pathways, and active transportation corridors.
- Policy OS-7.1: Trail Networks. Complete missing links in trails and active transportation networks to provide seamless pedestrian and bicycle connections to regional assets such as the Rio Hondo and San Gabriel River corridors.

- Policy OS-7.2: Physical Barriers. Improve crossings, underpasses, and infrastructure along arterial streets, freeways, and rail lines to enhance connectivity and safe access to parks and open spaces.
- Policy OS-7.4: Trail and Bikeway Networks. Develop off-street trails, greenways, and bikeways that link parks, community facilities, and urban centers while supporting active commuting and recreation.
- Goal OS-9 and its policies which aim for high-quality, safe, and accessible recreational infrastructure.
- Policy OS-9.1: Maintain and Upgrade Facilities: Invest in maintenance, repairs, and infrastructure upgrades to meet modern safety, functional, and aesthetic standards across all parks and recreational spaces.
- Policy OS-9.3: Multi-Use and Flexible Spaces. Design recreational areas to accommodate diverse programs, community events, sports, and social gatherings that can adapt to changing community needs.
- Policy OS-9.4: Partnerships. Coordinate with schools, institutions, and community organizations to increase access, programming, and use of parks, trails, and recreational facilities.
- Policy CR-2.4: Spreading Grounds Recreation and Access. Enhance public access to spreading grounds by incorporating landscaped trails, pocket parks, and multi-use pathways, promoting opportunities for hiking, walking, and biking while educating the community on local water conservation and the benefits of outdoor recreation.
- Policy EJ-2.4: Community Facilities Upgrades. Invest in the maintenance, expansion, and programming of libraries, recreation centers, parks, and other community facilities in areas with high vulnerability to ensure equitable access to public services.
- Policy EJ-3.3: Parks, Recreation, and Physical Activity. Expand and enhance parks, open space, trails, recreation programs, and active living facilities. Ensure that residents of all ages and abilities, particularly in underserved neighborhoods, have safe and convenient access to opportunities for physical activity.
- Policy EJ-3.9: Mobile and Flexible Recreation Programs. Provide traveling or pop-up recreation programs that deliver physical activity opportunities directly to neighborhoods lacking nearby parks or facilities.

These goals and policies would enhance and expand open space and recreation opportunities within the Planning Area but would not have an adverse physical effect on the environment since nearly all of the Planning Area is already developed and within an urbanized area. Further, even if the City identifies new opportunities for open space, which is challenging given the built-out nature, the limited opportunities available would mean that any expansion of existing facilities would be limited in scope and would not result in significant adverse environmental impacts. Lastly, all open space/recreation improvements would take place on already developed property and would create little or no additional impacts regarding other topics (e.g., noise, air quality, traffic, etc.).

Implementation of the Maintenance and Operations recommendations of the Parks and Open Space Master Plan, continued collection of development fees, identification of alternative funding sources for park maintenance, and adherence to the goals and policies of the GPU would ensure that the project would not increase the use of existing neighborhood and regional parks or other

recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, this impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

Non required.

Impact REC-2 - Would the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?

Analysis of Impacts

The GPU does not include development of any new park and/or recreation facilities as part of its framework. The GPU anticipates the Planning Area would go through a period of significant growth over the life of the Plan. As discussed in Impact REC-1 above, the GPU would result in significant unavoidable environmental impacts related to the physical deterioration of existing neighborhood and regional parks and other recreational facilities. Because the City is completely built out it would be challenging to identify sufficient new opportunities for open space within the City to meet the increased demand that would occur as a result of the GPU. For this reason, it is not anticipated that the project would result in the construction of new recreational facilities. The growth that could potentially occur under the GPU could require or result in the expansion of existing recreational facilities which could have an adverse physical effect on the environment. However, as part of the City's standard development review process, all future expansion of existing recreational facilities would also be required to undergo environmental review pursuant to CEQA and incorporate mitigation as necessary. The proposed GPU also includes various goals and policies intended to slow the deterioration of existing parks and recreation facilities, identify new recreation opportunities, and provide additional parks and recreation services to the residents of Downey. These goals and policies would enhance and expand open space and recreation opportunities within the Planning Area, but would not have an adverse physical effect on the environment since nearly all of the Planning Area is already developed and within an urbanized area. Lastly, all open space/recreation improvements would take place on already developed property and would create little or no additional impacts within other issue areas (e.g., noise, air quality, traffic, etc.).

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact REC-3 – Would the project cause substantial adverse cumulative impacts with respect to recreation?

Analysis of Impacts

Development of residential projects within the Planning Area would generally increase the usage of parks and recreational facilities in the City and surrounding area, potentially causing the need for additional parks and recreational facilities due to related population increases. However, the proposed GPU includes various goals and policies intended to slow the deterioration of existing parks and recreation facilities, identify new recreation opportunities, and provide additional parks and recreation services to the residents of Downey. State law requires neighboring jurisdictions to include an Open Space Element in their respective General Plans that include similar goals and policies. Lastly, given the incremental nature of the growth that would occur in Downey over the 20-year life of the Plan, it is not anticipated that the GPU would have the effect of resulting in cumulative recreation impacts in the region.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

4.19.5 – REFERENCES

California Department of Finance. (DOF) 2025. *E-5 Population and Housing Estimates for Cities, Counties, and the State 2020-2025, May 2025.* Web: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2025/ [Accessed October 2025].

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4.17 – TRANSPORTATION

This EIR chapter addresses transportation and traffic impacts associated with the General Plan Update. This EIR chapter addresses potential project impacts related to conflicts with a program plan, ordinance or policy addressing the circulation system. This chapter also analyzes whether the project would conflict with or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) regarding vehicle miles traveled or VMT. Lastly, this chapter analyzes whether the project would substantially increase hazards due to a geometric design feature or incompatible uses or result in inadequate emergency access.

4.17.1 – ENVIRONMENTAL SETTING

This section presents the existing transportation setting, including the existing street system, pedestrian, bicycle, and transit facilities, and the General Plan context. The information in this section is largely taken from the Transportation Impact Analysis report prepared by Ganddini Group, Inc. (see Appendix G).

Existing Roadway Network

The City of Downey roadway network and functional classifications are described in the City's existing General Plan Circulation Element as adopted in 2005. The City's roadway network currently has six basic classifications: Freeway, Major Arterial, Primary Arterial, Secondary Arterial, Collector, and Local. Exhibit 4.17-1 shows the existing General Plan roadway network in the City of Downey. Existing General Plan roadway cross-sections are provided in Appendix G.

Freeway: Freeways form the basis of the regional transportation network and are administered by Federal and State transportation agencies. The main difference between freeways and other roadways is that there is no direct access to properties abutting freeways and access from cross-streets is restricted at specific points (on-ramps and off-ramps). Freeway capacity is important to local communities since traffic congestion is worsened on arterial roads and other local streets when used as alternatives where freeways are not available. The following freeways travel through or near Downey:

- Santa Ana Freeway / Interstate 5 (I-5)
- Glenn Anderson Freeway / Interstate 105 (I-105)
- San Gabriel River Freeway / Interstate 605 (I-605)
- Long Beach Freeway / Interstate 710 (I-710), located one mile west of Downey western city limits

Major Arterial: Major arterials are designed to provide access to the freeway system. When freeways are not available, major arterials also serve as through routes for traffic crossing the City. In contrast to a freeway, adjacent properties may have driveway access onto the roadway. Access to adjacent properties should be limited wherever possible to minimize cross-traffic, which influences congestion and safety. Major arterials provide four-to-six travel lanes and a median divider. On-street parking should be prohibited to maximize roadway capacity. Single or double-left turn lanes should be provided at intersections.

Primary Arterial: Primary arterials are designed to provide access through parts of the City to major arterials. Access to adjacent properties is restricted to reduce congestion and accidents.

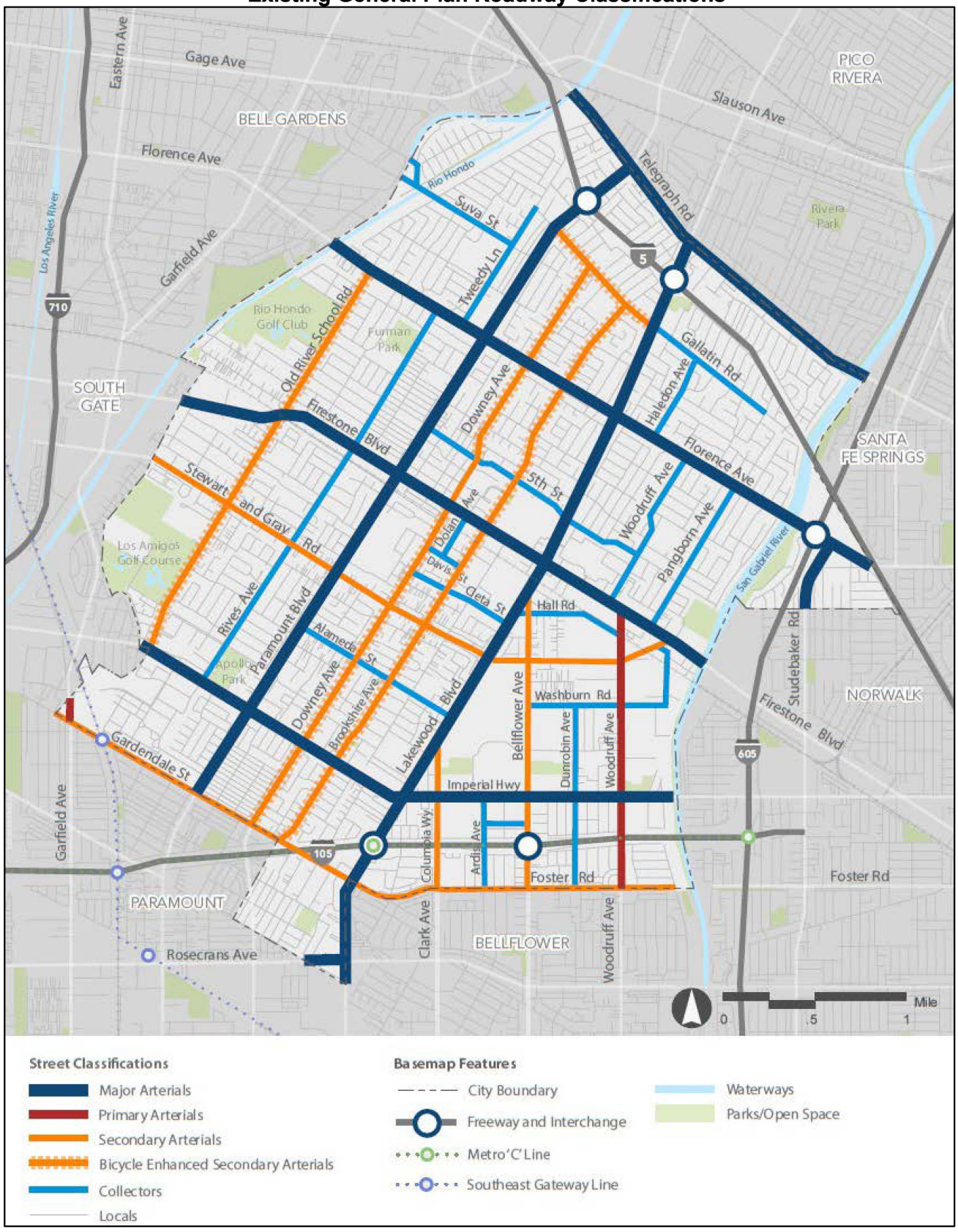
Primary arterials provide four travel lanes, two in each direction, and a median, in addition to on-street parking lanes. Single or double-left turn lanes should be provided at intersections.

Secondary Arterial: Secondary arterials are designed to provide access through parts of the City, but generally do not have the same capacity as major and primary arterials. Secondary arterials generally provide two-to-four travel lanes, two in each direction, in addition to parking lanes.

Collector: Collector streets are designed to provide access to arterial roads and the regional roadway network from local streets. Collector streets are not intended to be used as through routes to travel through the City, but rather, intended to collect traffic from local streets to be distributed at arterial roads. Typically, collectors provide, at most, one travel lane in each direction and curbside parking on both sides.

Local: Local streets are designed to provide access to properties that front upon the street and for access to the adjacent neighborhood. Local streets are not intended to be used as through routes from one neighborhood to another neighborhood, and so are typically designed with narrow widths intended to slow traffic speeds. Most local streets provide, at most, one travel lane in each direction and curbside parking on both sides. The majority of streets in Downey are classified as local streets.

Exhibit 4.17-1
Existing General Plan Roadway Classifications



Existing Transit Network

The City of Downey is currently served by the Los Angeles County Metropolitan Transportation Authority (Metro) transit system, Long Beach Transit, and the City of Downey's public transit system "Downey LINK."

Metro

Exhibit 4.17-2 shows the existing Metro transit system map within the City of Downey. As shown on 4.17-2, the City of Downey is currently served by the following Metro lines providing regional circulation:

- Metro Bus Line 62 (Telegraph Rd)
- Metro Bus Line 111 (Florence Avenue)
- Metro Bus Line 115 (Firestone Boulevard)
- Metro Bus Line 117 (Imperial Highway)
- Metro Bus Line 120 (Imperial Highway)
- Metro Bus Line 125 (Imperial Highway/Woodruff Avenue)
- Metro Bus Line 127 (Bellflower Avenue)
- Metro Bus Line 265 (Paramount Boulevard)
- Metro Bus Line 266 (Lakewood Boulevard)
- Metro Bus Line 460 (I-105)
- Metro Bus Line 577 (I-605)
- Metro Rail – C Line (I-105)

Long Beach Transit

Long Beach Transit Route 22 provides service between Downtown Long Beach and the Lakewood Green Line Station in the City of Downey.

Downey LINK

The City of Downey's public transit system, Downey LINK, operates Monday through Friday from 6:30 AM to 6:30 PM with four circulating routes during peak times providing local circulation within the City:

- Northwest Route
- Northeast Route
- Southeast Route
- Southwest Route

Exhibit 4.17-3 shows the City of Downey LINK Transit system map during peak times. All routes begin and end at the Downey Depot Transportation Center located at 8150 Nance Street (one block south of Firestone Boulevard off Downey Avenue). During mid-day times (9:00 AM – 2:00 PM, the Northwest and Northeast Routes are combined into a single North Route, and the Southeast and Southwest Routes are combined into a single South Route.

Existing Bicycle Network

The City of Downey's Active Transportation Plan (ATP), "WalkDowney", was adopted in 2021 and incorporates the City's Bicycle Master Plan that was adopted in 2015. Exhibit 4.17-4 shows the

existing and proposed bicycle facilities map as established in the WalkDowney ATP. As shown on Exhibit 4.17-4, the City's bicycle network is comprised of the following types of bikeways:[i]

- **Bike Path (Class I):** Currently, there are two Class I bike paths in the City of Downey. Class I bike paths, or shared use paths, are those that provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized. The Rio Hondo Bike Path and the San Gabriel River Path run along the west and east sides of the City, respectively. These bicycle paths are popular recreational destinations as well as important regional connectors between Downey, the Gateways Cities region, and other parts of Los Angeles County.
- **Bike Lane (Class II):** The WalkDowney Active Transportation Plan identifies Class II bike lanes that can be installed without any other change to the existing cross-section of the street. Class II bike lanes consist of pavement markings to provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted. Class II bike lanes are currently provided on Gardendale Street west of Lakewood Boulevard to Garfield Avenue, Brookshire Avenue between Gardendale Street and Imperial Highway, and Woodruff Avenue between Foster Road and Firestone Boulevard.
- **Bike Lane with Road Diet (Class II):** The City's Bicycle Master Plan identifies future installation of Class II bike lanes on the following roadways that would require a reduction from two vehicle travel lanes in each direction to one vehicle travel lane in each direction with a center turn lane:
    - Gallatin Road (between Tweedy Lane – Lakewood Boulevard)
    - Stewart and Gray Road (between Rives Avenue – Lakewood Boulevard)
    - Foster Road (between Lakewood Boulevard and eastern City boundary at San Gabriel River)
    - Old River School Road (between Florence Avenue – Firestone Boulevard
    - Brookshire Avenue (between Cherokee Drive – Imperial Highway)
    - Columbia Way (between Imperial Highway – Foster Road)

  Bike lane with road diet improvements are currently installed on the following roadways:

    - Gardendale Street (between Garfield Avenue – Lakewood Boulevard)
    - Old River School Road south of Firestone Boulevard
    - Downey Avenue (between Gallatin Road – 5th Street and Firestone Boulevard – Gardendale Street
    - Brookshire Avenue (Imperial Highway – Gardendale Street)

  Additionally, it is noted that lane striping on these streets transitions back to two travel lanes at intersections with arterials to minimize delay and extensive queuing during peak periods (i.e., Gardendale Street at Paramount Boulevard, Old River School Road at Stewart & Gray Road, etc.).
- **Buffered Bike Lane (Class II):** Buffered bike lanes are a type of Class II bikeway that include additional pavement markings, typically three to six feet wide, to further separate

[i] Bikeway class definitions are based on the California Streets and Highway Code (Section 890.4).

bicycle lanes from vehicular traffic. Portions of the existing Class II bike lanes currently provided on Woodruff Avenue include painted lane buffers.

- **Bike Route (Class III):** Bike routes are Class III bikeway facilities for secondary arterials, collectors and local residential streets that experience less vehicular traffic. Class III bikeways provide a right-of-way on-street or off-street, designated by signs or permanent markings and shared with pedestrians and motorists. These bikeways would include signage and wayfinding, on-street sharrows, and could include additional traffic calming elements. A Class III bike route is currently provided on Brookshire Avenue between Imperial Highway and Florence Avenue. In addition, Class III bike routes are currently in-place on portions of Old River School Road and Downey Avenue.

The California Streets and Highway Code also defines a Class IV bikeway; however, none are currently included in the City's existing or proposed bicycle network. Class IV bikeways, often referred to as cycle tracks or separated bikeways, promote active transportation and provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and which are separated from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

The WalkDowney ATP includes additional bicycle information, such as bicycle volume data, bicycle collision data, vehicular volumes and speeds, and bicycle parking.

Exhibit 4.17-2
Existing Transit Map – Metro

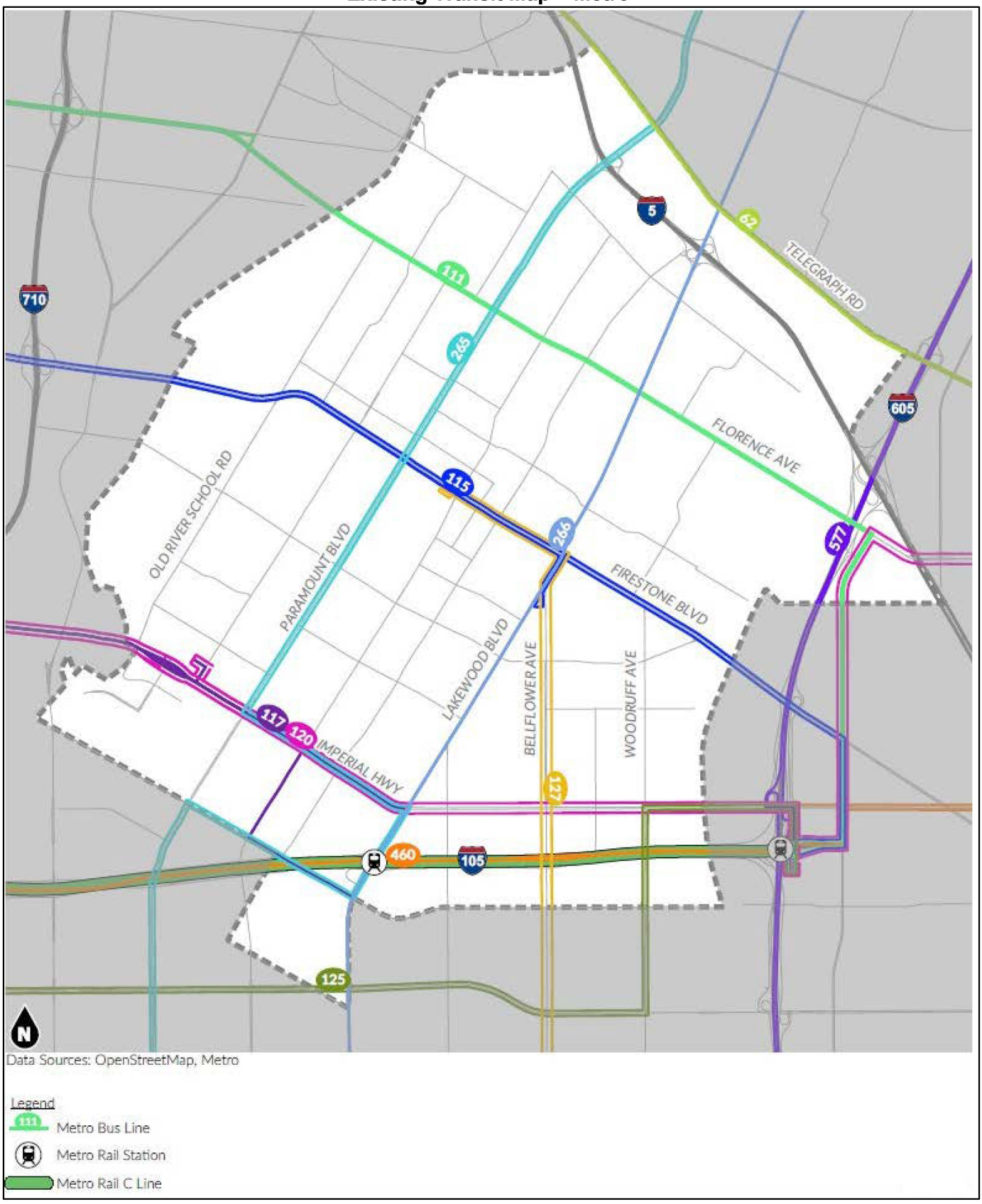
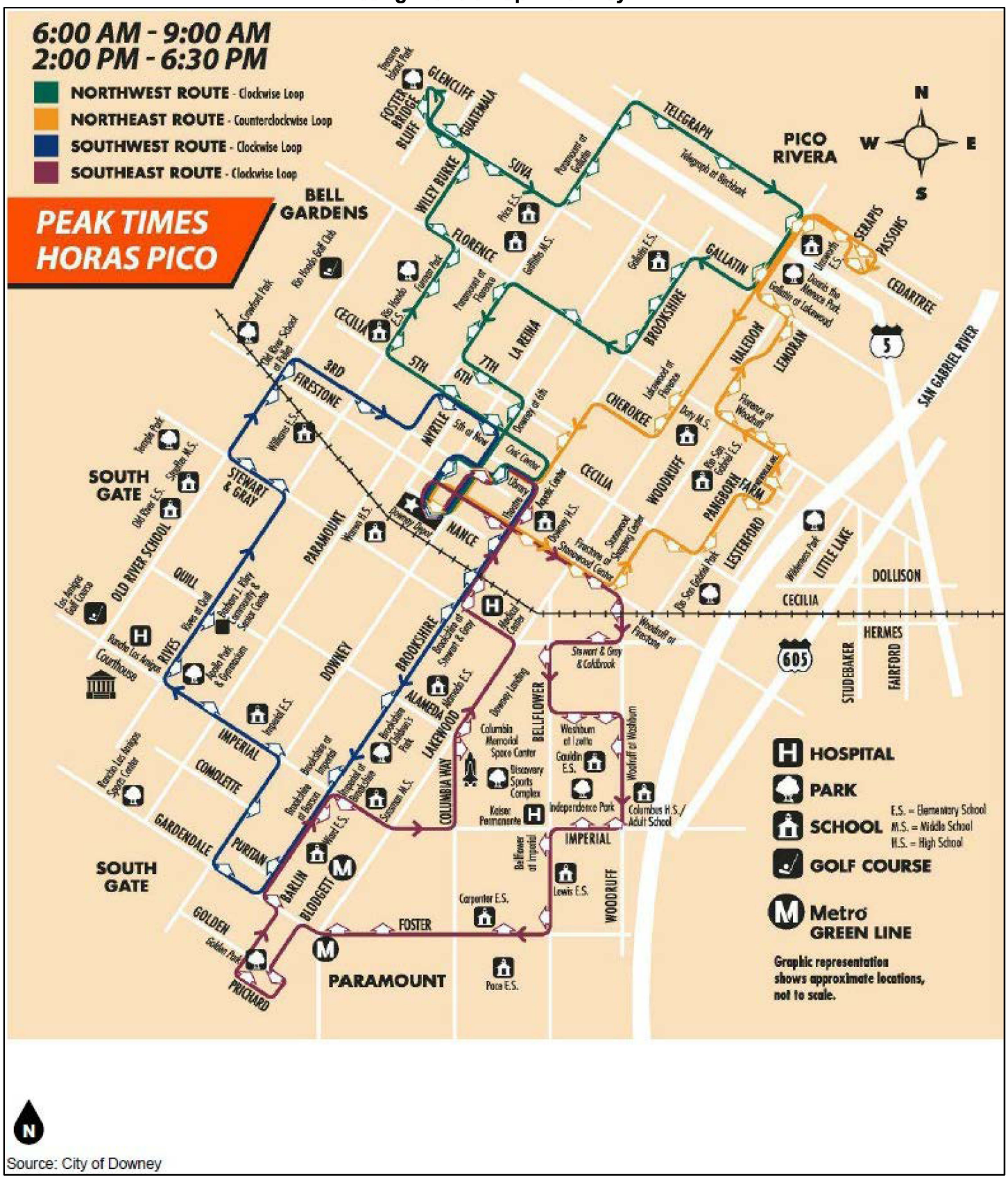
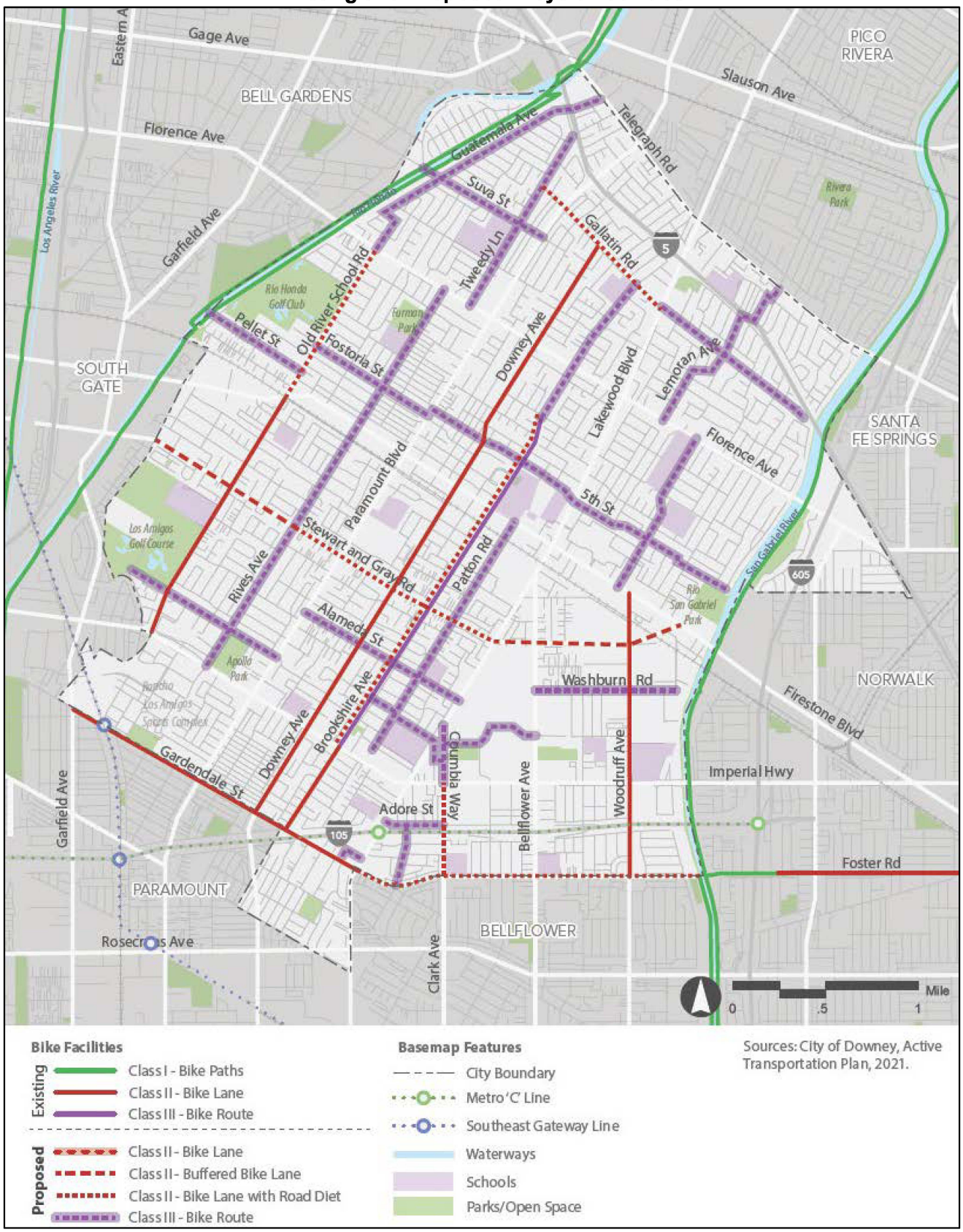


Exhibit 4.17-3
Existing Transit Map – Downey LINK



Source: City of Downey

Exhibit 4.17-4
Existing and Proposed Bicycle Facilities



Existing Pedestrian Network

The City of Downey is a developed urban/suburban municipality with an extensive network of pedestrian walkways built within the parkways of its arterial and local roadway network. Additionally, as noted in the WalkDowney ATP:

> There are a number of enhanced pedestrian safety features throughout the City. High visibility crosswalks are present at intersections near schools, a pedestrian hybrid flashing beacon is present at Woodruff Avenue & Via Amorita by Doty Middle School, and a crosswalk with a rectangular rapid flashing pedestrian beacon is present at Brookshire Avenue & Everest Street by the Brookshire Children's Park. Curb extensions exist along Downey Avenue in the downtown area, between Firestone Boulevard and 5th Street. Most bus stops in Downey have benches and a trash can; there are a few locations with a bus shelter.

The existing Rio Hondo Bike Path and the San Gabriel River Path are shared-use paths accessible to pedestrians. The City's pedestrian infrastructure also includes walking tracks at Furman and Apollo Parks. The WalkDowney ATP includes detailed pedestrian activity data, pedestrian collision data, and pedestrian safety countermeasures. Notable findings include the following three locations with the highest pedestrian activity:

- Downey Avenue in downtown Downey,
- Furman Park walking trails,
- Lakewood Boulevard East on-ramp that connects to the Lakewood Boulevard Green Line Station

The WalkDowney ATP also includes detailed concepts for priority pedestrian improvements based on existing conditions/collision review, input from local stakeholders, and variety of other considerations. Exhibit 4.17-5 shows the location of the following 19 priority pedestrian improvement projects identified in the WalkDowney ATP:

1A	De Palma St - Gurley Ave to Downey Ave
1B	Paramount Blvd & Quoit St & Parrot Ave
1C	Downey Ave & Nance St + Bus Depot
2	Greenway Traffic Circle Improvements
3	Wilderness Park & Florence Ave Access
4A	Imperial Hwy & Barlin Ave
4B	Imperial Hwy & Lakewood Blvd
4C	Lakewood Blvd & Dalen St
4D	Lakewood Blvd & 105 WB Ramps
4E	Lakewood Blvd & 105 EB Ramps
4F	Lakewood Blvd & Gardendale St
5A	Firestone Blvd & Patton Rd
5B	Paramount Blvd & Lubec St
6	Paramount Blvd & Stewart & Gray Rd
7A	Imperial Hwy & Woodruff Ave
7B	Lakewood Blvd & Stewart & Gray Rd
8	Downey Ave & OLPH
9	Brookshire Ave & Gallatin Rd
10	Downey Ave/New St & 6th St

Existing Truck Routes

Truck routes within the City of Downey are established in the City's Municipal Code, Section 3199.8(h). The following streets are established as truck routes within the City of Downey:

1) Bellflower Boulevard from Lakewood Boulevard to the southerly City limits;
2) Columbia Way from Lakewood Boulevard to Imperial Highway;
3) Cleta Street from Lakewood Boulevard to Patton Road;
4) Firestone Boulevard from the easterly City limits to the westerly City limits;
5) Florence Avenue;
6) Garfield Avenue;
7) Imperial Highway;
8) Lakewood Boulevard;
9) Old River School Road;
10) Patton Road from Firestone Boulevard to Cleta Street;
11) Paramount Boulevard;
12) Regentview Avenue;
13) Rosecrans Avenue;
14) Stewart and Gray Road from Lakewood Boulevard to Firestone Boulevard;
15) Studebaker Road from Florence Avenue to Route 605/5 freeway ramp intersection;
16) Telegraph Road;
17) Washburn Road from Regentview Avenue to Woodruff Avenue;
18) Woodruff Avenue from Firestone Boulevard to the southerly City limits;
19) Phlox Street between Paramount Boulevard and Downey Avenue; and
20) Downey Avenue between Firestone Boulevard and Phlox Street.

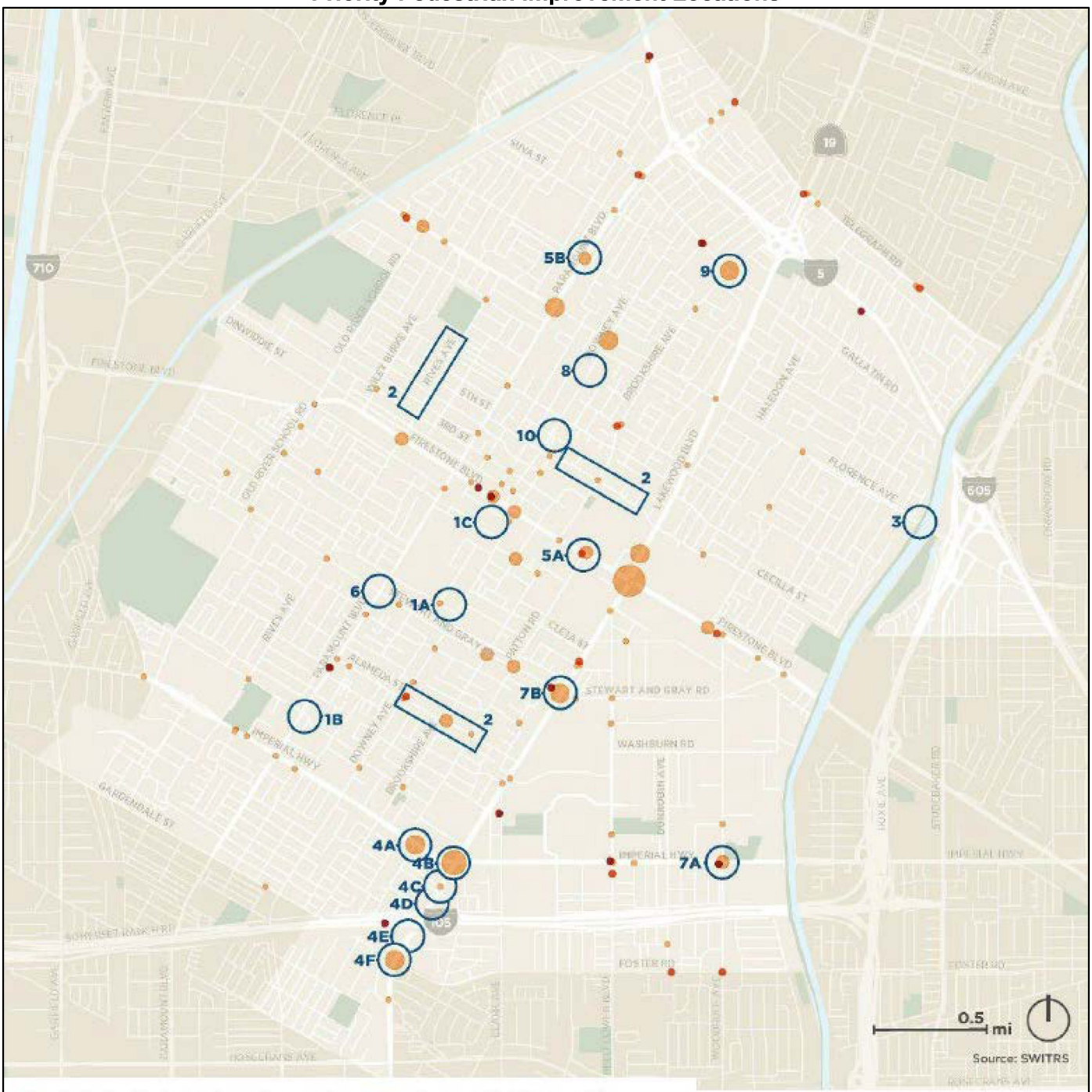
Exhibit 4.17-5 illustrates existing truck routes within the City of Downey.

Existing Daily Traffic Volumes

Exhibit 4.17-7 shows existing daily traffic volumes at 45 key roadway segments based on 24-hour bi-directional counts conducted on a typical weekday in February 2026. Vehicle classification counts were included at 17 sample locations. The traffic count worksheets are provided in Appendix G.

Table 4.17-1 shows the existing daily traffic volumes and vehicle mix in a tabular format. For planning purposes, the daily traffic volumes shown on Exhibit 4.17-7 and in Table 4.17-1 are rounded to the nearest hundred.

Exhibit 4.17-5
Priority Pedestrian Improvement Locations



1A	De Palma St - Gurley Ave to Downey Ave	5A	Firestone Blvd & Patton Rd
1B	Paramount Blvd & Quoit St & Parrot Ave	5B	Paramount Blvd & Lubec St
1C	Downey Ave & Nance St + Bus Depot	6	Paramount Blvd & Stewart & Gray Rd
2	Greenway Traffic Circle Improvements	7A	Imperial Hwy & Woodruff Ave
3	Wilderness Park & Florence Ave Access	7B	Lakewood Blvd & Stewart & Gray Rd
4A	Imperial Hwy & Barlin Ave	8	Downey Ave & OLPH
4B	Imperial Hwy & Lakewood Blvd	9	Brookshire Ave & Gallatin Rd
4C	Lakewood Blvd & Dalen St	10	Downey Ave/New St & 6th St
4D	Lakewood Blvd & 105 WB Ramps		
4E	Lakewood Blvd & 105 EB Ramps		
4F	Lakewood Blvd & Gardendale St		

Source: City of Downey

Exhibit 4.17-6
Existing Truck Routes

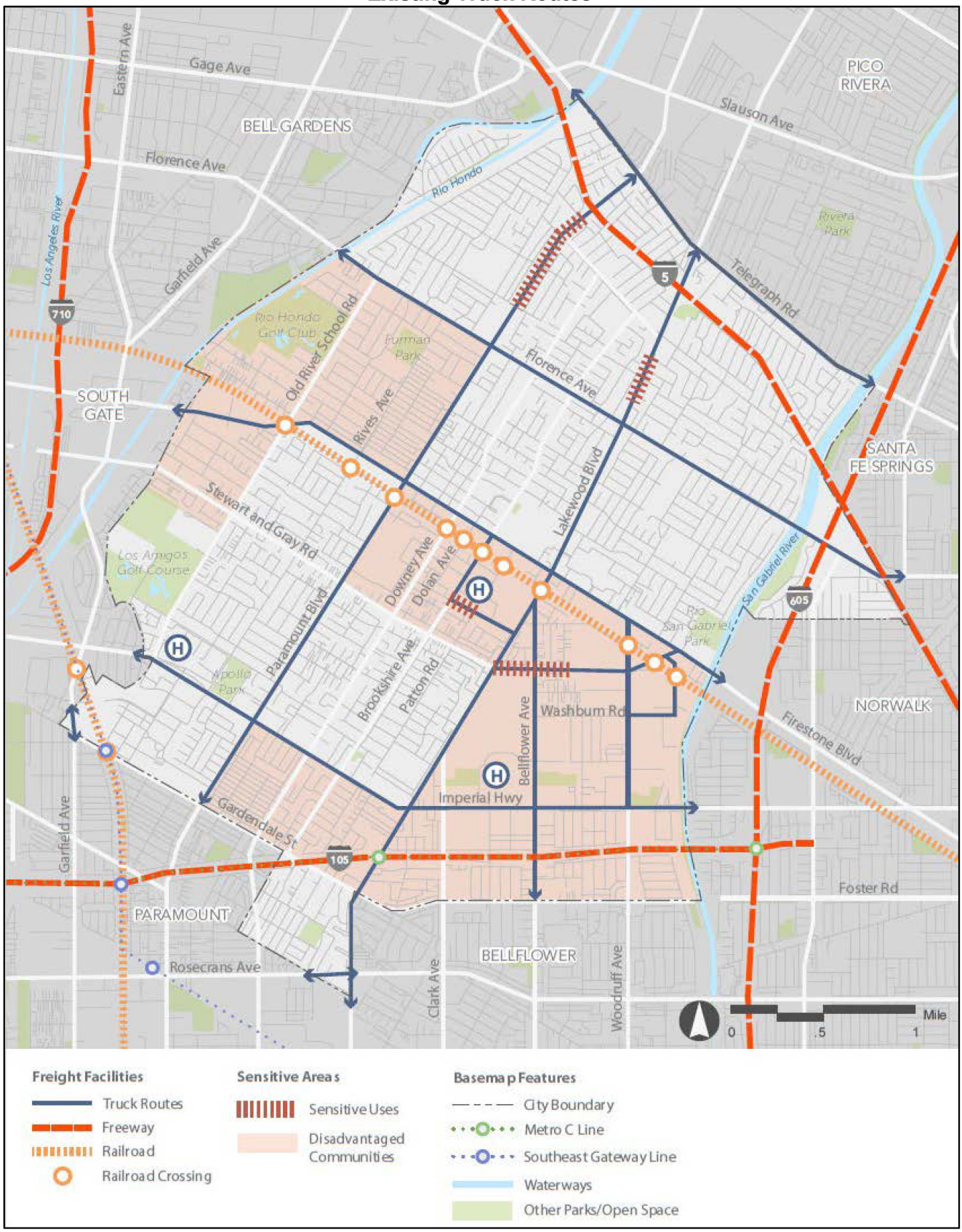


Exhibit 4.17-7
Existing Daily Traffic Volumes

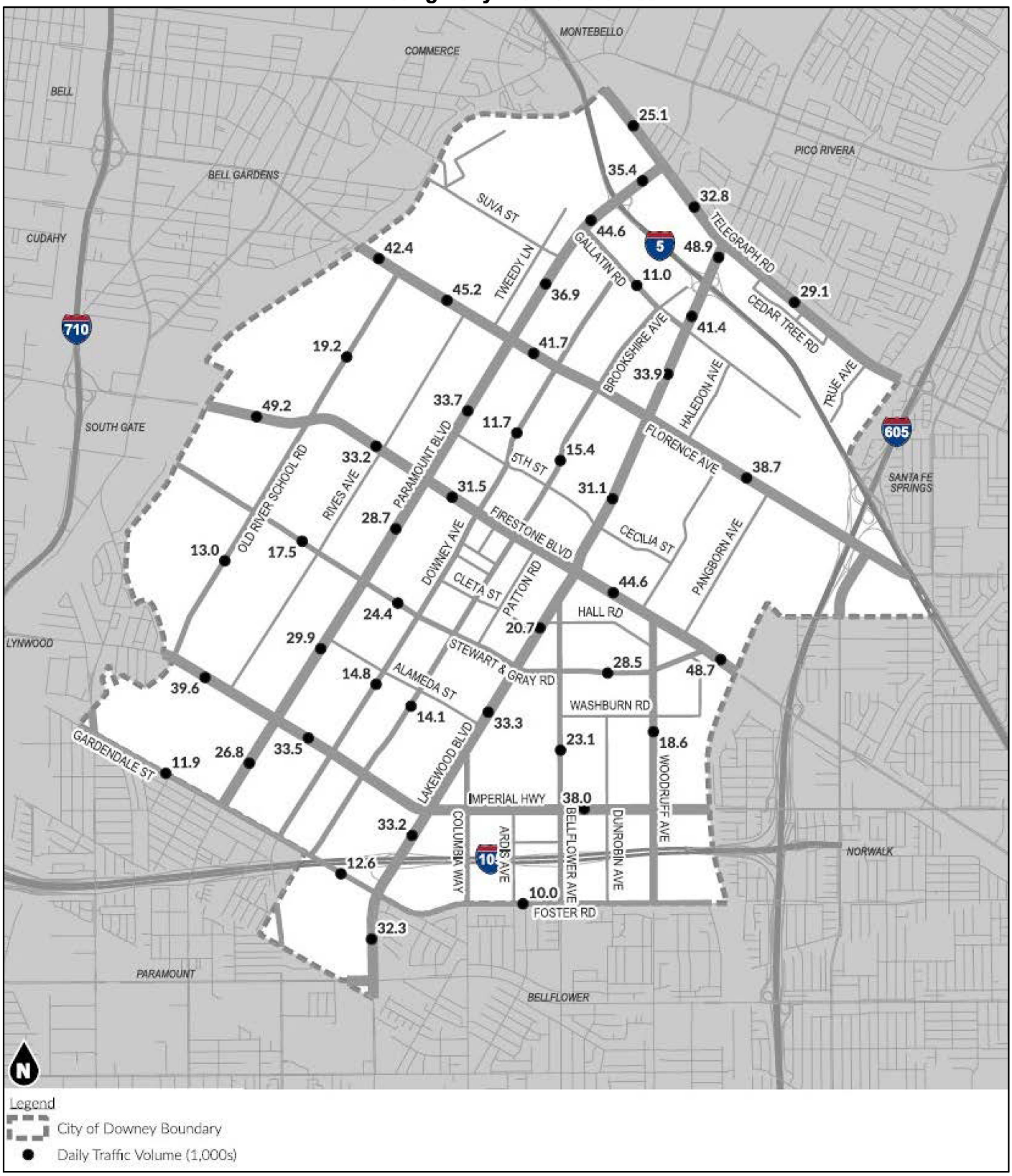


Table 4.17-1
Existing Daily Traffic Volumes Truck Mix

Roadway	Segment	Existing Daily Traffic Volume	Vehicle Mix		
			Light Duty	Medium Duty	Heavy Duty
1. Paramount Blvd	Telegraph Rd to I-5 Freeway	32,900	--	--	--
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	42,500	91.4%	6.5%	2.1%
3. Paramount Blvd	Gallatin Rd to Florence Ave	34,600	--	--	--
4. Paramount Blvd	Florence Ave to Firestone Blvd	30,900	--	--	--
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	27,300	--	--	--
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	27,700	92.7%	4.8%	2.5%
7. Paramount Blvd	Imperial Hwy to Gardendale Street	25,400	--	--	--
8. Lakewood Blvd	Telegraph Rd to I-5 Freeway	46,600	--	--	--
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	39,400	92.2%	4.7%	3.1%
10. Lakewood Blvd	Gallatin Rd to Florence Ave	32,300	--	--	--
11. Lakewood Blvd	Florence Ave to Firestone Blvd	29,600	--	--	--
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	19,700	--	--	--
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	31,700	93.9%	4.4%	1.8%
14. Lakewood Blvd	Imperial Hwy to I-5 Freeway	31,600	--	--	--
15. Lakewood Blvd	Foster Rd to Rosecrans Ave	30,800	--	--	--
16. Telegraph Rd	City Limits to Paramount Blvd	23,900	--	--	--
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd	31,200	92.5%	4.6%	2.9%
18. Telegraph Rd	Lakewood Blvd to City Limits	27,700	--	--	--
19. Florence Ave	City Limits to Old River School Rd	37,800	--	--	--
20. Florence Ave	Old River School Rd to Paramount Blvd	42,300	--	--	--
21. Florence Ave	Paramount Blvd to Lakewood Blvd	37,200	93.6%	4.1%	2.3%
22. Florence Ave	Lakewood Blvd to I-605 Freeway	35,400	--	--	--
23. Firestone Blvd	City Limits to Old River School Rd	46,800	--	--	--
24. Firestone Blvd	Old River School Rd to Paramount Blvd	29,900	--	--	--
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	30,000	90.9%	5.4%	3.7%
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	42,500	--	--	--
27. Firestone Blvd	Stewart & Gray Rd to City Limits	46,400	--	--	--
28. Imperial Hwy	Old River School Rd to Paramount Blvd	37,700	--	--	--
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	31,900	90.5%	5.5%	4.0%
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	36,200	--	--	--
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	17,700	85.7%	7.9%	6.4%
32. Old River School Rd	Florence Ave to Firestone Blvd	18,300	92.8%	4.9%	2.3%
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	12,400	--	--	--
34. Downey Ave	Florence Ave to Firestone Blvd	11,100	93.7%	4.3%	1.9%
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	14,100	--	--	--
36. Brookshire Ave	Florence Ave to Firestone Blvd	14,700	91.8%	5.0%	3.1%
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	13,400	--	--	--
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	10,500	89.2%	6.5%	4.3%
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	16,700	--	--	--
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	23,200	90.4%	5.9%	3.8%
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	27,100	--	--	--
42. Gardendale St	Garfield Ave to Paramount Blvd	11,300	--	--	--
43. Gardendale St	Paramount Blvd to Lakewood Blvd	12,000	92.4%	5.2%	2.3%
44. Foster Rd	Lakewood Blvd to Woodruff Ave	9,500	92.4%	4.9%	2.6%
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	22,000	87.9%	7.0%	5.1%

Source: Ganddini, 2026.

Notes:

(1) Daily traffic volume based on counts conducted in February 2026; see Appendix G. For planning purposes, daily traffic volume is rounded to the nearest hundred.

(2) Vehicle mix based on truck axle classification counts at sample locations. Per count worksheets: Light Duty = Passenger Cars; Medium Duty = 2-axle Trucks, Buses, and RVs; Heavy Duty = 3-Axle and 4+ Axle Trucks

Existing Roadway Capacity Analysis

This section describes the roadway capacity analysis for existing conditions and forecast year 2045 conditions for both the current General Plan and the proposed General Plan Update.

Roadway Capacity Analytical Methodology

Roadway segment daily capacity analysis is generally performed as a high-level planning analysis to determine where potential capacity issues may occur during peak hours. Daily roadway capacity is evaluated based on the Volume-to-Capacity (V/C) methodology. A V/C ratio is determined for each roadway segment based on the daily traffic volume divided by the theoretical capacity of the roadway based on the number of lanes and type of roadway classification. The V/C ratio can be correlated to a Level of Service, which is used to qualitatively describe the performance of a roadway facility ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). Table 4.17-2 shows the V/C ratio thresholds and a qualitative description for each Level of Service. The existing City of Downey General Plan includes goals, policies, and programs aimed at achieving Level of Service D or better.

Table 4.17-3 shows the current roadway classifications and the corresponding daily capacities based on number of lanes. The roadway capacities shown in Table 4.17-3 are based on the *Programmatic Traffic Impact Study County of Los Angeles General Plan Update*.[ii] The roadway segment capacity thresholds represent the theoretical maximum two-way average daily traffic volume that a roadway can accommodate within one day given typical peak hour characteristics and other factors such as the number of intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignments), sight distance, vehicle mix (truck and bus traffic), and bicycle/pedestrian traffic.

Table 4.17-2
Level of Service and Volume-to-Capacity Descriptions

LOS	V/C Ratio	Description
A	≤ 0.60	Acceptable Capacity: This represents a range of free flow to stable flow, where the unrestricted speed and freedom to maneuver begins to become more limited by the increase in traffic. In general, the driver experiences only minor inconvenience, and traffic flow is quick but light during off-peak hours.
B	> 0.60 to ≤ 0.70	
C	> 0.70 to ≤ 0.80	
D	> 0.80 to ≤ 0.90	Approaching Capacity: This represents high-density but stable flow, where speed and freedom to maneuver are restricted. In general, the driver experiences a degree of inconvenience during peak hours, and traffic flow is slow but steady during peak hours.
E	> 0.90 to ≤ 1.00	
F	> 1.00	Potentially Exceeds Capacity: This is used to define forced or breakdown flow during peak hours. This condition exists wherever the amount of traffic exceeds the amount which can reasonably be handled by the roadway. In general, the driver experiences a high degree of inconvenience, and traffic flow is extremely slow with stop-and-go flow and traffic queues begin to form. This condition is typical of the breakdown in flow which occurs when an accident is present on the roadway.

Source: Ganddini, 2026.
Notes:
Transportation Research Board, Interim Materials on Highway Capacity, Transportation Research Circular No. 212, January 1980. LOS = Level of Service; V/C = Volume-to-Capacity

[ii] Programmatic Traffic Impact Study County of Los Angeles General Plan Update (Iteris, June 10, 2014)

Table 4.17-3
Current Roadway Classifications and Daily Capacities

Roadway Classification	Number of Lanes[1]	Maximum ADT[2,3]
Major Arterial	6D 4D	54,000 36,000
Primary Arterial	4D	36,000
Secondary Arterial	4U 2D	36,000 18,000
Collector	2U	15,000

Source: Ganddini, 2026.
Notes:
(1) D = Divided (i.e., with raised median or center turn lane); U = Undivided (i.e., without median)
(2) ADT = Average Daily Traffic
(3) Roadway capacities based on Programmatic Traffic Impact Study County of Los Angeles General Plan Update (Iteris, June 10, 2014). Major Arterial based on 6-Lane Major Highway; Primary Arterial based on 4-lane Secondary Highway (with median); Secondary Arterial based on 4-lane Limited Secondary Highway (without median); Collector based on 2-lane Collector Street. Maximum ADT is based on Level of Service E conditions.

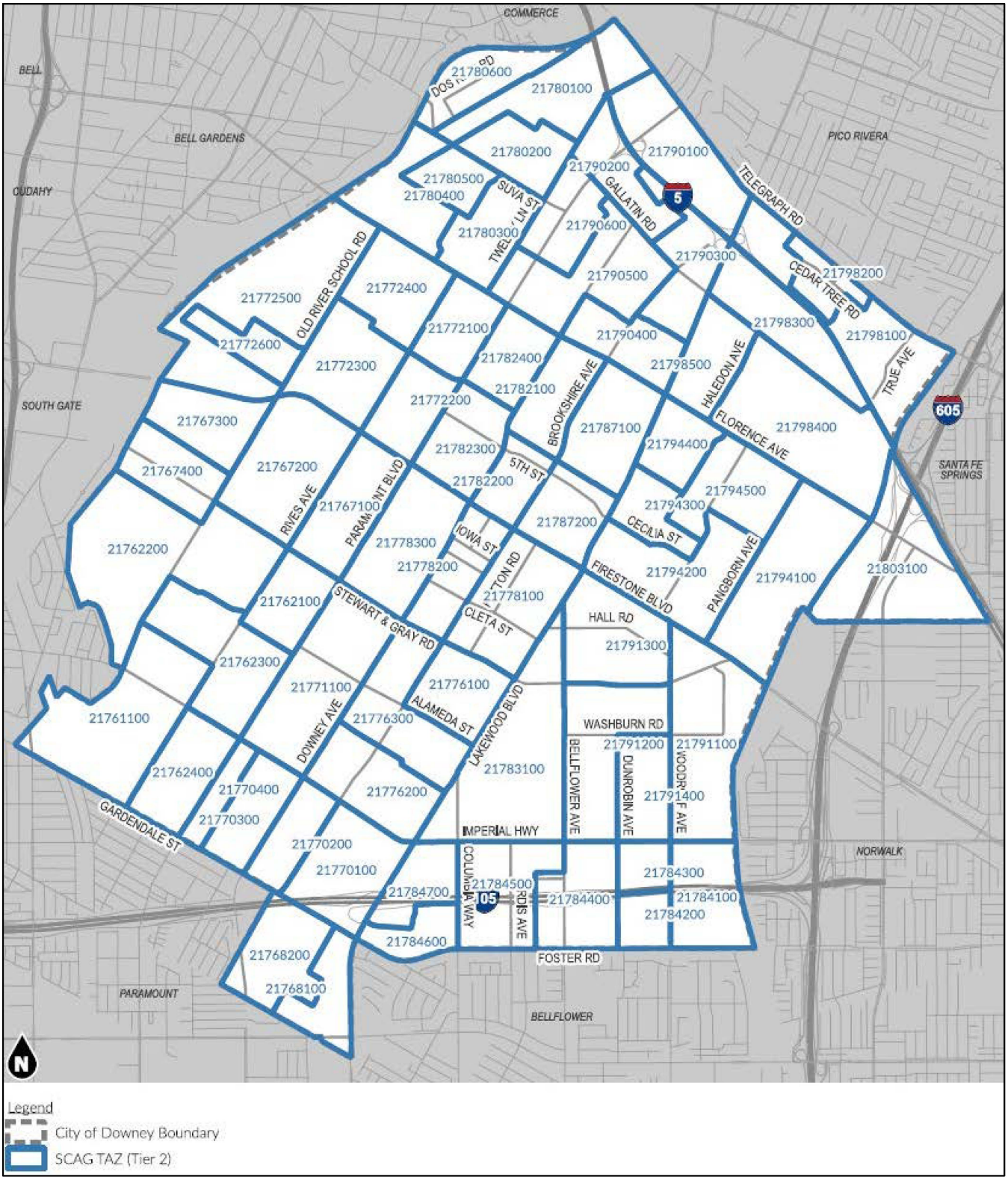
Forecasting Methodology

Year 2045 forecasts were developed using the Southern California Association of Governments (SCAG) Regional Transportation Model (RTM). The current SCAG RTM is an activity-based travel demand model most recently updated for the development and evaluation of the SCAG 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region grows and changes. The current SCAG RTM has base year 2019 and future year 2050 scenarios. Travel demand model plots are provided in Appendix G.

To determine horizon year 2045 forecasts, a growth increment approach was used based on the difference in traffic volumes obtained from the SCAG RTM base year 2019 and future year 2050 models. This difference defines the incremental growth in forecast volumes over the 31-year period between 2019 and 2050. The incremental growth in average daily traffic volume was factored in to reflect the forecast growth between the existing year (2026) and the horizon year 2045. For this purpose, linear growth between the year 2019 base model and the year 2050 future model was assumed. Since the increment between the existing year 2026 and the horizon year 2045 is 19 years of the 31-year time frame, the incremental traffic volume growth observed within the SCAG RTM model was factored by 0.61 (i.e., 19/31). To provide a conservative analysis, the incremental growth forecasts from the SCAG RTM model were reviewed and adjusted as necessary to ensure future traffic volumes would not be less than the existing measured traffic volumes shown in the previous section. Finally, these post-processed incremental growth forecasts were added to the existing (2026) traffic volumes. Post-processing worksheets are provided in Appendix G.

For reference, traffic volume forecasts for the current General Plan buildout were estimated based on the post-processing procedure described above using the SCAG RTM base year 2019 and unmodified future year 2050 model. Traffic volume forecasts for the proposed General Plan buildout were estimated based on the post-processing procedure described above using the SCAG RTM base year 2019 and a revised future year 2050 model with updated SED inputs to reflect the proposed land use changes. Exhibit 4.17-8 shows the traffic analysis zone map.

Exhibit 4.17-8
Traffic Analysis Zone Map



Existing Roadway Capacity Analysis

Table 4.17-4 shows the roadway capacity analysis for existing conditions based on the existing daily traffic volumes presented in the Existing Transportation Setting section. As shown in Table 4.17-4, the study roadway segments currently operate within acceptable Levels of Service (D or better) for Existing conditions, except for the following roadway segments that are currently approaching or potentially exceeding the theoretical daily capacity:

- Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] (LOS E)
- Paramount Boulevard between Gallatin Road and Florence Avenue [#3] (LOS E)
- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8] (LOS F)

It is noted that lane striping on Gardendale Street transitions back to two travel lanes at the arterial intersections of Paramount Boulevard, Downey Avenue, Brookshire Avenue, and Lakewood Boulevard, to minimize delay and extensive queuing during peak periods; therefore, actual peak hour operations may be better than reported in the daily capacity analysis.

Current General Plan (2045) Scenario

The Current General Plan scenario reflects year 2045 conditions assuming future land development/traffic growth occurs in accordance with the currently adopted General Plan. Traffic volume forecasts for the Current General Plan scenario were developed based on the incremental growth forecasting methodology described above assuming the SCAG RTM future year model is generally consistent with the existing City of Downey General Plan land uses and no changes were made to the socio-economic data (SED) inputs.

Exhibit 4.17-9 shows the Current General Plan (2045) daily traffic volume forecasts. Table 4.17-5 shows the roadway capacity analysis for Current General Plan (2045) conditions. As shown in Table 4.17-5, the study roadway segments are forecast to operate within acceptable Levels of Service (D or better) for Current General Plan (2045) conditions, except for the following roadway segments that are forecast to be approaching or potentially exceeding the theoretical daily capacity:

- Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] (LOS E)
- Paramount Boulevard between Gallatin Road and Florence Avenue [#3] (LOS F)
- Paramount Boulevard between Florence Avenue and Firestone Boulevard [#4] (LOS E)
- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8] (LOS F)
- Firestone Boulevard between West City Limits and Old River School Road [#23] (LOS E)
- Firestone Boulevard between Stewart & Gray Road to East City Limits [#27] (LOS E)

Exhibit 4.17-9
Current General Plan (2045) Daily Traffic Volumes Forecast



Table 4.17-4
Existing Roadway Segment Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volumes	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*4D*	*36,000*	*32,900*	*0.91*	*E*
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	42,500	0.79	C
3. Paramount Blvd	*Gallatin Rd to Florence Ave*	*Major Arterial*	*4D*	*36,000*	*34,600*	*0.96*	*E*
4. Paramount Blvd	Florence Ave to Firestone Blvd	Major Arterial	4D	36,000	30,900	0.86	D
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	27,300	0.76	C
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	27,700	0.77	C
7. Paramount Blvd	Imperial Hwy to Gardendale Street	Major Arterial	4D	36,000	25,400	0.71	C
8. Lakewood Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*6D*	*54,000*	*46,600*	*1.29*	*F*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	39,400	0.73	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	32,300	0.60	A
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	29,600	0.55	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	19,700	0.36	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	31,700	0.59	A
14. Lakewood Blvd	Imperial Hwy to I-5 Freeway	Major Arterial	6D	54,000	31,600	0.59	A
15. Lakewood Blvd	Foster Rd to Rosecrans Ave	Major Arterial	4D	36,000	30,800	0.86	D
16. Telegraph Rd	City Limits to Paramount Blvd	Major Arterial	6D	54,000	23,900	0.44	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,200	0.58	A
18. Telegraph Rd	Lakewood Blvd to City Limits	Major Arterial	6D	54,000	27,700	0.51	A
19. Florence Ave	City Limits to Old River School Rd	Major Arterial	6D	54,000	37,800	0.70	B
20. Florence Ave	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	42,300	0.78	C
21. Florence Ave	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	37,200	0.71	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway	Major Arterial	6D	54,000	35,400	0.66	B
23. Firestone Blvd	City Limits to Old River School Rd	Major Arterial	6D	54,000	46,800	0.87	D
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	29,900	0.55	A
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	30,000	0.56	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	42,500	0.79	C
27. Firestone Blvd	Stewart & Gray Rd to City Limits	Major Arterial	6D	54,000	46,400	0.86	D
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	37,700	0.70	B
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,900	0.59	A
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	36,200	0.67	B
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	17,700	0.49	A
32. Old River School Rd	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	18,300	0.51	A
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	2D	18,000	12,400	0.69	B
34. Downey Ave	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	11,100	0.31	A
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	2D	18,000	14,100	0.78	C
36. Brookshire Ave	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	14,700	0.41	A
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	4U	36,000	13,400	0.37	A
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	Secondary Art.	4U	36,000	10,500	0.29	A
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Art.	4U	36,000	16,700	0.46	A
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Art.	4U	36,000	23,200	0.64	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Art.	4D	36,000	27,100	0.75	C
42. Gardendale St	Garfield Ave to Paramount Blvd	Secondary Art.	2D	18,000	11,300	0.63	B
43. Gardendale St	Paramount Blvd to Lakewood Blvd	Secondary Art.	2D	18,000	12,000	0.67	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	Secondary Art.	4U	36,000	9,500	0.26	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	4D	36,000	22,000	0.61	B

Source: Ganddini, 2026.

Notes:

(1) D = Divided; U = Undivided

(2) Capacity based on existing number of lanes; see Table 4.17-3.

(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(5) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivided from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

Table 4.17-5
Current General Plan (2045) Scenario Roadway Segment Daily Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volumes	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*4D*	*36,000*	*35,400*	*0.98*	*E*
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	44,600	0.83	D
3. Paramount Blvd	*Gallatin Rd to Florence Ave*	*Major Arterial*	*4D*	*36,000*	*36,900*	*1.03*	*F*
4. Paramount Blvd	*Florence Ave to Firestone Blvd*	*Major Arterial*	*4D*	*36,000*	*33,700*	*0.94*	*E*
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	28,700	0.80	C
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	29,900	0.83	D
7. Paramount Blvd	Imperial Hwy to Gardendale Street	Major Arterial	4D	36,000	26,800	0.74	C
8. Lakewood Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*6D*	*54,000*	*48,900*	*1.36*	*F*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	41,400	0.77	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	33,900	0.63	B
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	31,100	0.58	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	20,700	0.38	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	33,300	0.62	B
14. Lakewood Blvd	Imperial Hwy to I-5 Freeway	Major Arterial	6D	54,000	33,200	0.61	B
15. Lakewood Blvd	Foster Rd to Rosecrans Ave	Major Arterial	4D	36,000	32,300	0.90	D
16. Telegraph Rd	City Limits to Paramount Blvd[4]	Major Arterial	6D	54,000	25,100	0.46	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd[4]	Major Arterial	6D	54,000	32,800	0.61	B
18. Telegraph Rd	Lakewood Blvd to City Limits[4]	Major Arterial	6D	54,000	29,100	0.54	A
19. Florence Ave	City Limits to Old River School Rd[5]	Major Arterial	6D	54,000	42,400	0.79	C
20. Florence Ave	Old River School Rd to Paramount Blvd[5]	Major Arterial	6D	54,000	45,200	0.84	D
21. Florence Ave	Paramount Blvd to Lakewood Blvd[5]	Major Arterial	6D	54,000	41,700	0.77	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway[5]	Major Arterial	6D	54,000	38,700	0.72	C
23. Firestone Blvd	*City Limits to Old River School Rd*	*Major Arterial*	*6D*	*54,000*	*49,200*	*0.91*	*E*
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	33,200	0.61	B
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,500	0.58	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	44,600	0.83	D
27. Firestone Blvd	*Stewart & Gray Rd to City Limits*	*Major Arterial*	*6D*	*54,000*	*48,700*	*0.90*	*E*
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	39,600	0.73	C
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	33,500	0.62	B
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	38,000	0.70	C
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	18,600	0.52	A
32. Old River School Rd	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	19,200	0.53	A
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	2D	18,000	13,000	0.72	C
34. Downey Ave	Florence Ave to Firestone Blvd[6]	Secondary Art.	4U	36,000	11,700	0.33	A
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	2D	18,000	14,800	0.82	D
36. Brookshire Ave	Florence Ave to Firestone Blvd[7]	Secondary Art.	4U	36,000	15,400	0.43	A
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	4U	36,000	14,100	0.39	A
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	Secondary Art.	4U	36,000	11,000	0.31	A
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Art.	4U	36,000	17,500	0.49	A
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Art.	4U	36,000	24,400	0.68	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Art.	4D	36,000	28,500	0.79	C
42. Gardendale St	Garfield Ave to Paramount Blvd	Secondary Art.	2D	18,000	11,900	0.66	B
43. Gardendale St	Paramount Blvd to Lakewood Blvd	Secondary Art.	2D	18,000	12,600	0.70	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	Secondary Art.	4U	36,000	10,000	0.28	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	4D	36,000	23,100	0.64	B

Source: Ganddini, 2026.

Notes:

(1) D = Divided; U = Undivided

(2) Capacity based on existing number of lanes; see Table 4.17-3.

(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(5) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivided from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

(6) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(7) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivided from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

4.17.2 – REGULATORY FRAMEWORK

Federal

No federal agencies or regulations directly apply to the General Plan's transportation impacts.

State

State of California Department of Transportation (Caltrans)

The State of California Department of Transportation (Caltrans) implements State planning priorities in all plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact State highway facilities. Pursuant to Public Resources Code § 21092.4, for projects of statewide, regional, or area-wide significance, the lead agency must consult with transportation planning agencies and public agencies that have transportation facilities which could be affected by a project.

Senate Bill (SB) 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the California Environmental Quality Act (CEQA) process for several categories of development projects including the development of infill projects in transit priority areas and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (Section 21099). Among other things, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of Level of Service (LOS) in CEQA documents. Formerly, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Pursuant to SB 743, the focus of transportation analysis changes from vehicle delay to vehicle miles traveled (VMT). The Office of Planning and Research (OPR) released two rounds of draft proposals for updating the CEQA Guidelines related to evaluating transportation impacts and, after further study and consideration of public comment, submitted a final set of revisions to the Natural Resources Agency in November 2017. This was followed by a rulemaking process that would implement the requirements of the legislation. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. OPR's regulatory text indicates that the new transportation impact guidelines emphasizing vehicle miles traveled (VMT) instead of Level of Service (LOS) had to be implemented statewide by July 1, 2020.

Regional

Southern California Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization (MPO) responsible for development of the Regional Transportation Plan (RTP), which presents the vision for transportation throughout most of Southern California, including Los Angeles County. Senate Bill 375 (SB 375) was passed to reduce greenhouse gas emissions from both automobiles and light trucks through integrated transportation, land use,

housing, and environmental planning. Under SB 375, SCAG is tasked with developing a Sustainable Communities Strategy (SCS). The SCS, as a component of the RTP, provides a plan for meeting emissions reduction targets set forth by the California Air Resources Board.

Long Range Transportation Plan (LRTP)

The Long Range Transportation Plan (LRTP), prepared by Metro, is the long range plan that responds to emerging environmental challenges through the provision of new initiatives and recommendations that include driving alternatives, mobility improvements, enhanced public transit, expanded rail, and the development of major corridor projects in Los Angeles County.

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), has numerous goals to increase mobility for the region's residents and visitors, and an emphasis on sustainability and integrated planning to collectively improve the region's mobility, economy, and sustainability. The RTP/SCS must be approved by Federal agencies in order to receive Federal transportation funds. Only projects and programs included in the RTP are eligible for Federal funding. SCAG adopted the 2025-2050 RTP/SCS in April 2024. It should be noted this program is now referred to as "Connect SoCal."

SCAG Regional Comprehensive Plan

The Regional Comprehensive Plan (RCP) is part of an overall regional planning process that is linked directly to SCAG's Growth Management Plan, the Housing Allocation Process, and the South Coast Air Quality Management District's Air Quality Management Plan. The last RCP was adopted by SCAG in 2008 and includes elements on Land Use and Housing, Open Space and Habitat, Water, Energy, Air Quality, Solid Waste, Transportation, and Security and Emergency Preparedness.

Highway Performance Monitoring System (HPMS)

The Highway Performance Monitoring System (HPMS) is a Federally mandated inventory system and planning tool designed to assess the nation's highway system. HPMS is used as a management tool by the Federal and State governments and local agencies to analyze the system's condition and performance. The HPMS data are used for allocation of Federal funds, identification of travel trends and future forecasts, Environmental Protection Agency air quality conformity tracking, and biennial reports to the United States Congress on the state of the nation's highways. The HPMS is administered by Caltrans, with technical data provided by local agencies.

Access Services

Access Services is a State-mandated local governmental agency created by Los Angeles County's public transit agencies to administer and manage the delivery of regional Americans with Disabilities Act (ADA) paratransit service. Access Services was established by 44 public fixed route transit operators in Los Angeles County. It is governed by a nine-member board appointed by the Los Angeles County municipal fixed route operators, the City of Los Angeles, the County of Los Angeles, the Transportation Corridor Representatives of the Los Angeles branch of the League of Cities, the Los Angeles County Commission on Disabilities, and the Coalition of Independent Living Centers.

County of Los Angeles Vehicle Miles Traveled Guidelines

The City of Downey uses the County of Los Angeles *Transportation Impact Analysis Guidelines* (July 23, 2020) ["County Guidelines"] to estimate VMT impacts. The TIA Guidelines establish screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory.

Local

City of Downey 2045 General Plan Update

The existing City of Downey General Plan includes goals, policies, and programs aimed at achieving Level of Service D or better. The City of Downey 2045 General Plan Update includes various goals and policies related to public services that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.17.3 – SIGNIFICANCE THRESHOLDS

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the General Plan Update could result in a significant impact if it would:

A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
B. Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b).
C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
D. Result in inadequate emergency access.
E. Cause substantial adverse cumulative impacts with respect to transportation and traffic.

4.17.4 – IMPACTS AND MITIGATION MEASURES

Conflicts with Plans or Programs

Impact TRAN-1 – Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

This section evaluates if the proposed GPU is generally consistent with programs, plans, ordinances, or policies addressing the circulation system. A discussion of Vehicle Miles Traveled (VMT) impacts is presented in Section 4.17 (Impact TRAN-2) following this section.

Analysis of Impacts

Proposed General Plan Update (2045) Roadway Capacity Analysis

The CEQA thresholds of significance for transportation and traffic impacts have shifted in recent years. In the past the analysis focused on the Level of Service (LOS) which measured congestion at local intersections and roadway segments. The emphasis of these past studies was to assure the street grid network functioned well and allowed for efficient movement of vehicles. The current

focus is to encourage active transportation (e.g., pedestrians, bicyclists, etc.) and transit, and to limit increases in Vehicle Miles Travelled (VMT, see also Impact TRAN-2 below). An important part of this analysis is to determine if a proposed project or programmatic action is consistent with the Circulation Element of the General Plan.

The Proposed General Plan Update scenario reflects year 2045 conditions assuming future land development/traffic growth occurs in accordance with the proposed General Plan Update. Traffic volume forecasts for the Proposed General Plan Update scenario were developed based on the incremental growth forecasting methodology for a new SCAG RTM future year model run with updated SED inputs applied to account for land use changes per the proposed General Plan Update.

Exhibit 4.17-10 shows the Proposed General Plan Update (2045) daily traffic volume forecasts. Table 4.17-6 shows the roadway capacity analysis for Proposed General Plan Update (2045) conditions. As shown in Table 4.17-6, the study roadway segments are forecast to operate within acceptable Levels of Service (D or better) for Proposed General Plan Update (2045) conditions, except for the following roadway segments that are forecast to be approaching or potentially exceeding the theoretical daily capacity:

- Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] (LOS F)
- Paramount Boulevard between Gallatin Road and Florence Avenue [#3] (LOS F)
- Paramount Boulevard between Florence Avenue and Firestone Boulevard [#4] (LOS E)
- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8] (LOS E)
- Firestone Boulevard between West City Limits and Old River School Road [#23] (LOS E)
- Firestone Blvd. btwn. Stewart & Gray to East City Limits/Old River School Rd. [#27] (LOS E)

Although these segments are projected to operate at LOS E or F, this delay is a measure of roadway capacity rather than an environmental impact. Because current state law explicitly removes traffic delay as a CEQA metric, these operational deficiencies do not constitute a significant impact under CEQA.

Exhibit 4.17-10
Proposed General Plan (2045) Daily Traffic Volumes Forecast



Table 4.17-6
Proposed General Plan Update (2045) Roadway Segment Daily Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volumes	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*4D*	*36,000*	*36,200*	*1.01*	*F*
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	44,800	0.83	D
3. Paramount Blvd	*Gallatin Rd to Florence Ave*	*Major Arterial*	*4D*	*36,000*	*37,200*	*1.03*	*F*
4. Paramount Blvd	*Florence Ave to Firestone Blvd*	*Major Arterial*	*4D*	*36,000*	*34,000*	*0.94*	*E*
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	29,500	0.82	D
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	31,300	0.87	D
7. Paramount Blvd	Imperial Hwy to Gardendale Street	Major Arterial	4D	36,000	28,000	0.78	C
8. Lakewood Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*6D*	*36,000*	*49,100*	*1.36*	*F*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	41,400	0.77	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	33,900	0.63	B
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	31,100	0.58	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	21,400	0.40	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	34,100	0.63	B
14. Lakewood Blvd	Imperial Hwy to I-5 Freeway	Major Arterial	6D	54,000	33,900	0.63	B
15. Lakewood Blvd	Foster Rd to Rosecrans Ave	Major Arterial	4D	36,000	32,300	0.90	D
16. Telegraph Rd	City Limits to Paramount Blvd	Major Arterial	6D	54,000	25,100	0.46	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	32,800	0.61	B
18. Telegraph Rd	Lakewood Blvd to City Limits	Major Arterial	6D	54,000	29,100	0.54	A
19. Florence Ave	City Limits to Old River School Rd	Major Arterial	6D	54,000	42,900	0.79	C
20. Florence Ave	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	45,900	0.85	D
21. Florence Ave	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	42,800	0.79	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway	Major Arterial	6D	54,000	41,200	0.76	C
23. Firestone Blvd	*City Limits to Old River School Rd*	*Major Arterial*	*6D*	*54,000*	*49,800*	*0.92*	*E*
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	34,300	0.64	B
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,900	0.59	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	45,800	0.85	D
27. Firestone Blvd	*Stewart & Gray Rd to City Limits*	*Major Arterial*	*6D*	*54,000*	*48,700*	*0.90*	*E*
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	37,700	0.70	C
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,900	0.59	B
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	36,200	0.67	C
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	18,800	0.52	A
32. Old River School Rd	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	19,200	0.53	A
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	2D	18,000	13,00	0.72	C
34. Downey Ave	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	11,700	0.33	A
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	2D	18,000	14,800	0.82	D
36. Brookshire Ave	Florence Ave to Firestone Blvd	Secondary Art.	4U	36,000	15,400	0.43	A
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	4U	36,000	14,100	0.39	A
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	Secondary Art.	4U	36,000	11,000	0.31	A
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Art.	4U	36,000	17,500	0.49	A
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Art.	4U	36,000	24,400	0.68	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Art.	4D	36,000	28,500	0.79	C
42. Gardendale St	Garfield Ave to Paramount Blvd	Secondary Art.	2D	18,000	11,900	0.66	B
43. Gardendal St	Paramount Blvd to Lakewood Blvd	Secondary Art.	2D	18,000	12,600	0.70	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	Secondary Art.	4U	36,000	10,000	0.28	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Art.	4D	36,000	23,100	0.64	B

Source: Ganddini, 2026.

Notes:

(1) D = Divided; U = Undivided

(2) Capacity based on existing number of lanes; see Table 4.17-3.

(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(5) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivided from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

(6) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(7) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivided from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

Plan Consistency

The General Plan Update's planned transportation network provides consistency related to regional active transportation plans and other mobility infrastructure plans; specifically, the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy and the City's Active Transportation Plan.

SCAG Regional Transportation Plan/Sustainable Communities Strategy. Downey is a member of the SCAG Regional Council, the decision-making body of the SCAG Joint Powers Authority under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The Connect SoCal RTP/SCS is a planning document for the region, allowing project sponsors to qualify for federal funding. In addition, Connect SoCal 2024 will identify a combination of transportation and land use strategies that help the region achieve state greenhouse gas emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, and support our vital goods movement industry.

The RTP/SCS is updated every four years and it is anticipated that the City will continue to work with SCAG to update the RTP/SCS to be consistent with the General Plan. The General Plan includes strategies for mixed-use development, which allows multiple land uses to work together, to reduce vehicle trip lengths. The California Air Resources Board's (CARB) 2016 Mobile Source Strategy recognizes that coordinated regional planning can improve California's land use patterns and transportation policy in a way that reduces transportation related emissions by reducing growth in VMT.

WalkDowney Active Transportation Plan. The WalkDowney Active Transportation Plan, adopted in June 2021, aims to maximize connectivity, regardless of travel mode to the assets already in place within the City. The intent of the plan is to promote bicycling as a more viable transportation option for people who live, work, and recreate in Downey. The primary goals of the Active Transportation Plan are to provide a safe, efficient, and connected network of multi-modal transportation facilities that residents and stakeholders can enjoy for a variety of purposes. The Plan proposes several bicycle and pedestrian improvement projects and includes a combination of on-street bicycle facilities, bicycle parking, intersection crossing improvements for major and neighborhood streets, a crosswalk policy, wayfinding, placemaking, and ways to facilitate walking and biking to key local destinations such as schools, parks, shopping centers, and civic institutions. The Plan also recommends policy changes and programming to maximize the effectiveness, safety and utilization of a new multimodal transportation system. The plan includes recommendations for roughly 16 miles of Class II bike lanes along with 21 miles of Class III bike routes. The proposed General Plan Update's circulation plan incorporates recommendations from the City's Active Transportation Plan and, therefore, would not conflict with the Plan.

In addition, the Land Use, Circulation, Environmental Justice, and Open Space Elements of the proposed GPU include goals and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Goal LU-5 and its policies strive for lively mixed-use areas near transit that provide opportunities to live, work, shop, and celebrate community life. Goal C-2 and its policies strive to ensure that pedestrian networks in the City are accessible,

connected, and supportive of daily life. Goal C-3 and its policies aim to ensure that the City's bicycle networks are expanded, continuous, protected, and integrated into the City. Goal C-4 and its policies seek to ensure that transit systems in the City are accessible, reliable, and seamlessly connected to the regional network. Goal C-8 and its policies aim to ensure that railroad crossings within the City are efficient, safe, and minimize delays. Policy EJ-2.2 seeks to implement safety-focused street improvements, including traffic calming, crosswalks, and bike/pedestrian enhancements, to reduce hazards and support active transportation in disadvantaged areas, while Policy EJ-2.8 seeks to improve pedestrian, bicycle, and transit connections between neighborhoods and key community facilities, including parks, libraries, clinics, and schools. Lastly, Goal OS-7 and its policies aim for an interconnected network of trails, pathways, and active transportation corridors.

Based on these considerations, the Downey General Plan Update is consistent with programs, plans, ordinances and policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Conflicts with VMT Thresholds

Impact TRAN-2 – Would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)?

Analysis of Impacts

VMT Screening Criteria

As previously stated, the City of Downey uses the County of Los Angeles *Transportation Impact Analysis Guidelines* (July 23, 2020) ["County Guidelines"] to estimate VMT impacts. The TIA Guidelines establish screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory. In response to determining a project's potential to cause VMT impacts, the County TIA Guidelines establish the following four screening steps:

1) Non-Retail Project Trip Generation: Projects generating less than 110 net daily vehicle trips.
2) Retail Project Site Plan: Retail uses less than 50,000 square feet of gross floor area.
3) Proximity to Transit: Projects located within one-half mile radius of a major transit stop[iii] or an existing stop along a high-quality transit corridor,[iv] and:

[iii] A major transit stop is defined as an existing rail transit station, ferry terminal with bus or rail service, or the intersection of two or more major bus routes with 20-minute or less headways during the peak commute hours (Pub. Resources Code, § 21064.3 and AB 2553).

[iv] Fixed route bus service with less than 15-minute headways during the peak commute hours (Pub. Resources Code, § 21155).

- Do not have Floor Area Ratio (FAR) of less than 0.75; or
- Do not provide more parking than required per code; or
- Are not inconsistent with the Southern Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); or
- Do not replace existing residential units with affordable housing units.

4) Low Income Residential Land Use: Project consisting of 100 percent affordable housing units.

The VMT screening criteria generally require specific development information that can only be evaluated at the project level; therefore, the proposed General Plan Update cannot be presumed to result in a less than significant impact and further VMT forecasting was performed.

VMT Forecasting Methodology for Non-Screening Development

Projects that do not satisfy any of the screening criteria must conduct more detailed VMT forecasting to determine the project's impact. For land use plans, the County TIA Guidelines state that VMT forecasting should be performed using the Southern California Association of Governments (SCAG) Regional Transportation Model (RTM). The current SCAG RTM is an activity-based travel demand model most recently updated for the development and evaluation of the SCAG 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The model analyzes a complex system of inputs such as highway networks, socioeconomic data (SED), driver behavior, and goods movement to forecast travel patterns as the region grows and changes.

In accordance with the County TIA Guidelines, potential project VMT impacts were evaluated using the SCAG RTM for the following scenarios:

- Base Year Conditions: This scenario reflects the SCAG RTM base year 2019 model.
- Cumulative No Project: This scenario reflects the SCAG RTM future year 2050 model and is used as the reference point for buildout per the current General Plan.
- Cumulative Plus Project: This scenario reflects a revised future year 2050 model run with modifications to reflect SED growth associated with the proposed General Plan Update.

VMT Thresholds of Significance

The County TIA Guidelines establish thresholds of significance for residential, office, regional serving retail, and land use plans. Based on threshold of significance established in the County TIA Guidelines, the City of Downey considers the following thresholds of significance:

Plan-Level Impacts: A land use plan would result in a significant plan-level VMT impact if the following condition is satisfied:

- The plan total VMT per service population (residents and employees) exceeds 16.8 percent below the existing employment VMT per employee for the Baseline Area in which the project is located.[v]

[v] The Baseline VMT refers to the year that the transportation study begins.

Cumulative Impacts: A project would result in a significant cumulative impact on VMT if all of the following conditions are satisfied:

- The project results in a project impact after applying an efficiency based VMT threshold; and
- The project is not deemed to be consistent with the SCAG RTP/SCS; and
- The project results in a net increase in VMT above that which was forecasted in the SCAG RTP/SCS.

VMT Impact Analysis

SED for existing conditions and the proposed General Plan Update were provided by MIG, working in collaboration with Ganddini Group. The following steps were performed to calibrate the proposed General Plan Update with the SCAG RTM SED inputs:

1. Determine the net SED growth between existing (2026) and buildout conditions per the proposed General Plan Update.
2. Determine the net SED growth between the base year (2019) and future year (2050) SCAG RTM model.
3. Determine the differential in SED growth forecasts between the SCAG RTM model and the proposed General Plan Update.
4. Revise the SCAG future year 2050 SED inputs by adding the differential in SED growth associated with the proposed General Plan Update.

For example, if the SCAG SED showed 100 additional housing units between 2019 and 2050, but the proposed General Plan Update is expected to result in up to 150 additional housing units, the SCAG SED inputs were increased by 50 housing units. The proposed General Plan Update buildout SED and final/ calibrated SED inputs are provided in Appendix G.

Table 4.17-7 shows the daily VMT estimates for existing conditions, the Current General Plan, and the proposed General Plan Update. As shown in Table 4.17-7, the proposed General Plan Update is estimated to generate approximately 4,421,345 total origin-destination VMT at a rate of approximately 22.1 VMT per service population. In comparison to the current General Plan, the proposed General Plan Update is forecast to increase total VMT generated but reduce/improve the efficiency rate by 0.7 VMT per service population.

Table 4.17-8 shows the South Los Angeles County ("South *County*") daily VMT estimates used to determine the current numerical threshold of significance (i.e., 16.8 percent below the Baseline Area). As shown in Table 4.17-8, the existing South County regional average VMT is approximately 22.9 VMT per service population, thus resulting in a threshold of 19.1 VMT per service population based on the County-established guidance used by the City of Downey.

Table 4.17-9 shows the project-level VMT impact evaluation. As shown in Table 4.17-9, the proposed General Plan Update is estimated to generate 22.1 VMT per service population, which exceeds the threshold of 19.1 VMT per service population based on County-established guidelines used by the City of Downey; therefore, the proposed General Plan Update would result in a significant VMT impact.

Although the proposed GPU improves overall VMT relative to the current General Plan (reducing the rate from 22.8 to 22.1 VMT per service population), it does not reduce the VMT rate below

the absolute regional threshold of 19.1 VMT per service population. Because the applicable methodology establishes an absolute regional performance target rather than a relative "improvement-over-baseline" standard, a plan can become more efficient than existing conditions but still fail to meet the required regional reduction. Additionally, the proposed General Plan Update would also increase VMT above that which was forecast in the SCAG RTP/SCS; therefore, the proposed General Plan Update would result in a significant VMT impact.

Table 4.17-7
City of Downey Daily VMT Estimates

Scenario	OD VMT	POP	EMP	SP	VMT per SP
Existing (2026)	4,259,481	116,962	50,525	167,487	25.4
Current General Plan	3,859,959	117,222	51,861	169,083	22.8
Proposed General Plan Update	4,421,345	143,354	56,782	200,136	22.1
Net Change Between Current and Proposed General Plan	**561,386**	**26,132**	**4,921**	**31,053**	**-0.7**

Source: Ganddini, 2026.
Notes:
1. Source: SCAG RTM. Origin-Destination VMT for all traffic analysis zones within Downey City Limits. Existing year 2026 data based on linear interpolation between 2019 and 2050 models.
2. OD VMT = Origin-Destination Vehicle Miles Traveled; POP = Population; EMP = Employees; SP = Service Population (Population + Employees)

Table 4.17-8
South Los Angeles County Daily VMT Estimates

Scenario	OD VMT	POP	EMP	SP	VMT per SP
SCAG RTM Base Year (2019)	334,218,427	9,249,006	4,704,723	13,953,729	24.0
Existing (2026)	325,280,867	9,392,733	4,785,330	14,178,063	22.9
SCAG RTM Future Year (2050	294,637,805	9,885,512	5,061,695	14,947,207	19.7

Source: Ganddini, 2026.
Notes:
1. Source: SCAG RTM. Origin-Destination VMT for all traffic analysis zones within Downey City Limits. Existing year 2026 data based on linear interpolation between 2019 and 2050 models.
2. OD VMT = Origin-Destination Vehicle Miles Traveled; POP = Population; EMP = Employees; SP = Service Population (Population + Employees)

Table 4.17-9
VMT Impact Evaluation

Scenario	Total VMT	SP	VMT per SP	Threshold	Above/ Below Threshold	Exceeds Threshold?
Current General Plan	3,859,959	169,083	22.8	19.1	+3.7	Yes
Proposed General Plan Update	4,421,345	200,136	22.1	19.1	+3.0	Yes

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

No feasible mitigation measures.

Level of Significance After Mitigation

Significant and unavoidable impact.

Design Feature Hazards

Impact TRAN-3 – 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)?

Analysis of Impacts

The City's street and intersection network is laid out in a grid pattern with a hierarchy of roadways by width and purpose. An overarching goal of the General Plan is to protect the health and safety of its residents and workers. The Circulation Element supports this effort by maintaining safe and efficient streets and intersections. Where traffic safety issues are identified, the City works to correct any structural deficiencies in a timely manner to the degree practical. Future development projects under the GPU would be required to comply with CEQA, and one of the transportation issues that must be addressed is to identify traffic hazards due to geometric design. Any specific traffic hazards due to geometric design related to a site specific development proposal would be identified and evaluated as part of the City's development review process and mitigated, if necessary. Additionally, any roadway modifications included as a result of the General Plan's land use plan would be designed to City and state engineering design standards to meet sight distance requirements and other design standards, including visibility of pedestrians and bicyclists. The General Plan does not propose any incompatible uses that would increase hazards. As such, the General Plan would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or the introduction of incompatible uses (e.g., farm equipment). Therefore, this impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Emergency Access

Impact TRAN-4 – Would the project result in inadequate emergency access?

Analysis of Impacts

The General Plan does not include elements that would impede emergency vehicle access. Any public roadway enhancements or alterations would be designed to conform to Downey Fire Department standards for access, as would driveways and internal circulation elements of new developments. In addition, the Circulation Element of the proposed GPU includes Goal C-1 and its policies which seek to ensure streets are safe, comfortable, and universally accessible for all users. Further, Goal C-8 and its policies strive for railroad crossings that are efficient, safe, and minimize delays. Policy C-8.1 supports improvement to railroad crossings along the Union Pacific Railroad Line to improve traffic flow, safety, and emergency access. Lastly, Policy C-8.2 promotes

improvements at railroad crossings that enhance safety, visibility, and operations, while reducing conflicts between trains, vehicles, pedestrians, and bicyclists and maintaining reliable emergency access through enhanced warning devices, visibility improvements, crossing design enhancements, and public education efforts. Policy C-8.2 also prioritizes measures that reduce conflicts between trains, vehicles, pedestrians, and cyclists, support emergency response access, and minimize safety risks for all roadway users. The City's development review process would also ensure that future development under the GPU would be consistent with these policies and would not result in inadequate emergency access. Therefore, implementation of the GPU goals and their attendant policies, and adherence to existing regulations, would ensure that future development under the proposed GPU would not result in inadequate emergency access. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact TRAN-5 – Would the project cause substantial adverse cumulative impacts with respect to transportation and traffic?

Analysis of Impacts

The proposed GPU would result in a significant and unavoidable VMT impacts and there are no feasible mitigation measures available to reduce impacts to less than significant. Because VMT is a regional impact, the project could cause a substantial adverse cumulative impact with respect to transportation. Additionally, because there are no feasible mitigation measures available to reduce impacts to less than significant, the project would result in a significant and unavoidable transportation impact.

Level of Significance

Potentially significant impact.

Mitigation Measures

No feasible mitigation measures.

Level of Significance After Mitigation

Significant and Unavoidable.

4.17.5 – REFERENCES

City of Downey, 2004. *Downey Vision 2025 Comprehensive General Plan Update Environmental Impact Report*. SCH# 2004031159. July 28, 2004.

City of Downey. 2005. *Downey Vision 2025 General Plan*. Adopted January 25, 2005. Revisions: Housing Element Update; Adopted October 11, 2022.

Ganddini Group, Inc. (Ganddini). *Downey General Plan Update Transportation Analysis*. June 22, 2026.

4.18 – TRIBAL CULTURAL RESOURCES

This EIR chapter addresses potential project impacts related to substantial adverse changes in the significance of a tribal cultural resource (TCR) that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. Also analyzed are the potential project impacts related to substantial adverse changes in the significance of a TCR that is determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. Lastly, this chapter evaluates potential cumulative TCR impacts from the project.

4.18.1 – ENVIRONMENTAL SETTING

TCR are the physical artifacts associated with the spiritual and religious lives of Native people that tie them together with their environment, each other, and their place in the universe. As described below, TCR include resources listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k) and/or resources determined by the lead agency to be significant to a California Native American tribe pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1.

Historical Resources

According to the General Plan Design Element, Downey has buildings built before 1950 that are recognized as historical structures worthy of preservation (Downey, 2005). Because age alone is not the sole criteria for recognition of structures as historical, many other older buildings built before 1950 have not been recognized as historical structures and not provided the same level of protection from demolition or modification. While no resources in the City of Downey are listed as California Historical Landmarks or Points of Historical Interest (OHP, 2025), and no resources within the Planning Area are listed on the California Register of Historical Resources (OHP, 2025) or the National Register of Historic Places (NPS, 2025), the Planning Area contains numerous historic era structures and sites with the potential for future registration on a State or National registry.

Archaeological Resources

Before the arrival of Spanish settlers in the 1700s, the Los Angeles Basin and the Southern Channel Islands were inhabited by the indigenous people known as the Tongva People (NAHC, 2025). The Amupunga, Huunga, and Tajauta villages were located in and around what is today, Downey. The area was seized from the native population by Spanish soldiers and missionaries, and in 1784, King Carlos III of Spain granted 75,000 acres of land, including Los Angeles harbor, to Juan Jose Dominguez. Dominguez would build his home, the Dominguez Rancho Adobe, in what is now the unincorporated community of Rancho Dominguez.

The indigenous Tongva People were relocated to Spanish missions and by 1806 were forced into labor by Spanish settlers and missionaries. The area was part of the early Spanish rancho of Jose Manuel Nieto, the holder of the largest Spanish land grant in California, stretching from the Pacific Ocean to the Puente Hills. Puente Hills, located approximately five miles northeast of Downey in an unincorporated area just north of the City of Whittier, contains archaeological and

paleontological resources that pre-date Spanish and Mexican land grants, dating back thousands of years and reflecting Native American settlement patterns.

Given the long history of Native American settlement in the region, followed by Spanish and Mexican rule, a moderate probability exists of finding prehistoric (archaeological) resources in the Planning Area. While Downey today is almost entirely urbanized and developed, given the history of the area, the probability exists of finding archaeological resources in the Planning Area, especially at depths below grade not previously disturbed by development activities.

4.18.2 – REGULATORY FRAMEWORK

National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) (16 U.S.C §§ 470 et seq.) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO), provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assist Native American tribes in preserving their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). NHPA establishes the nation's policy for historic preservation and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (i.e., historic properties) prior to undertakings**.**

Section 106 of the Federal Guidelines

Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP and SHPO must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings. The Section 106 process also gives federally recognized Native American Tribes the chance to consult and comment on a project before it can be finalized.

National Register of Historic Places

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, or association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 45 years of age to be considered for the NRHP unless it satisfies a standard of exceptional importance.

Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation

State

California Environmental Quality Act (CEQA)

CEQA provides criteria to evaluate whether a building, structure, object, or site is significant. Under CEQA Guideline §15064.5(a), historic resources include the following:

(1) A resource listed in or determined to be eligible by the State Historical Resources Commission for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in §5020.1(K) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of §5024.1 (g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, providing the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of

Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(3) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to §5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in §5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code §5020.1(j) or 5024.1.

In accordance with CEQA, properties designated or eligible at all levels are deserving of protection by a lead agency when any undertaking proposes to demolish or alter any such property.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change (CA Public Resources Code)." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria (Public Resources Code):

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for

listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has elapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

California Historical Landmarks (CHLs)

CHLs are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource must also be approved for designation by the County Board of Supervisors or the City or Town Council in whose jurisdiction it is located, be recommended by the State Historical Resources Commission, or be officially designated by the Director of California State Parks. The specific standards in use now were first applied in the designation of CHL No. 770. CHLs No. 770 and above are automatically listed in the CRHR. To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

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

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest (Point or Points) designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a Landmark, the Point designation will be retired. In practice, the Point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

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

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

Native American Heritage Commission, Public Resources Code Sections 5097.9–5097.991

Section 5097.91 of the Public Resources Code (PRC) established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.9 of the PRC, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection Act (NAGPRA) is consistent with the federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains, and cultural items be treated with dignity and respect," the California NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Senate Bill (SB) 18

California Government Code, Section 65352.3 incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes prior to the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB18 requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

Assembly Bill (AB) 52

Specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on TCR. The bill makes the above provisions

applicable to CEQA projects that have a notice of preparation or a notice of negative declaration filed or mitigated negative declaration on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1., 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California Public Resources Code (PRC), relating to Native Americans.

Health and Safety Code, Sections 7050 and 7052

Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease, and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code, Section 622.5

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes various goals and policies related to tribal cultural resources that would apply to the project and supersede the current (2025) General Plan goals and policies (see Appendix B).

4.18.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the General Plan Update could result in a significant impact if it:

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

    i) Listed or eligible for listing in the California Register of Historical Resources, or in a 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.

B. Would the project cause substantial adverse cumulative impacts with respect to TCR.

4.18.4 – IMPACTS AND MITIGATION MEASURES

Impact TRC-1 – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Analysis of Impacts

The TCR definition is in Section 4.18.1, above. No known TCRs that are archaeological in nature have been identified in the City of Downey. This means no landscapes, places that are not archaeological sites, or other non-archaeological features could be a TCR within the Planning Area. Also, no sites, features, places, or cultural landscapes are present within the Planning Area listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). The following analysis, therefore, will consider impacts to TCRs in a similar way as to prehistoric archaeological resources.

Native American Consultation is required per SB18 and AB 52 when a General Plan or General Plan Update is prepared and must be conducted before the General Plan Update is adopted. AB 52 and SB 18 are both California laws that mandate consultation with Native American tribes. However, while SB 18 requires local governments to contact tribes *before* adopting or significantly amending a general plan or specific plan, or designating land as open space. Local governments must notify the Native American Heritage Commission (NAHC) to get a list of culturally affiliated tribes, then allow tribes 90 days to respond and request consultation, AB 52 requires lead public agencies to notify California Native American tribes that are traditionally and culturally affiliated with the geographic area about a proposed project. Tribes have 30 days from receiving this written notification to formally request consultation. On March 12, 2026, the City sent notices to the following 10 Native American Tribes/Tribal Representatives to determine whether they wished to consult regarding the GPU:

Native American Tribal Group	**Tribal Representative**
Cahuilla Band of Indians	Erica Schenk, Chairperson
Gabrieleno Band of Mission Indians - Kizh Nation	Andrew Salas, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians	Anthony Morales, Chairperson
Gabrielino Tongva Indians of California Tribal Council	Robert Dorame, Chairperson
Gabrielino Tongva Indians of California Tribal Council	Christina Conley, Tribal Admin
Gabrielino/Tongva Nation	Sandonne Goad, Chairperson
Gabrielino-Tongva Tribe	Charles Alvarez, Chairperson
Gabrielino-Tongva Tribe	Sam Dunlap, Cul. Res. Dir.
Santa Rosa Band of Cahuilla Indians	Steven Estrada, Tribal Chairman
Soboba Band of Luiseño Indians	Joe Ontiveros, Hist. Pres. Officer

As of publication of this Draft EIR, the 30-day AB 52 and the 90-day SB 18 consultation periods had expired and none of the eight tribes had requested formal consultation with the City. This information is also included in Chapter 1.0 (Introduction).

Additionally, the GPU Design and Cultural Resources Element includes the following goals and policies related to tribal cultural resources:

- Goal D-8: Cultural and historic resources that are protected, preserved, and celebrated.
- Policy D-8.1: Historic Preservation Framework. Develop and implement a historic preservation framework that identifies and encourages the protection of local historic resources.
- Policy D-8.3: Design Standards for Historic Resources. Apply objective design standards for compatible alterations, additions, and infill development near historic resources.
- Goal D-9: Historic resources that are maintained, rehabilitated, and adapted in ways that retain their significance and support community identity.
- Policy D-9.1: Adaptive Reuse. Encourage adaptive reuse of historic buildings to support economic viability while retaining historic character.
- Policy D-9.2: Owner Incentives. Provide incentives for owners of historic resources, including Mills Act contracts, historic building code alternatives, and tax credits.
- Policy D-9.3: Flexibility for Non-Conforming Uses. Allow flexibility for nonconforming uses in historic resources to encourage preservation.
- Policy D-9.4: Demolition Review. Require careful review of proposed demolitions of historic resources and consider preservation alternatives.
- Policy D-9.5: Integrated Review. Integrate historic preservation into building and planning review processes to maintain resource integrity.
- Goal D-11: City-owned, archaeological, and Tribal Cultural Resources that are properly managed, protected, and celebrated.
- Policy D-11.1: Stewardship of City-Owned Resources: Ensure City-owned historic resources are preserved and maintained as examples of best practices.
- Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.
- Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.
- Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

These GPU goals and policies would serve to protect existing tribal resources by requiring all proposed projects to include cultural resources surveys at the proposal stage. With these goals and policies, the City's development requirements to review CEQA documents for impacts to archaeological resources and required SB 18/AB 52 consultation for Negative Declarations, Mitigated Negative Declarations, and EIRs, potential impacts to TCR by future development within the Planning Area would be less than significant.

Lastly, Section 7050.5 of the California Health and Safety Code requires that if human remains are discovered during grading or earthmoving, work must be halted and the coroner contacted to determine the Most Likely Descendant (MLD). If the MLD is Native American, tribal representatives will be contacted to consult on the appropriate disposition of the remains. CEQA requires the City and any project developer, including the City if it is a public works or other City-sponsored project, to comply with state law if human remains are found during excavation.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None Required.

Impact TRC-2 – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (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?

Analysis of Impacts

The TCR definition is in Section 4.18.3, above. This includes all cultural resources, with cultural value to a California Native American tribe that meets the criteria for inclusion on the California Register of Historical Resources (CRHR). This definition excludes cultural resources that ordinarily would be ineligible for inclusion on the CRHR. This impact considers TCRs that are not eligible for inclusion on the CRHR (i.e., if there is not a demonstrable public interest in that information, it does not possess a special and particular quality such as being the oldest of its type or the best available example of its type, and it is not directly associated with a scientifically recognized important prehistoric event or person).

While no known archaeological resources have been identified, including TCR, within the Planning Area, given the long history of Native American settlement in the region, followed by Spanish and Mexican rule, a moderate probability exists that prehistoric (archaeological) resources could be discovered within the Planning Area. The City is fully developed, with limited historical resources and a low-to-medium probability of archaeological resources. As such, the Design and Cultural Resources Element includes the following policies related to tribal cultural resources:

- Goal D-11: City-owned, archaeological, and Tribal Cultural Resources that are properly managed, protected, and celebrated.
- Policy D-11.1: Stewardship of City-Owned Resources: Ensure City-owned historic resources are preserved and maintained as examples of best practices.

- Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.
- Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.
- Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

These GPU goals and policies would serve to protect existing tribal resources by analyzing all proposed projects for the need for cultural resources surveys at the proposal stage. With these goals and policies, the City's development requirements to review CEQA documents for impacts to archaeological resources and required SB 18/AB 52 consultation for Negative Declarations, Mitigated Negative Declarations, and EIRs, potential impacts to TCR by future development within the Planning Area would be less than significant.

In addition, Section 7050.5 of the California Health and Safety Code requires that if human remains are discovered during grading or earthmoving, work must be halted and the coroner contacted to determine the MLD. If the MLD is Native American, tribal representatives will be contacted to consult on the appropriate disposition of the remains. CEQA requires the City and any project developer, including the City if it is a public works project, to comply with state law if human remains are found during excavation. Native American consultation, as prescribed by SB18 and AB52 also helps prevent impacts to cultural resources that are ordinarily not eligible for protection under CEQA. Additionally, Public Resources Code section 5024.1, ensures that the lead agency shall consider the significance of the resource to a California Native American tribe.

Nevertheless, future development pursuant to the General Plan may involve grading, excavation, or other ground-disturbing activities, which could disturb or damage unknown TCR. As such, implementation of the project could result in potentially significant impacts to TCR and incorporation of Mitigation Measures CUL-1 through CUL-4 is required to reduce potential impacts to less than significant. Incorporation of Mitigation Measures CUL-1 through CUL-4, implementation of GPU goals and policies, and compliance with respect to buried human remains would ensure that potential impacts to TCR within the Planning Area would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

CUL-1: Prior to approval of discretionary development projects that involve substantial ground disturbance in previously undisturbed areas, or where there is evidence that the project site may contain archaeological, historical, or Tribal Cultural Resources, the City shall require a records search through the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC), as appropriate, to determine the potential for cultural resources. If the records search or

project-specific conditions indicate the potential for significant impacts, the applicant shall prepare a cultural resources study conducted by an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards, including consultation with Tribal governments, as appropriate. Where resources are identified, the project shall implement measures to avoid, minimize, or mitigate impacts in accordance with CEQA and applicable City of Downey requirements.

CUL-2: As a condition of approval for discretionary grading permits, the City shall require prior to the start of construction activities, construction employees to be trained in recognizing potentially significant archaeological, paleontological, historic, or Tribal Cultural Resources that may be discovered during ground-disturbing activities. Project proponents will be required to submit verification that all site workers have received sensitivity training prior to commencement of ground-disturbing activities.

CUL-3: Upon discovery of significant archaeological, paleontological, historic, or Tribal Cultural Resources during site development, all activity shall be halted within 100 feet of the find(s) and notify a professional archaeologist, paleontologist, historian, and/or local Tribal government representative California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project (if appropriate) to evaluate the find(s) and recommend mitigation procedures, if necessary. Findings and mitigation measures are subject to review and approval by the Community Development Director prior to resuming site development work. The Tribe shall be contacted regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the Tribe(s) and archaeologist disagree on preferred treatment, the ultimate authority shall be the City of Downey Community Development Director.

CUL-4: If human remains are encountered during ground-disturbing activities, all work within the vicinity of the discovery shall cease immediately. The remains shall be treated in accordance with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, including notification of the County Coroner and, if the remains are determined to be Native American, notification of the Native American Heritage Commission for identification of the Most Likely Descendant and treatment of the remains in accordance with applicable law.

Level of Significance After Mitigation

Less than significant.

Cumulative Impacts

Impact TCR-3 - Would the project cause substantial adverse cumulative impacts with respect to tribal cultural resources?

Analysis of Impacts

It is possible that earthwork within the City may disturb Native American tribal cultural or archaeological resources that currently are not known. State law requires local jurisdictions to consult with local Native American tribal representatives when development or public works projects may affect TCR (i.e., SB 18 and AB 52). This government-to-government consultation

process is critical to identifying actions that could have significant impacts on TCR before any ground disturbance occurs in the surrounding region.

On a cumulative level, impacts to TCR within the Planning Area and the surrounding jurisdictions (i.e., the cities of Bellflower, Paramount, Gardena, South Gate, Cudahy, Lynwood, Bell Gardens, Pico Rivera, Santa Fe Springs, and Norwalk) should be considered. These jurisdictions contain TCRs which, as with all cultural resources, are non-renewable. Damaging, disturbing, or destroying TCRs results in a permanent loss of resources that can never be replaced, and future projects with impacts to cultural resources from all surrounding jurisdictions contribute to the cumulative impact to TCRs.

For this reason, the GPU Design and Cultural Resources Element includes the following goals and policies, which would serve to protect existing tribal resources by analyzing all proposed projects not subject to CEQA for the need for cultural resources surveys at the proposal stage:

- Goal D-11: City-owned, archaeological, and Tribal Cultural Resources that are properly managed, protected, and celebrated.
- Policy D-11.1: Stewardship of City-Owned Resources: Ensure City-owned historic resources are preserved and maintained as examples of best practices.
- Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.
- Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.
- Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

With these goals and policies, the City's development requirements to review CEQA documents for impacts to archaeological resources and required SB 18/AB 52 consultation for Negative Declarations, Mitigated Negative Declarations, and EIRs, potential impacts to TCR by future development within the Planning Area would be less than significant.

Existing regulations ensure that the City considers the significance of all cultural resources which have cultural value to a Native American tribe. Incorporating this regulation into the development process helps protect TCRs where they would otherwise not be by CEQA. Lastly, state law requires the City and surrounding jurisdictions to notify Native American representatives if tribal human remains are found.

By adopting the GPU goals and policies, following required laws and regulations, and continuation of the City's required CEQA review of all development projects, the potential cumulative impacts to cultural resources will be minimized, and future development in the City of Downey under the GPU would not make a significant contribution to any cumulative regional impacts on cultural resources.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.18.5 – REFERENCES

California Health and Safety Code, Section 7050.5.

California Public Resources Code Section 5097.

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4.19 – UTILITIES AND SERVICE SYSTEMS

This EIR chapter addresses potential project impacts related to the expansion or relocation of water, wastewater, and stormwater drainage infrastructure services. Project impacts related to dry utilities (natural gas, electricity, and telecommunications) are also addressed, as are potential impacts on water supply availability and ability of wastewater treatment and solid waste facilities to support the project. Lastly, this chapter evaluates project compliance with solid waste regulations.

4.19.1 – ENVIRONMENTAL SETTING

Water Services, Infrastructure, and Groundwater Sources

The City of Downey Public Works Utilities Division operates and maintains the City's water infrastructure, which consists of 19 groundwater wells, 265 miles of water mains, 23,500 meter connections, 1,800 fire hydrants, and 5,800 isolation valves (Downey, 2026). The City sources nearly its entire water supply as groundwater from the Central Basin, as well as utilizing recycled water. To fully meet the needs of customers in case of drought or emergency, the Utilities Division utilizes two imported water connections to import surface water from MWD: 1) Colorado River water through the Colorado River Aqueduct, owned and operated by MWD, and 2) the State Water Project, which utilizes the California Aqueduct for transmission to Southern California. The City provides water to individual water use sectors, which include single-family residential, multi-family residential, commercial, industrial, institutional/ governmental, and landscape. Recycled water is used within the City's service area for landscape irrigation, dual plumbing (i.e. toilets, urinals), and at the Rio Hondo Golf Course and Wilderness Park for their lakes and ponds.

According to the City's 2020 Urban Water Management Plan (UWMP), the City's water service area is approximately 12.3 square miles, with a service population of 110,556 in 2025. The UWMP projects the City to have a population of 117,081 by 2045. Projected population was based on 2020 U.S. Census data and the percentage of the City's boundaries within the water service area. The projected population was estimated by applying Southern California Association of Governments' (SCAG) projected annual growth rate for the City of Downey to the 2020 population. The 2020 UWMP indicates these population estimates were used to prepare the water consumption estimates in the UWMP (p. 3-7, Table 3-1). The SCAG data were based on SCAG's *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), dated September 2020, and incorporates demographic trends, existing land use, general plan land use policies, and input and projections through the year 2045 from the Department of Finance (DOF) and the U.S. Census Bureau for counties, cities and unincorporated areas within Southern California.

The City is located within the service area of the Central Basin Municipal Water District (CBMWD), a wholesale water agency that provides imported and recycled water to the Central Basin area. Although the City does not use imported water except during cases of drought or emergency, the City provided its 2020 UWMP to CBMWD, which includes potable and recycled water use projections in five-year increments for a normal year, a single dry year, and a five consecutive year drought over the next 25 years. Using this information, and similar information provided by other member agencies, CBMWD prepared its 2020 UWMP which is incorporated in the City's 2020 UWMP by reference. According to the City's 2020 UWMP, the City's Utilities Division has a water demand of 14,520 acre-feet in 2025 (including recycled water) and is projected to have a

demand of 17,243 acre-feet by the year 2045 (Table 4-3, p. 4-6). According to the City's 2020 UWMP, the City's water supplies are considered adequate for meeting domestic water demands in normal, single dry, and multiple dry years between 2021 and 2045. Additionally, the California Department of Water Resources does not identify the Central Basin as being in overdraft (as of 2020).

Wastewater Treatment and Conveyance Services

The City of Downey owns, operates, and maintains the sanitary sewer collection system that serves the Downey area (Downey, 2025b). Downey has approximately 22,500 sewer accounts. The wastewater generated in Downey and collected by local lines is transported to trunk sewers owned, operated, and maintained by the Los Angeles County Sanitation Districts (LACSD). The City's portion of the sanitary sewer collection system consists of approximately 193 miles of sanitary sewer mains, 4,552 manholes, and one lift station. The sewer mains range in size from six to 21 inches in diameter, and the sewer main material is nearly exclusively vitrified clay pipe (VCP). Largely, the sewer mains were installed between 1945 and 1955, with some lines dating to 1927. The City also owns and operates the Blandwood Road and True Avenue lift station, which was constructed in 2017 and replaced two older lift stations.

The City of Pico Rivera's sewer flows are also conveyed through the City of Downey via approximately 1,500 linear feet of sewer main portions of which are owned by the City of Downey and the City of Pico Rivera before entering a LACSD trunk sewer.

In addition to providing sewage conveyance via trunk sewers and interceptors, LACSD provides treatment services for Downey. LACSD owns and operates 10 water reclamation plants (WRPs) and a main processing plant. Sewer systems within LACSD's Joint Outfall System (JOS) convey wastewater to WRPs for water reclamation and hydraulic relief, or flow directly to the main processing facility, the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) in Carson, for secondary treatment and solids processing. Wastewater generated within Downey ultimately is sent either to the Los Coyotes WRP (LCWRP) in Cerritos or the A.K. Warren WRP, depending on the location of the site producing the waste.

The A.K. Warren WRP, which began operation in 1928 and serves a population of approximately 3.5 million people throughout Los Angeles County, has a capacity of 400 million gallons per day (mgd) and currently processes an average flow of 247.2 mgd. LCWRP, which began operation in 1970, has a current design capacity of 37.5 MGD and provides coagulated, filtered, and disinfected tertiary effluent. The LCWRP plant serves a population of approximately 370,000 people. The method of disposal when treated recycled water is not used (non-recycled) is discharged to the San Gabriel River, which eventually flows to the ocean. LACSD estimates approximately 60 gallons of wastewater are generated per person per day within LACSD's service area. Based on the City of Downey's 2025 population of 111,326 (DOF, 2025), the estimated volume of wastewater generated and collected in 2025 is approximately 7,519 AF.

Recycled water is used within Downey for landscape irrigation, dual plumbing (i.e. toilets, urinals), and in Rio Hondo Golf Course and Wilderness Park for their lakes and ponds (Downey, 2025a). CBMWD has developed a recycled water program to provide direct delivery of recycled water to serve non-potable demands, thereby offsetting reliance on imported water supplies. The City has coordinated preparation of its 2020 Plan with CBMWD. The City has several recycled water connections within its service area to deliver recycled water to its customers. The City and CBMWD also identified additional recycled water uses for landscape irrigation primarily in parks, schools, and freeway on-ramps.

In addition to actions implemented by CBMWD to identify new recycled water customers, the City has taken the lead to expand use of recycled water by constructing new mains. The City continues to retrofit landscape irrigation systems to use recycled water where available. The City is also looking for opportunities to use recycled water for non-irrigation applications such as dual plumbing and cooling. However, the primary application moving forward will continue to be landscape irrigation, focusing on the retrofit of parks, schools, and developments adjacent to existing recycled water infrastructure.

Stormwater Services and Facilities

The City's stormwater infrastructure consists of approximately 35 miles of storm drains, six dry wells, two stormwater lift stations, and stormwater open channels, culverts, drywells, and infiltration basins (Downey, 2025a). High concentrations of impervious surfaces in intensive urban areas, like Downey and surrounding cities, have contributed to poor water quality from polluted stormwater runoff. Key sources of contamination include sediment, nutrients, pesticides, metals, oil and grease, and pathogens.

Downey is one of 84 cities within Los Angeles County that is issued a Municipal National Pollutant Discharge Elimination System (NPDES) Permit by the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB). The Los Angeles County Department of Public Works' (LACDPW) Stormwater Quality Division is the principal permittee charged with improving stormwater conditions for residents in the county. The City does not directly use stormwater to meet its water demands. However, the City's means of maintaining compliance with Regional Water Quality Control Board NPDES MS4 permit requirements is predicated on reducing dry and wet weather runoff volumes via Best Management Practices (BMPs) that reduce runoff by infiltration into the ground and programs such as water conservation, which is the most effective way of reducing runoff and the associated pollutants conveyed into local receiving waters. For years, the City has been one of the leading municipalities in the region to use infiltration at developments and City projects as a water quality management strategy.

The City's Storm Water Engineering and Management program includes the following strategies to accomplish reduction in runoff:

- participating in various watershed committees
- developing, managing, and implementing plans, programs, policies, and projects to reduce runoff volumes
- local planning and development BMP compliance and design
- inspection and enforcement of BMPs and Low Impact Development (LID) requirements to clean and reduce runoff
- compliance litigation
- water quality analysis and reduction in source pollutants.

Such efforts have direct benefits to the City's water supply, as runoff infiltration into groundwater aquifers recharge the potable water supply and wells. Reduction in runoff source pollutants help maintain the high quality of groundwater supplies, and water usage reduction measures such as conservation and smart landscaping reduce impact on water supplies.

Solid Waste and Recycling Services

The City contracts with Athens Services for solid waste collection, disposal, and recycling services. Solid waste is taken to Athens Services' Sun Valley Material Recovery Facility (MRF) for sorting prior to being sent to one of five landfills located in San Bernardino County, including the Barstow Sanitary Landfill, the Victorville Sanitary Landfill, the Mid-Valley Sanitary Landfill in Rialto, the Landers Sanitary Landfill, and the San Timoteo Sanitary Landfill in Redlands. Capacities are:

- The Barstow Sanitary Landfill has a maximum permitted capacity of 80,354,500 cubic yards (CY), a maximum permitted daily throughput of 1,500 tons per day, and a remaining capacity of 68,361,526 CY (CalRecycle 2024).
- The Victorville Sanitary Landfill has a maximum permitted capacity of 93,400,000 CY, a maximum permitted daily throughput of 3,000 tons per day, and a remaining capacity of 79,400,000 CY.
- The Mid-Valley Sanitary Landfill has a maximum permitted capacity of 101,300,000 CY, a maximum permitted daily throughput of 7,500 tons per day, and a remaining capacity of 54,219,377 CY.
- The Landers Sanitary Landfill has a maximum permitted capacity of 13,983,500 CY, a maximum permitted daily throughput of 1,200 tons per day, and a remaining capacity of 11,063,811 CY.
- The San Timoteo Sanitary Landfill has a maximum permitted capacity of 23,685,785 CY, a maximum permitted daily throughput of 2,000 tons per day, and a remaining capacity of 11,780,000 CY.

Combined, the five landfills have a maximum combined permitted capacity of 312,723,785 CY, a combined maximum permitted daily throughput of 15,200 tons per day, and a combined remaining capacity of 224,824,714 CY.

Electricity Services

Electrical services to the Planning Area are provided by Southern California Edison (SCE).

Natural Gas Services

Natural gas is supplied to the Planning Area by the Southern California Gas Company (SCGC).

Telecommunications Services

Telecommunication services are provided by private companies including Time Warner, Charter Spectrum, AT&T, Verizon, and other service providers in the area.

4.19.2 – REGULATORY FRAMEWORK

Federal

Clean Water Act (CWA)

The CWA is the cornerstone of surface water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The SWRCB and RWQCB are responsible for ensuring implementation and compliance with the provisions of the federal CWA.

National Pollution Discharge Elimination System (NPDES)

The NPDES permit program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the federal CWA, the NPDES permit program authorizes state governments to perform many permitting, administrative, and enforcement aspects of the program. The act prohibits discharging “pollutants” through a “point source” into a “water of the United States” unless they have an NPDES permit. The permit contains limits on what can be discharged, creates monitoring and reporting requirements, and other provisions to ensure the discharge does not diminish water quality and/or people’s health.

State

California Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by U.S. Environmental Protection Agency (US EPA) in coordination with the California Department of Public Health (CDPH), is the main federal law that ensures the quality of drinking water. Under SDWA, US EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

California Department of Resources, Recycling, and Recovery (CalRecycle)

CalRecycle oversees, manages, and monitors waste generated in California. It provides limited grants and loans to help California cities, counties, businesses, and organizations meet the State waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites and co-disposal sites, including facilities that accept hazardous waste substances and non-hazardous waste. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including AB 939 and SB 1016 (see below).

Assembly Bill 939 (AB 939) (Public Resources Code 41780)

The California Integrated Waste Management Act Requires cities and counties to prepare integrated waste management plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements (SRRE) as part of the IWMP. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Senate Bill (SB) 1016

This law requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's IWMP. The CalRecycle Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. As of 2018, the Board is required to review a jurisdiction's source reduction and recycling element and hazardous waste element every two years.

Senate Bills 610 and 221, Water Supply Assessment and Verification

SB 610 and SB 221 amended State law to improve the link between the information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability (water supply assessment or WSA) to be provided to city and county decision-makers prior to approval of specified large development projects (projects greater than 500 dwelling units, or an equivalent water demand). Both statutes require this detailed information to be included in the administrative record. Under SB 610, WSAs must be furnished to local governments for inclusion in the environmental document for certain projects, as defined in Water Code 10912, subject to the California Environmental Quality Act (CEQA). Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

State Water Resources Control Board

The SWRCB, in coordination with nine RWQCBs, performs functions related to water quality, including issuance and oversight of wastewater discharge permits (e.g., NPDES), other programs regulating stormwater runoff, and underground and above-ground storage tanks. The SWRCB has also issued statewide waste discharge requirements for sanitary sewer systems, which include requirements for development of a sewer system management plan (SSMP).

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater. In most cases, only disinfected tertiary water may be used on food crops where the recycled water would come into contact with the edible portion of the crop. Standards are also prescribed for the use of treated wastewater for irrigation of parks, playgrounds, landscaping, and other non-agricultural irrigation. Regulation of reclaimed water is governed by the nine RWQCBs and the California Department of Public Health.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Section 10610–10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 AF annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act requires that urban water suppliers adopt an urban water management plan at least once every five years and submit it to the Department of Water Resources. Noncompliant urban water suppliers are ineligible to receive funding pursuant to Division 24 or Division 26 of the California Water Code, or receive drought assistance from the State, until the UWMP is submitted and deemed complete pursuant to the Urban Water Management Planning Act.

Regional

Los Angeles Basin MS4 Permit

Municipal separate storm sewer systems (MS4) are issued permits based on the size of the municipality. MS4 permit requirements include reduction of pollutant discharges to the "maximum extent practicable" and protection of water quality. Requirements also include identification of major outfalls and pollutant loads and control of discharges from new development and redevelopment. To address these objectives, municipalities are required to prepare stormwater management plans. Although the NPDES program does not regulate nonpoint sources of pollution, the Los Angeles Basin RWQCB has other programs in place to address nonpoint sources. The MS4 Permit also contains requirements that are necessary to improve efforts to reduce the discharge of pollutants in stormwater runoff to the maximum extent practicable and achieve water quality standards. The MS4 permit requires developments and redevelopments to implement Best Management Practices (BMPs) to control pollution in runoff from permitted sites. The BMPs that are required include the following programs:

- Litter, debris and trash control
- Incident response investigation and reporting
- New development and redevelopment
- Private construction activities
- Permittee activities (for sewage, streets and roads, and MS4 facilities)
- Public education and outreach
- Implementation of Total Maximum Daily Loads
- Reporting Requirements and Notifications

Los Angeles Countywide Integrated Waste Management Plan

Pursuant to AB939, the County prepared the 1996 Countywide Integrated Waste Management Plan (CIWMP) in collaboration with its cities to ensure a coordinated effort at solid waste reduction and landfilling. The CIWMP comprises five key elements: the Countywide Summary Plan, the Countywide Siting Element, the Source Reduction and Recycling Element (SRRE), the Household Hazardous Waste Element (HHWE), and the Non-Disposal Facility Element (NDFE).

- Countywide Summary Plan: The Countywide Summary Plan contains goals and policies and a summary of issues faced by the County and its cities. The Summary Plan provides steps cities need to take to meet the 50% division mandate.
- Countywide Siting Element: The Siting Element provides evidence that at least 15 years of capacity remain to hold waste for the County and its cities. If adequate capacity is not available, the Siting Element contains discussion of alternative disposal sites and additional diversion programs.
- Source Reduction and Recycling Element (SRRE): The SRRE provides analysis of the local waste stream to determine where to focus diversion efforts.
- Household Hazardous Waste Element (HHWE): The HHWE details programs that assist in recycling, treatment and disposal practices for Household Hazardous Waste programs.
- Non-Disposal Facility Element (NDFE): The NDFE goal is to identify existing and proposed waste management facilities that would require a solid waste permit to be operationally compliant.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes goals and policies related to utilities and service systems (see Appendix B).

4.19.3 – SIGNIFICANCE THRESHOLDS

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the project could result in a significant impact if it would:

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, the construction or relocation of which could cause significant environmental effects.

B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

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.

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.

E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

F. Cause substantial adverse cumulative impacts with respect to utilities and service systems.

4.19.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to utilities and service systems which could result from the implementation of the project and includes mitigation measures if needed to reduce significant impacts.

New or Expanded Facilities

Impact UTIL-1 – 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, the construction or relocation of which could cause significant environmental effects?

Analysis of Impacts

The GPU would accommodate growth consisting primarily of future residential development. This growth would require the expansion of existing infrastructure along with the likely development of new facilities related to utility infrastructure. The GPU does not include any specific proposals for new facilities, although new facilities would result from the projected population growth associated with GPU implementation. All future development and/or infrastructure projects subject to CEQA

would be required to undergo environmental review with respect to their discrete impacts at the time of proposal. Below is a discussion of the project's potential impacts related to water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities.

***Water Supply*.** The City of Downey Public Works Utilities Division operates and maintains the City's water infrastructure, which sources nearly its entire water supply as groundwater from the Central Basin, as well as utilizing water treatment facilities for recycled water. To fully meet the needs of customers in case of drought or emergency, the Utilities Division utilizes three imported water connections to import surface water from MWD. According to the City's 2020 UWMP, the City's water service area was projected to have a population of 110,556 in 2025 and 117,081 by 2045, which is an estimated increase of approximately 4,028 persons. Projected population in the City's service area were based on growth rate projections obtained from data provided by SCAG.

According to the UWMP, the City's Utilities Division had a water demand of 14,520 AFY in 2025 (including recycled water) and is projected to have a demand of 17,243 AFY by the year 2045. According to the City's 2020 UWMP, the City's water supplies are considered adequate for meeting domestic water demands in normal, single dry, and multiple dry years between 2021 and 2045. Additionally, the California Department of Water Resources does not identify the Central Basin as being in overdraft (as of 2020).

Table 3-4 in Section 3, Project Description, compares existing City characteristics from 2025 and those estimated for 2045. Table 3-4 estimates the City's population will be 142,809 in 2045, which exceeds the 117,081 estimated in the City's 2020 UWMP to adequately supply future growth. In addition, it is estimated that the project would result in annual water usage within the Planning Area of approximately 17,596 AFY in the City in 2045, which exceeds the 17,243 AFY estimated in the City's UWMP for 2045 (see Appendix D).[i] Therefore, GPU implementation could potentially result in the need for both new and expanded water supply and distribution facilities.

The City's Public Works Utilities Division plans, designs, and develops the City's potable water, recycled water, sewer, and stormwater system infrastructure rehabilitation and replacement programs by managing and implementing engineering contracts and studies, preparing plans and specifications, managing the Geographic Information System (GIS), and reviewing designs and improvement plans for developments for compliance with City standards. The division also develops, manages, and implements watershed management and monitoring plans, Green Streets, Low Impact Development (LID), and other policies/programs to capture dry and wet weather runoff for infiltration into the ground via BMPs; these are implemented at the time private development and City projects occur. They recharge local groundwater supplies.

The City currently has 16,554 AFY of water rights. Should future water usage increase above this amount (for example, in excess of 17,500 AFY), the City has the ability to lease additional water rights to make up the difference and deliver the water to its customers utilizing its groundwater wells which have the capacity to accommodate this usage. However, since most of the City's water supply comes from groundwater sources and the growth associated with the project exceeds that upon which the City's UWMP was developed, impacts to the long-term local groundwater supply are potentially significant and mitigation is required. Mitigation Measure HYD-1 has been incorporated to address adequate groundwater supplies for City residents over the long term.

[i] The 2020 UWMP states that the City of Downey's actual water use rate in fiscal year 2019-2020 was 110 gallons per capita per day.

The proposed GPU includes goals and policies intended to protect the City's water supply system.

- Goal C-12: Reliable, resilient, sustainable, and efficiently managed water systems.
- Policy C-12.1: Infrastructure Maintenance and Upgrades. Maintain and upgrade local water infrastructure systems to ensure continuous service and compliance with health and safety standards.
- Policy C-12.2: Water Conservation and Demand Management. Promote efficient water use and implement demand management strategies, including conservation programs, water-efficient technologies, and public education to reduce system demand and support long-term supply reliability.
- Policy C-12.3: Smart Water Management. Integrate smart monitoring and leak detection technologies to improve efficiency and system performance.
- Policy S-7.3 promotes water conservation, recycled water use, and regional coordination to maintain reliable water supplies during droughts and long-term climate stress.

Future development pursuant to the GPU would be required to comply with the City's development review process and Municipal Code requirements related to water supply infrastructure. With implementation of Mitigation Measure HYD-1, GPU goals and policies, and continued regulatory compliance with State and regional water quality standards through the City's development review process, development pursuant to the project would not result in significant impacts related to the need for new or expanded water supply facilities.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

HYD-1: **Water Demand Management.** New developments that will be served by the Downey Public Works Department - Utilities Division shall obtain a Can and Will Serve letter verifying that the Utilities Division has sufficient capacity and intends to supply water to the proposed development project. Project applicants shall provide the Utilities Division with the project location, project description, and quantified estimated daily and annual water usage for the project. The quantified estimated daily and annual water usage data shall be calculated by a qualified engineer using state or local generation rates.

Level of Significance After Mitigation

Less than significant impact.

Wastewater Treatment. The City of Downey owns, operates, and maintains the sanitary sewer collection system that serves the community. Wastewater generated in Downey is collected by trunk sewers owned, operated, and maintained by the LACSD. Wastewater generated within the City is collected by LACSD facilities and sent to either the LCWRP in Cerritos or the A.K. Warren WRP in Carson.

The A.K. Warren WRP, which serves a population of approximately 3.5 million people throughout LA County, has a capacity of 400 mgd and currently processes an average effluent flow of 242 mgd. The LCWRP, which serves a population of approximately 370,000 people, has a current design capacity and average effluent flow of 37.5 mgd. Together, the two WRPs have a combined design capacity of 437.5 mgd and an average effluent flow of 279.5 mgd.

LACSD estimates that approximately 60 gallons of wastewater is generated per person per day within LACSD's service area. Based on the City of Downey's 2025 population of 111,326, the estimated volume of wastewater generated and collected in 2025 is approximately 6.7 mgd. Based on a projected population of 142,809 in 2045 pursuant to the project, the estimate volume of wastewater generated and collected in 2045 would be 8.6 mgd. This amount would be well within the treatment capacity for both the LCWRP and A.K. Warren WRP.

As stated above, the City provides recycled water for landscape irrigation, dual plumbing (i.e., toilets, urinals), and at the Rio Hondo Golf Course and Wilderness Park for their lakes and ponds. CBMWD provides recycled water produced from the LCWRP in Cerritos. CBMWD has developed a recycled water program to provide direct delivery of recycled water for non-potable demands, thereby offsetting reliance on imported water supplies. The City has coordinated preparation of its 2020 UWMP with CBMWD. The City has several recycled water connections to deliver recycled water to customers. The City and CBMWD have identified additional recycled water uses for landscape irrigation in parks, schools, and freeway on-ramps.

In addition to actions implemented by CBMWD to identify new recycled water customers, the City has taken the lead to expand use of recycled water throughout its service area through the construction of new mains. The City continues to retrofit landscape irrigation systems to use recycled water where available. The City is also looking for opportunities to use recycled water for non-irrigation applications such as dual plumbing and cooling. However, the primary application moving forward will still be the irrigation of landscaping, focusing on the retrofit of parks, schools, and developments adjacent to existing recycled water infrastructure.

The GPU Circulation Element includes:

- Goal C-13: A safe, reliable, wastewater conveyance system.
- Policy C-13.1: Sewer System Management. Manage, operate, and maintain all portions of the sanitary sewer system to ensure reliable service and prevent spills.
- Policy C-13.2: Capacity and Capital Improvements. Maintain and expand system capacity to convey peak sanitary flows, aligning upgrades, rehabilitation, and replacement of infrastructure with anticipated future development and community growth.
- Policy C-13.3: Advanced Monitoring and Maintenance. Implement advanced monitoring, inspection, and preventive maintenance programs to detect vulnerabilities and address system needs proactively.
- Policy C-13.4: Resource Allocation. Provide adequate funding, personnel, and equipment to maintain, operate, and improve the sanitary sewer system and implement capital projects.

LACSD's Connection Fee Program provides funds for future capital expenditures needed to accommodate additional wastewater contributions in the LACSD sewerage system. This program requires all new users, as well as existing users who expand their wastewater discharge, to pay

a connection fee based upon the quantity and strength of wastewater discharge. This connection fee applies to residential, commercial, and industrial dischargers.

For new development, the connection fee is to be paid prior to the time the development is connected to the sewer or, in the case of expanding existing facilities, at the time of expansion of the wastewater discharge. A new wastewater discharger may incur a connection fee for an existing facility if the baseline capacity is not sufficient for the new discharge. Industrial users who expand their wastewater discharge, such that the capacity is 25 percent greater than the baseline capacity, are required to pay a connection fee for the increased discharge, thereby establishing a new baseline capacity.

For users obtaining wastewater discharge permits at industrial sites within the LACSD service area, baseline capacity may have been established by the previous industrial user. Baseline capacity generally remains with the site regardless of change of ownership. The only exception occurs when a relocation credit is granted under Section 3.08 of the Connection Fee Ordinances to allow a portion of the baseline capacity to be relocated to another site within the service area. Applicants for future development pursuant to the GPU would be required to pay applicable connection fees for wastewater discharge.

With continued implementation of fees to fund wastewater infrastructure expansion, as well as GPU goals and policies intended to maintain and enhance the City's wastewater management system, the project would not directly require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

***Stormwater Drainage*.** The City of Downey's stormwater infrastructure consists of approximately 35 miles of storm drains, six dry wells, two stormwater lift stations, and stormwater open channels, culverts, drywells, and infiltration basins. Downey is one of 84 cities within Los Angeles County that is issued a Municipal NPDES Permit by the LAWQCB. The Los Angeles County Department of Public Works' Stormwater Quality Division is the principal permittee charged with improving stormwater conditions.

The City's means of maintaining compliance with Regional Water Quality Control Board NPDES MS4 permit requirements is predicated on reducing dry and wet weather runoff volumes via BMPs. BMPs reduce runoff by infiltration into the ground, which is the most effective way of reducing runoff and the associated pollutants conveyed into local receiving waters. For years, the City has been one of the leading municipalities in the region implementing in infiltration systems in private development and City projects as a water quality management strategy.

Downey's topography is generally flat, and the City is almost completely built out. Non-developed areas include parks, school recreation fields, and landscaped areas around buildings. Given these conditions, development pursuant to the GPU would not significantly increase impermeable surface coverage and thus would not create the potential for increased stormwater runoff. High

concentrations of impervious surfaces in intensive urban areas, like Downey and surrounding cities, have contributed to poor water quality from polluted stormwater runoff. Key sources of contamination include sediment, nutrients, pesticides, metals, oil and grease, and pathogens. LAWQCB regulates the discharge of stormwater from municipalities and activities within their jurisdiction, including construction. The City is a signatory of the Los Angeles County Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharge. In addition, the City's development review process examines potential increases in runoff from development sites and requires post-development runoff to not exceed pre-development levels through project design such as the use of detention basins and siltation fencing.

Additionally, the proposed GPU includes various goals and policies intended to manage and improve the City's stormwater collection and conveyance system.

- Goal C-14: Stormwater and drainage infrastructure that is climate-adaptive, and effectively managed to reduce flood risk and protect public safety.
- Policy C-14.1: System Capacity and Flood Management. Operate, maintain, and upgrade stormwater and drainage systems in the City to ensure adequate capacity during major storm events, reduce flood risk, and protect life and property.
- Policy C-14.2: Climate Change Adaptation and Sustainability. Plan and design stormwater infrastructure to address the anticipated impacts of climate change, including increased storm intensity and variability, while promoting sustainable system performance and long-term environmental protection.
- Policy C-14.3: Regional Coordination. Coordinate stormwater planning, infrastructure improvements, and flood management strategies with regional stormwater and flood control agencies to enhance system performance, manage watershed-level impacts, and improve regional resilience.
- Policy C-14.4: Development Coordination. Coordinate stormwater and drainage planning with development projects to ensure adequate system capacity, minimize runoff impacts, and reduce potential flooding.

Future development would be assessed at a site-specific project-level when proposed. Any future projects pursuant to the GPU would be required to adhere to local, State, and federal law and policy (see Section 4.10.2) regulating urban runoff and municipal stormwater control. Any impacts would be required to be analyzed in subsequent project-level CEQA documentation, wherein any potentially significant impacts would be required to be mitigated to less than significant level.

With implementation of GPU goals and policies, continued regulatory compliance with state and regional water quality standards, and guidelines for runoff control in the Municipal Code, development within the Planning Area would not directly require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

***Electric Power*.** SCE has no stated plans to relocate or expand electric power facilities within the City. However, implementation of the project could lead to demand-driven expansion of local facilities or distant generation and transmission facilities and subsequently, the possibility of physical environmental impacts. These projects, if required, would be subject to environmental review at the time they are proposed. Therefore, any impacts from new development under the project would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

***Natural Gas*.** SoCalGas no stated plans to relocate or expand natural gas facilities within the City. However, implementation of the project would lead to demand-driven expansion of local or regional facilities and, subsequently, the possibility of physical environmental impacts covered. These projects would be subject to environmental review at the time of proposal. Therefore, any impacts from new development under the project would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

***Telecommunications*.** There are no plans at present to relocate or expand telecommunication facilities within the City. However, implementation of the project would lead to demand-driven expansion of facilities and, subsequently, the possibility of physical environmental impacts covered under CEQA. These projects would be subject to environmental review at the time of proposal. These facilities are provided by private organizations and the infrastructure would be covered by service fees. The Circulation Element of the GPU includes Infrastructure Goal C-15 and its policies which aim to ensure communications infrastructure is modern, resilient, accessible, and supportive of public services and community connectivity. Policy C-15.1 directs the City to expand high-speed broadband, public Wi-Fi, and cellular coverage throughout the City. Future development would be required to be consistent with these goals and policies. Therefore, any impacts from new development under the project would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Conclusion. As discussed in the preceding analysis, the project would result in potentially significant impacts to water supply facilities and requires incorporation of mitigation to reduce potential impacts to less than significant.

Regarding wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities, compliance with existing statutory regulations, implementation of GPU goals and policies, and payment of connection fees would address any needed relocation or construction of new facilities, the construction of which would be subject to CEQA review. Project impacts would be less than significant.

Water Supplies

Impact UTIL-2 – Would there be sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Analysis of Impacts

The availability of water supplies is discussed in Impact UTIL-1 above. According to the City's 2020 UWMP, the City's water service area was projected to have a population of 110,556 in 2025 and 117,081 by 2045, which is an estimated increase of approximately 4,028 persons. Projected population in the City's service area were based on growth rate projections obtained from data provided by SCAG.

According to the UWMP, the City's Utilities Division has a water demand of 14,520 AFY in 2025 (including recycled water) and is projected to have a demand of 17,243 AFY by the year 2045. According to the City's 2020 UWMP, the City's water supplies are considered adequate for meeting domestic water demands in normal, single dry, and multiple dry years between 2021 and 2045. Additionally, the California Department of Water Resources does not identify the Central Basin as being in overdraft (as of 2020).

Table 3.4 in Section 3, Project Description, compares existing City characteristics from 2025 and those estimated for 2045. Table 3.4 estimates the City's population at 142,809 in 2045, which exceeds the 117,081 estimated in the City's 2020 UWMP to adequately supply future growth. In addition, using CalEEMod default outputs for indoor and outdoor water use, it is estimated that the project would result in annual water usage within the Planning Area of approximately 17,596 AFY in 2045, which exceeds the 17,243 AFY estimated in the City's UWMP for 2045 (see Appendix D). [ii] Therefore, GPU implementation could potentially result in the need for both new and expanded water supply and distribution facilities.

The City's Public Works Utilities Division plans, designs, and develops the City's potable water, recycled water, sewer, and stormwater systems infrastructure rehabilitation and replacement programs by managing and implementing engineering contracts and studies, preparing plans and specifications, managing the GIS, and reviewing designs and improvement plans for developments for compliance with City standards. The City currently has 16,554 AFY of water rights. Should future water usage increase above this amount (for example, in excess of 17,500 AFY), the City has the ability to lease additional water rights to make up the difference and deliver the water to its customers utilizing its groundwater wells which have the capacity to accommodate this usage. The division also develops, manages, and implements watershed management and

[ii] The 2020 UWMP states that the City of Downey's actual water use rate in fiscal year 2019-2020 was 110 gallons per capita per day.

monitoring plans, Green Streets, Low Impact Development (LID), and other policies/programs in order to capture dry and wet weather runoff for infiltration into the ground via best management practices (BMPs) implemented at developments and City projects which raise local water levels to the benefit of the City's groundwater wells. However, since most of the City's water supply comes from groundwater sources, and the growth represented by the project exceeds that upon which the City's UWMP was developed, impacts to the long-term local groundwater supply are potentially significant and mitigation is required. Mitigation Measure HYD-1 has been incorporated to assure there would be adequate groundwater supplies for City residents in the future with implementation of the GPU.

The City's Storm Water Engineering and Management program includes the following strategies to accomplish reduction in runoff: participating in various watershed committees; developing, managing, and implementing plans, programs, policies, and projects to reduce runoff volumes; local planning and development BMP compliance and design; inspection and enforcement of BMPs and Low Impact Development requirements to clean and reduce runoff; compliance litigation; and water quality analysis and reduction in source pollutants. Such efforts have direct benefits to the City's water supply by infiltration of runoff into groundwater aquifers which benefit the City's potable water supply and wells, reduction in runoff source pollutants to help ensure the high quality of the City's groundwater supplies, and in water usage reduction measures such as conservation and smart landscaping which reduce impact on the City's water supplies while in turn reducing runoff volumes. Additionally, the City's water supply has a direct relationship with such runoff compliance efforts as it is the source of all of the City's dry weather flows.

The proposed GPU includes various goals and policies intended to protect the City's water supply system. The Circulation Element includes Infrastructure Goal C-12 which aims to ensure that the City's water systems are reliable, resilient, sustainable, and efficiently managed for all users. Policy C-12.1 seeks to maintain and upgrade water infrastructure to ensure continuous service and compliance with health and safety standards. Further, the Safety Element of the GPU includes Policy S-7.3 which promotes water conservation, recycled water use, and regional coordination to maintain reliable water supplies during droughts and long-term climate stress.

Future development pursuant to the project would be required to comply with the City's development review process and Municipal Code requirements related to water use. With implementation of Mitigation Measure HYD-1 and GPU goals and policies, sufficient water supplies would be available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years; impact would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

HYD-1: **Water Demand Management.** New developments that will be served by the Downey Public Works Department - Utilities Division shall obtain a Can and Will Serve letter verifying that the Utilities Division has sufficient capacity and intends to supply water to the proposed development project. Project applicants shall provide the Utilities Division with the project location, project description, and quantified estimated daily and annual water usage for the project. The quantified estimated daily and annual water usage data shall be calculated by a qualified engineer using state or local generation rates.

Level of Significance After Mitigation

Less than significant impact.

Wastewater Treatment

Impact UTIL-3 – 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?

Analysis of Impacts

As previously discussed, wastewater generated in Downey is collected by trunk sewers owned, operated, and maintained by the Los Angeles County Sanitation Districts (LACSD). Wastewater generated within the City of Downey is collected by the LACSD and ultimately sent to either the Los Coyotes WRP (LCWRP) or the A.K. Warren WRP, depending on the location of the site producing the waste. Both of these WRPs are located outside the City's service area.

The A.K. Warren WRP, which serves a population of approximately 3.5 million people throughout LA County, has a capacity of 400 million gallons per day (mgd) and currently processes an average effluent flow of 242 mgd. The LCWRP, which serves a population of approximately 370,000 people, has a current design capacity and average effluent flow of 37.5 mgd. Taken together, the two WRPs have a combined design capacity of 437.5 mgd and an average effluent flow of 279.5 mgd. LACSD estimates approximately 60 gallons of wastewater is generated per person per day within LACSD's service area. Based on the City of Downey's 2025 population of 111,326, the estimated volume of wastewater generated and collected in 2025 is approximately 6.7 mgd. Based on a projected population of 142,809 in 2045 under the project, it is estimated that the volume of wastewater generated and collected in 2045 would be 8.6 mgd. This amount would be well within the treatment capacity for both the LCWRP and A.K. Warren WRP.

As previously stated, recycled water is also used within the City's service area for landscape irrigation, dual plumbing (i.e. toilets, urinals), and in Rio Hondo Golf Course and Wilderness Park for their lakes and ponds. The City is located within the service area of the Central Basin Municipal Water District (CBMWD), which provides recycled water produced from LACSD's LCWRP in Cerritos. CBMWD has developed a recycled water program within its service area to provide direct delivery of recycled water to serve non-potable demands, thereby offsetting reliance on imported water supplies. The City has coordinated the preparation of its 2020 Plan with CBMWD. The City has several recycled water connections within its service area to deliver recycled water to its customers. The City and CBMWD also identified additional recycled water uses for landscape irrigation primarily in parks, schools, and freeway onramps within the City's service area.

In addition to actions implemented by CBMWD to identify new recycled water customers, the City has taken the lead on expanding the use of recycled water throughout its service area through the construction of new mains. The City continues to retrofit landscape irrigation systems to use recycled water where available. The City is also looking for opportunities to use recycled water for non-irrigation applications such as dual pluming and cooling. However, the primary application moving forward will still be the irrigation of landscaping with the main focus over the next 25 years being the retrofit of parks as well as the retrofit of schools and developments adjacent to existing recycled water infrastructure.

The Circulation Element of the proposed GPU includes Infrastructure Goal C-13 and its policies which strive for a safe, reliable, wastewater conveyance system. Policy C-13.1 seeks to properly manage, operate, and maintain all portions of the sanitary sewer system to ensure reliable service and prevent spills. Policy C-13.2 aims to maintain and expand system capacity to convey peak sanitary flows, aligning upgrades, rehabilitation, and replacement of infrastructure with anticipated future development and community growth. Policy C-13.3 seeks to implement advanced monitoring, inspection, and preventive maintenance programs to detect vulnerabilities and address system needs proactively. Lastly, Policy C-13.4 directs the City to provide adequate funding, personnel, and equipment to maintain, operate, and improve the sanitary sewer system and implement capital projects.

The LACSD's Connection Fee Program provides funds for future capital expenditures needed to accommodate additional wastewater contributions in the Sanitation Districts' sewerage system. This program requires all new users of the sewerage system, as well as existing users who expand their wastewater discharge, to pay a connection fee to the Sanitation Districts based upon the quantity and the strength of the wastewater discharge. This connection fee applies to residential, commercial and industrial dischargers.

For new facilities, the connection fee is to be paid prior to the time the facility is actually connected to the sewer or, in the case of expanding existing facilities, at the time of expansion of the wastewater discharge. A new wastewater discharger may incur a connection fee for an existing facility if the baseline capacity is not sufficient for the new discharge. Industrial users who expand their wastewater discharge, such that the capacity is 25 percent greater than the baseline capacity, are required to pay a connection fee for the increased discharge thereby establishing a new baseline capacity.

For users obtaining wastewater discharge permits at industrial sites within the Sanitation Districts' service area, baseline capacity may have been established by the previous industrial user. Baseline capacity generally remains with the site regardless of change of ownership. The only exception occurs when a relocation credit is granted under Section 3.08 of the Connection Fee Ordinances so as to allow a portion of the baseline capacity to be relocated to another site within the service area. Applicants for future development under the project would be required to pay applicable connection fees for wastewater discharge.

With continued implementation of fees to fund wastewater infrastructure expansion, as well as GPU goals and policies intended to reduce impacts to wastewater treatment facilities, the project would not directly require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Solid Waste

Impact UTIL-4 – 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?

Analysis of Impacts

Solid waste collection, disposal, and recycling services in the Planning Area are provided under contract to the City by Athens Services. Solid waste collected in the City is taken to Athens Services' Sun Valley Material Recovery Facility (MRF) for sorting prior to being sent to one of five landfills located in San Bernardino County. These include the Barstow Sanitary Landfill, the Victorville Sanitary Landfill, the Mid-Valley Sanitary Landfill in Rialto, the Landers Sanitary Landfill, and the San Timoteo Sanitary Landfill in Redlands.

The Barstow Sanitary Landfill has a maximum permitted capacity of 80,354,500 cubic yards (CY), a maximum permitted daily throughput of 1,500 tons per day, and a remaining capacity of 68,361,526 CY (CalRecycle 2024). The Victorville Sanitary Landfill has a maximum permitted capacity of 93,400,000 CY, a maximum permitted daily throughput of 3,000 tons per day, and a remaining capacity of 79,400,000 CY. The Mid-Valley Sanitary Landfill has a maximum permitted capacity of 101,300,000 CY, a maximum permitted daily throughput of 7,500 tons per day, and a remaining capacity of 54,219,377 CY. The Landers Sanitary Landfill has a maximum permitted capacity of 13,983,500 CY, a maximum permitted daily throughput of 1,200 tons per day, and a remaining capacity of 11,063,811 CY. The San Timoteo Sanitary Landfill has a maximum permitted capacity of 23,685,785 CY, a maximum permitted daily throughput of 2,000 tons per day, and a remaining capacity of 11,780,000 CY. Taken together, the five landfills that receive solid waste from the City of Downey have a maximum combined permitted capacity of 312,723,785 CY, a combined maximum permitted daily throughput of 15,200 tons per day, and a combined remaining capacity of 224,824,714 CY.

In order to estimate solid waste generation under the project, default CalEEMod waste generation rates for the Planning Area were used (see Appendix D). Using CalEEMod default outputs for solid waste generation, it is estimated that the GPU would result in the generation of 293.6 tons of inorganic waste per day in 2045 when compared to existing conditions. This amount of inorganic solid waste represents 1.93 percent of the combined maximum permitted daily throughput of 15,200 tons per day for the landfills that serve the project area.

The proposed GPU includes various goals and policies intended to reduce impacts from solid waste disposal. The Circulation Element includes Infrastructure Goal C-16 and its policies which aim for solid waste collection and recycling services that promote environmental responsibility. Policy C-16.1 promotes recycling, composting, and zero-waste initiatives in residential, commercial, and industrial sectors. Policy C-16.2 directs the City to conduct outreach to encourage proper waste management, recycling, and participation in City programs. The City must also comply with a variety of state and regional laws and regulations regarding solid waste recycling and must coordinate with Los Angeles County regarding solid waste disposal. Compliance with these laws and regulations would help control the amount of waste produced within the Planning Area over the life of the GPU and ensure impacts related to solid waste would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Impact UTIL-5 – Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Analysis of Impacts

Any future project pursuant the GPU would be required to comply with all applicable federal, State, and local statutes and regulations related to solid waste management and reduction. The GPU does not contain any goals or policies that specifically address solid waste management. However, the City and its contractors must comply with a variety of State and regional laws and regulations regarding solid waste recycling and minimization (e.g., AB 939). Therefore, the GPU would not interfere with the City's compliance with federal, State, and local management and reduction statutes and regulations related to solid waste. With adherence to existing regulations, impacts would be less than significant.

Level of Significance Before Mitigation:

Less than significant impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact UTIL-6 – Would the project cause substantial adverse cumulative impacts with respect to utilities and service systems?

Analysis of Impacts

Development resulting from GPU implementation, in combination with other cumulative development in neighboring cities, would increase the demand for utilities in the region. Utilities can be potentially impacted by increased population, especially when new facilities are not built to meet population increases or when existing facilities are not adequately maintained. Alternatively, impacts may also occur when new facilities are built, resulting in physical impacts to existing resources. Overall, the GPU accounts for both these scenarios. The GPU includes policies to mitigate potential negative environmental impacts. Additionally, new facilities are subject to both the provisions of the GPU and compliance with CEQA, when required. Environmental review would identify site-specific conditions and physical changes resulting from utility services expansion. It was determined that water supply may not be adequate for the full implementation of the GPU in the future; however, implementation of Mitigation Measure HYD-1 would reduce the potential impact to less than significant. The growth projections of the GPU are different than those of the current General Plan, and it is possible the projected increases in housing and population and changes in non-residential development may have adverse impacts on water demand but are not expected to have significant impacts on sewer/wastewater, storm drainage, energy, telecommunications, or solid waste infrastructure and service providers in the

region. All of the local jurisdictions within the surrounding region have General Plan goals and policies similar to the City of Downey regarding the maintenance and, when necessary, expansion of utility systems to accommodate growth. Once the GPU is adopted, its growth projections would be incorporated as appropriate into the various master plans of the agencies and companies providing utility services to the City. In addition, the City would implement Mitigation Measure HYD-1 to help reduce future water demand on local water serving agencies. Therefore, the proposed GPU would not have cumulative impacts on regional utility services.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

4.19.5 – REFERENCES

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4.20 – WILDFIRE

This EIR chapter addresses potential project impacts related to State Responsibility Areas (SRAs) or lands classified as very high fire hazard severity zones (FHSZs). Specifically, this chapter analyzes whether the project would substantially impair an adopted emergency response plan or emergency evacuation plan, expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. Also analyzed are the potential impacts from installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Lastly, this chapter evaluates the project's potential cumulative wildfire impacts.

4.20.1 – ENVIRONMENTAL SETTING

Climate

The Planning Area is located in southern Los Angeles County, approximately 8.5 miles southeast of downtown Los Angeles and approximately 8.5 miles north of the Ports of Los Angeles and Long Beach. The greater Los Angeles region is classified as a Mediterranean climate, but specific weather conditions are dependent on local factors such as topography and proximity to the Pacific Ocean. The climate is determined by the North Pacific High-Pressure System, a subtropical anticyclone whose presence in the northeastern pacific results in hot, dry summers in the region and mild, wet winters. This pattern is generally interrupted by regional variances, such as the Santa Ana winds during the fall and storms hailing from the Pacific Northwest during the winter. El Niño and La Niña patterns every two to seven years also have large effects on weather and rainfall received between November and March.

The City's average temperatures range from a high of 84 degrees Fahrenheit (°F) in August to a low of 46 degrees °F in December (WRCC, 2025). Annual precipitation is approximately 14.46 inches, falling mostly from December through March. The Planning Area is relatively flat, with elevations ranging from 81 feet above mean sea level (AMSL) in the southwest portion of the Planning Area to 140 AMSL in the northeastern portion of the Planning Area.

Wind Patterns

The North Pacific High-Pressure System drives the prevailing winds in the basin. High winds can cause property damage and pose health risks, especially during the fire season. In addition to the typical regional wind patterns in the region, Santa Ana winds represent a particularly strong, dry wind hazard. Santa Ana winds are katabatic, meaning they develop as winds descend through mountain passes where they accelerate, dry out, and heat up. These winds are felt throughout the Los Angeles County region, including the Planning Area, as it is located within the Los Angeles Basin and to the west of the eastern mountain ranges where they originate. As these winds are typically strong, hot, and dry, these pose a unique and constant threat of igniting and spreading wildfires.

Fire Hazards Severity Zones

Fire Hazard Severity Zones (FHSZs) are maps developed by the California Department of Forestry and Fire Protection (CalFIRE) that classify areas based on their likelihood and potential intensity of wildfires, considering factors like vegetation, topography, and historical fire weather (CalFIRE). They categorize land into levels of "Moderate," "High," and "Very High" based on the physical conditions that influence fire behavior, separate from human-built mitigation efforts. These maps are used for land use planning and fire preparedness, and they often determine building standards for new construction in "Very High" zones. According to CalFIRE, Downey does not have any areas within a Moderate, High, or Very High FHSZ.

State Responsibility Areas (SRA)

An SRA refers to those areas where CalFIRE has responsibility for wildland fire protection. SRAs do not include lands within city boundaries or on federally owned lands. According to CalFIRE, no SRAs apply to Downey. The nearest SRAs to the Planning Area occur in the Puente Hills just north of Whittier, approximately 5.5 miles east-northeast of the Planning Area.

4.20.2 – REGULATORY FRAMEWORK

State

California Fire Code

The City has adopted the 2025 California Fire Code issued by the Fire and Life Safety Division of the Office of the State Fire Marshal, with amendments to address specific local conditions and needs. These provisions include construction standards and fire hydrant requirements, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for minimum fire flow rates for water mains.

Local

City of Downey 2045 General Plan Update

The City of Downey 2045 General Plan Update includes goals and policies related to structural and urban fires (see Appendix B).

Downey Municipal Code

Municipal Code Chapter 3 (Fire Code) regulates and establishes policies dealing with the safeguarding of life and property from fire and explosion hazards arising from the storage, handling, and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises.

4.20.3 – SIGNIFICANCE THRESHOLDS

The methodology used to evaluate potential environmental impacts is described in Section 4.0. As identified in Appendix G of the Guidelines for Implementation of CEQA, the General Plan Update has the potential to result in significant impacts if the following thresholds are exceeded. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

A. Substantially impair an adopted emergency response plan or emergency evacuation plan.

B. Due to slope, prevailing winds and other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

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

D. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

E. Cause substantial adverse cumulative impacts with respect to wildfire.

4.20.4 – IMPACTS AND MITIGATION MEASURES

This section describes potential impacts related to wildfires which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Emergency Response Plans

Impact WIL-1 – Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Analysis of Impacts

The Planning Area is fully urbanized and does not contain any FHSZ or SRA. As such, no wildfire hazards exist within the Planning Area. The Planning Area, however, is subject to risks from urban structure fires.

The Los Angeles County Department of Public Works has developed Disaster Route Maps for cities in the County (Los Angeles County Public Works, 2025). Freeway evacuation routes that transect the Planning Area include I-5 and I-105. Other freeway evacuation routes in close proximity include I-170 and I-605. Arterial roadway evacuation routes that transect the City and connect with these freeways include Florence Avenue, Imperial Highway, and Bellflower/Lakewood/Rosemead Boulevard.

The exact evacuation route used in an emergency depends on a variety of factors, including the specific emergency situation and proximity to evacuation routes. These roadway and freeway evacuation routes provide residents and visitors with multiple options for evacuating the City in the event of a disaster or emergency.

The project would not impact established evacuation routes as it does not include approval of any development project and would not include physical changes to any of the freeway or roadway evacuation routes listed above. While it is possible that temporary and limited circulation changes would be required during discrete periods of time associated with specific construction projects, these changes would be temporary and of a nature that would still allow evacuation in the event of an emergency. Emergency access would be required to be maintained to all properties during future construction activities, and all projects would be designed to comply with minimum access widths.

Additionally, the GPU Safety Element includes:

- Goal S-4: Maintain effective community preparedness and coordinated emergency response to protect life, property, and critical services during disasters.
- Policy S-4.1: Comprehensive Emergency Plans. Keep the city's Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP) up to date, consistent with state and federal standards, and integrated across departments.
- Policy S-4.2: Interdepartmental and Interagency Coordination. Ensure collaboration among City departments and with regional, state, and federal partners to strengthen disaster preparedness, response, and recovery.
- Policy S-4.3: Public Education and Awareness About Emergency Preparedness. Provide ongoing community outreach and training programs, such as CERT and Downey Alerts, to promote individual and neighborhood preparedness.
- Policy S-4.4: Critical Facilities and Services. Identify, maintain, and protect critical facilities and infrastructure needed to support emergency response and community recovery during and after disasters.
- Policy S-4.5: Reliable and Accurate Emergency Communications. Maintain reliable, redundant communication systems, including mass notification platforms, to deliver timely and accurate emergency information to the public.
- Policy S-4.6: Evacuation Route Planning and Coordination. Coordinate with County and Regional emergency management agencies to identify, maintain, and improve evacuation routes that ensure safe, efficient movement of people during emergencies.
- Policy S-4.9: Emergency Management Technology and Data Systems. Utilize and maintain emergency management technologies, data systems, and decision-support tools—such as real-time monitoring, geographic information systems mapping, mass notification platforms, and interagency data sharing—to enhance situational awareness, coordination, and effective response during emergencies.
- Policy S-5.10: Emergency Response Mobility. Reduce congestion-related delays to emergency response by prioritizing emergency vehicle mobility through roadway design, traffic operations, and coordinated land use and transportation planning.
- Policy S-6.5: Hazardous Materials and Industrial Safety. Continue coordination with businesses and regional agencies to prevent and safely manage hazardous materials incidents and industrial fire risks.

Because the Planning Area is not subject to wildfire risks and because the GPU includes goals and policies focused on maintaining effective community preparedness, development pursuant to the GPU would have no impacts in this regard.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Prevailing winds

Impact WIL-2 – Would the project result in impacts due to slope, prevailing winds, and other factors, exacerbating wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Analysis of Impacts

The Planning Area is fully urbanized and does not contain any Very High FHSZs or SRAs; hence, wildfire is not a risk. The Planning Area is relatively flat, with no hillsides or other sloped areas. While the Planning Area is subject to periodic, seasonal Santa Ana winds, the Planning Area does not experience strong prevailing winds. The closest vegetated hillsides are approximately five miles to the northeast. Given the absence of significant slopes, strong prevailing winds, or other factors that could cause or exacerbate wildfire risks, the project would not directly expose Planning Area residents to pollutant concentrations from wildfires or the uncontrolled spread of a wildfire.

The GPU Safety Element includes Goal S-4 and its policies, which aim to maintain effective community preparedness and coordinated emergency response to protect life, property, and critical services during disasters. Goal S-6 and its policies call for the City to maintain prompt and effective fire protection services that prevent loss of life, reduce property damage, and ensure rapid response to emergencies. Therefore, development under the GPU would have no impacts relative to slope, prevailing winds, or other factors that would contribute to the uncontrolled spread of wildfire.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Maintenance of Infrastructure

Impact WIL-3 – Would the project require the installation or maintenance of associated infrastructure such as roads, fuel breaks, emergency water resources, powerlines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Analysis of Impacts

As stated above, the Planning Area is fully urbanized and does not contain any Very High FHSZs or SRAs. For this reason, wildfire risks do not exist within the Planning Area. New urban development pursuant to the GPU would not require installation or maintenance of associated infrastructure such as roads, fuel breaks, emergency water resources, powerlines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The Safety Element and Conservation and Resources Element include:

- Goal S-7: Achieve a climate-resilient community able to adapt to, withstand, and recover from the impacts of climate change while protecting public health and essential infrastructure.
- Policy CR-8.3: Climate-Responsive and Resilient Design. Design buildings, streetscapes, and public spaces to withstand climate-related challenges, including extreme heat, drought, and flooding.
- Policy CR-9.4: Climate Adaptation and Resilient Infrastructure. Integrate extreme heat planning, flood preparedness, and resilient infrastructure strategies into City operations and planning to reduce vulnerabilities to climate change impacts.

Therefore, there would be no impacts in this regard.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Expose People or Structures to Risk

Impact WIL-4 – 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 changes?

Analysis of Impacts

Since the Planning Area is not at risk of wildfire and no significant slopes exist within or in proximity, few factors would contribute to post-fire slope instability or drainage changes that would contribute to flooding or landslides. Further, according to flood maps prepared by the Federal Emergency Management Agency (FEMA), the entirety of the Planning Area is located in Flood Zone X, an area with reduced risk due to levee failure (FEMA, 2025). The GPU does not include drainage changes that would expose people or structures to significant risks. Additionally, the Safety Element includes Goal S-4, which calls for effective community preparedness and coordinated emergency response to protect life, property, and critical services during disasters. For these reasons, the project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact WIL-5 - Would the project cause substantial adverse cumulative impacts with respect to wildfires?

Analysis of Impacts

Based on the analysis provided above in Impacts WIL-1 through WIL-4, the project would not have a cumulative impact on the ability of local agencies to protect residents, workers, and structures from wildfires, as the City is not located in an area susceptible to wildfires. However, the Planning Area is still subject to risk of urban fires, and development within the Planning Area has the chance to increase the population and/or activities and ignition sources which may increase the risk to expose people and structures to loss, injury, or death from urban fires. For this reason, the GPU includes goals and policies intended to ensure prompt, effective emergency response and fire suppression services, to protect life and property and enhance community resilience and preparedness to extreme weather events and heatwaves. The Planning Area is also accessible to various evacuation routes identified by the County as being reliable in an emergency situation.

The wider region surrounding the Planning Area is also heavily urbanized and does not face any area-wide threats from wildfires. Due to the level of urban development and lack of natural slopes with native vegetation, the project would not make a significant contribution to any cumulatively considerable wildfire impacts in the surrounding region.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.20.5 – REFERENCES

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5.0 – ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6 of the CEQA Guidelines requires an EIR to *"describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."* The section also states that *"the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if those alternatives would impede to some degree the attainment of the project objectives, or would be more costly."* Pursuant to Section 15126.6, this chapter examines two alternatives to the General Plan Update (project), including the CEQA-mandated No Project Alternative, and compares the impacts of each alternative to the proposed project. The ability of each alternative to meet the basic project objectives is also described, and the "environmentally superior" alternative among the three is identified, as required by the CEQA Guidelines.

5.1 – RATIONALE FOR ALTERNATIVE SELECTION

In accordance with CEQA Guidelines Section 15126.6(a), an EIR does not need to evaluate every conceivable alternative. A feasible range of alternatives has been evaluated to allow decision-makers to make a reasoned choice and determine which meet most of the project objectives. The project objectives included in Chapter 3, Project Description, are:

1. **Honor the Past, Shape the Future.** Celebrate Downey's heritage by preserving historic places and community traditions, while guiding thoughtful growth that respects the City's character and embraces progress.
2. **Grow Smart to Support Neighborhoods.** Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they're needed most.
3. **Build a Strong, Flexible Economy.** Support a diverse economic base that fosters business growth, revitalizes commercial areas, and promotes long-term prosperity.
4. **Offer Housing for Everyone.** Support a diverse range of housing opportunities that meet the needs of residents of all income levels while maintaining sufficient housing capacity to support future needs and long-term compliance with State housing law.
5. **Plan for Safe, Practical, Connected Travel.** Address the most urgent travel needs, expand alternatives to driving, and plan for a growing, connected community.
6. **Promote Safety and Peaceful Environments.** Enhance lighting, visibility, and public safety presence while reducing noise impacts so the community is secure and comfortable for all users.
7. **Protect Resources and Prepare for the Future.** Plan with climate, conservation, environmental health, and emergency preparedness in mind.
8. **Manage and Invest in Community Resources.** Manage water and natural resources while investing in and supporting parks, recreation, and community programs that enhance quality of life for all residents.

9. **A Healthier Downey for Everyone.** Reduce pollution burdens, expand access to healthy living resources, and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.
10. **Design for Quality and Lasting Identity.** Promote high-quality architecture, attractive streetscapes, and well-designed public spaces that reinforce community character, enhance the visual environment, and ensure new development contributes positively to established neighborhood identity and long-term vitality.
11. **Foster Trust and Connection.** Prioritize meaningful community engagement to strengthen relationships, build transparency, and create an informed, involved community.

In addition to the project objectives cited in the Guiding Principles, the City has the objective to identify and designate sufficient residential and mixed-use residential opportunity sites throughout the City to provide a robust housing capacity beyond the 6th Cycle Regional Housing Needs Assessment (RHNA), thereby maximizing implementation flexibility, accounting for uncertainties in site redevelopment and market conditions, supporting housing production across all income levels, and maintaining long-term compliance with State housing law.

While selecting alternatives to be considered for analysis, the City focused on analyzing those alternatives which could potentially reduce the significant unavoidable effects related to the project and also achieve the above project objectives.

5.2 – ALTERNATIVES CONSIDERED

The following alternatives have been evaluated and compared to the proposed GPU:

- Alternative 1: No Project/Existing General Plan Alternative
- Alternative 2: Reduced (-30%) Multifamily Residential Development Alternative

In accordance with CEQA Guidelines Section 15126.6(d), the discussion of impacts associated with these alternatives is less detailed than the evaluation included in Chapters 4.1 through 4.20. Table 5.1 shows the development assumptions for each alternative. Table 5.1 compares the growth potential for each alternative over existing conditions with the growth potential of the proposed GPU over existing conditions. Table 5.2 shows how impacts associated with the implementation of the alternatives compare to the impacts associated with implementation of the proposed GPU (refer to accompanying text for full explanation).

Table 5.1: Land Use Alternatives Development Assumptions				
			Net Change in Growth Potential (2045)	
Land Use	**Existing Conditions (2025)**	**Proposed GPU (2045)**	**Alternative 1: No Project/ Existing General Plan Development Potential [(a)]**	**Alternative 2: Reduced (-30%) Multifamily Residential Development Potential**
Dwelling Units	37,160	+10,350	+2,905	+7,245
Population	111,326	+31,483	+13,848	+22,038
Nonresidential	30.6 MSF	+2.6 MSF	+0	+2.6 MSF
Employees	44,703	+6,649	+4,900	+6,649

Source: Table 3.4, DEIR Project Description, MIG, 2026
(a) *Downey Vision 2025*-Comprehensive General Plan Update EIR, Table 3.3-1 – Housing/Population/Employment Projections, p. 3-10 (does not project increase in nonresidential square footage).
MSF = million square feet (rounded off)

Table 5.2: Alternatives' Impacts Compared to Project Impacts		
Impact/Resource	**Alternative 1: No Project / Existing General Plan Development Potential**	**Alternative 2: Reduced (-30%) Multifamily Residential Development Potential**
Aesthetics	Similar LTS	Similar LTS
Agriculture and Forest Resources	Similar LTS	Similar LTS
Air Quality	**Reduced SU**	**Reduced SU**
Biological Resources	Similar LTS	Similar LTS
Cultural Resources	Similar LTS	Similar LTS
Energy	Reduced LTS	Reduced LTS
Geology and Soils	Similar LTS	Similar LTS
Greenhouse Gas Emissions	**Reduced SU**	**Reduced SU**
Hazards and Hazardous Materials	Similar LTS	Similar LTS
Hydrology and Water Quality	Similar LTS	Similar LTS
Land Use	Similar LTS	Similar LTS
Mineral Resources	Similar LTS	Similar LTS
Noise	Reduced LTS	Reduced LTS
Population and Housing	Reduced LTS	Reduced LTS
Public Services	Reduced LTS	Reduced LTS
Recreation	Reduced LTS	Reduced LTS
Transportation (VMT)	**Reduced SU**	**Reduced SU**
Tribal Cultural Resources	Similar LTS	Similar LTS
Utilities and Service Systems	Similar LTS	Similar LTS
Wildfire	Similar LTS	Similar LTS

Source: MIG, 2026.
LTS = Less Than Significant Impact
SU = **Significant and Unavoidable Impact**

5.3 – ALTERNATIVE 1: NO PROJECT/EXISTING GENERAL PLAN

The following discussion of the No Project Alternative is based on the CEQA Guidelines Section 15126.6(e)(3)(A) which states:

> "When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, an alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan. Consistent with CEQA Guidelines Section 15126.6(e)(3)(A), the No Project Alternative represents the continued implementation of the adopted General Plan land use and zoning for the project areas."

5.3.1 – Principal Characteristics

The No Project/Existing General Plan Alternative (No Project Alternative) assumes that development would occur within the Planning Area as anticipated under the existing General Plan (*Downey Vision 2025*). Development assumptions for this alternative are shown in Table 5.1. As shown in Table 5.1, development pursuant to the existing General Plan would result in 7,445 fewer dwelling units and 17,635 fewer residents relative to the proposed GPU, but no change in non-residential development or employment. Additionally, no new policies, goals, or development standards associated with the proposed GPU would be implemented; the standards, goals, and policies associated with the 2005 General Plan would be applicable.

5.3.2 – Analysis of No Project/Existing General Plan Alternative

The potential impacts associated with the No Project Alternative are described below.

a. Aesthetics. As with the GPU, aesthetic impacts are anticipated to be similarly less than significant under . The 2005 General Plan notes that the Puente Hills are visible to the northeast of the Planning Area, the Rancho Palos Verdes hills are visible to the southwest, and the Santa Monica and San Gabriel Mountains are visible to the northwest and north, respectively. These mountain ranges and hills can be seen from many locations within the Planning Area. However, these views are partially or fully obstructed by existing development, trees, and other urban features. Although such obstructions are usually minimal in nature, they do exist, and they are typical of any type of built/urbanized environment. Development within the Planning Area would continue to be subject to the lighting and glare restrictions of the City of Downey Municipal Code Section 9520.06 (Outdoor Lighting), which requires that all outdoor lighting be "directed, positioned, and/or shielded as not to direct light on any street or abutting property." Similar to the proposed project, this alternative would result in a less than significant impact as.

b. Agriculture and Forestry Resources. The Planning Area does not contain any land identified as "important farmland" (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance). Additionally, the Planning Area does not have any land zoned or utilized primarily for agricultural or forestry purposes. Similar to the proposed project, this alternative would have a less than significant impact on agriculture or forestry resources.

c. *Air Quality.* The proposed GPU would result in significant unavoidable air quality impacts. For this alternative, it is assumed that residential and nonresidential development yield would be lower than the proposed GPU. This alternative would likely not be consistent with SCAG forecasts for the City, as the population and housing growth projections of the existing 2005 General Plan exceed the 2020-2045 RTP/SCS population and employment projections for the City (See Chapter 4.14). As such, this alternative would likely not be consistent with the SCAQMD 2022 Air Quality Management Plan (2022 AQMP) and would also exceed SCAQMD regional pollutant thresholds and thereby obstruct implementation of the AQMP. While no specific air quality modeling was undertaken for this alternative, it is likely that air quality mitigation measures needed for the proposed GPU would also be required for this alternative. The No Project Alternative would have reduced but similar significant unavoidable air quality impacts as the project.

d. *Biological Resources.* The Planning Area is completely urbanized and almost entirely built out. As with the proposed GPU, development pursuant to this alternative would occur within urban areas that currently have existing development. Similar to the proposed GPU, this alternative would have a less than significant impact on biological resources.

e. *Cultural Resources.* As with the project, development pursuant to the No Project Alternative could uncover previously unknown cultural resources or destroy/change structures that could be considered historic. As with the project, the No Project Alternative assumes that the City's development requirements would include a CEQA evaluation to analyze potential impacts to historic resources, which may include site-specific mitigation measures to reduce potential impacts of future development within the Planning Area. Additionally, existing goals, policies and implementation programs within the Design Element are intended to preserve and enhance the City's cultural resources. Similar to the project, this alternative would have a less than significant impact on cultural resources with adherence to existing regulations.

f. *Energy.* As with the project, development associated with the No Project Alternative would involve the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. This alternative would result in a lower level of residential and nonresidential development compared to the project. Similar to the project, under this alternative new development would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which would decrease estimated natural gas consumption in new and/or retrofitted structures. The No Project Alternative would result in less energy consumption than the project. Therefore, this alternative would have lower energy consumption and reduced less than significant energy impacts compared to the project.

g. *Geology and Soils.* The same geology and soils policies and regulations would apply to the No Project Alternative, as the existing General Plan contains goals and policies intended to reduce geologic or seismic hazards. In addition, both this alternative and the project would be exposed to the same existing geologic conditions within the Planning Area. As with the project, existing building requirements would also be applicable. Additionally, all future projects would be required to be designed and constructed in compliance with all applicable City and State codes and requirements. All existing General Plan policies related to geology and seismic issues would apply to this alternative, as is the case with the project. Therefore, similar to the project, this alternative would have a similar less than significant geology impact.

h. *Greenhouse Gas Emissions.* The project would result in significant unavoidable greenhouse gas (GHG) emissions impacts. This alternative would result in a lower level of residential and nonresidential development compared to the project. It is likely that mitigation measures identified for the project would also be required for this alternative. While no specific GHG modeling was undertaken for this alternative, given the reduction in housing and population under this alternative, it is likely that the No Project Alternative would have reduced impact but likely would remain significant and unavoidable due to the scale of development increase over time.

i. *Hazards and Hazardous Materials.* Similar to the project, the No Project Alternative would result in the presence of hazardous materials during construction and operation of development projects. The amount and use of these hazardous materials present during construction would be limited, would be in compliance with existing government regulations, and would not be considered a significant hazard. As with the project, any future development would be subject to the City's standard environmental review, which would include identification of any contaminated sites not already identified and implementation of appropriate cleanup and disposal procedures. Therefore, similar to the project, the No Project Alternative would have a less than significant hazards and hazardous materials impact.

j. *Hydrology and Water Quality.* Development associated with implementation of the No Project Alternative would be subject to all existing water quality regulations and programs. This alternative assumes less residential and nonresidential development compared to the project. Thus, similar to the project, the No Project Alternative would have a less than significant hydrology and water quality impact.

k. *Land Use and Planning.* As with the project, the No Project Alternative would not physically divide an established community. Development would be consistent with the adopted 2005 General Plan and would not conflict with regulations adopted to avoid environmental effects. Similar to the project, this alternative would have a less than significant land use and planning impact.

l. *Mineral Resources.* No significant mineral deposits are present within the Planning Area, and nowhere in the Planning Area does adequate information indicate that significant mineral deposits are present or judgement suggests that a high likelihood for their presence exists. Similar to the project, this alternative would have less than significant impacts on mineral resources.

m. *Noise.* The project would result in less than significant noise impacts. This alternative would result in a lower level of residential and nonresidential development compared to the project. Development that would occur pursuant to the No Project Alternative would be subject to the same construction noise control regulations as the project. Regarding traffic noise, traffic levels would be lower than those associated with the project, which would not be substantial enough to result in a noticeable change in traffic-related operational noise. While no specific noise modeling was undertaken for this alternative, roadway noise impact would be less than significant, similar to the project.

n. *Population and Housing.* This alternative would result in 7,445 fewer dwelling units and 17,635 fewer residents when compared to the project. Given the reduction in population and housing, similar to the proposed project, impact would be less than significant.

o. Public Services. This alternative would result in a lower level of residential and nonresidential development, as well as reduced population growth, compared to the project, which would result in decreased demand for public services relative to the project. With continued collection of development impact fees and implementation of existing General Plan policies related to maintaining public services, this alternative would result less than significant impacts related to public services, similar to the project.

p. Recreation. Compared to the project this alternative would result in a lower level of residential development and population growth, which would result in reduced demand for recreational facilities. With continued collection of development impact fees and implementation of existing General Plan policies related to maintaining recreation facilities, this alternative would result in a less than significant impacts related to recreation, similar to the project.

q. Transportation. This alternative would result in a lower level of residential and nonresidential development than the project. The overall lower growth may result in fewer vehicle miles traveled relative to the project. However, without undertaking transportation modeling for this alternative, it would be speculative to make such a determination. Therefore, while transportation impacts associated with this alternative would likely be reduced, they would likely still be considered significant and unavoidable.

r. Tribal Cultural Resources. As with the project, development pursuant to the No Project Alternative could uncover previously unknown Tribal Cultural Resources (TCR). Compliance with existing regulations regarding burial grounds, consultation with Native American tribes, and implementation of mitigation strategies for identified TCR when impacts are unavoidable would reduce impacts to less than significant. Therefore, similar to the project, this alternative would have a less than significant impact on TCR.

s. Utilities and Service Systems. This alternative would result in a lower level of residential and nonresidential development, as well as population, compared to the project. Development associated with No Project Alternative implementation would be subject to all existing water quality regulations and programs. Therefore, similar to the project, this alternative would have less than significant utilities and service systems impacts.

t. Wildfire. No Very High Fire Hazard Severity Zones or State Responsibility Areas exist within or in proximity to the Planning Area. Similar to the project, this alternative would result in a less than significant wildfire impact.

Attainment of Project Objectives

The No Project Alternative assumes that development would occur within the Planning Area but only to the level assumed in the existing 2005 General Plan. The No Project Alternative would not meet the project objectives and would not provide the housing development capacity needed to meet the longer-term Regional Housing Needs Allocation (RHNA).

5.4 – ALTERNATIVE 2: REDUCED (-30%) MULTIFAMILY RESIDENTIAL DEVELOPMENT

5.4.1 – Principal Characteristics

The Reduced Multifamily Residential Development Capacity Alternative would accommodate the City's 2021–2029 Regional Housing Needs Allocation (RHNA) through the designation of a

smaller number of residential opportunity sites than proposed under the Project. Under this alternative, the General Plan would provide capacity for approximately 7,245 residential units, compared to 10,350 residential units under the Proposed Project, representing a reduction of 3,105 units (approximately 30 percent). This reduction removes the additional housing capacity built into the updated General Plan to account for future RHNA allocation (through 2045) but provides capacity for the sixth cycle RHNA and the buffer identified in the City's sixth cycle Housing Element. Development assumptions for this alternative are shown in Table 5.1. This alternative assumes that the goals, policies, and implementation measures in the GPU would apply.

5.4.2 – Analysis of the Reduced Multifamily Residential Development Alternative

The potential impacts associated with the Reduced Multifamily Residential Development Alternative are described below.

a. *Aesthetics.* As with the proposed GPU, aesthetic impacts are anticipated to be less than significant under this alternative. Scenic vistas within view of the Planning Area would continue to be partially or fully obstructed by existing development, trees, and roadway features throughout the Planning Area. Further, the various policies of the proposed GPU outlined in section 4.1.4 emphasize preservation and enhancement of the City's neighborhoods, corridors, and land use districts. Therefore, these General Plan policies apply indirectly to the visual character the Planning Area. Most critical are those that help preserve historical structures, create public art, and seek to enhance views (and thus visual character). Finally, future projects within the Planning Area would be subject to the lighting and glare restrictions of the City of Downey Municipal Code Section 9520.06 (Outdoor Lighting), which requires that all outdoor lighting be "directed, positioned, and/or shielded as not to direct light on any street or abutting property." Any new development under the Reduced Multifamily Residential Alternative would be required to undergo design review, which would ensure compliance with regulations and review for potential light and glare. Similar to the proposed project, this alternative would result in a less than significant impact.

b. *Agriculture and Forestry Resources.* The Planning Area does not contain any land identified as some kind of "important farmland" (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance). Additionally, the Planning Area does not have any land zoned or utilized primarily for agricultural or forestry purposes. Similar to the proposed project, this alternative would have a less than significant impact on agriculture or forestry resources.

c. *Air Quality.* The project would result in significant unavoidable air quality impacts. Even though this alternative reduces the overall amount of residential development by 30 percent when compared to the project, this alternative would likely not be consistent with SCAG forecasts for the City as the population and housing growth projections of the existing 2005 General Plan exceed the 2020-2045 RTP/SCS population and employment projections for the City (See Chapter 4.14). As such, this alternative would likely not be consistent with the SCAQMD 2022 Air Quality Management Plan (2022 AQMP) and would also exceed SCAQMD regional pollutant thresholds and thereby obstruct implementation of the AQMP. While no specific air quality modeling was undertaken for this alternative, it is likely that air quality mitigation measures needed for the project would also be required for this alternative. Therefore, this alternative would have reduced but similar significant unavoidable air quality impacts as the project.

d. *Biological Resources.* The Planning area is completely urbanized and almost entirely built out. As with the project, development pursuant to this alternative would occur within urban areas that currently have existing development. Similar to the project, this alternative would have a less-than-significant impact on biological resources with incorporation of mitigation measures.

e. *Cultural Resources.* As with the project, development pursuant to this alternative could uncover previously unknown cultural resources or destroy/change structures that could be considered historic. As with the project, pursuant to this alternative the City's development requirements would include a CEQA evaluation to evaluate potential impacts to historic resources, which may include mitigation measures to reduce potential impacts of future development within the Planning Area. Additionally, goals, policies and implementation programs within the proposed GPU would preserve and protect significant archaeological resources within the Planning Area. Similar to the project, this alternative would have a less-than-significant impact on cultural resources with incorporation of mitigation measures and adherence to existing regulations.

f. *Energy.* As with the project, development associated with the Reduced Multifamily Residential Alternative would involve the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. Similar to the project, under this alternative new development and land use turnover would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which would decrease estimated natural gas consumption in new and/or retrofitted structures. Given the 30 percent reduction in residential development under this alternative, this alternative would have reduced less-than-significant energy impacts as the project.

g. *Geology and Soils.* Both the alternative and the project would be exposed to the same existing geologic conditions within the Planning Area, and the same geology and soils policies and regulations would apply to both the project and this alternative. As with the project, existing building requirements would be applicable under this alternative and all future projects would be required to be designed and constructed in compliance with all applicable City and State codes and requirements. Additionally, proposed GPU policies related to geology and seismic issues would be applicable to this alternative, as is the case with the project. Therefore, similar to the project, this alternative would have less than significant geology impacts.

h. *Greenhouse Gas Emissions.* The project would result in significant unavoidable greenhouse gas (GHG) emissions impacts. This alternative would result in 30 percent less housing development when compared to the project. It is likely that mitigation measures identified for the project would also be required for this alternative. While no specific GHG modeling was undertaken for the alternative, it is likely that the Reduced Multifamily Residential Alternative would have reduced impact but likely would remain significant and unavoidable due to the scale of development increase over time..

i. *Hazards and Hazardous Materials.* Hazardous materials would be present during construction and operation of development associated with the Reduced Multifamily Residential Alternative. The amount and use of these materials present during construction would be limited, would be in compliance with existing government regulations, and would not be considered a significant hazard. As with the project, any future development under this alternative would be subject to the City's standard environmental review process, which

would include identification of any contaminated sites not already identified and implementation of appropriate cleanup and disposal procedures. Therefore, similar to the project, this alternative would have a less than significant hazards and hazardous materials impacts.

j. Hydrology and Water Quality. Development associated with implementation of the Reduced Multifamily Residential Alternative would be subject to all existing water quality regulations and programs. The mitigation measure (HYD-1) regarding water supply would still be required under this alternative. Therefore, similar to the project, this alternative would have less than significant hydrology and water quality impacts.

k. Land Use and Planning. As with the project, the Reduced Multifamily Residential Alternative would not physically divide an established community and would not conflict with regulations adopted to avoid environmental effects. Similar to the project, this alternative would have a less-than-significant land use and planning impact.

l. Mineral Resources. No significant mineral deposits are present within the Planning Area, and nowhere in the Planning Area does adequate information indicate that significant mineral deposits are present or judgement suggests that a high likelihood for their presence exists. Similar to the project, this alternative would have less than significant impacts on mineral resources.

m. Noise. The Reduced Multifamily Residential Alternative would result in 30 percent less housing development when compared to the project. Under this alternative, measures mandated by the City's Noise Ordinance would still be required to ensure that construction noise is mitigated for projects located near sensitive receptors. While no specific roadway noise modeling was undertaken for the alternative, this alternative would likely have reduced less than significant noise impacts when compared to the project.

n. Population and Housing. This alternative would result in approximately 30 percent fewer residential units and 30 percent less population growth compared to the project. This alternative would reduce but still result in a similar less than significant impacts related to population and housing compared to the project. The alternative would not provide capacity to meet future RHNA cycle allocations. The potential inability to provide future housing capacity could have associated impacts, such as longer commute distances, which could result in higher VMT and related pollutant emissions.

o. Public Services. This alternative would result in a 30 percent reduction housing units and similar reduction in population growth when compared to the project. Therefore, this alternative would result in a similar less-than-significant public services impact compared to the project.

p. Recreation. This alternative would result in less housing development when compared to the project. Therefore, this alternative would result in reduced less than significant recreation impacts compared to the project.

q. Transportation. This alternative would result in less residential development than would occur with implementation of the project. With the reduction in residential development associated with this alternative, it is possible that vehicle miles traveled impacts under this alternative would also be reduced. However, without undertaking transportation modeling for this alternative, it would be speculative to make such a determination. Therefore, while the

transportation impacts associated with this alternative would likely be reduced, they would likely still be considered significant and unavoidable.

r. Tribal Cultural Resources. As with the project, development under the Reduced Multifamily Residential Alternative could uncover previously unknown Tribal Cultural Resources. Compliance with existing regulations regarding burial grounds, consultation with Native American tribes, and implementation of mitigation strategies for identified TCR when impacts are unavoidable would reduce impacts to less than significant. Similar to the project, this alternative would have less than significant impacts on Tribal Cultural Resources with incorporation of mitigation measures.

s. Utilities and Service Systems. This alternative would result in less housing development within the Planning Area when compared to the project, although there would be a similar amount of non-residential development. The mitigation measure (HYD-1) regarding water supply would still be required under this alternative. This alternative would have a similar less than significant utilities and service system impact when compared to the project.

t. *Wildfire.* There are no Very High Fire Hazard Severity Zones or State Responsibility Areas within the Planning Area or within close proximity to the Planning Area. Similar to the project, this alternative would result in a less than significant wildfire impact.

Attainment of Project Objectives

The Reduced Multifamily Residential Development Capacity Alternative assumes that development would occur within the Planning Area; however, the residential unit yield would be reduced by approximately 30 percent. Under this alternative, the General Plan would provide capacity for approximately 7,245 residential units, compared to 10,350 residential units under the proposed GPU, representing a reduction of approximately 3,105 units. The Reduced Multifamily Residential Development Capacity Alternative would meet all project objectives but not to the same degree or extent as the proposed project.

Although this alternative would continue to provide sufficient residential capacity to satisfy the City's RHNA allocation of 6,525 units and would remain generally consistent with applicable State housing requirements, including the Housing Element Law, No Net Loss Law, and the obligation to affirmatively further fair housing, it would substantially reduce the City's excess residential capacity above its RHNA allocation. Specifically, the housing capacity buffer would decrease from approximately 3,825 units (58.6 percent above RHNA) under the proposed project to approximately 720 units (11.0 percent above RHNA) under this alternative.

As a result, this alternative would reduce the City's inventory of residential opportunity sites and provide less flexibility to accommodate sites that do not redevelop as anticipated during the planning period, changing market conditions, infrastructure constraints, or other implementation uncertainties that commonly affect Housing Element sites. Accordingly, while the Reduced Multifamily Residential Development Capacity Alternative would satisfy the City's minimum statutory housing obligations, it would not fully attain the project's objective of providing additional residential capacity above the RHNA allocation to maximize implementation flexibility, maintain a robust inventory of housing opportunity sites throughout the planning period, and support long-term compliance with State housing law such as providing capacity to meet future RHNA cycle allocations.

5.5 - ENVIRONMENTALLY SUPERIOR ALTERNATIVE

None of the alternatives would eliminate or reduce any of the significant impacts associated with the project to less than significant levels. However, Alternative 2, the Reduced Multifamily Residential Development Alternative, would modestly reduce potential impacts and meet most project objectives. From an environmental impact perspective, Alternative 2 would be considered the “environmentally superior alternative.” This conclusion is based on the comparative impact conclusions in Tables 5.1 and 5.2 and the analysis within this chapter.

6.0 – CEQA-MANDATED SECTIONS

6.1 – CUMULATIVE IMPACTS

Section 15130(a) of the CEQA Guidelines requires that the EIR "discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable...." The CEQA Guidelines (Section 15355) define "cumulative impacts" as "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

The analyses of quantitative cumulative impacts in this EIR are based on the “summary of projections” method, as authorized by section 15130(b)(1)(B) of the CEQA Guidelines.

The proposed GPU is itself a cumulative project because it would be implemented across the entire Planning Area incrementally and cumulatively over approximately 20 years (the horizon year is 2045 but the life of the plan could extend beyond 2045). This Program EIR evaluates the GPU as one “project” in accordance with CEQA. All potentially significant cumulative impacts are addressed in each of the impact topical areas (Air Quality, Land Use and Planning, Noise, etc.) in Chapters 4.1 through 4.20 of this EIR.

6.2 – GROWTH-INDUCING EFFECTS

CEQA Guidelines Section 15126.2(d) requires that an EIR discuss "...the ways in which the proposed GPU could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

The proposed GPU would have a planning horizon year of 2045. It is estimated that growth under the GPU would result in increases of approximately 10,350 dwelling units and approximately 2.6 million square feet of non-residential building space within the Planning Area. Additionally, there would be an estimated population increase of approximately 31,483 people, and an increase of approximately 6,649 jobs within the Planning Area by the 2045 horizon year. However, no unplanned, substantial, detrimental, growth-inducing effect is expected because the General Plan is the City’s overall guide to growth and development in the future.

The goals, policies and implementing actions, contained in the proposed GPU address the potentially negative aspects of growth, and have been designed to facilitate development efficiently and effectively in an area where roads and infrastructure already exist. The more compact urban form envisioned by the GPU is expected to improve the livability in the Planning Area by improving walking and bicycling opportunities, increasing economic vitality and job opportunities, and reducing vehicle-miles-traveled (VMT). The potential growth-related impacts associated with the GPU have also been evaluated in the topical Chapters of this EIR (Air Quality, Land Use and Planning, Noise, etc.) and, as appropriate, mitigation measures have been applied to address such impacts. In addition, implementation of the proposed GPU would not involve the extension of roads, major sewer or water lines, or the construction of other major infrastructure facilities that would induce growth in areas adjoining the Planning Area.

6.3 – SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires that the EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." The impacts listed below are identified as significant and unavoidable for one of four reasons: 1) no potentially feasible mitigation has been identified; 2) potential mitigation has been identified but may be found by the Lead Agency to be infeasible; 3) with implementation of feasible mitigation, the impact still would not, or might not, be reduced to a less-than-significant level; or 4) implementation of the mitigation measure would require approval of another jurisdictional agency, whose approval will be pursued by the Lead Agency but cannot be guaranteed as of the publication of this EIR. Because these significant unavoidable impacts “cannot be alleviated without imposing an alternative design” (CEQA Guidelines Section 15126.2[b]), Chapter 5.0 (Alternatives to the Proposed General Plan Update) of this EIR evaluates a range of feasible alternatives that could lessen the identified significant unavoidable impacts, and evaluates for each alternative the ability to meet the project objectives.

The following impacts have been identified in this EIR as significant and unavoidable:

Section 4.3 Air Quality

- Impact AIR-1: Conflict with or obstruct implementation of applicable air quality plans because it would exceed the growth assumption of the South Coast Air Quality Management Plan (AQMP), and exceed SCAQMD’s regional threshold for the criteria pollutant listed under Impact AIR-2 below, thereby impeding AQMP attainment.
- Impact AIR-2: Result in a cumulatively considerable net increase of non-attainment criteria pollutants for which the project region is in non-attainment. The GPU would exceed the SCAQMD regional operational thresholds for NOx, ROG, CO, $PM_{2.5}$ and PM_{10}, and construction thresholds for ROG, NOx and PM_{10}.
- Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations.
- Impact AIR-5: Cause adverse substantial adverse cumulative impacts with respect to air quality (Cumulative Impact).

Section 4.8, Greenhouse Gas Emissions

- Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Impact GHG-3: Cause a substantial adverse cumulative impact with respect to greenhouse gas emissions (Cumulative Impact).

Section 4.17, Transportation

- Impact TRAN-1: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) related to VMT.
- Impact TRAN-5: Cause substantial adverse cumulative impacts with respect to transportation and traffic

The implications of each significant unavoidable impact identified above are described in the particular EIR chapter referenced with the impact. The GPU is being proposed, notwithstanding

these effects, to fully achieve the project objectives described in Chapter 3.0 of this EIR. If the City approves the updated General Plan (or an alternative to the proposed GPU) that would result in significant unavoidable impacts, the City must adopt a “Statement of Overriding Considerations” per CEQA Guidelines Section 15093 describing why the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of the approved Plan outweigh its significant unavoidable impacts.

6.4 – SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126.2(c) requires that the EIR discuss "significant irreversible environmental changes which would be caused by the proposed GPU should it be implemented." Since nearly all of the Planning Area is developed and the GPU would not significantly change the circulation pattern or make other major changes to major infrastructure facilities, there would not be any significant irreversible physical changes caused by the GPU. The proposed GPU would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment and vehicles, and the use of these same resources during long-term operation of individual projects facilitated by the Plan. However, because development facilitated by the proposed GPU would be required by law to comply with California Code of Regulations Title 24 (including updates over time) and adopted City energy conservation ordinances and regulations, Plan implementation would not be expected to use energy in a wasteful, inefficient, or unnecessary manner.

The consumption or destruction of other non-renewable or slowly renewable resources would also result during construction, occupancy, and use of individual development sites under the proposed GPU. These resources would include, but would not be limited to, lumber, concrete, sand, gravel, asphalt, masonry, metals, and water. GPU implementation would also irreversibly use water and solid waste landfill resources. However, development under the proposed GPU would not involve a large commitment of those resources relative to supply, nor would it consume any of those resources wastefully, inefficiently, or unnecessarily, especially considering ongoing City conservation and recycling programs.

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City of Downey

2045 DRAFT CITY OF DOWNEY GENERAL PLAN

July 2026



2045 DRAFT
CITY OF DOWNEY
GENERAL PLAN

JULY 2026

CityofDowney

11111 Brookshire Ave
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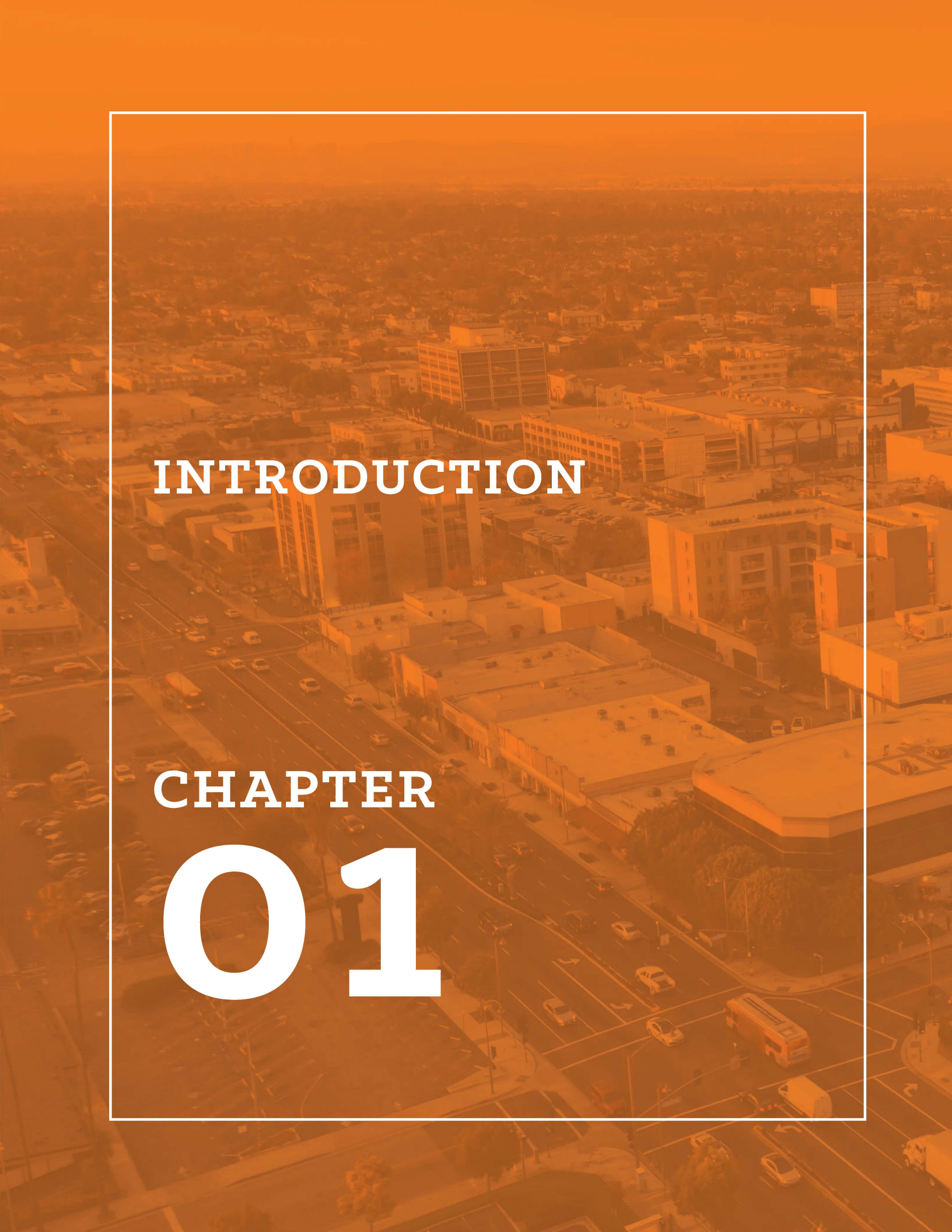
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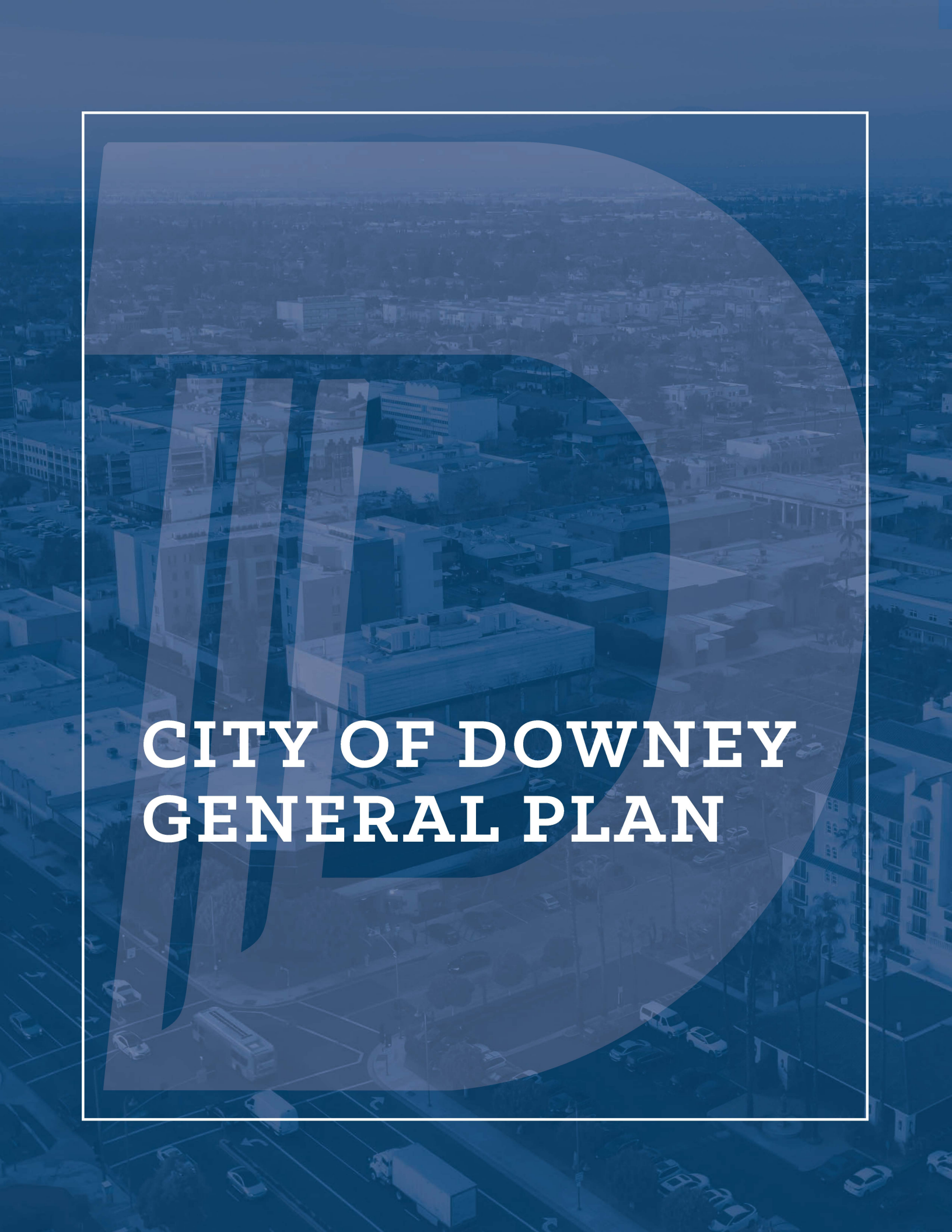
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INTRODUCTION

CHAPTER 01



CITY OF DOWNEY GENERAL PLAN

CHAPTER

01

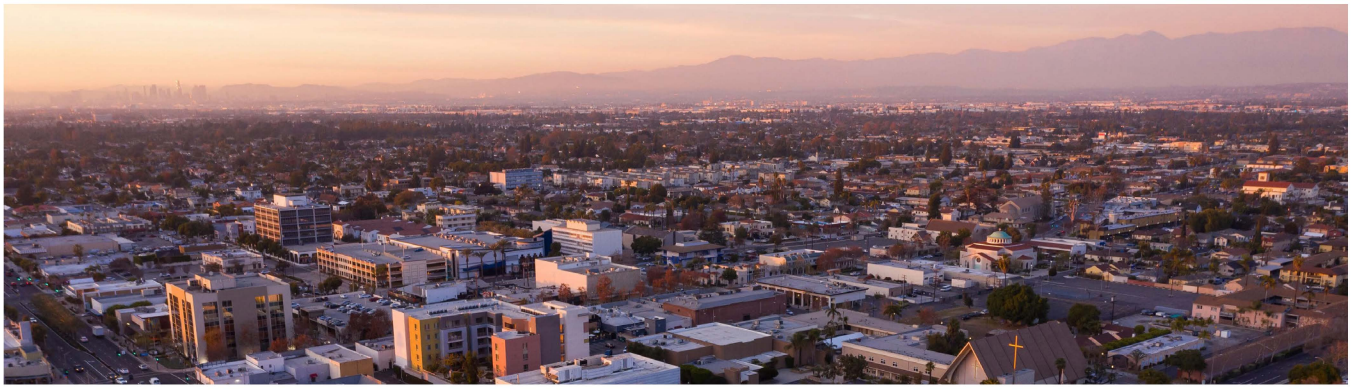
INTRODUCTION

WHY THIS PLAN MATTERS

What this chapter address and why these topics are important?

Now is an exciting time to live, work, and invest in the City of Downey. Since 2000, the community has experienced meaningful change, growth, and reinvestment that continue to shape its identity and and position the City for a great future. Since community members and city leaders last came together to establish a shared vision for the city, Downey has celebrated major milestones, including the opening of the Columbia Memorial Space Center, development of Downey Landing, and regional recognition of its schools and leadership in science, technology, and innovation. These achievements reflect a community committed to progress, opportunity, and quality of life.

This General Plan recognizes that Downey stands at another important moment. New opportunities for reinvestment, neighborhood improvements, economic development, and community enhancement are emerging, and new challenges such as housing needs, environmental change, infrastructure demands, and evolving community priorities require thoughtful planning.



A view of Downey from the sky

This plan establishes a shared direction that builds on past successes and prepares the city for the future.

This General Plan provides that direction. It serves as the city's comprehensive blueprint to guide growth, development, conservation, and public investment over the next 20 years and beyond. The Plan establishes a long-term community vision and outlines goals and policies that shape land use, housing, mobility, economic vitality, public services, environmental stewardship, and community design. While the Plan continues core elements that guide planning for development, infrastructure, and community resources, it also introduces new priorities that reflect changing needs, community values, and state requirements.

Among these is the Environmental Justice Element, which advances the city's commitment to equity by promoting healthy neighborhoods, expanding access to opportunity, and ensuring that all residents benefit from safe environments, quality services, and meaningful community resources. Together, the Plan's vision, goals, and policies establish a framework for a resilient, inclusive, and vibrant community.

Looking ahead, this General Plan charts a path through 2045 — preserving what makes Downey unique while embracing innovation, sustainability, and opportunity for future generations. It reflects the community's shared aspirations and provides a roadmap for thoughtful decision-making as the City continues to grow and evolve with purpose and confidence, just as the city's motto reminds us:

"Downey's future remains unlimited".



A Downey welcome sign from the 1960s featuring community service clubs emblems

WHAT THIS PLAN DOES

Purpose of the General Plan

A General Plan serves as the long-term policy framework for a local community. It establishes a shared vision for the future and identifies the goals, policies, and actions the community will pursue to achieve that vision.

The Downey General Plan is organized into elements that address land use, mobility, housing, public safety, environmental protection, and community development (see Figure I-1). Together, these elements guide how the city will change over time and ensure that development aligns with community needs and values. City staff and elected officials rely on the General Plan when making decisions about new development, infrastructurs, public services, and policies..

State Requirements and Local Intent

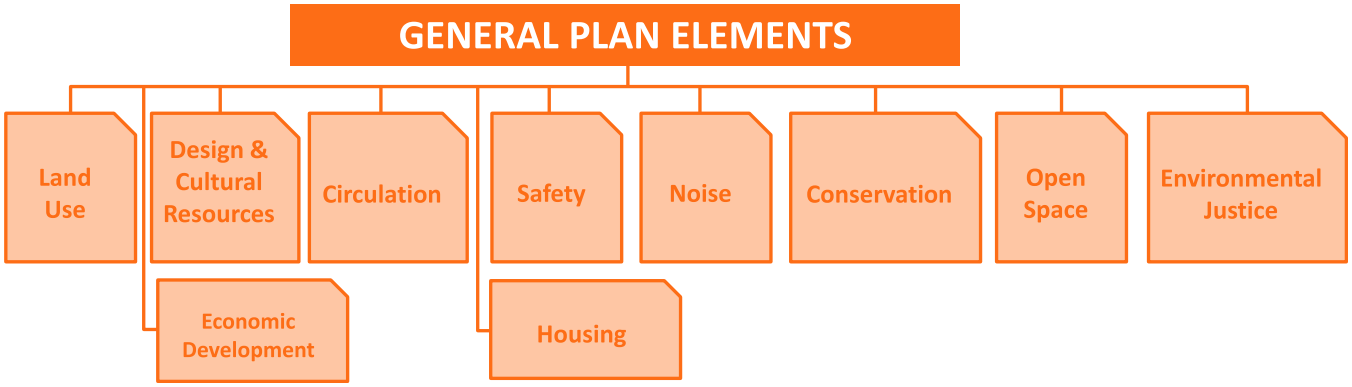
This General Plan fulfills requirements of California law, which requires each city to adopt "a comprehensive, long-term general plan for the physical development of the county or city" (Government Code Section 65300). State law requires General Plans to address land use, circulation, housing, conservation, open space, noise, safety, and environmental justice. These topics are addressed through the Plan elements.

This is the first General Plan for Downey to include an Environmental Justice Element. State law requires cities to identify and address environmental conditions that may disproportionately affect certain communities and to establish policies that promote equitable access to healthy environments, services, and opportunities for all residents.

The General Plan also expands the Design Element into the Design and Cultural Resources Element, recognizing the importance of preserving Downey's cultural resources, historic assets, and neighborhood character that contribute to the City's identity and sense of place. In addition, the City is updating the Economic Development Element to support business growth, investment, innovation, tourism, and long-term economic vitality, building upon the City's Economic Development Action Plan and market research.

The General Plan establishes a vision and policy direction through 2045. While not all goals may be fully realized within this timeframe, the Plan provides a consistent framework to guide public decisions, investments, and actions throughout the planning horizon.

FIGURE I-1: GENERAL PLAN ELEMENTS



How the Plan Works Together: Internal Consistency

State law requires that all General Plan elements be internally consistent, meaning that goals, policies, and implementation programs across all elements must align and reinforce one another. The General Plan functions as a unified policy framework, where each element contributes to a comprehensive planning approach to land use, mobility, housing, economic vitality, environmental stewardship, public health, and community design.

The Land Use Element establishes the physical development framework for the city, while supporting elements such as Circulation, Housing, Environmental Justice, and Conservation provide more detailed direction on how that framework is implemented. Together, these elements ensure coordinated decision making, reduce policy conflicts, and advance a shared vision for a sustainable, equitable, and resilient community (see Table INTRO-1).

TABLE I-1: GENERAL PLAN ELEMENT CONSISTENCY

Element	Key Role	Relationship to Other Elements
Land Use	Defines development patterns, land use designations, and growth strategy	Serves as the foundation for Circulation, Housing, Economic Development, and Design
Circulation	Plans transportation networks and mobility options	Supports Land Use patterns, reduces impacts (Noise, Enviromental Justice), and advances sustainability (Conservation)
Housing	Addresses housing needs, affordability, and site capacity	Aligns with Land Use designations, supports Economic Development, and advances Environmental Justice
Economic Development	Promotes jobs, business growth, and fiscal sustainability	Reinforces Land Use strategy, supports Housing opportunities, and leverages Circulation access
Open Space	Plans parks, recreation, and open space resources	Supports Conservation goals, advances Environmental Justice, and enhances community health
Conservation	Protects natural resources, sustainability, and climate adaptation	Integrates with Land Use, Open Space, Safety, and Environmental Justice
Environmental Justice	Addresses equity, public health, and access to resources	Cross-cuts all elements, particularly Land Use, Housing, Circulation, and Open Space
Safety	Reduces risks from hazards (natural and human-made)	Informs Land Use decisions and aligns with Conservation and Circulation for emergency access
Noise	Manages noise compatibility and exposure	Coordinates with Land Use and Circulation to minimize impacts on sensitive uses
Design & Cultural Resources	Establishes urban form, character, quality of development, and preservation of cultural resources	Implements the Land Use vision and enhances the public realm, mobility, community identity, and cultural heritage

FROM PAST TO PRESENT

The Growth and Evolution of Downey

The City of Downey has evolved from Indigenous settlements and early rancho lands into a vibrant and innovative community. Long before the city was established, the area was home to Tongva villages located along the Rio Hondo and San Gabriel River corridors. Following Spanish settlement, the area became part of Rancho Santa Gertrudes, one of several ranchos created from a large land concession granted in 1784. By the mid-1800s, the land was subdivided into small farms, establishing a thriving agricultural community known for citrus production and shaping the early identity of Downey. The arrival of the Southern Pacific Railroad in 1873 supported continued growth and regional connectivity. During the twentieth century, Downey transitioned from an agricultural community to a major center of aerospace and manufacturing. Aircraft production during World War II and later work associated with the Apollo Space Program and Space Shuttle positioned Downey at the forefront of aviation and space innovation, contributing to local economic growth and community development.

Indigenous Roots and Ranchos (500 AD – 1865)

500 AD



Tongva Heritage
Tongva communities settle throughout the Los Angeles region, including villages within present-day Downey.

1542



Spanish Contact
Spanish explorer Juan Cabrillo's expedition reaches San Pedro Bay and first contacts Indigenous communities in the region.

1771



Mission San Gabriel
Establishment of Mission San Gabriel introduces Spanish settlement and agricultural practices to the area.

Indigenous Roots and Ranchos (500 AD – 1865)

1784



The Nieto Concession
Manuel Nieto receives a 300,000-acre land concession spanning from the Santa Ana River to the Los Angeles River.

1834



Rancho Santa Gertudes
Nieto's heirs divide the land into six ranchos, including Rancho Santa Gertudes.

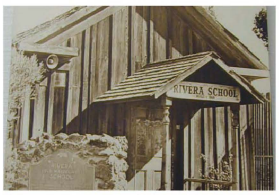
1865



John G. Downey Purchases
Former California Governor John Gately Downey purchases and subdivides Rancho Santa Gertudes into small farms.

Agriculture, Aerospace, and Cityhood (1873 – 1956)

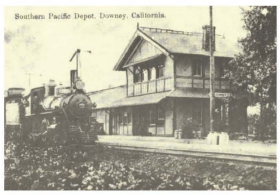
Late 1800s



A Unified Community

College Settlement, Gallatin, and Downey merge to form a unified community.

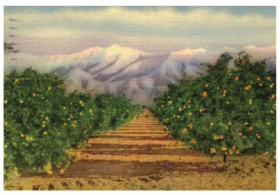
1873



Southern Pacific Railroad

Southern Pacific Railroad establishes a route and depot in Downey, supporting regional growth.

Early 1900s



The Citrus Capital

Downey becomes widely known for citrus production and agriculture.

1929



Aerospace Beginnings

Development of aircraft manufacturing facilities begins Downey's aerospace industry.

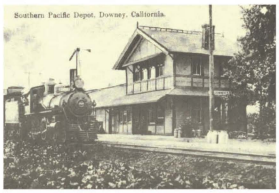
1941 - 1945



The Vultee War Effort

Vultee Aircraft becomes Downey's largest employer and a major producer of US Miltary aircraft during World War II.

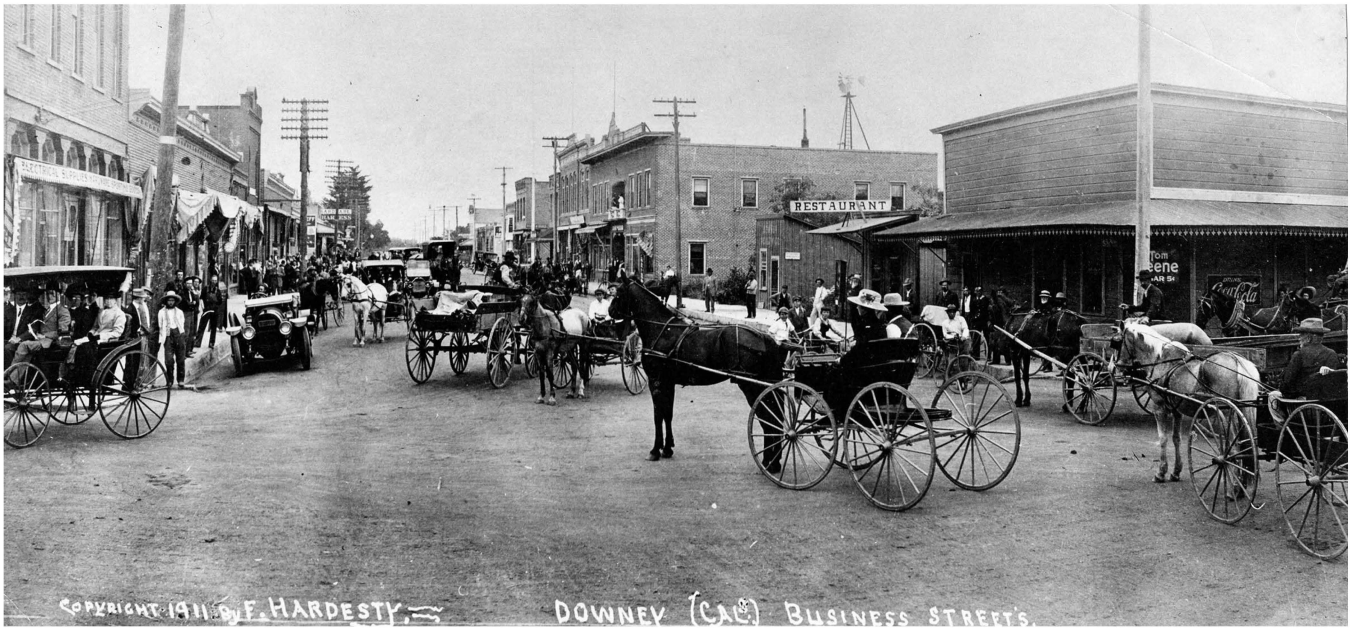
1956



City Incorporation

Downey incorporated as city and becomes the 50th city in Los Angeles County.

Agriculture, Aerospace, and Cityhood (1873 – 1956)



A vibrant Downtown Downey in 1911

The Aerospace Capital and Future (1961 – 2025+)

1961



The Apollo Mission

North American Aviation/Rockwell awarded contract to design and build the Apollo Command & Service Module.

1970s



Building the Space Shuttle

Rockwell Develops the Space Shuttle Orbiter Vehicle.

1991



Plant Closure

Closure of the Rockwell plant leads to redevelopment of the aerospace area.

2000s



Modern Redevelopment

Revelopment of former Rockwell site into commercial, institutional, and educational uses, including Downey Landing and medical facilities.

2009



Columbia Memorial Space Center

Columbia Memorial Space Center opens to inspire future scientists, engineers, and explorers.

2025



A Legacy of Inspiration

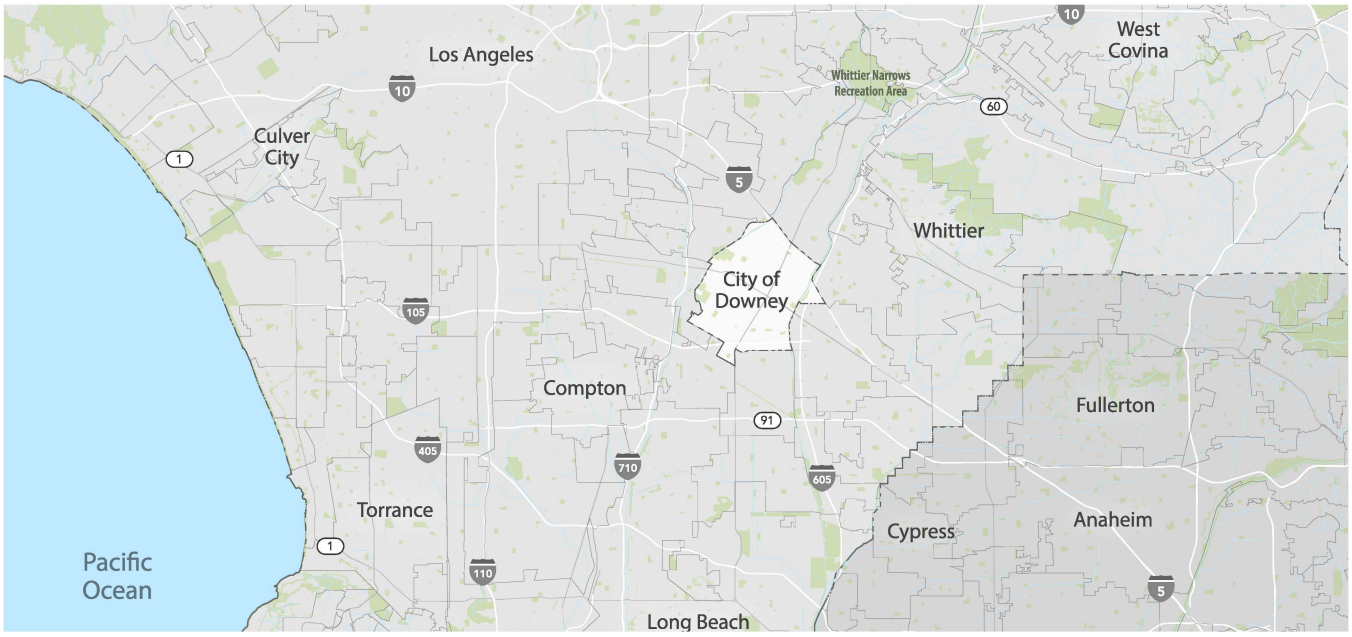
City of STEM becomes the official Los Angeles County Science Festival as Downey breaks ground on the new shuttle exhibit for 'Inspiration'.

The Aerospace Capital and Future (1961 – 2025+)



Historic McDonald's in Downey, one of the oldest operating locations and a local landmark

FIGURE I-1: REGIONAL MAP



WHERE WE ARE IN THE REGION

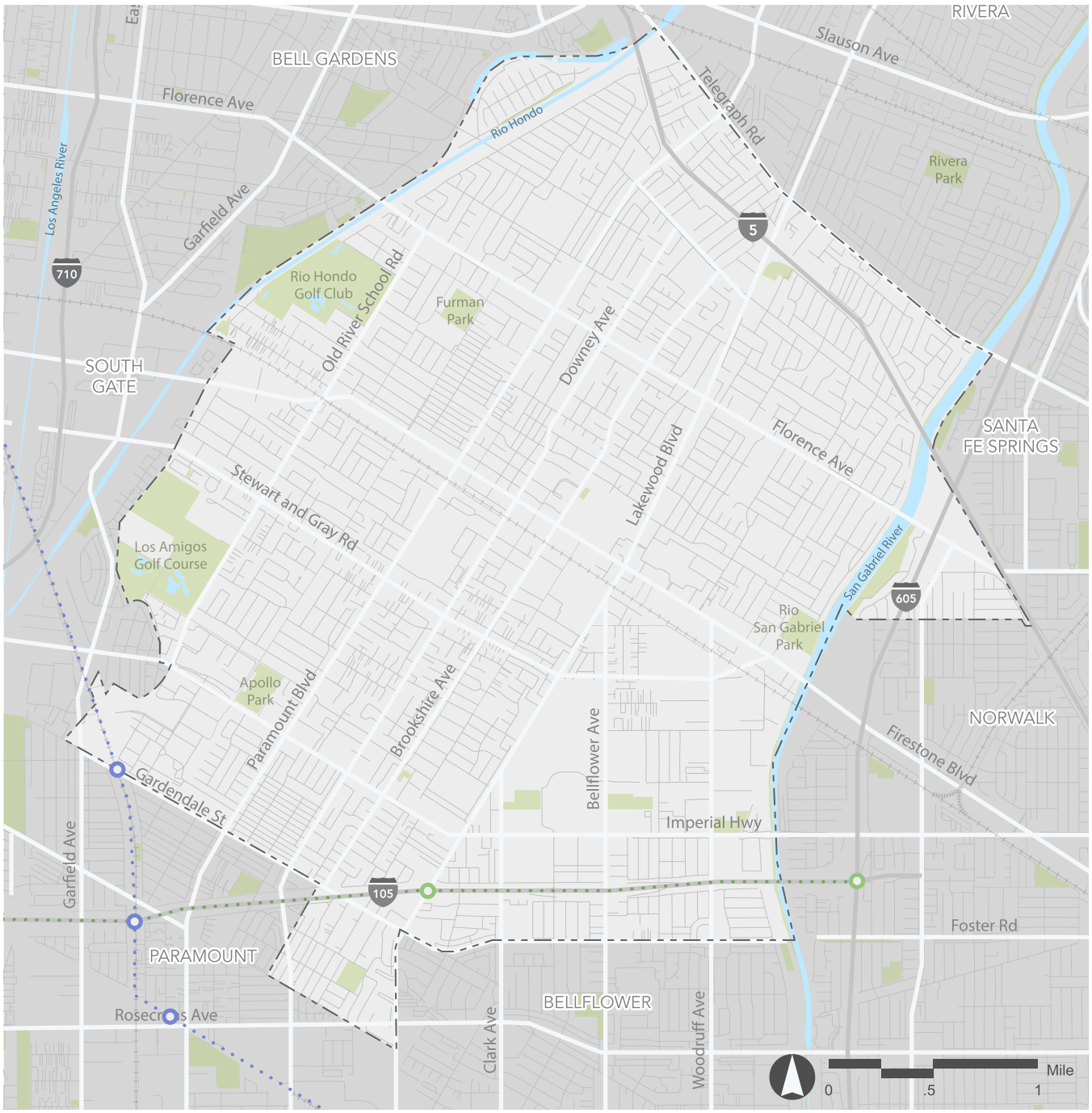
Downey is located in the southeastern portion of Los Angeles County, approximately 13 miles from Downtown Los Angeles. The city is strategically positioned within a regional transportation network, with most of its area between the Interstate 5, Interstate 605, and Interstate 105 freeways, providing convenient access to employment centers throughout Los Angeles, neighboring communities, Los Angeles International Airport, and destinations in Orange County.

Downey's regional connectivity is further supported by rail and transit infrastructure. A Southern Pacific Railroad line bisects the city, running along Burns Avenue just south of Firestone Boulevard. The Metro C Line, which operates along the Interstate 105 corridor between the LAX Transit Center and Norwalk, also serves Downey with a station at Lakewood Boulevard, strengthening regional mobility and access to major destinations.

Planning Area

The Downey General Plan 12.5 square mile planning area encompasses the city's incorporated boundaries, as shown in Figure I-2. Telegraph Road generally defines the northern boundary, and Foster Road forms much of the southern edge. The city is bordered by branches of the Rio Hondo River and San Gabriel River to the west and east, respectively.

FIGURE I-2: CITY OF DOWNEY PLANNING AREA



Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

FRAMING THE PLAN

Community Profile

Downey is an established suburban community of approximately 111,500 residents (2026), making it one of the larger cities in Los Angeles County. The city contains approximately 36,300 housing units, with more than 80 percent of residents living in family households. Stable neighborhoods, strong community institutions, and access to regional employment centers contribute to Downey's role as a very desirable residential community.

Established Development and Land Use Pattern

Downey's development pattern reflects its suburban character. Residential neighborhoods make up approximately 60 percent of the land area, with single-family homes representing the predominant housing type. Multifamily housing, including condominiums, townhomes, and apartments, is generally concentrated in central areas of the city, along major corridors such as Stewart and Gray Road and Imperial Highway, and near key intersections, including Paramount Boulevard and Florence Avenue.

Downey's Downtown and Civic Center serve as the cultural, governmental, and commercial hub. This area includes city offices, community facilities, cultural destinations such as the Downey Theatre, and a mix of shops, restaurants, and service-oriented businesses. The Downtown and Civic Center support both local residents and visitors, providing spaces for community gatherings, public events, and economic activity that enhance identity and vibrancy.

Commercial uses account for approximately 14 percent of land in Downey and are primarily located along major corridors, including Firestone Boulevard, which bisects the city from east to west and serves as a central commercial spine. These areas provide retail services, employment opportunities, and community-serving businesses that support residents and the surrounding region.

Industrial uses represent approximately four percent of the land area and are concentrated



Downey's low-density neighborhoods are defined by tree-lined streets and single-family homes

primarily near the eastern city boundary south of Firestone Boulevard, with smaller pockets between Paramount and Lakewood Boulevards. Some industrial areas are located near residential neighborhoods, creating land use compatibility challenges related to noise, air quality, traffic, and safety. Addressing these conditions is an important consideration for planning and development.

Physical Environment

Downey's physical environment is shaped by its location between the Rio Hondo and San Gabriel Rivers, both of which include flood control channels designed to reduce regional flood risk. While these facilities limit large-scale flooding, climate change and more intense storm events present ongoing challenges. The city's highly urbanized landscape, characterized by extensive paved surfaces and limited natural drainage, can contribute to localized flooding during heavy rainfall. The General Plan provides policies and strategies to support climate resilience, stormwater management, and environmental sustainability.

Growth, Housing, and Future Needs

Although Downey's population has remained relatively stable between 19XX and 20XX, regional and statewide housing demand is expected to increase the number of residents over time. By 2035, the city is projected to accommodate approximately 4,500 additional residents, requiring planning for new housing opportunities in a largely built-out community. The General Plan establishes strategies to accommodate desired growth, expand housing choices, support affordability, and enhance mobility while maintaining neighborhood character and quality of life.

Mobility, Economy, and Community Services

Downey benefits from strong regional transportation access, an established employment base, and a network of community facilities, including parks, schools, and civic services. Maintaining safe and efficient mobility, supporting economic vitality, and enhancing public safety and community services remain central priorities as the city continues to evolve.



Downey Theatre, a cultural and civic hub

WHAT OUR COMMUNITY TOLD US

This General Plan reflects the many voices heard during a comprehensive and inclusive community engagement process. This process surfaced the priorities, concerns, and aspirations of Downey residents and businesses that will guide the plan's direction, goals, and implementation. Engagement included city leader interviews, focus groups, and interactive workshops. The city also hosted pop-up events at community gatherings and conducted a citywide online survey, providing residents with multiple ways to share their vision for Downey's future and offer input on key topics related to the General Plan.

These activities offered residents opportunities to express priorities related to community values, mobility, commercial corridors, economic development, and housing. Pop-up event participants also shared preferences regarding the location and type of new housing. Across all engagement activities, community members consistently envisioned a city with safe, walkable neighborhoods, inviting public spaces, and a strong family-oriented character. Residents emphasized priorities such as:

- safer streets
- expanded shade and street lighting
- efficient public transportation
- mixed-use development that integrates housing with local shops and restaurants
- additional community gathering spaces
- a diverse array of small businesses and entertainment options, and
- local employment opportunities with good wages.

The following highlight the key themes derived from these engagement activities. A complete summary of all engagement activities and findings is included in Appendix B (Community Engagement Summary).



Community engagement pop-up event at Touch-a-Truck at Independence Park



Community engagement pop-up event at the annual Bunny Patch at Golden Park



Environmental Justice workshop at the Columbia Memorial Space Center

FIGURE I-3: SAMPLE OF COMMENTS FROM THE COMMUNITY



Sample verbatim comments from General Plan workshops, pop-ups, focus groups, and the community survey



Preserving neighborhood character is a key desire

1. Preserving Neighborhood Character While Managing Growth

Residents and community leaders want Downey to accommodate growth while maintaining the qualities that define its neighborhoods. Strong interest exists for ensuring new development is thoughtfully designed, compatible with existing communities, and maintains high housing quality. Topics of discussion included housing density, accessory dwelling units (ADUs), duplexes, lot splits, and multifamily developments, particularly in relation to single-family areas. Many participants expressed support for mixed-use development along commercial corridors, while emphasizing the need for careful planning to address parking, traffic, and neighborhood compatibility.

2. Strengthening the Local Economy and Revitalizing Commercial Areas

Economic development remains a key priority, with a focus on creating higher-paying jobs and expanding retail, dining, and entertainment options. Residents and stakeholders envision commercial areas as vibrant destinations that provide a mix of businesses and family-friendly amenities. Redevelopment opportunities at sites such as Stonewood Mall and Downey Landing were frequently highlighted as potential areas for investment.

3. Improving Public Safety and Community Cleanliness

Public safety is consistently identified as a top concern. Participants value the Police Department and expressed interest in enhanced visibility and enforcement, particularly near schools, parks, and major corridors. Other considerations included community well-being, traffic safety, and maintenance of public spaces, including graffiti removal and litter control.

4. Expanding Parks, Recreation, and Community Services

Parks, recreation programs, and community services are central to Downey's quality of life. Residents highlighted the importance of additional recreational amenities for youth, seniors, and families, as well as the enhancement and expansion of green spaces and park facilities.

5. Improving Walkability, Mobility, and Transportation Safety

Participants emphasized the need for safer and more comfortable walking and biking conditions citywide, noting areas with deteriorated sidewalks, high traffic speeds, and incomplete bike networks.

6. Addressing Environmental Health and Pollution

Environmental and public health concerns were raised, particularly regarding air quality and emissions near major roadways and industrial areas. Residents emphasized the importance of planning for environmental sustainability and neighborhood health.

7. Beautification and Urban Design Improvements

Beautification and urban design were identified as important factors for community pride, safety, and economic vitality. Residents expressed interest in a cleaner, more attractive city environment.

8. Supporting Youth, Families, and Education

Downey is widely valued as a family-oriented community, and participants emphasized supporting youth, families, and education through recreational programs, partnerships with local schools, and community initiatives.

9. Improving Access to Healthy Living Resources

Access to resources that promote healthy living, including parks, nutritious food options, and wellness programming, was highlighted as an important community need.

10. Expanding Community Engagement and Communication

Participants expressed a desire for clear, accessible communication between the City and residents, as well as more opportunities to provide input on planning and community decisions. Multiple communication channels were recommended to reach diverse audiences effectively.



The community prioritizes services that support family-oriented activities.

OUR SHARED VISION – GUIDING DOWNEY FORWARD

The vision and guiding principles for Downey's General Plan were shaped through a careful review of community engagement and public input. Insights from residents, business owners, and other community members, along with an analysis of current conditions, trends, and previous planning efforts, helped identify priorities, values, and aspirations that reflect the community's hopes for the future. This vision statement and guiding principles provide a framework for decision-making and planning that aligns with these shared goals.

GENERAL PLAN VISION STATEMENT

Downey is a proud and forward-thinking community that embraces its history while shaping a dynamic and resilient future. Our City fosters opportunity, innovation, and inclusivity—where residents of all ages and backgrounds thrive in connected, quality neighborhoods with diverse housing, economic, and transportation choices. Through thoughtful planning, strong community engagement, and a focus on long-term resilience and responsible growth, Downey stands as a vibrant, welcoming place for generations to come.



Residents gathering at a Concert Under the Stars reflecting Downey's strong sense of community and connection

GENERAL PLAN GUIDING PRINCIPLES

Honor the Past, Shape the Future

Celebrate Downey's heritage by preserving historic places and community traditions, while guiding thoughtful growth that respects the City's character and embraces progress.

Protect Resources and Prepare for the Future

Plan with climate, conservation, environmental health, and emergency preparedness in mind.

Grow Smart to Support Neighborhoods

Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they're needed most.

Manage and Invest in Community Resources

Manage water and natural resources while investing in and supporting parks, recreation, and community programs that enhance quality of life for all residents.

Build a Strong, Flexible Economy

Support a diverse economic base that fosters business growth, revitalizes commercial areas, and promotes long-term prosperity.

A Healthier Downey for Everyone

Reduce pollution burdens, expand access to healthy living resources, and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.

Offer Housing for Everyone

Support a diverse range of housing opportunities that meet the needs of residents of all income levels whilemaintaining sufficient housing capacity to support future needs and long-term compliance with State housing law.

Foster Trust and Connection

Prioritize meaningful community engagement to strengthen relationships, build transparency, and create an informed, involved community.

Plan for Safe, Practical, Connected Travel

Address the most urgent travel needs, expand alternatives to driving, and plan for a growing, connected community.

Design for Quality and Lasting Identity

Promote high-quality architecture, attractive streetscapes, and well-designed public spaces that reinforce community character, enhance the visual environment, and ensure new development contributes positively to established neighborhood identity and long-term vitality.

Promote Safety and Peaceful Environments

Enhance lighting, visibility, and public safety presence while reducing noise impacts so the community is secure and comfortable for all users.

USING THIS GENERAL PLAN

General Plan Chapters

Every General Plan developed by communities in California must include a set of topics that are each addressed in the plan as stand-alone chapters, called elements:

- Land Use
- Circulation
- Housing
- Conservation
- Open Space
- Noise
- Safety
- Environmental Justice
- Economic Development
- Design & Cultural Resources

How to Use the General Plan

This General Plan is designed to be accessible and practical for a wide range of readers. Most elements follow a consistent structure to make it easy to locate the rationale, goals, and policies behind each topic. The Housing Element is structured to comply with additional State law requirements, reflecting its unique role in housing planning.

Policy Structure

Each element is organized into a clear hierarchy of goals, policies, and programs that translate the community's vision into implementable direction:



Broad statements of the community's desired outcomes

Goals



Specific directions and commitments that guide City Decisions, actions, and investments

Policies



Practical actions, programs, or initiatives to achieve the goals and policies over time

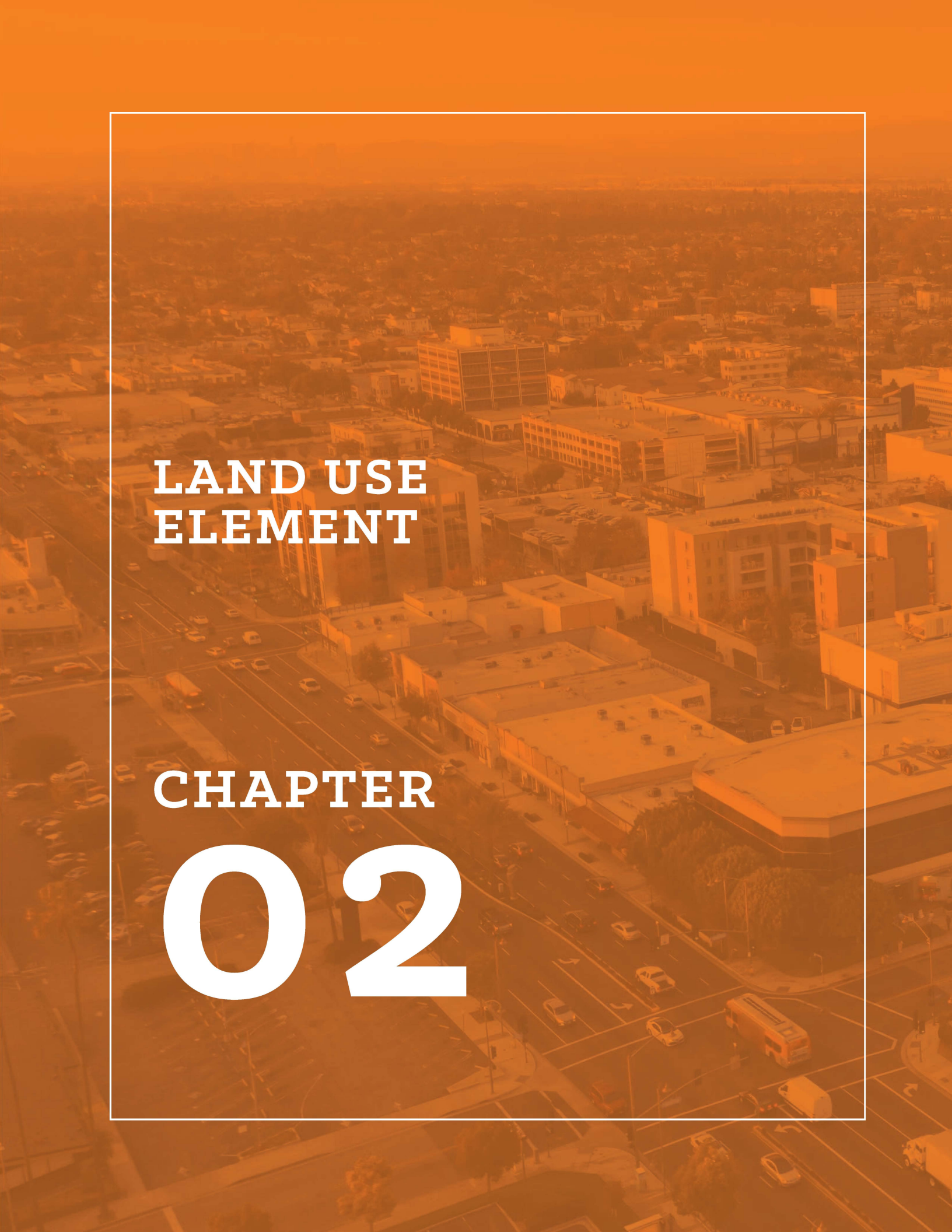
Programs

Who this Plan Is For

This General Plan serves multiple audiences, each of whom can use the document in different ways:

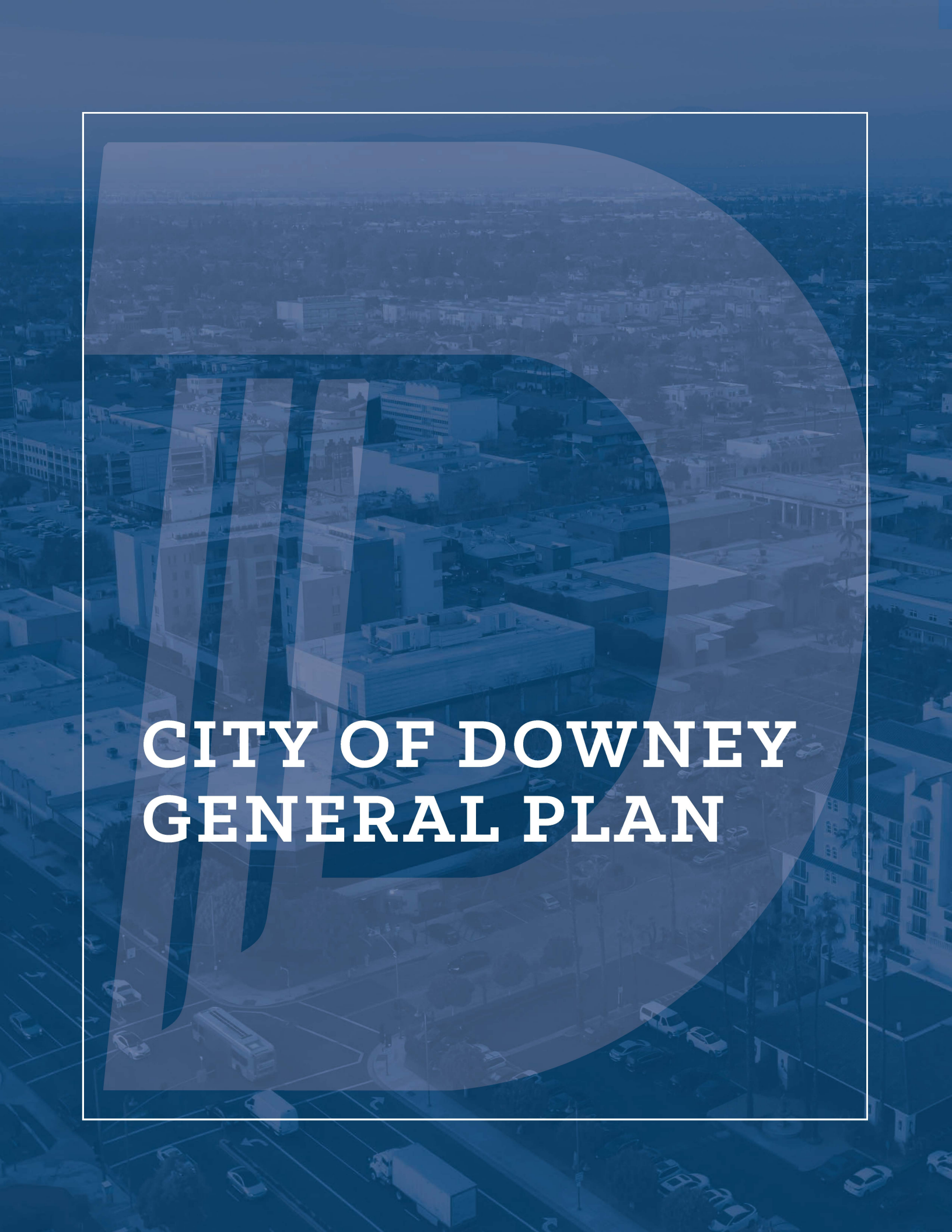
- **City Council, Commissions, Committees, and Staff.** Use the General Plan to guide policy decisions, strategic planning, budgeting, and development approvals. It informs long-term funding plans such as the Capital Improvement Plan, which identifies planned infrastructure, parks, roads, and facility investments.
- **City Planners and Developers.** Reference the General Plan when reviewing or proposing new developments to ensure projects are consistent with city goals, policies, and community values.
- **Property Owners and Businesses.** Understand the city's vision for land use, zoning, and development opportunities, helping inform decisions about property investments, improvements, or business expansion.
- **Residents.** Learn how the city plans to support neighborhood character, public safety, mobility, recreation, environmental quality, and economic vitality. Residents can also use the General Plan to participate meaningfully in public discussions about City planning and growth.
- **Community Groups and Organizations.** Use the General Plan to guide advocacy, collaborative initiatives, and local programs that align with the city's priorities and vision.
- **Visitors and Tourists.** Gain insight into Downey's vision for its downtown, cultural destinations such as the Downey Theatre, the Columbia Space Center, parks, and other public spaces, helping visitors understand the City's priorities and experience its community values.

By providing this shared framework, the General Plan ensures that all stakeholders, whether decision-makers, property owners, businesses, or residents, can understand, engage with, and help implement Downey's vision for a resilient and vibrant community.



LAND USE ELEMENT

CHAPTER 02



CITY OF DOWNEY GENERAL PLAN

CHAPTER

02

LAND USE ELEMENT

INTRODUCTION

What This Chapter Addresses and Why These Topics Are Important

How land is used in Downey shapes the way people experience neighborhoods, access jobs and services, and interact with the community. Thoughtful development, whether a new business, residential project, or active public space, can transform underutilized areas, strengthen local identity, and enhance the quality of life across surrounding neighborhoods. In Downey, well-placed investments have the potential to revitalize commercial and industrial districts, create employment opportunities, support local businesses, and bring critical community amenities closer to residents. Such changes contribute to a stronger local economy, increased fiscal stability, and greater access to housing, services, and public spaces.

This chapter provides a framework for land use planning that builds on Downey's assets, guiding growth in ways that support the city's long-term fiscal health, economic vitality, and community well-being. It emphasizes complete neighborhoods, well-connected commercial and mixed-use corridors, vibrant employment areas, and public spaces that strengthen Downey's identity.

The policies, land use designations, and growth strategies in this element are implemented through local ordinances, including the Downey Municipal Code and specifically Article IX, the Comprehensive Zoning Ordinance, which defines allowable uses and sets development standards for each property. Several area-specific plans provide more detailed guidance, ensuring that future development reflects Downey's character, supports local priorities, and contributes to thriving neighborhoods and districts.



Large crowd gathered in Downtown enjoying live entertainment at the International Food and Music Festival

GUIDING PRINCIPLES SHAPING THE LAND USE ELEMENT

The Land Use Element provides policy direction to reinforce community character, support quality neighborhoods, and promote economic and housing growth that align with the City's vision. This framework is grounded in principles of context-sensitive development, fiscal sustainability, neighborhood preservation, and community identity.

Honor the Past, Shape the Future

Celebrate Downey's heritage by preserving historic places and community traditions, while guiding thoughtful growth that respects the City's character and embraces progress.

Build a Strong, Flexible Economy

Support a diverse economic base that fosters business growth, revitalizes commercial areas, and promotes long-term prosperity.

Grow Smart to Support Neighborhoods

Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they are needed most.

Offer Housing for Everyone

Support a diverse range of housing opportunities that meet the needs of residents of all income levels whilemaintaining sufficient housing capacity to support future needs and long-term compliance with State housing law.

COMMUNITY CONSIDERATIONS

Through community workshops, surveys, stakeholder discussions, review of background reports and existing conditions materials, and other engagement activities conducted as part of the General Plan Update, several land use opportunities and challenges emerged that will help guide future growth and development in Downey.

Managing Growth and Change

Feedback emphasized the importance of accommodating future growth in appropriate locations while maintaining the qualities that make Downey a desirable place to live. Comments supported directing new development to areas with existing infrastructure capacity, encouraging investment along major commercial corridors and Downtown, and ensuring that growth contributes to the City's long-term fiscal health.

Protecting Neighborhoods

Preserving the character of established neighborhoods was identified as a key priority. Input supported providing a range of housing opportunities while ensuring that new development includes appropriate transitions, compatible design, and building scales that respect surrounding residential areas. Community members also emphasized the importance of managing parking demand and minimizing spillover parking impacts from new development to protect neighborhood livability and maintain access for residents.

Revitalizing Commercial Areas

Comments highlighted the need to reinvest in aging commercial corridors and shopping centers. Input emphasized attracting new businesses, encouraging adaptive reuse of underutilized properties, improving the appearance and functionality of commercial areas, and creating destinations that serve residents and visitors.

Supporting Jobs, Economic Vitality, and Fiscal Sustainability

Maintaining a strong local economy and expanding employment opportunities were identified as important priorities. Feedback supported attracting high-quality businesses, retaining employment-generating uses, strengthening healthcare and medical industry clusters, and promoting development that contributes to the City's fiscal sustainability.

Building Transit-Oriented Hubs

Input recognized the opportunities associated with future transit investments while also noting concerns about development intensity and compatibility. Comments supported focusing growth near transit facilities where housing, employment, and services can be integrated, while ensuring that development is well-designed and compatible with surrounding areas.

Creating Complete Neighborhoods

Feedback expressed a desire for neighborhoods that provide convenient access to housing, shopping, services, parks, and transit. Input supported improving walking and bicycling connections, enhancing access to daily destinations, and creating more connected neighborhoods throughout the city.

LAND USE AND COMMUNITY FORM FRAMEWORK

Downey is a city of neighborhoods, gathering places, and businesses that serve residents and the broader region. Its residential areas are well defined, connected by streets and corridors that link homes to schools, shops, parks, and employment centers. Commercial anchors—such as Stonewood Center, Downey Landing, and Downtown—provide destinations for shopping, services, and community activity. Commercial corridors along Florence Avenue, Paramount Boulevard, Imperial Highway, Lakewood Boulevard, and Firestone Boulevard, along with industrial areas in the southeast quadrant of the City, support local employment and contribute to fiscal sustainability. Together, these areas form the physical and social fabric that gives Downey its distinctive character.

The Land Use Plan establishes a framework for guiding development while protecting what is valued about the city today. It promotes complete neighborhoods with diverse housing types, vibrant mixed-use centers that bring homes, shops, and services closer together, and dynamic employment areas that support local businesses and job growth. These places are connected by safe, accessible streets, well-designed public spaces, and civic destinations that strengthen Downey's identity. Collectively, these elements form a land use pattern that balances housing, economic vitality, and enduring community character.

The Land Use Element works in concert with the other elements of the General Plan, particularly the Economic Development Element, to support investment, expand employment opportunities, strengthen the City's tax base, and foster a resilient and prosperous local economy while maintaining Downey's quality of life.



Bird's-eye view looking west over well-maintained residential neighborhoods, with Florence Avenue visible along the right edge, highlighting the area's stable and high-quality housing character

Strategic, Targeted, and Managed Growth

Downey is projected to experience moderate growth over the next two decades, creating a need for additional housing, employment opportunities, infrastructure, and public services. Land use policies must respond thoughtfully to changing market conditions, support housing production, sustain the City's economic base, and ensure that growth occurs in appropriate locations. The focus is on managing growth strategically through reinvestment, infill development, and targeted redevelopment that enhances quality of life while preserving the character of established neighborhoods.

Key approaches guiding growth include:

- **Adaptive Reuse, Infill, and Revitalization:** Encourage redevelopment of underutilized or aging properties to meet housing and employment needs while strengthening neighborhood character.
- **Housing Overlay:** Promote targeted areas for increased housing variety and density, balancing affordability with compatibility and community priorities.
- **Mobility and Land Use Integration:** Align new development with transit, pedestrian, and bicycle networks to create accessible, connected, and complete neighborhoods.
- **Specific Plans:** Use area-specific planning tools to guide coordinated development in strategic locations, ensuring cohesive design, land use mix, and positive economic outcomes.



Commercial rehabilitation, landscaping, and facade improvements can revitalize the shopping center at Lakewood Boulevard and Imperial Highway and enhance the surrounding corridor

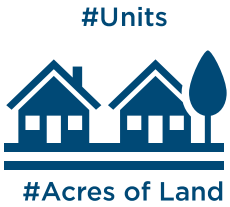
LAND USE PLAN

The Land Use Plan identifies where residential, commercial, industrial, and other uses may occur, the intensity of development that is appropriate, and the urban form and character desired citywide. The plan balances protection of established neighborhoods with opportunities for reinvestment, revitalization, and new development.

Land Use Designations

State law requires cities to identify where different types of development may occur. In Downey, the Land Use Element and Land Use Map define 14 land use categories, establishing the types of uses, intensity, and character appropriate for each area. These designations are broad enough to provide flexibility for implementation yet clear enough to guide development in a way that reflects the City's vision, supports neighborhood compatibility, and strengthens community and economic vitality. The City's Zoning Code provides the detailed development standards to implement each land use designation in Downey, a General Plan Designation has multiple corresponding zoning districts.

Key Designation Terms



Density and Intensity. Residential density (du/ac) shows how many homes are allowed per acre, while floor area ratio (FAR) indicates the amount of building area relative to the lot (see Figure LU-1)



Context: Urban Form, and Character. Land use designations are intended to guide development that responds to surrounding conditions, respects building scale and massing, and reinforces the physical identity of neighborhoods, corridors, and districts.



Mobility Connections and Parking. Designations encourage integration with pedestrian, bicycle, transit, and vehicular networks while balancing parking needs to support walkability, access, and efficient land use.



Transitions. Designations support sensitive transitions between different land uses, with densities and building types structured to maintain neighborhood compatibility and protect community character.

FIGURE LU-1: DENSITY AND INTENSITY

Residential Density

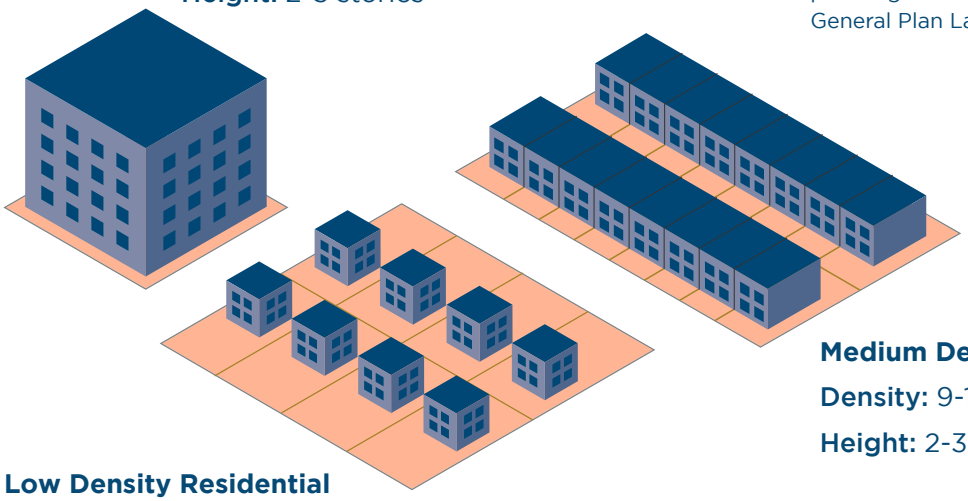
Dwelling Units per Acre

Residential density, measured in dwelling units per acre (du/ac), indicates the number of housing units on a given acre of land and guides the scale and intensity of development. Lower-density areas have fewer units and larger lots, while higher-density areas accommodate more units on sites of varying site. This measure supports housing planning and ensures consistency between the General Plan Land Use Map and zoning.

High Density Residential

Density: 18-40 du/ac

Height: 2-5 stories



Medium Density Residential

Density: 9-18 du/ac

Height: 2-3 stories

Low Density Residential

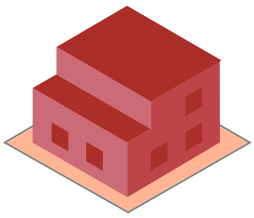
Density: 4-8 du/ac

Height: 1-2 stories

Non-Residential Intensity

Floor Area Ratio (FAR)

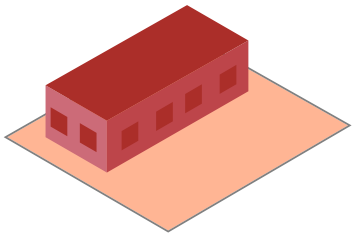
Non-residential intensity, measured by floor area ratio (FAR), represents the relationship between a building's total floor area and the size of its lot. Lower FARs typically reflect smaller buildings or more open space, while higher FARs indicate more intensive development with larger or multi-story structures. This metric helps guide the scale of commercial and employment uses.



1.50 Floor-Area Ratio (FAR)

Lot Coverage: 100%

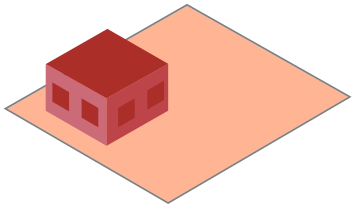
Height: 1-2 Stories



0.50 Floor-Area Ratio (FAR)

Lot Coverage: 50%

Height: 1-2 Stories



0.25 Floor-Area Ratio (FAR)

Lot Coverage: 25%

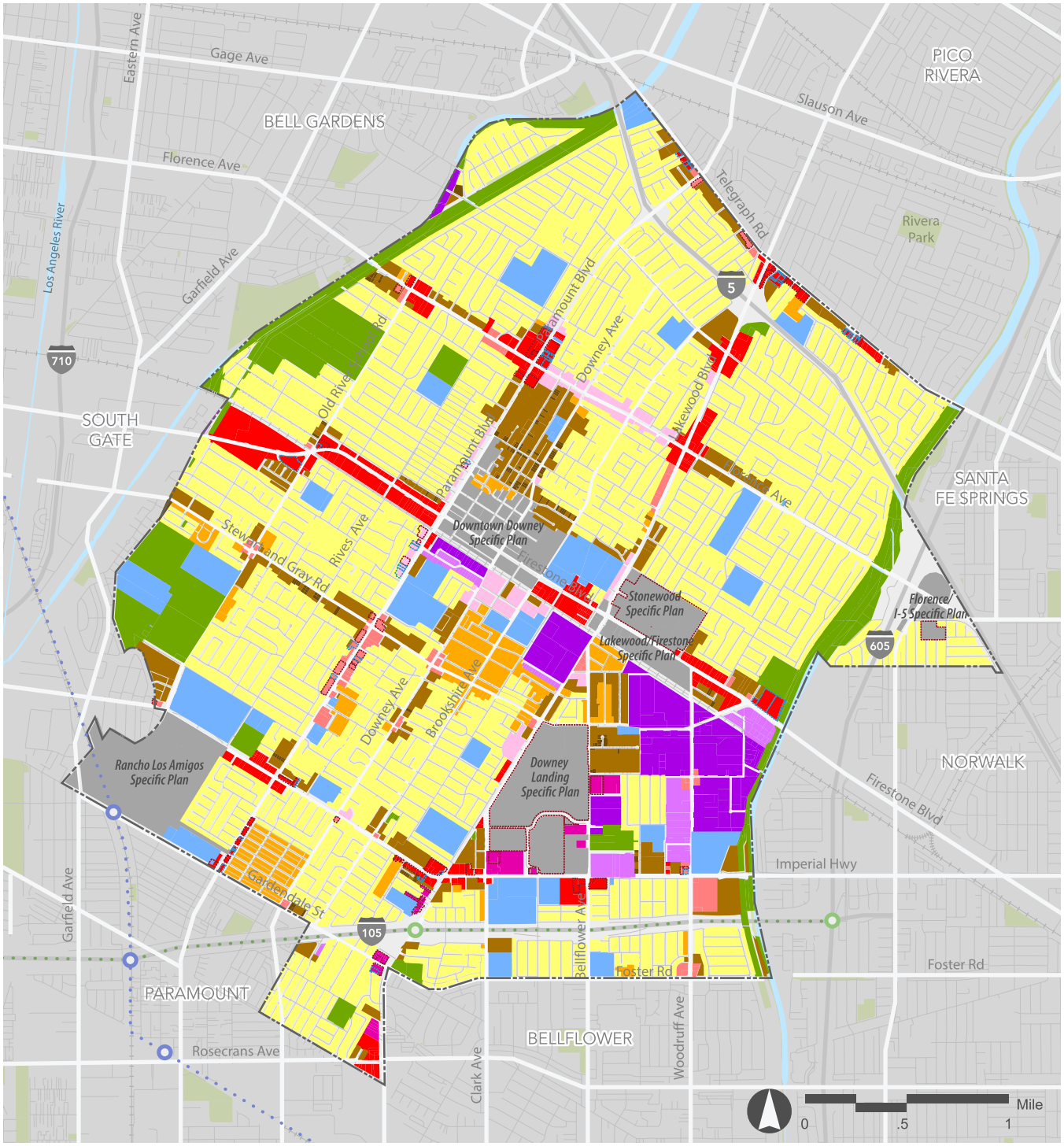
Height: 1-2 Stories

Figure LU-2 illustrates the planned distribution of land uses based on the designations presented in Table LU-1. Table LU-1 identifies permitted densities, intensities, and associated zoning districts for each General Plan Land Use designation.

TABLE LU-1: GENERAL PLAN LAND USE DESIGNATIONS

Land Use Designation	Density/Intensity	Corresponding Zoning Districts
Residential		
Low Density Residential (LDR)	1.0 - 8.9 du/ac	Single-Family Residential Zone (R-1)
Medium Density Residential (MDR)	9.0 - 17.0 du/ac	Two-Family Residential Zone (R-2)
High Density Residential (HDR)	18.0 - 24.0 du/ac	Multiple-Family Residential Zone (R-3)
Housing Element Residential Overlay 1 (HOU-1)	18.0 - 40.0 du/ac	Housing Overlay Zone 1 (HOU-1)
Commercial, Office and Mixed-Use		
Neighborhood Commercial (NC)	Up to 0.25 FAR	Neighborhood Commercial Zone (C-1)
General Commercial (GC)	0.25 - 4.00 FAR	General Commercial Zone (C-2)
Office (O)	0.50 - 5.00 FAR	Professional Office Zone (C-P)
Mixed-Use (MU)	24.0 - 50.0 du/ac Up to 4.00 FAR	Mixed-Use Zone (M-U)
Housing Element Residential Overlay 2 (HOU-2) and Residential Corridor Overlay	30.0 du/ac Intensity varies by base designation	Housing Overlay Zone 2 (HOU-2)
Industrial		
Light Industrial (LI)	Up to 0.60 FAR	Light Manufacturing Zone (M-1)
Industrial (I)	Up to 0.60 FAR	General Manufacturing Zone (M-2)
Institutional And Open Space Designations		
Public and Institutional (PI)	Up to 1.00 FAR	Public Zone (P)
Parks and Open Space (P/OS)	Building intensity varies by use	Open Space Zone (O-S)
Special Designations		
Special Plan (SP)	Density and intensity standards are specified within each plan	Specific Plan (SP)

FIGURE LU-2: LAND USE PLAN



Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Housing Element Residential Overlay 1

Commercial
- Neighborhood Commercial
- General Commercial
- Office
- Mixed Use
- Housing Element Residential Overlay 2
- Residential Corridor Overlay

Public and Institutional
- Public/Institutional
- Parks/Open Space

Industrial
- Light Industrial
- Industrial

Specific Plan
- Specific Plan

Basemap Features
- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Residential Land Use Designations

The residential land use designations define the varying housing typologies distributed throughout Downey, largely in single use type neighborhoods and also incorporated as part of integrated mixed-use districts. Three residential land use designations and one overlay apply to areas primarily intended for housing and neighborhood-serving activities. While public parks and major public or institutional facilities are designated separately on the Land Use Plan, residential neighborhoods are closely connected to schools, religious institutions, small community facilities, and other uses that serve residents and contribute to neighborhood identity. Together, these uses help create complete neighborhoods by providing opportunities for education, worship, social interaction, and community gathering within or near residential areas.

The residential designations are:

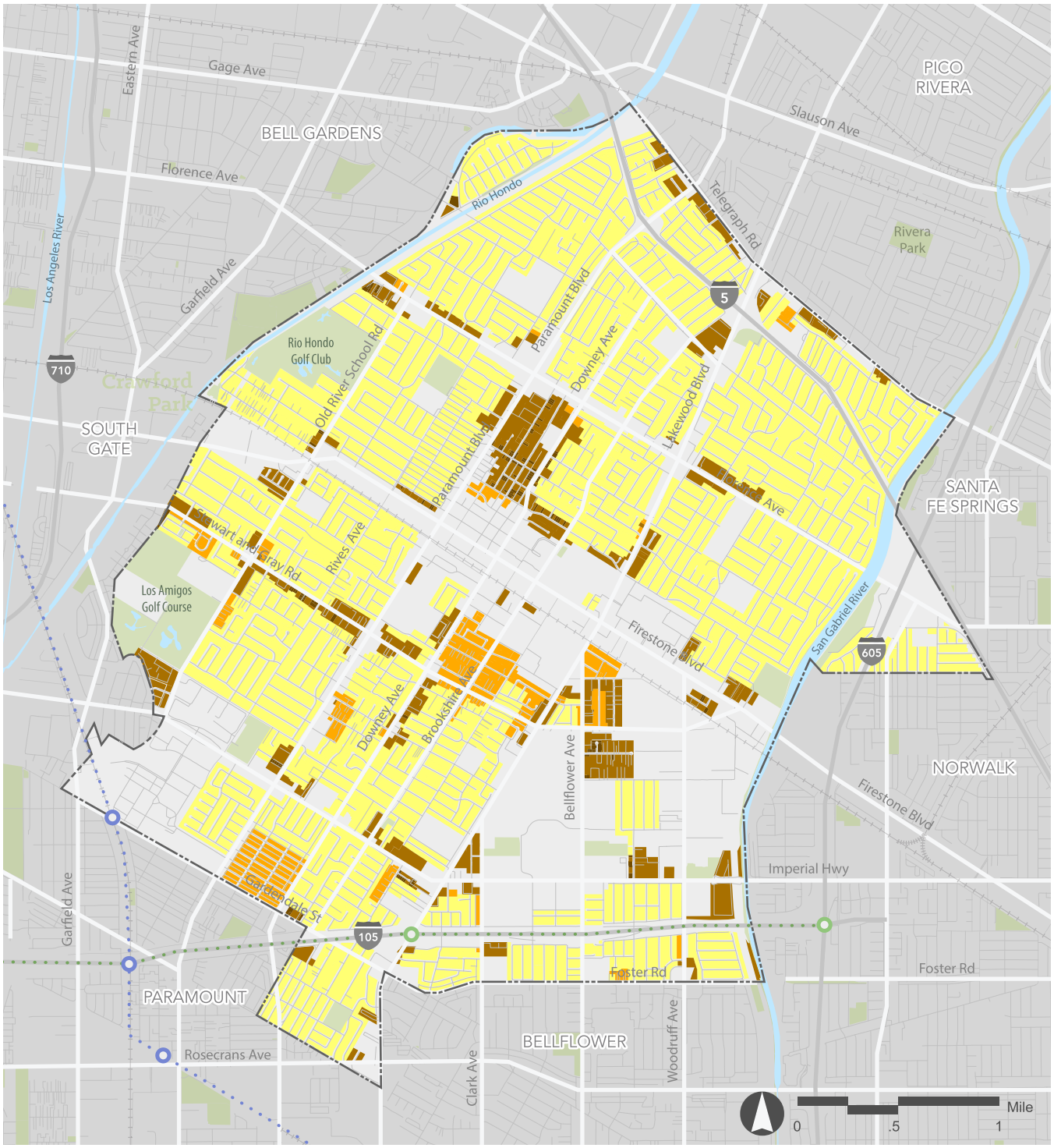
- Low Density Residential (LDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Housing Element Residential Overlay 1 (HOU-1)

Consistent with State regulations, Accessory Dwelling Units (ADUs) are permitted in addition to the densities otherwise allowed.



Low-density residential neighborhood

FIGURE LU-3: RESIDENTIAL LAND USES



Residential Designations

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Housing Element Overlay 1

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Low Density Residential - LDR (1.0 - 8.9 DU/AC)

The Low Density Residential (LDR) designation is established to maintain and enhance the character of neighborhoods composed primarily of single-family detached homes. Residential development may be integrated.

Context: Character and Urban Form

Low Density Residential neighborhoods are defined by their suburban scale, visual consistency, and cohesive streetscape patterns. Single-family neighborhoods feature homes with similarily sized front yards with landscaping, and tree-lined streets that reinforce neighborhood identity. Architectural styles reflect the many periods across Downey's history, with single-story ranch-style homes predominating, reflecting the growth boom of the 1940s through 1970s. To maintain the City's established suburban character and scale, large box-like homes with excessive massing or forms that are incompatible with surrounding neighborhoods are discouraged. New development and additions should complement existing homes, respecting building scale, massing, lot patterns, and roof forms to maintain compatibility, rhythm, and visual continuity.

Density/Intensity

- Residential Density: 1.0 – 8.9 dwelling units per acre
- Population: 3 – 28 persons per acre[1]

Mobility Connections and Parking

New development should support safe pedestrian and bicycle movement while accommodating vehicle access. Driveways, garages, and parking areas should minimize visual impacts and maintain streetscape continuity. Connectivity to nearby schools, parks, and transit should be encouraged to create complete and walkable neighborhoods.

Transitions

New development should provide sensitive transitions to adjacent lower- or higher-density areas. This includes managing building heights, massing, and setbacks to protect privacy, sunlight, and open space. Landscaping, building orientation, and site layout should buffer differences in density while preserving neighborhood character.



Low-density residential neighborhood

Note: 1) Population density using average household size from the 2025 Department of Finance, Demographic Research Unit.

Medium Density Residential - MDR (9.0 - 17.0 DU/AC)

The Medium Density Residential (MDR) designation supports the preservation and enhancement of for sale and rental housing at densities that accommodate small-lot subdivisions, townhomes, and modest-scale apartment developments. Additionally permitted complementary land uses include public parks, public schools, and other neighborhood serving complementary civic institutions.

Context: Character and Urban Form

New development should respect prevailing building scale, massing, lot patterns, and landscaped streetscapes. Architectural design, materials, and site layout should reinforce neighborhood identity while creating attractive, functional, and socially engaging environments. Entrances to units, whether singular or for multiple units, should follow the prominent development pattern, such as existing housing facing the street, and the clustered housing urban design may be used to facilitate the provision of private open space and recreational amenities supporting community interaction. Additional guidance regarding neighborhood character, architectural design, building compatibility, and preservation of community identity is provided in the Design and Cultural Resources Element.

Density/Intensity

- Residential Density: 9.0 – 17.0 dwelling units per acre
- Population: 28 – 53 persons per acre

Mobility Connections and Parking

Development should be designed to provide efficient, convenient, and accessible access for pedestrians, bicyclists, transit users, and motorists. Parking areas should be integrated with landscaping to minimize visual impact and maintain streetscape continuity. Connectivity to nearby schools, parks, and commercial areas should enhance walkability and access to daily needs.

Transitions

New development should transition to adjacent lower-density areas by managing building heights, massing, and setbacks to protect privacy, sunlight, and open space. Landscaping, building orientation, and site layout should be used to respect differences in density and maintain neighborhood character.



An example of Medium Density Residential townhomes

High Density Residential - HDR (18.0 - 24.0 DU/AC)

The High Density Residential (HDR) designation provides for higher-density multifamily residential development, including both rental and ownership housing in the form of multilevel buildings. The designation is intended to support a range of housing opportunities while accommodating development at greater residential densities. Permitted uses also include schools, parks, civic uses, religious institutions, and other community-serving facilities that support residential neighborhoods.

Context: Character and Urban Form

This designation generally feature two- to three-story multi-unit residential buildings. Developments are designed to include private and common open space, shared or private parking facilities, and on-site active or passive recreation areas with resident amenities. Architectural and landscape design should be high quality, reflecting a cohesive urban character that integrates with surrounding neighborhoods. Building scale, massing, orientation, materials, and landscaping should respond to adjacent uses while preserving privacy and open space.

Density/Intensity

- Residential Density: 18.0 – 24.0 dwelling units per acre
- Population: 56 – 75 persons per acre

Mobility Connections and Parking

Development should promote safe, convenient pedestrian, bicycle, and transit access. Parking areas should be sensitively located and designed to minimize visual impacts and maintain streetscape continuity. Connections to nearby services, transit hubs, and public spaces should enhance accessibility and support complete neighborhoods.

Transitions

New development should provide sensitive transitions to adjacent lower-density areas. This may include building setbacks, massing adjustments, height modulation, and landscaping.



An example of multifamily High Density Residential development at three stories in height

Housing Element Overlay 1 - HOU-1 (18.0 - 40.0 DU/AC)

The Housing Element Residential Overlay 1 designation allows higher-density housing on specific sites identified in the Housing Element. It accommodates multifamily development of an urban residential character in strategic locations, supporting housing goals focused on accommodating more affordable housing options.

Context: Character and Urban Form

Land uses within the HOU-1 overlay generally consist of two- to five-story multi-unit residential buildings, with taller structures permitted where contextually appropriate. High-quality architectural and landscape design is essential to balance higher-density living with open space, community services, and a strong design character. Developments should provide both private and common areas, shared or private parking facilities, and internal active or passive recreation spaces and amenities to support a functional, attractive residential environment. Architectural style, materials, and landscaping should reinforce a cohesive urban character and create a distinct identity for each site.

Density/Intensity

- Residential Density: 18.0 – 40.0 dwelling units per acre
- Population: 56 – 125 persons per acre

Mobility Connections and Parking

Sites should support pedestrian, bicycle, and transit access. Parking areas should be integrated into the site design to minimize visual impacts and preserve streetscape continuity. Connectivity to nearby schools, parks, and neighborhood amenities is encouraged to create complete and walkable neighborhoods.

Transitions

New development should provide sensitive transitions to adjacent lower-density areas. This may include modulated building heights, strategic massing, building orientation, landscape buffers, and open space placement.



An example of multifamily development

Commercial, Office, and Mixed-Use Land Use Designations

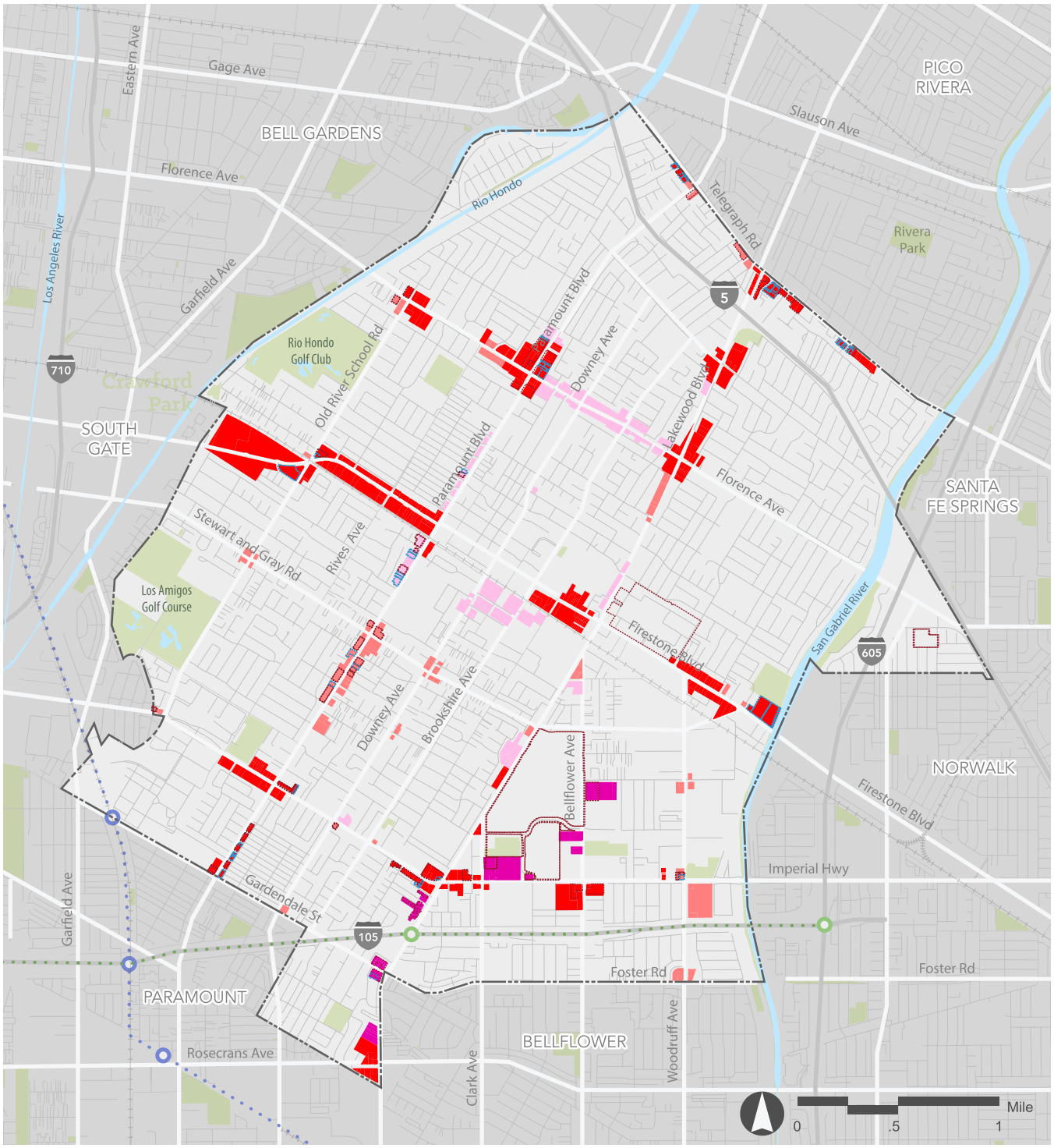
Two commercial, one office, one mixed-use, and a housing overlay designation accommodate a range of uses that meet local residents' daily needs, attract regional visitors, create jobs, expand housing options, and generate local tax revenues. The residential overlay encourages higher-density housing and incentivizes reinvestment along key commercial corridors. Development in these areas should be carefully designed to respond to the scale, character, and context of surrounding neighborhoods. This includes reduced building heights or massing near lower-density residential areas.

- Neighborhood Commercial (NC)
- General Commercial (GC)
- Office (O)
- Mixed-Use (MU)
- Housing Element Residential Overlay 2 (HOU-2) and Residential Corridor Overlay (RCO)



Retail commercial at the Promenade at Downey

FIGURE LU-4: COMMERICIAL, OFFICE, AND MIXED USE LAND USES



Commercial Designations

- Neighborhood Commerical
- General Commercial
- Office
- Mixed Use

Housing Overlays

- Housing Element Residential Overlay 2
- Residential Corridor Overlay

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Neighborhood Commercial (NC)

The Neighborhood Commercial designation provides areas for small-scale commercial spaces that primarily are occupied by businesses that cater to daily needs of nearby residents. These areas support convenience shopping, personal and professional services, and community-oriented businesses.

Context: Character and Urban Form

Neighborhood Commercial areas are generally small in scale. Land uses include low-impact retail, restaurants, and personal or professional services, with an emphasis on locally serving businesses that are compatible with adjacent residential neighborhoods. Buildings should respect the scale, setbacks, and massing of nearby neighborhoods, with landscaping and façade articulation that maintains visual continuity and reinforces a pedestrian-friendly environment. Storefronts, entrances, windows, and canopies should enhance walkability and connect seamlessly to sidewalks. Development should be designed and operated to minimize potential impacts on adjacent residential areas, including noise, lighting, traffic, and other operational effects, while maintaining compatibility with surrounding neighborhood character.

Density/Intensity

- **Floor-Area Ratio (FAR):** Up to 0.25

Mobility Connections and Parking

Development should prioritize pedestrian and bicycle access, with safe and convenient connections to nearby residential neighborhoods, parks, and schools. On-site parking should be designed to minimize visual impacts and avoid dominating the streetscape while providing adequate spaces for residents, customers, and deliveries.

Transitions

Where Neighborhood Commercial areas are adjacent to lower-density residential neighborhoods, development should include reduced building heights, landscaped buffers, and massing modulation.



Neighborhood-serving commercial uses at the corner of Lakewood Boulevard and Gallatin Road.

General Commercial (GC)

The General Commercial designation provides for more intense commercial uses that serve local and regional markets. These areas support retail, services, restaurants, entertainment, and hospitality in higher-intensity, pedestrian-oriented, and transit-ready environments that meet the broader community's commercial needs.

Character and Urban Form

General Commercial areas accommodate a wide range of commercial businesses. Site layouts should balance automobile access with pedestrian and bicyclist safety and comfort. These areas should provide flexibility to accommodate evolving market conditions, emerging business types, and changing consumer preferences while maintaining compatibility with surrounding uses. Potential impacts related to lighting, signage, traffic, noise, odors, and hours of operation should be managed to minimize conflicts with nearby residential neighborhoods. Auto-oriented uses such as gas stations, car washes, and drive-through establishments may be appropriate along heavily traveled corridors, while auto repair and vehicle sales uses should be directed to suitable locations that maintain the visual quality of major commercial corridors. Landscaping, building articulation, and setbacks should reinforce an attractive streetscape.

Density/Intensity

- **Floor-Area Ratio (FAR):** 0.25 - 4.00

Mobility Connections and Parking

General Commercial sites should support multimodal access, including transit, walking, and bicycling. Parking areas should be efficiently integrated into the site to minimize visual impacts and maintain pedestrian-friendly streetscapes.

Transitions

Where General Commercial areas border lower-density residential neighborhoods, development should provide sensitive transitions through reduced building heights, stepped massing, landscaping buffers, and site orientation that minimizes noise impacts from parking, loading, and refuse storage areas.



Retail commercial uses at Downey Landing

Office (O)

The Office designation accommodates professional and administrative activities, including medical offices, business offices, financial institutions, and service providers. These areas provide employment opportunities while supporting surrounding commercial, healthcare, and institutional uses, helping create connected, mixed-support districts that serve employees and clients.

Context: Character and Urban Form

Office areas typically consist of small- to moderate-scale buildings, business centers, and related facilities. Medical offices, such as clinics and specialty practices, are a key component in locations near hospitals and healthcare facilities, supporting local services and contributing to the employment base. Development should create attractive work environments while maintaining compatibility with adjacent residential and commercial areas. Buildings should respect neighborhood scale, setbacks, and architectural context. Site design should emphasize pedestrian access, landscaping, and visually appealing façades. In locations near major healthcare facilities or transit hubs, office development should include pedestrian connections that link employees and visitors to nearby businesses, amenities, and transit options.

Density/Intensity

- **Floor-Area Ratio (FAR):** 0.50 - 5.00

Mobility Connections and Parking

Office sites should provide safe and convenient access for pedestrians, bicyclists, transit users, and cars. Parking should be efficiently integrated, minimizing visual impacts and maintaining streetscape continuity.

Transitions

Where Office areas are adjacent to lower-density residential neighborhoods, development should use reduced building heights, setbacks, landscaped buffers, and building articulation to minimize impacts on privacy, light, and views.



An example of office uses



An example of office amenities for employees

Mixed Use (MU)

The Mixed-Use designation promotes integrated residential, office, and commercial districts that meet neighborhood and community needs in active, higher-intensity, pedestrian-oriented, and transit-ready areas. This designation is intended to encourage revitalization and intensification of prominent commercial nodes and corridors higher-density housing that supports commercial activity.

Context: Character and Urban Form

Mixed Use areas feature a balanced mix of residential, commercial, and office spaces, integrated horizontally across a site or vertically within buildings. Development may include medium- to high-density housing alongside small- to moderate-scale neighborhood and community-serving commercial and office uses. Design should prioritize walkability, pedestrian connections, and transit access, with active frontages that encourage social interaction and support local businesses. Effective site and building design are essential to integrate different uses while minimizing potential conflicts related to privacy, noise, or parking.

Density/Intensity

- **Residential Density:** 24.0 – 50.0 du/ac
- **Population:** 94 – 157 persons per acre
- **Floor-Area Ratio (FAR):** Up to 4.00

Mobility Connections and Parking

Mixed-Use developments should encourage multimodal access. Parking should be integrated efficiently onsite, minimizing visual impacts and preserving pedestrian-friendly streetscapes. Site layouts should provide convenient connections to nearby commercial centers, public spaces, and transit stops to support complete, accessible districts.

Transitions

Where Mixed-Use areas border lower-density neighborhoods, development should incorporate height transitions, setbacks, landscaping buffers, and articulation to protect privacy, light, and views.



An example of Mixed Use

Housing Element Overlay 2 (HOU-2) and Residential Corridor Overlay (RCO)

The Housing Element Overlay 2 (HOU-2) designation is applied to sites identified in the Housing Element to accommodate higher-density residential and mixed-use development needed to meet the City's housing obligations. The Residential Corridor Overlay (RCO) applies a similar development approach along selected commercial corridors that are not Housing Element sites, expanding opportunities for residential and mixed-use development beyond the Housing Element inventory. Both overlays are used in combination with the Neighborhood Commercial and General Commercial designations to promote reinvestment and redevelopment along major corridors, increase housing opportunities, and support long-term economic vitality.

Context: Character and Urban Form

HOU-2 and RCO areas feature a coordinated mix of residential, commercial, and office uses that maximize land efficiency and allow symbiotic uses in compact districts. The overlay generally applies to commerciallly zoned properties along Firestone Boulevard, Paramount Boulevard, Telegraph Road, Lakewood Boulevard, Florence Avenue, and Imperial Highway. Uses may include:

- **Residential:** Higher-density housing such as apartments, townhomes, in two- to four-story buildings, with heights and massing scaled to surrounding context. Stand-alone residential development is also permitted.
- **Commercial:** Neighborhood- and community-serving businesses that support residents and visitors, integrated with housing and offices where appropriate and consistent with the underlying commercial zoning district.
- **Office:** Small- to medium-scale professional and medical offices that generate local employment and support adjacent businesses.

High-quality design is essential. Buildings should provide private and common open spaces, shared or private parking, and on-site active or passive recreation areas and amenities. Architectural design, massing, and materials should complement adjacent development while creating cohesive streetscapes.

Density/Intensity

- **Residential Density:** Up to 30.0 du/ac
- **Population:** Up to 94 persons per acre
- **Floor-Area Ratio (FAR):** Varies by base designation

Mobility Connections and Parking

Development should encourage multimodal access. On-site parking should be efficiently integrated to minimize visual impacts and maintain pedestrian-friendly streetscapes. Connections to nearby commercial centers, offices, schools, parks, and transit stops are encouraged to create complete, accessible districts.

Transitions

Where HOU-2 and RCO areas abut lower-density residential neighborhoods, development should include stepped building heights, setbacks, landscaping buffers, and building articulation to protect privacy, maintain light and views, and ensure compatibility with surrounding uses.

Industrial Land Use Designations

Industrial areas support businesses that provide skilled labor jobs, generate local tax revenue, and contribute to the broader Southern California economy. Two industrial categories accommodate a range of business types and intensities, with the more-intensive uses only allowed within Industrial areas. Recognizing that trucking-intensive or heavy industrial uses can create noise, generate emissions, and contribute to roadway wear, development is guided to minimize negative effects on surrounding neighborhoods and infrastructure.

- Light Industrial (LI)
- Industrial (I)

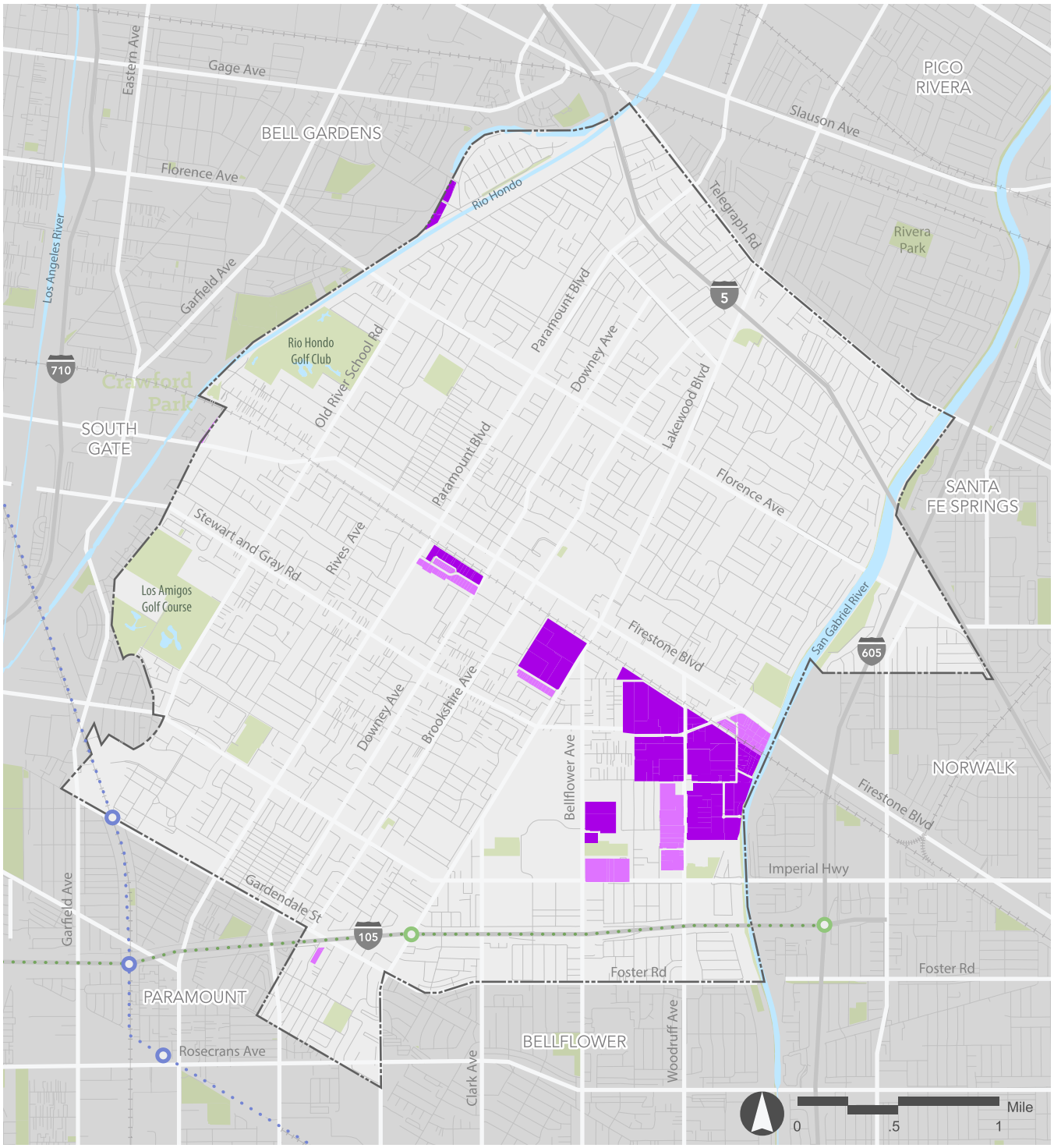






Examples of Industrial uses

FIGURE LU-5: INDUSTRIAL USES



Industrial Designations

- Light Industrial
- Industrial

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Light Industrial (LI)

The Light Industrial designation accommodates low-impact manufacturing, assembly, and service-oriented industrial activities that create jobs and contribute to the local economic base while minimizing environmental, visual, and neighborhood impacts.

Context: Character and Urban Form

Land uses typically include operations such as small-scale assembly, distribution, and service facilities all conducted indoors. Complementary commercial and business-support uses may also be permitted. Development should use site layouts and building scale that emphasize low-intensity uses, with loading areas, truck parking, and other industrial operations screened or buffered to reduce noise, visual impact, and potential conflicts with adjacent properties.

Density/Intensity

- **Floor-Area Ratio (FAR):** Up to 0.60

Mobility Connections and Parking

Light Industrial areas should support efficient vehicle circulation for trucks and service vehicles while maintaining safe pedestrian and bicycle movement along adjacent streets.

Transitions

New development should provide sensitive transitions to adjacent lower-intensity or non-industrial areas. Setbacks, landscaping, and building orientation should be used to buffer industrial operations from nearby residential, commercial, or civic uses,



An example of Light Industrial uses

Industrial (I)

The Industrial designation accommodates a wide range of industrial activities, including manufacturing, logistics, warehousing, and other labor- and capital-intensive uses that provide employment, generate tax revenue, and support the regional economy.

Context: Character and Urban Form

Land uses typically include manufacturing, logistics, warehousing, distribution, and outdoor storage operations, as well as complementary commercial and business-support uses. Development should utilize site layouts and building design that accommodate industrial activities while minimizing impacts on surrounding properties. Loading areas, truck parking, outdoor storage, and other industrial operations should be screened or buffered to reduce noise, visual impacts, and potential conflicts with adjacent uses. Where industrial areas adjoin residential neighborhoods or other sensitive land uses, landscaped setbacks, walls, and other buffering techniques should be incorporated to enhance compatibility. Sustainable site design practices, including energy-efficient buildings, stormwater management, and environmental performance measures, are encouraged to reduce operational impacts and support long-term sustainability.

Density/Intensity

- **Floor-Area Ratio (FAR):** Up to 0.60

Mobility Connections and Parking

Industrial areas should provide efficient circulation for trucks and service vehicles while accommodating on-site employee parking. Truck movement on and off site must be designed to avoid traffic destruction on public streets, with no impacts to residential streets onto residential streets.

Transitions

New industrial development should provide sensitive transitions to adjoining lower-intensity areas. Setbacks, landscaping, screening, and building orientation should be used to minimize impacts on nearby residential, commercial, and civic uses, protecting neighborhood compatibility and community safety.



An example of Industrial uses

Institutional and Open Space Designations

The Institutional and Open Space designations accommodate public and quasi-public uses that serve the community, provide essential services, and preserve natural and recreational resources. These areas include schools, libraries, public safety facilities, parks, open space corridors, community centers, utilities, and major drainage and flood control infrastructure. Building scale and intensity vary depending on the specific use, site constraints, and surrounding context.

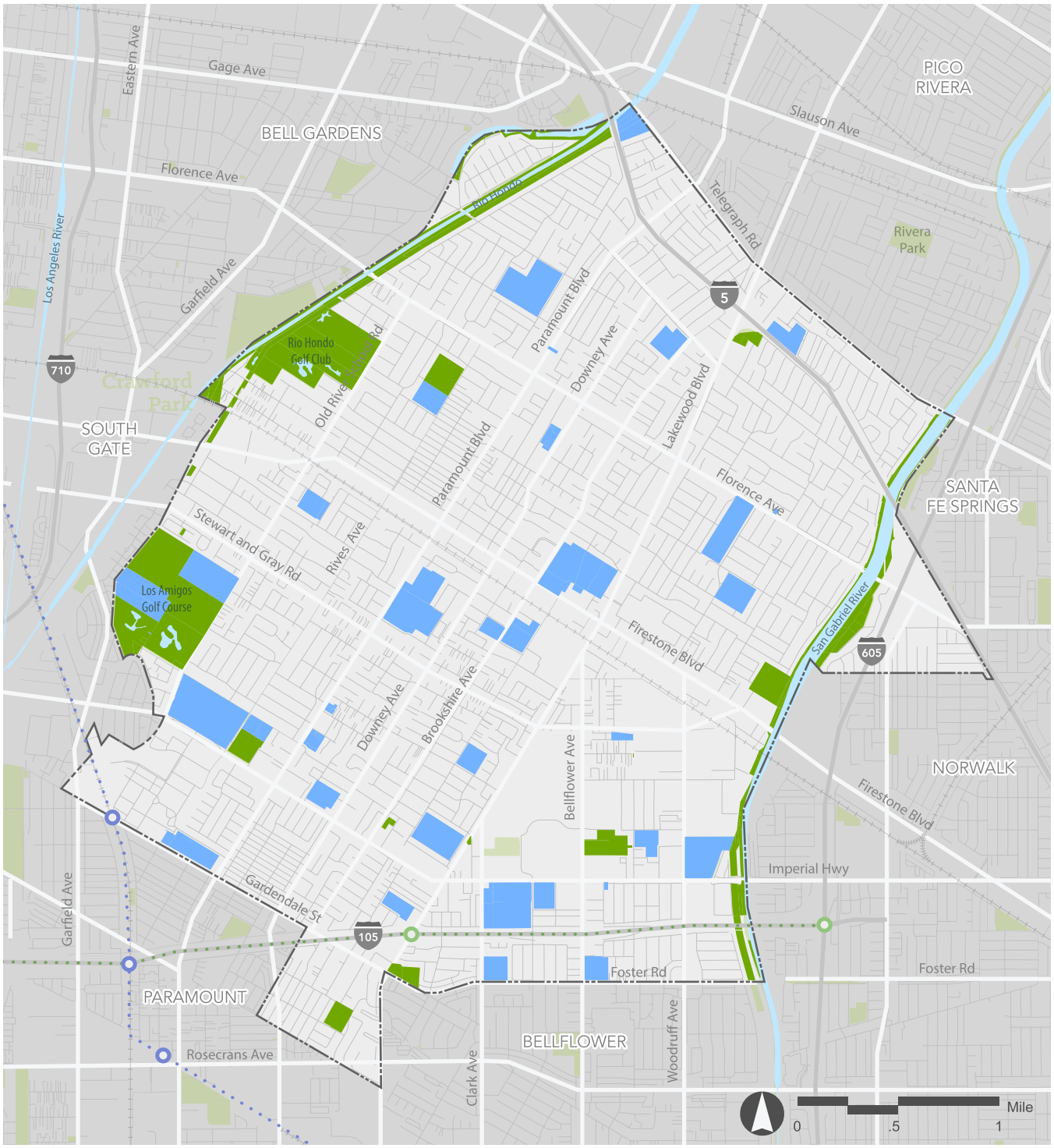
- Public and Institutional (PI)
- Parks and Open Space (OS)





Park pop-ups at Golden Park

FIGURE LU-6: INSTITUTIONAL AND OPEN SPACE USES



Public and Institutional Designations

- Public/Institutional
- Parks/Open Space

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Public and Institutional (PI)

Purpose

This designation accommodates public and quasi-public facilities that provide essential services, civic functions, and community resources. It provides for government, educational, religious, and community-serving uses to be appropriately sited, designed, and integrated with surrounding neighborhoods to support civic life.

Context: Character and Urban Form

Allowed land uses include schools, libraries, fire and police stations, religious institutions, historic sites, community centers, utilities and infrastructure, major drainage facilities, and government service buildings. Development should be integrated with surrounding neighborhoods and reflect appropriate building scale. If a public or semi-public function ceases, alternative community-serving uses may be permitted, provided they are compatible with surrounding development and consistent with zoning regulations.

Density/Intensity

- **Building Height:** 1 to 4 stories

Mobility Connections and Parking

Standard parking requirements generally apply to new development, but reduced parking may be considered to encourage the retention of community resources or support transit use. Sites should provide safe pedestrian and bicycle access and connect to surrounding streets, parks, and transit infrastructure.

Transitions

Building intensity varies by use, but development should be compatible with adjacent areas in terms of scale, massing, and design.



Public and Institutional uses includes fire stations, such as Downey Fire Station No. 3.

Parks and Open Space (OS)

Purpose

This designation preserves and enhances areas for active and passive recreation, natural habitats, and public gathering spaces with parks, trails, and open spaces accessible to all residents, providing environmental, recreational, and social benefits.

Context: Character and Urban Form

Allowed land uses include parks, trails, greenways, natural open space, river corridors, recreation fields and courts, playgrounds, community buildings, gardens, and golf courses. Facilities promote environmental stewardship and reflect sustainable, inclusive, and adaptable design principles. Design should integrate with surrounding neighborhoods and urban form, enhancing the character and quality of the public realm.

Density/Intensity

- **Building Height:** 1 to 2 stories

Mobility Connections and Parking

Parks and open space areas should have pedestrian and bicycle access, connections to streets and transit, and parking areas sufficient to support deman and avoid impact on surrounding neighborhoods. Trails, pathways, and river corridors should link to adjacent parks, schools, and community destinations to support active transportation and healthy lifestyles.

Transitions

Development should be sensitive to surrounding uses, particularly near residential, properties. Natural topography and vegetation should be preserved where possible to maintain ecological and visual integrity.



Apollo Park is a Park and Open Space use.

Special Designations

Specific Plan (SP)

Specific plans contain precise guidance for land development, and infrastructure for a well-defined area. Detailed policy and/or regulatory requirements are contained within each Specific Plan (see LU-7). Examples include:

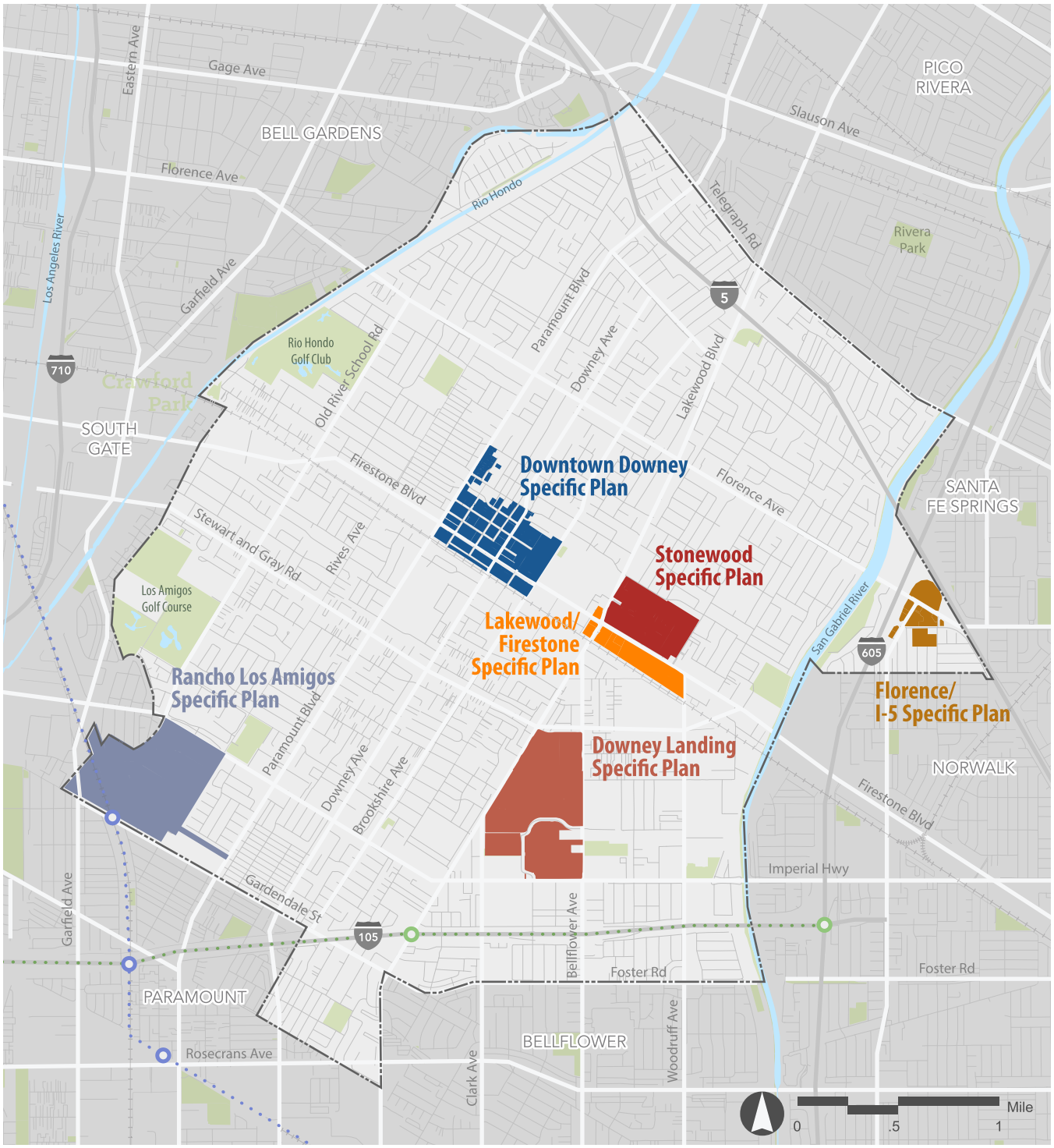
- Downey Landing Specific Plan
- Downtown Downey Specific Plan
- Florence/I-5 Specific Plan
- Lakewood/Firestone Specific Plan
- Rancho Los Amigos South Campus Specific Plan
- Stonewood Specific Plan





The Stonewood Center Specific Plan contains tailored land use and development regulations.

FIGURE LU-7: SPECIFIC PLANS



Specific Plans

- Downtown Downey Specific Plan
- Stonewood Specific Plan
- Lakewood/Firestone Specific Plan
- Downey Landing Specific Plan
- Rancho Los Amigos Specific Plan
- Florence/I-5 Specific Plan

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

LAND USE AND ZONING

State law requires that a city's Zoning Code be consistent with its General Plan. The Land Use Element establishes the long-term vision for the distribution, intensity, and form of development. Zoning regulations must implement that vision at a more detailed, parcel-level scale. This relationship ensures that day-to-day land use decisions, such as development approvals, entitlements, and permitting, align with the policies and designations established in the General Plan.

In Downey, each General Plan Land Use designation is implemented via one or more zoning districts. These districts specify allowed uses, densities, and development standards, including, building height, setbacks, lot coverage, and floor area ratio (FAR). The Land Use and Zoning Consistency Matrix (see Table LU-2) identifies the zoning districts that implement each General Plan Land Use designation.

In some cases, multiple zoning districts may implement a single Land Use designation to provide flexibility. Also, a single zoning district may be applied across multiple Land Use designations where standards can accommodate a range of intensities or where overlays are used to refine development potential.

This framework ensures that Downey's regulatory structure remains legally compliant, transparent, and aligned with the City's long-term planning objectives.

TABLE LU-2: LAND USE AND ZONING CONSISTENCY MATRIX

Zones	General Plan Land Use Designations														
	Low Density Residential (LDR)	Medium Density Residential (MDR)	High Density Residential (HDR)	Housing Element Residential Overlay 1 (HOU-1)	Office (O)	Neighborhood Commercial (NC)	General Commercial (GC)	Housing Element Residential Overlay 2 (HOU-2)	Residential Corridor Overlay (RCO)	Light Industrial (LI)	Industrial (I)	Parks and Open Space (OS)	Public and Institutional (PI)	Mixed Use (MU)	Specific Plan
Single-Family Residential (R-1)	⊙														
Two-Family Residential (R-2)		⊙													
Multiple-Family Residential (R-3)			⊙	⊙											
Housing Overlay 1 (HOU-1)			⊙	⊙											
Professional Office (C-P)					⊙			⊙	⊙						
Neighborhood Commercial (C-1)						⊙		⊙	⊙						
General Commercial (C-2)							⊙	⊙	⊙						
Central Business District (C-3)							⊙							⊙	⊙
Commercial Manufacturing (C-M)										⊙					
Hospital-Medical Arts (H-M)					⊙		⊙						⊙	⊙	
Mixed-Use (M-U)								⊙	⊙					⊙	
Light Manufacturing (M-1)										⊙					
General Manufacturing (M-2)											⊙				
Public (P)													⊙		
Open Space (O-S)												⊙			
Housing Element Residential Overlay 2 (HOU-2) and Residential Corridor Overlay								⊙	⊙						
Specific Plan (SP)															⊙

BEYOND LAND USE

This Land Use Plan considers more than just land use categories and numerical targets. The land use designations also reflect broader strategies that shape how people experience the city and interact with their neighborhoods. These include concepts like Complete Neighborhoods, Sustainability, and Healthy Communities, which are central to quality of life.

Land Use and Mobility

Effective land use planning goes hand-in-hand with mobility. Strategic placement of higher-density housing, mixed-use developments, and employment centers near transit corridors supports sustainable travel choices, reduces automobile dependence, and increases access to jobs and services. Site design should support walkability to transit stops and prioritize convenient connections for pedestrians and bicyclists. Streets, sidewalks, and pathways should be well integrated with surrounding land uses, enabling residents to access schools, parks, shops, and workplaces without relying solely on automobiles. These land use strategies support the goals and policies of the Circulation Element by creating development patterns that improve mobility, encourage active transportation, and enhance access to transit.

Complete Neighborhoods

A complete neighborhood is one in which residents have convenient access to daily needs, including housing, employment, shopping, recreation, education, and community services, within a short distance of home. Complete neighborhoods support walking, bicycling, and transit use while fostering social interaction, community identity, and access to essential services. A mix of land uses and housing choices allows residents of different ages, incomes, and abilities to remain connected to opportunities and amenities throughout the city. The concept of complete neighborhoods is reinforced through the Housing Element, Conservation and Open Space Element, and Circulation Element, which collectively support housing opportunities, access to parks and community facilities, and transportation choices that enhance quality of life.



Pedestrian-friendly streets with active uses, accessible sidewalks, and comfortable public spaces support walking and create more connected community environments.

Healthy Communities

Land use decisions influence public health, environmental quality, and access to opportunity. Healthy and equitable communities provide access to parks, quality housing, fresh food, transportation options, community facilities, and other resources that support well-being. Land use planning can also help reduce exposure to pollution, noise, and environmental hazards, particularly in neighborhoods that have historically experienced disproportionate environmental burdens. These objectives are closely tied to the Environmental Justice Element, which addresses environmental burdens and equitable access to community resources, and the Safety Element, which promotes healthy and resilient neighborhoods.

Sustainability

Environmental sustainability involves designing development patterns that reduce resource consumption and minimize environmental impacts. Strategies include locating housing and employment near transit, supporting compact and mixed-use development, integrating energy-efficient systems, conserving water, preserving open space, and encouraging renewable energy infrastructure. These approaches help reduce greenhouse gas emissions, improve environmental resilience, and support long-term economic and environmental sustainability. The Sustainability framework established through land use planning complements the Conservation and Open Space Element, Environmental Justice Element, Safety Element, and Circulation Element by supporting climate adaptation, resource conservation, environmental quality, and reduced vehicle emissions.

Economic Development

Land use and economic development are closely interconnected. The location and design of commercial centers, mixed-use districts, industrial areas, and employment corridors influence business investment, job creation, and fiscal sustainability. Through coordinated land use planning, Downey can support business retention and expansion, attract new investment, strengthen commercial corridors, and create opportunities for a diverse range of industries and employers. The Economic Development Element builds upon this land use framework by establishing strategies to promote business growth, workforce development, tourism, innovation, and long-term economic competitiveness, ensuring that future development contributes to both community prosperity and fiscal sustainability.

Community Design and Cultural Resources

The character of the built environment is shaped not only by land use but also by the quality of design and preservation of cultural resources. Land use decisions should reinforce neighborhood character, support compatible development patterns, and respect the architectural, historical, and cultural features that contribute to Downey's identity. The Design and Cultural Resources Element provides detailed guidance regarding urban design, neighborhood compatibility, historic preservation, cultural resources, and public realm improvements, helping ensure that future growth enhances community character while preserving the qualities that make Downey distinctive.

TARGETED AREAS OF CHANGE

This General Plan largely preserves established land use patterns in Downey (Figure LU-7). To accommodate growth, reinvestment, and strategic land use transitions, the Land Use Plan focuses changes along commercial corridors to strengthen economic resilience and:

- Facilitate high-quality property improvements, redevelopment, and compatible infill development
- Promote walkable, compact development patterns and strengthen multimodal connections between land use and transportation
- Support economic development by reducing retail leakage and encouraging new commercial services, dining establishments, and employment opportunities that meet community needs and strengthen the local economy.
- Expand opportunities for high-quality housing that meets the diverse needs of current and future residents
- Enhance the public realm through quality development, landscaping, and streetscape improvements
- Reinvigorate aging commercial centers and districts to create shared benefits for residents, businesses, and property owners

Successful revitalization involves more than changes in land use; it requires an integrated approach that considers urban form, mobility networks, environmental conditions, and community well-being. In addition to guiding transitions in targeted areas, the Land Use Plan supports quality infill and reinvestment that strengthen the character, functionality, and vitality of neighborhoods and districts. The Design and Cultural Resources Element further establishes expectations for the form and character of new development and public realm improvements.

Districts and Corridors

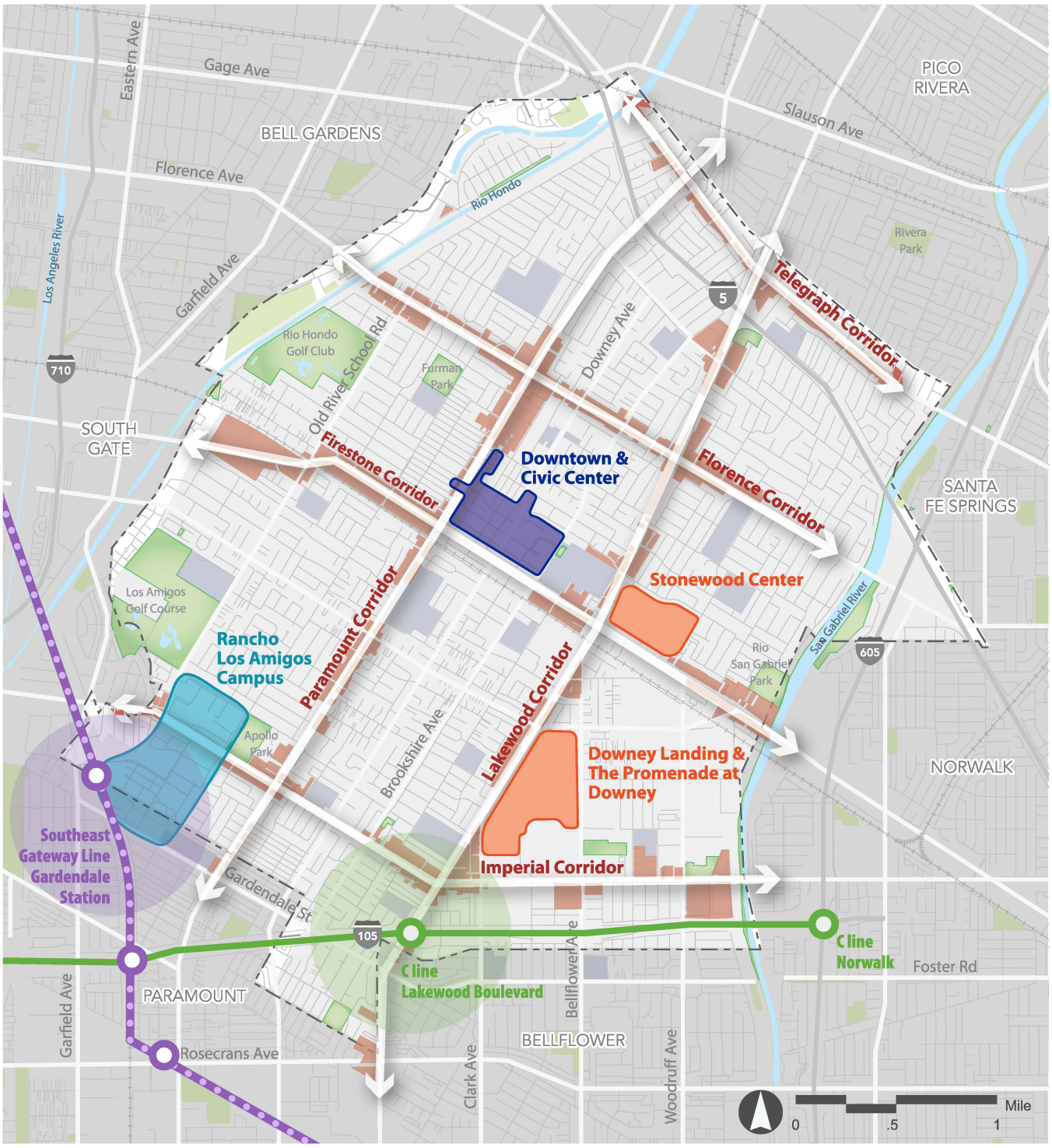
Targeted districts and corridors are identified to accommodate growth, reinvestment, and strategic change. These areas represent key opportunity locations where focused planning will support economic development, housing expansion, transit-oriented development, and enhanced public spaces.

Districts

Downey's districts are distinct areas of the city strategically positioned to accommodate growth, reinvestment, and targeted change. Each district has a defined role in shaping the city's urban form, land use intensity, mobility networks, and community amenities while maintaining compatibility with surrounding neighborhoods.

- **Downtown and Civic Center.** The Downtown and Civic Center area will remain the primary mixed-use urban center and cultural hub, guided by the Downtown Downey Specific Plan, which provides tailored development standards and design guidelines across approximately 131 acres of mixed-use districts. Development will continue to reinforce Downtown as a lively destination for dining, shopping, entertainment, housing, employment, and civic uses within a walkable environment. Strategic growth will focus on enhancing the edges of Downtown; strengthening connections to adjacent neighborhoods, Firestone Boulevard, and the Civic Center; and improving streetscapes, public spaces, and multimodal accessibility.
- **Ranch Los Amigos Campus.** The Rancho Los Amigos Campus is a major regional employment and mixed-use center anchored by expanded Los Angeles County facilities and transit-oriented development. Revitalization of the southern campus will support a compact, multi-modal environment centered around the planned

FIGURE LU-7: DISTRICTS AND CORRIDORS



Districts

- Downtown & Civic Center
- Commercial Center Districts
- Transit-Oriented Community

Corridors

- Corridor

Transit

- Metro C Line & Station
- Planned 'Southeast Gateway' Line & Station

Basemap Features

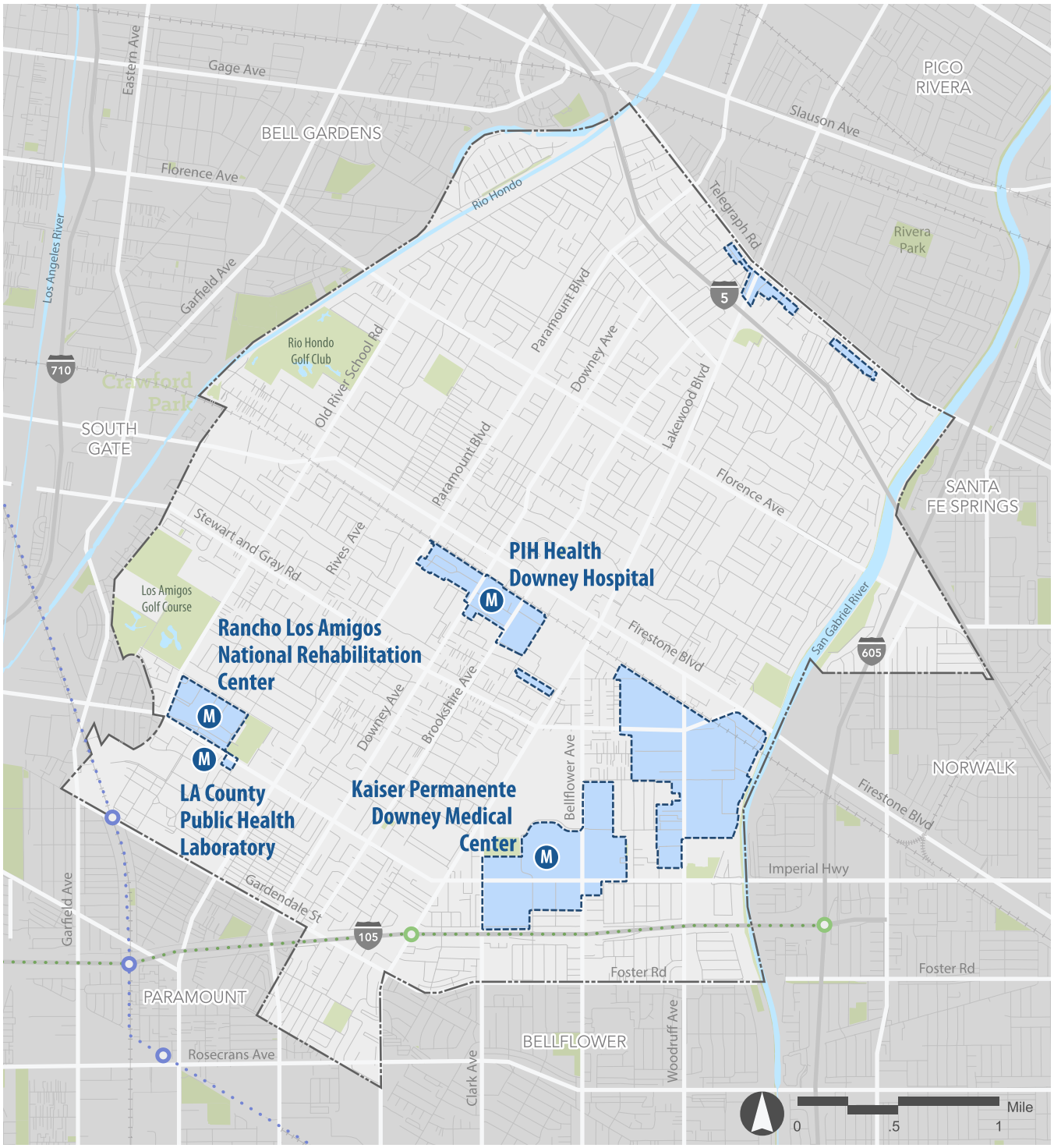
- City Boundary
- Waterways
- Parks/Open Space

Southeast Gateway line and Gardendale Transit Station.

Development will include a diverse mix of employment uses, regional services, housing, cultural facilities, and public spaces that create an economically productive district. New projects will emphasize transit-supportive densities, sustainable design, enhanced pedestrian connectivity, and strong links to surrounding neighborhoods. The area will integrate public spaces and community amenities while preserving and celebrating the campus's historic identity and role as a regionally important center.

- **Downey Landing and The Promenade at Downey.** Downey Landing and The Promenade at Downey are envisioned to evolve into vibrant mixed-use destinations that combine retail, housing, employment, and entertainment uses. New development will expand opportunities for multifamily housing, hospitality uses, and neighborhood- and regional-serving retail. The area will continue to serve as a major gathering place, with enhanced public spaces, pedestrian-oriented design, and improved connectivity to surrounding neighborhoods. Redevelopment will encourage reinvestment in established commercial properties while introducing new housing and activity centers that support economic vitality and community life.
- **Stonewood Center.** Stonewood Center is a focus area for commercial revitalization and mixed-use redevelopment. Envisioned improvements include modernizing the shopping center, introducing housing and complementary uses, and transforming the area into a more active and integrated destination. Development will support a mix of retail, residential, and commercial uses, improved site design, and enhanced pedestrian and transit access. Over time, the area may transition toward a more compact, mixed-use environment that strengthens economic activity and creates new housing opportunities.
- **Biomedical District.** The Biomedical District is a zoning overlay district that promotes biomedical and healthcare-related development in the area surrounding major medical institutions, including along Woodruff Avenue, Imperial Highway, and portions of Telegraph Road near Rancho Los Amigos National Rehabilitation Center, Kaiser Permanente Downey Medical Center, and PIH Health Downey Hospital (see Figure LU-8). The overlay applies additional land use and development provisions to properties within the district while retaining the underlying base zoning. The district includes properties on both sides of key corridors, including the south side of Telegraph Road, to support the continued growth of a connected medical and innovation cluster. The overlay reinforces the City's role as a regional healthcare and biomedical hub while strengthening employment opportunities and economic growth. It provides flexibility to allow biomedical research, medical services, laboratories, medical device production, and related professional office uses beyond those otherwise permitted in the underlying base zones.

FIGURE LU-8: BIOMEDICAL DISTRICTS



Biomedical Districts

- Biomedical Districts
- Medical Facility

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line

Corridors

Corridors are major transportation and activity spines that support commercial activity, multifamily housing, and multimodal connectivity. These corridors are key locations for targeted growth, mixed-use development, and public realm improvements that reinforce urban character. To expand housing opportunities and support reinvestment, portions of several corridors include the Housing Element Overlay 2 (HOU-2) and Residential Corridor Overlay (RCO) designations. These overlays allow higher-density residential and mixed-use development on selected commercial properties, helping accommodate future housing needs while supporting economic vitality, transit access, and walkable development patterns.

- **Lakewood Corridor.** The Lakewood Corridor connects Downtown with adjacent neighborhoods. The corridor includes HOU-2 and RCO areas that provide opportunities for higher-density housing and mixed-use development along commercially zoned properties while maintaining appropriate transitions to surrounding neighborhoods. Development will consist of higher-intensity commercial, office, residential, and mixed-use buildings near major intersections, with transitions to surrounding residential areas through sensitive building height, massing, and setbacks. The RoseWood Corridor Project will convert the corridor into a Complete Street, with enhanced rapid bus service, safer bus stops, and improved pedestrian and bicycle connections. A pedestrian-friendly streetscape with wider sidewalks, shade trees, active ground-floor uses, and accessible crossings will strengthen connections to the Metro C Line Lakewood Station and support walking for people of all ages and abilities. Streetscape enhancements, active frontage design, and reinvestment in underutilized properties will strengthen connectivity, create a cohesive corridor identity, and reinvent the street as a modern, multimodal corridor.
- **Firestone Corridor.** The Firestone Corridor will remain a major commercial spine serving local and regional markets, while accommodating expanded housing



Looking east at the intersection of Firestone Boulevard and Lakewood Boulevard

opportunities through HOU-2 and RCO areas located along portions of the corridor.

- **West Firestone** will continue to function as a primary retail and commercial corridor serving regional needs.
- **Central Firestone** will support and complement Downtown by accommodating mixed-use development, employment uses, and intensified activity.
- **East Firestone** will continue to provide commercial and service-oriented uses while supporting reinvestment and modernization.

Across the corridor, improvements will enhance streetscape quality, pedestrian safety, and transit accessibility while supporting economic development and corridor identity.

- **Paramount Corridor.** The Paramount Corridor includes HOU-2 and RCO areas that support expanded multifamily housing opportunities and compatible mixed-use development along commercially zoned properties. Redevelopment will introduce higher-density residential uses while supporting existing commercial activity and neighborhood-serving businesses. Development will promote transit-supportive densities at select locations, improved pedestrian connectivity, and enhanced neighborhood access to services. New housing will be designed to provide appropriate transitions to surrounding neighborhoods.
- **Telegraph Corridor.** The Telegraph Corridor includes HOU-2 and RCO areas that provide opportunities for higher-density residential and mixed-use development as part of a broader corridor revitalization strategy. New projects will increase housing opportunities along a major transportation route, support transit access, and encourage reinvestment in underutilized properties. Improvements will enhance walkability, strengthen connections to nearby services and employment areas, and create a more cohesive corridor character.



Central Firestone will support and complement Downtown with mixed-use development, employment uses, and an active pedestrian-oriented environment.

- **Florence Corridor.** The Florence Corridor includes selected HOU-2 and RCO areas that support additional housing opportunities while maintaining the corridor's role as a center for medical, office, and neighborhood-serving commercial uses. Future land use will prioritize mixed-use and higher-density, transit-supportive development near activity centers while maintaining appropriate transitions to surrounding residential neighborhoods. Streetscape improvements, pedestrian and bicycle enhancements, and improved public spaces will enhance walkability, strengthen corridor cohesion, and support connections to nearby services, transit, and community amenities.
- **Imperial Corridor.** The Imperial Corridor includes HOU-2 and RCO areas that support mixed-use redevelopment, higher-density housing, and employment-oriented uses, particularly near key intersections, medical facilities, and transit connections. Future urban form will emphasize compact, walkable development patterns with active frontages, improved public spaces, and multimodal connections, including enhanced connectivity to the Metro C Line Lakewood Station. Development will balance growth with neighborhood compatibility through careful building scale, setbacks, landscaping, and design measures that integrate new residential and mixed-use development with adjacent neighborhoods.

DEVELOPMENT POTENTIAL

The Land Use Plan accommodates modest growth through 2045. Figure LU-9 presents build-out projections between 2024 (baseline) and 2045, showing projected increases in housing units, nonresidential building square footage, and employment. These estimates provide a planning tool to monitor growth and inform decision-making; actual development may vary based on market conditions, infrastructure availability, and community priorities.

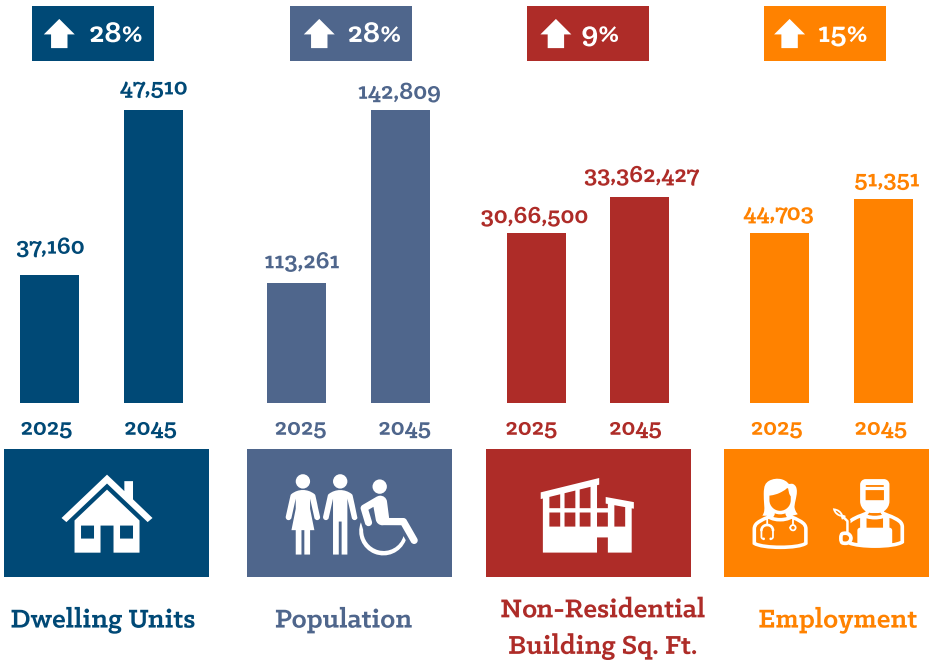
The ongoing need for a wider range of housing options will drive new residential development, particularly in multifamily housing and accessory dwelling units, supporting higher-density, transit-accessible neighborhoods while maintaining the character of established single-family areas. Concurrently, commercial and industrial investment will expand space for businesses and jobs, strengthening the city's economic base. Thoughtful planning and infrastructure investment will be critical to support housing choice, vibrant neighborhoods, and a resilient local economy.

Growth Summary

By 2045, total dwelling units in Downey are projected to increase by nearly 28 percent, from 37,160 to 47,510, while population is expected to grow from 111,326 to 142,809 (see Figure LU-4). Non-residential development will also expand, with building area increasing by nearly nine percent and employment rising by approximately 15 percent. The greatest employment growth is anticipated in the commercial and industrial sectors, reflecting a shift toward more intensive uses and a stronger local jobs base.

These projections underscore the importance of integrating higher-density housing near transit, promoting complete and walkable neighborhoods, and ensuring new development complements surrounding areas.

FIGURE LU-9: PROJECTED GROWTH SUMMARY



GOALS AND POLICIES

Land Use goals and policies provide direction for guiding desired growth and change and land use decisions that will create a balanced, sustainable, and vibrant community. The goals establish desired outcomes for housing, economic vitality, neighborhood preservation, and public spaces, while the policies provide actionable guidance for achieving them.

GOAL LU-1: GROWTH AND CHANGE THAT SERVES COMMUNITY NEEDS, IS COMPATIBLE WITH LONG-ESTABLISHED LAND USE PATTERNS, PRESERVES FISCAL STABILITY, AND ENHANCES QUALITY OF LIFE

Policy LU-1.1: Directed Growth. Concentrate growth along major corridors and in mixed-use districts to preserve established residential neighborhoods, support efficient infrastructure use, and encourage transit use.

Policy LU-1.2: Context-Sensitive Development. Require new infill development to be compatible with surrounding neighborhood or district context, including building form, scale, and site design.

Policy LU-1.3: Land Use Compatibility. Provide appropriate buffers between sensitive land uses (residences, schools, and recreation areas) and major sources of noise, pollution, and emissions, including freeways and industrial operations.

Policy LU-1.4: Fiscal Sustainability. Attract and support revenue-generating uses and investment that strengthen the City's long-term fiscal sustainability and align with service capacity.

Policy LU-1.5: Mixed-Use Environments. Encourage a mix of land uses that supports opportunities to live, work, and access services within the community.

GOAL LU-2: STABLE, HIGH-QUALITY NEIGHBORHOODS THAT REFLECT DIVERSE HOUSING TYPES AND RESPECT ESTABLISHED CHARACTER

Policy LU-2.1: Neighborhood Preservation. Preserve and enhance single-family neighborhoods by maintaining established character, supporting sensitive land use transitions, and ensuring compatible adjacent development.

Policy LU-2.2: Neighborhood Compatibility and Design. Ensure new residential development reflects neighborhood context through appropriate height, massing, setbacks, building scale, and site design.

P**olicy LU-2.3: Residential Scale and Site Integration.** Establish development standards that maintain appropriate relationships between building size and lot size.

Policy LU-2.4: Transit-Supportive Housing. Support higher-density housing in areas with access to transit, services, and employment, including corridors and commercial areas.

Policy LU-2.5: Housing for All. Encourage the development of affordable housing for all income groups, including for persons with developmental disabilities, and encourage the strategic use of available funding sources and development incentives for the production of long-term housing.

GOAL LU-3: COMMERCIAL DISTRICTS THAT PROVIDE COMMUNITY-SERVING USES, ATTRACT LOCAL SPENDING, AND SUPPORT THRIVING BUSINESSES

Policy LU-3.1: Commercial Revitalization and Economic Vitality. Promote reinvestment and adaptive reuse in commercial areas that modernize properties, encourage mixed-use environments, improve site and building conditions, and strengthen local economic activity and fiscal revenue.

Policy LU-3.2: Corridor Development. Establish corridor nodes that accommodate new residential and commercial uses enhance the public realm and economic activity.

Policy LU-3.3: Mixed-Use Development. Promote mixed-use development that increases housing supply, supports economic vitality, and creates walkable environments.

Policy LU-3.4: Parking Strategies. Implement parking solutions that are incentives for creative site planning and urban design (e.g., joint-use parking, parking management systems, parking structures).

Policy LU-3.5: Quality Design. Require high-quality site design, landscaping, architecture, and property maintenance for commercial development and redevelopment.

Policy LU-3.6: Neighborhood Commercial. Encourage neighborhood-serving commercial uses that meet local daily needs, provide convenient access to goods and services, and enhance walkability and community vitality within residential areas.

GOAL LU-4: A DYNAMIC MIX OF BUSINESSES AND EMPLOYMENT-GENERATING USES THAT PROVIDE QUALITY JOBS AND SUSTAIN A STRONG LOCAL ECONOMY

Policy LU-4.1: Employment Clusters. Encourage investment in employment-generating uses that build upon and strengthen existing medical, office, and industrial clusters to support economic growth and innovation.

Policy LU-4.2: Industrial Land Preservation. Protect industrial lands for job generating uses while supporting modernization that reinforces industry clusters and prioritizes operational compatibility with surrounding areas.

Policy LU-4.3: Business Attraction and Retention. Support the attraction, retention, and expansion of manufacturing, industrial, and emerging industry sectors that strengthen the city's economic base, generate revenue, and provide quality employment opportunities.

Policy LU-4.4: Healthcare and Innovation Uses. Promote the development and expansion of medical, health technology, and related industries in areas near major healthcare institutions to enhance healthcare services, foster innovation, and create quality employment opportunities.

Policy LU-4.5: Biomedical Facilities. Encourage the attraction and expansion of medical research, laboratory, and outpatient uses within the established Biomedical Overlay to support healthcare innovation and high-quality employment opportunities.

Policy LU-4.6 Economic Value of Land Uses. Prioritize land uses within employment areas that support productivity, job creation, and

community benefit, and discourage uses that provide limited economic or community benefit.

GOAL LU-5: LIVELY MIXED-USE AREAS NEAR TRANSIT THAT PROVIDE OPPORTUNITIES TO LIVE, WORK, SHOP, AND CELEBRATE COMMUNITY LIFE

Policy LU-5.1: Downtown Vitality. Support public and private investment in Downtown to reinforce its role as the city's cultural, civic, and commercial core and a focal point for community activity.

Policy LU-5.2: Transit-Oriented Development. Encourage transit-supportive development near major transit facilities that integrates housing, employment, services, and public spaces.

Policy LU-5.3: Major Activity Centers. Support mixed-use redevelopment in major commercial and institutional areas that enhances economic activity and creates community gathering places.

Policy LU-5.4: Metro C Line Station Area. Encourage transit-oriented, mixed-use development within one-half mile of the C Line station by directing higher-density housing and commercial uses to nearby commercial areas.

Policy LU-5.5: Southeast Gateway Transit-Oriented Development. Support transit-oriented, mixed-use development at the planned Southeast Gateway within the southern portion of the Rancho Los Amigos Campus, supporting higher-density housing, employment uses, and supportive services that leverage regional transit access.

GOAL LU-6: HEALTHY COMMUNITIES WHERE HOUSING, WORK, AND AMENITIES ARE CONVENIENTLY ACCESSIBLE

Policy LU-6.1: Walkable Neighborhoods. Encourage safe and walkable environments as a priority in new development and redevelopment.

Policy LU-6.2: Mobility and Access. Encourage land use and urban design patterns that prioritize safe, accessible, and connected walking and biking routes linking schools, parks, employment areas, and transit stops.

Policy LU-6.3: Reduced Vehicle Dependence. Encourage land use patterns that support walking, bicycling, and transit use to reduce reliance on private vehicles.

Policy LU-6.4: Equitable Access to Services. Promote equitable access to neighborhood amenities, public facilities, and open space citywide.

Policy LU-6.5: Community Health and Wellness. Preserve and expand public facilities, open space, and design features that support health, wellness, and active living.

GOAL LU-7: DISTRICTS AND CORRIDORS THAT SUPPORT GROWTH, INVESTMENT, AND CONNECTIVITY

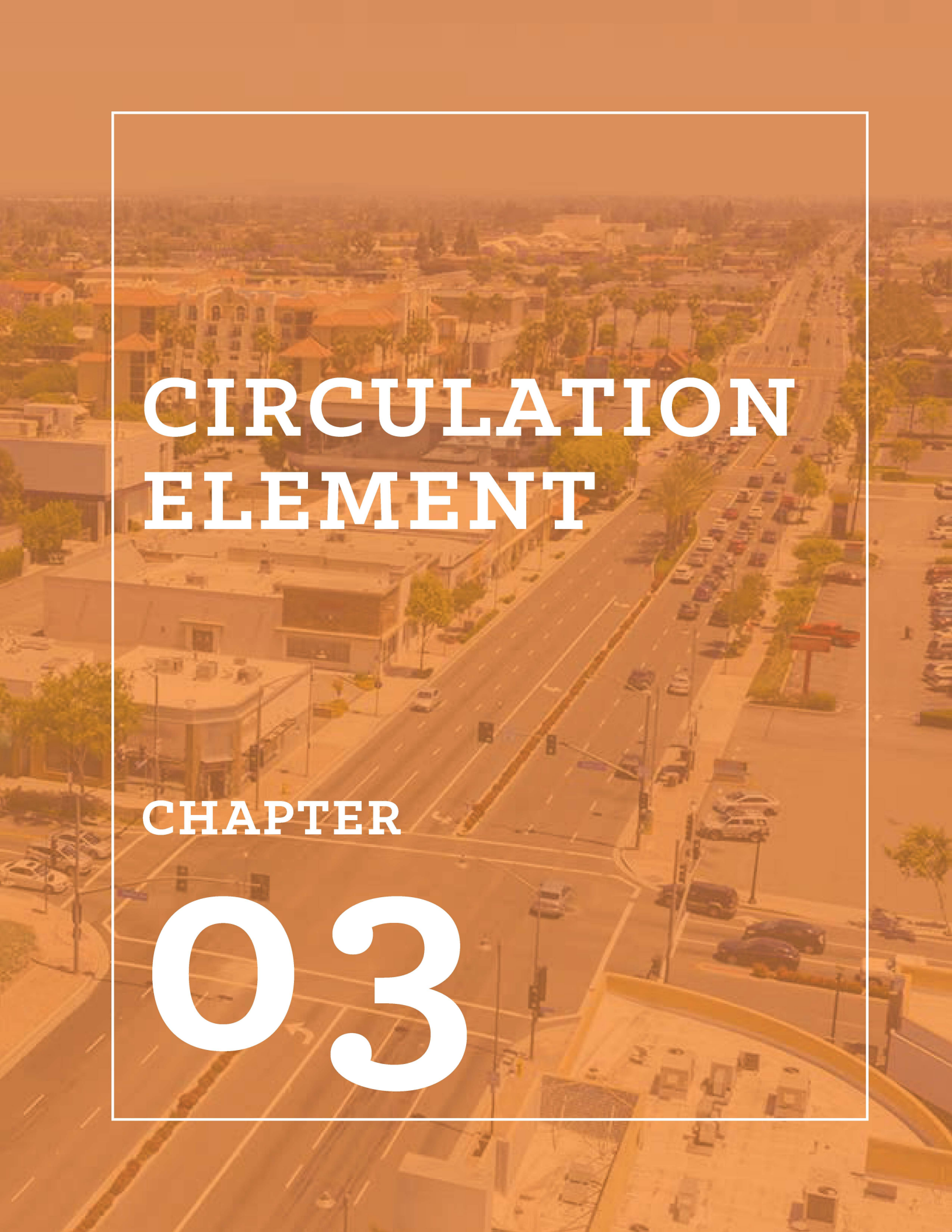
Policy LU-7.1: Downtown Vitality. Support mixed-use development and investment to enhance cultural, civic, and commercial activity, strengthen pedestrian, bicycle, and transit accessibility, and enhance public spaces.

Policy LU-7.2: Civic Center Vitality. Support continued investment and improvements in the

Civic Center area to enhance civic functions and improve public spaces.

Policy LU-7.3: Rancho Los Amigos Campus. Encourage transit-oriented, mixed-use development at the Rancho Los Amigos Campus and the Southeast Gateway area that integrates employment, housing, services, public spaces while respecting the area's history.

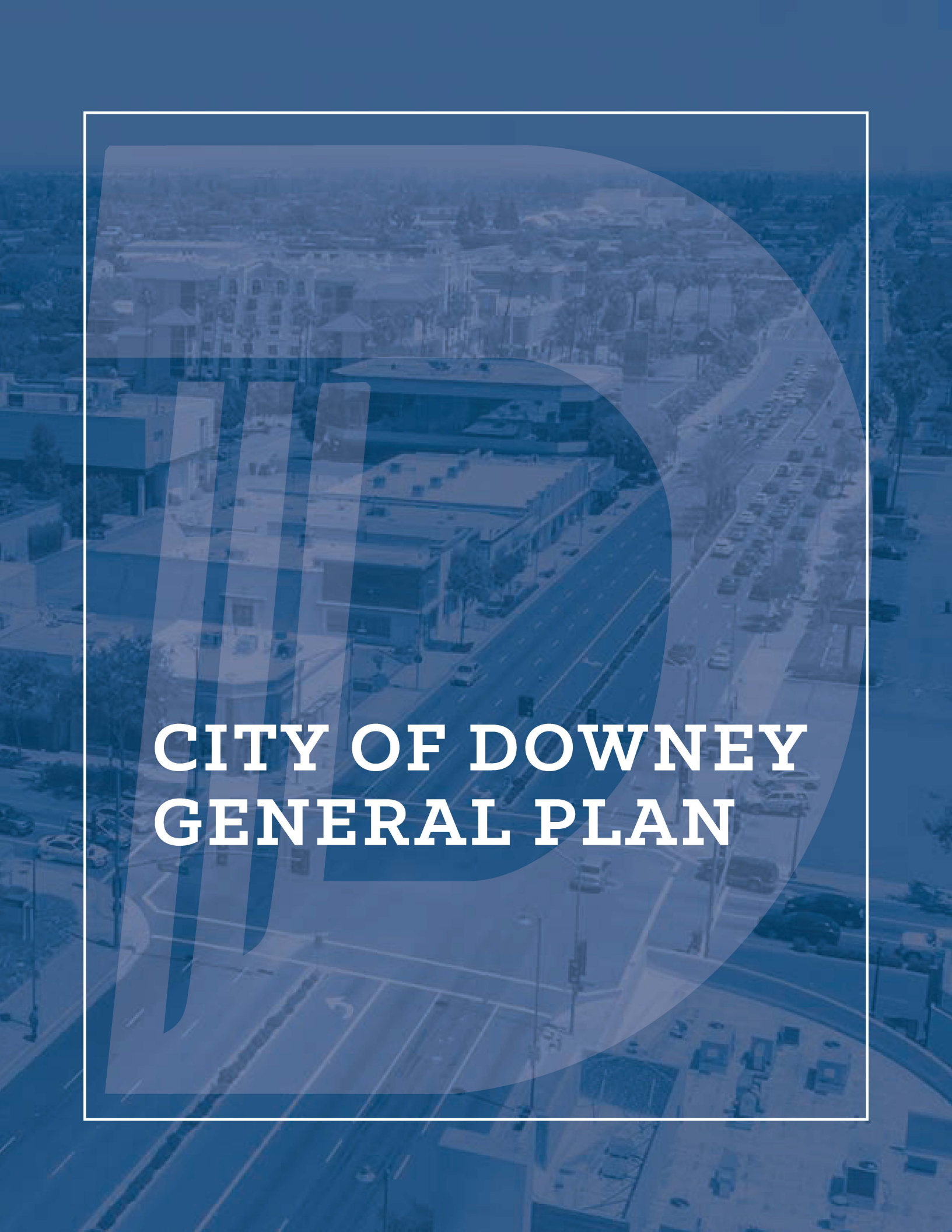
Policy LU-7.4: Mixed-Use Commercial Destinations. Encourage reinvestment and redevelopment at major commercial centers, including Downey Landing, The Promenade at Downey, and Stonewood Center, toward the goal of reinventing those places as vibrant, walkable mixed-use destinations that integrate retail, housing, employment, and public gathering spaces.



CIRCULATION ELEMENT

CHAPTER

03



CITY OF DOWNEY GENERAL PLAN

CHAPTER

03

CIRCULATION ELEMENT

INTRODUCTION

What this chapter addresses and why these topics are important?

The Circulation Element addresses how people, goods, and essential services move throughout Downey. It defines the safe, efficient, mobility network that allows multiple modes of travel and connects Downey to the region. The Circulation Element also addresses the infrastructure systems that support essential service systems, including water supply, wastewater, storm drainage, communications, and solid waste and recycling services.

While distinct in purpose, these physical and utility networks are closely intertwined, working together to support public health, environmental quality, and reliable city operations.

By coordinating mobility and infrastructure planning, the City can reduce congestion, improve safety, support environmental sustainability, and strengthen the capacity of Downey's built systems to adapt to future change.

GUIDING PRINCIPLES SHAPING THE CIRCULATION ELEMENT

The Circulation Element provides a long-term framework for planning and managing the City of Downey's mobility and infrastructure systems, emphasizing safe, efficient, and connected movement for people, goods, and essential services. It guides policies that strengthen mobility, access, and service reliability while supporting the City's environmental and community goals. The Element addresses two interrelated components:

- **Mobility,** which focuses on transportation networks and travel, and
- **Infrastructure,** which focuses on essential service systems such as water supply, wastewater, storm drainage, communications, and solid waste and recycling.

Together, these components support community function, public health, and long-term resilience.

This framework is grounded in the principles of sustainability, connectivity, and multi-modal design, ensuring that strategies address travel

needs and the infrastructure systems that sustain daily life and city operations.

This Element outlines strategies to enhance streets, transit, bicycle and pedestrian networks, and mobility hubs, Also, the planning approaches strengthen infrastructure systems that support water management, communications, and waste services. Coordinated planning improves system performance, ensures equitable access, supports climate resilience, and applies innovative solutions to meet current and future needs.



Plan for Safe, Practical, Connected Travel

Address the most urgent travel needs, expand alternatives to driving, and plan for a growing, connected community.



Grow Smart to Support Neighborhoods

Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they are needed most.



Design for Quality and Lasting Identify

Promote high-quality architecture, attractive streetscapes, and well-designed public spaces that reinforce community character, enhance the visual environment, and ensure new development contributes positively to established neighborhood identity and long-term vitality.

COMMUNITY CONSIDERATIONS

Community workshops, pop-up events, and online engagement provided valuable input on transportation and infrastructure priorities, while the evaluation of existing conditions helped identify ongoing challenges related to traffic safety, active transportation connectivity, transit access, aging infrastructure, and environmental sustainability. Residents emphasized the need for safer streets, improved walking and bicycling conditions, better lighting, reliable infrastructure, and enhanced connections to schools, parks, businesses, and transit. The City has already made significant investments and continues to address many of these issues through ongoing programs, capital improvements, and maintenance efforts. However, as a long-term planning document, the General Plan recognizes that transportation and infrastructure needs will continue to evolve over time. Community feedback and technical analysis highlight opportunities to build upon current efforts, address remaining challenges, and guide future investments that support a safe, connected, efficient, and resilient transportation and infrastructure network.

Safety for All Users

Downey's major corridors, including Paramount Boulevard, Firestone Boulevard, Florence Avenue, Lakewood Boulevard, and others, carry high traffic volumes and speeds that can create safety challenges for pedestrians, bicyclists, and motorists. Community members expressed concerns about speeding and traffic conditions near schools, parks, and other activity centers.

Walkability and Accessibility

Although many neighborhoods are walkable, gaps in the sidewalk network, limited shade, and accessibility barriers can make it difficult for residents to safely reach schools, parks, transit stops, and commercial destinations. Improving pedestrian accessibility remains an important community priority.

Street Lighting and Public Realm Quality

Residents identified inadequate lighting in some neighborhoods, along pedestrian routes, and near community destinations as a concern affecting visibility, comfort, and perceptions of safety. Maintaining a well-lit and welcoming public realm is important to supporting walking, recreation, and neighborhood activity.

Active Transportation and Mobility Options

Downey's bicycle network remains incomplete in some areas, limiting opportunities for safe and comfortable travel by bicycle and other active modes. Improving connections between neighborhoods, schools, parks, employment centers, and regional trails is important for expanding mobility options and reducing dependence on automobiles.

Transit and Regional Connectivity

Public transit provides an important transportation option for many residents, workers, students, and visitors. However, challenges related to transit access, service convenience, bus stop amenities, and first- and last-mile connections can affect transit use and limit mobility for those who rely on public transportation.

Green Infrastructure and Environmental Quality

Limited tree canopy, urban heat, stormwater runoff, and other environmental conditions affect the comfort and functionality of streets and public spaces. Integrating green infrastructure into transportation corridors can improve environmental quality, support climate resilience, and enhance the pedestrian experience

Infrastructure Maintenance and System Reliability

Downey relies on an extensive network of streets, sidewalks, drainage facilities, lighting systems, utilities, and other public infrastructure that requires ongoing maintenance and periodic upgrades. Aging infrastructure, increasing service demands, and evolving environmental conditions create long-term challenges for maintaining reliable and resilient public facilities.



Walking in Downtown Downey

MOBILITY PLAN

Introduction

Downey's circulation system connects people to jobs, schools, parks, shops, and destinations within and beyond the city. It includes streets, sidewalks, bike routes, transit services, and supportive infrastructure. The City envisions a safe, efficient, and accessible network for all users—whether they are walking, biking, riding transit, or driving.

Downtown Downey serves as the heart of the city's mobility network. Pedestrians, cyclists, and transit riders converge here to access local businesses, civic amenities, and regional connections. Investments in Downtown will prioritize safe, comfortable, and connected routes, reinforcing its role as a central hub that links surrounding neighborhoods to transit, parks, and key destinations.

The following sections outline the City's priorities and strategies for travel mode, highlighting improvements that enhance safety, connectivity, and convenience throughout the mobility network.

Pedestrian Mobility

Many people enjoy walking in Downey, especially in Downtown, where residents, workers, and visitors access schools, parks, shops, restaurants, and transit stops. Sidewalks, crosswalks, and pathways provide safe, comfortable, and accessible walking environments. Future improvements will focus on filling sidewalk gaps, upgrading intersections, implementing "road diets," enhancing accessibility for all users, and adding shade, lighting, and landscaping, all of which make walking safer, more enjoyable, and a practical mobility choice.

Bicycling

Downey's relatively flat terrain and gridded street network make it well suited for cycling. Expanding and connecting the bicycle network will provide residents with more options for



Transportation activity at the intersection of Firestone Boulevard and Downey Avenue in Downtown Downey, where pedestrian movement, local traffic, and transit access converge in a walkable, mixed-use environment

local travel and recreation while reducing traffic congestion and emissions. Downtown will be the focal point for bike connectivity, linking activity nodes, commercial centers, schools, and parks throughout the city. Planned improvements include new bike lanes, intersection upgrades, and expanded connections to nearby communities. Supporting facilities such as bike parking, wayfinding, and lighting will enhance safety and convenience for all riders.

Transit

Transit is an essential component of Downey's mobility system. Bus service connects residents to local destinations and regional employment centers, while Metro's C Line light rail station, the Downey Transit Center in Downtown, and the planned Southeast Gateway rail line will provide broader access across the greater Los Angeles region. Downtown will act as the central hub for transit connections, integrating bus routes, rail services, and first- and last-mile connections. The City's long-term plan is continue to plan for and implement enhancements to enhance bus stops and shelters, coordinate transit investments with future land use, and encourage multimodal access to strengthen transit use, improve connectivity, and support sustainable growth.

Vehicles

Automobiles, delivery vehicles, and trucks will continue to be the primary means of moving people and goods to and through Downey. The City aims to maintain a well-functioning street network that supports efficient travel while minimizing congestion and safety conflicts. Strategies include optimizing traffic signals, improving intersection design, maintaining pavement conditions, and encouraging alternative modes of travel to balance roadway demand. As delivery services increasingly rely on local routes, the City will also consider infrastructure needs that support safe loading, reduced neighborhood impacts, and future electrification of fleets and charging systems to advance cleaner, more sustainable mobility.



C Line (Los Angeles Metro) train traveling in the median of the Interstate 105, illustrating integrated transit infrastructure within a major freeway corridor

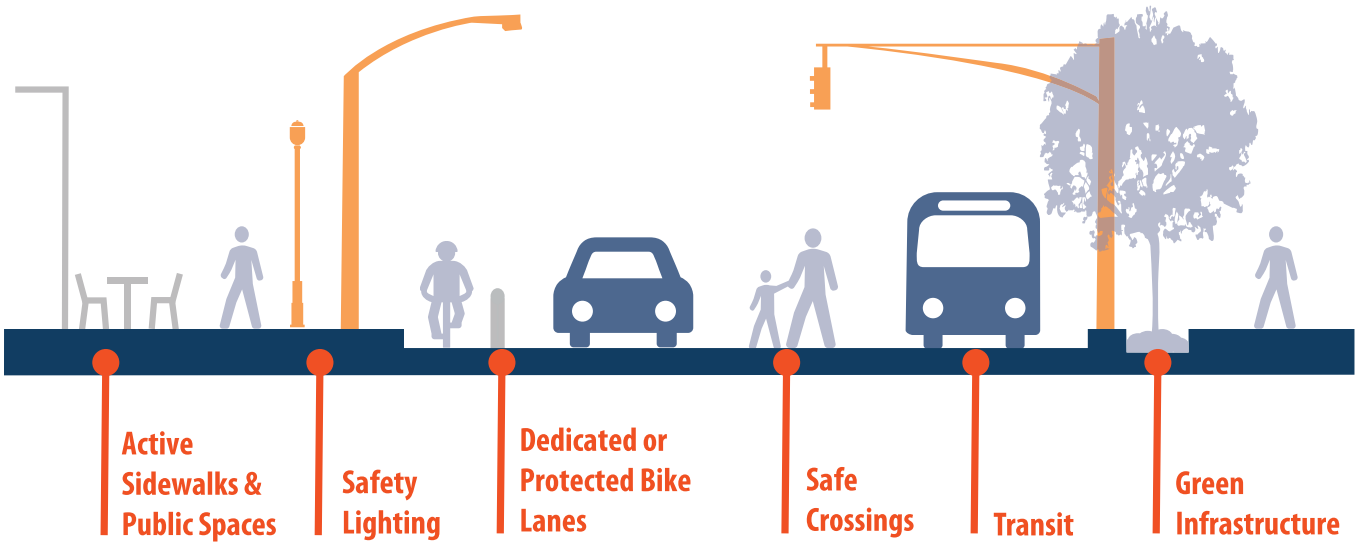
Complete Streets

Downey's Mobility Plan is guided by the Complete Streets planning approach, which provides for streets to be designed and operated to serve all users: pedestrians, bicyclists, transit riders, and motorists, regardless of age or ability. Complete Streets balance the movement of motor vehicles with the comfort and safety of people traveling by other modes.

While Complete Streets aim to support all users, not every street is expected to accommodate every mode equally. The City envisions a coordinated network in which some corridors are designed to serve multiple modes, while complementary streets provide enhanced accommodations for specific types of travel such as bicycling, walking, or transit. This approach allows improvements to be tailored to each street's context, function, and available space, while collectively creating a well connected and multimodal system.

Implementing a Complete Streets approach allows Downey to transform its corridors into multi-purpose public spaces that support mobility, health, and environmental goals. Improvements may include wider sidewalks, protected bike lanes, enhanced crosswalks, landscaped medians, accessible transit stops, stormwater management features, and street trees for shade and comfort (See Figure C-1). By designing streets as part of an integrated network, Downey can strengthen neighborhood connections and promote a more active, resilient, and inclusive transportation system.

Figure C-1: Complete Streets



Street Classification System

Downey's street network is organized into a hierarchy of street types that serve different purposes, from moving regional traffic to providing neighborhood access (see Table C-1 and Figure C-2). Each classification reflects a balance between mobility, access, and context, ensuring that streets function safely and efficiently while supporting adjacent land uses.

Freeways

Freeways serve as the highest level of mobility within Downey's mobility system, connecting the city to the greater Los Angeles region. The I-5, I-605, I-105, and I-710 freeways accommodate regional and intercity travel, supporting the movement of goods and commuters through the city. Access is fully controlled, with on- and off-ramps providing connections to major city streets. Freeways are managed by Caltrans and designed primarily for high-speed, intercity travel.

Major Arterial

Major Arterials provide direct access to freeways and connect Downey to adjacent cities and regional destinations. These streets typically include six travel lanes divided by a median, with an approximate 90-foot curb-to-curb width and a 106- to 114-foot right-of-way. They accommodate high traffic volumes and serve as key routes for commuters, goods movement, and transit. Examples include Lakewood Boulevard and Firestone Boulevard, which balance regional mobility demands with adjacent commercial access.

Design of Major Arterials emphasizes reliable travel times, efficient intersection operations, and accommodation of transit and freight movement. Pedestrian access is supported through targeted improvements such as controlled crossings, median refuge islands, enhanced visibility treatments, and other safety enhancements at key locations. Bicycle facilities are generally not prioritized along these corridors due to traffic volumes and operational demands and may instead be accommodated on parallel routes (i.e., Secondary Arterials) where a higher level of comfort and safety can be achieved.

Primary Arterial

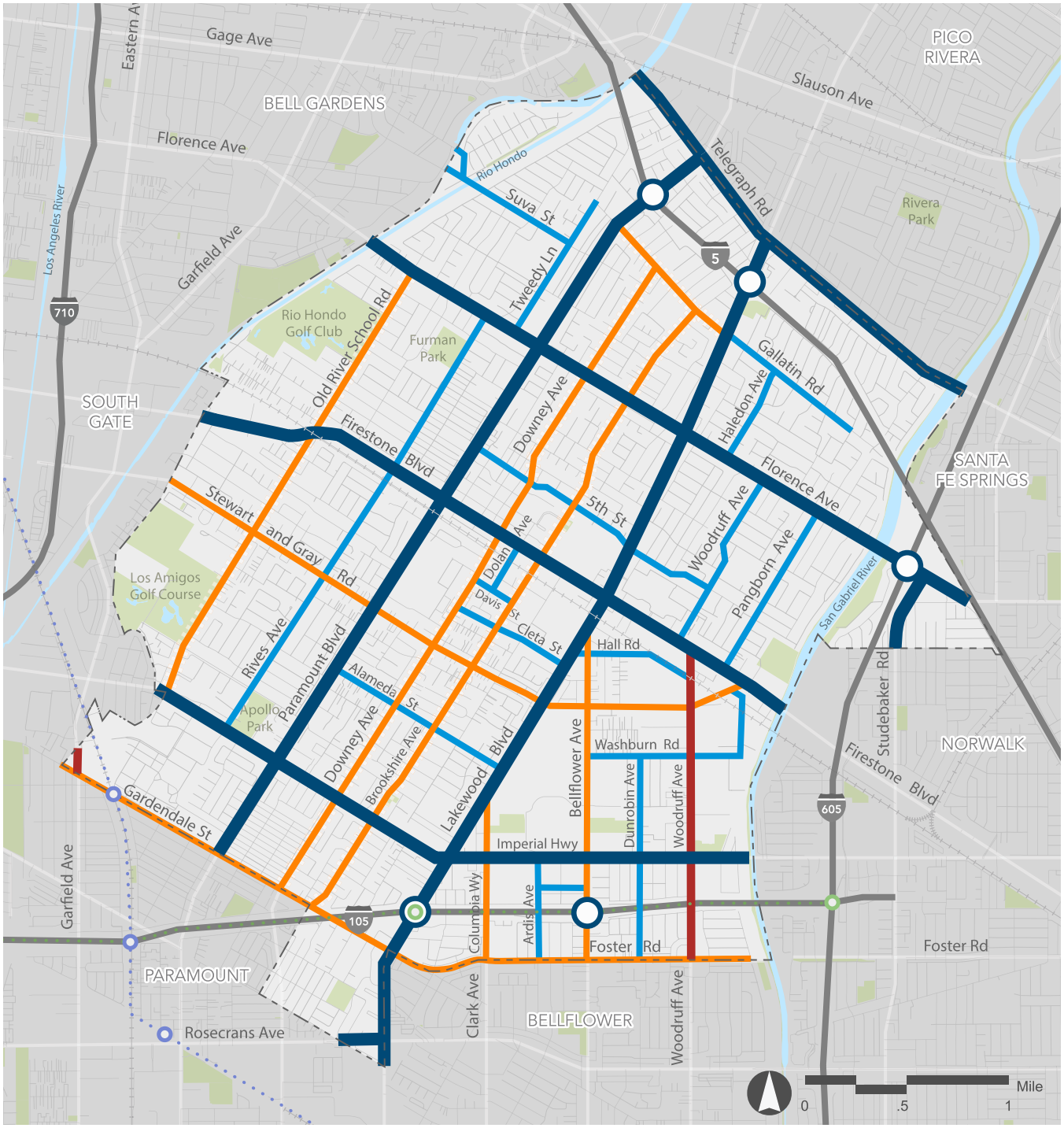
Primary Arterials connect major activity centers, such as employment areas and shopping districts, to Regional Arterials. These streets typically include four lanes divided by a center median, with an 76-foot curb-to-curb width and a 96-foot right-of-way. They are designed to support moderate traffic speeds and multimodal use, often featuring transit routes, sidewalks, and bicycle lanes. Woodruff Avenue is example of streets that link neighborhoods to the broader circulation system.

Secondary Arterial

Secondary Arterials provide mobility between neighborhoods and commercial areas and link local streets to Major and Primary Arterials. These streets generally include two-to-four undivided travel lanes with an approximate 64-foot curb-to-curb width and an 84-foot right-of-way. They carry moderate traffic volumes while providing important connections between residential areas, employment centers, schools, parks, and commercial destinations.

Secondary Arterials are designed to accommodate multiple modes through a balanced approach to mobility, safety, and access. They support walking, bicycling, transit, and vehicular travel while maintaining efficient traffic flow. Design features may include enhanced pedestrian crossings, dedicated or protected bicycle facilities, transit stop improvements, traffic calming measures, and streetscape enhancements such as street trees, landscaping, lighting, and furnishings. By prioritizing safety, comfort, and flexibility, Minor Arterials help connect neighborhoods to key

FIGURE C-2: STREET CLASSIFICATION SYSTEM



Street Classifications

- Major Arterials
- Primary Arterials
- Secondary Arterials
- Bicycle Enhanced Secondary Arterials
- Collectors
- Locals

Basemap Features

- City Boundary
- Freeway and Interchange
- Metro 'C' Line
- Southeast Gateway Line
- Waterways
- Parks/Open Space

Source: City of Downey, 2026.

TABLE C-1: STREET CLASSIFICATION SUMMARY

Street Type	Arterials			Collector	Local
	Major	Primary	Secondary		
Primary Function	Connect to freeways and regional destinations; support high traffic and goods movement	Link major activity centers to Major Arterials; moderate traffic, multimodal	Connect neighborhoods to Major and Primary Arterials; support moderate traffic	Distribute traffic from local streets to higher capacity streets	Provide access to homes, schools, businesses; prioritize livability
Typical Lanes	4-6 divided	4 divided	4 undivided & 2 divided	2 undivided	Varies
Width/ Row	90 ft/106-114 ft	76 ft/96 ft t	64 ft/84 ft	40 ft/60 ft	Varies
Key Features	Medians, transit, commercial access	Transit, sidewalks, bike lanes	Traffic calming, bike lanes, street trees	Sidewalks, parking, bike facilities	Pedestrian and cyclist safety, parking, local character
Modal Priorities	**Primary:** Vehicle, Freight, Transit **Secondary:** Pedestrian	**Primary:** Vehicle, Transit **Secondary:** Bicycle, Pedestrian	**Primary:** Vehicle, Bicycle, Transit **Secondary:** Pedestrian	**Primary:** Vehicle, Bicycle **Secondary:** Pedestrian	**Primary:** Pedestrian, Bicycle **Secondary:** Vehicle
Key Design Features	Medians, transit, commercial access, controlled crossings, landscaped median islands	Transit facilities, sidewalks, bike lanes, landscaped medians, enhanced crossings	Traffic calming, bicycle facilities, transit stops, street trees, enhanced crossings	Sidewalks, parking, bicycle facilities, neighborhood traffic	Low-speed design, parking, street trees, neighborhood character, safe crossings
Examples	Lakewood Blvd. Firestone Blvd. Paramount Blvd. Florence Ave. Imperial Hwy. Telegraphy Rd.	Woodruff Ave. Garfield Ave.	Old River School Rd. Downey Ave. Brookshire Ave. Bellflower Ave. Columbia Wy. Gardendale St.	Rives Ave. Tweedy Ln. Suva St. Gallatin Rd. Pangborn Ave. Washburn Rd. Hall Rd.	Various residential neighborhood streets

destinations while creating a more inviting and accessible public realm for all users.

Collector

Collector streets distribute traffic from local streets to higher-capacity streets while providing local circulation between residential neighborhoods, schools, parks, commercial areas, and community facilities. They typically include two undivided lanes with an approximate 40-foot curb-to-curb width and a 60-foot right-of-way. These streets support local travel, school routes, and short-distance trips, serving as important connections for everyday neighborhood access.

Design emphasizes safe and comfortable walking and bicycling while maintaining local vehicular access. Features may include sidewalks, on-street parking, bicycle facilities where appropriate, enhanced crossings, reduced speeds, traffic calming measures, street trees, and shade. Collectors balance mobility and access, with an overall character that prioritizes neighborhood connectivity and safety over through traffic.

Local Streets

Local streets provide direct access to homes, schools, parks, and businesses. They carry low traffic volumes and are designed for slower speeds to enhance safety and comfort for pedestrians and cyclists. Primarily serving residential neighborhoods, these streets are not intended for through traffic and instead support access to homes and nearby destinations. Street widths and right-of-way dimensions vary depending on neighborhood design and age.

Design features may include traffic calming measures, narrow travel lanes, on-street parking, street trees, and comfortable sidewalks that contribute to neighborhood character and livability. Local streets form the foundation of Downey's transportation network, prioritizing walkability, neighborhood interaction, and quality of life while accommodating local vehicle access.

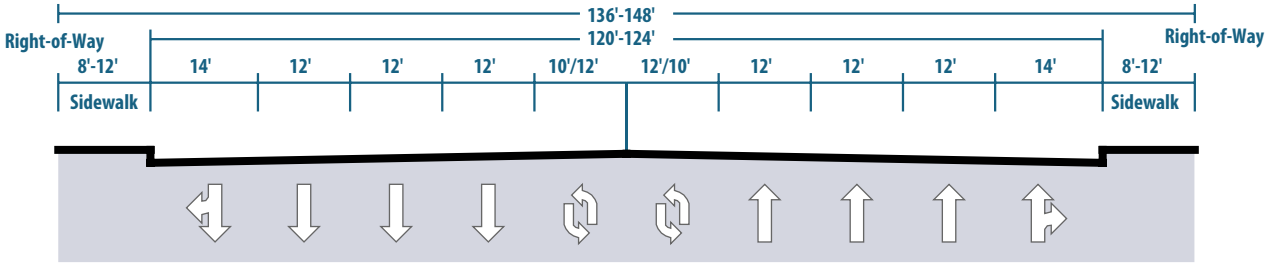
See Figures C-3. C-4, and C-5 for cross sections for Major Arterials, Primary Arterials, Secondary Arterials, and Collector streets



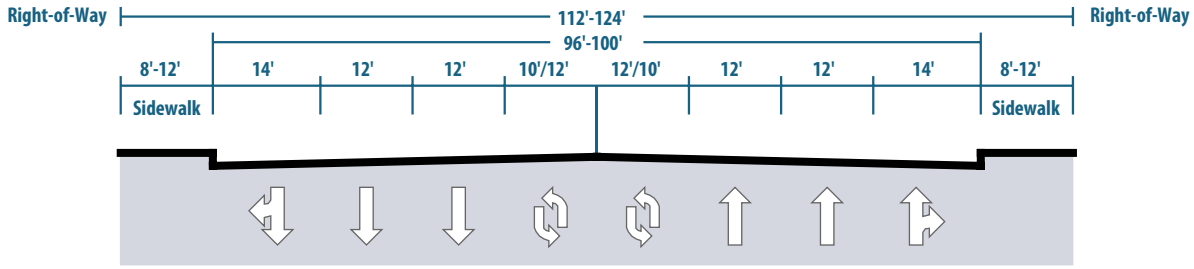
Downey Avenue is a Bicycle Enhanced Secondary Arterial

FIGURE C-3: MAJOR ARTERIALS CROSS SECTIONS

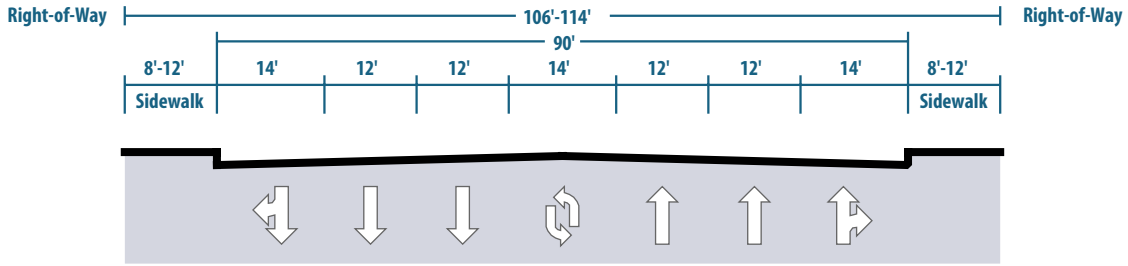
Major Arterial - Intersection (Augmented Approach)



Major Arterial - Intersection



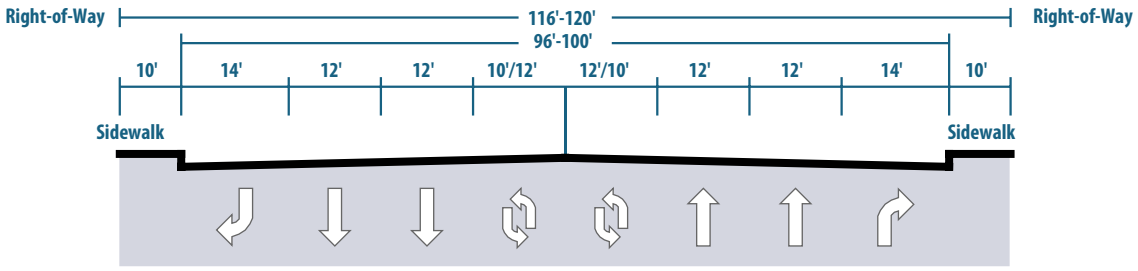
Major Arterial - Mid-Block



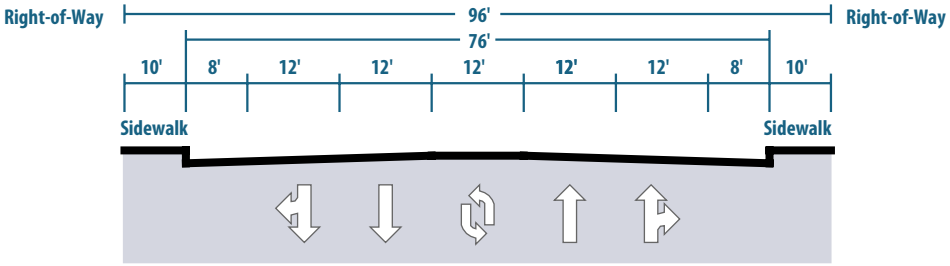
General note: Cross-sections indicate minimum desireable section; additional lanes/width may be required per detailed analysis results, particularly at the arterial-to-arterial intersections. Median width may also vary depending on the available right-of-way.

FIGURE C-4: PRIMARY ARTERIAL CROSS SECTIONS

Primary Arterial - Intersection (Approach)



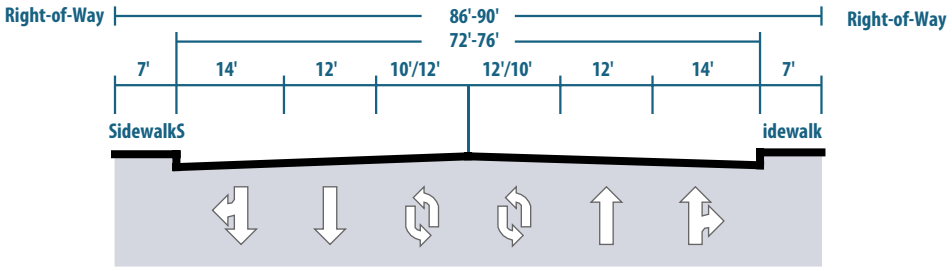
Primary Arterial - Mid-Block



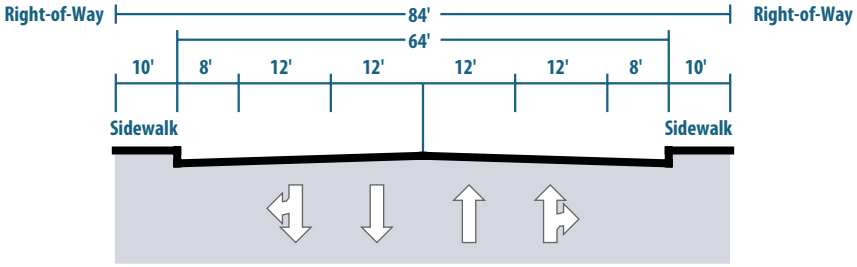
General note: Cross-sections indicate minimum desireable section; additional lanes/width may be required per detailed analysis results, particularly at the arterial-to-arterial intersections. Median width may also vary depending on the available right-of-way.

FIGURE C-5: SECONDARY ARTERIAL AND COLLECTOR CROSS SECTIONS

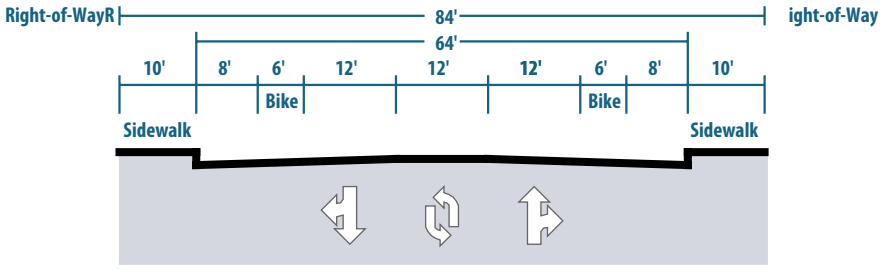
Secondary Arterial - Intersection (Approach)



Secondary Arterial - Mid-Block

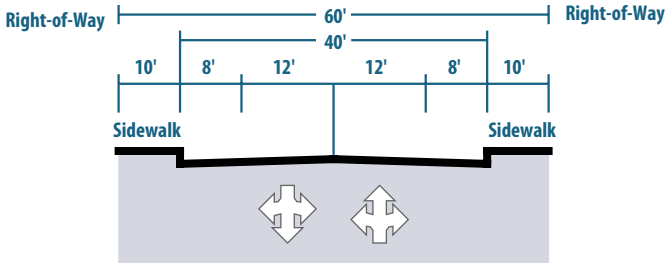


Bicycle Enhanced Secondary Arterial - Mid-Block*



*Note: At signalized intersections, bike lanes may transition to a shared through lane, as necessary, to minimize delay and queuing.

Collector



General note: Cross-sections indicate minimum desireable section; additional lanes/width may be required per detailed analysis results, particularly at the arterial-to-arterial intersections. Median width may also vary depending on the available right-of-way.

Level of Service and Vehicle Miles Traveled

Downey evaluates traffic performance using both traditional and modern measures to understand how streets function and how transportation decisions affect the community.

Level of Service (LOS) is a way to measure how smoothly traffic moves on streets and at intersections. It uses a letter grade from "A" to "F," where A means traffic flows easily with little delay and F means heavy congestion and long waits. While LOS helps identify where cars experience backups, it mainly focuses on vehicle movement and does not fully reflect how streets work for people walking, biking, or using transit, or how traffic affects the environment.

Vehicle Miles Traveled (VMT) reflects the degree to which people drive in and around the city. It adds up the total miles traveled by cars and trucks each day or for a specific project. VMT reports how new developments and road projects affect traffic and the environment. The goal is to reduce how far people need to drive by encouraging shorter trips, better public transit, and safer, more comfortable places to walk and bike.

Downey uses both LOS and VMT metrics to balance efficient mobility with sustainability goals, allowing for traffic improvements, transit expansion, and infrastructure investments support safe, connected, and environmentally responsible travel choices.

Roadway Capacity Recommendations

The planned roadway network can generally accommodate projected 2045 traffic volumes, with targeted improvements. To maintain adequate capacity on major corridors, the City will consider over time whether to widen Paramount Boulevard to provide three travel lanes in each direction between Telegraph Road and Firestone Boulevard, this is consistent with its Major Arterial designation.

Consistent with the WalkDowney Active Transportation Plan, several corridors have been identified for bicycle facility improvements through lane reductions and road diets where excess roadway capacity exists. As of 2026, some improvements had been implemented, while others remain for future consideration. Portions of Downey Avenue, Brookshire Avenue, Gallatin Road, and Old River School Road will continue to be considered for adjustments. To reflect their multimodal function, these roadways are designated as Bicycle Enhanced Secondary Arterials.

Several roadway segments, including portions of Lakewood Boulevard, Firestone Boulevard, Gardendale Street, Foster Road, and Old River School Road, are forecast to operate near capacity by 2045These condition may change over time with improved transit availability and use, evolving commute practices, and other factors that affect the means and routes people use to travel within and through Downey. The City will continue to monitor traffic operations, particularly during peak periods, and determine whether evolving conditions warrant roadway modifications.

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Curbside Management

The curbside is one of the most valuable components of the public right-of-way and serves many functions beyond parking, including passenger pick-up and drop-off, deliveries, transit stops, accessibility accommodations, micromobility parking, and emergency access. Effective curbside management helps balance these competing demands while supporting safety, mobility, and access to destinations throughout the city (see Figure C-6).

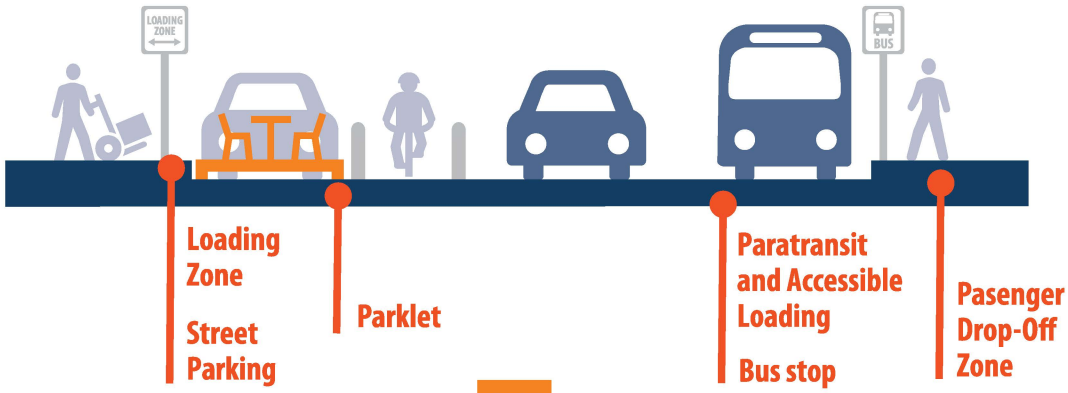
Growing demand from deliveries, rideshare services, transit operations, and commercial activity has increased competition for limited curb space. These demands can contribute to double parking, blocked visibility at intersections, and conflicts among drivers, pedestrians, bicyclists, and transit users.

Strategies to improve curbside operations may include designated loading and passenger zones, targeted time restrictions, enhanced signage and curb markings, visibility improvements near intersections and crosswalks, and ongoing monitoring of curb utilization. Proactive curbside management can help ensure that limited curb space is used efficiently while supporting safe and convenient access for all users.



Effective curbside and parking management can support parcel delivery services, reduce traffic conflicts, and improve access for businesses, residents, and visitors.

FIGURE C-6: CURB MANAGEMENT



Pedestrian Mobility

Downey's streets serve more than cars; they connect people walking, biking, and to parks, schools, shops, and neighborhoods across the city. The Active Transportation Network focuses on creating safe, comfortable, and convenient ways to travel without a car. In a city that values healthy, connected neighborhoods, improving sidewalks, crosswalks, and bike routes is essential for everyday mobility. To guide these efforts, the City adopted a Active Transportation Plan, which outlines strategies and investments to make walking and bicycling safer, more accessible, and more appealing to all.

Downey's flat topography, compact neighborhoods, and interest in walking and biking provide a strong foundation for expanding the active transportation system. Yet gaps in sidewalks, limited bike infrastructure, and safety concerns along busy corridors make it challenging for people to choose these options confidently. Strengthening pedestrian and bicycle networks, combined with better lighting, shade, and street design, can make non-driving trips safer, easier, and more inviting for people of all ages and abilities.

Pedestrian Mobility

Downey's goal is to make walking a safe, comfortable, and practical way to move throughout the community. Many neighborhoods have active foot traffic near schools, parks, and local businesses. Future pedestrian improvements will focus on connecting key destinations, improving comfort and accessibility, enhancing crosswalks and intersections, and addressing safety concerns along major corridors and neighborhood streets, with corridors and intersections evaluated and prioritized for safety improvements based on existing conditions, community input, and identified needs.

Future planned pedestrian improvements will use a range of design strategies to enhance visibility, accessibility, and comfort. These may include high-visibility crosswalks, curb extensions, pedestrian refuge islands, improved lighting, and accessible curb ramps. Where practical, streets may be redesigned to calm traffic and provide safer crossing distances.

The City will draw on proven safety countermeasures and design principles recommended by the Federal Highway Administration (FHWA) and the National



Example of pedestrian improvements featuring a mid-block crossing that enhances safety and provides convenient access between destinations

Association of City Transportation Officials (NACTO). These best practices emphasize safer crossings, reduced vehicle speeds, and pedestrian-priority design features that improve safety for people of all ages and abilities.

Over time, pedestrian improvements will be guided by several core objectives:

- **Fill sidewalk gaps** to ensure continuous, accessible paths of travel.
- **Upgrade crossings** near schools, parks, and transit stops.
- **Improve lighting and visibility** for nighttime safety.
- **Enhance comfort** with shade trees, landscaping, and seating.
- **Integrate pedestrian safety into all street design projects** to create walkable, connected neighborhoods.

Through these efforts, Downey will continue building a city where walking is not only possible but preferred for short trips and everyday activities.

Pedestrian Improvement Strategies

Future pedestrian projects in Downey will follow the Active Transportation Plan and focus on making crossings safer, more visible, and more accessible while reducing conflicts between drivers and people walking. Improvements will be prioritized in areas around transit stations where pedestrian activity is greatest (see Figure C-7). Strategies draw from proven traffic safety and design practices used throughout the region and can be tailored to the needs of each location.

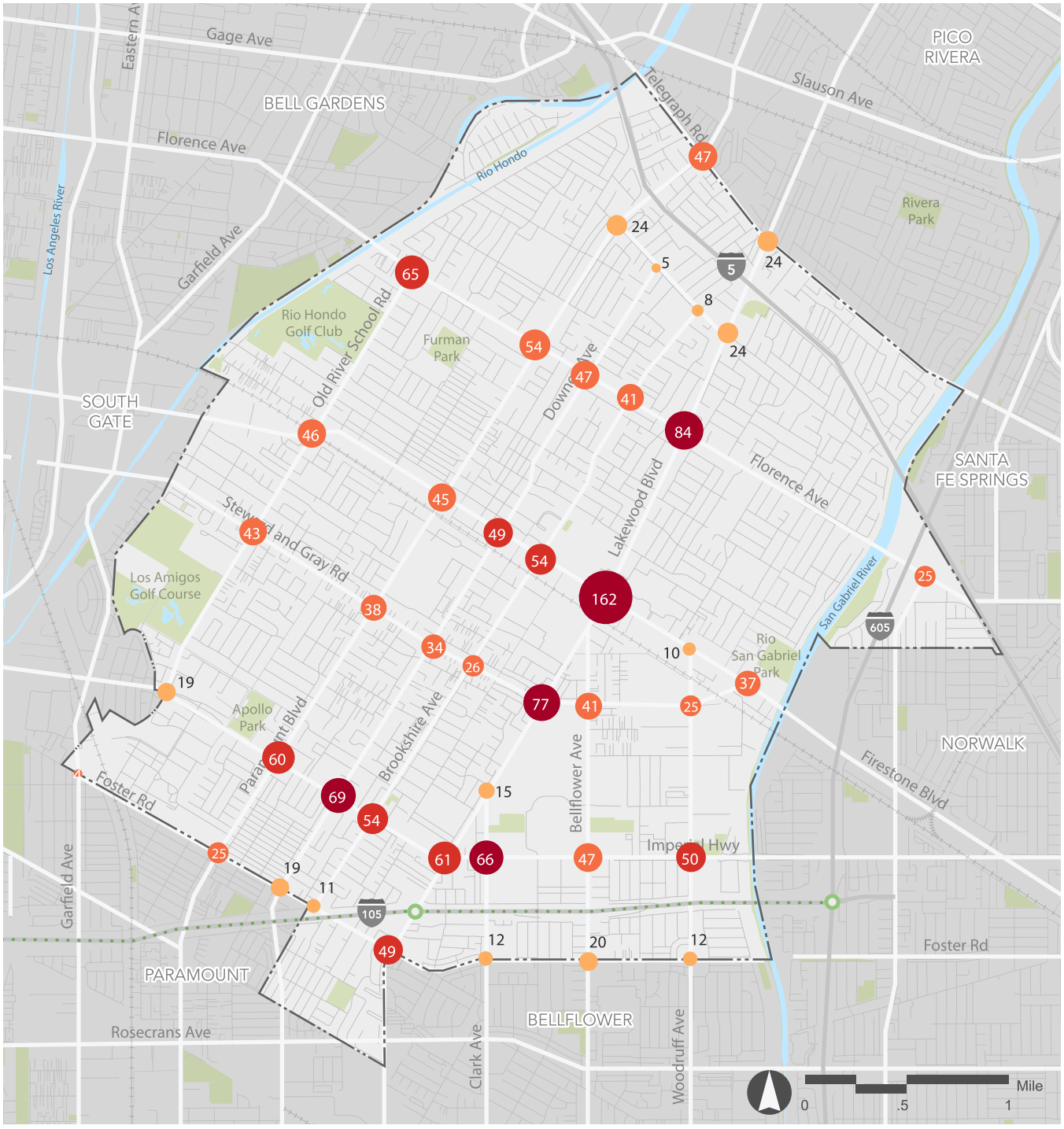
Typical pedestrian improvements may include:

- **High-visibility crosswalks, pavement markings, and signage:** Use of bold striping and clear markings to make crossings easier for drivers to see and encourage vehicles to stop behind designated lines.
- **Leading Pedestrian intervals:** Adjusted signal timing that gives pedestrians a few seconds of head start before vehicles receive a green light, increasing their visibility and reducing conflicts with turning traffic.



Intersection roundabout and crosswalks concept - Downey Active Transportation Plan (Source: Fehr & Peers)

FIGURE C-7: VEHICLE COLLISIONS



Number of Intersection Collisions (2015 to 2025)

- 0 - 10
- 11 - 24
- 25 - 47
- 48 - 90
- 91+

Basemap Features

- City Boundary
- Metro 'C' Line
- Waterways
- Parks/Open Space

Sources: Transportation Injury Mapping System (TIMS), UC Berkeley Safe Transportation Research and Education Center (SafeTREC), based on California Highway Patrol Statewide Integrated Traffic Records System (SWITRS), 2015 - 2025.

- **Protected left-turn and right-turn controls:** Dedicated signal phases or no-turn-on-red restrictions to eliminate conflicts between vehicles and pedestrians in crosswalks.
- **Curb extensions and tighter curb radii:** Extending the sidewalk into the parking lane at intersections to shorten crossing distances, calm traffic, and improve visibility between drivers and pedestrians.
- **Access management:** Reducing the number or proximity of driveways near intersections to minimize turning conflicts and improve pedestrian safety.
- **Improved curb ramps:** Upgrading ramps to meet accessibility standards and provide smooth, direct connections across intersections.
- **Wayfinding and signage:** Directional signage to guide pedestrians to nearby destinations, transit stops, and key community facilities
- **Lighting and Visibility Enhancements:** Installing streetlights or back-lit signage at crossings and corners to improve nighttime safety.



Enhanced pedestrian plaza concept at Wilderness Park - Downey Active Transportation Plan (Source: Fehr & Peers)

Bicycling Mobility

Building on the Active Transportation Plan, Downey will continue to expand and enhance the bicycle network to more comfortable and connected routes for riders of all ages and abilities. Future improvements will include a range of bicycle facilities, intersection upgrades, and end-of-trip amenities that make biking a more practical and attractive way to travel between homes, schools, parks, and major destinations. Figure C-8 illustrates the types of bicycles facilities, and C-9 shows the location of bicycle facilities.

The growth of e-bikes will influence policies and design standards that accommodate their safe and responsible use. E-bikes offer residents greater range and accessibility, particularly for students, workers, and older adults, but their higher speeds can create safety challenges when used on sidewalks or in mixed-traffic environments. Planning will emphasize education, enforcement, and infrastructure design to support safe e-bike use while maintaining a comfortable experience for all roadway and pathway users.

See the Open Space Element for additional discussion of recreation trails.



Example of a Class II buffered bike lane, providing dedicated space for bicyclists with added separation from vehicle traffic to improve comfort and safety

FIGURE C-8: TYPES OF BICYCLE FACILITIES







Bike Path (Class I)

A Class I bike path provides a completely separated right-of-way for the exclusive use of bicyclists and pedestrians. These paths are physically removed from vehicle traffic, often located along rivers, utility corridors, or greenways. It offers a high level of safety and comfort, suitable for recreation and commuting.

Buffered Bike Lane (Class II)

Buffered bike lanes are on-street bicycle lanes separated from motor vehicle traffic by a painted buffer zone or physical elements such as parked vehicles, landscaping, or bollards. The buffer creates additional space between cyclists and moving vehicles, enhancing safety and comfort, particularly along busier corridors.

FIGURE C-8: TYPES OF BICYCLE FACILITIES (CONTINUED)



Bike Lane (Class II)

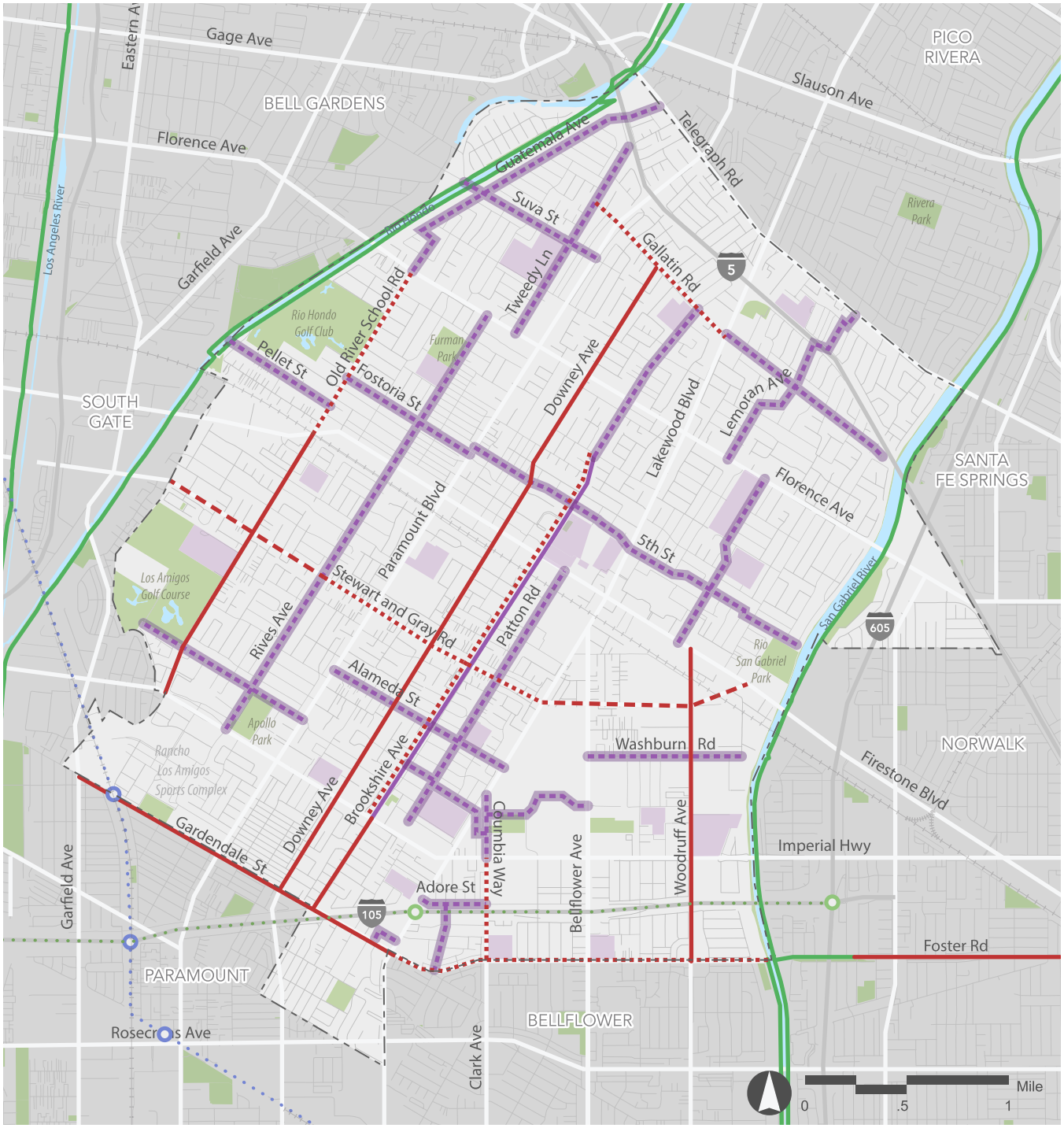
Standard bike lanes are striped lanes on the roadway designated for the preferential use of bicycles. They are typically located along the right-hand side of the street and may include pavement markings and signage to alert motorists of shared roadway use.



Bike Route (Class III)

Bike routes are shared roadways identified by signage and pavement markings that indicate preferred routes for cyclists. These routes are typically on lower-volume streets and may connect to higher-class bicycle facilities.and comfort, particularly along busier corridors.

FIGURE C-9: BICYCLE FACILITIES



Bike Facilities

Existing
- Class I - Bike Paths
- Class II - Bike Lane
- Class III - Bike Route

Proposed
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class II - Bike Lane with Road Diet
- Class III - Bike Route

Basemap Features
- City Boundary
- Metro 'C' Line
- Southeast Gateway Line
- Waterways
- Schools
- Parks/Open Space

Sources: City of Downey, Active Transportation Plan, 2021.

End-of-Trip Bicycle Facilities

A complete bicycle network extends beyond the ride itself and includes secure and convenient places to park. End-of-trip bicycle facilities help make cycling a practical transportation option for commuting, shopping, and recreation. They also play a role in supporting seamless transfers to transit, making it easier for riders to combine biking with bus or rail trips for longer-distance travel.

Downey can strengthen its bicycle infrastructure by adopting clear standards for bicycle parking design, siting, and quantity requirements for different types of land uses. End-of-trip facilities should include both short-term and long-term parking, located near key destinations and transit stops to encourage convenient and reliable connections between modes.

- **Short-Term Parking:** Bicycle racks placed in visible, easily accessible locations near building entrances, parks, or along commercial corridors. These should be simple, secure, and convenient for quick trips.
- **Long-Term Parking:** Secure facilities that protect bicycles from theft and weather, such as bike lockers, enclosed bike rooms, or bike cages. These are best suited for employees, residents, and transit riders who leave their bicycles for extended periods.

Efforts will focus on expanding bicycle parking citywide to make cycling a reliable and convenient choice for everyday travel. The City will explore developing consistent design standards for bike racks, lockers, and storage areas, ensuring they are safe, visible, and accessible to all users.

Public right-of-way installations will continue to play a role, especially along busy commercial corridors, near parks, schools, and transit stops. A citywide program that allows businesses and property owners to request bicycle racks or corrals on public or private property, can help fill key gaps and encourage more residents and visitors to travel by bike.



Example of short-term parking that supports quick visits, pick-up and drop-off activity, and convenient access to nearby businesses

Transit

Transit in Downey includes a mix of local and regional services that connect neighborhoods to key destinations across the city and the wider region. Metro and Downey LINK buses provide frequent service along major corridors, while the Metro C Line station at Lakewood Boulevard links riders to countywide rail connections. The Downey LINK community circulator further improves local access to civic facilities, commercial areas, schools, and neighborhoods. These services offer convenient, reliable, and accessible travel options for residents and visitors.

Light-Rail Transit

Strengthening access to the Lakewood Station on the C Line is a key opportunity for improving regional connectivity. Although the station provides important access to destinations throughout the county and currently includes bicycle lockers for secure bike storage, many nearby streets lack the continuous sidewalks, safe crossings, protected bikeways, and wayfinding needed to comfortably reach the station. Enhancing these corridors with improved lighting, designated pick-up and drop-off areas, additional secure bicycle parking, and mobility hubs can make the station more accessible and support higher transit use. Improving connections between the station, Downtown, commercial centers, and adjacent neighborhoods can further integrate the station into everyday travel patterns.

The planned Gardendale Station on the future Southeast Gateway Line presents another important opportunity to plan multimodal access from the beginning. Designing safe pedestrian routes, completing sidewalk networks, incorporating separated bikeways, and establishing direct connections to the Rancho Los Amigos South Campus and Rancho Los Amigos National Rehabilitation Center can support successful station access. Early planning for shared mobility areas, microtransit zones, and curbside access will help ensure the station is convenient, welcoming, and functional for a wide range of users.



View of the Lakewood Boulevard C Line Station from Lakewood Boulevard, showing direct street access to light rail and connections for pedestrians and transit riders.

Looking ahead, Downey can continue shaping an integrated and equitable mobility system by supporting transit-oriented corridors that combine higher-density housing and mixed-use development near bus routes and future rail stations. Coordinating with Metro to enhance bus frequency, real-time information, and schedule alignment can further improve the user experience. Additional strategies include expanding shared mobility hubs, exploring microtransit or on-demand shuttle services, and working with regional partners to ensure future high-capacity transit investments are accessible and aligned with the city's land use and equity goals.

Bus Transit

Downey benefits from a well-connected local and regional bus network anchored by the Downey Depot Transportation Center, located near Downtown Downey. The depot serves as a primary transit hub and central transfer point for Metro and Downey LINK routes, offering frequent service to employment centers, schools, retail districts, and regional transit connections. The depot's proximity to Downtown supports walkable access to civic uses, shopping, and services, while the Downey LINK circulator connects surrounding neighborhoods, civic facilities, and commercial areas to the hub, providing reliable mobility options for residents and workers.

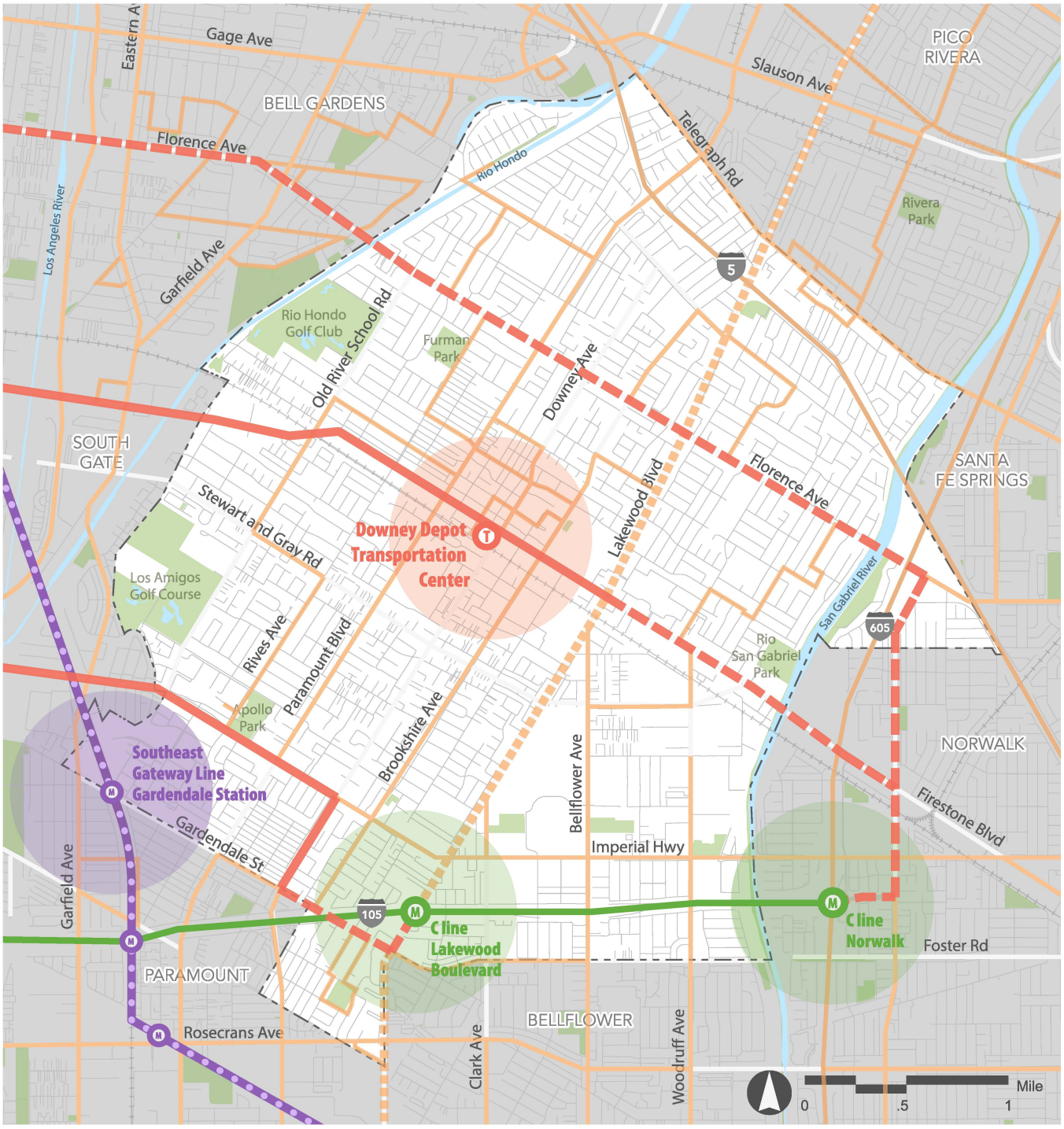
A key component of Downey's transit system is its network of high-quality transit corridors and stations (see Figure C-10). High-quality transit corridors are streets where transit service operates frequently, typically every 15 minutes or less during peak periods, allowing riders to travel without long wait times. High-quality transit stations are major stops or transfer points designed to provide reliable access to frequent transit service, enhanced passenger amenities, and connections to regional destinations. These corridors and stations support convenient, all-day mobility and help reduce reliance on private vehicles.

High-quality transit service operates along portions of Firestone Boulevard (west of Downey Avenue) and Imperial Highway (west of Brookshire Avenue), where frequent bus service provides connections to regional destinations. These corridors serve as the foundation of the City's frequent transit network and present



Metro bus arriving at the Downtown Transportation Depot, highlighting a key transit hub that supports connections between local routes, pedestrians, and surrounding destinations

FIGURE C-10: TRANSIT



Transit Lines

- Bus Routes
- High-Quality Transit Corridors
- Metro C Line
- Downey Depot Transportation Center

Planned/Future Transit Lines

- RoseWood Corridor
- High-Quality-Transit Corridors (2050)
- Planned 'Southeast Gateway' Line & Station

Basemap Features

- City Boundary
- Waterways
- Parks/Open Space

Sources: California Department of Transportation (CalTrans), 2025; LA Metro.

opportunities to enhance pedestrian access, bicycle connectivity, and the overall transit rider experience through streetscape and infrastructure improvements.

Looking ahead, the City can continue to coordinate with transit providers to support and advocate for enhanced transit service where improved transit connections could strengthen access to regional destinations and nearby rail stations serving Downey and surrounding communities.

Because transit service is provided by regional and local transit agencies, the City's role is focused primarily on improving access to transit and creating a supportive environment for transit use. Continued coordination with transit agencies can help identify opportunities for service enhancements, improved rider amenities, and infrastructure investments that support reliable and convenient transit access. As transit providers transition toward zero-emission fleets, the City can also collaborate with regional partners to support infrastructure and land use planning that accommodates future transit technologies and operational needs.

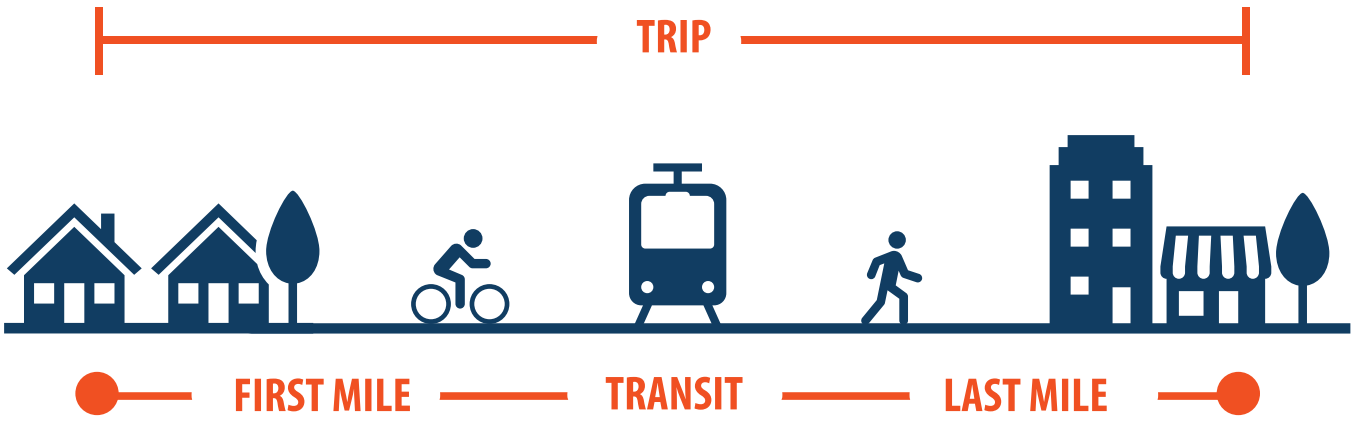
Future Vision: RoseWood Corridor

A potential long-term regional mobility opportunity for Downey is the RoseWood Complete Corridor Vision Plan, a collaborative effort to explore multimodal improvements along the Rosemead/Lakewood Boulevard corridor. The vision plan evaluates enhanced transit service, improved pedestrian and bicycle facilities, and stronger connections between communities. As planning efforts continue, Downey can coordinate with neighboring jurisdictions, transit providers, and regional agencies to support opportunities that improve mobility, enhance safety, and strengthen the Lakewood Boulevard corridor.

First/Last Mile Improvements

Enhancing first/last mile access is essential to improving overall transit performance and usability. In Downey, this means strengthening pedestrian routes to transit stations, bus stops, and the Downey Depot through improved crossings, better lighting, upgraded sidewalks, and shade (see Figure C-11). Expanding bicycle facilities such as designated bike lanes, secure bike parking, and connections to the regional bike network can help riders comfortably reach transit without a car. Wayfinding signage, micro-mobility options, and improved ADA access further support seamless connections. Together, these strategies help more residents take advantage of Downey's transit services and ensure that every trip begins and ends with a safe and convenient path.

FIGURE C-11: FIRST/LAST MILE



Freight Mobility and Rail Corridors

Downey's street and rail network plays an important role in regional goods movement due to its proximity to major freight corridors, including Interstates 5, 105, 605, and 710. Local industrial districts, warehousing, and logistics operations depend on efficient truck and rail access, and several designated truck routes carry significant volumes of heavy vehicles each day. While these corridors support the City's economic base, they also present challenges, including pavement damage, noise and vibration, conflicts at key intersections, and localized air quality impacts near homes, schools, and parks.

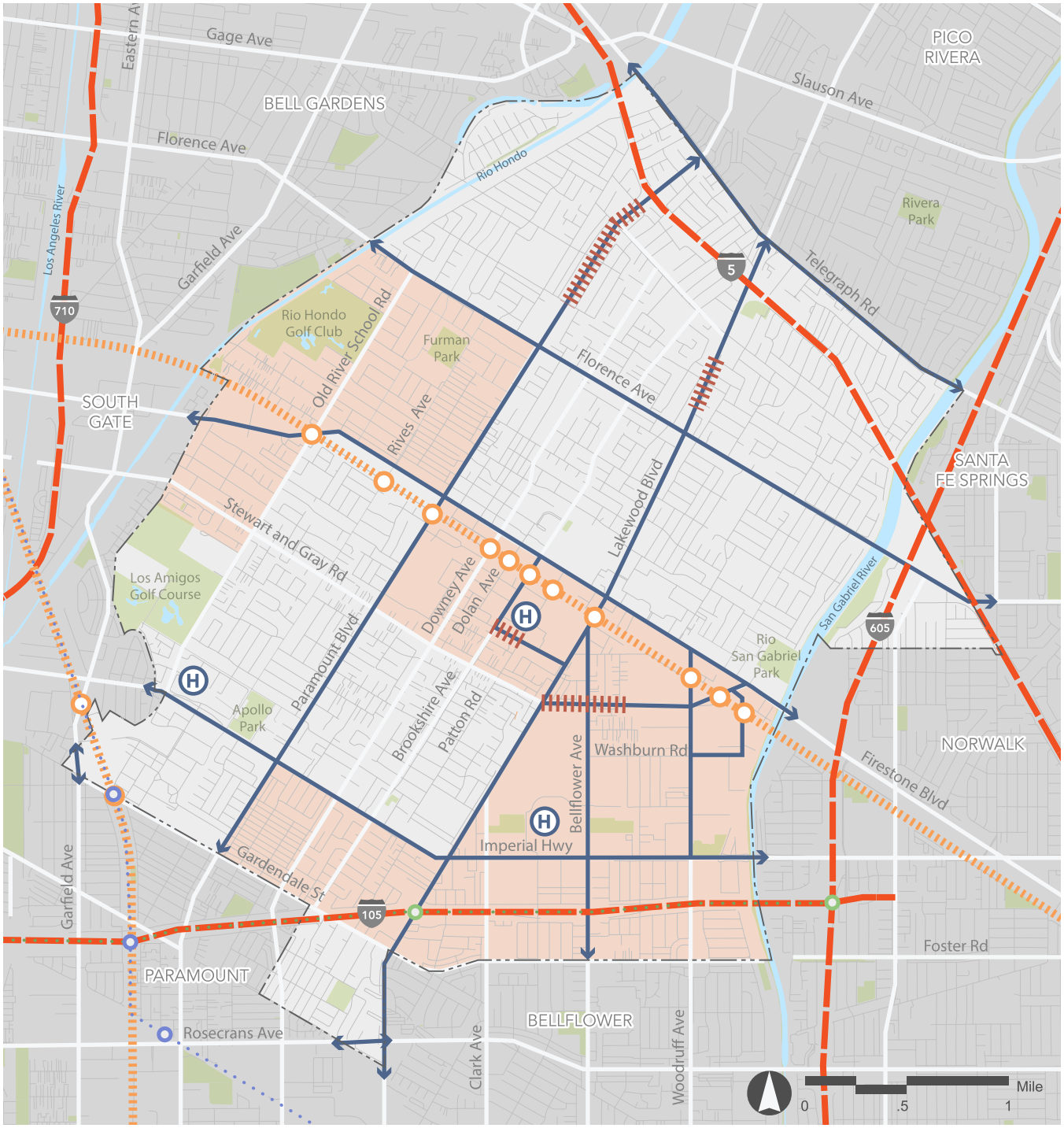
High truck volumes can accelerate wear on city streets and require more frequent roadway maintenance. In some locations, trucks divert onto neighborhood streets to avoid congestion, creating conflicts with pedestrians, school routes, and residential areas. These conditions highlight the need for a coordinated approach that protects community health while preserving reliable goods movement for local businesses.

Downey can strengthen its freight framework by refining and clearly signing designated truck routes that direct heavy vehicles toward major corridors and away from sensitive uses. Opportunities include updating the truck route map to reflect current industrial activity, adding enforcement and traffic-calming measures on non-designated streets, and redesigning intersections where truck turning movements create safety concerns or congestion. Identifying and establishing truck travel routes that avoid residential neighborhoods and concentrations of sensitive receptors, such as schools, parks, and childcare facilities, is a key component of this effort. State laws establish standards for truck route planning, including consistent signage, identification of appropriate truck parking and idling locations, and requirements to make truck route maps publicly available to warehouse operators, fleet operators, and truck drivers.

As an example, a segment of Stewart and Gray Road is designated as a truck route; however, portions of this corridor transect a multi-family residential neighborhood identified as a disadvantaged community. The presence of heavy truck activity in close proximity to sensitive receptors, including multi-family housing, creates potential exposure to air pollution, noise, and traffic safety conflicts. In addition, a small segment of Cleta Street experiences truck activity near single-family residential uses and the nearby PIH Health Hospital - Downey, a sensitive receptor. State law requires jurisdictions to minimize truck routing through residential areas and reduce impacts to sensitive uses through circulation planning, route designation, and site design measures. To support compliance with state logistics and truck routing requirements and protect public health, the City will evaluate and implement strategies to reduce truck–residential conflicts and improve compatibility between freight movement and surrounding land uses.

Rail infrastructure also plays a role in the local goods movement network. Two lines operated by Union Pacific Railroad traverse the city and influence circulation patterns. The line paralleling Firestone Boulevard, part of the Patata Industrial Lead, causes traffic delays at multiple at-grade crossings (see Figure C-12). Long-term solutions may include grade separation or potential rail abandonment, although any future grade separation must minimize impacts on adjacent businesses. A second line in the southwest portion of the city, part of the San Pedro Subdivision, also affects circulation and emergency response, underscoring the importance of coordinated planning with Union Pacific and regional partners.

FIGURE C-12: FREIGHT MOBILITY



Freight Facilities
- Truck Routes
- Freeway
- Railroad
- Railroad Crossing

Sensitive Areas
- Sensitive Uses
- Disadvantaged Communities

Basemap Features
- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: City of Downey, 2026, and CalEnviroScreen 4.0, 2021.

Investing in pavement upgrades along primary truck corridors can reduce long-term maintenance costs, while incorporating green infrastructure and sound-buffering features can help mitigate environmental and noise impacts. Supporting the transition to low- and zero-emission freight vehicles through charging infrastructure, incentives, and partnerships with industrial operators can further improve air quality. Collaboration with regional partners such as the Southern California Association of Governments, Los Angeles County Metropolitan Transportation Authority, California Department of Transportation, Gateway Cities Council of Governments, and the South Coast Air Quality Management District will help ensure Downey's freight strategy aligns with broader efforts to modernize and decarbonize freight corridors across Southern California while advancing regional air quality goals.

See the Environmental Justice Element for additional discussion on truck impacts.



Industrial warehouse in Downey with trucks at loading docks, illustrating active goods movement and the role of freight corridors in supporting local businesses and regional logistic

Parking Management

Parking remains a significant concern in Downey, particularly in residential neighborhoods experiencing increased demand from accessory dwelling units (ADUs), multigenerational households with multiple drivers, and spillover from nearby commercial areas and higher-density housing. These factors can reduce available curb parking, contribute to localized congestion, and create conflicts between residents, visitors, employees, and customers competing for limited parking resources.

Recent changes in State law have reduced the City's ability to require parking for many new residential and mixed-use developments, particularly near transit and in certain infill locations. While these policies support housing production, transit-oriented development, and walkability, they can also increase reliance on existing on-street parking when parking is not provided on-site. As a result, parking management is increasingly shifting from minimum parking requirements toward demand-based strategies that maximize the efficiency of existing parking resources.

To address these challenges, Downey can continue to modernize parking policies and implement tools that better align parking supply with actual demand. Potential strategies include shared-use parking agreements, joint-use parking facilities, off-site parking arrangements, parking benefit districts, and updated parking standards that reflect changing travel behaviors. These approaches can improve utilization of existing parking assets while supporting economic development, housing goals, and a more balanced transportation system. Continued investment in transit, walking, bicycling, and micromobility options can further reduce parking demand and provide residents and visitors with more travel choices.



Public parking in Downtown, clearly marked to guide visitors to convenient, shared parking areas that support local businesses and walkable streets.

Travel Demand Management

As traffic congestion, transportation costs, and environmental concerns continue to grow throughout Southern California, strategies that reduce reliance on single-occupancy vehicle travel have become increasingly important. Travel Demand Management (TDM) refers to programs, services, and incentives that encourage people to shift trips to walking, bicycling, transit, carpooling, telecommuting, and other transportation options, particularly during peak travel periods. These strategies can improve mobility, reduce vehicle miles traveled (VMT), lower greenhouse gas emissions, and make more efficient use of existing transportation infrastructure.

Downey's central location, access to regional transit services, growing bicycle and pedestrian networks, and mix of residential, employment, commercial, and institutional destinations provide opportunities to support travel choices beyond driving alone. While many transportation decisions are made by individual residents, employers, schools, and regional agencies, the City can play an important role by supporting education and outreach programs, promoting awareness of available transportation options, and encouraging transportation demand management strategies through planning, development review, and partnerships. Travel demand management complements investments in sidewalks, bicycle facilities, transit access, and complete streets by helping residents, employees, students, and visitors understand and utilize available travel options. These efforts can improve transportation system efficiency, support air quality and climate goals, and reduce pressure on local roadways while maintaining mobility throughout the community.



Downey LINK supports transportation demand management by providing convenient local transit connections throughout the city.

Climate, Air Quality, and Adaption

Downey faces growing challenges from extreme heat, localized air pollution, and water resource constraints, all of which affect public health and environmental quality. The built environment, dominated by paved surfaces and limited tree canopy, intensifies heat exposure, particularly in vulnerable communities.

Investing in pavement upgrades along primary truck corridors can reduce long-term maintenance needs, while incorporating green infrastructure and sound-buffering treatments can help mitigate environmental and noise impacts. Supporting the transition to low- and zero-emission freight vehicles—through charging infrastructure, incentives, and partnerships with industrial operators—can further reduce air quality concerns. Collaborating with regional partners such as SCAG, Metro, and Caltrans will ensure Downey's freight strategy aligns with broader efforts to modernize and decarbonize freight corridors in Southern California.

A resilient and climate-forward Downey will require integrated adaptation and mitigation strategies that enhance public health, ecological function, and energy efficiency. Future actions may include expanding urban greening and shade networks, increasing tree canopy coverage in heat-prone areas, and adopting green infrastructure solutions such as bioswales, permeable pavements, and stormwater capture systems. Land use and transportation planning should incorporate carbon reduction goals, prioritizing infill development and multimodal access. Electrification of vehicles and buildings, supported by public charging infrastructure and incentive programs, can significantly reduce emissions. The City can also develop a Resilience and Climate Action Framework that ties together air quality, mobility, water, and energy initiatives under a single adaptive strategy, ensuring Downey remains livable and sustainable under changing environmental conditions.

See the Conservation Element for additional discussion on natural resources.

See the Safety Element for additional discussion on climate resilience.



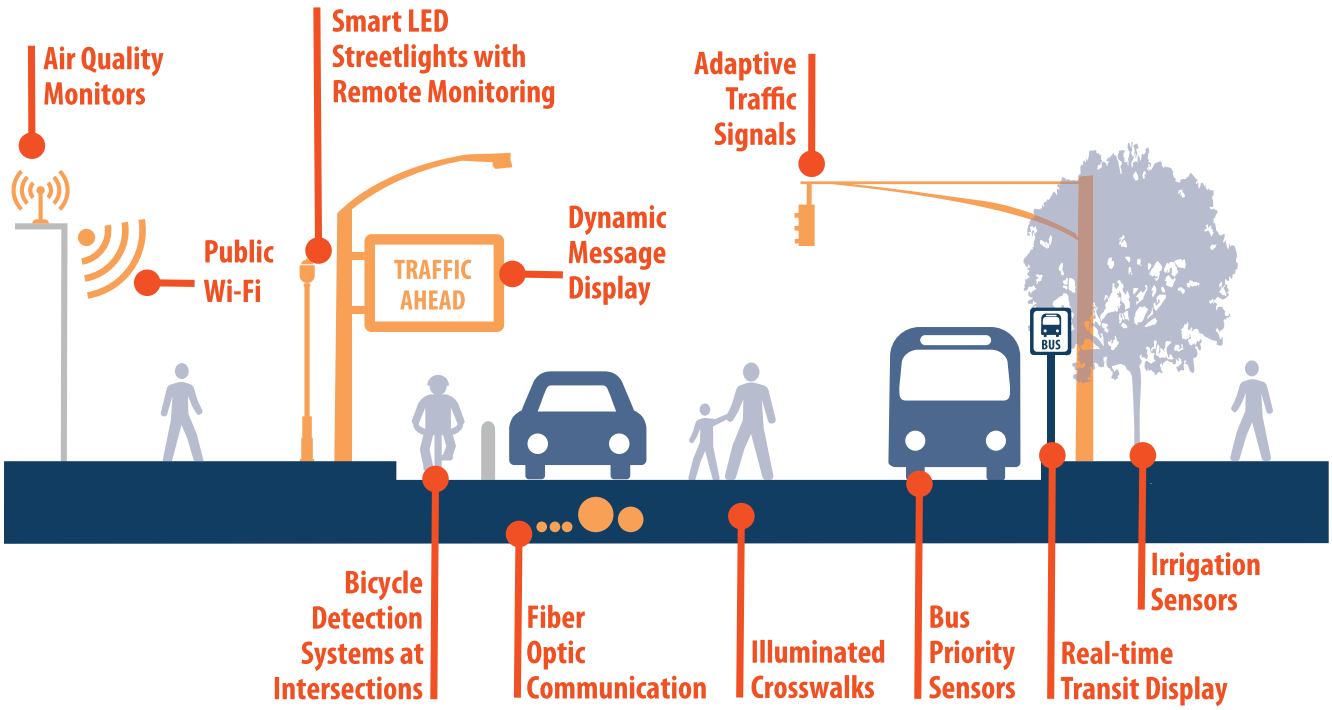
Electric vehicle charging stations at the City Library support clean transportation and provide convenient access for visitors while they use nearby community services

Emerging Mobility Technologies

Advances in transportation technology are creating new opportunities to improve safety, efficiency, and system performance. Emerging tools such as adaptive traffic signals, connected vehicle technologies, smart parking systems, real-time traveler information, and integrated mobility platforms can help communities better manage traffic, reduce congestion, and enhance the user experience (see Figure C-13 for examples of mobility technologies).

Downey can continue to incorporate smart transportation technologies as infrastructure is upgraded and modernized. Opportunities include deploying adaptive signal systems that respond to real-time traffic conditions, expanding traffic monitoring and communication networks, utilizing data-driven tools to improve operations and maintenance, and integrating technology that supports safer travel for pedestrians, bicyclists, transit users, and motorists. As transportation technologies evolve, the City can coordinate with regional agencies and technology providers to evaluate innovative solutions that improve mobility, enhance safety, and support a more connected and efficient transportation network.

FIGURE C-13: CONNECTED MOBILITY TECHNOLOGIES



INFRASTRUCTURE PLAN

Downey's infrastructure system supports reliable services for residents and businesses. The City prioritizes maintaining and improving water, sewer, drainage, and sidewalk networks while integrating innovative solutions, advanced technology, and proactive maintenance to maximize public benefit and resource efficiency.

Water System

Downey provides a reliable and high-quality water supply through a combination of 19 groundwater wells and Metropolitan Water District connections, serving approximately 14,200 acre-feet annually to residential, commercial, and fire protection users. The City maintains over 265 miles of water mains, 23,500 meters, more than 1,800 fire hydrants, and supporting pump stations and valves, ensuring adequate pressure, water quality, and system reliability.

Water conservation is a priority given the region's semi-arid climate and recurring droughts. The City enforces regulations to minimize wasteful water use, promotes incentives and education programs, and implements measures such as metering, leak detection, and recycled water projects. The Urban Water Management Plan guides planning for drought resilience, demand management, and sustainable water practices, supporting current needs and future growth.

Planning efforts include expanding water efficiency programs, integrating smart water monitoring technologies, optimizing recycled water use, and conditioning development projects to ensure sustainable water service for all residents.

Wastewater

Downey operates and maintains 193 miles of sanitary sewer mains, 4,552 manholes, and one lift station, serving approximately 23,000 connections. The City complies with State Water Resources Control Board regulations and implements a Sewer System Management Plan to prevent overflows, maintain system performance, and ensure public health and environmental protection.

Planning strategies include ongoing preventive maintenance, system upgrades, use of advanced monitoring technologies, and coordination with private sewer connections to maintain high-quality, reliable service while minimizing environmental impacts.

Storm Drainage

The storm drainage network consists of 33 miles of pipes, 570 manholes, 710 catch basins, and two lift stations. The City operates under the National Pollutant Discharge Elimination System (NPDES) to prevent stormwater pollution from urban runoff, industrial sites, and construction activities. Programs include stormwater inspections, compliance enforcement for commercial and industrial properties, street sweeping, and debris removal to protect local waterways.

Looking forward, the City will continue to enhance stormwater management by implementing green infrastructure solutions such as bioswales and rain gardens, improving drainage system capacity, and coordinating with development projects to reduce flood risk and improve water quality.

See the Conservation Element for additional discussion on water conservation, stormwater, and Drainage Infrastructure.

Communications

The local private communications infrastructure supports public safety, municipal operations, and community connectivity. This includes broadband and fiber optic networks, public Wi-Fi, cellular coverage, and communication systems for emergency services. Reliable communications infrastructure enhances local services, supports telecommuting and education, and enables real-time data management for traffic, utilities, and public safety operations.

Looking ahead, the City can continue expanding high-speed internet access across neighborhoods, deploy smart city technologies such as traffic and environmental sensors, and improve emergency communication systems to enhance resilience. Coordination with regional broadband providers and adoption of innovative wireless solutions can ensure equitable access to technology and support the city's growing digital needs.

Solid Waste and Recycling

Downey provides solid waste collection, disposal, and recycling services to maintain public health, environmental quality, and neighborhood livability. Programs include curbside trash and recycling pickup, green waste collection, household hazardous waste programs, and City-sponsored public education on proper waste management.

Strategies focus on waste reduction, increased recycling rates, and adoption of sustainable technologies. The City can expand composting programs, encourage multi-family and commercial recycling, implement zero-waste initiatives, and support public-private partnerships to improve material recovery. Promoting education and outreach, integrating smart waste monitoring, and optimizing collection routes can enhance efficiency while reducing environmental impacts and greenhouse gas emissions.



Downey Touch-A-Truck event featuring an Athens Services garbage truck that supports essential waste collection and serves the community

GOALS AND POLICIES

These goals and policies guide how Downey will manage and improve the systems that support daily movement and essential infrastructure services. These policies establish a framework for creating safe, connected, and efficient transportation networks while strengthening the reliability and resilience of infrastructure that serves homes, businesses, and community facilities. By aligning mobility, utilities, and public realm investments with long-term growth and emerging technologies, the City can enhance access for all users, reduce environmental impacts, support economic vitality, and maintain a high quality of life for current and future residents.

Mobility

GOAL C-1: SAFE, COMFORTABLE, AND UNIVERSALLY ACCESSIBLE FOR ALL USERS

Policy C-1.1: Pedestrian Safety Enhancements. Prioritize pedestrian safety through high-visibility crosswalks, pavement markings, leading pedestrian intervals, protected left- and right-turn phases, curb extensions, signage, and intersection designs near schools, parks, and transit stops that reduce conflicts between vehicles and pedestrians.

Policy C-1.2: Traffic Calming Measures. Encourage traffic calming and roadway safety improvements where warranted based on traffic engineering studies and safety data to reduce vehicle speeds and improve safety for all users.

Policy C-1.3: Enforcement and Education. Coordinate with law enforcement, community organizations, and regional partners to support traffic law enforcement, provide education for drivers, bicyclists, and pedestrians, and promote safe and courteous behavior across all modes of travel.

Policy C-1.4: Safe and Efficient Movement of People and Goods. Maintain and enhance the street system to support safe and efficient movement of people and goods for all users: motorists, pedestrians, bicyclists, transit riders, and freight traffic.

Policy C-1.5: Street System Improvements through Development. Encourage infill development to incorporate improvements consistent with adopted City standards and improvement requirements to enhance safety, connectivity, and multimodal access as part of the development review process.

GOAL C-2: ACCESSIBLE, CONNECTED, AND SUPPORTIVE PEDESTRIAN NETWORKS

Policy C-2.1: Sidewalk Completion and Maintenance. Prioritize sidewalk network and maintaining existing sidewalks to provide continuous, accessible routes throughout the City, with attention to ADA compliance, drainage, and long-term maintenance.

Policy C-2.2: Pedestrian Safety. Pursue improvements that enhance pedestrian safety and comfort and encourage walking, particularly along major corridors, near major transit stops, and in Downtown and neighborhood commercial areas.

Policy C-2.3: Intersection and Crossing Improvements. Pursue improvements to intersections and pedestrian crossings to enhance safety and comfort for pedestrians of all ages and abilities.

Policy C-2.4: Promote Walking as a Mode of Travel. Encourage walking as a safe and practical travel option by supporting improvements to pedestrian routes and crossings, and enhancing connectivity to pedestrian enhance mobility.

GOAL C-3: EXPANDED, CONTINUOUS, PROTECTED, AND INTEGRATED. BICYCLE NETWORKS

Policy C-3.1: Protected and Safe Bicycle Facilities. Develop a connected bicycle network that includes bike lanes, buffered lanes, shared routes, and off-street paths, with safe crossings, and clear wayfinding to improve safety and connectivity.

Policy C-3.2: Bicycle Safety Education. Support education and outreach program to promote safe bicycle use and practices and increase awareness among motorists, bicyclists, and students. Incorporate design standards, educational programs, and enforcement strategies.

Policy C-3.3: Bicycle Parking and Transit Connections. Promote secure bicycle parking near commercial centers, transit stops, and key destinations and support bicycle connections to transit.

Policy C-3.4: Promote Bicycling as a Mode of Travel. Promote cycling as a safe, practical, and appealing alternative to vehicle trips to reduce congestion and vehicle emissions.

GOAL C-4: ACCESSIBLE, RELIABLE, AND SEAMLESSLY CONNECTED TRANSIT SYSTEMS

Policy C-4.1: First- and Last-Mile Connectivity. Enhance transit by improving access, connections, including sidewalks and bike lanes that link neighborhoods to bus stops and light rail stations.

Policy C-4.2: Transit-Enhanced Plan for Development. Encourage higher-density, mixed-use development along transit corridors to support frequent, reliable, and convenient service, while reducing dependence on single-occupancy vehicles.

Policy C-4.3:Transit Infrastructure and Service Improvements. Pursue improvements to transit stops, passenger amenities, and first- and last-mile connections, and coordinate with transit providers to support enhanced service coverage, operating hours, and service frequency that improve transit accessibility, reliability, safety, and convenience.

Policy C-4.4: Promote Public Transit as a Mode of Travel. Encourage public transit use as a practical and convenient alternative to driving, improving mobility for all residents and reducing vehicle miles traveled (VMT).

Policy C-4.5: Reduced-Emission Transit Infrastructure Planning. Coordinate with transit service providers to transition to zero-emission fleets and related infrastructure as part of future transmit improvements in accordance with State mandates.

Policy C-4.6: Transportation Demand Management. Support transportation demand management programs that encourage transit use, walking, bicycling, carpooling, telecommuting, and other alternatives to single-occupancy vehicle travel to reduce congestion and vehicle miles traveled.

GOAL C-5: GOODS MOVEMENT IS EFFICIENT, SUSTAINABLE, AND COMPATIBLE WITH NEIGHBORHOOD LIVABILITY

Policy C-5.5: Designated Truck Routes. Define and manage designated truck routes to support efficient goods movement and reduce conflicts with residential neighborhoods while protecting neighborhood safety and community health.

Policy C-5.6: Clean Freight and Logistics. Encourage zero-emission and low-emission delivery fleets and explore freight consolidation

and smart logistics systems to reduce congestion, noise, and air pollution.

Policy C-5.7: Regional Collaboration. Coordinate with regional agencies to align freight planning with broader initiatives, including zero-emission corridors and sustainable industrial land use strategies.

Policy C-5.8: Minimize Truck Impacts. Plan land uses to minimize impacts from truck traffic on residential areas and city streets while maintaining economic and freight mobility priorities.

GOAL C-6: LOCAL STREETS WITHOUT THROUGH TRAFFIC

Policy C-6.1: Discourage Regional Cut-Throughs. Design traffic management strategies that discourage regional traffic from using neighborhood streets as shortcuts.

Policy C-6.2: Optimize Local Street Function. Promote street design and management practices on local and collector streets that balance mobility, access, and safety with neighborhood character .

GOAL C-7: PARKING AND CURBSIDE FACILITIES THAT MEET COMMUNITY NEEDS AND SUPPORT MULTIMODAL ACCESS

Policy C-7.1: Encourage Adequate Parking Supply. Require the provision of sufficient parking supply to meet demand while balancing multimodal transportation needs and neighborhood livability.

Policy C-7.2: Smart Parking Management. Promote parking management strategies, including shared parking, time limits, demand-responsive pricing where appropriate, and curbside management practices that improve parking availability, reduce congestion, and support efficient use of parking resources.

Policy C-7.3: Truck Parking. Discourage long-term or overnight parking in residential and sensitive areas, protect neighborhood character, maintain roadway safety and visibility, and preserve street capacity for local access and circulation.

GOAL C.8: RAILROAD CROSSINGS THAT ARE EFFICIENT, SAFE, AND MINIMIZE DELAYS

Policy C-8.1: Improve Rail Crossings. Support improvement to railroad crossings along the Union Pacific Railroad Line to improve traffic flow, safety, and emergency access.

Policy C-8.2: Enhance Railroad Crossing Safety. Promote improvements at railroad crossings that enhance safety, visibility, and operations, while reducing conflicts between trains, vehicles, pedestrians, and bicyclists and maintaining reliable emergency access. through enhanced warning devices, visibility improvements, crossing design enhancements, and public education efforts. Prioritize measures that reduce conflicts between trains, vehicles, pedestrians, and cyclists, support emergency response access, and minimize safety risks for all roadway users.

GOAL C-9: INFRASTRUCTURE SYSTEMS THAT ARE CLIMATE RESPONSIVE

Policy C-9.1: Urban Greening and Shade. Promote tree canopy, shade structures, and landscaping along streets and sidewalks to reduce heat exposure and to enhance comfort along street and sidewalks.

Policy C-9.2: Green Infrastructure Integration. Pursue the integration of green infrastructure within streets and transportation corridors to support stormwater management, improve air quality, and enhance environmental sustainability. Incorporate bioswales, permeable pavement, and stormwater capture systems into transportation projects to improve water management, air quality, and environmental sustainability.

Policy C-9.3: Low-Carbon and Resilient Transportation. Promote infill development, multimodal access, and electrification of vehicles and infrastructure to reduce emissions and enhance long-term resilience.

GOAL C-10: SMART, INNOVATIVE, AND TECHNOLOGICALLY INTEGRATED MOBILITY OPTIONS

Policy C-10.1: Emerging Mobility Infrastructure. Deploy adaptive traffic signals, connected vehicle technologies, and mobility management systems to enhance safety and optimize traffic flow across all modes.

Policy C-10.2: Pilot Programs for New Mobility. Explore electric shuttle services, micromobility options, and shared mobility hubs to complement transit and reduce single-occupancy vehicle trips.

Policy C-10.3: Data-Driven and Equitable Mobility. Use mobility data to guide planning decisions, ensure equitable access, protect privacy, and monitor the performance of emerging mobility technologies.

GOAL C-11: STREETS THAT ARE COMPLETE, MULTIMODAL, AND CONTEXT-SENSITIVE

Policy C-11.1: Complete Streets Design. Ensure all street projects balance the needs of pedestrians, bicyclists, transit riders, and motorists while incorporating safety, comfort, and environmental enhancements.

Policy C-11.2: Street Typology and Function. Design streets consistent with their classification while integrating multimodal improvements and neighborhood context.

Policy C-11.3: Sustainable Street Operations. Incorporate green infrastructure, bike and pedestrian amenities, and multimodal facilities into routine street maintenance, upgrades, and future roadway projects to enhance long-term sustainability and livability.

Infrastructure

GOAL C-12: RELIABLE, RESILIENT, SUSTAINABLE, AND EFFICIENTLY MANAGED WATER SYSTEMS

Policy C-12.1: Infrastructure Maintenance and Upgrades. Maintain and upgrade local water infrastructure systems to ensure continuous service and compliance with health and safety standards.

Policy C-12.2: Water Conservation and Demand Management. Promote efficient water use and implement demand management strategies, including conservation programs, water-efficient technologies, and public education to reduce system demand and support long-term supply reliability.

Policy C-12.3: Smart Water Management. Integrate smart monitoring and leak detection technologies to improve efficiency and system performance.

GOAL C-13: A SAFE, RELIABLE, WASTEWATER CONVEYENCE SYSTEM

Policy C-13.1: Sewer System Management. Manage, operate, and maintain all portions of the sanitary sewer system to ensure reliable service and prevent spills.

Policy C-13.2: Capacity and Capital Improvements. Maintain and expand system capacity to convey peak sanitary flows, aligning upgrades, rehabilitation, and replacement of infrastructure with anticipated future development and community growth.

Policy C-13.3: Advanced Monitoring and Maintenance. Implement advanced monitoring, inspection, and preventive maintenance programs to detect vulnerabilities and address system needs proactively.

Policy C-13.4: Resource Allocation. Provide adequate funding, personnel, and equipment to maintain, operate, and improve the sanitary sewer system and implement capital projects.

GOAL C-14: STORMWATER AND DRAINAGE INFRASTRUCTURE THAT IS CLIMATE-ADAPTIVE, AND EFFECTIVELY MANAGED TO REDUCE FLOOD RISK AND PROTECT PUBLIC SAFETY

Policy C-14.1: System Capacity and Flood Management. Operate, maintain, and upgrade stormwater and drainage systems in the City to ensure adequate capacity during major storm events, reduce flood risk, and protect life and property.

Policy C-14.2: Climate Change Adaptation and Sustainability. Plan and design stormwater infrastructure to address the anticipated impacts of climate change, including increased storm intensity and variability, while promoting sustainable system performance and long-term environmental protection.

Policy C-14.3: Regional Coordination. Coordinate stormwater planning, infrastructure improvements, and flood management strategies with regional stormwater and flood control agencies to enhance system performance, manage watershed-level impacts, and improve regional resilience.

Policy C-14.4: Development Coordination. Coordinate stormwater and drainage planning with development projects to ensure adequate system capacity, minimize runoff impacts, and reduce potential flooding.

GOAL C-15: COMMUNICATIONS INFRASTRUCTURE THAT KEEPS DOWNEY ECONOMICALLY COMPETITIVE AND RESIDENTS CONNECTED

Policy C-15.1: Infrastructure Expansion. Encourage the expansion of high-speed broadband, public Wi-Fi, and cellular coverage citywide.

Policy C-15.2: Smart City Integration. Deploy smart sensors and communication technologies to improve municipal services, traffic management, and public safety.

Policy C-15.3: Emergency Communications. Ensure that the communications systems for first responders and emergency management meets the city's needs and implement enhancements as needed.

Policy C-15.4: Reliable Communications Infrastructure. Prioritize the use of communications franchise agreements based on the providers' ability to advance business growth

and reliability for all users.

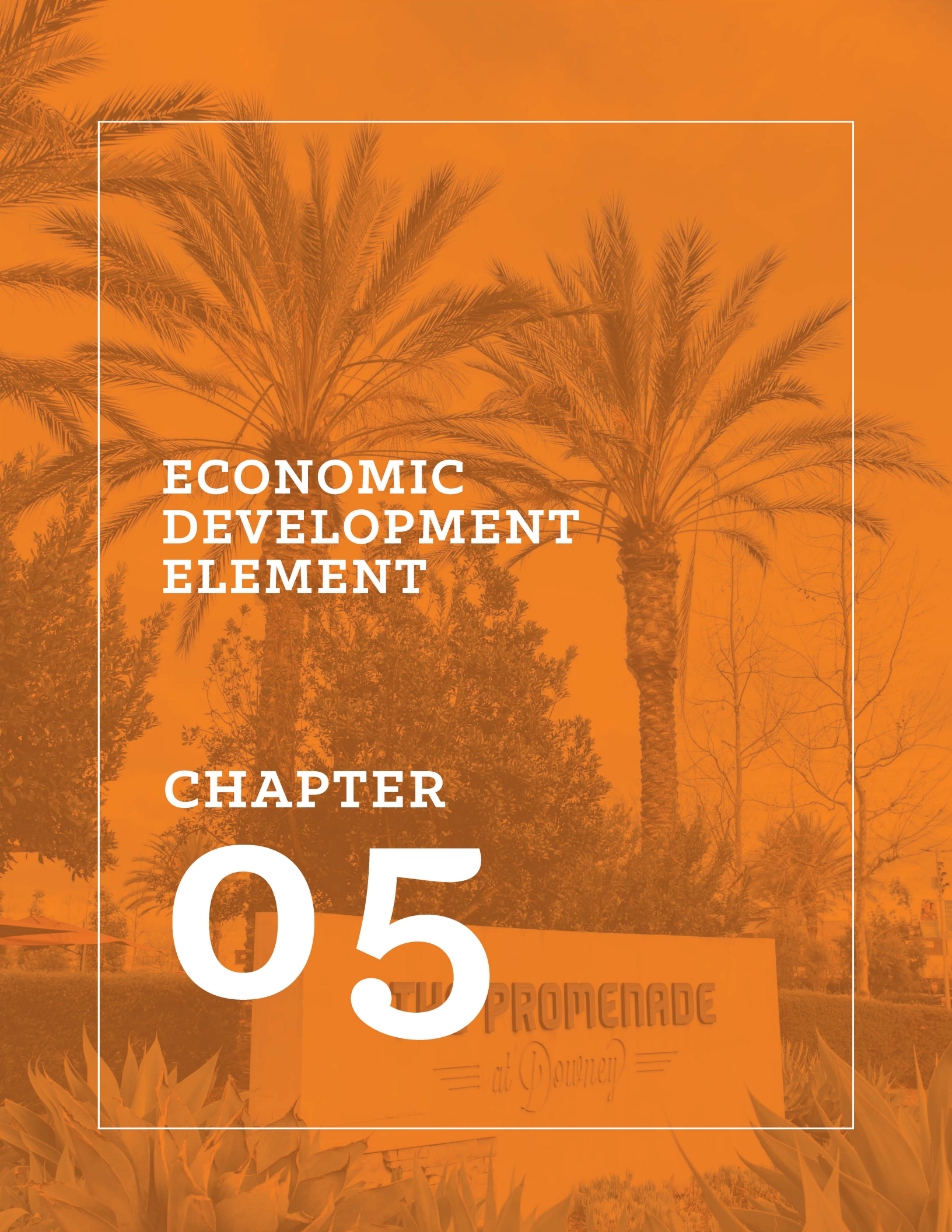
GOAL C-16: SOLID WASTE COLLECTION AND RECYCLING SERVICES THAT PROMOTE ENVIRONMENTAL RESPONSIBILITY

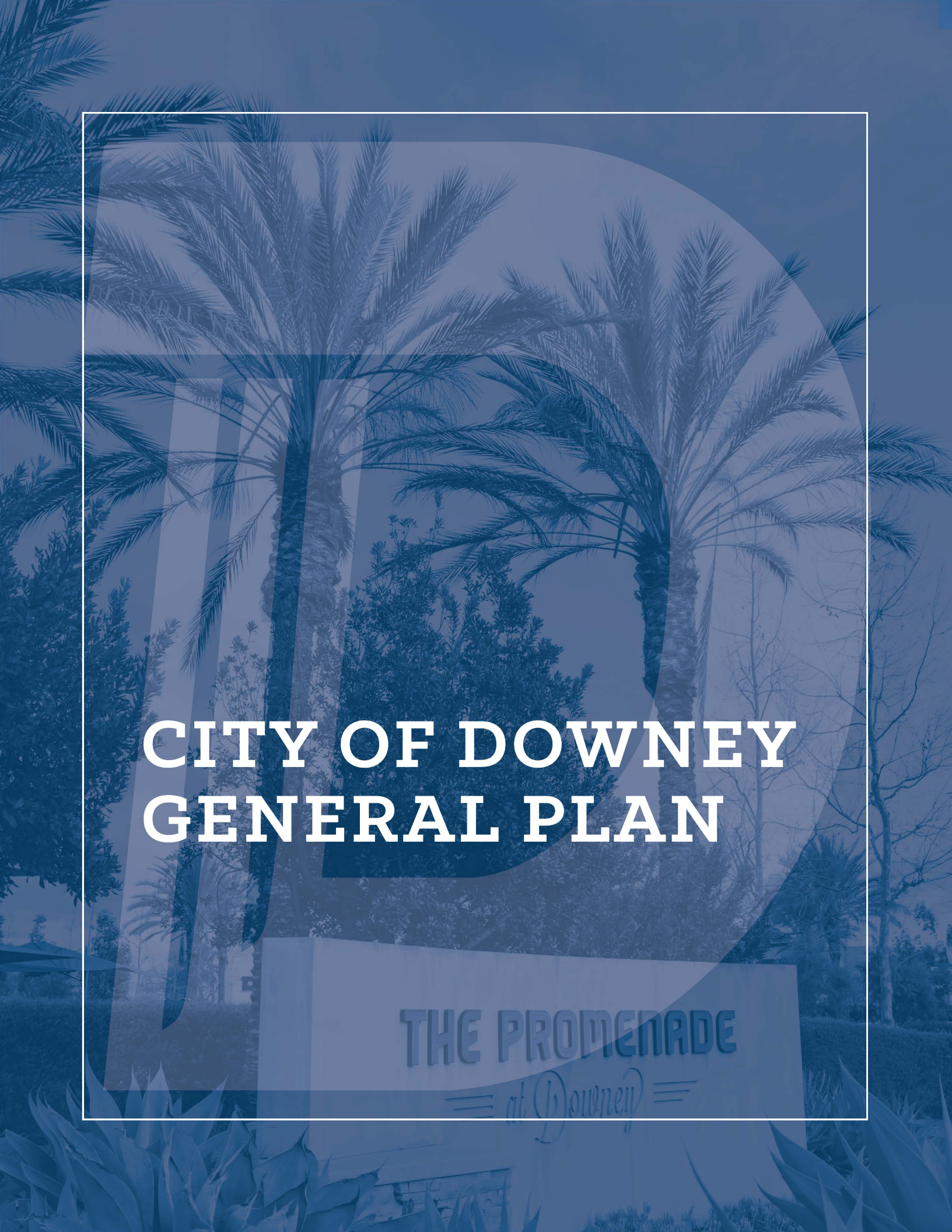
Policy C-16.1: Waste Reduction and Diversion. Promote recycling, composting, and zero-waste initiatives in residential, commercial, and industrial sectors.

Policy C-16.2: Public Education and Engagement. Conduct outreach to encourage proper waste management, recycling, and participation in local programs.

ECONOMIC DEVELOPMENT ELEMENT

CHAPTER 05





CITY OF DOWNEY GENERAL PLAN

CHAPTER

05

ECONOMIC DEVELOPMENT ELEMENT

INTRODUCTION

What this chapter addresses and why these topics are important?

The Economic Development Element establishes a strategic framework to strengthen and diversify the local economy and enhance fiscal stability. This chapter outlines the City's vision, policies, and implementation programs to support business growth, attract investment, create quality jobs, and expand economic opportunities for the community. It guides how economic activity, land use planning, and community development initiatives work together to ensure long-term economic resiliency.

Economic development is essential to maintaining a strong local tax base, supporting public services and infrastructure, and sustaining vibrant commercial districts and employment opportunities. As a mature, built-out community with limited land for expansion, Downey must take a proactive and coordinated approach to private redevelopment efforts, business support, and strategic investment. This element responds to emerging industries and regional growth trends by identifying opportunities to strengthen the city's competitive position within the greater Los Angeles region.

This chapter builds on the City's Economic Development Action Plan to define priorities related to development coordination, business support, marketing and branding, and tourism and hospitality. As a whole, these policies and programs position Downey to leverage its existing assets, encourage innovation and entrepreneurship, and promote inclusive economic growth that benefits residents and businesses.

GUIDING PRINCIPLES SHAPING THE ECONOMIC DEVELOPMENT ELEMENT

This Economic Development Element emphasizes business vitality, job creation, strategic investment, and targeted redevelopment while guiding policies that enhance economic competitiveness, fiscal stability, and community prosperity. This framework is grounded in the principles of economic resilience, innovation, opportunity, equity, and collaboration, ensuring that economic strategies respond to market conditions and anticipate trends – particularly beyond a five-year horizon.

Guiding Principles Related to Economic Development:

Overarching strategies focus on actions to attract and retain businesses, encourage entrepreneurship, support redevelopment and mixed-use development, and leverage key economic assets such as Downtown, commercial corridors, and major employment centers. The framework promotes alignment between land use and economic planning and encourages partnerships with public and private organizations to achieve and sustain economic development goals.



Build a Strong, Flexible Economy

Support a diverse economic base that fosters business growth and long-term prosperity.

COMMUNITY CONSIDERATIONS

Downey benefits from a diverse service-oriented economy, strong healthcare and manufacturing sectors, and commercial corridors that support a wide range of businesses. Through the community engagement process and evaluation of existing conditions, several economic development priorities emerged related to business growth, job creation, commercial revitalization, and long-term economic sustainability.

Maximizing Redevelopment and Strategic Land Use

Input highlighted the importance of reinvesting in underutilized properties and identifying opportunities for redevelopment in a largely built-out community. Comments supported encouraging infill development, adaptive reuse, mixed-use projects, and strategic reinvestment that strengthens economic activity, enhances property values, and contributes to the City's fiscal health.

Supporting Small Businesses and Entrepreneurship

Feedback emphasized the important role that small businesses, locally owned establishments, and entrepreneurs play in Downey's economy and community character. Comments identified a need to support business growth, reduce barriers to investment, provide business assistance resources, and create opportunities for new and expanding businesses.

Capturing Retail, Dining, and Visitor-Serving Opportunities

Input expressed interest in expanding shopping, dining, entertainment, and hospitality opportunities within the city. Comments highlighted the desire for additional family-friendly destinations, unique local businesses, and experiences that encourage residents and visitors to spend more time and money in Downey.

Diversifying the Economy and Attracting Higher-Wage Jobs

Strengthening economic opportunities and expanding access to quality employment emerged as important priorities. Feedback supported attracting a broader range of industries, encouraging innovation and investment, supporting healthcare and professional sectors, and creating opportunities for higher-wage employment within the city.

Strengthening Downtown and Commercial Corridors as Community Anchors

Comments emphasized the importance of Downtown and major commercial corridors as centers of economic activity, community gathering, and civic identity. Input supported enhancing streetscapes, improving the appearance and functionality of commercial districts, encouraging investment, and creating vibrant destinations that serve residents and businesses.

Aligning Economic Development with Housing, Land Use, and Fiscal Resilience

Feedback recognized the connection between economic development, housing, land use, and the City's long-term financial stability. Comments supported coordinated planning efforts that encourage investment, expand economic opportunities, diversify revenue sources, and strengthen the City's ability to provide services and maintain community amenities over time.

DOWNEY'S ECONOMIC LANDSCAPE

Downey is a mature, service-oriented community whose economy reflects its role as a regional provider of healthcare, education, retail, and professional services. Over time, the local economy has transitioned from industrial base to one driven primarily by institutional employment, consumer services, and locally serving businesses. Limited land supply and high development costs, particularly for housing, present constraints even as the city plans for steady population and employment growth. These conditions highlight the importance of reinvestment, redevelopment, business retention, and the strategic attraction of targeted industries to accommodate future demand and support long-term economic vitality.

Land Use and Development Pattern

Downey's economic landscape is defined primarily by commercial and institutional uses, with smaller areas dedicated to office and industrial activity. As of 2025, retail and service commercial uses occupied approximately 730 acres (see Figure ED-1), forming one of the City's largest economic land use categories and supporting shopping centers, restaurants, and consumer services that generate local employment and tax revenue. These commercial areas serve residents and surrounding communities, reinforcing Downey's role as a regional retail destination.

Office and professional service uses occupied (2025) approximately 140 acres and support administrative, financial, and business operations. Industrial uses accounted for about 220 acres, representing a relatively small share of land area compared to surrounding communities. Industrial areas support manufacturing, logistics, and wholesale activities but are constrained by limited land availability and increasing redevelopment pressures.

Institutional uses represent a significant component of the local economic structure. Public facilities, educational campuses, and healthcare uses collectively occupy substantial acreage and function as major employment centers. These uses provide stable jobs, support regional service needs, and reinforce Downey's role as a center for health, education, and public services.

The city has a modest hospitality sector, with approximately 650 hotel rooms (2025) serving business travelers and visitors. A small share of these rooms is provided by newer, full-service

FIGURE ED-1: ECONOMIC LAND USE INVENTORY(2025)





Firestone Boulevard – a major commercial corridor

TABLE ED-1: EMPLOYMENT CATEGORIES (2025)

Major Employment Category	Subcategories	Percent of Total	Notes / Implications
Education and Health Services	Educational Services; Health Care and Social Assistance	30.6%	Largest employment base; reflects Downey's strong healthcare and institutional economy.
Financial, Professional, and Business Services	Finance & Insurance; Real Estate, Rental & Leasing; Professional, Scientific & Technical Services; Management of Companies; Administrative & Support Services	18.6%	Knowledge-based and office-oriented employment sector.
Trade, Transportation, and Utilities	Retail Trade; Wholesale Trade; Transportation & Warehousing; Utilities	18.0%	Consumer services and goods movement supporting regional retail activity.
Leisure and Hospitality	Accommodation & Food Services; Arts, Entertainment & Recreation	10.5%	Visitor-serving and service economy employment.
Public Administration	Government & public services	7.8%	Stable employment from local and regional government.
Other Services	Personal services, repair, and similar activities	6.4%	Supports local community needs and small business activity.
Goods-Producing Industries	Agriculture, Forestry, Fishing & Hunting; Mining; Construction; Manufacturing	6.2%	Smaller share of the economy; provides middle-wage jobs and economic diversity.
Information	Media, telecommunications, data-related industries	1.6%	Small but specialized sector.
Unclassified	N/A	0.4%	Minor, undefined portion of employment.

Source: Esri Business Summary, 2025.

hotels, while the majority of the inventory consists of older hotels and motels that offer more limited amenities. This mix reflects an established but constrained visitor-serving market, with opportunities for modernization and reinvestment over time.

Overall, the land use pattern reflects a built-out urban environment where future economic growth will occur primarily through infill development, intensification of existing sites, and private redevelopment of underutilized properties.

Employment and Industry Structure (2025)

Downey's employment base is largely service-oriented. Education and health services constitute the largest share of employment at approximately 31 percent, highlighting the strong healthcare presence and regional role in providing educational and social services (see Table ED-1). Financial, professional, and business services account for roughly 19 percent of jobs, supporting knowledge-based employment, office functions, and local investment activity. Trade, transportation, and utilities represent about 18 percent of employment, with retail trade as a major driver of consumer activity that serves both residents and surrounding communities.

Leisure and hospitality, including restaurants, hotels, and recreation, comprise approximately 11 percent of employment, contributing to visitor-serving activity and the local service economy. Public administration, other services, goods-producing industries, and information sectors together account for the remaining 21 percent of employment, providing essential services, middle-wage jobs, and economic diversity. Overall, Downey's employment structure reflects a stable, locally focused economy anchored in healthcare, education, retail, and professional services while maintaining a mix of supporting sectors important for diversification.

The composition of Downey's employment sectors has important implications for long-term economic development. The dominance of education, healthcare, and service-oriented industries underscores the city's role as a regional provider of essential services, creating a stable employment base that can support sustained growth. The strong presence of retail, professional services, and financial sectors highlights opportunities for targeted business retention, attraction of higher-wage industries, and redevelopment of commercial corridors. Leisure, hospitality, and visitor-serving sectors, while smaller, provide potential for economic diversification and enhanced revenue generation through tourism and



Downey Gateway is located at the prominent intersection of Downey Avenue and Firestone Boulevard

local spending. Together, these sector trends reinforce the need for coordinated strategies that support redevelopment, business retention, entrepreneurship, and workforce development, ensuring that Downey's economic development policies foster community prosperity and long-term fiscal resilience.

Market Conditions and Growth Trends

Market analysis as of 2025 indicates relatively modest long-term demand for new commercial and industrial development due to limited projected population and employment growth in Downey and surrounding communities. Future retail growth is expected to occur primarily through recapturing retail spending that occurs in neighboring jurisdictions, rather than through significant increases in population.

Office markets in the region are experiencing elevated vacancy rates compared to historic levels, reflecting ongoing shifts in workplace patterns, including remote and hybrid work arrangements. While some submarkets continue to perform steadily, overall demand for traditional office space has softened, leading to slower leasing activity and an increased focus on repositioning or adaptive reuse of existing buildings. These trends suggest that future office demand may be more targeted, with an emphasis on flexible, high-quality, and strategically located spaces.

Industrial uses remain a key component of the local and subregional economy, with the industrial market significantly larger than the office sector. Across Southeast Los Angeles County, demand for warehouse, distribution, and light industrial space remains strong due to proximity to major freeways, regional labor access, and connections to the Ports of Los Angeles and Long Beach.

In Downey, industrial vacancy rates remain



The Promenade at Downey was competed in 2016

relatively low, reflecting steady demand and limited available space. As a largely built-out community, opportunities for new industrial development are constrained by limited land availability and compatibility with surrounding uses. As a result, future industrial growth is expected to focus on reinvestment, modernization, and more efficient use of existing industrial areas rather than large-scale expansion.

Housing growth associated with implementation of the Housing Element may support future economic activity by expanding the local customer base and workforce. Additional residential development could strengthen demand for neighborhood-serving retail, services, and commercial uses over time.

The hospitality sector shows modest growth potential, although long-term opportunities may emerge through redevelopment projects, regional events, and strategic investment in visitor-serving uses.

Over the course of the 20-year General Plan buildout, market conditions will continually change in response to regional economic shifts, demographic trends, infrastructure improvements, land availability, and other factors influencing development demand. Policies and programs in this element are intended to provide flexibility to adapt to evolving market conditions while supporting long-term economic vitality in Downey.



Looking north from Washburn Road toward a cluster of industrial, transportation, and warehousing uses



Healthcare hubs support nearby neighborhood retail and dining.



Popular dining options anchor Downey's commercial corridors and attract valuable regional spending.



The Columbia Memorial Space Center serves a major cultural and educational destination for the region.

ECONOMIC DEVELOPMENT PLAN

The Economic Development Plan provides a comprehensive framework to strengthen Downey's economic vitality, fiscal stability, and long-term competitiveness. It guides strategies to support business growth, attract targeted investment, and enhance commercial and employment districts while aligning economic activity with community priorities. Recognizing Downey's mature urban form and limited opportunities for outward expansion, the plan emphasizes redevelopment, reinvestment, and strategic use of existing assets to generate employment opportunities and increase local revenue. Through coordinated development, business support, targeted marketing, and investment in visitor-serving uses, this plan positions Downey to adapt to changing market conditions over time.

Development Coordination

Development coordination is critical in Downey to ensure optimized use of limited remaining vacant land and reflect modest projections for regional population and employment growth. Low vacancy rates in the office and industrial sectors suggest a relatively healthy market, but physical capacity constraints and changing workplace trends limit large-scale growth opportunities.

In this context, proactive coordination of development activities will help City leaders maximize redevelopment opportunities, facilitate mixed-use and infill projects, and align private investment with community priorities. Coordinated development review, infrastructure planning, and targeted incentives can help address market constraints, support feasible projects, and encourage investment that generates tax revenue, employment opportunities, and improved commercial services. This approach also ensures that land use decisions and economic development efforts work together.

Entrepreneurial and Targeted-Area Business Support

Supporting existing businesses and fostering entrepreneurship are central to maintaining economic vitality in a community where large-scale new development is limited. Economic analysis indicates that much of Downey's future retail growth will come from recapturing sales flowing to neighboring communities rather than from significant population growth. Strengthening the local business environment, supporting small businesses, and enhancing commercial districts are therefore key strategies for expanding economic activity.

Targeted business support also recognizes the importance of Downtown and other commercial areas as economic and community anchors. These areas contribute to local identity, generate economic activity, and provide services for residents and visitors. In addition to Downtown, Florence Avenue hosts a cluster of medical offices–including medical practices, dentistry, and optometry–that serve the day-to-day needs of the community and create a specialized local service hub. By supporting entrepreneurs, expanding technical assistance resources, and strengthening partnerships with regional business organizations, the City can help local businesses adapt to changing market conditions, improve competitiveness, and create employment opportunities while reinforcing the economic health of both general commercial corridors and specialized clusters such as the local medical office sector.

Downtown and the Firestone Boulevard corridor are key commercial and community hubs, hosting a mix of retail, dining, professional services, and entertainment venues. These areas provide important gathering spaces for residents. They support locally owned businesses and complementary regional and national retailers that contribute to Downey's character, identity, and community-serving retail and services. Strengthening these corridors through targeted business support, incentives, and infrastructure improvements can enhance their vibrancy, attract new investment, and ensure that these districts continue to serve as economic anchors that complement redevelopment efforts elsewhere in the city.

Marketing for Economic Development

Strategic marketing will position Downey competitively within the highly dynamic and economically diverse Los Angeles metropolitan region. With many surrounding communities competing for investment, businesses, and visitors, Downey must clearly communicate its advantages, including its central location, established neighborhoods, available redevelopment sites, and strong industry sectors such as healthcare and manufacturing.

Marketing efforts are particularly important given relatively modest regional growth projections and limited new development capacity. Attracting targeted industries, identifying preferred tenants for redevelopment sites, and promoting the local business-friendly environment can help Downey capture a greater share of regional investment. Effective and consistent messaging also supports broader economic development goals by promoting local businesses, strengthening the city's identity, and increasing awareness of economic opportunities among investors, employers, and residents.

Tourism and Hospitality

Tourism and hospitality provide opportunities to diversify Downey's economy and generate new revenue by attracting visitors and outside spending. While demand for new hotel development is limited, long-term potential exists for hospitality investment as redevelopment projects advance and regional visitor activity grows. Tourism acts as an export industry, bringing external dollars into the local economy while supporting local businesses and services.

Downey's attractions and institutions provide a foundation for expanding visitor activity. The Columbia Memorial Space Center serves as a major cultural and educational destination. Hospitals such as Kaiser Permanente, PIH Health, and Rancho Los Amigos National Rehabilitation Center contribute to health-related travel and services. Commercial corridors, shopping centers, and planned redevelopment projects, including the transformation of Rancho Los Amigos into a mixed-use center around the future light rail station at Gardendale Street, create opportunities for complementary retail, dining, and hospitality uses.

City leaders can leverage regional events and conventions in Southern California by marketing Downey as an accessible and attractive destination for attendees, participants, and visitors. Supporting visitor-serving uses, enhancing hospitality amenities, and integrating tourism considerations into redevelopment planning can strengthen Downey's regional profile and generate economic activity.

GOALS AND POLICIES

The following goals and policies provide a strategic framework to guide Downey's economic development. They address the city's built-out urban form, limited vacant land, and modest regional growth while leveraging existing strengths such as healthcare, education, retail, and commercial clusters.

The policies are informed by economic analysis, market trends, and extensive community input. They reflect residents' priorities for a diverse and locally oriented business mix, improved commercial corridors, and sustainable economic growth that benefits current and future generations.

GOAL ED-1: CONTINUED REDEVELOPMENT OF UNDER-USED PROPERTIES TO ELEVATE REVENUE AND JOBS GENERATING POTENTIAL

Policy ED-1.1: Redevelopment of Underutilized Sites. Encourage the redevelopment, infill, and intensification of underutilized commercial and industrial properties to support long-term economic growth in a built-out urban environment.

Policy ED-1.2: Mixed-Use Development. Encourage mixed-use development along commercial corridors and near transit stations to integrate housing, retail, and employment opportunities.

Policy ED-1.3: Streamlined Review and Incentives. Promote policies and institute regulatory frameworks that support timely project review and encourage private investment that strengthens the city's economic base and employment opportunities.

GOAL ED-2: GROWTH IN SUPPORT LOCAL BUSINESSES AND ENTREPRENEURSHIP

Policy ED-2.1: Business Support and Technical Assistance. Provide technical assistance, financing support, and business development programs to strengthen small businesses, entrepreneurs, and minority-owned enterprises.

Policy ED-2.2: Regional Partnerships for Economic Support. Foster partnerships with regional economic development organizations to enhance access to business support resources.

Policy ED-2.3: Downtown and Corridor Vitality. Promote the vitality of Downtown and major commercial corridors as economic and community anchors by encouraging business retention, community-serving uses, and active and vibrant environments.

Policy ED-2.4: Retail Diversity and Community Preferences. Promote a range of retail, dining, and neighborhood-serving businesses that serve the needs of the community..

GOAL ED-3: ATTRACT AND RETAIN TARGETED INDUSTRIES AND HIGHER-WAGE JOBS

Policy ED-3.1: Targeted Industry Attraction. Promote the attraction of industries that provide higher-wage employment, including professional services, healthcare, technology, and innovation-based sectors.

Policy ED-3.2: Adaptive and Flexible Workspaces. Encourage flexible and adaptable workspace models that support entrepreneurship, innovation, and evolving workplace trends.

Policy ED-3.3: Compatible Office and Professional Uses. Promote office and professional uses that support redevelopment sites and mixed-use development patterns.

Policy ED-3.5: Healthcare Sector Growth. Support the expansion of healthcare and medical services by encouraging the growth of hospitals, medical offices, and related health industries. Support their efforts to grow employment opportunities and reinforce Downey's role as a regional healthcare hub.

GOAL ED-4: CONTINUOUS ECONOMIC DEVELOPMENT MARKETING AND INVESTMENT ATTRACTION

Policy ED-4.1: Promote Downey's Economic Assets. Promote Downey's strategic location, redevelopment opportunities, and unique community assets to support business attraction and economic growth.

Policy ED-4.2: Promote Key Local Assets. Encourage the attraction of business that strengthen the City's economic base and expand retail and service options for residents and local workforce.

GOAL ED-5: GROWTH IN THE TOURISM, HOSPITALITY, AND VISITOR-SERVING MARKETS

Policy ED-5.1: Leverage Local Attractions. Promote Downey's unique attractions, such as the Columbia Memorial Space Center, commercial centers, and healthcare facilities, to attract visitors and support regional spending.

Policy ED-5.2: Support Tourism-Serving Uses. Encourage hospitality, dining, and family-friendly entertainment uses within commercial core areas and near the planned light rail station.

Policy ED-5.3: Community Events and Activities. Encourage events and activities that attract visitors that align with Downey's scale and community character.

GOAL ED-6: ALIGN ECONOMIC DEVELOPMENT WITH COMMUNITY CHARACTER

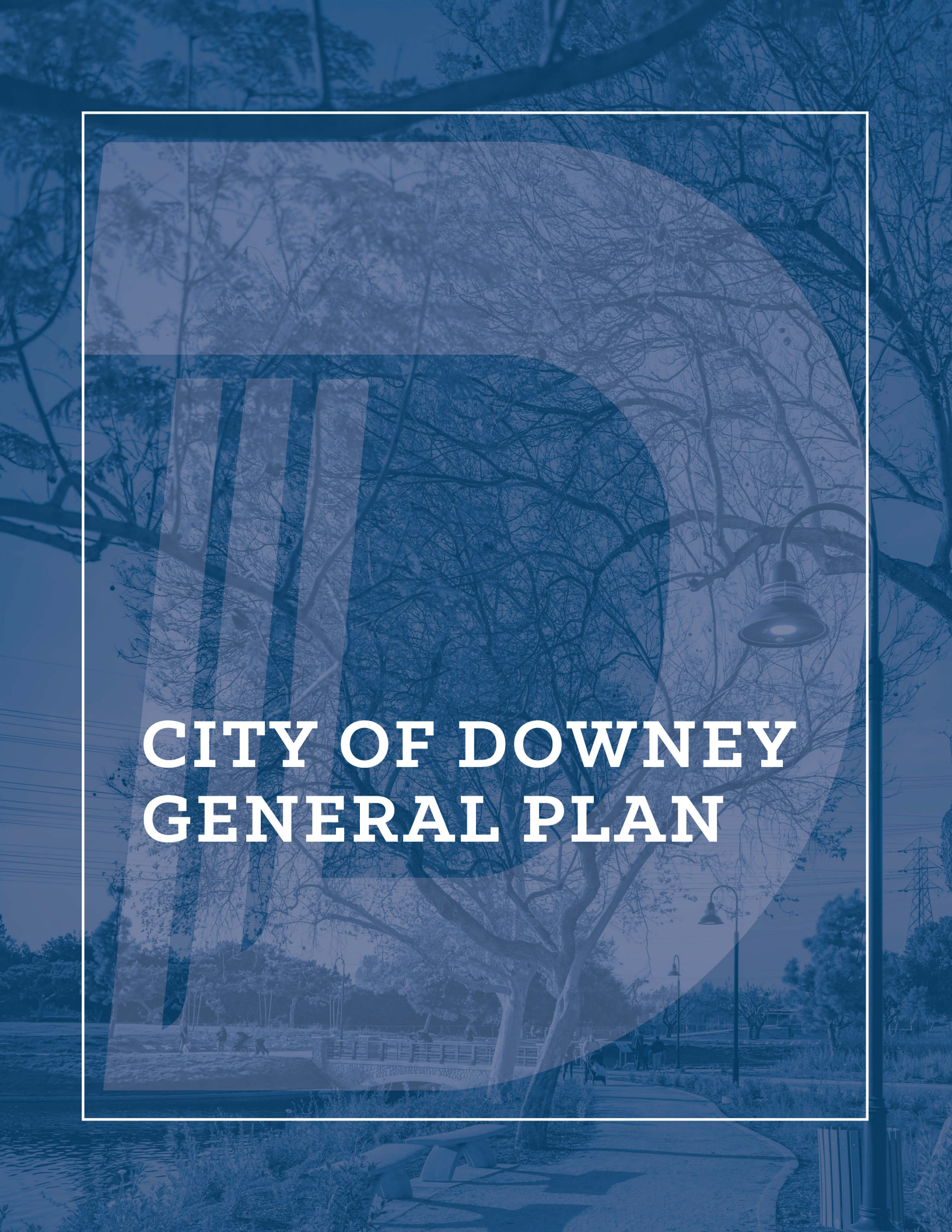
Policy ED-6.1: High-Quality Development and Community Character. Encourage high-quality development, property maintenance, and well designed commercial environments that reinforce Downey's community character.

Policy ED-6.2: Coordinate Land Use and Economic Development. Align economic development strategies with housing growth, land use planning, and transportation infrastructure to support job access and vibrant neighborhoods.



OPEN SPACE ELEMENT

CHAPTER 06



CITY OF DOWNEY GENERAL PLAN

CHAPTER

06

OPEN SPACE ELEMENT

INTRODUCTION

In a city with limited undeveloped land, every park, trail, river corridor, and green space is more than just land: it is a vital piece of the community fabric. Open spaces provide room to play, breathe, and connect with nature, even amid the urban landscape. They shape our neighborhoods, link our streets, and offer everyday escapes that improve health and foster social connections.

Downey's open space system is diverse and inventive. From river corridors that double as wildlife habitat and flood protection, to pocket parks tucked into neighborhoods and plazas within Downtown, open spaces here must do more than provide greenery. They include community gathering spaces and civic centers, such as the Columbia Memorial Space Center, which provide educational, cultural, and social opportunities for residents of all ages. Open spaces in Downey must serve multiple purposes, address community needs, and reach every resident within walking distance. As this General Plan looks to the future, open space is not just about preserving land, but about creatively expanding, connecting, and enhancing it so that every resident can enjoy the benefits of parks, trails, community spaces, and green areas.

Whether it is relaxing in one of Downey's neighborhood parks, enjoying a game on a local field, or gathering with friends in a downtown plaza, the city's parks and open spaces tell the story of a community that values health, equity, and livability. This Open Space Element charts a course to carry that story forward in innovative, equitable, and sustainable ways.

Purpose

The Open Space Element guides provision of accessible, safe, and well-maintained parks, trails, and community facilities that serve all residents' needs. Its focus is on equitable park access, innovative approaches to expanding open space, and the development of recreational programming that is diverse, flexible, and responsive to changing community needs. The element also emphasizes trail connectivity, high standards for maintenance and safety, and the integration of climate-resilient design in parks and public spaces. Through these strategies, Downey aims to create a connected and vibrant open space system that supports public health and social interaction.

What is Open Space?

In a fully built-out and highly urbanized city like Downey, open space plays a critical role in supporting quality of life. Unlike jurisdictions with large areas of undeveloped land, Downey's open space system is largely defined by parks, river corridors, utility corridors, and other multi-purpose landscapes that must balance recreation, infrastructure, and environmental functions. As the city continues to grow and evolve, open space planning must focus not only on preservation but also on creative integration of open space into the urban fabric to meet community needs and advance equity.

Open space in Downey encompasses land and water areas that are undeveloped or minimally developed and that provide environmental, recreational, visual, and functional benefits to the community. These spaces are essential components of the City's overall land use framework and support a wide range of public purposes, even when they do not resemble traditional parks or natural preserves.

The Open Space Element must address the long-term preservation and use of open space for the following purposes:

- **Natural Resources.** Protection of natural resources, including rivers, streams, watersheds, wetlands, wildlife habitat, and areas of ecological or scientific value.
- **Managed Resource Production.** Areas used for the production of resources such as agriculture, rangeland, mineral resources, groundwater recharge, and forestry, where applicable.
- **Outdoor Recreation.** Parks, trails, recreational facilities, scenic areas, and open spaces used for active and passive recreation.
- **Public Health and Safety.** Open space needed for protection from hazards such as flooding, earthquake fault zones, unstable soils, and wildfire risk areas, and for safeguarding water quality and air quality.
- **Preservation of Scenic Resources.** Areas that contribute to scenic beauty, visual relief, and the aesthetic character of the community, including viewsheds and landscape features.



NATURAL RESOURCES



MANAGED RESOURCE PRODUCTION



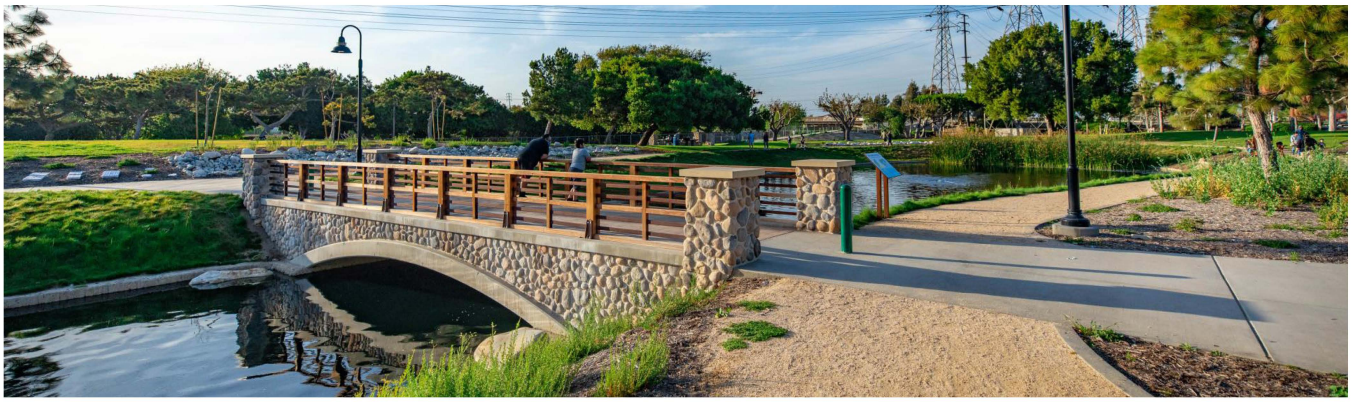
OUTDOOR RECREATION



PUBLIC HEALTH & SAFETY



SCENIC RESOURCES



A view of pedestrian bridge over the duck pond at Wilderness Park

From a natural resources perspective, open spaces contribute to ***the protection and enhancement of ecological functions*** within an urban setting. In Downey, this includes river and flood control corridors, landscaped buffers, and habitat areas that support urban wildlife, improve air quality, manage stormwater, and contribute to climate resilience. These spaces also offer opportunities to restore native vegetation and strengthen connections between regional ecological systems.

Open spaces in Downey also serve important ***recreational and community functions***. River corridors provide opportunities for walking, biking, and passive recreation, while plazas, courtyards, and green streets offer flexible spaces for social gatherings and community events. In a city with limited land availability, these non-traditional open spaces expand access to recreation and help connect neighborhoods to parks and activity centers.

In addition, open space plays a key role in ***public health and safety.*** Floodplains, river corridors, and other constrained lands require careful management to reduce risk from flooding, seismic activity, and extreme heat, while simultaneously providing open space benefits. Well-designed open spaces can also support water quality protection, urban cooling, and emergency access.

Finally, open space contributes to urban form and visual quality by breaking up continuous development, framing corridors and gateways, and enhancing neighborhood identity. In Downey, strategically located open spaces help shape development patterns, improve streetscapes, and reinforce a sense of place. Together, these functions underscore the importance of open space as a vital, multi-functional element of the City's future growth and livability strategy.



Downey Unified School District after-school sports programming

GUIDING PRINCIPLES SHAPING THE OPEN SPACE ELEMENT

The Open Space Element provides a long-range framework for preserving, enhancing, and equitably expanding Downey's open spaces. This framework is guided by the principles of sustainability, environmental justice, connectivity, multi-benefit design, and public participation. It addresses land acquisition, regulations, environmental considerations, and coordination with relevant agencies, while presenting actionable implementation strategies such as regulatory measures, public programs, and partnerships with other organizations. Public engagement is central to both the development of this element and any future updates.

Guiding Principles related to Open Space:

Protect Resources and Prepare for the Future

Plan with climate, conservation, community safety, and emergency preparedness in mind.

Manage and Invest in Community Resources

Manage water and natural resources while investing and supporting parks and community programs that enhance quality of life for all residents.

A Healthier Downey for Everyone

Reduce pollution burdens and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.

To balance the needs of a growing community with the imperative to protect natural resources, this element is grounded in the principles of sustainability, environmental justice, connectivity, and multi-benefit design. It outlines strategies to expand parks, trails, preserves, and urban green spaces equitably, ensuring all residents can enjoy the benefits of open space.

COMMUNITY CONSIDERATIONS

Downey's parks, recreation facilities, and open spaces provide important places for recreation, community gathering, health, and environmental benefits. As the city continues to evolve, maintaining and enhancing these resources will require addressing facility needs, improving access and connectivity, expanding recreational opportunities, and planning for long-term resilience. The following considerations emerged through the General Plan Update process and will help guide future investments in parks, open space, and recreation facilities.

Maintaining and Enhancing Parks and Recreation Facilities

Feedback highlighted the importance of maintaining Downey's existing parks, recreation facilities, and community amenities. Comments emphasized the need for ongoing investment in aging infrastructure, facility upgrades, maintenance, accessibility improvements, and enhancements that preserve the quality and usability of these community assets.

Expanding Access to Parks and Open Space

Input recognized the value of parks and open space throughout the city while noting that opportunities to add new traditional park acreage are limited in a largely built-out community. Comments supported identifying creative opportunities to expand recreational amenities, improve access to open space, and enhance park resources where feasible.

Improving Connectivity and Access

Improving connections between neighborhoods, parks, schools, community facilities, and other destinations emerged as a recurring theme. Feedback supported enhancing pedestrian and bicycle infrastructure, improving trail and pathway connections, and creating safer and more convenient routes to parks and open spaces throughout the city.

Meeting Evolving Recreation and Community Needs

Comments reflected the need for parks and recreation facilities to serve residents of all ages, interests, and abilities. Input supported expanding recreational, cultural, educational, and community programming while ensuring that facilities remain flexible and responsive to changing community needs.

Promoting Safety, Sustainability, and Resilience

Feedback recognized the importance of designing and managing parks and open spaces to address long-term environmental and community challenges. Comments supported incorporating shade, water-efficient landscaping, stormwater management features, accessibility improvements, safety enhancements, and other sustainable design practices that improve the comfort, usability, and resilience of community spaces.

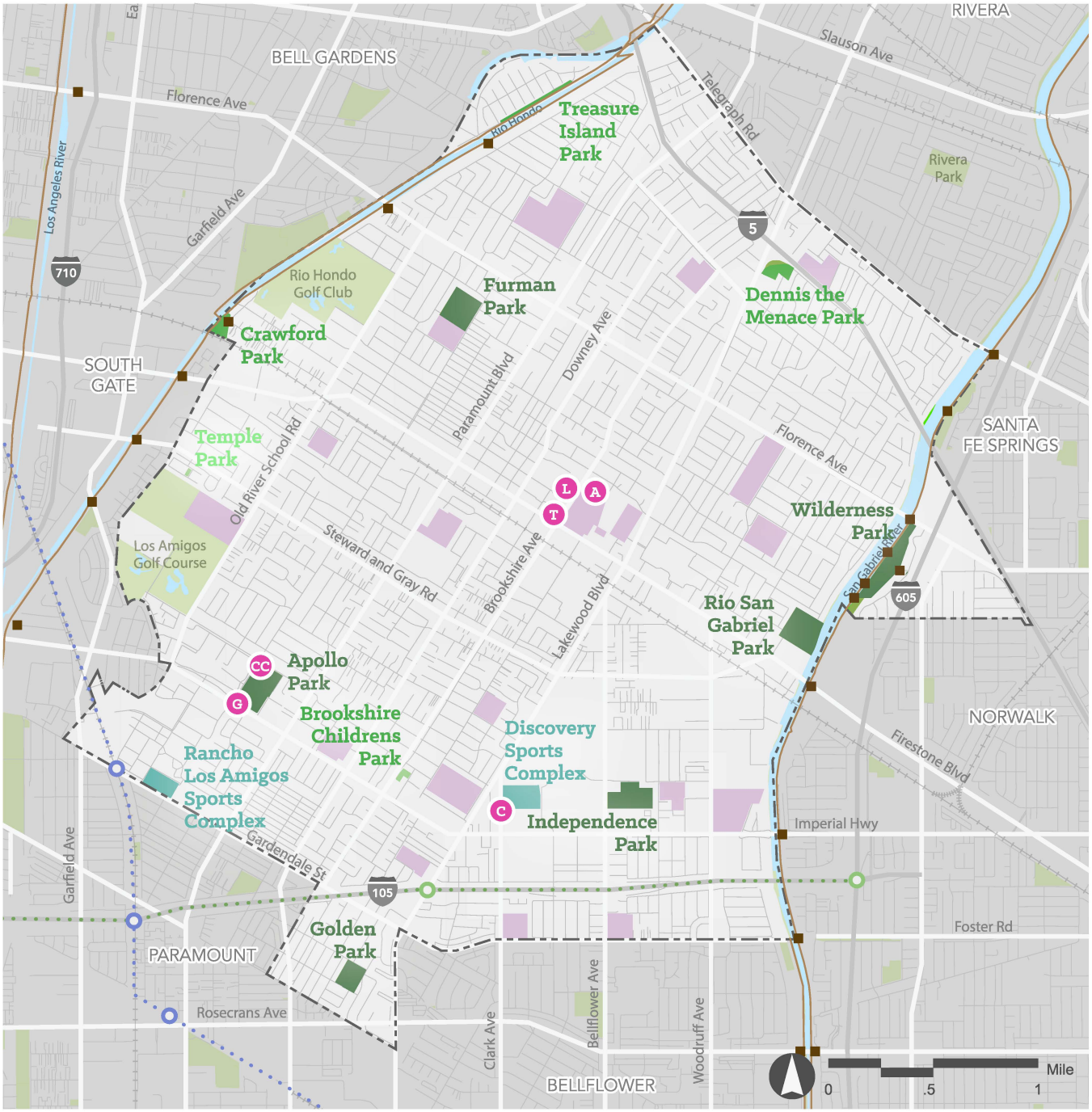


Residents enjoying community event at Golden Park

TABLE OS-1: PARKS AND OPEN SPACE INVENTORY (2026)

Park Name	Park Type	Acres	Park Amenities	
Brookshire Children's Park	Pocket Park	1.2	▪ Playground	
Temple Park	Pocket Park	0.4	▪ Playground	
Crawford Park	Neighborhood Park	2.3	▪ Playground	
Dennis the Menace Park	Neighborhood Park	6.2	▪ Barbeques	▪ Picnic Tables
Treasure Island Park	Neighborhood Park	3.8	▪ Playground	
Discorvery Sports Complex	Community Sports Park	12.7	▪ Athletic Fields ▪ Ball Diamond	▪ Restroom
Apollo Park	Community Park	17.2	▪ Activity Room ▪ Athletic Fields ▪ Ball Diamonds ▪ Bocce Ball Court ▪ McCaughan Gymnasium ▪ Outdoor Sand	▪ Volleyball Courts ▪ Playground ▪ Restrooms ▪ Shuffleboard Court ▪ Walking Trail
Furman Park	Community Park	14.4	▪ Activity Room ▪ Ball Diamonds ▪ Outdoor Fitness ▪ Picnic Shelters	▪ Playground ▪ Restrooms ▪ Tennis Courts ▪ Walking Trail
Golden Park	Community Park	8.1	▪ Activity Room ▪ Ball Diamonds ▪ Barbeques ▪ Basketball Court	▪ Handball Court ▪ Kitchen ▪ Picnic Shelters ▪ Picnic Tables
Independence Park	Community Park	10.2	▪ Playground ▪ Tennis Courts ▪ Futsal Courts	▪ Restrooms ▪ Skate Park
Rio San Gabriel Park	Community Park	15.7	▪ Ball Diamonds ▪ Basketball Court ▪ Dog Park	▪ Picnic Shelters ▪ Play Area ▪ Restrooms
Wilderness Park	Community Park	24.6	▪ Barbeques	
Rancho Los Amigos Sports Complex	Community Sports Park	5	▪ Concession Stand ▪ Adminstrative Offices ▪ Storage Space	▪ Meeting Space ▪ 3 Multi-sport Fields ▪ Restrooms
Total		116.8		

FIGURE OS-1: PARKS AND OPEN SPACE INVENTORY



Park Classifications

- Pocket Parks
- Neighborhood Parks
- Community Parks
- Community Sports Parks
- Joint-Use Facilities

Trails and Access

- Trailhead and Access Points
- Multi-Use Trails

Recreation Facilities

- CC Barbara J. Riley Community Center & Senior Center
- G Gary P. McCaughan Gymnasium
- T Downey Theatre
- L Downey Library
- C The Columbia Memoria Space Center
- A Downey Community Aquatic Center

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: City of Downey, 2026.

OPEN SPACE PLAN

The City's approach to open space emphasizes the ongoing maintenance and enhancement of existing parks and recreation facilities, while seeking innovative ways to expand access despite limited land availability. The plan prioritizes reinvestment in current assets, improved management practices, and creative strategies such as multi-use spaces, shared facilities, and reimagined underutilized areas to strengthen the open space system.

Parks and Recreational Facilities

Downey's parks and recreation system is designed to provide a range of spaces that serve residents at the neighborhood, community, and citywide levels. Parks vary in size, amenities, and purpose, offering opportunities for passive recreation, organized sports, social gathering, and cultural events.

- **Pocket Parks.** These small urban parks, generally under two acres in size, are integrated into neighborhoods to provide immediate access to green space. They may include turf, walkways, plazas, play areas, and picnic facilities. While they do not typically include restrooms or parking, pocket parks are ideal for local programming, fostering neighborhood engagement, and adding character to the urban landscape.
- **Neighborhood Parks.** Serving multiple blocks or neighborhoods, these parks range in size from approximately two to eight acres and provide spaces for play, small sports fields, benches, picnic areas, and walking. Neighborhood parks are designed to meet the recreational needs of residents within roughly a one-half-mile radius.
- **Community Parks.** Typically over eight acres in size, community parks provide facilities for larger groups and a broader range of activities, including sports, recreation, and community events. They are generally accessible via major streets and include restrooms and parking. Subtypes include:
  - Community Sports Parks: Dedicated to organized team sports, these parks may include soccer and baseball fields, basketball courts, and other amenities, along with restrooms, parking, and support facilities.
  - Civic Center Community Parks: Designed for daily use like a pocket park but equipped to host larger community-wide events within the Downey Downtown.
- **Joint-Use Facilities.** Complementing the broader park system, joint-use facilities (such as sports fields on school grounds) serve citywide recreation needs and provide spaces for active recreation, programming, and community events. These facilities typically include restrooms and parking and help expand access to high-quality recreational resources for residents throughout the city.

PARK ACCESSIBILITY:
Is park land located where everyone can access it?



in Downey

39% of residents live **WITHIN 1/2 MILE** of a park.

Compared to a County average of 49%



1.05 PARK ACRES PER 1,000 PEOPLE

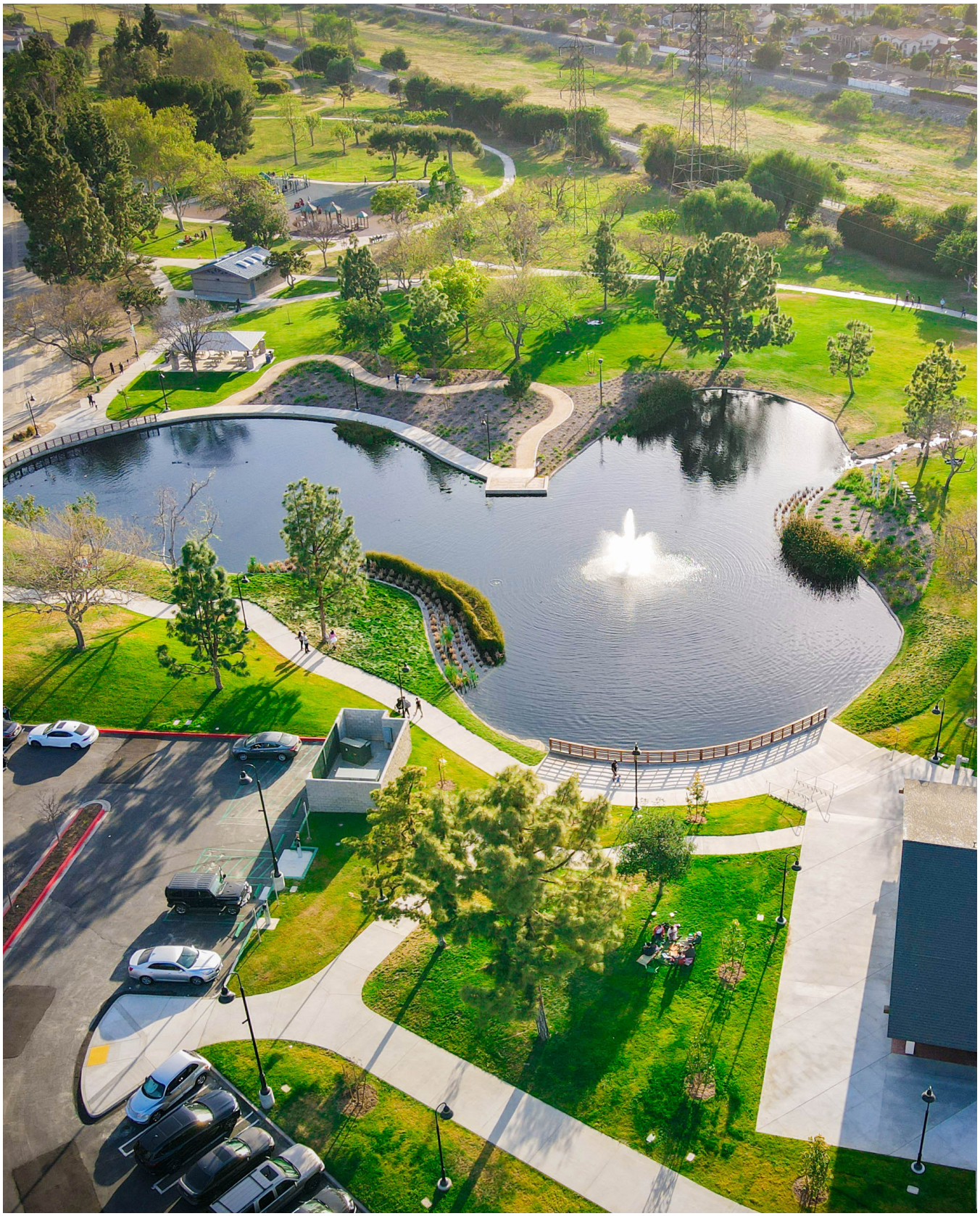


108,816 POPULATION (2023)



117 PARK ACRES within Downey

Los Angeles County: 3.3 park acres per 1,000.



Aerial view of Wilderness Park in Downey

Park Level of Service

Downey currently provides approximately 117 acres of parkland, or 1.05 acres per 1,000 residents based on the City's 2025 population. As the population grows, this ratio is projected to decline to approximately 0.82 acres per 1,000 residents by 2045 if additional parkland is not provided. While traditional park standards, such as the commonly referenced benchmark of 3.0 acres per 1,000 residents, indicate that Downey has a limited supply of parkland, the City recognizes that park service is also measured by residents' access to parks, the quality and condition of facilities, and the range of recreation opportunities available. This General Plan therefore emphasizes a comprehensive approach that expands park access, enhances existing parks and recreation facilities, improves connectivity, and identifies opportunities for new parks and open spaces to meet the needs of current and future residents.

Expanding Parks and Open Space

These strategies are tailored for a built-out city context.

- **River and Flood Control Corridors.** The Rio Hondo and San Gabriel River corridors present significant opportunities to expand linear parks, habitat areas, and multi-use trails. Strategic partnerships with regional agencies can support enhancements that improve access, recreation, and ecological value while maintaining flood control functions.
- **Utility and Infrastructure Easements.** Utility corridors and easements can be re-envisioned as shared-use greenways, accommodating walking paths, passive recreation, and landscape buffers. These spaces provide cost-effective opportunities to expand the open space network without acquiring new land. The City also recognizes that utility providers may have policies that limit leasing opportunities for use as trails and open space.
- **Joint-Use and Specialized Open Spaces.** Public golf courses, and similar large landholdings can contribute to the open space system through joint-use agreements, perimeter trails, and designated passive recreation areas, expanding public access while respecting primary land uses.
- **Trail Expansion and Bicycle Network Integration.** Expanding the trail system through enhanced bicycle and pedestrian networks, including off-street trails, protected bike facilities, and green streets, can increase functional open space, support mobility, and extend the reach of the park system.
- **Urban Green Spaces and Placemaking.** Downtown Downey and key corridors offer opportunities for plazas, courtyards, and pocket parks that support flexible programming, community events, and everyday use. These urban spaces can deliver high recreational and social value in areas where traditional park expansion is not feasible.
- **School and Institutional Partnerships.** Joint-use of school sites and other institutional properties can expand access to fields, courts, and open play areas, particularly in park-deficient neighborhoods, while maximizing the use of existing public assets.
- **Greening of Streets and Public Rights-of-Way.** Enhanced streetscapes, green medians, parkways, and stormwater features can function as linear open spaces that improve environmental performance, neighborhood character, and pedestrian comfort, contributing to a more connected and resilient open space system.
- **Mobile Recreation and Temporary Activation.** Mobile recreation programs

and temporary use of public spaces can expand access to recreation in areas lacking parks. Strategies may include pop-up play and fitness programs, mobile equipment, and the temporary closure of select streets or parking areas to create safe spaces for recreation, community events, and active use, allowing the City to deliver recreational amenities flexibly while testing long-term opportunities for public space expansion.

Equitable Park Access

Equitable access to parks and open space is a foundational principle of this General Plan and an important contributor to public health, community well-being, and environmental justice. Parks provide essential spaces for physical activity, social interaction, and respite from urban conditions, and their benefits are greatest when residents can safely and conveniently access them on foot. Ensuring access to high-quality parks throughout Downey is especially important in a built-out city where opportunities to add new parkland are limited.

A widely accepted benchmark for park access is the ability to reach a park within a 10-minute walk, generally defined as approximately one-half mile. This standard emphasizes proximity and walkability rather than acreage alone and reflects how residents, particularly children, seniors, and households without reliable vehicle access, use park and open space resources.

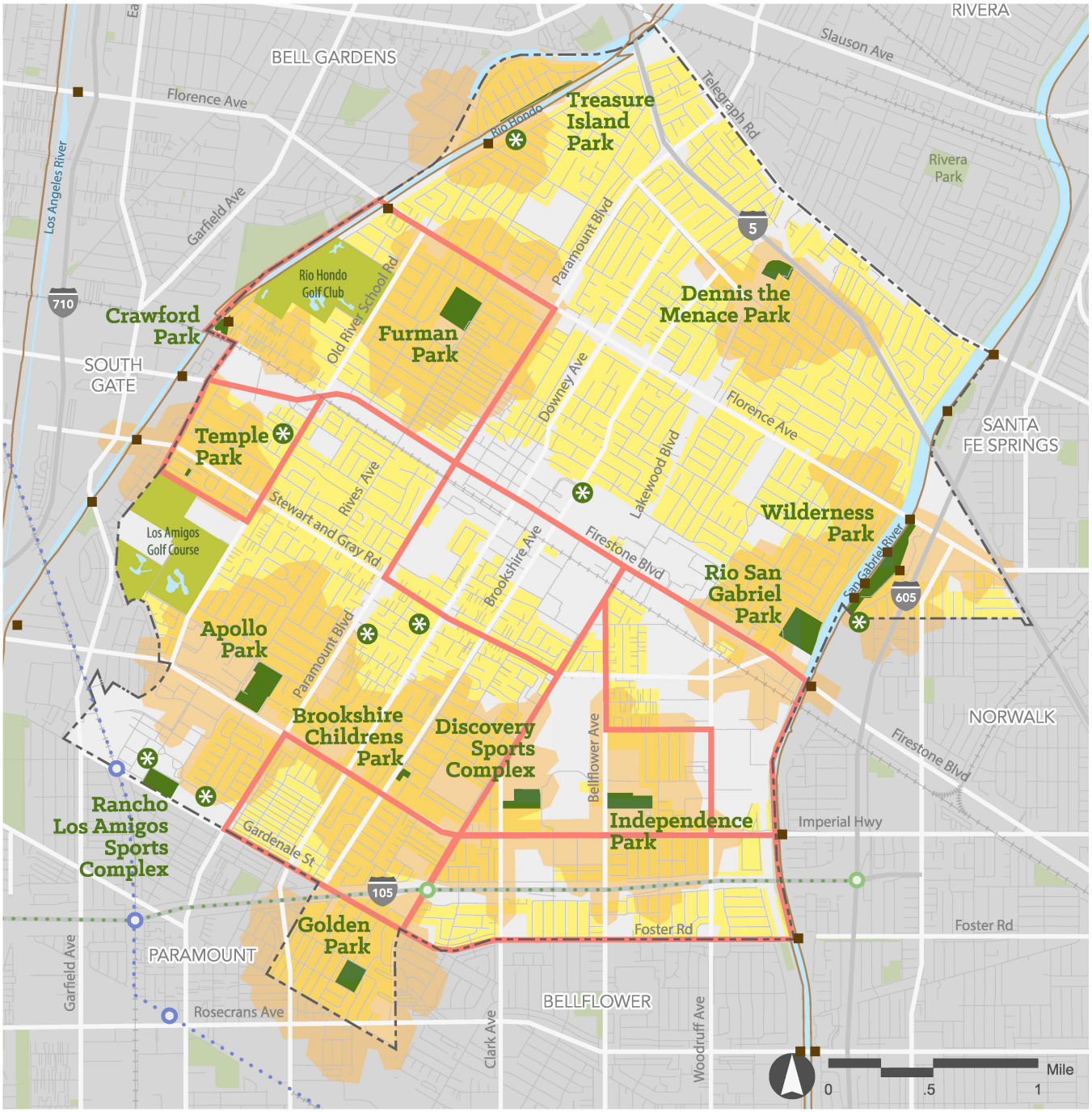
This General Plan promotes citywide improvements to park access through new parks, joint-use facilities, enhanced pedestrian and bicycle connections, and other innovative strategies that expand recreation opportunities. While these efforts will benefit residents throughout Downey, particular emphasis will be placed on improving access in underserved neighborhoods, including portions of central Downey and disadvantaged communities south of Firestone Boulevard, where investments can help address longstanding gaps in park access and advance more equitable outcomes.

See the Environmental Justice Element for additional discussion on park access.



Sports fields at the Rancho Los Amigos Sports Complex

FIGURE OS-2: PARK ACCESS (10-MINUTE WALK)



Park Access

- City Parks
- Golf Courses
- Half-Mile Access
- Potential Park Expansion Opportunities
- Other Parks and Open Spaces

Trails and Access

- Trailhead and Access Points
- Multi-Use Trails

General Plan Land Uses

- Residential & Mixed Use

Environmental Justice Areas

- Disadvantaged Communities

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: City of Downey, 2026, and CalEnviroScreen 4.0, .

COMMUNITY FACILITIES

Community facilities are essential to Downey's quality of life, providing spaces where residents gather, learn, create, and connect. Together with parks and open spaces, these facilities form the backbone of Downey's civic and cultural life. They support recreation, education, arts, and community services for residents of all ages and abilities.

Downey's community facilities include regional and citywide destinations such as the Columbia Memorial Space Center and the Downey Theatre, as well as essential neighborhood-serving facilities like the Downey Library and the Barbara J. Riley Community and Senior Center. These facilities complement the park system by providing indoor and flexible spaces for programs, events, and services that respond to the evolving needs of residents of all ages and abilities. As the City looks to the future, community facilities will continue to support social connection, lifelong learning, and a strong sense of community throughout Downey.

- **Columbia Memorial Space Center.** The Columbia Memorial Space Center serves as a regional educational and cultural landmark, honoring Downey's aerospace legacy while offering hands-on STEM learning opportunities. It functions as both a community gathering space and an educational resource that supports youth education, lifelong learning, and cultural enrichment. Future considerations include expanding the Center as a regional STEM campus that leverages the historic Inspiration space shuttle mock-up, incorporates more outdoor exhibits and interactive play structures, and emphasizes Downey's aerospace history and regional economic development. Partnerships with local schools, aerospace industries, and nearby Long Beach aerospace businesses can strengthen educational programs and broaden public engagement.



Columbia Memorial Space Center in Downey



Music programming at Downey City Library



Gary P. McCaughan Gymnasium



Barbara J. Riley Community & Senior Center

- **Downey Theatre.** The Downey Theatre is a large performing arts venue hosting concerts, theatrical productions, community events, and touring performances. It contributes to Downtown vitality and provides opportunities for residents to engage with the arts. Future considerations focus on maximizing facility use through implementation of an Arts Master Plan, expanding programming to include fine and performing arts education, community workshops, and regional cultural events. Enhancements could include flexible rehearsal and performance spaces, upgraded technology and acoustics, and coordinated partnerships with local schools, arts organizations, and professional touring groups.
- **Downey Library.** The Downey Library is a cornerstone of lifelong learning and civic engagement, offering educational programs, technology access, study spaces, and community meeting rooms that support literacy, workforce development, and community connections. Future considerations include modernizing library facilities, expanding technology access, increasing public engagement opportunities, and creating flexible community spaces that can host classes, workshops, and small-scale cultural events. Additional parking and improved accessibility will enhance the library's role as a community hub that responds to the evolving needs of residents of all ages.
- **Barbara J. Riley Community and Senior Center.** The Barbara J. Riley Community and Senior Center provides dedicated programming, services, and gathering spaces for older adults, supporting active aging through recreation, wellness programs, social activities, and essential services. Future considerations focus on expanding programs to meet the growing population of older adults, including gentler fitness classes, creative arts, technology instruction, and intergenerational activities that engage multiple age groups. The City can strengthen partnerships with AARP, local healthcare providers, faith-based organizations, and educational institutions to enhance program offerings. A strategy plan can guide future services, outreach, communication, and facility improvements so that seniors remain engaged, active, and socially connected while addressing the needs of the rapidly growing population of adults over 85.
- **McCaughan Gymnasium at Apollo Park**. The Apollo Park Gymnasium, officially named in honor of former Mayor and Council Member Gary P. McCaughan, M.D., is a key indoor recreation facility within the park system and reflects the community leadership that supported its development. The gymnasium provides year-round space for indoor sports, recreation, and community activities, serving residents of all ages. As recreation needs and community demographics continue to evolve, ongoing maintenance and strategic upgrades to the facility should prioritize flexibility in indoor sports and programming, ensuring the gymnasium can adapt to changing demands while remaining a reliable venue for continued indoor activity use.
- **Downey Aquatics Center.** Located on the Downey High School campus, the Downey Aquatics Center operates through a joint-use partnership between the City of Downey and the Downey Unified School District. The facility supports community swim lessons, recreational swimming, aquatic fitness, and other City recreation programs while also serving school athletic and instructional needs, maximizing the efficient use of a shared public facility.

Downey's community facilities, including the joint-use Downey Aquatics Center, will continue to serve as hubs for learning, recreation, and civic

engagement. Future improvements will expand access, enhance education, arts, recreation, and wellness programs, strengthen partnerships with schools and community organizations, and upgrade facilities to support flexible, technology-enabled, and intergenerational activities.

Recreation Services and Programming

Downey offers a broad range of recreation programs and classes that serve residents of all ages and abilities, supporting physical activity, social connection, and overall well-being. Participation is strong, with thousands of residents engaging annually in classes, camps, enrichment programs, and community events. Offerings include aquatics and swimming instruction, arts and crafts, fitness and wellness activities, organized sports, cultural programming, and educational enrichment. Facilities such as the Barbara J. Riley Community and Senior Center, the joint-use aquatic facility, parks, and community venues provide essential settings for these services. Demographic trends indicate continued growth in demand for senior programming, youth and teen activities, family-oriented services, and accessible health-focused recreation.

Recreation services also include organized team sports, day camps, sports camps, and special events delivered in partnership with community organizations and regional agencies. Seasonal celebrations, cultural events, and health-oriented programs contribute to community identity while encouraging active lifestyles and preventative health. Programs designed for seniors, youth, and individuals with special needs further support an inclusive system that promotes physical, mental, and social wellness across the community.

Looking ahead, this General Plan supports the continued evolution of recreation services toward more flexible, inclusive, and community-driven programming that integrates health and wellness into everyday experiences. Priority directions include expanding early childhood and summer programs, strengthening aquatics and fitness opportunities, supporting intergenerational activities, and enhancing access to programs that encourage healthy lifestyles and stress reduction. The City will also place increased emphasis on arts and culture, including both fine and performing arts, and on creative programming that leverages established facilities such as the Downey Theatre and other community venues.



Downey has various community centers with activity and recreation rooms.

TRAIL CONNECTIVITY

Trail connectivity is a key strategy for linking Downey's neighborhoods, parks, and community facilities while supporting walking and biking. Regional trails along the San Gabriel and Rio Hondo Rivers serve as major recreational and mobility assets, providing opportunities for longer-distance travel, recreation, and access to open space. Strengthening connections to these corridors is a priority of this General Plan.

Future efforts will focus on enhancing trailheads and access points that connect the river trails to Downey's established citywide bikeway system. Improving wayfinding, crossings, and neighborhood linkages will make it easier for residents to reach regional trails safely and comfortably. By better integrating regional trails with local bikeways and park facilities, Downey can create a more cohesive and accessible trail network that supports everyday recreation, regional connectivity, and healthier, more active lifestyles.

See the Circulation Element for additional discussion on bicycle facilities.



Example of bicycle trail amenities, including a repair station and interpretive bike signage



Improving access to trails along river corridors

URBAN GREENING AND ECOLOGICAL RESILIENCE

As a largely built-out city bordered by major freeways, rail corridors, and channelized rivers, Downey's approach to urban greening focuses on strategically weaving natural systems back into the urban landscape. Expanding green infrastructure enhances neighborhood livability while addressing rising temperatures, managing stormwater, improving air quality, and supporting long-term climate adaptation. Urban greening is envisioned as a citywide network of trees, landscaped corridors, and nature-based solutions that function as both community amenities and environmental infrastructure.

A central component of this effort is the continued expansion of Downey's urban forest. Increasing tree canopy across neighborhoods, parks, and public rights-of-way will provide shade, reduce surface temperatures, and help mitigate the urban heat island effect, particularly in areas with limited tree cover. Tree planting and management strategies will prioritize heat-vulnerable communities, align species selection with water availability and maintenance capacity, and balance canopy growth with infrastructure constraints. A resilient urban forest will be supported by proactive tree care, long-term maintenance, and community participation.

Green infrastructure will also play a critical role in managing stormwater and improving water quality. Bioswales, landscaped parkways, rain gardens, and other features can be integrated into streets, medians, parking areas, and public facilities to capture and filter runoff before it reaches the Rio Hondo and San Gabriel River systems. These strategies reduce localized flooding, support groundwater recharge where feasible, and enhance the performance and appearance of the built environment.

Urban greening also supports habitat and ecological connectivity. Enhancements along river corridors, utility easements, and linear open spaces can create small but important habitat linkages for birds, pollinators, and small mammals. Replacing underutilized turf, excess pavement, and ornamental landscaping with native and drought-tolerant plant communities will strengthen these connections while remaining compatible with surrounding neighborhoods.



Native plant landscaping at Furman Park

Expanded tree planting and landscaped setbacks along freeways, industrial areas, rail lines, and major corridors will help buffer noise, improve air quality, and visually soften infrastructure edges. Together, these strategies position urban greening as a foundational element of Downey's resilience framework, creating a healthier, cooler, and more connected city.

See the Conservation Element for additional discussion on urban greening.

URBAN GREENING EXAMPLES



Urban community gardens



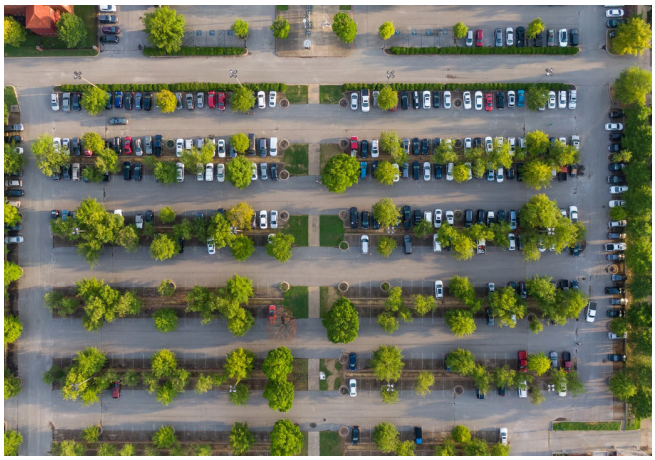
Green gathering spaces



Small park spaces for excercise and relaxation



Native plant vegetation & bioswales



Green parking lot landscaping



Using landscaping as dividers for bike/walk paths

GOALS AND POLICIES

Open space is a vital component of Downey's urban fabric, providing opportunities for recreation, social connection, environmental resilience, and public health. In a fully built-out city, every park, trail, river corridor, and green space serves multiple purposes—supporting physical activity, mental well-being, ecological functions, and community identity. The goals and policies below guide the preservation, expansion, and enhancement of Downey's open space system, ensuring that parks, trails, and community facilities remain accessible and equitable.

GOAL OS-1: A COMPREHENSIVE AND EQUITABLE PARK SYSTEM THAT MEETS THE DIVERSE NEEDS OF ALL RESIDENTS

Policy OS-1.1: Joint-Use Access. Strengthen partnerships with schools and institutions to standardize joint-use agreements, opening playgrounds, athletic fields, and recreational facilities to the public during non-school hours to relieve pressure on high-density neighborhoods.

Policy OS-1.2: Strategic Acquisition and Conversion. Identify opportunities to acquire new parkland or repurpose underutilized public and institutional sites, including utility easements, surplus parking, and municipal property, into pocket parks, plazas, community gardens, and flexible green spaces.

Policy OS-1.3: Neighborhood-Scale Green Spaces. Prioritize pocket parks and neighborhood parks within one-half-mile of neighborhoods to provide immediate access to play areas, social hubs, and informal gathering spaces, particularly in underserved and disadvantaged communities.

Policy OS-1.4: Municipal Sites into Public Amenities. Redesign underutilized areas around public facilities into functional micro-parks, plazas, and community gathering spaces that enhance neighborhood character and provide recreational opportunities.

Policy OS-1.5: Youth-Oriented Multi-Use Spaces. Design parks, plazas, and recreational areas with flexible, multi-use zones, well-lighted paths, and seating to serve as safe "third spaces" for youth recreation, mentorship, and socialization.

GOAL OS-2: COMMUNITY FACILITIES SERVING AS MULTI-PURPOSE HUBS FOR LEARNING, RECREATION, ARTS, AND WELLNESS

Policy OS-2.1: Upgrade and Maintain Facilities. Invest in modernization and ongoing maintenance of community facilities to provide safe, flexible, and welcoming spaces for recreation, learning, arts, and wellness activities.

Policy OS-2.2: Expand Community Partnerships. Collaborate with schools, regional organizations, cultural institutions, and service providers to enhance programming, expand access, and maximize use of community facilities and open spaces.

Policy OS-2.3: Promote Lifelong Learning, Arts, and Wellness. Offer a broad range of educational, cultural, and wellness programs, including intergenerational activities, arts workshops, STEM learning, and health-focused initiatives.

Policy OS-2.4: Accessibility and Technology. Design facilities to meet accessibility standards and integrate updated technology to support diverse programs, flexible scheduling, and inclusive participation.

Policy OS-2.5: Columbia Memorial Space Center. Support expansion and modernization of the Space Center to enhance hands-on STEM learning, outdoor exhibits, interactive play areas, and programs that celebrate Downey's aerospace heritage by leveraging partnerships with local schools, aerospace businesses, and regional organizations to broaden educational impact and community engagement.

Policy OS-2.6: Downey Theatre. Maximize use of the Theatre for performances, arts education, community workshops, and regional cultural events while enhancing flexible spaces, technology, acoustics, and partnerships with schools, arts organizations, and touring groups.

Policy OS-2.7: Downey Library. Continue to modernize the Library to expand technology, study and meeting spaces, literacy, workforce, and cultural programs, while improving accessibility and parking to strengthen its role as a community hub space.

Policy OS-2.8: Senior Center. Expand programming for older adults, including fitness, wellness, creative arts, technology instruction, and intergenerational activities. Strengthen partnerships with healthcare providers, educational institutions, and senior service organizations, guided by a Senior Strategic Plan, to meet the needs of an aging population.

Policy OS-2.9: Promote Multi-Purpose and Flexible Use. Design or adapt all community facilities to accommodate a variety of activities simultaneously, including recreation, education, arts, wellness, and civic events, to maximize community benefit.

GOAL OS-3: DIVERSE, INCLUSIVE, AND RESPONSIVE RECREATION

PROGRAMS THAT SERVE ALL AGES, ABILITIES, AND INTERESTS

Policy OS-3.1: Expand Equitable Access. Provide recreation programs for youth, teens, adults, seniors, and individuals with disabilities, ensuring equitable opportunities across sports, aquatics, arts, cultural, and wellness activities.

Policy OS-3.2: Support Inclusive and Culturally Responsive Programming. Design programs that reflect Downey's cultural diversity and community needs, including multicultural events, language-accessible offerings, and activities that encourage cross-cultural participation.

Policy OS-3.3: Advance Universal Accessibility. Require program locations, facilities, and materials to meet or exceed accessibility standards, including ADA compliance, to remove physical, sensory, and communication barriers.

Policy OS-3.4: Provide Flexible Program Delivery. Offer programs at varied times and locations, using multiple formats such as drop-in, seasonal, intergenerational, and virtual options to maximize participation and convenience.

Policy OS-3.5: Maintain Adaptable Spaces for Programming. Design and manage parks, community facilities, and shared-use spaces to be flexible, multi-purpose, and equipped to support evolving recreation programs, special events, and cultural activities.

Policy OS-3.6: Evaluate and Evolve Programs. Regularly assess participation trends and community feedback to refine offerings, expand successful programs, and introduce innovative recreation opportunities.

GOAL OS-4: HEALTH, FITNESS, AND WELLNESS INTEGRATED INTO PARKS, PROGRAMS, AND COMMUNITY FACILITIES

Policy OS-4.1: Fitness Opportunities. Offer diverse fitness, wellness, exercise classes, and specialized health programs, tailored to a range of abilities and age groups.

Policy OS-4.2: Health and Preventative Practices. Incorporate health education, nutrition, stress reduction, and preventative wellness initiatives into recreational programming to support long-term community health.

Policy OS-4.3: Intergenerational and Family-Oriented Activities. Develop programs that encourage participation across generations, including family fitness, multigenerational arts, and community wellness events.

GOAL OS-5: COMMUNITY ENGAGEMENT AND SOCIAL CONNECTION FOSTERED THROUGH OPEN SPACE AND PROGRAMMING

Policy OS-5.1: Community Input and Participation. Engage residents in program planning, evaluation, and expansion through surveys, focus groups, and community advisory opportunities to align offerings with evolving community needs.

Policy OS-5.2: Spaces for Youth and Teens. Offer structured and unstructured activities in secure, well-lighted, and supervised settings where young people can socialize, learn, and develop leadership and life skills.

Policy OS-5.3: Collaborate with Community Partners. Coordinate with schools, non-profits, regional agencies, and local organizations to expand program reach, diversify offerings, and optimize resources.

GOAL OS-6: ARTS, CULTURE, AND CREATIVE EXPERIENCES AVAILABLE AND ACCESSIBLE ACROSS ALL NEIGHBORHOODS

Policy OS-6.1: Fine and Performing Arts Programs. Offer classes, workshops, performances, and exhibitions that encourage artistic expression and cultural enrichment for all ages.

Policy OS-6.2: Facilities for Creative Programming. Use venues such as the Downey Theatre, libraries, and community centers for arts and cultural programs, including performances, exhibits, and educational workshops.

Policy OS-6.3: Arts, Recreation, and Wellness. Combine creative activities with health and wellness programs to provide holistic, engaging experiences that nurture mind, body, and community connection.

GOAL OS-7: AN INTERCONNECTED NETWORK OF TRAILS, PATHWAYS, AND ACTIVE TRANSPORTATION CORRIDORS

Policy OS-7.1: Trail Networks. Complete missing links in trails and active transportation networks to provide seamless pedestrian and bicycle connections to regional assets such as the Rio Hondo and San Gabriel River corridors.

Policy OS-7.2: Physical Barriers. Improve crossings, underpasses, and infrastructure along arterial streets, freeways, and rail lines to enhance

connectivity and safe access to parks and open spaces.

Policy OS-8.3: Transit and Active Transportation. Coordinate park and open space access with public transit to reduce reliance on vehicles and improve connectivity for all residents.

Policy OS-7.4: Trail and Bikeway Networks. Develop off-street trails, greenways, and bikeways that link parks, community facilities, and urban centers while supporting active commuting and recreation.

GOAL OS-8: A RESILIENT URBAN LANDSCAPE THAT MITIGATES CLIMATE IMPACTS AND ENHANCES ECOLOGICAL FUNCTION

Policy OS-8.1: Urban Forests. Increase tree canopy coverage in parks, neighborhoods, and rights-of-way, prioritizing heat-vulnerable and disadvantaged areas.

Policy OS-8.2: Rewilding and Sustainable Landscaping. Convert impervious surfaces, underutilized turf, and ornamental landscapes into drought-tolerant, native, and pollinator-friendly plantings to support wildlife and improve air quality.

Policy OS-8.3: Community Resilience Hubs. Enhance public facilities and surrounding landscapes with shade, green infrastructure, and biophilic elements to provide cooling, refuge during extreme heat events, and community gathering opportunities.

Policy OS-8.4: Ecological Connectivity. Create green corridors and habitat linkages along rivers, utility easements, and linear open spaces to support wildlife movement, strengthen ecological function, and connect neighborhoods to nature.

Policy OS-8.5: Green Infrastructure for Climate Adaptation. Incorporate bioswales, rain gardens, landscaped parkways, and stormwater retention features into streetscapes, parks, and public spaces to manage runoff, reduce flooding, and enhance resilience.

Policy OS-8.6: Green Buffers. Use landscaped setbacks along freeways, industrial areas, and major streets to reduce noise, improve air quality, and visually soften infrastructure impacts.

GOAL OS-9: HIGH-QUALITY, SAFE, AND ACCESSIBLE RECREATIONAL INFRASTRUCTURE

Policy OS-9.1: Maintain and Upgrade Facilities. Invest in maintenance, repairs, and infrastructure upgrades to meet modern safety, functional, and aesthetic standards across all parks and recreational spaces.

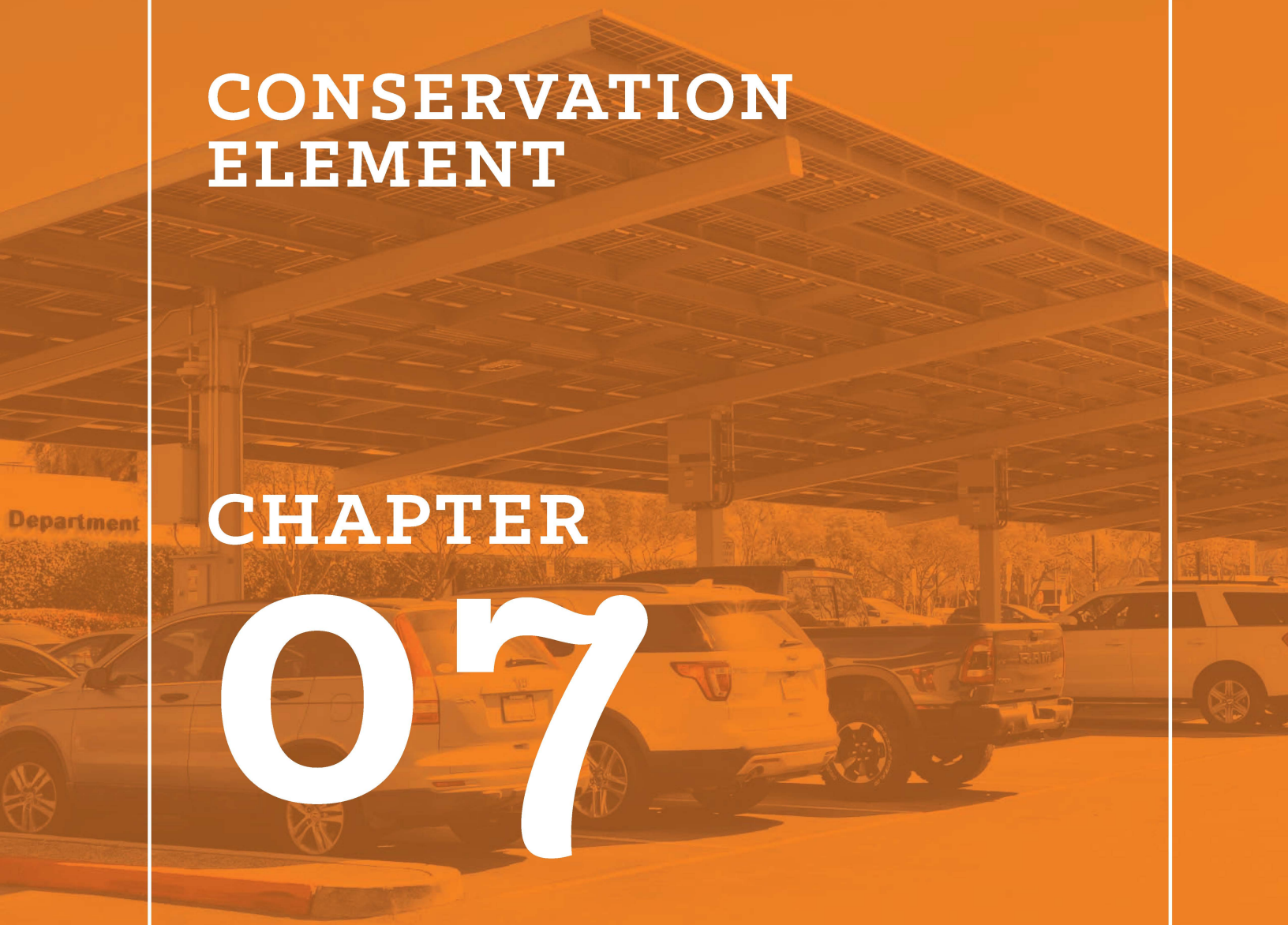
Policy OS-9.2: Universal Design. Design pathways, amenities, play areas, and restrooms in accordance with Universal Design principles to support equitable access for seniors, people with disabilities, and residents with limited mobility.

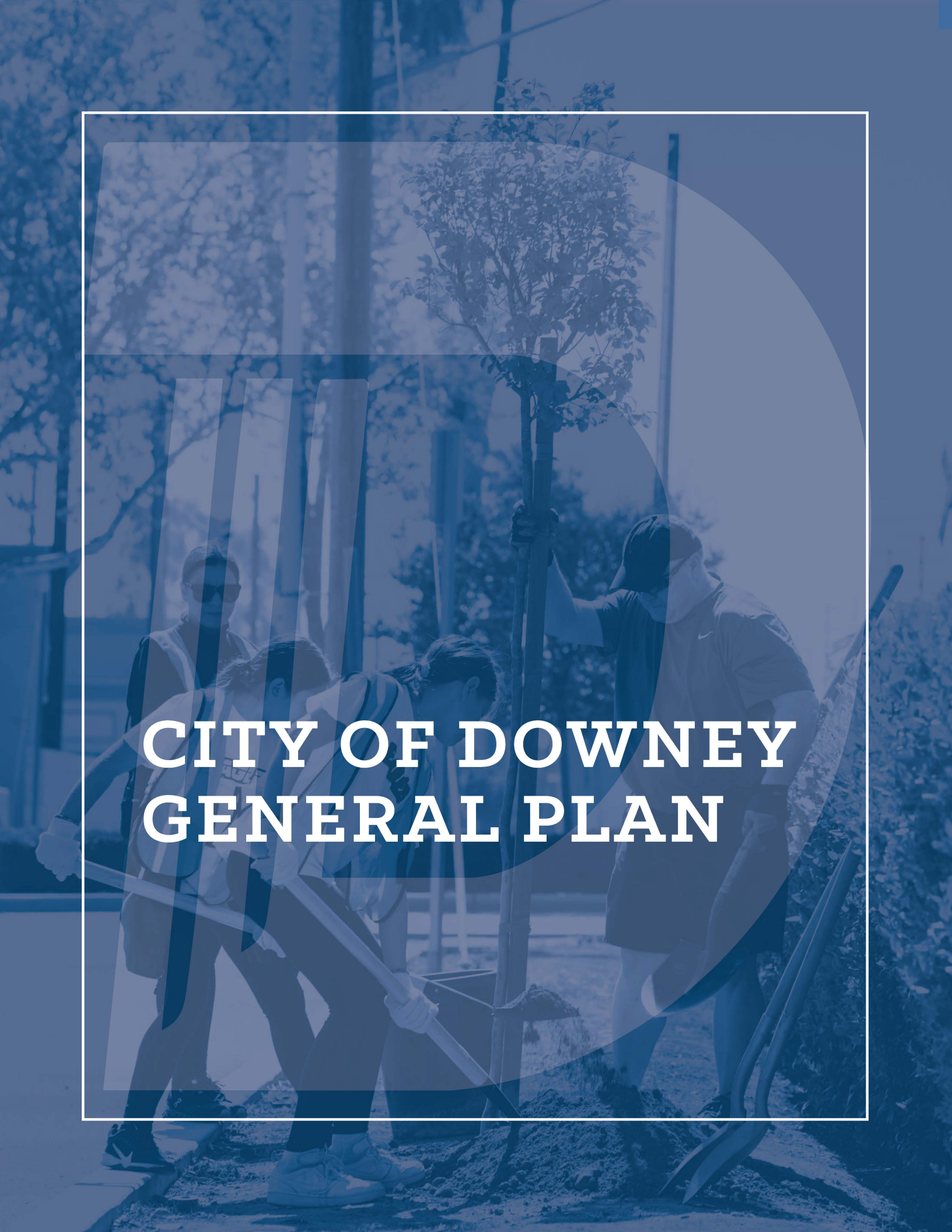
Policy OS-9.3: Multi-Use and Flexible Spaces. Design recreational areas to accommodate diverse programs, community events, sports, and social gatherings that can adapt to changing community needs.

Policy OS-9.4: Partnerships. Coordinate with schools, institutions, and community organizations to increase access, programming, and use of parks, trails, and recreational facilities.

CONSERVATION ELEMENT

CHAPTER 07





CITY OF DOWNEY GENERAL PLAN

CHAPTER

07

CONSERVATION ELEMENT

INTRODUCTION

What this chapter addresses and why these topics are important?

Despite being a highly developed urban environment, Downey promotes awareness of its natural resources, from urban forest canopy and green spaces to underlying water resources and the remaining patches of natural habitats. Natural resources in an already heavily urbanized environment warrant increased focus on the need to conserve and protect natural spaces. Responsibly managing natural resources directly benefits the Downey community in ways fundamental to public health and quality of life. Conservation efforts tie directly to improving our air quality and ensuring the reliability and cleanliness of our water supply. Improved air quality can reduce respiratory illnesses, while clean water can support domestic, commercial, and recreational needs.

The Conservation Element establishes goals and policies for the preservation, enhancement, and development of natural resources. Natural resources include land, water, and ecosystem resources, as well as the benefits these resources provide to the community. The Conservation Element is one of the seven mandatory elements of a general plan. It should be developed in coordination with the open space and land use elements to guide conservation and development while balancing community needs with environmental protection and climate change impacts.

Government Code Section 65302(d) states that the Conservation Element must address a range of natural resources, including water, forests, soil, rivers, and wildlife. It also needs to consider how new development impacts natural resources on public lands.

GUIDING PRINCIPLES SHAPING THE CONSERVATION ELEMENT

The Conservation Element provides a long-term framework for protecting, enhancing, and sustainably managing Downey's natural and open space resources. It emphasizes the preservation of water, energy, biological resources, and urban green infrastructure while guiding policies that strengthen ecological function, community resilience, and environmental quality. This framework is grounded in the principles of sustainability, environmental justice, connectivity, multi-benefit design, and public engagement, ensuring that conservation strategies address both ecological priorities and community needs.

Protect Resources and Prepare for the Future

Plan with climate, conservation, community safety, and emergency preparedness in mind.

Manage and Invest in Community Resources

Manage water and natural resources while investing in and supporting parks and community programs that enhance quality of life for all residents.

Guiding Principles Related to Conservation:

To meet the dual goals of supporting a growing community and protecting vital natural resources, this element outlines strategies to enhance river corridors, urban green spaces, and parks, and trails, and to restore ecological functions where feasible. It promotes equitable access to environmental benefits, integrates conservation into development and land use planning, and establishes a framework for partnerships, programs, and regulations that will guide the City toward a more sustainable and resilient future.

COMMUNITY CONSIDERATIONS

Through community engagement and an evaluation of existing conditions, several environmental challenges and priorities were identified. Residents expressed a strong desire for a cleaner, greener, and more sustainable community, including expanded tree canopy, improved air quality, water conservation, and protection of open spaces and natural resources. Technical analysis also identified long-term environmental concerns related to climate change, resource conservation, and ecosystem health. Together, these issues help guide the City's efforts to enhance environmental quality, strengthen resilience, and improve quality of life for current and future residents.

Protecting Water Resources

Downey relies on a combination of local groundwater and imported water supplies that face increasing pressures from drought, climate change, and regional water demand. Protecting water quality, promoting conservation, and ensuring long-term water reliability remain important challenges for the community

Improving Air Quality

Located within the highly urbanized South Coast Air Basin, Downey experiences air quality challenges associated with vehicle traffic, freight movement, industrial activities, and regional pollution sources. Exposure to air pollution can affect public health, particularly for children, older adults, and individuals with respiratory conditions.

Expanding the Urban Forest

Tree canopy coverage varies throughout the city, leaving some neighborhoods with limited shade and greater exposure to urban heat. Expanding and maintaining the urban forest is important for improving air quality, reducing heat island effects, enhancing neighborhood character, and supporting climate resilience.

Building Climate Resilience

Climate change is expected to increase the frequency and severity of extreme heat events, drought conditions, intense storms, and other environmental stresses. These impacts can affect public health, infrastructure, natural resources, and overall community resilience, requiring proactive planning and adaptation measures.

Preserving Natural Resources

As a fully urbanized community, Downey has limited natural open space and habitat areas. Urban development has reduced ecological connectivity and fragmented natural resources, particularly along waterways and green corridors. Protecting and enhancing the ecological value of the Rio Hondo and San Gabriel River corridors, urban habitats, and green infrastructure remains an important environmental priority.

CONSERVATION PLAN

The Conservation Plan establishes a framework for protecting and efficiently managing Downey's natural environment and resource systems to support long-term environmental health, sustainability, and community resilience. Although largely urbanized, Downey's natural resources, including groundwater supplies, urban vegetation, open space areas, and environmental quality systems, play an essential role in maintaining quality of life and supporting ecological functions. This plan addresses the protection and enhancement of biological resources, promotes responsible conservation of water and energy resources, and supports sustainable development practices that reduce environmental impacts while improving environmental performance citywide.

The Conservation Plan also advances strategies to improve air quality and reduce greenhouse gas emissions through coordinated land use, transportation, and resource management policies. By emphasizing resource efficiency, climate responsiveness, and environmental stewardship, the plan seeks to reduce pollution, enhance urban green infrastructure, and strengthen the capacity to adapt to changing environmental conditions. Together, these policies guide Downey's efforts to conserve resources, protect environmental quality, and promote a healthier and more sustainable community for residents today and in the future.

Natural Resources

Downey's natural resources are primarily defined by its water-related systems, which play an important role in flood management. The loca hydrologic setting is influenced by regional waterways, including the Rio Hondo and San Gabriel River, which function as major flood control and watershed features serving the surrounding area. Local groundwater resources also represent a critical environmental asset that supports regional water reliability and requires careful protection from contamination and overuse. In addition, the local stormwater and drainage infrastructure manages urban runoff, reduces flood risk, and presents opportunities to improve water quality, enhance groundwater recharge, and support sustainable watershed management practices.

Hydraulic Resources

Downey's hydrologic resources play a central role in supporting environmental quality, ecological health, and climate resilience. These resources include regional river corridors, groundwater systems, and stormwater infrastructure that

collectively manage flood risk, protect water quality, and support sustainable watershed functions in a highly urbanized environment. The Conservation Plan guides the long-term protection, restoration, and responsible management of these systems to enhance ecological function, strengthen environmental resilience, and improve watershed health.

Rio Hondo and San Gabriel River Corridors

The Rio Hondo River and San Gabriel River corridors are among the most significant environmental and recreational assets serving Downey, with the San Gabriel River flanking the eastern boundary and the Rio Hondo River forming the western boundary (see Figure CV-1). While primarily functioning as major flood control channels managed by the Los Angeles County Flood Control District, these waterways also provide important opportunities to expand natural habitat, enhance ecological function, and increase access to recreational green space. As a highly urbanized and built-out community, Downey relies on these river corridors as essential greenways that support flood safety, but also environmental quality and ecological connectivity.

Looking forward, the City seeks to balance the rivers' flood control function with their ecological potential by supporting habitat restoration, expanding native vegetation, and improving overall ecosystem health. These corridors provide opportunities to capture and treat urban runoff before it reaches downstream coastal areas, helping to address urban pollution and improve regional water quality. Enhancing habitat conditions along the river corridors can support native plant and wildlife species, strengthen regional biodiversity, and advance broader climate resilience goals. Restored habitats can also help filter stormwater runoff and support groundwater recharge, contributing to long-term environmental sustainability.

Downey's efforts to enhance the Rio Hondo and San Gabriel River corridors are supported by regional partners, including the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC), which provides funding for projects that restore natural habitats, expand public access, and enhance green space along regional waterways. Regional initiatives, such as the San Gabriel River Corridor Master Plan, promote integrated approaches that align flood management with ecological restoration and community access improvements.

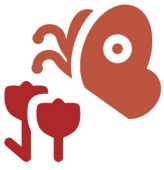
Groundwater

Groundwater is a critical natural resource that supports regional water reliability. Downey relies primarily on locally pumped groundwater from City-owned wells for potable water supply, making the protection of groundwater quality and long-term availability a key conservation priority (see Circulation Element for water

The many benefits of a river corridor...



FLOOD CONTROL

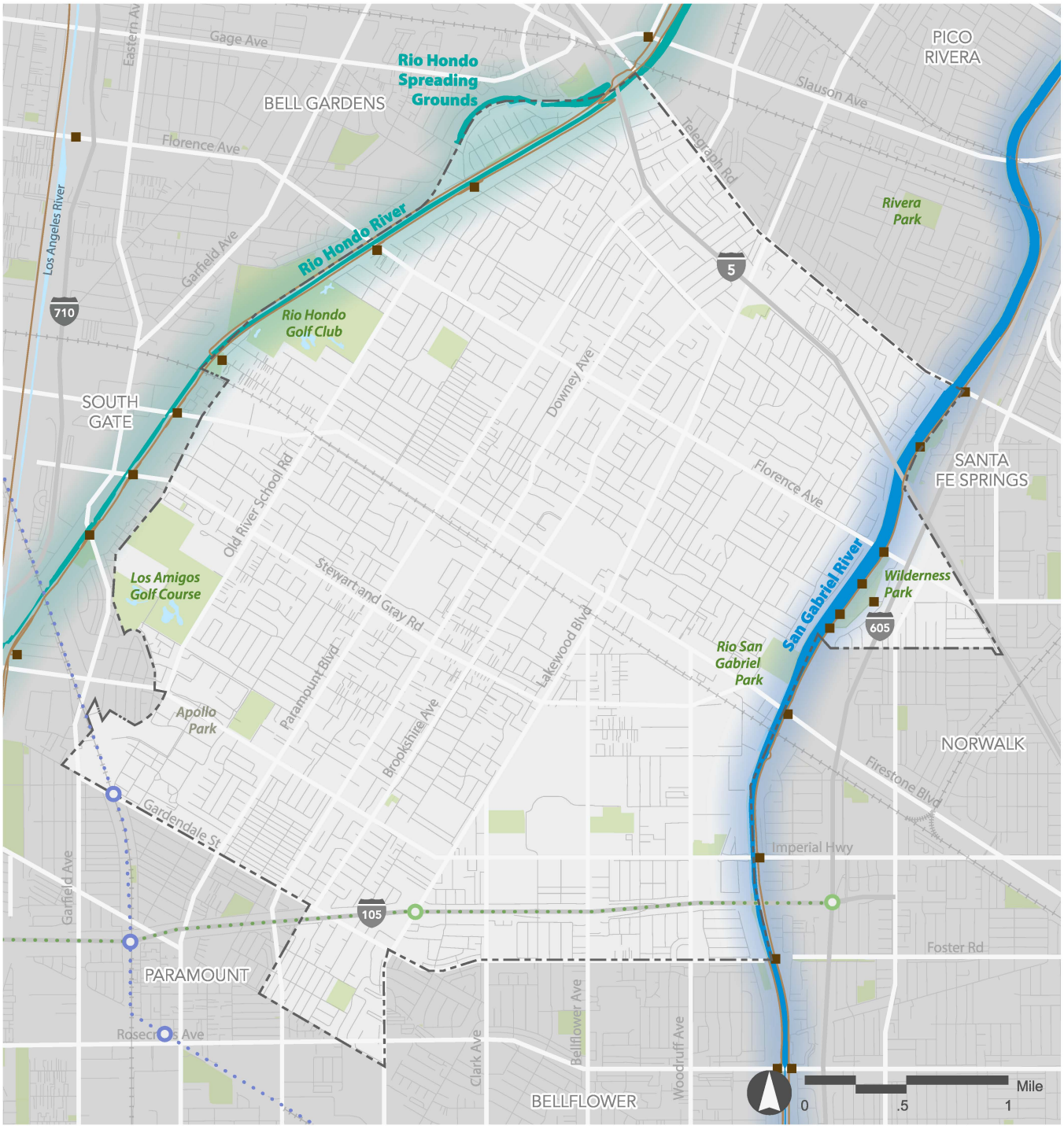


ECOLOGICAL HABITAT



PUBLIC ACCESS

FIGURE CV-1: RIVER CORRIDORS



River Corridors
- San Gabriel River
- Rio Hondo River

Trails and Access
- Trailhead and Access Points
- Multi-Use Trails

Basemap Features
- City Boundary
- Metro C Line
- Southeast Gateway Line
- Parks/Open Space

Source: U.S. Geological Survey (USGS), National Hydrography Dataset (NHD); Los Angeles County GIS Data Portal.

supply). The Conservation Plan supports strategies that protect groundwater from contamination, promote recharge opportunities, and encourage efficient water use.

The City benefits from regional groundwater recharge infrastructure along the Rio Hondo River, including the Rio Hondo Coastal Spreading Grounds, a major engineered basin system south of Whittier Narrows. These spreading basins divert stormwater from the Rio Hondo Channel for deep percolation into the Central Basin aquifer, serving as one of the primary recharge sources for Downey and surrounding communities. By protecting and integrating these facilities into local conservation strategies, Downey can enhance recharge, improve water quality, and strengthen long-term resilience to drought conditions.

Future resource management efforts focus on strengthening groundwater recharge, protecting water quality, and improving resilience to drought conditions. Regional stormwater capture and infiltration efforts help replenish groundwater supplies, enhance watershed function, and reduce reliance on imported water sources. Sustainable land use practices, green infrastructure, and water conservation measures further support the protection and efficient management of this vital resource.

In addition, parks located near river corridors, major storm drain infrastructure, or those with sufficient size and capacity present important opportunities to integrate stormwater infiltration and detention facilities. Incorporating these systems within park landscapes can expand regional stormwater capture capacity, reduce runoff and localized flooding, and support groundwater recharge while maintaining recreational use. The City has implemented stormwater infiltration and detention infrastructure at several parks and will install additional facilities at other suitable park sites, demonstrating a continued commitment to multi-benefit resource management and climate resilience.

Stormwater and Drainage Infrastructure

Downey's stormwater and drainage systems manage urban runoff, reduce flood risk, and protect downstream water quality while supporting broader environmental objectives. Although primarily designed for flood management and addressed in greater detail in the Safety Element, stormwater infrastructure also plays a role in resource conservation and watershed protection.

The City promotes forward-looking stormwater management strategies that improve urban runoff quality, enhance infiltration, and support groundwater recharge. Through low-impact development practices, green infrastructure, and sustainable drainage approaches, Downey seeks to reduce pollutant discharges, strengthen watershed health, and improve resilience to changing climate conditions while supporting long-term environmental performance.

Green infrastructure

Green infrastructure integrates natural systems into the built environment to provide ecological and environmental benefits. Features such as bioswales, vegetated areas, and permeable landscapes support stormwater management, improve water quality, enhance habitat, and strengthen climate resilience while contributing to a healthier urban environment.

Examples of green infrastructure improvements include:

- **Bioswales.** Vegetated channels that capture, convey, and filter stormwater, reducing runoff and improving water quality.

- **Permeable Pavements.** Surfaces that allow water to infiltrate into the ground, reducing flooding and replenishing groundwater.
- **Rain Gardens.** Shallow, planted depressions that collect and absorb stormwater from rooftops, sidewalks, or streets.
- **Constructed Wetlands.** Engineered wetland areas that treat stormwater, support biodiversity, and improve groundwater recharge.
- **Vegetated Swales and Buffer Strips.** Strips of vegetation along roadways or water channels that slow runoff, capture pollutants, and provide habitat.
- **Community Gardens and Pocket Parks.** Small-scale green spaces that enhance local biodiversity, provide permeable surfaces, and engage residents in stewardship.
- **Cisterns and Rainwater Harvesting Systems.** Infrastructure to collect and store rainwater for irrigation or other non-potable uses, reducing demand on potable water supplies.
- **Green Streets and Green Alleys.** Streetscapes designed with permeable surfaces, street trees, and vegetation to manage stormwater and improve neighborhood ecology.



An example of a bioswale to capture stormwater



Permeable pavers help recharge groundwater.



Community gardens provide fresh food, social connection, learning opportunities, and environmental benefits.

Biological Resources

Local biological resources are primarily located in the City parks, open space areas, landscaped environments, and the Rio Hondo and San Gabriel River corridors. Although highly urbanized, these areas provide habitat for wildlife and contribute to climate resilience and ecosystem health. The Conservation Plan supports the protection, enhancement, and long-term management of these urban ecological systems by strengthening habitat value, expanding vegetation, and improving ecological function throughout the built environment.

Urban Biodiversity, Wildlife Management, and Rewilding

Downey supports a diverse array of urban-adapted plant and animal species, including small mammals, birds, pollinators, and other beneficial insects, which contribute to ecological health within parks, open spaces, landscaped areas, and river corridors. Although urban development has fragmented habitats and limited wildlife movement, the Conservation Plan emphasizes strategies to enhance biodiversity, restore ecological function, and strengthen resilience through both large- and small-scale interventions.

See the Open Space Element for additional discussion on parks.

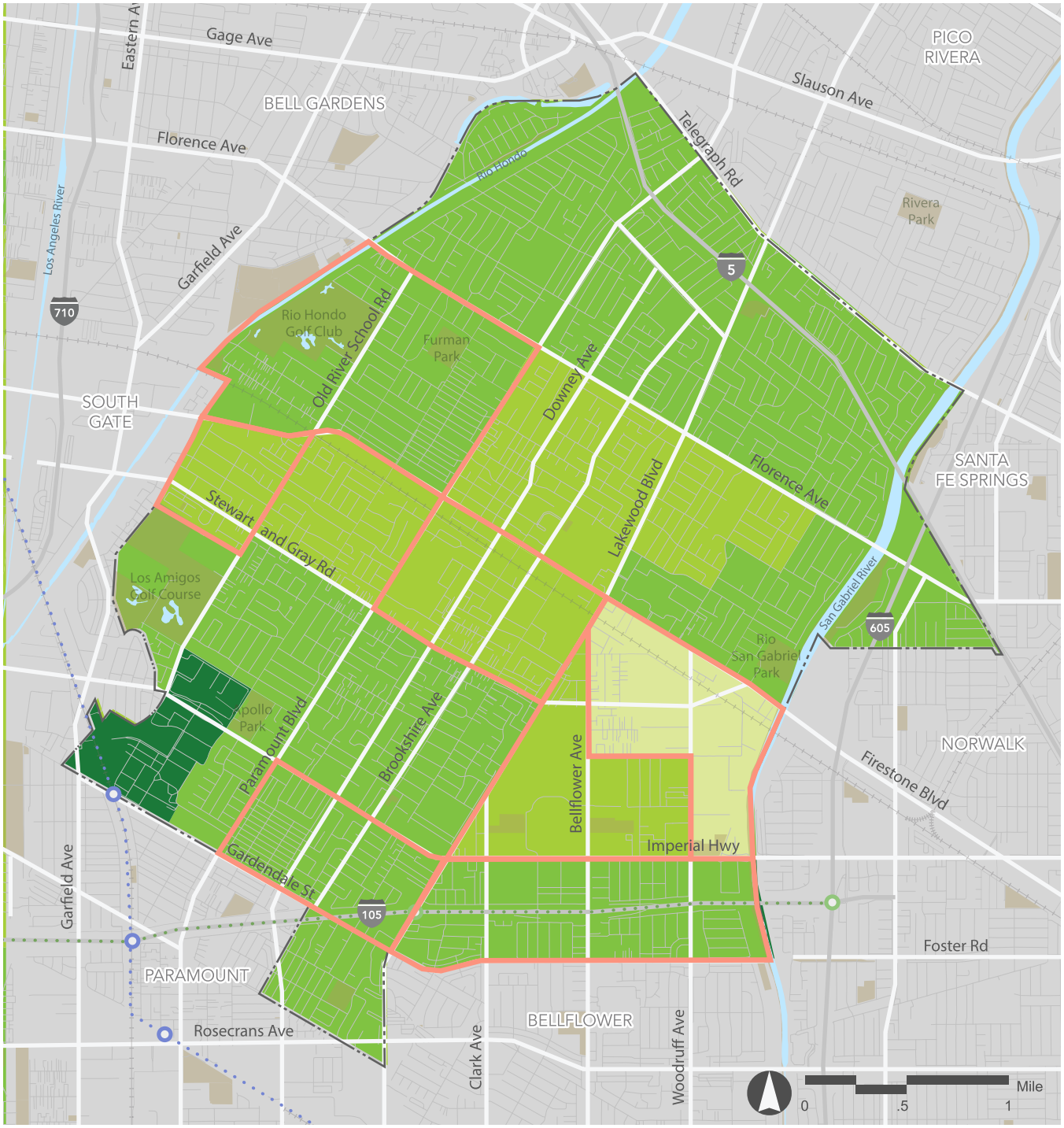
Future conservation efforts focus on improving habitat quality, expanding native vegetation, and creating microhabitats that support small mammals, insects, and birds throughout parks and along river corridors. Urban wildlife management strategies will allow for coexistence between residents and wildlife by protecting habitats, minimizing conflicts, and supporting thriving populations of native species.

The Conservation Plan encourages ecological restoration and rewilding opportunities to reintegrate natural processes into the urban landscape. Examples include restoring native



Example of expanding native vegetation along river corridors

FIGURE CV-2: TREE CANOPY COVERAGE



Average Tree Canopy Coverage (Census Tract) *

- 0 - 5%
- 5 - 10%
- 10 - 15%
- 15 - 20%
- Disadvantaged Communities

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Parks/Open Space

Note: * - The Los Angeles County Tree Canopy Coverage average is 18%.

Sources: Los Angeles County, US Census Bureau, 2022; California Department of Forestry and Fire Protection (CAL FIRE); USDA Forest Service (USFS)

vegetation in underutilized park areas, enhancing river corridor habitats with native plants and shaded refuges, reestablishing pollinator gardens in public spaces, and creating small wetlands or naturalized basins to support birds, amphibians, and beneficial insects. Downey's Wilderness Park, given its location adjacent to the San Gabriel River corridor, functions as a key ecological interface with potential to enhance habitat connectivity, support wildlife movement, and expand native and drought-tolerant plant communities that improve ecosystem function and urban biodiversity.



Arbor Day tree planting demonstration

Urban Forest and Landscapes

Downey's urban forest and landscaped areas provide critical environmental benefits, including shade, air quality improvements, carbon sequestration, urban heat reduction, and wildlife habitat. The Conservation Plan emphasizes expanding and maintaining tree canopy coverage through coordinated urban forestry programs, tree preservation and replacement, and sustainable landscape practices. Figure CR-2 shows the average tree canopy coverage by census tract. Landscape standards promote the use of native and drought-tolerant plants, reduce water demand, and enhance ecological function in both public and private development, supporting long-term environmental performance and climate resilience.



Volunteers at the annual 'Keep Downey Beautiful' event

Future goals focus on significantly increasing tree canopy across the city through strategic planting and management. The City aims to plant 30,000 new trees in parks, streets, and private properties over the coming decades, integrating trees into development review processes and prioritizing plantings in neighborhoods with limited canopy, particularly those that are underserved or disadvantaged. Access will also be expanded through free tree programs for residents. Sound arboricultural practices, including selective removal of dead or declining trees and replacing them with new plantings, will ensure a healthy and resilient urban



Drought-tolerant landscaping

forest. Collectively, these efforts will improve, enhance climate resilience, provide habitat for urban wildlife, and create cooler, healthier neighborhoods for all residents, with a focus on equity in benefits.

FIGURE CV-3: URBAN FOREST BENEFITS



1. Provides shade and reduces heat in streets and neighborhoods
2. Improves air quality by filtering pollutants
3. Captures carbon and helps address climate change
4. Reduces stormwater runoff and supports groundwater recharge
5. Buffers noise along streets and corridor
6. Increases property values and neighborhood appeal

Conservation of Resources

Water Conservation

Downey's location within a heavily utilized regional water system makes proactive water conservation critical, especially given the extended and recurring drought conditions affecting Southern California. Long-term strategies prioritize reducing overall water demand, eliminating waste, and enhancing local groundwater recharge to maintain reliable supplies during periods of water scarcity. The City will continue expanding drought-tolerant landscaping in public and private spaces, enhancing green infrastructure to capture and filter stormwater, and promoting high-efficiency fixtures and technologies. Additionally, where feasible, Downey will expand the use of recycled water (purple pipe systems) for irrigation and other non-potable purposes, further reducing reliance on potable water supplies.

See the Circulation Element for additional discussion on water supply.

Energy Conservation and Renewable Energy

Minimizing energy demand and transitioning to renewable sources are central to Downey's long-term sustainability and climate objectives. The City will continue improving energy efficiency across residential, commercial, and municipal sectors while expanding access to clean energy solutions. Initiatives will include promoting rooftop solar and energy storage systems, advancing electrification of municipal and community operations, and maintaining compliance with state energy standards such as Title 24. These efforts will reduce greenhouse gas emissions, decrease reliance on fossil fuels, and contribute to environmental sustainability and resilience.



Solar panels at Civic Center produce clean energy.

Green Building

Green building practices will guide future development and redevelopment to meet sustainability goals and enhance the resilience of the built environment. Strategies will include low-impact development techniques to manage stormwater onsite, the use of recycled or locally sourced building materials, and the incorporation of passive solar design, energy-efficient building orientation, rooftop solar installations, and other renewable energy technologies to reduce energy demand, lower greenhouse gas emissions, and strengthen climate resilience.

Improving Air Quality and Reducing Greenhouse Gases

Downey's location in the heavily urbanized South Coast Air Basin makes air quality a critical environmental and public health concern. While regional air quality has improved significantly since the brown sky days of the 1970s and '80s, the basin continues to experience episodes of poor air quality. SCAQMD leads the effort to reduce emissions of harmful pollutants, including particulate matter, nitrogen oxides, and volatile organic compounds (VOCs), with a strong focus on mobile source emissions, the largest contributor to regional smog. Strategies include promoting public transit, expanding bicycle and pedestrian infrastructure, supporting the transition to electric vehicles (EV) through expanded charging networks, and enforcing anti-idling regulations for commercial vehicles.

Looking forward, the Conservation Plan emphasizes reducing greenhouse gas (GHG) emissions across municipal operations and the community by integrating climate-smart strategies into all development, infrastructure, and resource management projects. Planned initiatives include accelerating the transition to clean energy, improving energy efficiency in buildings and public facilities, expanding the urban forest to capture carbon, and diverting organic waste from landfills. Transportation-focused measures will reduce vehicle emissions through EV adoption, multimodal transit improvements, and expanded active transportation networks.

Climate adaptation and resilience are central to these efforts. The City integrates extreme heat planning, flood preparedness, and stormwater management into conservation and safety goals to protect infrastructure, natural resources, and residents from climate-related impacts. By combining mitigation and adaptation strategies, Downey can contribute to better air quality, reduced GHG emissions, and improved resilience.

GREEN BUILDIING CATEGORIES



GOALS AND POLICIES

Natural resources are essential components of Downey's urban environment, providing not only ecological and climate benefits supporting public health and community well-being. Parks, trails, river corridors, and landscaped areas serve multiple roles: enhancing biodiversity, improving air and water quality, mitigating heat, and creating enjoyable places to visit. The goals and policies below guide the protection, restoration, and sustainable management of local natural and built environmental resources, ensuring they remain accessible and valuable for generations to come.

GOAL CR-1: EFFECTIVE WATER SYSTEMS THAT PROTECT ENVIRONMENTAL QUALITY, PROVIDE FLOOD CONTROL, AND SUPPORT ECOLOGICAL RESTORATION AND RECREATIONAL ACCESS

Policy CR-1.1: River Corridor Runoff Mitigation. Protect and improve water quality in the Rio Hondo and San Gabriel River corridors by using natural systems and green infrastructure to capture, filter, and treat urban runoff before it reaches downstream areas.

Policy CR-1.2: Ecological Partnerships. Collaborate with regional agencies, including the Rivers and Mountains Conservancy, to restore native habitats while maintaining the rivers' primary flood control functions.

Policy CR-1.3: Public Access and Recreation. Develop trails, greenways, and educational opportunities that provide recreational and learning benefits while preserving ecological function.

Policy CR-1.5: Regional Coordination. Coordinate with regional partners to implement integrated flood control, ecological restoration, and community access strategies along the river corridors.

GOAL CR-2: RELIABLE AND SUSTAINED GROUNDWATER AS A CRITICAL RESOURCE FOR DOWNEY AND THE REGION

Policy CR-2.1: Groundwater Protection. Safeguard local groundwater supplies from contamination and overuse through monitoring programs, pollution controls, and safe land use practices near recharge areas.

Policy CR-2.2: Groundwater Recharge. Enhance aquifer replenishment through stormwater capture, green infrastructure, and integration with regional recharge facilities.

Policy CR-2.3: Spreading Grounds Recreation and Access. Enhance public access to spreading grounds by incorporating landscaped trails, pocket parks, and multi-use pathways, promoting opportunities for hiking, walking, and biking while educating the community on local water conservation and the benefits of outdoor recreation.

GOAL CR-3: INTEGRATED GREEN INFRASTRUCTURE PROVIDING ENVIRONMENTAL, SOCIAL, AND CLIMATE BENEFITS THROUGHOUT THE URBAN ENVIRONMENT

Policy CR-3.1: Low-Impact Development (LID) and Green Infrastructure. Incorporate LID techniques, including vegetated channels, bioswales, permeable pavements, rain gardens, and green streets in public and private projects to manage stormwater on-site, reduce flooding, enhance groundwater recharge, and support urban biodiversity.

Policy CR-3.2: Community Gardens and Pocket Parks. Provide small-scale green spaces that improve ecological function, increase urban canopy, and engage residents in stewardship and environmental education.

Policy CR-3.3: Rainwater Harvesting and Cisterns. Encourage collection and reuse of rainwater for irrigation and other non-potable uses to reduce demand on potable water supplies and increase local water resilience.

GOAL CR-4: URBAN BIODIVERSITY AND HABITAT CONNECTIVITY SUPPORTING DIVERSE WILDLIFE AND ECOLOGICAL FUNCTION

Policy CR-4.1: Habitat Enhancement. Expand native vegetation and create microhabitats in parks, river corridors, and landscaped areas to support small mammals, birds, pollinators, and other beneficial insects.

Policy CR-4.2: Ecological Connectivity. Enhance linkages between parks, green spaces, and river corridors to facilitate wildlife movement and strengthen ecosystem resilience.

Policy CR-4.3: Urban Wildlife Management. Promote coexistence with wildlife by protecting habitats, minimizing human-wildlife conflicts, and maintaining healthy populations of native species.

Policy CR-4.4: Rewilding and Restoration. Restore natural processes through native plantings, pollinator gardens, shaded refuges, and small wetlands to improve ecological function and climate resilience.

Policy CR-4.5: Pollinator-Friendly Public Spaces. Integrate pollinator-supportive vegetation and "learning gardens" into city parks, joint-use school sites, and landscaped areas.

Policy CR-4.6: Rio Hondo and San Gabriel River Corridors. Treat the river corridors as essential ecological greenways, prioritizing native habitat restoration to support biodiversity, water quality, and migratory bird populations.

Policy CR-4.7: Native and Drought-Tolerant Landscaping. Promote the use of climate-appropriate native landscaping in public and private spaces to support local wildlife and reduce water demand.

Policy CR-4.8: Groundwater Protection and Recharge. Safeguard the Central Groundwater Basin from contamination, and implement green infrastructure projects that collect, filter, and infiltrate stormwater to enhance local groundwater recharge.

GOAL CR-5: EXPANDED AND RESILIENT TREE CANOPY AND LANDSCAPED AREAS THAT ENHANCE ENVIRONMENTAL QUALITY AND COMMUNITY RESILIENCE

Policy CR-5.1: Tree Canopy Expansion. Significantly increase tree plantings across public and private areas, prioritizing neighborhoods with limited canopy coverage, and along parks, major street corridors, and river corridors.

Policy CR-5.2: Arboricultural Management. Maintain a healthy urban forest through selective removal of declining or dead trees, tree replacement, and proper care practices, ensuring long-term tree health and longevity.

Policy CR-5.3: Mature and Historic Tree Preservation. Protect and preserve mature, heritage, and significant trees during development, construction, and public projects to maintain ecological, aesthetic, and cultural value.

Policy CR-5.4: Environmental Services Maximization. Enhance the environmental benefits of urban trees, including shade, air quality improvement, carbon sequestration, stormwater management, and wildlife habitat.

Policy CR-5.5: Sustainable Landscaping Standards. Promote the use of native and drought-tolerant plants, reduced water demand, and integrated green infrastructure features into both public and private landscapes.

Policy CR-5.6: Neighborhood Tree Initiatives. Expand canopy coverage in residential neighborhoods to improve quality of life, reduce urban heat, and support equitable access to green space.

Policy CR-5.7: Community Engagement and Support. Encourage public participation through free tree programs, educational initiatives, volunteer planting, and stewardship activities to strengthen local ownership of the urban forest.

Policy CR-5.8: Urban Forest Funding. Secure sustainable funding sources to support planting, maintenance, and long-term management of the urban forest, ensuring continued growth and resilience.

GOAL CR-6: LONG-TERM WATER SUSTAINABILITY THROUGH CONSERVATION, PROTECTION, AND EFFICIENT MANAGEMENT OF LOCAL WATER RESOURCES

Policy CR-6.1: Water Demand Reduction. Promote water-efficient fixtures, conservation practices, and public education programs across municipal, residential, and commercial sectors to reduce overall water use.

Policy CR-6.2: Recycled Water Expansion. Support the use of recycled water (purple pipe systems) for irrigation and other non-potable applications wherever feasible to reduce reliance on potable water supplies.

GOAL CR-7: COMMUNITY SUSTAINABILITY REFLECTED IN WASTE REDUCTION, ENERGY EFFICIENCY, AND WATER CONSERVATION

Policy CR-7.1: Energy Efficiency. Improve energy efficiency across municipal operations, residential buildings, and commercial sectors to reduce demand and lower greenhouse gas emissions,

Policy CR-7.2: Renewable Energy Deployment. Support rooftop solar, energy storage, electrification projects, and other renewable energy technologies to reduce reliance on fossil fuels and advance local sustainability goals.

Policy CR-7.3: Compliance with Energy Standards. Require new development, retrofits, and major renovations meet or exceed state energy standards, including California Title 24, to maintain high efficiency and environmental performance.

GOAL CR-8: SUSTAINABLE BUILDING PRACTICES ENHANCING RESILIENCE, REDUCING ENVIRONMENTAL IMPACTS, AND SUPPORTING CLIMATE ADAPTATION

Policy CR-8.1: Sustainable and Locally Sourced Materials. Encourage the use of recycled, locally sourced, and low-impact building materials in both public and private construction to minimize environmental impacts and support local sustainability initiatives.

Policy CR-8.2: Passive and Renewable Energy Design. Promote the integration of passive solar strategies, energy-efficient building orientation, rooftop solar installations, energy storage, and other renewable energy technologies to reduce energy demand, lower greenhouse gas emissions, and improve building performance.

Policy CR-8.3: Climate-Responsive and Resilient Design. Design buildings, streetscapes, and public spaces to withstand climate-related challenges, including extreme heat, drought, and flooding.

Policy CR-8.4: Holistic Sustainability Approaches. Promote sustainable design practices, including cool roofs, water-efficient landscaping, and energy-efficient building features, to support Downey's long-term environmental goals.

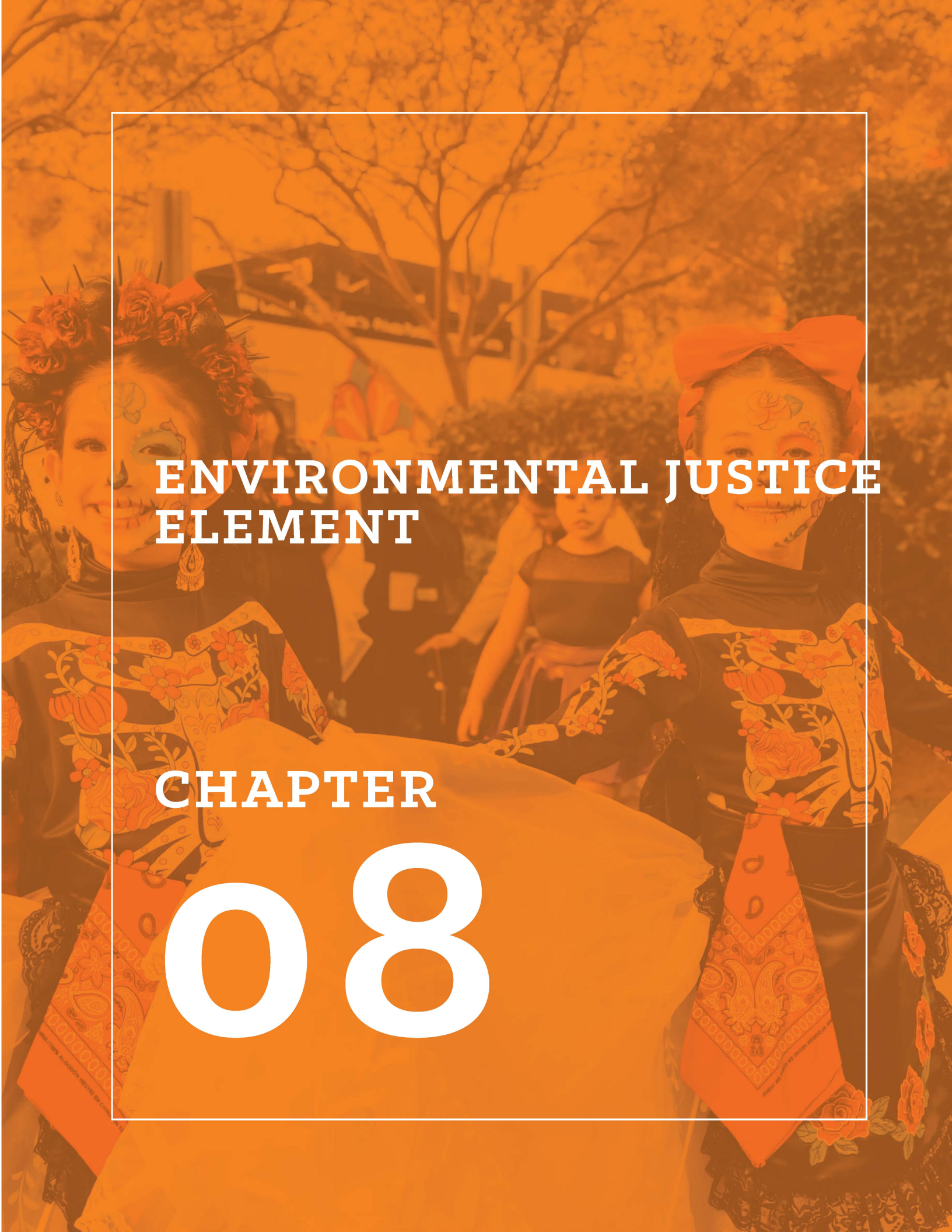
GOAL CR-9: AIR QUALITY IMPROVEMENT AND GREENHOUSE GAS REDUCTION TO PROTECT PUBLIC HEALTH AND MITIGATE CLIMATE CHANGE IMPACTS

Policy CR-9.1: Emissions Management. Reduce mobile, stationary, and industrial sources of pollutants to improve air quality, protect public health, and mitigate climate change impacts.

Policy CR-9.2: Clean and Active Transportation. Encourage the use of public transit, walking, bicycling, and low-emission vehicles, and support strategies to reduce unnecessary vehicle idling and transportation-related emissions.

Policy CR-9.3: Energy and Buildings Efficiency. Implement greenhouse gas reduction strategies in municipal and community operations, including energy use and building efficiency, in alignment with regional and state climate goals.

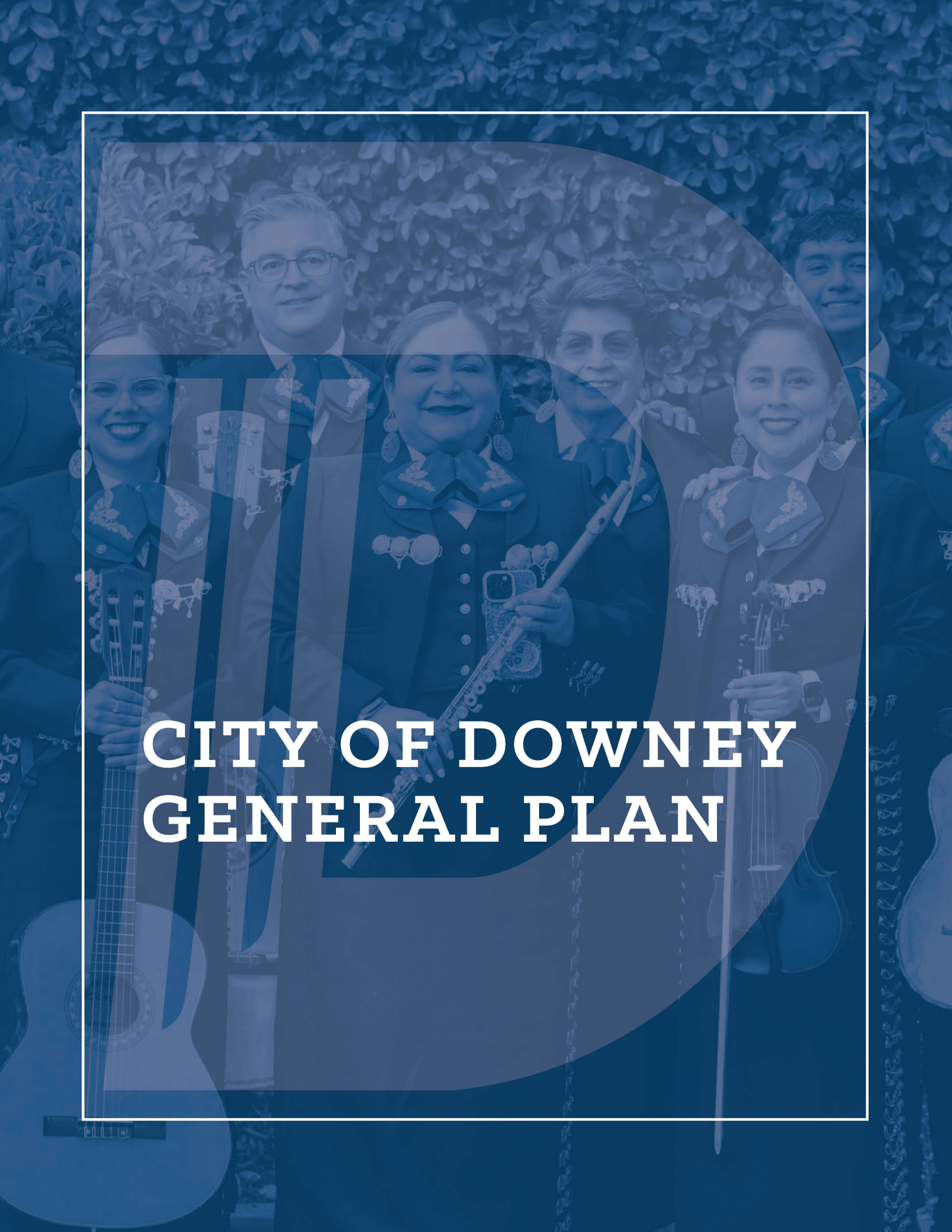
Policy CR-9.4: Climate Adaptation and Resilient Infrastructure. Integrate extreme heat planning, flood preparedness, and resilient infrastructure strategies into City operations and planning to reduce vulnerabilities to climate change impacts.



ENVIRONMENTAL JUSTICE ELEMENT

CHAPTER

08



CITY OF DOWNEY GENERAL PLAN

CHAPTER

08

ENVIRONMENTAL JUSTICE ELEMENT

INTRODUCTION

What this chapter addresses and why these topics are important?

This chapter examines environmental justice—ensuring that all Downey residents have equitable opportunities to have clean air, safe housing, access to healthy food, nearby parks, and a meaningful voice in community decisions. Some communities face greater challenges due to historical policies, such as redlining, restrictive housing practices, and inequitable zoning, which shaped patterns of investment and development. These policies also influenced the location of industrial uses, including aerospace manufacturing, placing homes near industrial areas or major freeways, such as I-105 and I-605, and exposing residents to higher levels of air pollution, noise, and other environmental hazards.

In addition, certain neighborhoods have limited access to parks, grocery stores, and healthy food options, making it harder for residents to stay active or maintain a nutritious diet. The Environmental Justice Element identifies these community needs, highlighting areas most affected by environmental hazards, aging or substandard housing, and barriers to participation in local decision-making. By understanding and prioritizing these challenges, the City can target investments and actions to improve health, safety, and opportunities for all residents, ensuring that every neighborhood is supported and no community is left behind.



Dia De Los Muertos Arts Festival

Legal Framework

In 2016, California lawmakers passed Senate Bill 1000, amending Government Code Section 65302. This required cities and counties that have "disadvantaged communities" to develop an Environmental Justice Element or integrate related goals, policies, and objectives in other elements. A disadvantages community is defined by the California Environmental Protection Agency (CalEPA) as a census tract experiencing disproportionate pollution, environmental hazard, and socioeconomic borders, or those with median household incomes below 80 percent of the state average In response, the Environmental Justice Element must:

- Identify objectives and policies to **reduce the unique or compounded health risks** in disadvantaged communities by means that include, but are not limited to, the reduction of pollution exposure, including the improvement of air quality, and the promotion of public facilities, food access, safe and sanitary homes, and physical activity.
- Identify objectives and policies to **promote civic engagement in the public decision-making process.**
- Identify objectives and policies that **prioritize improvements and programs that address the needs of disadvantaged communities.** [1]

The Environmental Justice Element establishes a vision that facilitates transparency and public engagement in local planning and decision-making processes, promotes fair access to benefits that encourage well-being like healthy food options and recreation, and reduces harmful pollutants and their associated health risks in disadvantaged communities (also being referred to in this document as environmental

ENVIRONMENTAL JUSTICE: FROM EQUALITY TO EQUITY

What is Environmental Justice

"Environmental justice is the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" - California Government Code, Section 65040.12(e).

Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from policies and operations – whether that be industrial, governmental, or commercial.

Equality vs. Equity

Equality: An approach that treats everyone the same, without considering differences in past conditions, current needs, or desired outcomes.

Equity: An approach that accounts for past conditions and current needs so that future outcomes are fair and inclusive for all community members.

1. California General Plan Guidelines, June 2020. General Plan Guidelines Chapter 4: Environmental Justice Element

2. Climate Change's Unequal Impacts, State of California Department of Justice. Climate Change's Unequal Impacts | State of California - Department of Justice - Office of the Attorney General

justice communities). This element also shines a light and aims to address the "adverse impacts climate change disproportionately poses to those who are socially and economically disadvantaged."[2]

GUIDING PRINCIPLES SHAPING THE ENVIRONMENTAL JUSTICE ELEMENT

The Environmental Justice Element provides a long-term framework to ensure that all Downey residents live in safe, healthy neighborhoods. It emphasizes reducing exposure to environmental pollution; expanding access to parks, open spaces, and essential services; and fostering meaningful community engagement in public decision-making. This framework is grounded in the principles of equity, health, inclusion, community empowerment, and sustainability, ensuring that policies address both environmental risks and the social needs of underserved communities.



Dia De Los Muertos Arts Festival

Protect Resources and Prepare for the Future

Plan with climate, conservation, community safety, and emergency preparedness in mind.

Manage and Invest in Community Resources

Manage water and natural resources while investing and supporting parks and community programs that enhance quality of life for all residents.

A Healthier Downey for Everyone

Reduce pollution burdens and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.

Grow Smart to Support Neighborhoods

Encourage moderate, well-planned growth that enhances neighborhoods, aligns with community values, and supports infrastructure and service needs by prioritizing improvements where they're needed most

This element guides strategies that address pollution reduction, equitable service delivery, and inclusive decision-making. By centering equity and community voice, it supports a Downey where environmental risks are minimized, opportunities for healthy living are accessible to all, and residents are active participants in shaping the city's future.

COMMUNITY CONSIDERATIONS

Through community engagement and an evaluation of conditions in Downey, several key challenges and priorities have been identified. These challenges reflect pressing needs and disparities, while the priorities highlight areas where the community and City leadership want to focus resources and action. Together, they guide the environmental justice strategies presented in this element.

Reducing Environmental Burdens

Feedback highlighted concerns regarding exposure to air pollution, traffic-related impacts, noise, and other environmental conditions in areas located near major transportation corridors and industrial uses. Comments supported efforts to improve environmental quality, reduce potential health risks, and ensure that sensitive land uses such as homes, schools, parks, and community facilities are protected from incompatible impacts.

Improving Community Health and Well-Being

Input emphasized the importance of creating healthy neighborhoods that provide access to parks, recreational opportunities, active transportation facilities, healthy food options, and community services. Comments supported investments that encourage physical activity, improve public health outcomes, and enhance overall quality of life.

Promoting Equitable Investment and Community Improvements

Feedback recognized that community needs and access to resources can vary across the city. Comments supported directing public investments, infrastructure improvements, neighborhood enhancements, and community-serving facilities to areas where needs are greatest in order to promote equitable outcomes and improve quality of life citywide.

Ensuring Equitable Access to Public Facilities and Services

Access to community facilities, programs, infrastructure, and public services was identified as an important consideration. Input supported maintaining and enhancing public amenities, improving accessibility, and ensuring that residents throughout the city have access to safe, welcoming, and well-maintained spaces that support recreation, education, health, and community connection.

Strengthening Civic Engagement and Transparency

Comments emphasized the importance of inclusive and accessible public engagement. Feedback supported providing clear and timely information, offering opportunities for participation that reflect the community's diversity, reducing barriers to engagement, and ensuring that community input is meaningfully considered in planning and decision-making processes.

COMMUNITY OVERVIEW

This section provides an overview of Downey's population, history, industrial uses, and transportation infrastructure, highlighting factors that influence environmental justice considerations in the city.

Population and Socioeconomic Characteristics (2025)

Downey is a diverse community of approximately 111,326 residents. The population is predominantly Hispanic or Latino, comprising about 75 percent of residents. Non-Hispanic White residents account for roughly 12.6 percent, Asian residents 6.4 percent, and Black or African American residents 3.4 percent. Smaller portions of the population identify as Native American or other races (1 percent) or multiracial (1.5 percent).

Approximately 40 percent of households include children under 18, reflecting a family-oriented community. The median household income is approximately $92,600, with about nine percent of residents living below the poverty line. Educational attainment varies, with nearly 84 percent of adults having graduated from high school and 28 percent holding a Bachelor's degree or higher.

These demographic and socioeconomic characteristics are important for understanding environmental justice in Downey. They influence residents' exposure to environmental hazards, access to public services, healthy food, parks, and safe housing, as well as opportunities for engagement in community planning and decision-making. Recognizing these factors allows the City to identify neighborhoods with elevated needs and prioritize investments that support equitable access to resources, health, and well-being for all residents.

Latino Population Growth and Historical Racial Dynamics

For much of the twentieth century, Downey developed as a predominantly white, middle-class suburb. Like many communities throughout Southern California, housing opportunities were influenced by discriminatory practices, including racially restrictive covenants and lending practices that limited residential options for Mexican American, Black, and other minority households. These practices contributed to patterns of residential segregation and unequal investment in neighborhoods.



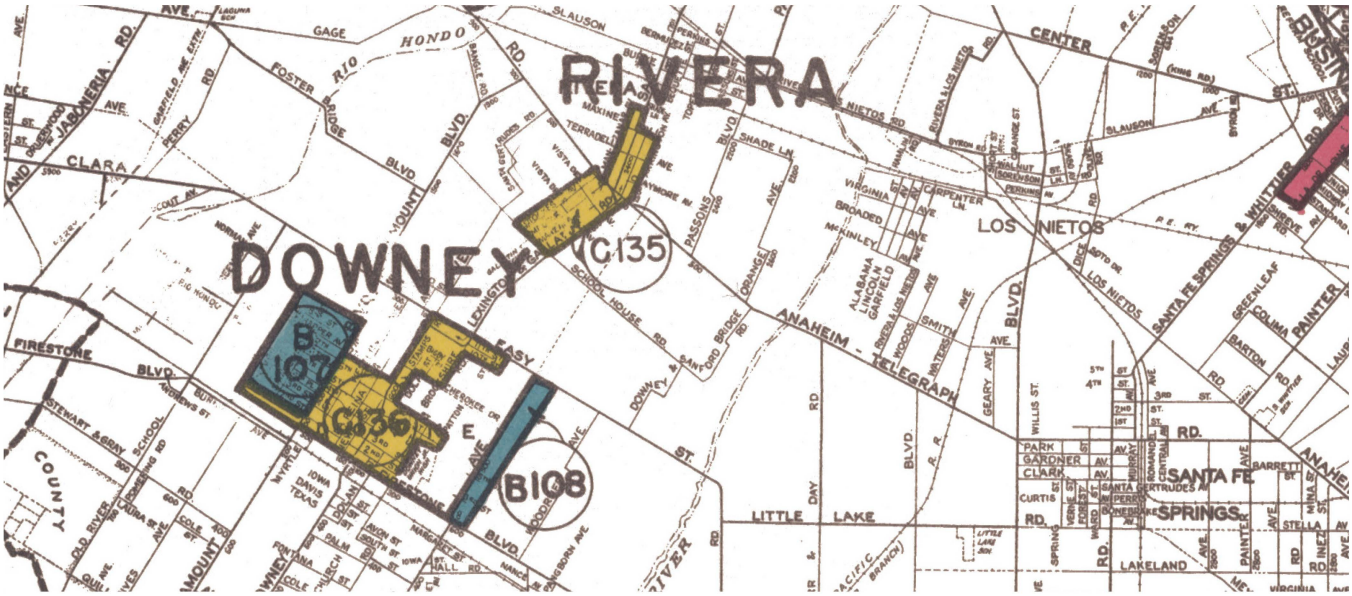
Downey family attending a park pop-up event

Beginning in the latter part of the twentieth century, Downey experienced significant demographic change as Latino families increasingly settled in the community, attracted by housing opportunities, schools, employment, and proximity to regional job centers. Census data show that the Latino population grew substantially between 1980 and 2020, reflecting broader demographic and migration trends occurring throughout Southern California.

Today, Latinos represent a majority of Downey residents and have made significant contributions to the city's economic, cultural, and civic life. While Downey has become increasingly diverse, historical patterns of housing discrimination and uneven investment continue to influence neighborhood conditions and environmental justice considerations, including disparities in access to environmental amenities, transportation, and community resources. [1]

Historic Redlining and Housing Discrimination in Downey

During the mid-twentieth century, housing opportunities in Downey were influenced by discriminatory practices that affected many communities throughout Los Angeles County. Race-restrictive covenants and exclusionary real estate practices limited housing choices for Mexican American, Black, and other minority households. Federal housing programs further reinforced these patterns through neighborhood risk-rating systems developed by the Home Owners' Loan Corporation (HOLC), which evaluated communities based in part on racial, ethnic, and socioeconomic characteristics. Areas within and adjacent to Downey received varying HOLC grades, influencing access to mortgage



Area Description for C136 (yellow area in Downey): "South of the area along the numerous highways are found **scattered groups of poorly constructed dwellings which house Mexican and Japanese farm laborers whose children attend the local schools and, to this extent, are a detrimental influence.** *While this area possesses many favorable qualifications, age, obsolescence and heterogeneity preclude a higher grade than 'medial yellow'". Source: Nelson, R. K., Winling, L, et al. (2023). Mapping Inequality: Redlining in New Deal America. Digital Scholarship Lab. https://dsl.richmond.edu/panorama/redlining.*

Sources: 1) U.S. Census Bureau Decennial Census (1980–2020); Southern California Association of Governments demographic profiles; University of Richmond, Mapping Inequality: Redlining in New Deal America; Garcia, Robert A. "On Race, Housing and Confronting History," The Downey Patriot (2019).

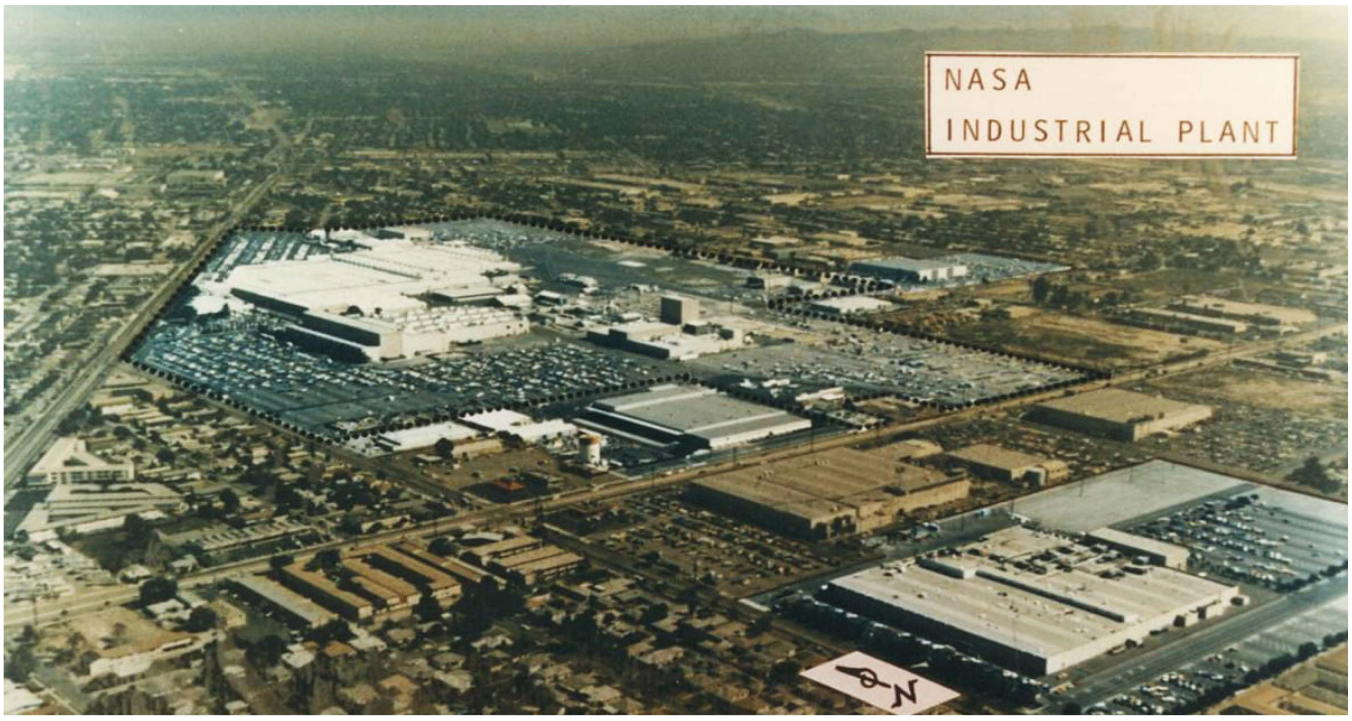
financing and private investment. Although race-restrictive covenants were later deemed unenforceable, the effects of discriminatory lending and housing practices contributed to long-term patterns of residential segregation and unequal investment. These historic conditions continue to influence disparities in environmental quality, public health, access to parks and healthy food, and other neighborhood resources today.[2]

Aerospace History and Environmental Legacy

Downey has a rich aerospace heritage that shaped the city's economic and physical landscape. During World War II and the Cold War, the city was home to major aerospace facilities, including Vultee Aircraft, North American Aviation, and later Rockwell International, which produced military aircraft, Saturn V booster rockets, Apollo lunar modules, and components for space shuttles.

While these industries provided skilled, well-paying jobs, they also resulted in environmental contamination affecting soil and groundwater. Following the closure of aerospace operations in the late 1990s and early 2000s, these sites underwent multi-phase cleanup and remediation, overseen by the California Department of Toxic Substances Control and the Regional Water Quality Control Board. Contaminants such as volatile organic compounds (VOCs) were identified and addressed before redevelopment.

Today, these former aerospace sites are home to a mix of uses, including the Columbia Memorial Space Center, commercial centers such as the Downey Landing and Promenade at Downey, residences, parks, and the Kaiser Permanente Downey Medical Center.



Historic aerial view of the NASA Industrial Plant in Downey, where decades of aerospace manufacturing later contributed to environmental contamination in the surrounding area..

Sources: 2) University of Richmond, Mapping Inequality: Redlining in New Deal America (HOLC Residential Security Maps and Area Descriptions for Los Angeles County); and Robert A. Garcia, "On Race, Housing, and Confronting History," The Downey Patriot, July 10, 2019.

Industrial and Warehousing Land Uses

In addition to its aerospace legacy, Downey includes industrial areas supporting warehousing, logistics, and trucking operations, particularly near major transportation corridors. Notable concentrations of industrial uses occur in the southeast portion of the city along Woodruff Avenue and in the southwest area east of Garfield Avenue, where larger warehousing and distribution facilities are located. These uses contribute to the city's economic base but can also generate localized air quality and noise impacts, particularly affecting nearby residential neighborhoods.

Transportation Corridors and Environmental Impacts

Downey is intersected by several major transportation corridors that influence land use and environmental conditions:



Residential neighborhoods along Coldbrook Avenue are directly adjacent to warehousing and industrial use.

- **Interstate 105 (Century Freeway).** Runs east-west along the southern edge of the city, carrying commuter and freight traffic.
- **Interstate 605 (San Gabriel River Freeway).** Runs north-south to the east, serving regional connections for goods movement.
- **Major Roadways.** Other arterials, including Imperial Highway, Lakewood Boulevard, Firestone Boulevard, Florence Avenue, and Telegraph Road, provide local and regional access.

Proximity to these freeways increases residents' exposure to traffic-related air pollution and noise, which is an important consideration for environmental justice, particularly for neighborhoods close to interchanges or high-volume traffic corridors.

Environmental Justice Considerations in Downey

Downey's demographic patterns, historic and current industrial land uses, and transportation network highlight how environmental and health risks are not distributed evenly across the city. Neighborhoods located near former aerospace sites, industrial facilities, or major freeways may experience higher exposure to air pollution, noise, and other environmental hazards, while also facing challenges in accessing parks, healthy food, and essential community services.

Understanding these patterns is a key step in identifying areas where residents may face disproportionate environmental and health burdens. The next section explains how the state defines and measures these vulnerable communities, providing the basis for focused strategies to improve health, safety, and equity across Downey.

IDENTIFYING DISADVANTAGED COMMUNITIES

Some neighborhoods face more environmental and health challenges than others. In California, these areas are called Disadvantaged Communities (DACs) or Environmental Justice Communities. These are places where residents may be exposed to higher levels of pollution while also facing social or economic challenges, such as lower incomes or higher rates of health conditions.

The state uses a tool called CalEnviroScreen 4.0 to identify these communities. It evaluates 21 indicators and groups them into two main categories:

- **Pollution Burdens:** Includes both pollution exposures (such as air pollution from freeways or chemicals from industrial sites) and environmental effects (such as contaminated groundwater or hazardous waste sites).
- **Population Characteristics**: Includes both sensitive populations (such as children, older adults, and people with health conditions like asthma) and socioeconomic factors (such as income, education, and unemployment).

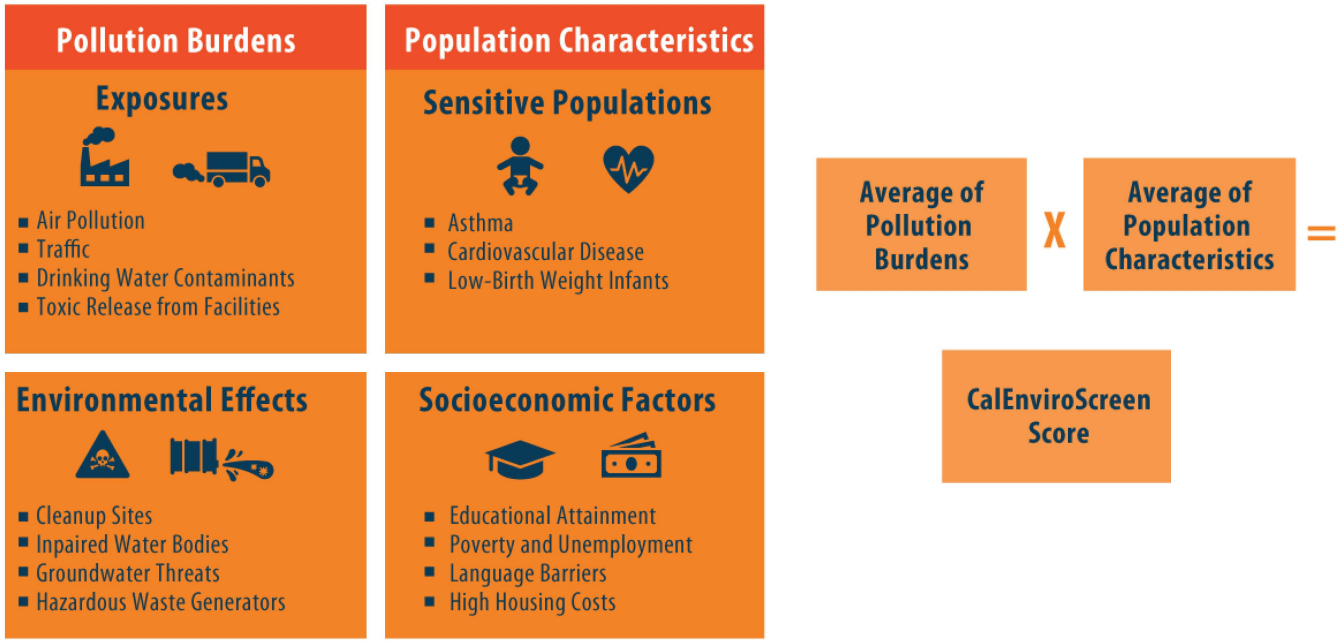
To calculate the final score, CalEnviroScreen:

1. Averages the **pollution exposure and environmental effects** indicators to create a Pollution Burden score
2. Averages the **sensitive population and socioeconomic indicators** to create a Population Characteristics score
3. Combines these two scores into a single overall score for each neighborhood (census tract)

This final score reflects both the level of environmental exposure and how vulnerable the population may be to those conditions.

Each neighborhood is then ranked compared to others across California. Neighborhoods in the top 25 percent, meaning they have the highest combined levels of pollution and vulnerability, are identified DACs. See Figure EJ-1 for CalEnviroScreen 4.0 scoring methodology.

FIGURE EJ-1: CALENVIRONSCREEN SCORING



In Downey, seven neighborhoods meet this criterion (see Table EJ-1 and Figure EJ-2). These neighborhoods are identified in bold blue text in the table and highlighted in red on the map. Most are in the southeast and central-west parts of the city, close to I-105 and I-605, near industrial areas, or near sites that were once used for aerospace manufacturing. For residents, this might mean that air quality can sometimes be worse in these areas, and some families may face additional health or economic stress compared to other parts of the city.

Even if a neighborhood does not have the highest overall score, it might still have a high pollution risk (like being next to a busy freeway) or high social vulnerability (like more families with low income). This is why it is important to look at both pollution and community factors when planning improvements.

Maps and tables in this plan show where these vulnerable neighborhoods are located and which factors contribute most to their scores. This helps guide decisions about where to focus efforts, such as cleaner air initiatives, green space improvements, or health programs.

Downey's average citywide CalEnviroScreen 4.0 percentile score is 70, indicating that, overall, the city experiences higher combined environmental and social vulnerability than much of California. This score is driven by a relatively high Pollution Burden percentile of 80.6, reflecting elevated exposure to environmental conditions such as air pollution and proximity to industrial uses, while the Population Characteristics percentile of 54.2 indicates moderate levels of community sensitivity and socioeconomic factors. As shown in Figure EJ-2, these scores illustrate how pollution exposure plays a significant role in shaping environmental conditions across the city.



Aerial view of eastern Downey looking south, showing the I-605 freeway, adjacent industrial areas, and residential neighborhoods situated between these uses

TABLE EJ-1: CALENVIRONSCREEN 4.0 PERCENTILE SCORES

Cencus Tract	CES Score	Overall Category	Pollution Burden	Population Vulnerability	Notes
504	68	Moderate	High	Moderate	Near industrial areas
505	66	Moderate	High	Moderate	Near freeway
506.01	70	Moderate	Very High	Moderate	Near freeway
506.02	55	Moderate	Moderate	Moderate	Near freeway and Lakewood Blvd
507	75	High	Very High	Moderate	Near freeway
508	**76**	**High/DAC**	**Very High**	**Moderate**	**Near freeway and industrial uses**
509.01	74	Moderate	Moderate	High	Former redlined area
509.02	52	Moderate	Moderate	Moderate	Primarily residential with major arterial
510	72	Moderate	Very High	Moderate	Primarily residential with major arterial
511.01	**80**	**High/DAC**	**Very High**	**High**	**Former aerospace property**
511.02	**89**	**High/DAC**	**Very High**	**High**	**Near industrial uses and warehouses**
512.01	50	Moderate	Low	Moderate	Primarily residential with major arterial
512.02	72	Moderate	High	High	Primarily residential near former aerospace property
513	**79**	**High/DAC**	**High**	**High**	**Near major arterial**
514.01	**84**	**High/DAC**	**Very High**	**High**	**Near industrial uses and warehouses**
514.02	70	Moderate	Moderate	High	Primarily residential with major arterial
515.01	71	Moderate	Very High	Moderate	Primarily residential near industrial areas
515.02	52	Moderate	Moderate	Moderate	Primarily residential with major arterial
516	N/A	--	Moderate	N/A	No residential
517	**79**	**High/DAC**	**High**	**Very High**	**Near freeway**
518	**83**	**High/DAC**	**Very High**	**High**	**Near freeway**
534	75	High	High	Very High	Near freeway
504	68	Moderate	High	Moderate	Near freeway

Note: 1. **DAC:** Designated as a Disadvantaged Community by the State of California.

FIGURE EJ-2: CALENVIRONSCREEN CITYWIDE PERCENTILE SCORING

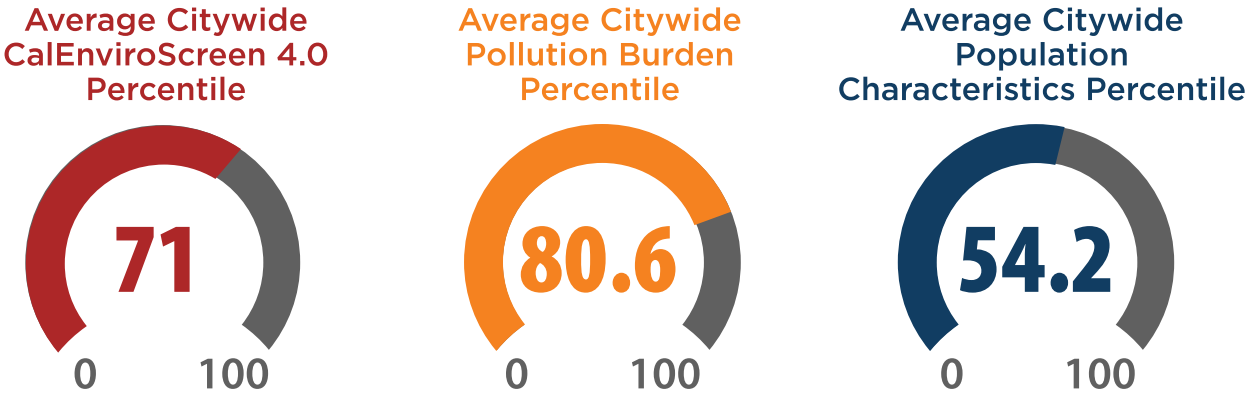
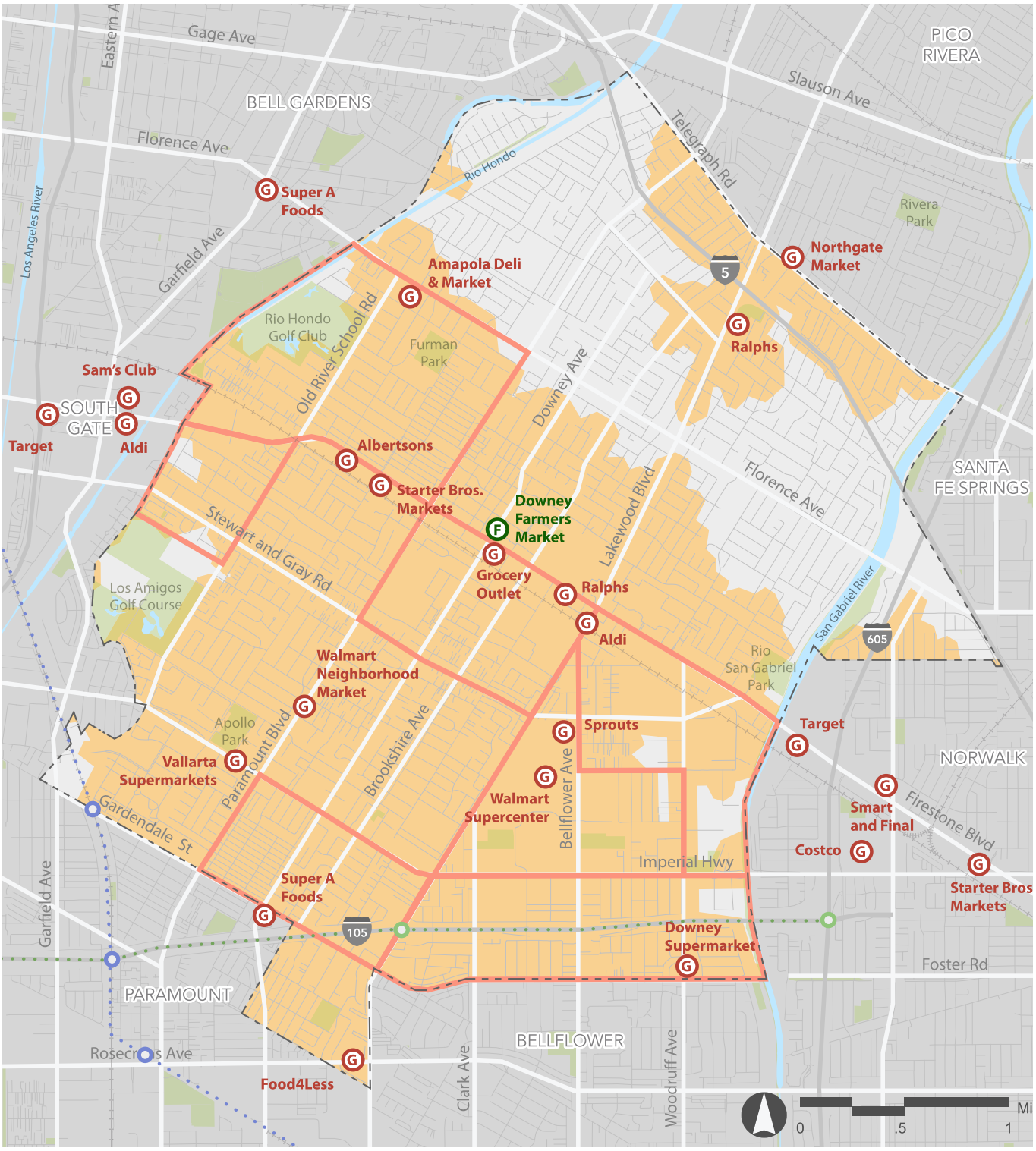


FIGURE EJ-2: COMMUNITIES FACING ENVIRONMENTAL BURDENS



Fresh Food Access

- Grocery Stores
- Farmers Market
- Disadvantaged Communities
- 1-Mile Grocery Store Access

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: City of Downey, 2026, and CalEnviroScreen 4.0, 2021.

Pollution Burden

Pollution burden measures the potential exposure of a community to environmental pollutants and hazardous conditions. This includes exposures which occur when people come into direct contact with pollutants, such as breathing polluted air or drinking contaminated water, and environmental effects, which are harmful changes to the surrounding environment caused by pollution, such as contaminated soil, impaired water bodies, or legacy industrial sites.

Both exposures and environmental effects can negatively impact health and quality of life, particularly in neighborhoods that are lower income or predominantly communities of color, creating inequities in health and environmental conditions.

Table EJ-2 provides an overview of the individual indicators that make up the aggregated pollution burden score, along with a brief explanation of each indicator and its relevance at the citywide level in Downey.

TABLE EJ-2: CALENVIRONSCREEN 4.0 POLLUTION BURDEN INDICATORS

Indicator	Description	Downey's Average Score	Downey's Conditions
Toxic Release Inventory (TRI)	This indicator measures exposure to hazardous chemicals released into the air, water, or soil from industrial facilities. Residents living near these facilities may be exposed to pollutants during routine operations or accidental releases.	92	Several TRI sites are located in industrial areas south of Firestone Boulevard. All census tracts in Downey score "high" or "very high" for proximity to toxic release facilities.
$PM_{2.5}$	$PM_{2.5}$ (particulate matter at 2.5 micron) refers to very small airborne particles that are about 30 times smaller than the width of a human hair. These particles are produced by vehicles, industrial activities, wood burning, and other combustion sources. Because of their small size, they can travel deep into the lungs and bloodstream, contributing to heart disease, respiratory illness, asthma, and other health problems. Children, older adults, and people with existing heart or lung conditions are most sensitive to $PM_{2.5}$ exposure.	83	Regionally, the highest $PM_{2.5}$ levels occur in central Los Angeles and Downtown Los Angeles. These elevated concentrations extend eastward and include most of the Downey area.

Indicator	Description	Downey's Average Score	Downey's Conditions
Lead	Lead exposure is commonly associated with older homes containing lead-based paint, aging plumbing, and contaminated soil. Exposure can impair brain development in children and cause damage to the nervous system, kidneys, and other organs.	79	Many homes built before 1978 may contain lead-based paint or older plumbing. Census tracts identified with higher lead burden include neighborhoods with a greater concentration of older housing stock.
Traffic Density	Traffic is a major source of air pollution. Vehicle exhaust releases harmful pollutants such as nitrogen oxides, carbon monoxide, and benzene, which are linked to respiratory illness, cardiovascular disease, cancer risk, and premature death.	71	Traffic-related pollution is highest near freeway corridors and major arterial streets. Areas near the city's boundaries and freeway interchanges show higher exposure levels than central neighborhoods. Major roadways such as Lakewood Boulevard and Firestone Boulevard also contribute to local air quality impacts.
Diesel PM	Diesel particulate matter comes primarily from trucks, buses, ships, trains, and diesel-powered vehicles. Diesel emissions contain many toxic chemicals that can penetrate deep into the lungs and are associated with eye, nose, and throat irritation, heart and lung disease, and increased cancer risk. Children and older adults are especially vulnerable.	69	Diesel emissions are strongly associated with freeway corridors. Areas closest to major freeways show the highest exposure levels. Freeways that carry goods movement traffic, particularly from the Los Angeles and Long Beach ports, are major contributors to diesel pollution in and around the city.
Hazardous Waste	Hazardous waste includes materials ranging from used automotive fluids to toxic industrial byproducts. These materials are transported to permitted facilities for treatment, storage, or disposal and may pose environmental and health concerns for nearby communities.	69	Hazardous waste sources include industrial businesses, medical facilities, and commercial uses. Higher concentrations occur near industrial areas and major transportation corridors.
Groundwater Threats	Hazardous materials stored or disposed of improperly can contaminate soil and groundwater, potentially affecting drinking water supplies and public health.	48	Certain locations with past industrial activities have identified groundwater concerns. Some affected census tracts also meet environmental justice criteria due to combined environmental and socioeconomic conditions.

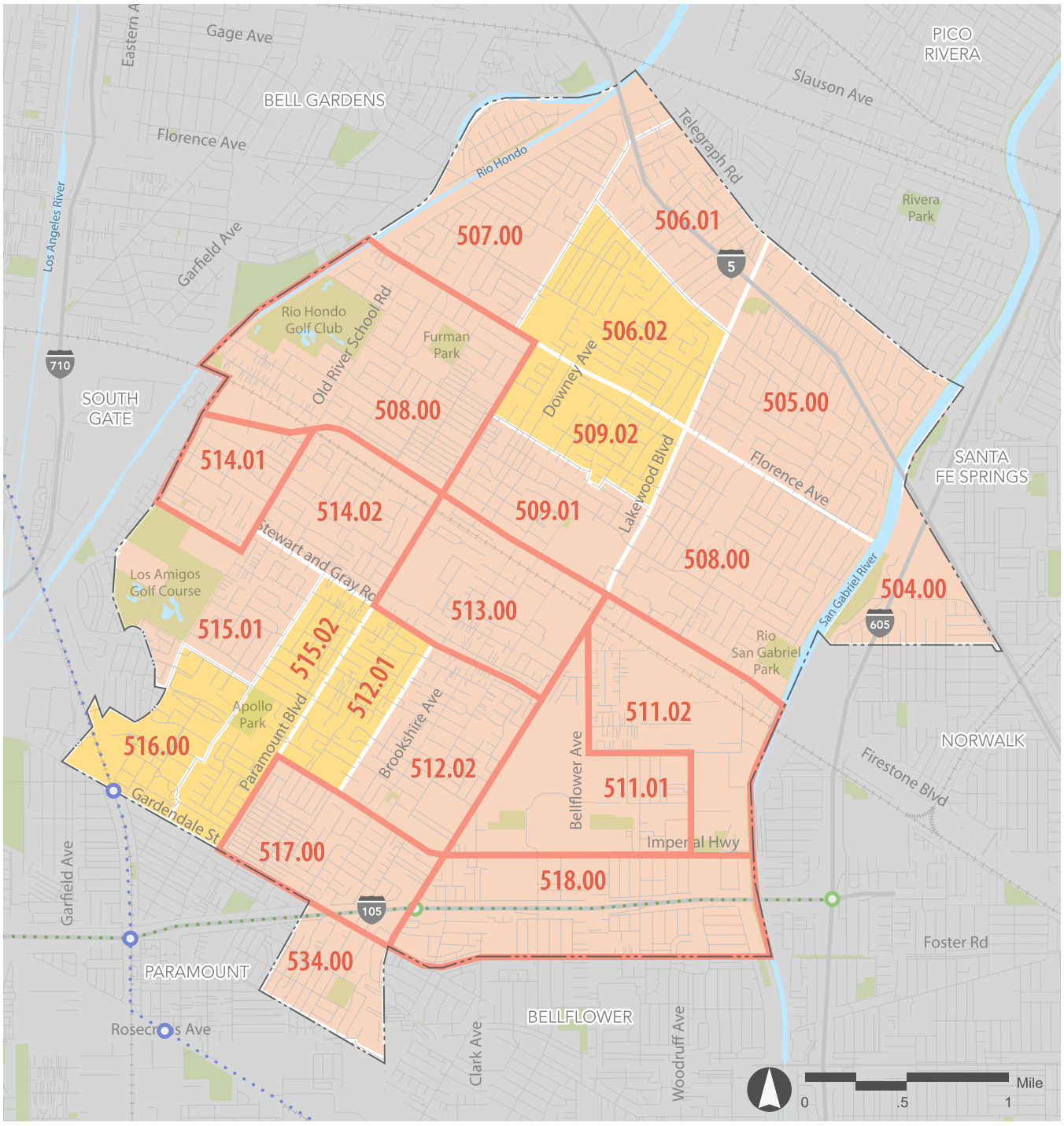
Indicator	Description	Downey's Average Score	Downey's Conditions
Impaired Water Bodies	Impaired water bodies contain pollutants that limit their use for drinking, recreation, aquatic habitat, or other beneficial purposes. Contamination may result from urban runoff, industrial discharge, or wastewater.	42	Several census tracts include water bodies such as the Rio Hondo, where water quality impairments have been identified.
Solid Waste	Solid waste sites include facilities that are out of compliance with environmental standards or illegal dumping locations that may degrade surrounding environmental conditions and expose nearby residents to health risks.	40	Several census tracts show exposure to solid waste sites, including areas identified as environmental justice communities.
Cleanup Sites	Cleanup sites are locations contaminated with hazardous chemicals that require environmental remediation. Residents living near these sites may face increased risk of exposure through air, soil, or groundwater.	26	Several cleanup sites are located in areas historically used for industrial and aerospace activities. These include the former NASA Industrial Plant and nearby sites with known hazardous materials contamination. While these sites have undergone or are undergoing cleanup, they may still pose potential environmental concerns.

Notes:

- A higher percentile means an area faces more pollution or greater vulnerability than most other places in the state.
- Downey's Average Score was calculated using the values across all twenty-two (22) census tracts within the city.

Source: CalEnvironScreen 4.0 the Office of Environmental Health Hazard Assessment, December 2025.

FIGURE EJ-3: CALENVIRONSCREEN 4.0 POLLUTION BURDEN



CalEnviroScreen 4.0 Pollution Burden Percentile Scores (Census Tracts)

- High Burden* (75% to 89.9%)
- Moderate Burden (50% to 78.9%)
- Low Burden (25% to 49.9%)
- Very Low Burden (24.9% or Lower)
- Disadvantaged Community

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: CalEnviroScreen 4.0, 2021.

Population Characteristics

Population characteristics describe physical, social, or health-related traits that can increase a community's vulnerability to pollution. These are divided into socioeconomic factors and sensitive populations:

- **Socioeconomic factors** include income, education, language proficiency, housing conditions, and other measures of material well-being. Communities with lower socioeconomic status often have fewer resources to advocate for cleaner environments, reduce exposure, or relocate away from hazardous areas.
- **Sensitive populations** include children, the elderly, and individuals with pre-existing health conditions. These groups are more susceptible to the harmful effects of pollution and therefore require greater consideration in planning and mitigation efforts.

Together, the pollution burden and population characteristics scores help identify DACs, neighborhoods that face a combination of higher environmental exposures and social vulnerabilities. This information is critical for prioritizing health protections, environmental improvements, and equitable access to resources..

TABLE EJ-3: CALENVIRONSCREEN 4.0 POPULATION CHARACTERISTICS INDICATORS

Indicator	Description	Downey's Average Score	Downey's Conditions
Housing Cost Burden	Housing cost burden refers to households that spend a large portion of their income on housing. When housing costs are high, households may have less money available for food, health care, transportation, and other basic needs. High housing costs can contribute to housing instability, financial stress, and negative health outcomes.	50	In Downey, areas with a higher concentration of multifamily housing generally show higher housing cost burden scores, including several neighborhoods south of Firestone Boulevard.
Educational Attainment	Educational attainment measures the highest level of education completed by residents. Education is strongly linked to income, employment opportunities, health outcomes, and overall quality of life. Lower levels of educational attainment can increase vulnerability to environmental and economic challenges.	65	Two census tracts in Downey, including one identified as an environmental justice community, show higher percentages of residents over age 25 without a high school diploma.

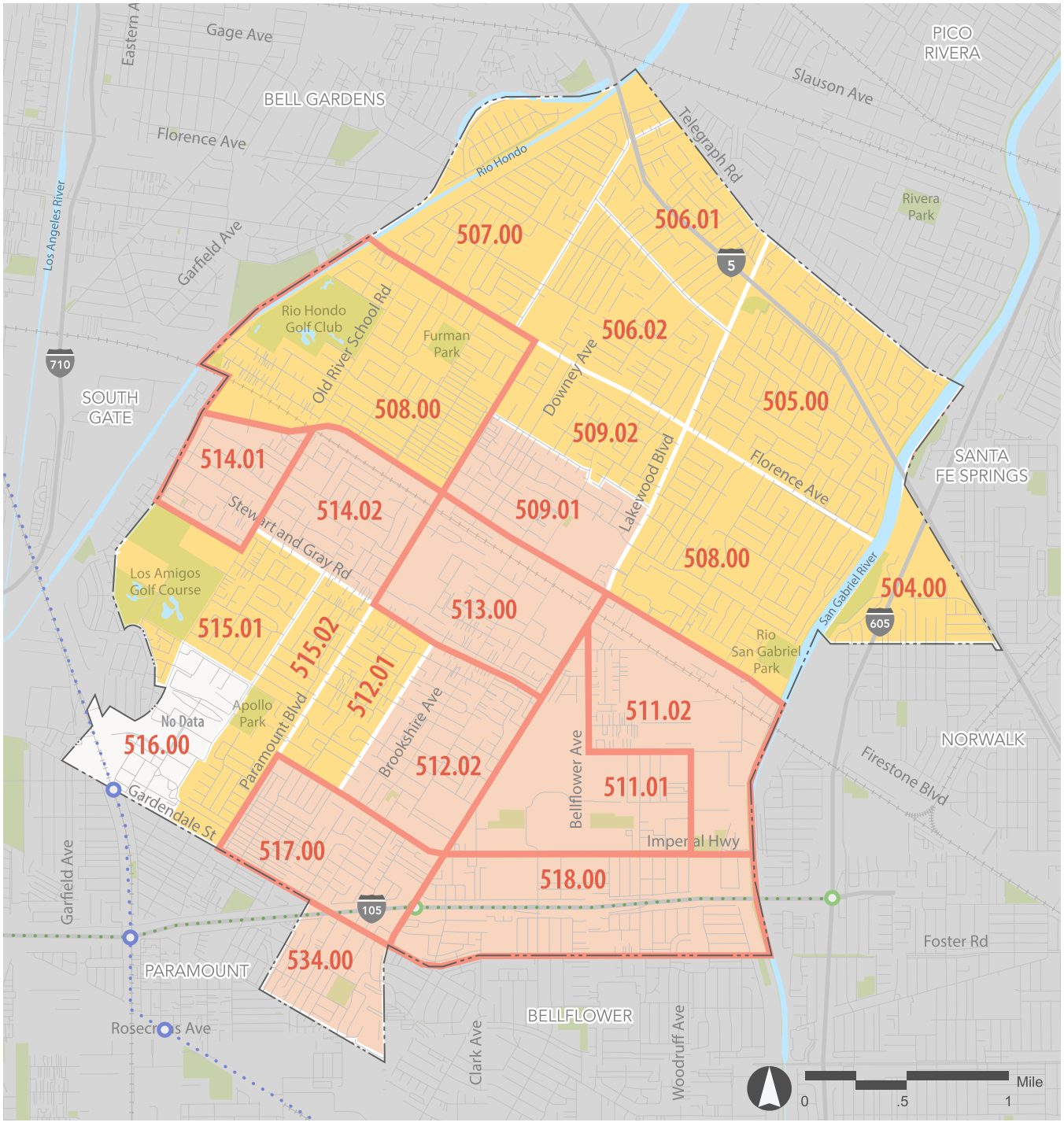
Indicator	Description	Downey's Average Score	Downey's Conditions
Poverty	Poverty is a key social determinant of health. Lower-income households may face greater exposure to environmental hazards and often have fewer resources to address health and environmental risks.	47	The highest poverty rates in Downey occur in areas near the Downey Landing shopping center. Overall, however, the city has a lower proportion of households living in poverty compared to Los Angeles County and the State. Poverty levels vary based on household size, employment, and housing tenure.
Linguistic Isolation	Linguistic isolation refers to households where no person over age 14 speaks English well. Language barriers may limit access to services, emergency information, and health care, increasing vulnerability during environmental or public health events.	59	Two census tracts in Downey score near the threshold for higher linguistic isolation, indicating households that may require language assistance for effective communication, particularly during emergencies or public outreach efforts.
Unemployment	This indicator measures the share of residents over age 16 who are unemployed but able to work. Unemployment can lead to financial stress, reduced access to health care, and increased vulnerability to environmental and health risks.	44	Three census tracts in Downey show higher unemployment levels. Limited employment opportunities and lower income can affect housing choice and may increase the likelihood of living in areas with greater environmental burdens.
Cardiovascular Disease	Cardiovascular disease includes conditions affecting the heart and blood vessels. Risk factors include poor diet, limited physical activity, smoking, and exposure to air pollution. Individuals with cardiovascular conditions are more sensitive to environmental hazards.	71	Higher rates of emergency room visits related to cardiovascular disease occur in central areas of the city and in southern neighborhoods near Interstate 105.
Low Birth Weight	Low birth weight refers to infants born weighing less than 5.5 pounds. It is associated with increased risk of developmental challenges, chronic health conditions, and infant mortality. Environmental exposures such as air pollution and toxic contaminants may contribute to low birth weight.	45	Five census tracts in Downey show higher rates of low birth weight, including three tracts identified as environmental justice communities.

Notes:

- A higher percentile means an area faces more pollution or greater vulnerability than most other places in the state.
- Downey's Average Score was calculated using the values across all twenty-two (22) census tracts within the city.

Source: CalEnvironScreen 4.0 the Office of Environmental Health Hazard Assessment, December 2025.

FIGURE EJ-4: CALENVIRONSCREEN 4.0 POPULATION CHARACTERISTICS



Source: CalEnviroScreen 4.0, 2021.

CalEnviroScreen 4.0 Population Characteristics Percentile Scores (Census Tracts)

- High Burden (75% to 89.9%)
- Moderate Burden (50% to 78.9%)
- Low Burden (25% to 49.9%)
- Very Low Burden (24.9% or Lower)
- Disadvantaged Community

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

ADDRESSING ENVIRONMENTAL JUSTICE

Environmental justice in Downey involves addressing the uneven distribution of environmental risks and access to resources across the city. Many residents face higher exposure to air pollution, hazardous materials, and contaminated sites, while some neighborhoods have limited access to parks, healthy food, safe housing, and essential community facilities. This section outlines strategies to reduce these inequities, promote healthier living conditions, and support resilient, vibrant communities.

Pollution Exposure and Environmental Effects

Pollution burden reflects the combined impacts of exposure and environmental effects. Exposure occurs when people come into direct contact with pollutants, such as breathing contaminated air from vehicle emissions. Environmental effects refer to harmful changes to air, soil, or water caused by pollution, including contaminated land or degraded environmental conditions that can affect communities over time. Together, these factors influence public health, environmental quality, and overall quality of life.

In Downey, pollution burden is shaped by multiple urban and historical conditions. The city's proximity to major regional freeways, including Interstate 5, Interstate 605, and Interstate 105, exposes nearby neighborhoods to elevated levels of particulate matter ($PM_{2.5}$), diesel emissions, and traffic-related air pollution (see Figure EJ-5). Industrial emissions from light manufacturing and warehousing areas, along with legacy contamination from former aerospace and manufacturing activities, further contribute to environmental health risks. Toxic Release Inventory sites and older industrial zones concentrate environmental hazards in certain areas, disproportionately affecting lower-income and disadvantaged communities.

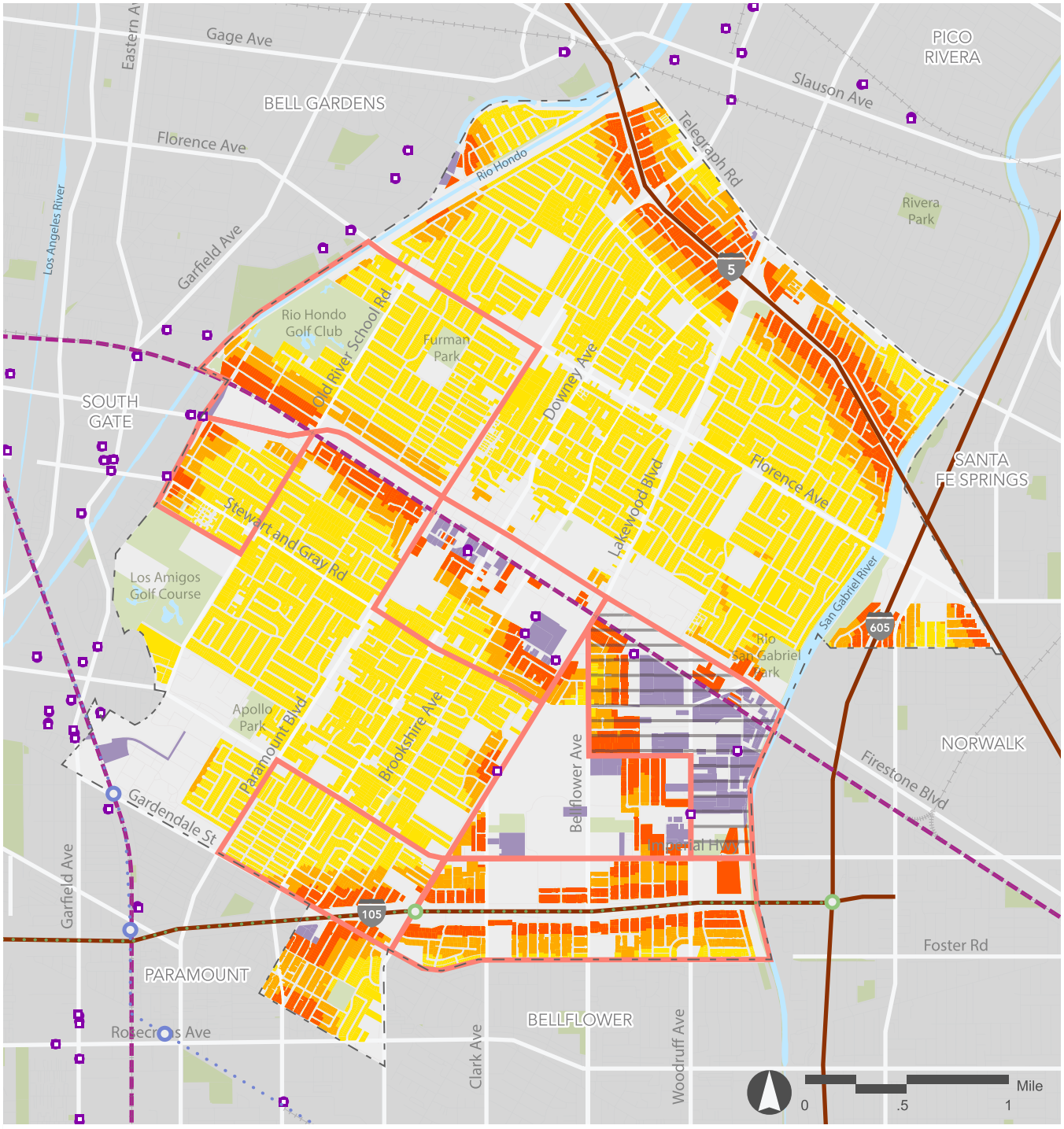
Because pollution sources, environmental conditions, and exposure risks vary across the city, effective environmental justice strategies must address specific geographic conditions. The following approaches focus on reducing exposure near transportation corridors and industrial areas, remediating legacy contamination, and protecting residents from ongoing environmental health risks through land use planning, monitoring, and targeted mitigation.

Neighborhoods Near Freeways and Major Arterials

Neighborhoods located near major transportation corridors experience the highest exposure to traffic-related pollution, including diesel emissions, particulate matter, and noise. Strategies focus on reducing exposure at the source, improving building protections, and creating physical buffers between residents and pollution sources.

- Require high-efficiency air filtration systems (MERV-13 or higher or equivalent) in new residential and sensitive-use developments near freeways.
- Encourage retrofits of existing homes with improved ventilation and filtration systems.
- Install dense tree canopy, sound walls, and vegetated berms along freeway edges and major corridors. Prioritize species that capture particulate matter and reduce noise.
- Restrict truck idling near residential neighborhoods, schools, and parks.
- Designate and enforce preferred truck routes away from sensitive uses.
- Support electrification infrastructure for trucks and buses.
- Install localized air quality sensors near high-traffic corridors.
- Share real-time air quality information with residents.

FIGURE EJ-5: POLLUTION SOURCES AND RESIDENTIAL PROXIMITY



Source: City of Downey, CalEnviroScreen 4.0, 2021, and U.S. Environmental Protection Agency (EPA) Toxics Release Inventory (TRI) Program, 2025.

Neighborhoods Near Industrial Uses and Toxic Release Sources

Industrial areas can generate emissions, hazardous materials, and operational impacts that affect nearby residents. These strategies aim to strengthen land use compatibility, reduce emissions, and improve oversight of industrial activities.

- Require health risk assessments for new or expanding industrial facilities.
- Apply performance standards for emissions, noise, odors, and hazardous materials handling.
- Require landscaped buffers, increased setbacks, or lower-intensity uses between industrial and residential areas.
- Consider relocation or amortization of incompatible heavy industrial uses over time.
- Promote electrification of industrial equipment and vehicle fleets.
- Encourage adoption of best available control technologies.
- Limit hours of high-impact activities near sensitive receptors.
- Strengthen inspection and compliance monitoring programs.
- Reroute truck routes away from sensitive uses.



See the Safety Element for additional discussion on pollution hazards.

Previously Contaminated Sites and Areas with Legacy Pollution

Historic industrial activities and hazardous material releases can leave long-term environmental effects in soil and groundwater. Addressing these legacy conditions reduces ongoing health risks and supports safe community reinvestment.

- Prioritize remediation of contaminated sites in disadvantaged communities.
- Partner with state and federal agencies to secure cleanup funding.
- Require site testing and remediation before redevelopment.
- Encourage conversion of remediated sites to community-serving uses such as parks, housing, or community facilities.
- Apply deed restrictions or land use controls where contamination remains.
- Monitor soil and groundwater conditions over time.
- Strengthen inspection of underground storage tanks.
- Require leak detection and spill prevention systems.
- Provide information to residents about environmental risks and safe property use in previously contaminated areas.

Access to Healthy Foods

Access to fresh, nutritious food supports community health and overall well-being. In Downey, residents generally have good access to food retailers, with numerous grocery store chains located throughout the city and in surrounding communities. Environmental Justice analysis (see Figure EJ-3) shows that most neighborhoods, including disadvantaged areas, are within one mile of a grocery store. However, some neighborhoods north of Florence Avenue, on both the east and west sides of the city, have more limited proximity to certain food outlets. Residents in these areas can still access the Firestone Boulevard corridor, which contains a concentration of grocery stores and food services, but distance and transportation needs may present barriers for some households.

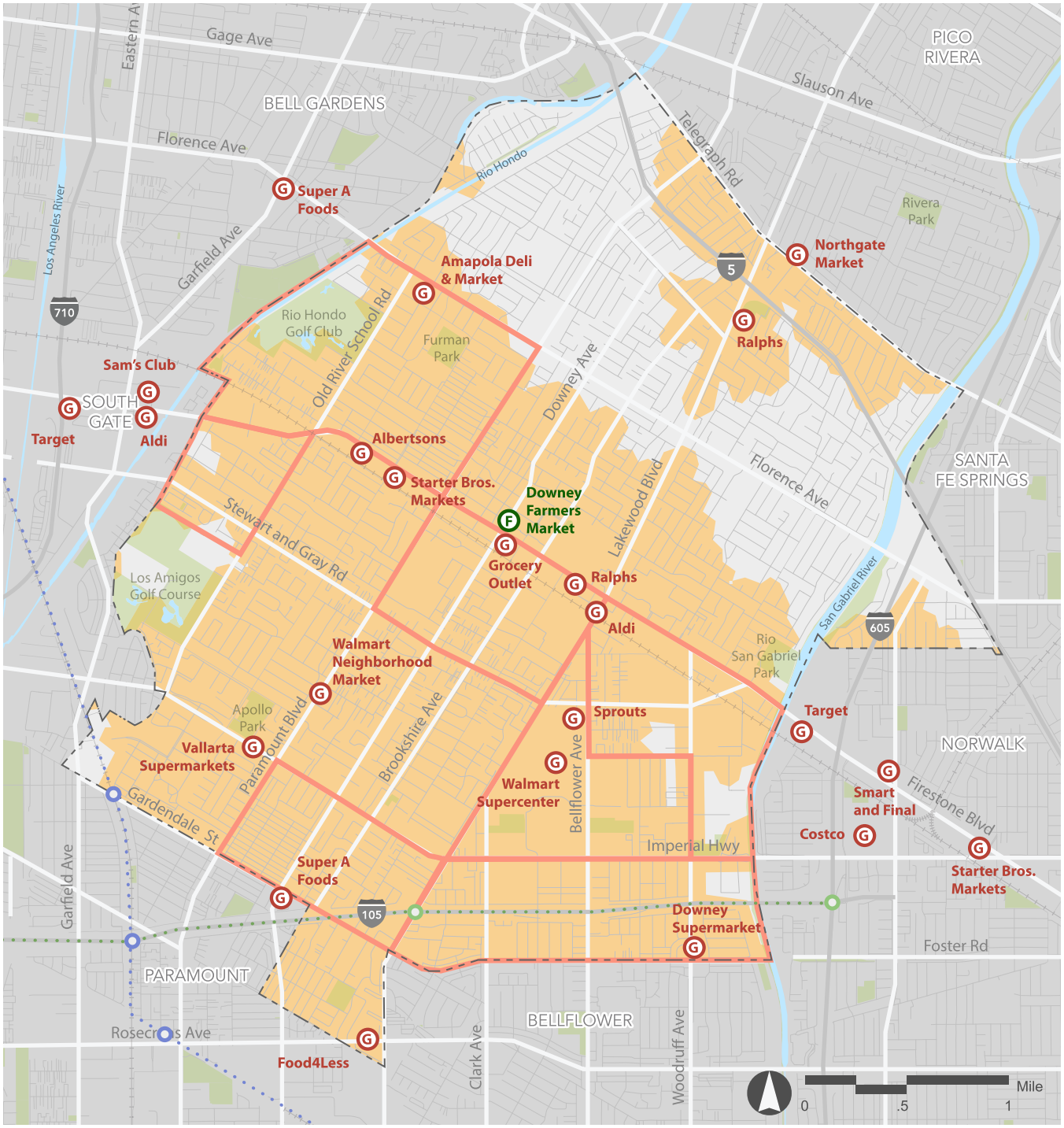
While overall access is relatively strong, maintaining and improving food availability remains important to support healthy eating and reduce diet-related health risks such as obesity, diabetes, and heart disease. Targeted strategies can help address remaining gaps, improve convenience for residents with limited mobility or transportation options, and strengthen the City's local food system. The following approaches support equitable access to healthy food options citywide:

- Support development of grocery stores, farmers' markets, and other outlets near residential areas, with a focus on disadvantaged communities.
- Encourage community gardens, urban agriculture programs, and farm-to-community initiatives to provide local, healthy food.
- Partner with schools, nonprofits, and public health agencies to offer nutrition education and programs that connect residents to affordable, healthy food.



Fresh berries and seasonal fruit on display at the Downey Farmers Market, providing residents with access to locally grown, healthy food options

FIGURE EJ-6: HEALTHY FOOD ACCESS



Fresh Food Access

- Grocery Stores
- Farmers Market
- Disadvantaged Communities
- 1-Mile Grocery Store Access

Basemap Features

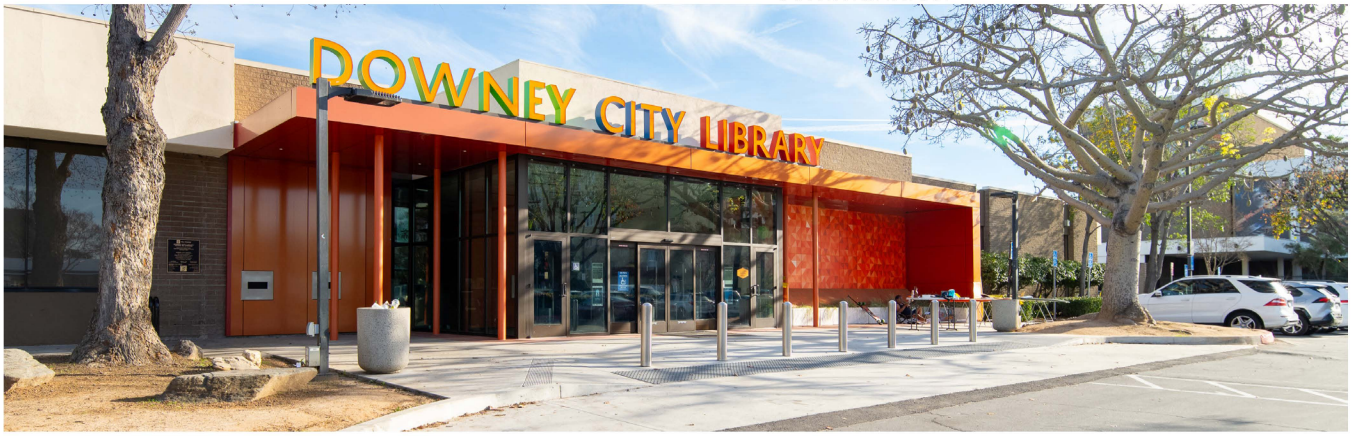
- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: City of Downey, 2026, and CalEnviroScreen 4.0, 2021.

Access to Public Facilities

Equitable access to public facilities is essential for healthy, vibrant communities. In Downey, residents rely on parks, libraries, community centers, healthcare clinics, and other public services for recreation, learning, and essential daily needs. However, some neighborhoods, particularly those with higher concentrations of disadvantaged residents, face limited access to these facilities due to distance, transportation barriers, or insufficient capacity. This can reduce opportunities for education, wellness, social interaction, and cultural enrichment and may exacerbate existing health and social disparities. Ensuring that all residents have nearby, safe, and well-maintained public facilities supports community well-being, fosters inclusivity, and strengthens environmental justice by providing equal access to resources that enhance quality of life across the city.

- Prioritize new public facilities or expansions in southeast and central-west Downey, where many disadvantaged communities are located, as feasible.
- Implement mobile or pop-up services, such as library vans, recreation program buses, and health outreach clinics, to reach residents farther from permanent facilities.
- Improve pedestrian and bicycle connections to existing parks, libraries, and community centers, especially along major corridors like Firestone Boulevard and Lakewood Boulevard.
- Co-locate services where possible, for example combining park amenities with community programming at Downey Civic Center, Promenade Park, or other hubs.
- Upgrade existing facilities for safety, ADA accessibility, energy efficiency, and recreational quality, prioritizing locations in historically underserved neighborhoods.
- Offer programs at varied times and provide multilingual services reflecting Downey's diverse population, particularly Spanish and Tagalog speakers.
- Provide subsidized or free access for low-income residents to recreation classes, cultural events, and wellness programs.
- Engage Downey residents in planning and designing new or upgraded facilities to ensure programs and spaces meet community needs.
- Expand online and virtual program options to complement in-person services at libraries, recreation centers, and senior centers.
- Partner with local nonprofits, schools, and health organizations to expand services, programs, and community stewardship opportunities in Environmental Justice communities.



Public libraries provide essential access to education, technology, and community resources; expanding services through mobile or pop-up programs can help reach residents in underserved areas.

Safe and Sanitary Homes

Housing quality is a key component of environmental justice and community health. Many homes in Downey, particularly those built before the 1960s, contain hazards such as lead-based paint, outdated plumbing, and insufficient ventilation, which pose health risks for children, seniors, and other vulnerable populations. These risks are compounded in neighborhoods with higher concentrations of disadvantaged residents, where access to resources for home repairs or remediation is limited. Programs to support safe housing, including code enforcement, lead abatement, and weatherization, protect residents' physical health, promote mental well-being, and strengthen community stability. Ensuring that all Downey residents live in safe, sanitary homes is a fundamental step in reducing health inequities and promoting environmental justice citywide.

- Promote lead testing, remediation, and safe renovation programs for older homes.
- Provide guidance and resources to residents for maintaining safe, healthy living environments.
- Target public investment and technical support to neighborhoods with older housing stock and higher vulnerability.

See the Housing Element for additional discussion on safe housing.

Meeting Community Needs

Community engagement plays a central role in identifying environmental justice priorities and community needs in Downey. Through public outreach and participation, residents highlighted the importance of healthy, safe, and well-maintained neighborhoods as essential to quality of life. Community input emphasized that health and well-being are shaped by access to safe mobility, clean public spaces, wellness-supporting resources, and essential services. Feedback also identified disparities in neighborhood conditions, infrastructure quality, and access to community resources, particularly in disadvantaged areas. Understanding these community-identified needs helps guide planning decisions, inform targeted investments, and support more equitable living conditions across the city.

Improve Walkability, Mobility, and Neighborhood Safety

Community members have cites ongoing challenges related to safe and convenient mobility, particularly for pedestrians and bicyclists. Residents reported gaps in sidewalk infrastructure, inadequate maintenance of public rights-of-way, and limited street lighting in some areas, which can contribute to safety concerns and discourage walking. Traffic-related issues, including speeding, noise, and unsafe driving behavior on major corridors and neighborhood streets, were also identified as key concerns. Participants emphasized the need for traffic calming measures, improved speed enforcement,

See the Circulation Element for additional discussion on street safety.



Downey Walk to School Day

and protected facilities for pedestrians and cyclists.

Strengthen Community Health, Cleanliness, and Neighborhood Conditions

Through engagement, participants also emphasized broader neighborhood conditions that influence community health and well-being. Key concerns included maintaining clean and safe public spaces, addressing illegal dumping and waste management issues, and strengthening code enforcement and property maintenance to improve housing and neighborhood quality. Participants identified impacts associated with homelessness in public areas, particularly related to safety and sanitation. Additional needs include improving connectivity between neighborhoods and essential services, expanding access to healthcare and wellness resources, and upgrading communication and digital infrastructure in areas with limited service.

Access to Physical Activity

Regular physical activity supports community health, reduces chronic disease, and improves overall quality of life. Access to parks, trails, recreation programs, and safe walking and bicycling routes plays a critical role in supporting daily exercise, particularly for children, seniors, and households without access to private recreational facilities. In Downey, disparities in access to well-maintained parks, safe active transportation routes, and recreational opportunities can limit physical activity in some neighborhoods, particularly in disadvantaged communities. Expanding opportunities for exercise through park improvements, recreation programming, and safe street design supports healthier lifestyles, strengthens social connections, and promotes equitable access to wellness resources.

Community engagement and technical analysis highlight specific gaps in access to physical activity resources. Areas within a 10-minute walk of a park, as well as areas located farther away, are identified in Figure EJ-4, illustrating disparities in park access. The analysis shows that several residential areas within disadvantaged communities do not have access to a park within a 10-minute walk. The neighborhood southeast of Lakewood Boulevard, south of Firestone Boulevard, and north of Stewart and Gray Road, characterized by higher-density apartment development, lacks nearby recreational space and could benefit from a small park or neighborhood recreational amenity. Additional neighborhoods, primarily single-family residential areas, also do not meet the 10-minute walk standard, indicating broader gaps in access to physical activity opportunities citywide.

See the Open Space Element for additional discussion on park access.



Park Pop-up event involving physical activity: yoga

Public input further emphasized the need for expanded recreation programs, improved park conditions, and safe and convenient connections to parks and community destinations. Residents highlighted the importance of shade, tree canopy, and comfortable outdoor environments that encourage regular use of public spaces. To help address these gaps, the City can expand access to recreation through both permanent facilities and flexible service delivery approaches, including mobile recreation programs that bring activities, equipment, and services directly to underserved neighborhoods. Potential approaches include:

- Expand and improve parks, trails, playgrounds, and recreational facilities, prioritizing underserved neighborhoods.
- Implement safe street design and traffic-calming measures that support walking, biking, and rolling for all ages and abilities.
- Integrate green infrastructure, tree canopy, and shaded corridors to encourage outdoor activity and reduce urban heat.
- Partner with community organizations to offer exercise programs, sports leagues, and wellness initiatives that reach all residents.
- Provide mobile recreation opportunities, such as pop-up play programs, traveling fitness classes, and temporary recreational amenities in neighborhoods with limited park access.

Civic Engagement and Community Participation

Environmental justice in Downey depends on meaningful, inclusive participation by all residents, particularly those in disadvantaged communities who are most affected by pollution, unsafe infrastructure, and limited access to resources. Ensuring that community members have a voice in planning, decision-making, and policy development is essential to advancing equity, building trust, and addressing the unique needs of neighborhoods facing the highest environmental and social burdens.

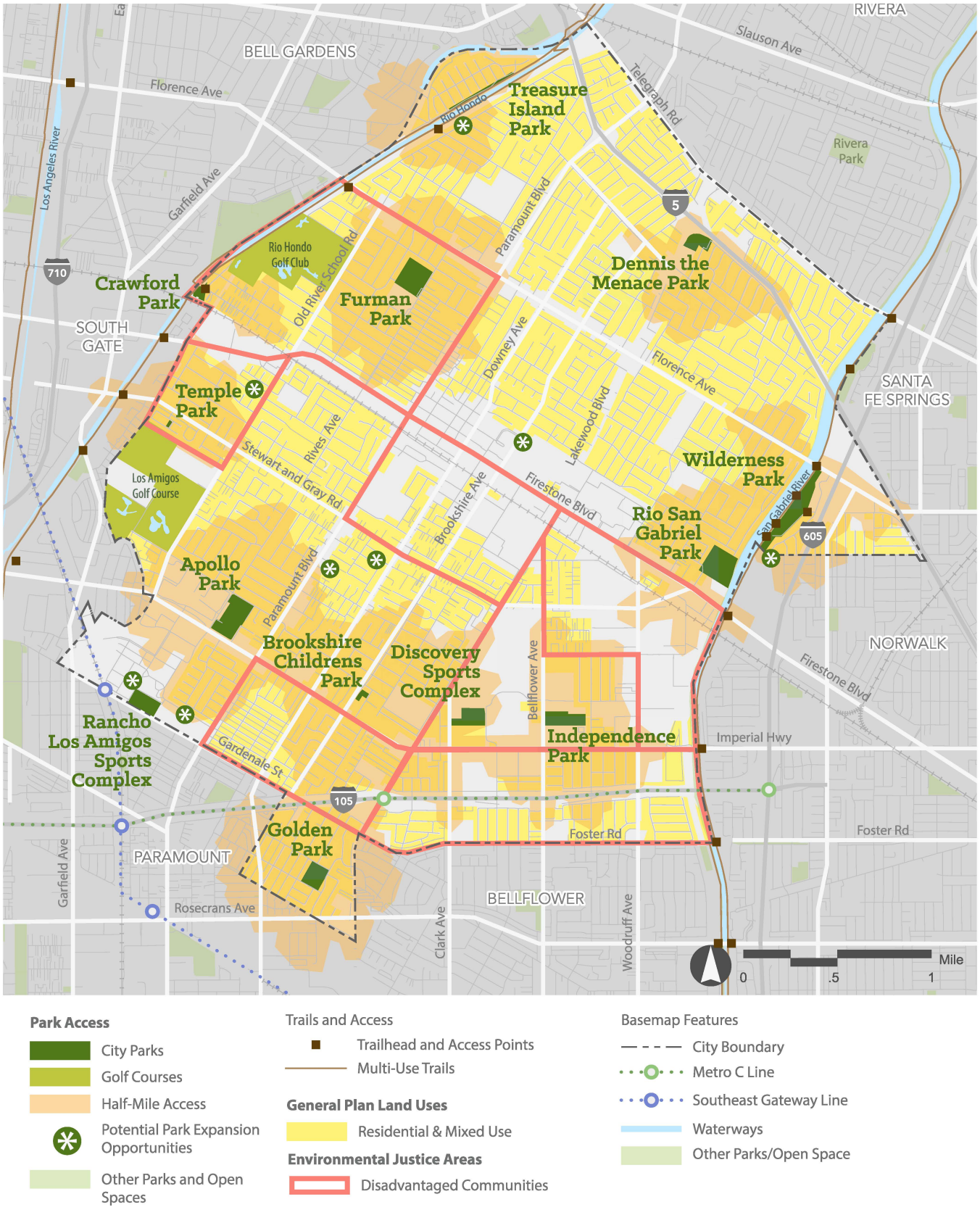
Downey's approach to community engagement emphasizes equitable, transparent, and effective processes. The City prioritizes public participation in ways that strengthen civic involvement, foster collaboration, and enhance trust between residents and local government. By actively seeking input from residents, the City can better identify community priorities, align planning efforts with local needs, and develop policies and programs that promote healthier, safer, and more resilient neighborhoods.

Inclusive engagement strategies include providing accessible opportunities for residents to participate in discussions on environmental, land-use, and public health decisions, ensuring that language, disability, and scheduling barriers are addressed. The City also focuses on capacity building, supporting residents to understand and influence policies, advocate for improvements, and participate effectively in governance. This commitment to civic participation ensures that environmental justice goals are informed by the lived experiences of the community and that planning outcomes equitably reflect the needs of all residents.



City Council meetings provide opportunities for community members to share input, voice concerns, and participate in local decision-making.

FIGURE EJ-7: PARK ACCESS (10-MINUTE WALK)



Source: City of Downey, 2026, and CalEnviroScreen 4.0, 2021.

GOALS AND POLICIES

Environmental justice focuses on protecting the health, safety, and quality of life of all residents by addressing environmental burdens, improving access to community resources, and promoting fair and inclusive decision making. In Downey, environmental justice efforts seek to reduce exposure to pollution and hazards, improve access to healthy living opportunities, prioritize investment in underserved neighborhoods, and strengthen community participation in planning and policy decisions. The following goals and policies guide actions to create healthier environments, equitable services, and resilient neighborhoods for all residents, with particular attention to communities facing the greatest environmental and social challenges.

GOAL EJ-1: REDUCE EXPOSURE TO POLLUTION, HAZARDOUS MATERIALS, AND ENVIRONMENTAL HEALTH RISKS, WITH EMPHASIS ON NEIGHBORHOODS FACING THE HIGHEST BURDENS.

Policy EJ-1.1: Air Quality and Transportation. Implement land use and transportation strategies that reduce public exposure to toxic air contaminants, including measures that decrease reliance on automobile travel, reduce vehicle emissions, and promote cleaner transportation options.

Policy EJ-1.2: Industrial and Commercial Impacts. Require heavy industrial and high-intensity commercial activities near residential neighborhoods, schools, parks, or other sensitive uses to mitigate impacts such as air pollution, noise, odors, and operational hazards.

Policy EJ-1.3: Development Review for Sensitive Areas. Apply enhanced review standards and limit variances for new or expanded industrial or commercial uses near sensitive receptors, particularly in disadvantaged communities.

Policy EJ-1.4: Vegetation and Green Buffers. Use trees, landscaping, and green infrastructure as buffers between residential neighborhoods and major pollution sources, including freeways, rail corridors, and industrial districts, with priority in disadvantaged areas.

Policy EJ-1.5: Hazardous Materials Oversight. Coordinate with regulatory agencies to monitor ongoing compliance of facilities that handle hazardous materials or generate toxic releases.

Policy EJ-1.6: Contaminated Site Cleanup. Prioritize remediation and reuse of contaminated or underutilized sites within disadvantaged communities to reduce long-term exposure risks and encourage community reinvestment.

Policy EJ-1.7: Lead Exposure Reduction. Encourage the identification and safe remediation of lead hazards in older housing, particularly homes constructed before 1960, through education, rehabilitation programs, and compliance with applicable state and federal regulations.

Policy EJ-1.8: Prohibit Heavy Polluting Uses. Promote land use patterns that reduce potential exposure to air emissions, hazardous materials, and other pollutants by discouraging the establishment or expansion of heavy polluting land uses near residential neighborhoods, schools, parks, and other sensitive receptors.

Policy EJ-1.9: City-Driven Environmental Monitoring. Implement and support local air quality and environmental monitoring programs to identify environmental conditions, inform

planning and regulatory decisions, and support public education and awareness efforts.

Policy EJ-1.10: Truck and Transportation Emissions. Design and enforce truck routes, limit idling near sensitive uses, and support electrification of freight and public transit vehicles to reduce exposure to traffic-related pollution.

GOAL EJ-2: PRIORITIZE COMMUNITY NEEDS AND EQUITABLE INVESTMENTS IN INFRASTRUCTURE, PUBLIC FACILITIES, AND NEIGHBORHOOD IMPROVEMENTS, WITH EMPHASIS ON HISTORICALLY UNDERSERVED AND DISADVANTAGED COMMUNITIES.

Policy EJ-2.1: Infrastructure Upgrades. Target street repairs, sidewalks, drainage, lighting, and other public infrastructure improvements to neighborhoods experiencing historic underinvestment.

Policy EJ-2.2: Safety and Complete Streets. Implement safety-focused street improvements, including traffic calming, crosswalks, and bike/pedestrian enhancements, to reduce hazards and support active transportation in disadvantaged areas.

Policy EJ-2.3: Tree Canopy and Shade. Increase urban tree canopy and shaded areas along streets, sidewalks, and public spaces, prioritizing neighborhoods with limited green cover to reduce heat and improve air quality.

Policy EJ-2.4: Community Facilities Upgrades. Invest in the maintenance, expansion, and programming of libraries, recreation centers, parks, and other community facilities in areas with high vulnerability to ensure equitable access to public services.

Policy EJ-2.5: Resource Allocation Transparency. Use clear criteria and public reporting to guide and communicate how funding and resources are allocated to address the greatest needs and disparities across Downey's neighborhoods.

Policy EJ-2.6: Holistic Neighborhood Revitalization. Promote initiatives that combine environmental remediation, green infrastructure, safe active transportation, and community amenities in historically overburdened neighborhoods to create healthier, safer, and more resilient communities.

Policy EJ-2.7: Neighborhood Cleanliness and Sanitation. Strengthen code enforcement, waste management, and public space maintenance to improve neighborhood health, safety, and livability, particularly in overburdened areas.

Policy EJ-2.8: Connectivity to Services. Improve pedestrian, bicycle, and transit connections between neighborhoods and key community facilities, including parks, libraries, clinics, and schools.

Policy EJ-2.9: Digital and Communication Access. Expand broadband and cellular coverage and improve access to online services to support equitable access to information, programs, and public participation.

Policy EJ 2.10: Community Facilities and Services. Provide equitable access to libraries, community centers, recreation facilities, and cultural programs that support learning, social interaction, wellness, and civic participation in

all neighborhoods, with priority for historically underserved areas.

Policy EJ 2.11: Green Infrastructure and Climate Resilience. Integrate green infrastructure, tree canopy, and shaded streets along pedestrian corridors, parks, and public spaces to improve comfort, reduce urban heat, and enhance environmental quality. Strengthen connections to regional resources such as the Rio Hondo and San Gabriel River.

GOAL EJ-3: PROMOTE HEALTHY EATING, ACCESS TO PHYSICAL ACTIVITY, AND VIBRANT, WELLNESS-SUPPORTING COMMUNITIES.

Policy EJ-3.1: Healthy Food Access. Support development of grocery stores, farmers' markets, community-supported agriculture, and other healthy food outlets near residential areas, prioritizing disadvantaged neighborhoods.

Policy EJ-3.2: Nutrition Education and Food Program. Encourage programs that educate residents on nutrition and connect families to affordable, locally grown food.

Policy EJ-3.3: Parks, Recreation, and Physical Activity. Expand and enhance parks, open space, trails, recreation programs, and active living facilities. Ensure that residents of all ages and abilities, particularly in underserved neighborhoods, have safe and convenient access to opportunities for physical activity.

Policy EJ-3.7: Food Equity and Urban Agriculture. Encourage community gardens, urban agriculture programs, and farm-to-community initiatives to improve access to healthy, locally grown food, and promote resident participation in planning, operation, and decision-making to support food security and community engagement.

Policy EJ-3.8: Healthy Living Programs. Support programs that integrate nutrition, physical activity, and wellness education into schools, recreation centers, and community events, and collaborate with local health agencies and nonprofits to provide equitable opportunities for healthy lifestyles.

Policy EJ-3.9: Mobile and Flexible Recreation Programs. Provide traveling or pop-up recreation programs that deliver physical activity opportunities directly to neighborhoods lacking nearby parks or facilities.

Policy EJ-3.10: Equitable Program Access. Ensure recreational programming is accessible to residents of all ages, abilities, and income levels, including youth, seniors, and households with limited private amenities.

GOAL EJ-4: PROMOTE MEANINGFUL, INCLUSIVE, AND TRANSPARENT PARTICIPATION IN CITY DECISION-MAKING.

Policy EJ-4.1: Inclusive Engagement. Implement civic engagement practices that are accessible, culturally responsive, and inclusive of all residents, consistent with the City's Strategic Plan goals.

Policy EJ-4.2: Transparent Outreach. Conduct public meetings and outreach in a transparent manner, providing accommodations for language, accessibility, and schedules that reflect community availability.

Policy EJ-4.3: Clear Information. Provide clear, consistent, and nonpartisan information to

support informed participation, build trust, and strengthen public confidence in local decisions.

Policy EJ-4.4: Education on Environmental Justice. Increase awareness and understanding of environmental justice issues to support meaningful resident participation in identifying priorities and shaping solutions.

Policy EJ-4.5: Community Capacity Building. Provide training, workshops, and technical assistance to empower residents to participate in decisions, advocate for community priorities, and navigate environmental, health, and land-use regulations.

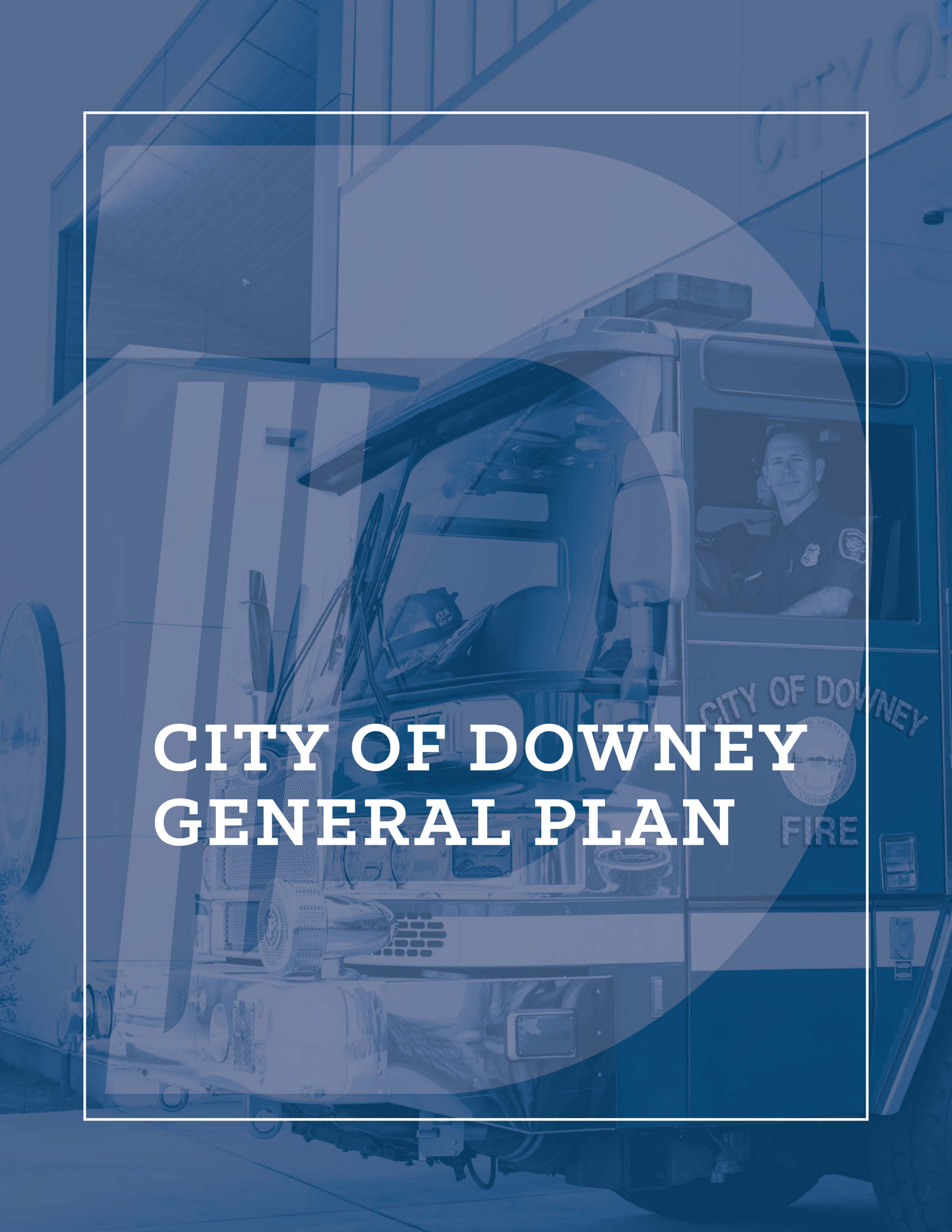
Policy EJ-4.6: Community-Informed Planning. Use feedback from residents, particularly from disadvantaged neighborhoods, to identify priorities, guide targeted investments, and evaluate the effectiveness of environmental justice strategies.

Policy EJ-4.7: Ongoing Engagement and Feedback Loops. Establish regular mechanisms for residents to review progress on environmental justice initiatives and provide input on updates to programs, facilities, and policies.



SAFETY ELEMENT

CHAPTER 09



CITY OF DOWNEY GENERAL PLAN

CHAPTER

09

SAFETY ELEMENT

INTRODUCTION

What this chapter addresses and why these topics are important?

The Safety Element establishes a comprehensive framework to protect the community from natural and human-caused hazards while promoting a safe, resilient, and prepared city. Through coordinated planning, hazard mitigation, emergency preparedness, infrastructure resilience, and public education, the element helps Downey maintain safe neighborhoods and protect lives, property, and critical community resources.

Downey's diverse residential neighborhoods, businesses, schools, parks, and community facilities contribute to the city's high quality of life. Maintaining that quality of life requires effective public safety services, reliable infrastructure, emergency response capabilities, and clear communication before, during, and after emergencies. As the community continues to grow and evolve, the City must be prepared to address a wide range of risks, including earthquakes, flooding, wildfire, hazardous material incidents, extreme heat, and other threats to public health and safety.

Climate change is increasing the frequency and severity of many hazards affecting Southern California. Extreme heat events place greater demands on the electrical grid and can pose significant health risks, particularly for vulnerable populations. Wildfires can affect air quality, damage natural and built environments, and threaten lives and property. Prolonged droughts, rising temperatures, and changing precipitation patterns can increase the potential for water shortages and localized flooding. These challenges require proactive planning and adaptation strategies to strengthen community resilience and reduce future risks.

State law requires every city to adopt a Safety Element that identifies and addresses both short- and long-term hazards that may affect the community. The Safety Element must also address climate adaptation and resilience through a vulnerability assessment that identifies the people, places, and systems most susceptible to climate-related impacts. This assessment provides the foundation for the goals, policies, and actions contained in this chapter.

GUIDING PRINCIPLES THAT SHAPE THIS CHAPTER

The goals, policies, and actions in this chapter are guided by the principles of safety, resilience, preparedness, sustainability, and community well-being. They support the City's commitment to Promoting Safety and Peaceful Environments by enhancing public safety, emergency preparedness, and hazard mitigation efforts, and Protecting Resources and Preparing for the Future by addressing climate-related risks, strengthening infrastructure resilience, and planning for long-term community adaptation. This chapter also advances several of the City's Strategic Plan goals related to Quality of Life, Safety, Infrastructure, and Efficiency and Adaptability.

Promote Safety and Peaceful Environments

Enhance lighting, visibility, and public safety personnel presence so the community is secure and comfortable for all users.

Protect Resources and Prepare for the Future

Plan with climate, conservation, community safety, and emergency preparedness in mind.



National Night Out at the Civic Center. Residents gathered to watch a live vehicle extrication demonstration by the Downey Fire Department, showcasing specialized rescue techniques and equipment used during traffic emergencies.

KEY COMPONENTS OF THE SAFETY ELEMENT



CLIMATE ADAPTATION



NATURAL HAZARDS



HUMAN-CAUSED HAZARDS



COMMUNITY SAFETY



EMERGENCY PREPAREDNESS

COMMUNITY CONSIDERATIONS

Through community engagement and an evaluation of existing conditions, several key safety and resilience challenges were identified. Community members consistently emphasized safety as a top priority, highlighting concerns related to crime prevention, traffic safety, emergency response, and neighborhood security. Technical analysis also identified long-term risks associated with climate change, natural hazards, and emergency preparedness. Together, these issues help shape the City's approach to protecting residents, infrastructure, and community well-being.

Community Safety

Residents consistently identified public safety as one of Downey's highest priorities. Community members expressed concerns about crime, traffic safety, speeding, reckless driving, and personal security in neighborhoods, commercial areas, parks, and other public spaces. Maintaining effective police, fire, and emergency medical services while meeting evolving community needs remains an ongoing challenge.

Climate Adaptation and Resilience

Climate change is expected to increase the frequency and severity of extreme heat, drought conditions, severe storms, and other climate-related hazards. Community members also expressed concerns about localized flooding during heavy rain events and the City's ability to maintain reliable infrastructure and essential services during emergencies. Vulnerable populations, including older adults, children, and lower-income households, may face disproportionate impacts from these events

Emergency Preparedness

Downey must remain prepared to respond to natural and human-caused emergencies, including severe weather events, public health emergencies, hazardous materials incidents, and utility disruptions. As the city continues to grow, maintaining effective emergency response systems, communication networks, evacuation planning, and coordination among agencies will be essential to protecting public health and safety.

Seismic and Geologic Hazards

Downey is located in a seismically active region and is vulnerable to strong ground shaking from nearby fault systems, including the Newport–Inglewood Fault and the Whittier Fault. Although no active fault crosses the city, portions of Downey are susceptible to liquefaction and other ground failure hazards that could damage buildings, infrastructure, and utilities during a major earthquake. Preparing for and reducing risks associated with seismic events remains a critical long-term challenge.

SAFETY PLAN

Natural Hazards

Natural hazards are events or physical conditions that occur as part of natural processes and have the potential to cause harm to people, property, and the environment. In Downey, these hazards are shaped by regional geology, climate, and hydrology, and commonly include earthquakes and flooding. While natural hazards cannot be prevented, their impacts can be reduced through informed land use planning, resilient infrastructure, and effective emergency preparedness.

Seismic and Geologic Hazards

Downey is located on the broad alluvial plain of the Los Angeles Basin, an area with several active regional fault systems capable of producing significant seismic activity. Downey does not contain any Alquist-Priolo Earthquake Fault Zones, because no active faults are mapped as running directly through the city. But the city is still within a seismically active region of the Los Angeles Basin, so the city remains subject to strong ground shaking from nearby faults, including the Whittier and Norwalk faults.

The most significant seismic hazard is strong ground shaking associated with the nearby Newport–Inglewood–Rose Canyon fault zone, which trends northwest–southeast through the region (see Regional Earthquake Faults Map, Figure S-1). Within this system, the Avalon–Compton fault and Cherry–Hill fault are the closest mapped fault segments affecting the Downey area.

Other nearby active faults that could generate strong ground shaking include the Whittier fault within the Elsinore fault zone, as well as the Los Alamitos fault and the East Montebello fault.

Given its location within Southern California, Downey has a high probability of experiencing a magnitude 6.7 or greater earthquake within the coming decades, most likely associated with activity along the Newport–Inglewood–Rose Canyon fault system or other regional fault systems.

Downey is classified in Seismic Design Category D-2, which indicates there is a high risk of strong ground shaking if an earthquake happens nearby. As a result, all new construction and major renovations in the city must meet strict building code standards to ensure structures can withstand significant earthquake forces.

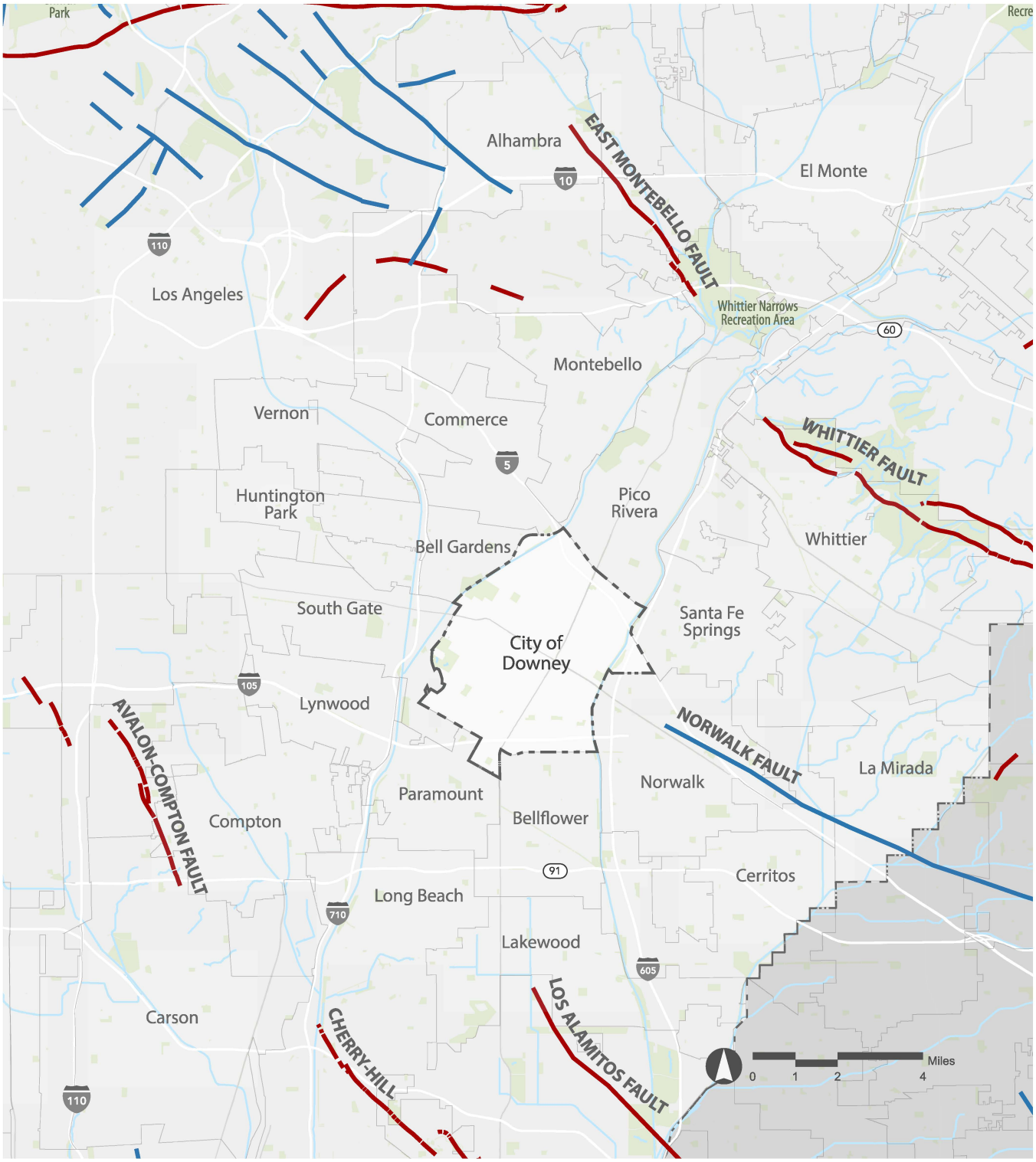
Geologic hazards are those that may be activated with or without an earthquake due to some combination of geologic conditions, groundwater, and the weather. In Downey, ground shaking and liquefaction carry the most risks to property and residents.

Seismic-Related Hazards

Seismic hazards are not limited to the shaking and potential ground rupture associated with earthquakes. The shaking can lead to landslides in hilly terrain (not of concern in Downey) and liquefaction, which is a local concern.

During earthquakes, the shaking can cause loose, wet soil to behave like a liquid. This is called soil liquefaction, and it happens because the vibrations force the water between soil particles to the surface, reducing the soil's strength and ability to support structures. This can lead to buildings sinking, tilting, or collapsing, and is a major cause of damage in earthquakes. Figure S-2 above (Seismic and Geologic Hazards Map) shows that Downey is in a seismic hazard zone where liquefaction may occur during a strong earthquake. Developers of properties within the city limits may be required to investigate the potential hazard and mitigate its threat during the local permitting process

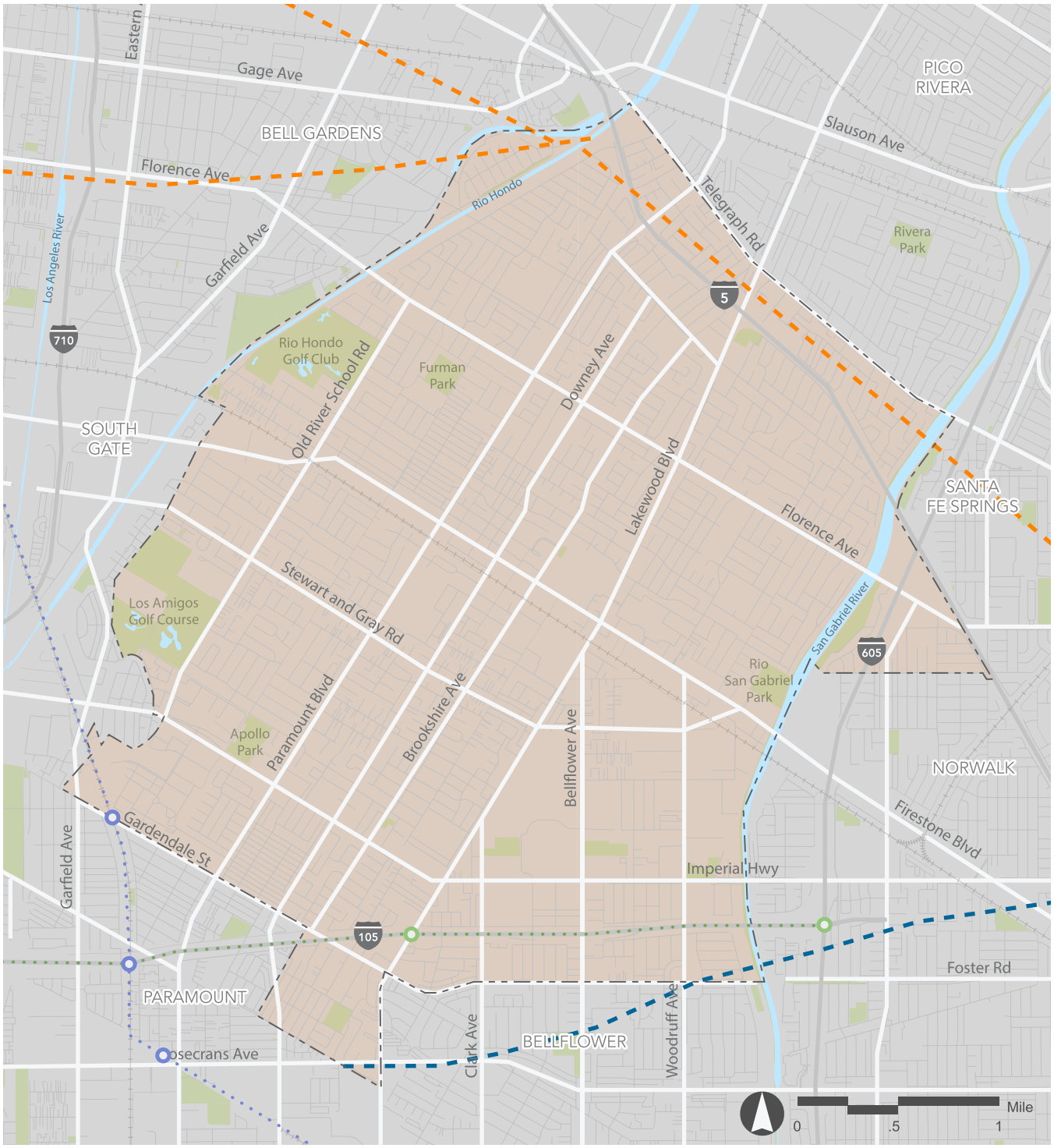
FIGURE S-1: REGIONAL EARTHQUAKE FAULTS MAP



Source: California Geological Survey, Fault Activity Map of California (2024).

Source: U.S. Geological Survey (USGS), Quaternary Fault and Fold Database for the Nation; California Geological Survey (CGS).

FIGURE S-2: SEISMIC AND GEOLOGIC HAZARDS



Geological Hazards

- Mix of Soils, Hard to Predict Liquefaction
- Historical Geological Evidence of Movement
- Potential for Ground Displacement (Liquefaction)

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: California Geological Survey (CGS), Official Seismic Hazard Zone Maps (Liquefaction Zones).

Flooding

The National Flood Insurance Program has designated Downey as an area with no special flood hazard. Most of the city has only a moderate flood risk due to flood control protection from area levees and an elevated ridge alongside the banks of local river channels (Figure S-3, Flood Risk Map). Flood control facilities along the San Gabriel and Rio Hondo Rivers have been constructed to contain most of the flooding potential in the area. Downey is not at risk from inundation due to dam failure, as the city is outside of mapped dam inundation zones.

While channel systems like the Rio Hondo and San Gabriel Rivers help reduce flooding, climate change is causing stronger storms that could overwhelm flood control systems. Downey has many roads and rooftops that don't absorb water, making isolated, localized flooding during large rainstorms more likely in some areas.

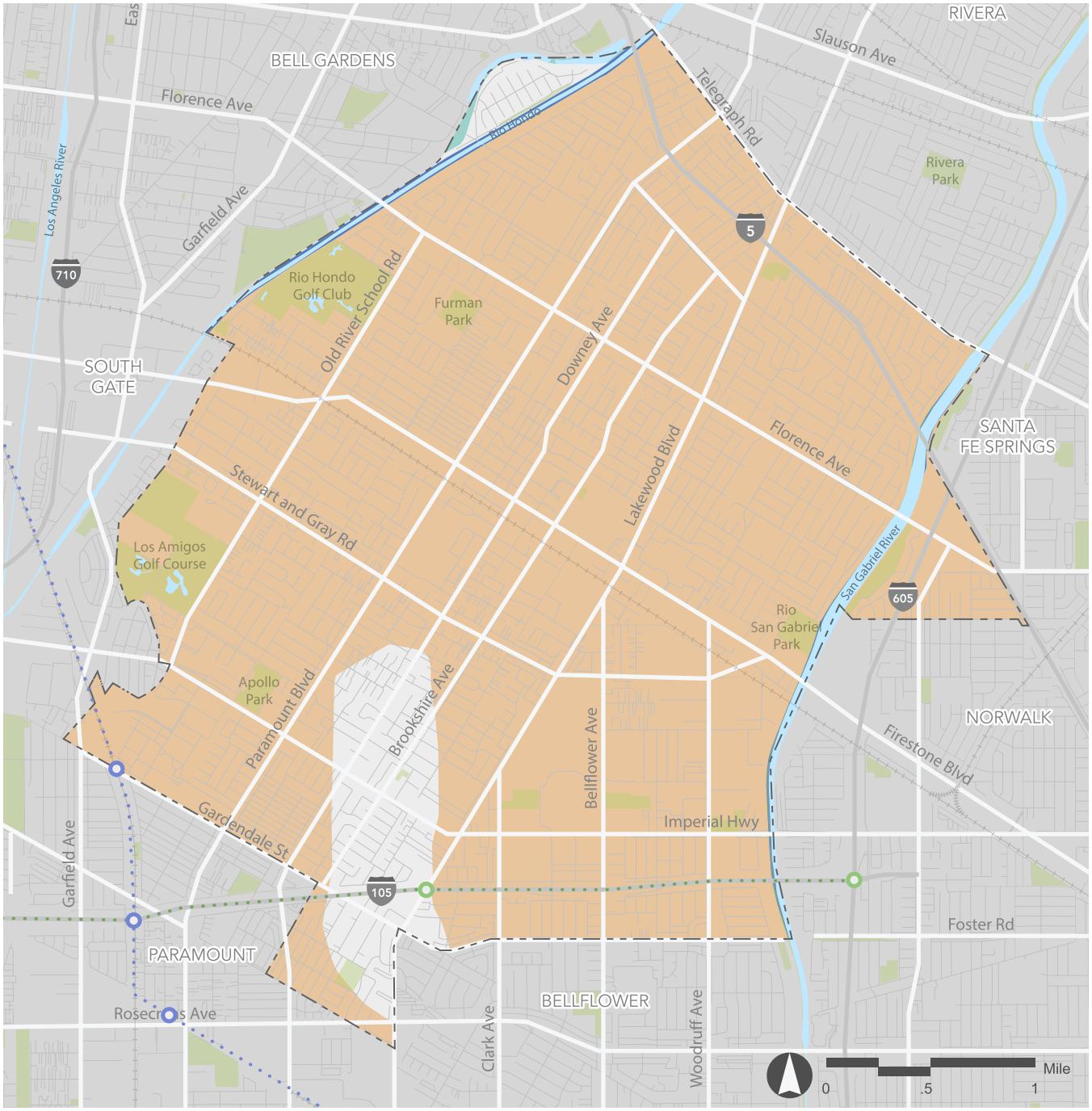


Flooded street on Firestone Boulevard in Downey, 1954, illustrating historic flooding conditions prior to major flood control improvements; however, extreme storm events may increase flood risk in the future.



Furman Park is the site of a regional stormwater infiltration project that enhances flood management while improving the resilience and functionality of the park's green space.

FIGURE S-3: FLOOD RISK MAP



Floor Hazard Risks

- 1% Annual Chance of Flooding
- 0.2% Annual Chance of Flooding
- Areas with Reduced Flood Risk due to Levee

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: Federal Emergency Management Agency (FEMA), National Flood Hazard Layer (NFHL).

Whittier Narrows Dam Inundation

Whittier Narrows Dam is a federally operated flood control facility constructed by the U.S. Army Corps of Engineers in 1957. The dam regulates flows from the San Gabriel River and Rio Hondo and serves as a key component of the regional flood control system for southeastern Los Angeles County. Designed as a "dry dam," it temporarily stores stormwater during major storm events and releases flows in a controlled manner to reduce downstream flooding. Communities downstream, including Downey, benefit from this regional flood protection system.

The dam protects a large and densely developed urban area, with more than one million residents across multiple cities relying on its operation. While the facility substantially reduces flood risk, it has also been identified as a high-consequence structure due to the potential severity of impacts in the unlikely event of failure. Potential risks include overtopping during extreme storm events, internal erosion within the dam foundation, or operational issues with spillway gates.

In response to these risks, the U.S. Army Corps of Engineers has initiated the Whittier Narrows Dam Safety Modification Project, a comprehensive, multi-phase effort to improve dam performance and reduce flood risk. Initial actions have included repairs and upgrades to spillway gates and other interim measures to address the most critical vulnerabilities.

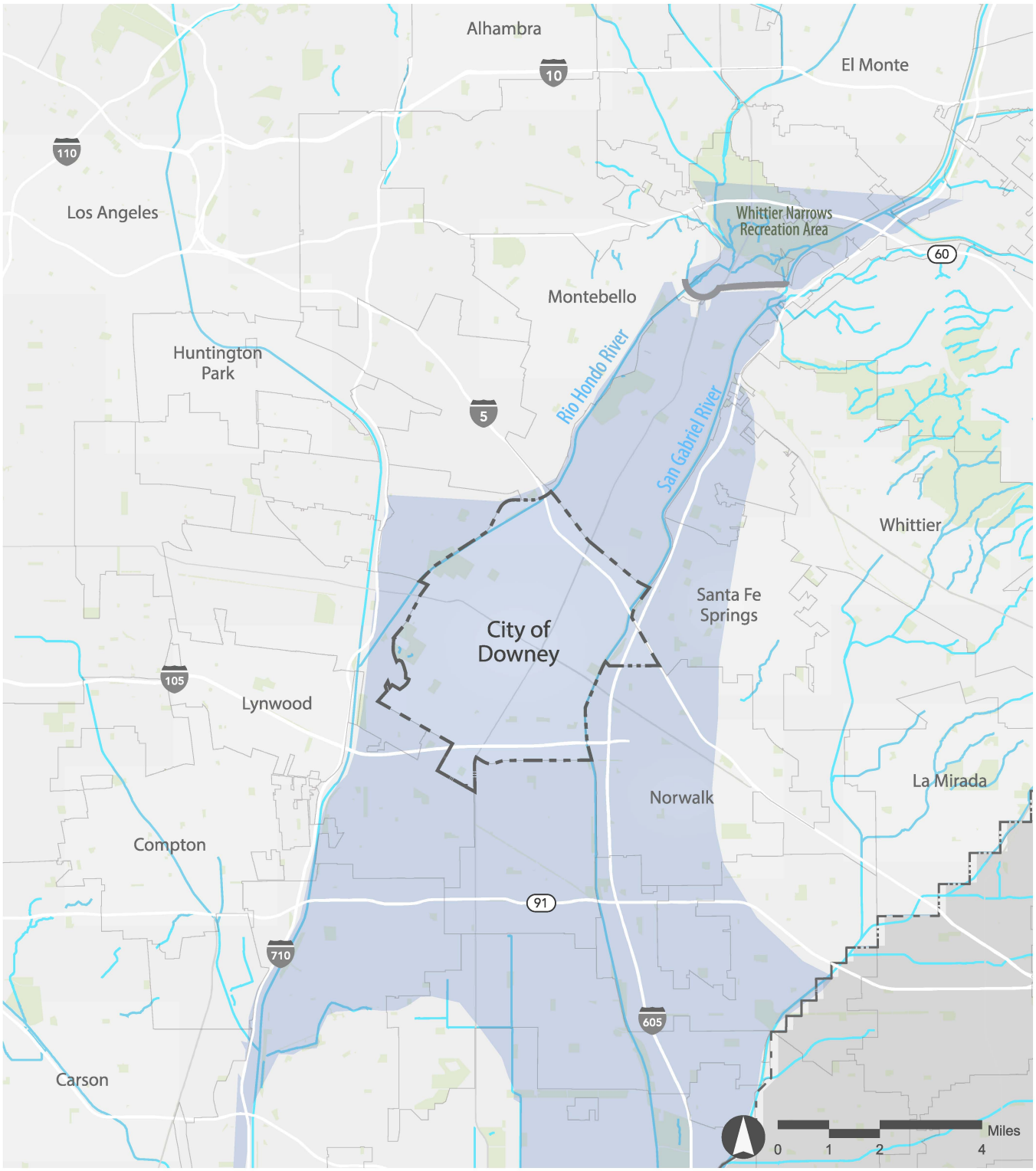
Future phases of the project focus on long-term structural improvements, including strengthening the dam to address seepage concerns and enhancing its ability to safely manage extreme flood events. These improvements are part of a broader federal dam safety program and are anticipated to continue into the early 2030s, subject to funding and implementation timelines.

For the City of Downey, the dam remains a critical piece of regional infrastructure that both protects the community and informs local hazard planning. Although the probability of a failure event is low, the potential extent of inundation warrants continued coordination with regional agencies, incorporation of inundation mapping into planning efforts, and integration of evacuation and emergency response strategies into the Safety Element.



The Whittier Narrows Dam San Gabriel River Spillway conveys flows into the San Gabriel River channel.

FIGURE S-4: DAM INUNDATION RISK AREAS



Whittier Dam Inundation
- Dam Inundation Area
- Whittier Narrows Dam

Basemap Features
- City Boundary
- County Boundary
- Waterways
- Parks/Open Space

Source: U.S. Army Corps of Engineers (USACE), Whittier Narrows Dam Safety Modification Project; California Department of Water Resources (DWR), Division of Safety of Dams (DSOD).

Human-Caused Hazards

Human-caused hazards, also referred to as technological hazards, result from the built environment, infrastructure systems, and human activities. These hazards include urban and wildland fires, hazardous materials incidents, dam failure, and disruptions to critical infrastructure. Although they originate from human systems, their risks can be managed through regulation, system design, maintenance, and coordinated emergency response. Planning for these hazards focuses on minimizing risk, protecting public safety, and ensuring rapid recovery when incidents occur.

Urban Fire Risk

Fire Hazard Severity Zones (FHSZ) are mapped in areas where wildland fires are likely to occur and spread. Since Downey is a fully urbanized, flat, and built-out city, it does not contain these hazard areas.

While the city is not near locations where wildland fires occur, recent wildfires affecting nearby jurisdictions at the urban-wildland interface led to regionwide air quality issues for several days. Wildfire smoke poses health risks for everyone, especially older adults, people who work outdoors, and those with breathing difficulties. Not all residents have access to air filters or high-quality masks to filter out dangerous particles.

Urban fire risk in Downey is considered low, as large-scale incidents are infrequent, although smaller isolated events do occur (City of Downey Hazard Mitigation Plan 2024). Vulnerability is greatest in areas with older or closely spaced wooden structures, but overall, the hazard is citywide and affects all buildings and residents equally. No significant development or demographic changes have increased exposure since prior planning efforts. Because fire events are difficult to predict and could impact any neighborhood, all facilities, including essential and critical facilities, are considered at risk.



Downey Fire Department hosts various live demonstration events open to residents of Downey.



Between four fire stations, Downey Fire Department responds to nearly 13,000 incdents annually.

Hazardous Materials

Hazardous materials are substances that pose a potential threat to human health, safety, or the environment due to their chemical or physical characteristics. These materials, such as flammable, corrosive, reactive, or toxic substances, are commonly found in industrial, commercial, and even residential settings. While their routine use and storage are typically well regulated, accidental or uncontrolled releases can have significant consequences, from immediate harm to long-term environmental degradation. Downey's mix of industrial activities and transportation corridors creates potential risks from stationary sources, transportation incidents, pipeline ruptures, or illegal dumping events.

The City's Fire and Public Works Departments play key roles in reducing hazardous materials risks. The Fire Prevention Division, led by a Hazardous Materials Specialist, regulates storage and handling and conducts inspections exceeding state thresholds. The City's website provides safety resources, while Public Works manages residential hazardous waste disposal. Businesses are permitted and inspected by the Downey Fire Department Fire Prevention Bureau, reflecting Downey's commitment to public safety and environmental health.

Pollution Hazards

Due to the city's location in an industrial subregion and its proximity to three major freeways, pollution exposure is a fact of life. The most notable areas of concern are near I-5, I-105, and those adjacent to industrial sites in the southeastern part of the city. City staff of Downey continue efforts to promote safe use and handling of materials and ensures responsible siting of facilities through proper land planning and enforcement of existing regulations.

Toxic Release

The Department of Toxic Substances Control (DTSC), a department within theCalifornia Environmental Protection Agency (CalEPA), ,oversees the Toxics Release Inventory (TRI) Program that tracks the industrial management of toxic chemicals. TRI data are reported annually by facilities that meet reporting requirements. In Downey, TRI facilities are located in industrial areas and are primarily major industrial and commercial operations such as aerospace manufacturers and related industries. See Figure S-5, Regulated Hazardous Materials Sites.

The South Coast Air Quality Management District (SCAQMD) administers the Air Toxics Hot Spots program to identify and assess facilities that emit pollutants with localized health risks. The program tracks pollutants such as organic gases, carbon monoxide, nitrogen and sulfur oxides, and particulate matter (PM_{10}). In Downey, major sources include large medical centers and manufacturing facilities, where emissions stem from medical waste incineration, fuel use, industrial processes, and diesel equipment. These data help assess and mitigate risks to nearby residents and improve local air quality.

Hazardous Waste Generators and Transporters

Figure S-6 identifies facilities in Downey registered under the CalEPA's Facility Registry Service as active hazardous waste generators and transporters regulated by the Resource Conservation and Recovery Act (RCRA). These facilities handle or produce hazardous materials in quantities that require ongoing monitoring and compliance with federal hazardous waste management standards. Facilities that generate large quantities of hazardous waste in Downey are concentrated along major corridors like Firestone Boulevard, including home improvement stores, pharmacies, and auto repair shops. In industrial areas, large quantity generators include manufacturing operations, hospitals, and medical centers. Hazardous waste transporters, mostly trucking and logistics companies, are clustered in the southeastern industrial area, where freight-related activity is concentrated.

Underground Storage Tanks

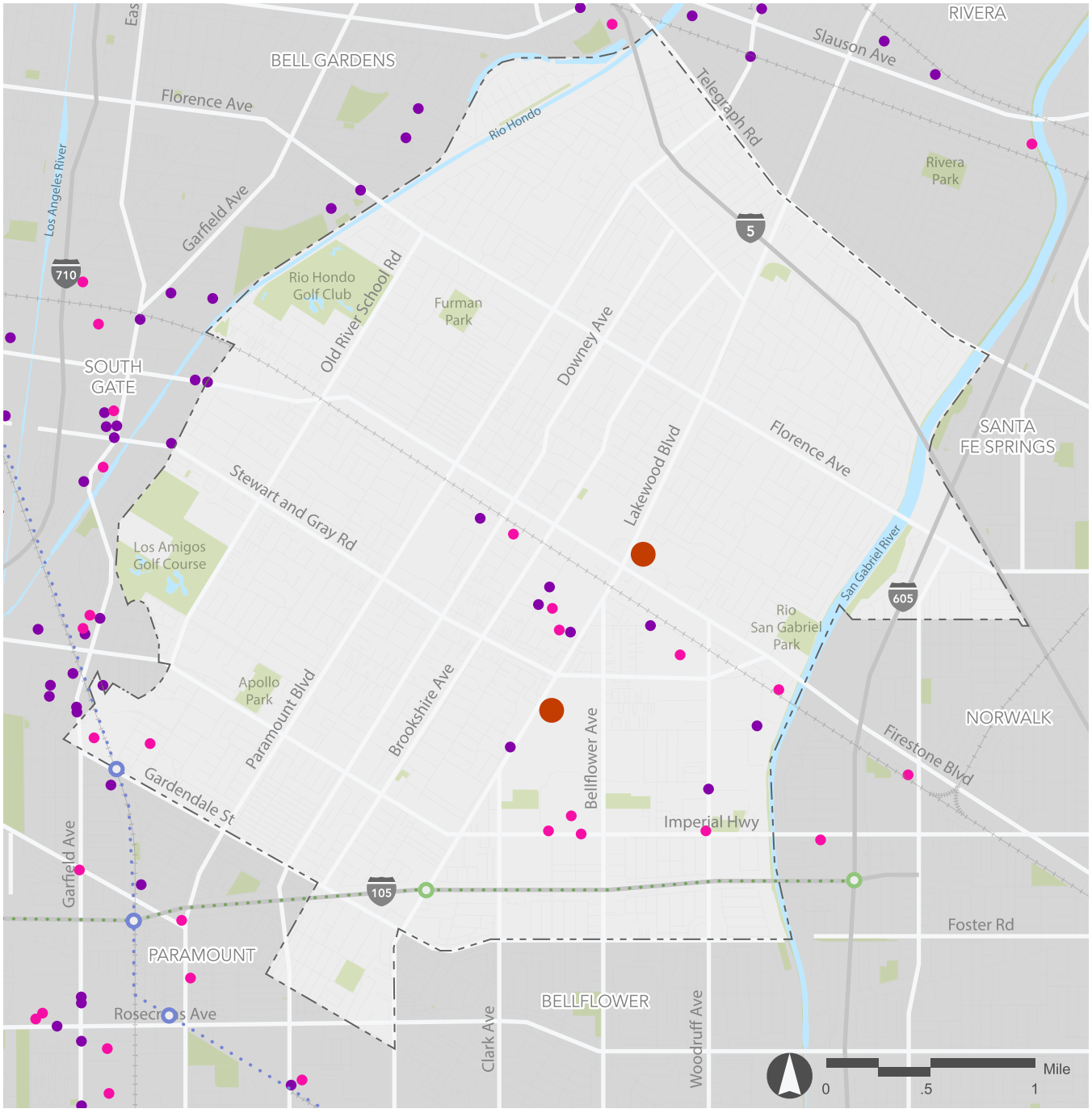
Underground storage tanks (USTs) are tanks and connected piping with at least 10 percent of their volume underground, typically used to store petroleum or hazardous substances. Older bare-steel tanks were prone to corrosion and leaks, which can contaminate soil and groundwater and create fire or explosion hazards. Federal regulations have since reduced the number of substandard USTs nationwide. While USTs are often associated with gas stations, they also serve other purposes such as emergency generators, waste oil storage, chemical storage, and hydraulic systems. Most regulated USTs contain petroleum and are owned by marketers such as gas stations and convenience stores, or by non-marketers such as fleet operators and local governments. In Downey, many USTs are located at major intersections with gas stations, with other concentrations in southeast industrial areas (see Figure S-5).

Contaminated Sites

Two contaminated sites in Downey are listed in the EPA's Facilities Registry Service; however, these are not considered priority sites in need of remediation. One site, the former NASA site at Downey Landing, was officially designated as remediated by the federal government and the City of Downey in 2017 following cleanup efforts to support commercial redevelopment and transfer of oversight to the City.[1] Remediation activities in the early 2000s identified lead-based paint, asbestos-containing materials in former buildings, and volatile organic compounds in surrounding soils. Another site along Lakewood

1 *RESIGHT in Partnership with the City of Downey Achieves Final Site Closure for Downey NASA Industrial Plant - RESIGHT*

FIGURE S-5: REGULATED HAZARDOUS MATERIALS SITE



Hazardous Waste & Contaminated Site

- Superfund (Non-Priority List)
- Underground Tank Remediation
- Toxic Release Inventory (TRI)

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: U.S. Environmental Protection Agency (EPA), Envirofacts and RCRAInfo Corrective Action Program; California Department of Toxic Substances Control (DTSC), EnviroStor; California State Water Resources Control Board (SWRCB), GeoTracker.

Emergency Preparedness and Disaster Response

Downey's emergency response system is a coordinated effort among fire, police, and emergency medical services designed to protect residents, workers, and visitors during everyday incidents and major emergencies. With established mutual aid agreements, a well-trained workforce, and a commitment to continuous improvement, the system ensures that first responders can act quickly and effectively. Ongoing planning, interagency coordination, and community preparedness programs further strengthen the City's ability to respond to and recover from disasters, maintaining safety and resilience across all neighborhoods.

The Office of Emergency Management oversees the planning and coordination for disaster preparedness, response, recovery, and mitigation. The department develops emergency plans, conducts training and exercises, and works with local partners to reduce risks and support effective response and recovery following emergencies. The Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP) guide Downey's approach to emergency management and disaster response.

- The **Emergency Operations Plan** outlines how the City coordinates response and recovery efforts during major emergencies such as natural disasters, technological incidents, or security threats. It establishes roles, responsibilities, and procedures consistent with the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).
- The **Hazard Mitigation Plan** identifies long-term strategies to reduce risks from natural and human-caused hazards. It assesses local vulnerabilities, prioritizes mitigation actions, and provides a framework for reducing potential losses.
- The **Community Emergency Response Team (CERT)** program provides emergency preparedness and basic disaster response training to residents. Participants learn skills such as light search and rescue, disaster medicine, and fire suppression, enabling them to assist their families and neighbors during emergencies when first responders may be delayed. The program is offered by the City of Downey Fire Department and the Office of Emergency Management, with opportunities for additional training and participation through the Advanced CERT (ACERT) program.
- **Downey Alerts – Citizen Notification System** provides emergency notifications from the City of Downey through text, email, or voice messages to cell, work, or home phones. The system delivers real-time alerts about severe weather, utility disruptions, power outages, road closures, and other emergencies that may affect homes, schools, or workplaces.

Public Safety Services

Police Protection

The Downey Police Department provides full-service law enforcement and community safety programs for residents and businesses. Core responsibilities include responding to emergency and non-emergency calls, investigating crimes, enforcing traffic laws, and maintaining community outreach and education programs.

In 2024, the Department received approximately 43,000 emergency calls and 83,000 non-emergency calls for service. Between 2018 and 2023, Downey's crime reports per 1,000 residents fluctuated, declining through 2020 before gradually increasing through 2023. This trend reflects both changes in reporting practices and evolving public safety challenges as the city continues to grow and urban conditions shift.

Fire Protection and Emergency Medical Response

The Downey Fire Department provides fire suppression, rescue, and emergency medical services from four stations distributed throughout the city. The Department operates four paramedic-engine companies, one truck company, four basic life support ambulances, an urban search and rescue (USAR) unit, and a command vehicle. The Department consists of six Divisions: Administration, Operations, Emergency Medical Services, Prevention, Communications, and Emergency Preparedness. See Figure S-6, Public Safety Services for location of Downey Fire Stations and the Police Department.

The number of emergency incidents responded to by the Fire Department has shown a general upward trend since 2018, aside from a temporary decline during 2020–2021. In 2025, incident responses exceeded 13,000. The continued rise in emergency calls indicates growing service demand associated with population growth, increased mobility, and community health needs.



Fire Department demonstration at annual National Night Out

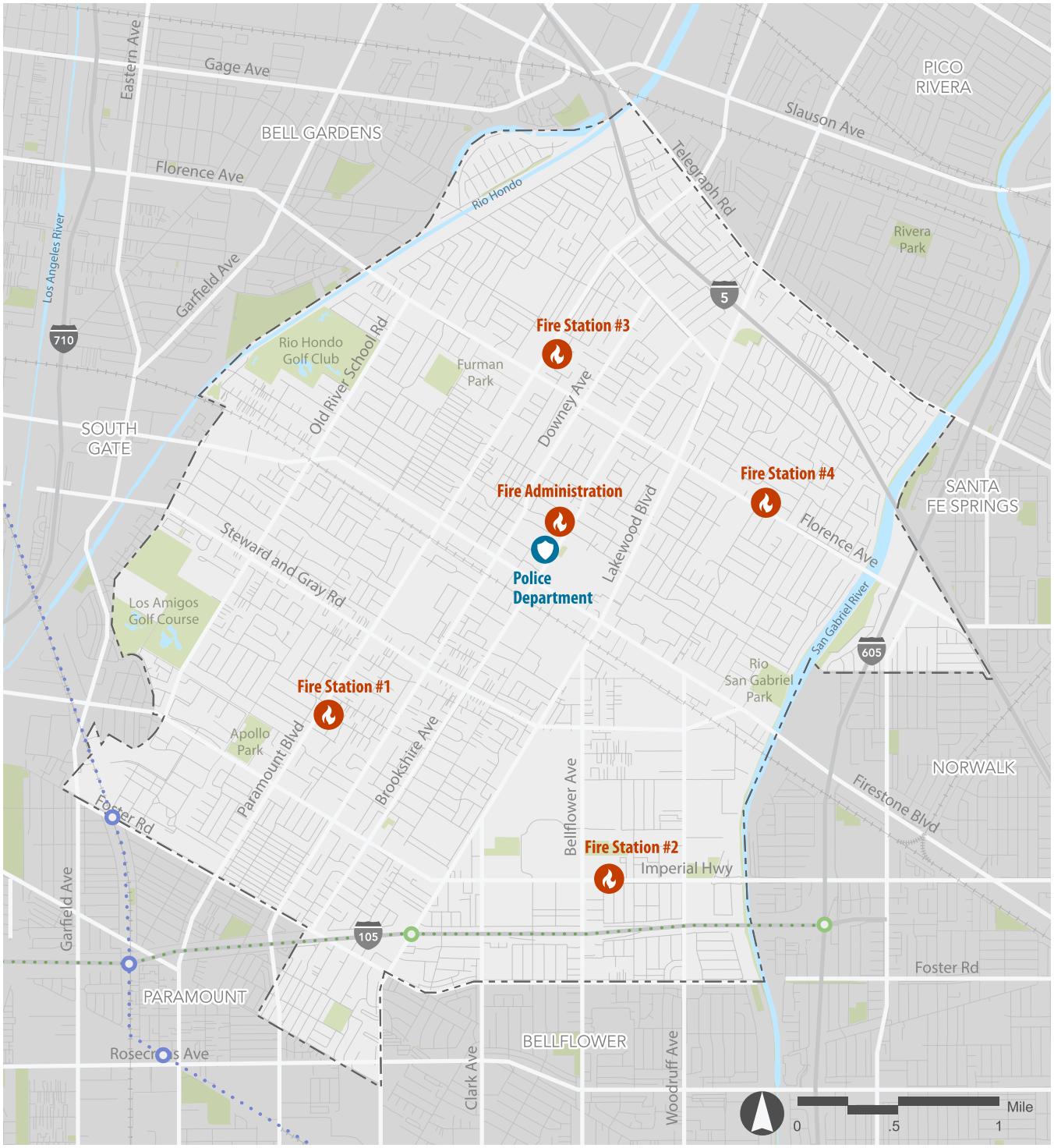


Downey Fire Department crew ready at a moments notice



Downey Police Department. at annual National Night Out

FIGURE S-6: PUBLIC SAFETY SERVICES



Police and Fire Service Facilities

- Fire Stations and Administration
- Police Department

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: City of Downey, 2026.

Emergency Evacuations

In an emergency, the ability to safely and efficiently move people out of at-risk areas depends on a well-connected network of major streets and freeway access points. While the City does not have a formally designated evacuation route network, several arterial roadways function as logical evacuation corridors due to their width, connectivity, and regional linkages. See Figure S-7 for evacuation routes.

North–South Corridors

Key north–south routes that could serve as evacuation corridors include Lakewood Boulevard, Downey Avenue, Paramount Boulevard, and Old River School Road. These streets connect residential and commercial areas to regional freeways and adjacent jurisdictions, providing multiple options for distributing evacuation traffic. Lakewood Boulevard, in particular, is a critical route, as it provides direct access to both the I-5 and I-105 freeways.

East–West Corridors

Primary east–west corridors include Florence Avenue, Firestone Boulevard, Imperial Highway, and Stewart and Gray Road. These routes provide cross-town mobility and connect to major north–south arterials and freeway on- and off-ramps. Florence Avenue, Firestone Boulevard, and Imperial Highway are especially important regional connectors that provide access to the I-605 and I-710 freeways, enabling evacuation to destinations outside the city and facilitating emergency response ingress.

Freeway Access and Regional Connectivity

Proximity to multiple regional freeways enhances evacuation and emergency response capabilities. Access to the I-5, I-105, I-605, and I-710 allows for dispersal of evacuation traffic in multiple directions, north toward Los Angeles and South Gate, east toward Norwalk and Santa Fe Springs, and west toward Lynwood and South Los Angeles. These connections are also essential for bringing in mutual aid and emergency services from neighboring jurisdictions.

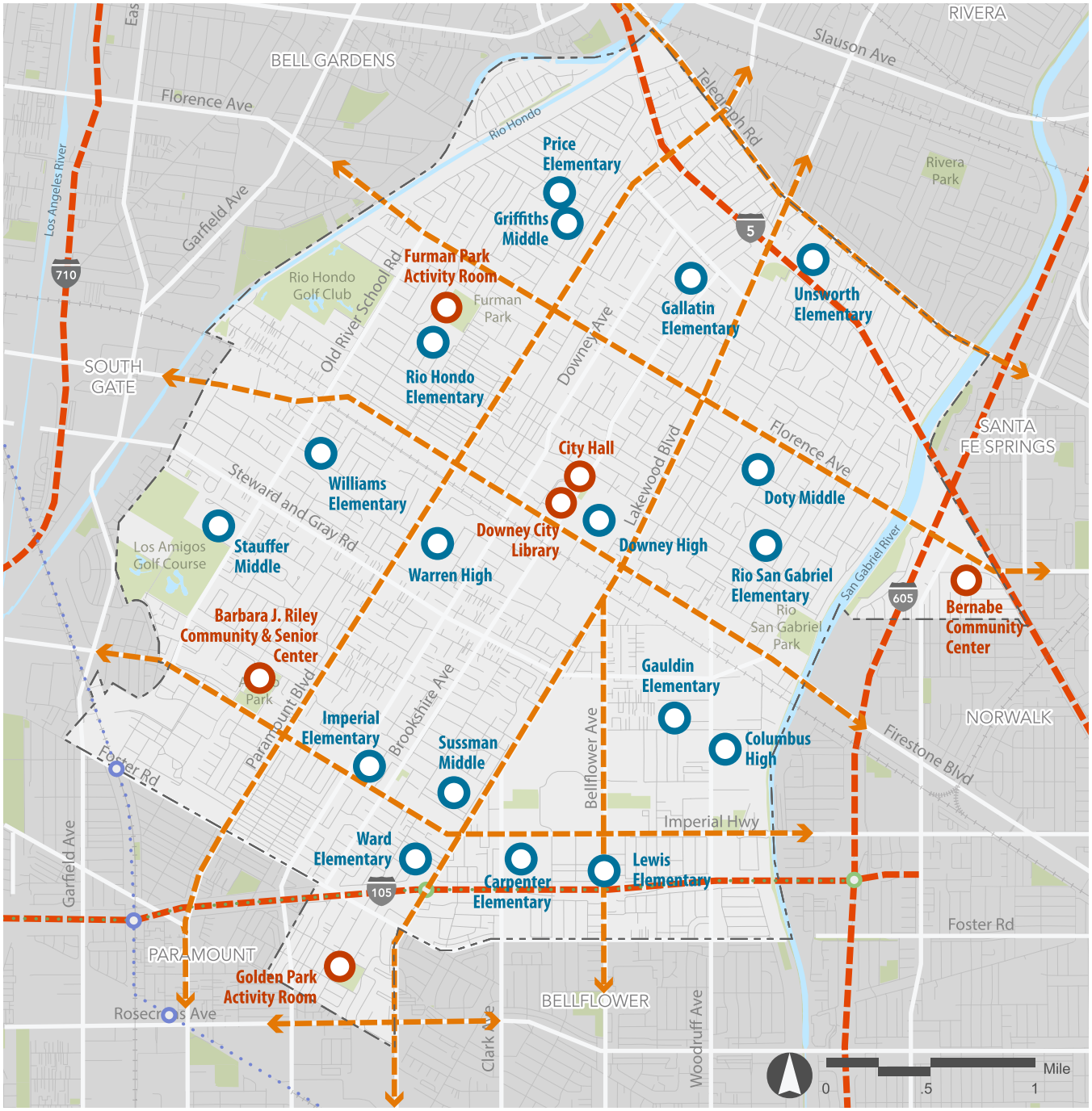
Operational Considerations

Because evacuation operations depend not only on physical routes but also on management, coordination with the Downey Police Department and Los Angeles County Office of Emergency Management is essential to establish traffic control measures, communication protocols, phased evacuation procedures, and plans to assist residents who do not have personal vehicles. Ensuring these primary arterials remain clear and functional during emergencies, especially during incidents that may impact freeway access is a priority.

Emergency Shelters

In addition to evacuation routes, the City may utilize a variety of public facilities as temporary emergency shelters, evacuation centers, or resource distribution sites during disasters and other emergency events. Potential shelter locations may include schools, community centers, the library, City Hall, and other public facilities that can accommodate displaced residents and support emergency operations. These facilities may provide temporary refuge, information, basic services, and coordination with emergency response agencies. The City coordinates with local school districts, Los Angeles County agencies, the American Red Cross, and other partners to identify suitable shelter locations and ensure resources are available to support residents during evacuations and disaster recovery efforts. The availability and use of specific shelter facilities will depend on the nature, location, and scale of the emergency.

FIGURE S-7: EMERGENCY EVACUATION ROUTES



Evacuation Route

- Evacuation Route
- Freeway Evacuation Route

Potential Evacuation Shelter

- Public Facilities
- Schools

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: MIG and City of Downey, 2026.

Climate Adaptation and Resilience

Climate adaptation means preparing for and responding to the impacts of climate change. For Downey, this includes strengthening the ability to manage extreme heat, drought, flooding, and potential power disruptions so that residents, businesses, and natural systems remain safe and functional.

Forecasted impacts include higher temperatures, longer droughts, heavier wind and rainstorms, and energy strain. These conditions can increase risks such as flooding, fire, reduced air and water quality, and impact the long-term health of community members. Building resilience means planning ahead, protecting vulnerable populations, and ensuring that critical systems like evacuation routes and emergency services can recover quickly after disruptions.

Managing Heat Risks

As global temperatures rise, the Los Angeles region is predicted to experience a range of climate-related impacts. The average annual maximum temperature is projected to increase, and the increase in temperature will likely result in heat waves, drought, and diminished air quality. These changes pose a risk to human health especially for seniors or people with respiratory conditions or for those who work outdoors or are unable to take shelter from high heat. Additionally, in urbanized areas the "heat island effect" can make outdoor gathering places uncomfortable or even unhealthy.

Downey can reduce heat impacts by expanding shade and tree canopy, using reflective materials, and maintaining access to cooling centers. The City's Urban Forest Management Plan supports these efforts by guiding tree planting, maintenance, and long-term care to preserve shade, improve air quality, and enhance community resilience.

Ensuring Drought Resilience and Water Supply Reliability

Downey relies on groundwater from City-owned wells, supplemented by recycled water for non-potable uses. Because drought is common in Southern California, conservation remains a top priority. The City promotes efficient water use through drought regulations, public outreach and rebates, and coordinates regionally to secure reliable long-term water supplies.



Expanding tree canopy increases shade coverage and reduces pavement temperatures, helping to mitigate urban heat.

Strengthening Power Grid Reliability and Outage Preparedness

Downey partners with utility providers to improve energy efficiency and expand renewable energy. Through its Energy Action Plan and participation in the Clean Power Alliance, the City continues to reduce emissions, upgrade infrastructure, and improve access to cleaner, more affordable energy. Ongoing recycling, tree planting, and technology upgrades also support local energy resilience.

Protecting Vulnerable Populations

Climate adaptation efforts should prioritize residents most at risk from climate change impacts, including seniors, low-income households, and those with health vulnerabilities. The City can strengthen resilience by improving access to cooling centers, public transportation, emergency alerts, and medical services during extreme heat, flooding, or power outages. Building and maintaining strong partnerships with community organizations and service providers can help ensure that outreach, resources, and recovery efforts reach those who need them most.

Advancing Resilient Infrastructure and Buildings

Downey can increase its resilience by planning, designing, and retrofitting infrastructure and buildings to better withstand extreme heat, flooding, and other climate-related hazards. Incorporating green infrastructure such as permeable surfaces, bioswales, and shade trees helps manage stormwater, reduce heat, and enhance air quality. Updating building standards to improve energy efficiency and water conservation will support long-term safety and sustainability while reducing maintenance costs and environmental impacts.



City community centers serve as ideal cooling centers, particularly for seniors and other heat-vulnerable populations.

GOALS AND POLICIES

The Safety Element establishes a comprehensive framework to reduce risks from natural and human-caused hazards, protect public health and safety, and strengthen the City's ability to prepare for, respond to, and recover from emergencies. The goals and policies that follow address seismic hazards, flooding, hazardous materials, emergency preparedness, public safety services, and climate resilience. Together, they guide land use decisions, infrastructure investments, and coordinated actions with partner agencies to support a safe, resilient, and well-prepared community.

Seismic and Seismic-Related Hazards

GOAL 1: REDUCE THE RISK OF DAMAGE, INJURY, AND LOSS OF LIFE FROM SEISMIC AND GEOLOGIC HAZARDS THROUGH SAFE BUILDING DESIGN, RELIABLE INFRASTRUCTURE, AND EFFECTIVE EMERGENCY READINESS.

Policy S-1.1: Safe Development and Construction. Ensure that new development and major renovations meet current seismic safety standards and incorporate appropriate geotechnical design practices.

Policy S-1.2: Retrofit of Vulnerable Structures. Encourage the retrofit of older buildings, critical facilities, and utilities to reduce risk from earthquakes and related ground failure.

Policy S-1.3: Emergency Readiness. Coordinate with regional partners and utility providers to ensure rapid response and recovery following seismic events.

Policy S-1.4: Public Awareness and Education. Promote community preparedness through public information campaigns and resources on earthquake safety and recovery.

Policy S-1.5: Hazard Mapping and Monitoring. Maintain and use up-to-date hazard maps and data to guide land use decisions and infrastructure investments.

Flood Hazards and Flood Risk

GOAL 2: PROTECT THE COMMUNITY FROM PROPERTY DAMAGE, INFRASTRUCTURE DISRUPTION, AND PUBLIC SAFETY HAZARDS THROUGH EFFECTIVE FLOOD MANAGEMENT AND SAFE DEVELOPMENT PRACTICES.

Policy S-2.1: Flood Management Systems. Maintain and improve the storm drain and flood control infrastructure to reduce localized flooding and protect developed areas.

Policy S-2.2: Safe and Resilient Development. Ensure that new development and redevelopment incorporate drainage, green infrastructure, and flood protection measures consistent with local, state, and federal standards.

Policy S-2.3: Regional Agency Coordination. Collaborate with the Los Angeles County Flood Control District, Caltrans, and other agencies to manage regional drainage systems and mitigate flood risks.

Policy S-2.4: Flood Hazard Information and Awareness. Provide up-to-date floodplain information and guidance to residents, businesses, and developers to reduce flood risks and property loss.

Policy S-2.5: Emergency Preparedness for Flood Events. Integrate flood response and evacuation

procedures into the City's emergency operations planning and public education programs.

Policy S-2.6: Dam Inundation Risk. Coordinate with responsible agencies to monitor dam conditions and support improvements that reduce downstream inundation risk.

Pollution Hazards

GOAL 3: REDUCE THE RISKS TO PUBLIC HEALTH, PROPERTY, AND THE ENVIRONMENT FROM THE STORAGE, USE, TRANSPORT, AND EMISSION OF HAZARDOUS MATERIALS THROUGH RESPONSIBLE MANAGEMENT, PREVENTION, AND REMEDIATION PRACTICES.

Policy S-3.1: Safe and Responsible Management of Hazardous Materials. Enforce storage, transport, treatment, recycling, and disposal requirements consistent with all applicable federal, state, and local regulations.

Policy S-3.2: Assessment and Remediation Before Site Reuse or Redevelopment. Make sure that sites with known or potential contamination are properly assessed and remediated before reuse or redevelopment. Plan future uses of these sites that align with cleanup requirements and site conditions.

Policy S-3.3: Protection of Sensitive Uses. Require new or existing facilities that use hazardous materials to incorporate design and operational measures that protect nearby sensitive uses such as schools, hospitals, childcare centers, and residential areas.

Policy S-3.4: Placement of Sensitive Uses. Limit the placement of sensitive uses near existing industrial operations or hazardous materials users unless effective safeguards and mitigation measures are in place to prevent conflicts or exposure risks.

Policy S-3.5: Toxic Air Emissions Monitoring. Monitor and evaluate facilities that generate toxic air contaminants or hazardous emissions to reduce exposure risks and protect nearby sensitive land uses.

Policy S-3.6: Storage Tanks Design and Storage Compliance. Monitor compliance with state and federal standards for the design, installation, and operation of storage tanks to minimize risks of leaks and exposure.

Emergency Preparedness and Response

GOAL 4: MAINTAIN EFFECTIVE COMMUNITY PREPAREDNESS AND COORDINATED EMERGENCY RESPONSE TO PROTECT LIFE, PROPERTY, AND CRITICAL SERVICES DURING DISASTERS.

Policy S-4.1: Comprehensive Emergency Plans. Keep the city's Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP) up to date, consistent with state and federal standards, and integrated across departments.

Policy S-4.2: Interdepartmental and Interagency Coordination. Ensure collaboration among City departments and with regional, state, and federal partners to strengthen disaster preparedness, response, and recovery.

Policy S-4.3: Public Education and Awareness About Emergency Preparedness. Provide ongoing community outreach and training programs, such as CERT and Downey Alerts,

to promote individual and neighborhood preparedness.

Policy S-4.4: Critical Facilities and Services. Identify, maintain, and protect critical facilities and infrastructure needed to support emergency response and community recovery during and after disasters.

Policy S-4.5: Reliable and Accurate Emergency Communications. Maintain reliable, redundant communication systems, including mass notification platforms, to deliver timely and accurate emergency information to the public.

Policy S-4.6: Evacuation route planning and coordination. Coordinate with County and Regional emergency management agencies to identify, maintain, and improve evacuation routes that ensure safe, efficient movement of people during emergencies.

Policy S-4.7: Equity in preparedness and response. Ensure that emergency planning, communication, and recovery programs address the needs of vulnerable and underserved populations across all neighborhoods. Partner with disaster relief agencies like the Red Cross to ensure resources are available to support residents in the aftermath of an event.

Policy S-4.8: Emergency Access and Evacuation for the Treasure Island Neighborhood. Recognize the limited ingress and egress conditions in the Treasure Island Neighborhood by incorporating evacuation planning, emergency access considerations, and coordination with emergency response agencies to allow for safe, timely evacuation and emergency response during flood, storm, or other emergency events.

Policy S-4.9: Emergency Management Technology and Data Systems. Utilize and maintain emergency management technologies, data systems, and decision-support tools—such as real-time monitoring, geographic information systems mapping, mass notification platforms, and interagency data sharing—to enhance situational awareness, coordination, and effective response during emergencies.

Policy S-5.10: Emergency Response Mobility. Reduce congestion-related delays to emergency response by prioritizing emergency vehicle mobility through roadway design, traffic operations, and coordinated land use and transportation planning.

Public Safety: Law Enforcement and Crime Prevention

GOAL 5: MAINTAIN SAFE, SECURE NEIGHBORHOODS SUPPORTED BY PROACTIVE LAW ENFORCEMENT, COMMUNITY TRUST, AND EQUITABLE ACCESS TO PUBLIC SAFETY RESOURCES.

Policy S-5.1: Community-oriented Policing. Encourage ongoing collaboration between police officers, residents, businesses, and community organizations to identify safety concerns and develop local solutions.

Policy S-5.2: Safe Public Spaces. Design and maintain parks, streets, and civic areas to promote natural surveillance, lighting, and activity that enhance both actual and perceived safety. Use Crime Prevention through Environmental Design (CPTED) principles in the design or redevelopment of projects and buildings.

Policy S-5.3: Local Homelessness and Public Safety. Coordinate with social service providers, mental health professionals, and regional partners to address safety concerns related to homelessness through outreach, connection to

services, and compassionate enforcement where needed.

Policy S-5.4: Community and Youth Engagement. Encourage active participation in public safety through neighborhood and youth programs that build trust, foster leadership, and strengthen community connections. Support partnerships such as neighborhood watch groups, youth mentorships, and other initiatives that promote shared responsibility for a safe community.

Policy S-5.5: Transparency and Accountability in Public Safety Services. Promote open communication between law enforcement and the public through community meetings, reporting, and feedback opportunities to strengthen trust and accountability.

Policy S-5.6: Regional Coordination. Collaborate with neighboring jurisdictions and county agencies to share information, coordinate public safety responses, and address cross-jurisdictional issues affecting community safety.

Policy S-5.7: Police Services Responsive to Community Needs. Maintain adequate police staffing, equipment, technology, and facility maintenance to provide effective law enforcement services, emergency response, crime prevention, and community policing efforts that meet existing and future community needs.

Fire Protection Services

GOAL 6: MAINTAIN PROMPT AND EFFECTIVE FIRE PROTECTION SERVICES THAT PREVENT LOSS OF LIFE, REDUCE PROPERTY DAMAGE, AND ENSURE RAPID RESPONSE TO EMERGENCIES.

Policy S-6.1: Service Levels Responsive to Population Growth. Ensure adequate staffing, equipment, and facilities to provide timely and effective fire protection and emergency medical response throughout the city.

Policy S-6.2: Development Coordination. Ensure Fire personnel continues to participate in project reviews to ensure that new and redeveloped properties provide sufficient fire access, water supply, and life-safety systems.

Policy S-6.3: Structural and Urban Fire Prevention. Promote fire-safe building design and ongoing maintenance through fire code enforcement, building inspections, and public education.

Policy S-6.4: Public Education and Awareness. Expand public education programs that inform residents and businesses about fire prevention, evacuation procedures, and emergency preparedness.

Policy S-6.5: Hazardous Materials and Industrial Safety. Continue coordination with businesses and regional agencies to prevent and safely manage hazardous materials incidents and industrial fire risks.

Policy S-6.6: Interagency Coordination. Maintain mutual aid and cooperative agreements with neighboring jurisdictions and regional fire agencies to ensure seamless response to emergencies.

Climate Adaptation and Resilience

GOAL 7: ACHIEVE A CLIMATE-RESILIENT COMMUNITY ABLE TO ADAPT TO, WITHSTAND, AND RECOVER FROM THE IMPACTS OF CLIMATE CHANGE WHILE PROTECTING PUBLIC HEALTH AND ESSENTIAL INFRASTRUCTURE.

Policy S-7.1: Local Resilience to Climate Hazards. Plan for and respond to climate-related hazards including extreme heat, drought, flooding, and power disruptions by maintaining reliable infrastructure, emergency systems, and public services that protect community health and safety.

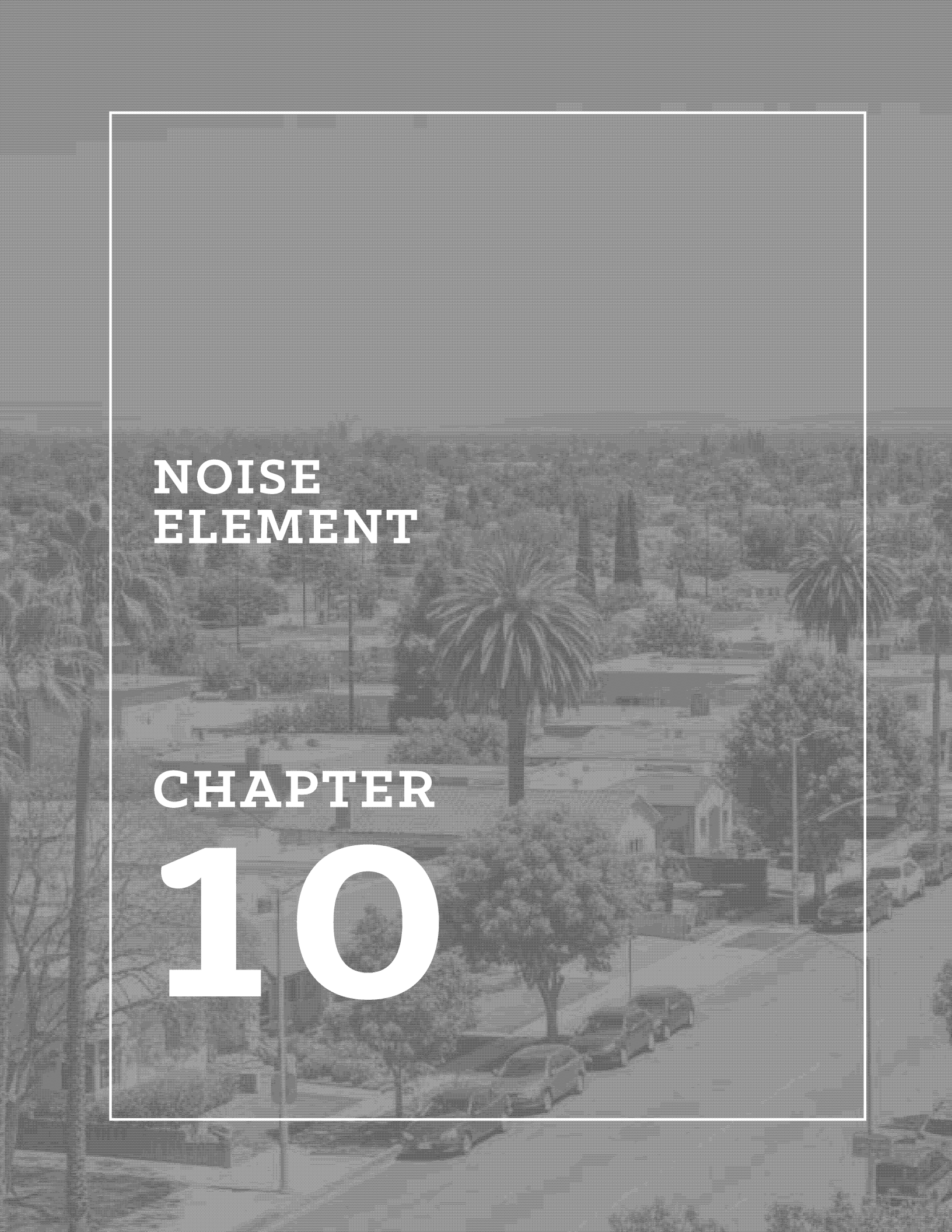
Policy S-7.2: Urban Greening and Heat Mitigation. Implement strategies that increase tree canopy, shade, and cool surfaces through the Urban Forest Management Plan and other initiatives to reduce heat exposure and improve air quality.

Policy S-7.3: Reliable and Sustainable Water Supply. Promote water conservation, recycled water use, and regional coordination to maintain reliable water supplies during droughts and long-term climate stress.

Policy S-7.4: Energy Efficiency and Grid Reliability. Collaborate with regional utilities and programs such as the Clean Power Alliance to expand renewable energy, improve efficiency, and increase backup power capacity for critical facilities.

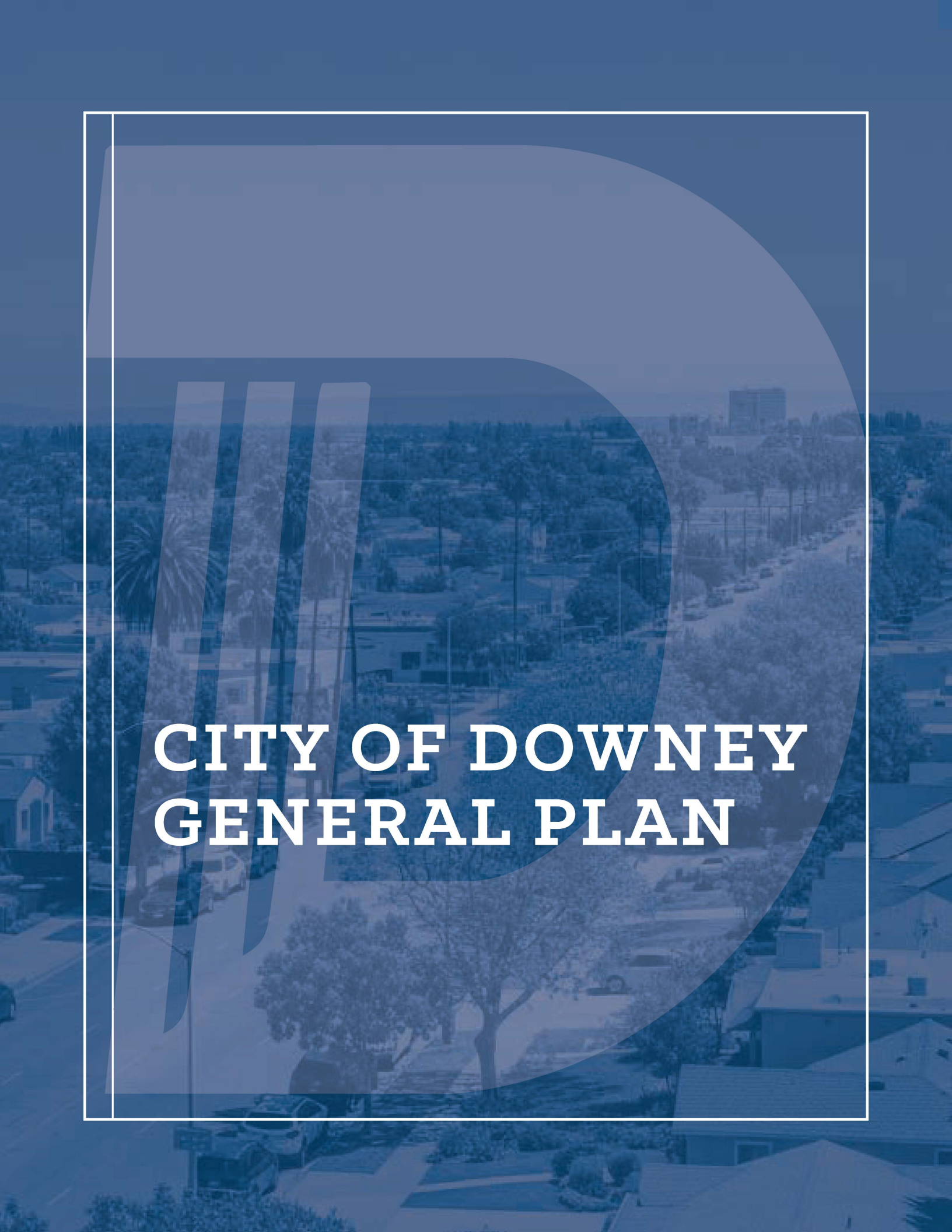
Policy S-7.5: Vulnerable Populations. Prioritize support for vulnerable residents such as seniors, low-income households, and those with health conditions through equitable access to cooling centers, emergency information, and transportation during climate events.

Policy S-7.6: Public Cooling and Heat Relief Facilities. Identify, operate, and promote cooling centers during extreme heat events, with a focus on accessibility, geographic coverage, and coordination with emergency response and mass notification systems to protect public health.



NOISE ELEMENT

CHAPTER 10



CITY OF DOWNEY GENERAL PLAN

CHAPTER

10

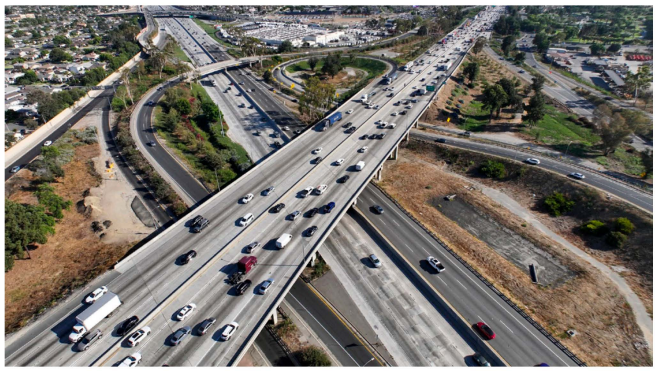
NOISE ELEMENT

INTRODUCTION

The Noise Element evaluates major sources of noise across the City of Downey to identify existing, potential, and future conflicts and to guide strategies for reducing noise impacts. It establishes policies to maintain noise conditions that are compatible with the city's diverse land uses, from residential neighborhoods and schools to industrial districts and commercial centers. This chapter provides guidance for the City, developers, and operators on noise management, mitigation, and land use planning to supporting the quality of life of all residents.

Noise generally is defined as unwanted or disruptive sound. In a developed city like Downey, noise is part of daily life, particularly along busy streets, rail corridors, and near industrial or commercial activity. While residents may expect higher noise levels during daytime hours, quieter conditions are essential in the evening for leisure and sleep. Excessive noise can interfere with daily routines, affect physical and mental health, reduce social cohesion, and diminish overall community livability.

A key focus of this Noise Element is protecting noise-sensitive land uses, where activities such as learning, social interaction, rest, and recovery are most vulnerable. These include residential areas, schools, parks, hospitals and medical clinics, daycare centers, senior living facilities, and places of public assembly such as churches and community centers. Protecting these uses is especially important given their proximity to major transportation corridors, industrial districts, and active commercial areas.



I-605 in the Downey area carries over 300,000 vehicles daily.

Purpose of the Noise Element

The Noise Element guides decisions to minimize exposure of sensitive land uses to noise from highways, rail lines, industrial sites, commercial operations, and other mobile and stationary sources. This element supports a healthier community by providing:

- A policy framework for maintaining and updating the City's Noise Ordinance.
- Strategies to mitigate noise in areas where people live, work, and recreate.
- Consideration of communities disproportionately affected by environmental and health burdens.
- Protection of employees in commercial and industrial sectors through compliance with local and state noise regulations.

Per California law, the Noise Element must:

- Provide clear information about the community noise environment and integrate noise considerations into land use planning.
- Develop strategies to reduce and mitigate excessive noise through planning, design, enforcement, and public education.
- Protect areas where people live, work, and recreate, including residences, schools, childcare facilities, hospitals, senior facilities, and other sensitive uses.
- Define the local noise environment using standard tools such as Community Noise Equivalent Level (CNEL) or Day-Night Average Sound Level (DNL) to ensure consistent evaluation across land uses.



Vehicle traffic is a major source of transportation noise in the community.

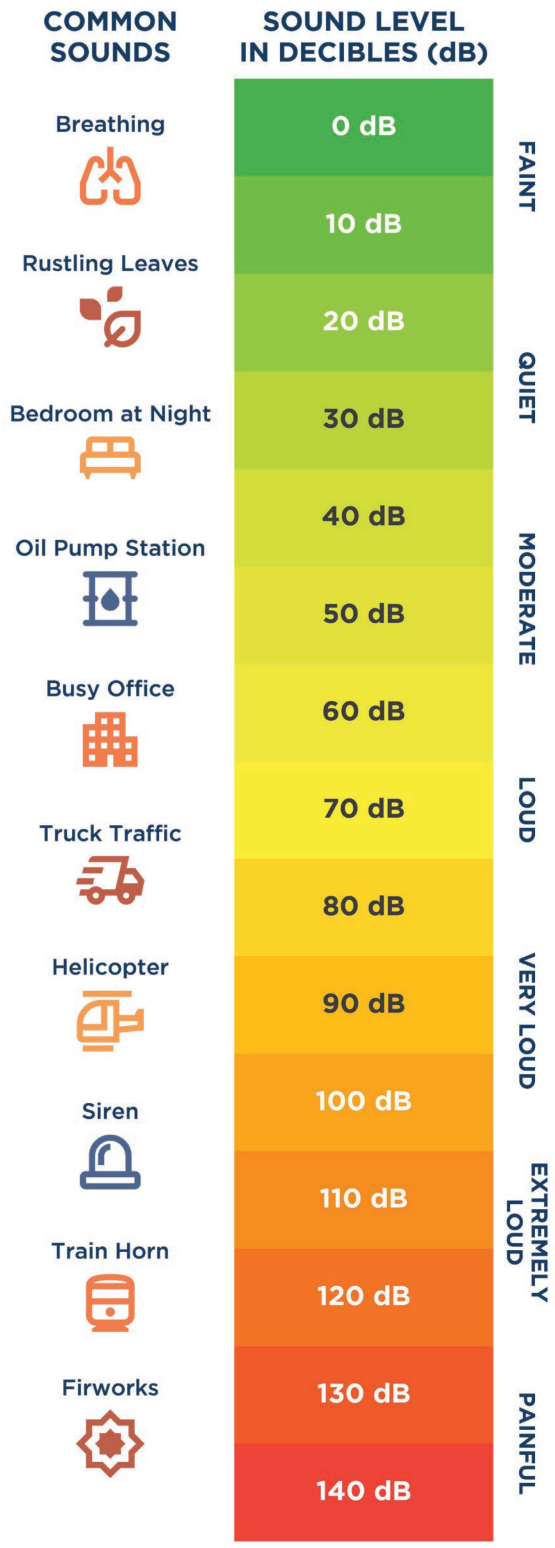
What Is Noise?

Sound is characterized by its loudness (intensity) and pitch (frequency). Loudness is measured in decibels (dB), while environmental noise is quantified using the A-weighted decibel scale (dBA), which accounts for human hearing sensitivity. Noise is generally defined as unwanted or disruptive sound.

Because human experience of noise depends on exposure over time and from multiple sources, community-scale noise is typically evaluated using the Community Noise Equivalent Level (CNEL) or the Day-Night Average Sound Level (DNL). Both metrics calculate average noise over 24 hours and give additional weighting to nighttime noise, reflecting its greater potential to disrupt rest and sleep. Noise contour maps based on CNEL or DNL illustrate how noise levels vary across the city and identify areas most affected by transportation corridors, industrial operations, and other major noise sources.

The range of common sounds and their approximate decibel levels are shown in Figure N-1 (Common Sounds and Their Decibel Levels [dB]), which illustrates how quiet or loud different everyday noises are, from faint sounds like rustling leaves to extremely loud sources such as train horns or fireworks.

FIGURE N-1: COMMON SOUNDS AND THEIR DECIBEL LEVELS (DB)



GUIDING PRINCIPLES SHAPING THE NOISE ELEMENT

The Noise Element provides a framework for reducing noise impacts and promoting safe, comfortable, and healthy environments in Downey. This framework is guided by the principles of safety, environmental justice, multi-benefit design, and community well-being. It addresses land use, transportation, industrial and commercial sources, and coordination with relevant agencies, while presenting actionable strategies such as regulatory measures, noise mitigation programs, and public awareness initiatives.

Guiding Principles Related to Noise:



Promote Safety and Peaceful Environments

Enhance lighting, visibility, and public safety presence while reducing noise impacts so the community is secure and comfortable for all users.



A Healthier Downey for Everyone

Reduce pollution burdens and invest in cleaner, safer neighborhoods to support the well-being of all communities, especially those underserved.

To balance the needs of a growing community with the imperative to protect residents from noise and related environmental impacts, this element is grounded in the principles of safety, environmental justice, and multi-benefit design. It outlines strategies to minimize noise from transportation, commercial, and industrial sources, ensuring all residents can enjoy quieter, healthier neighborhoods.

COMMUNITY CONSIDERATIONS

Through community workshops, pop-up events, and online engagement, residents identified noise as an important quality-of-life issue affecting neighborhoods, schools, parks, and other community gathering places. Community members expressed concerns about traffic noise, construction activity, commercial operations, and other sources that can disrupt daily activities and reduce neighborhood comfort. An evaluation of existing conditions also identified transportation corridors, commercial areas, industrial activities, and aircraft overflights as the primary contributors to noise exposure throughout the city. Together, community input and technical analysis highlight the importance of protecting noise-sensitive land uses, promoting compatible land use patterns, minimizing noise conflicts, and maintaining a healthy and livable environment for residents, workers, students, and visitors

Transportation Noise

Freeways, major roadways, rail corridors, and aircraft operations are significant sources of noise throughout Downey. Residents living near transportation corridors may experience elevated noise levels that can affect daily activities, outdoor enjoyment, and sleep quality

Construction-Related Noise

Ongoing construction, redevelopment, infrastructure improvements, and maintenance activities can generate temporary noise that disrupts nearby neighborhoods and businesses. As new housing and mixed-use development

occurs, managing construction-related noise remains an important consideration.

Land Use Compatibility and Noise Conflicts

Commercial, industrial, institutional, and entertainment-related activities can generate noise that affects nearby residential neighborhoods and other noise-sensitive land uses. Loading operations, outdoor activities, restaurants, and nighttime entertainment uses may create conflicts when not appropriately separated or designed.

Health and Well-Being

Residents located near freeways, major transportation corridors, and employment areas may experience higher levels of noise exposure. Prolonged exposure to excessive noise can affect quality of life and may contribute to sleep disturbance, stress, and other health-related concerns.

Public Awareness and Understanding

Many common neighborhood noise sources, such as landscape equipment, amplified music, vehicle alarms, and pets, can generate complaints and conflicts among residents. Community awareness of noise regulations, permitted noise levels, and available reporting processes remains limited

Consistent Enforcement

Community members have expressed concerns about the consistency of noise complaint response and enforcement. Maintaining clear procedures and equitable application of noise regulations across all neighborhoods and land use types remains an important priority.

Limited Local Control

Many of the largest sources of noise affecting Downey, including freeways, rail operations, and aircraft activity, are regulated by regional, state, or federal agencies. As a result, the City's ability to directly address some noise concerns is limited and often requires coordination with outside agencies and partners.



Community events such as Concerts Under the Stars bring residents together while balancing recreation and entertainment activities with surrounding neighborhood compatibility.

COMMUNITY NOISE SOURCES

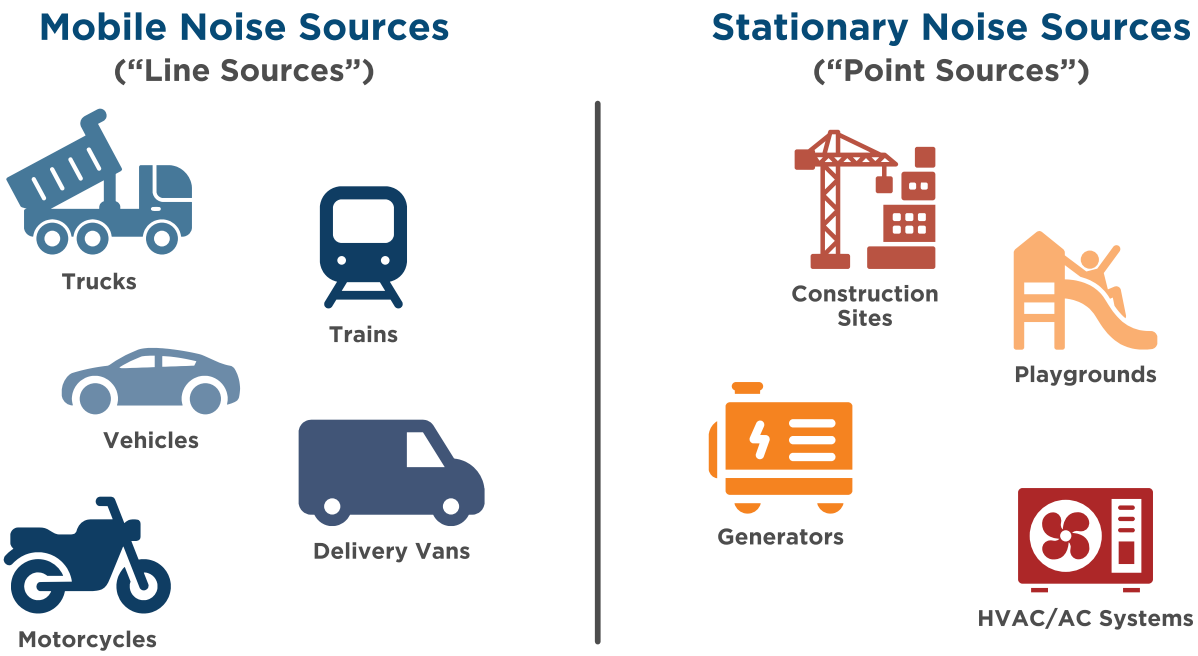
Noise in Downey is generated by a combination of mobile and stationary sources of noise. These can either be from mobile "line" sources, such as major arterial roadways, railroads, and flight paths, or stationary "point" sources, including noise generated at stationary locations such as mechanical equipment, generators, and factories. Transportation-related line sources contribute the most to the overall noise level and environment.

Mobile ("Line") Source Noise

Vehicular traffic is Downey's most dominating source of noise, generated on every roadway type: from local streets to high-volume arterials and I-5 and I-105. Noise is generated by:

- Engine and mechanical noise.
- Exhaust systems, especially on larger delivery and semi-trucks. Heavy trucks and motorcycles generate higher-than-typical noise levels.
- Tire noise generated through pavement interaction (worse on rough pavement). At freeway speeds, this can account for 75–90% of total vehicle noise.
- Aerodynamic noise at high speeds as vehicles move through the air.
- Driver behaviors such as excessive horn use, loud stereos with windows down, rapid acceleration, and sudden hard braking.

The movement of goods and rail operations, both passenger and commercial, contributes significantly to Downey's overall noise environment. Noise from these activities comes from multiple sources, including heavy trucks traveling along major corridors, idling vehicles running deliveries at commercial and industrial sites, and the movement of freight and commuter trains. Rail noise is generated by train engines, vibrations, warning bells, crossing signals, switching operations, and horn use at crossings. Train horns are one of the most persistent sources of intermittent noise.



Downey has two rail corridors: the Union Pacific Railroad and LA Metro's C Line. These activities primarily act as line sources, projecting noise as they operate over long distances and affecting adjacent neighborhoods, businesses, and public spaces.

Aircraft traffic noise is significant due to Downey's location under high-traffic flight paths to Los Angeles International Airport (LAX). In typical operating conditions, more than 75 flights an hour go over Downey in route to LAX. In addition, unplanned flights, such as helicopters, particularly police helicopters, contribute significantly to local noise. Local governments have little direct control over air traffic because federal, state, and regional agencies manage the airspace and preempt local control of aircraft noise emissions. However, the City of Downey and neighboring municipalities can meet with agencies regarding excessive aircraft noise and work regionally to develop mitigation strategies.

Refer to Figure N-2 for the baseline (2026) noise contour map across the city.

Stationary ("Point") Source Noise

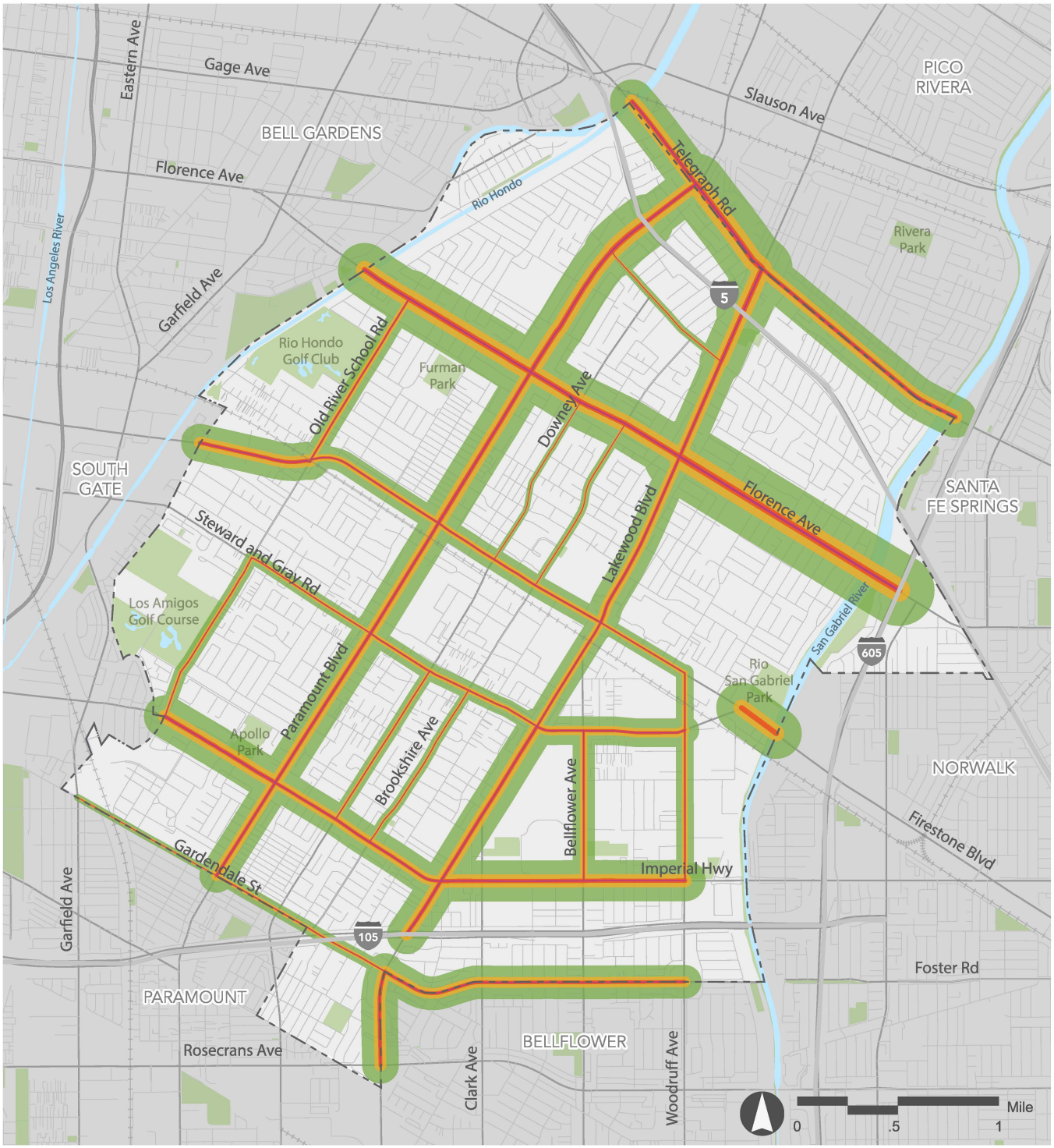
Stationary or point sources of noise include mechanical equipment, generators, ventilation and air conditioning systems, amplified sound, landscape maintenance equipment, and even human activity such as loud voices or outdoor play. While these sources are found day-to-day in both residential and commercial settings, the most significant stationary noise impacts typically arise from industrial and commercial operations. When feasible, such uses should be sited or designed to minimize noise for adjacent sensitive land uses such as homes, schools, parks, medical, and other noise-sensitive uses.

Redevelopment and infill investment increases daily construction activity across the city. Although temporary, construction noise can be disruptive, particularly in residential neighborhoods, which is why Downey's Municipal Code limits construction to specific hours of the day to provide relief to the local community. The local noise regulations provide a framework to limit when construction may occur and establish standards that protect residents and other sensitive sites from prolonged or unnecessary noise exposure. These regulations help to balance economic growth with the community's right to a reasonable noise environment.



Traffic along major roadways, including Lakewood Boulevard and Firestone Boulevard, contributes to mobile noise levels in surrounding neighborhoods.

FIGURE N-2: CITY OF DOWNEY EXISTING (2026) NOISE CONTOURS



Baseline (2026) - Community Noise Equivalent Level (CNEL)

- 75 CNEL
- 70 CNEL
- 65 CNEL
- 60 CNEL

Basemap Features

- City Boundary
- Waterways
- Parks/Open Space

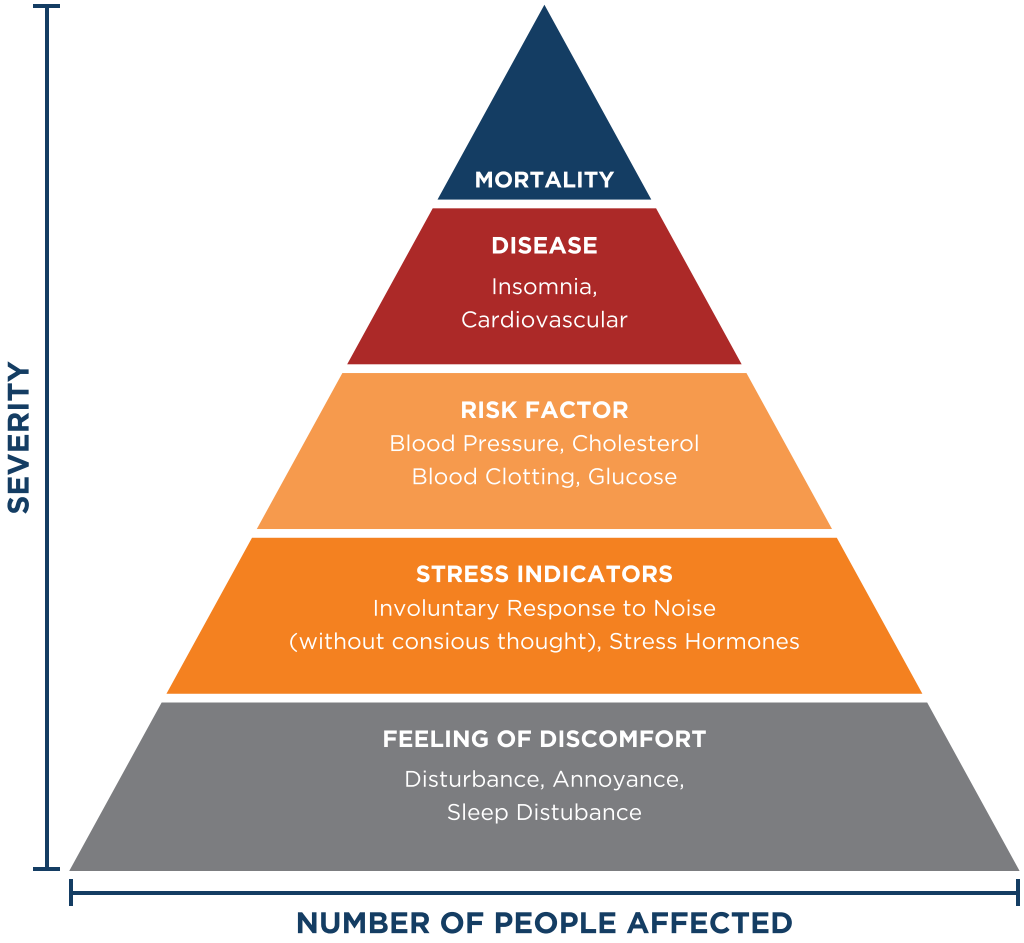
Source: MIG, Inc., using the U.S. Department of Transportation Federal Highway Administration (FHWA) Traffic Noise Model (TNM), Version 3.2, with existing (2026) and future (2045) traffic forecasts from the Ganddini Group, Inc. (2026) traffic analysis.

PHYSICAL EFFECTS OF NOISE

Figure N-3 illustrates the relationship between noise exposure levels and potential impacts on residents' health. Prolonged exposure to elevated noise can pose risks to both physical and mental well-being. Scientific research indicates that extended exposure to noise above 90 dBA can permanently damage inner-ear cells, forming the basis for occupational hearing protection standards. Continued exposure above 85 dBA may lead to long-term hearing loss, while sustained exposure above 75 dBA can trigger physiological stress responses, affecting blood pressure, cardiovascular health, sleep quality, and nervous system function.

These health concerns are recognized in the California Noise Control Act (Health and Safety Code Section 46000), which identifies excessive noise as a serious hazard to public health and welfare. The Act acknowledges the potential for noise to cause physiological, psychological, and economic harm, and establishes that all Californians have the right to an environment free from noise that could compromise health or quality of life.

FIGURE N-3: NOISE EXPOSURE AND EFFECTS ON THE HEALTH OF RESIDENTS



Source: California Office of Planning and Research (OPR), General Plan Guidelines, Appendix D: Noise Element Guidelines.

APPROACHES TO NOISE MANAGEMENT

As Downey continues to evolve, emerging technologies, new alnd uses, and transportation systems will create opportunities and challenges for managing noise. The City looks to take a proactive approach to anticipate and mitigate noise impacts, protect sensitive land uses, and support community health and well-being.

Mobile Noise Sources

Mobile noise originates from transportation systems: freeways, major arterials, local streets, freight and passenger rail, and aircraft. These sources are the dominant contributors to ambient noise in Downey and require targeted strategies to protect sensitive uses. Key approaches include:

- **Transportation and Mobility Innovations.** Support increased use of electric and low-emission vehicles, noise-reducing traffic management strategies, and active transportation networks to minimize noise over time.
- **Noise-Compatible Land Use Planning.** Apply the Noise and Land Use Compatibility Matrix to guide siting and design of new development, ensuring sensitive uses are protected from high mobile noise exposure.
- **Infrastructure and Design Solutions.** Promote noise-reducing pavement, sound barriers, vegetation buffers, and strategic building orientation to reduce noise impacts from highways, roads, and rail corridors.
- **Monitoring and Data-Driven Management.** Deploy real-time noise monitoring systems along major transportation corridors to identify noise hotspots, evaluate mitigation effectiveness, and inform planning and enforcement efforts.
- **Coordination with Regional Agencies.** Work with rail operators, airport authorities, and state and federal transportation agencies to implement noise reduction



Example of sound wall along a freeway

- **Design and Site Planning Strategies.** Require mixed-use developments, industrial facilities, and commercial sites to incorporate sound attenuation measures, building insulation, landscape buffers, and site layouts that reduce noise exposure of nearby sensitive uses.
- **Adaptive Land Use Planning.** Incorporate stationary noise considerations into infill, redevelopment, and long-term planning to avoid conflicts between noise-generating and noise-sensitive land uses.
- **Community Engagement and Education.** Inform residents, employers, and operators about noise impacts, reporting procedures, and mitigation strategies to support public awareness and compliance.

Future-Focused Noise Management

Looking ahead, Downey will adopt innovative approaches that address both mobile and stationary sources while responding to emerging challenges:

- **Smart Noise Monitoring and Data Integration.** Expand real-time noise monitoring to cover both transportation corridors and stationary sources, supporting proactive planning, enforcement, and public information.
- **Advanced Design and Multi-Benefit Infrastructure.** Encourage quiet pavement, sound-absorbing materials, sound walls façade treatments, and vegetated buffers in both public and private projects to reduce noise exposure citywide.
- **Dynamic Policy Updates.** Periodically review noise standards and ordinances to account for new technologies, cumulative impacts, and changing community expectations.

These strategies provide the framework for addressing both current and future noise challenges in Downey. To guide planning and development decisions, the City relies on structured tools and standards that translate these management approaches into measurable and enforceable criteria. The following sections describe the Noise and Land Use Compatibility Matrix, which helps determine where sensitive uses can be safely located, and the Noise Standards and Evaluation procedures, which establish numeric thresholds and assessment methods to ensure new development, infrastructure projects, and operational activities remain compatible with the city's noise environment.

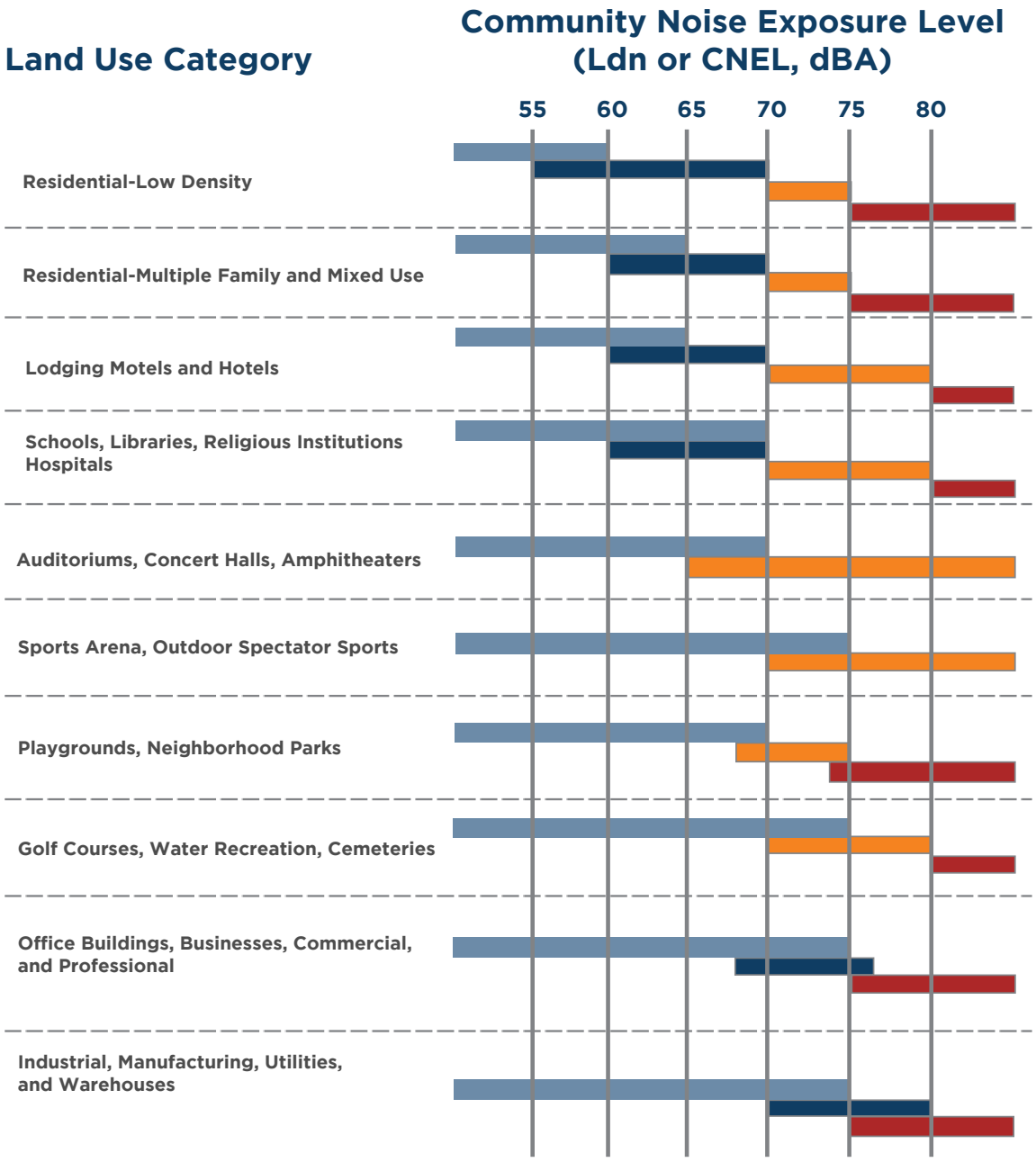
FIGURE N-6: ACCEPTABLE NOISE LEVELS BY LAND USE

Land Use	Interior	Exterior
Residential	45 db (A) and below	60 db (A) and below
Schools, parks, and other non-residential noise-sensitive land uses	45 db (A) and below	60 db (A) and below
Commercial	65 db (A) and below	-
Industrial	70 db (A) and below	-

NOTES:
- All noise levels are CNEL, Community Noise Equivalent Level
- Interior noise levels based on windows closed
- Exterior areas for residential limited to rear yards of single-family uses, and patios/balconies and common recreational areas of multiple-family uses
- Exterior areas for schools limited to playgrounds areas, picnic areas, and other areas of frequent human use

Source: California Office of Planning and Research (OPR), General Plan Guidelines, Appendix D: Noise Element Guidelines. (lci.ca.gov)

FIGURE N-4: NOISE/LAND USE COMPATIBILITY MATRIX



Interpretation

Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings invovled are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normall suffice.

Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Conditionally Unacceptable
New construction or development should generally not be undertaken.

Source: City of Downey, 2025.

Noise and Land Use Compatibility

To ensure that future development and redevelopment in Downey remain compatible with the local noise environment, the Noise Element relies on two primary planning tools: the Noise and Land Use Compatibility Matrix and the Future Noise Contour Maps. The Noise and Land Use Compatibility Matrix (see Figure N-4) establishes acceptable noise exposure thresholds for various land uses, including residential neighborhoods, schools, parks, hospitals, commercial areas, and industrial zones. This matrix provides guidance to decision-makers on whether proposed developments are appropriate for a particular location or whether mitigation measures are necessary to protect sensitive uses. It also offers a consistent framework for evaluating project impacts during environmental review, development review, and discretionary permitting, helping maintain compatibility across different types of land uses and preventing conflicts between noisy activities and sensitive uses.

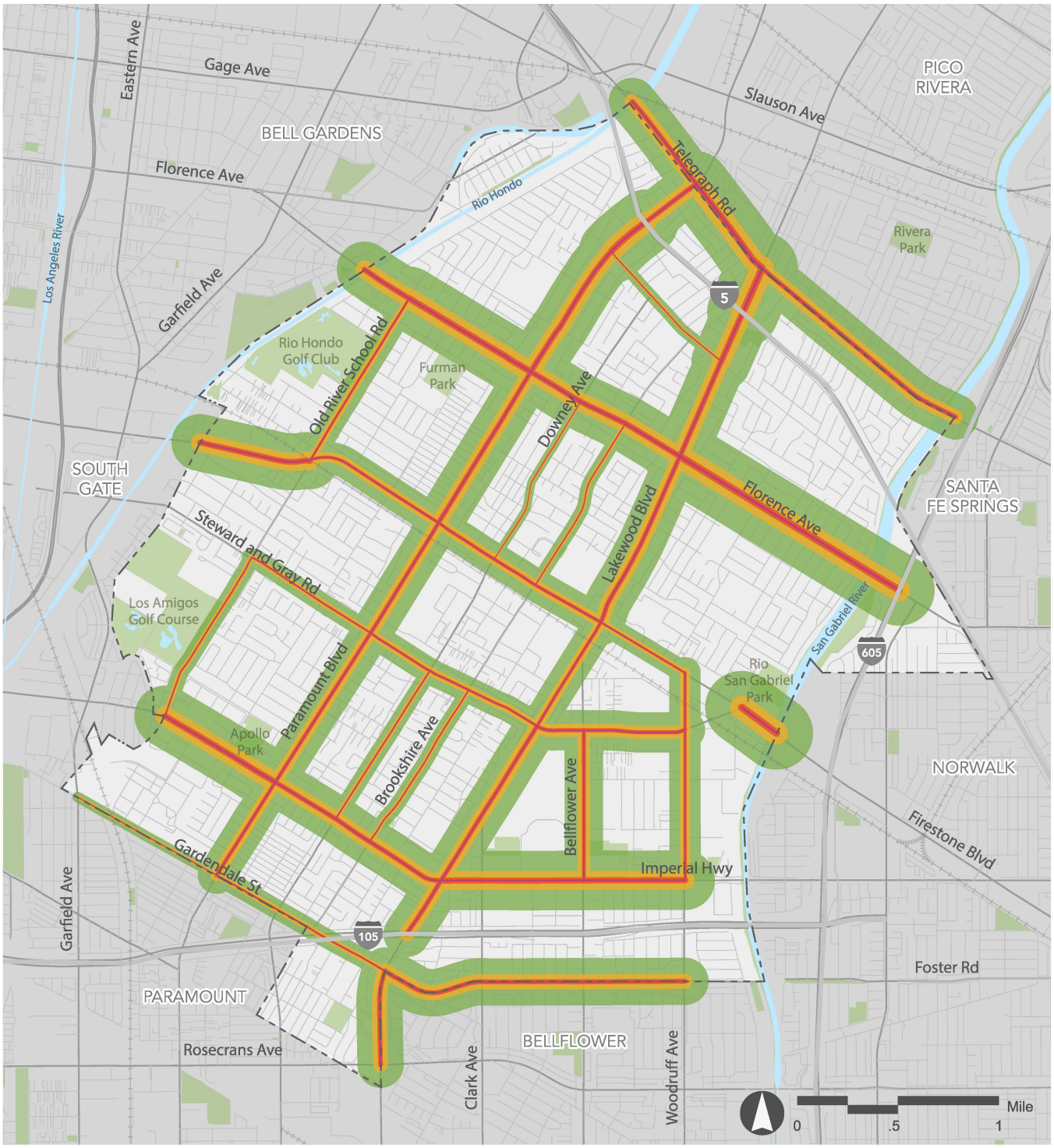
The Future Noise Contour Map (Figure N-5) complements the matrix by illustrating projected noise levels throughout the city based on anticipated growth, transportation improvements, land use changes, and planned infrastructure projects. These maps identify areas where existing or future noise-sensitive land uses may be exposed to elevated noise levels and support proactive planning and design measures. They help guide site planning, the placement of noise barriers, building design strategies, and land use adjustments to ensure that new development aligns with surrounding noise conditions and preserves livability.

Noise Standards and Evaluation

Consistent with state guidance, acceptable noise levels for sensitive land uses are generally defined as a maximum of 60 dBA outdoors and 45 dBA indoors (Figure N-6: Acceptable Noise Levels by Land Use). Sensitive uses such as residences, schools, hospitals, and parks located near freeways, major roadways, rail lines, flight paths, or other significant noise sources may require site-specific acoustic evaluations to assess potential impacts and identify appropriate mitigation measures. These numeric standards provide a clear, technical basis for evaluating noise exposure and ensuring that interior and exterior environments are safe and comfortable.

Together, the matrix, contour maps, and noise standards create a coordinated approach that guides development, infrastructure improvements, and operational activities while protecting public health, reducing land use conflicts, and maintaining overall community well-being.

FIGURE N-5: CITY OF DOWNEY FUTURE (2045) NOISE CONTOURS



Future (2045) - Community Noise Equivalent Level (CNEL)

- 75 CNEL
- 70 CNEL
- 65 CNEL
- 60 CNEL

Basemap Features

- City Boundary
- Waterways
- Parks/Open Space

Source: MIG, Inc., using the U.S. Department of Transportation Federal Highway Administration (FHWA) Traffic Noise Model (TNM), Version 3.2, with existing (2026) and future (2045) traffic forecasts from the Ganddini Group, Inc. (2026) traffic analysis.

GOALS AND POLICIES

The Noise Goals and Policies establish a framework for minimizing noise impacts, protecting noise-sensitive land uses, and promoting compatibility between transportation, development, and community activities. These policies address both mobile and stationary noise sources, integrate noise considerations into land use and development decisions, and support effective standards, enforcement, and regional coordination to protect public health, safety, and welfare.

Noise Sources and Land Use Compatibility

GOAL N-1: REDUCED MOBILE NOISE IMPACTS FROM TRANSPORTATION AND REGIONAL INFRASTRUCTURE

Policy N.1-1: Roadway and Vehicular Noise. Reduce noise generated by vehicular traffic on freeways, arterials, and local streets through traffic management, enforcement of vehicle noise standards, and roadway and circulation planning that minimizes noise in residential neighborhoods.

Policy N.1-2: Rail Noise. Reduce noise impacts from freight and passenger rail operations near residential and other noise-sensitive land uses through coordination with rail operators, operational controls, infrastructure improvements, and sound attenuation requirements for nearby development.

Policy N.1-3: Aviation Noise. Minimize noise impacts from commercial aircraft, private aircraft, and helicopters through regional coordination, regulation of helicopter facilities, and monitoring of aviation operations affecting the city.

Policy N.1-4: Low-Emission Vehicles and Active Transportation. Encourage the adoption of electric and low-emission vehicles, active transportation networks, and traffic management strategies that reduce vehicular noise and improve air quality.

GOAL N-2: LIMITED NOISE IMPACTS FROM STATIONARY SOURCES

Policy N.2-1: Construction and Operational Noise. Minimize noise generated by construction, maintenance, and operational activities by limiting hours of activity, encouraging quieter equipment and practices, and enforcing adopted noise standards.

Policy N.2-2: Mixed-Use Development Noise. Require mixed-use developments to incorporate design and construction techniques that reduce noise and vibration between residential and nonresidential uses.

Policy N.2-3: Industrial Noise Near Residential Areas. Minimize noise impacts from industrial uses located adjacent to residential areas by requiring effective noise control measures, including equipment enclosures, operational restrictions, and buffering through structural barriers, and by promoting site design and building techniques that reduce both mobile and stationary noise exposure of nearby residents.

Policy N.2-4: Neighborhood Noise Compatibility. Encourage land use patterns and site designs that reduce noise intrusion into residential neighborhoods and other noise-sensitive areas, particularly during nighttime hours.

GOAL N-3: NOISE-SENSITIVE LAND USES PROTECTED FROM EXCESSIVE NOISE

Policy N.3-1: Noise-Sensitive Uses. Protect existing and planned noise-sensitive land uses by avoiding incompatible siting, requiring interior noise attenuation where needed, and minimizing noise from adjacent non-residential uses.

Policy N.3-2: Non-Residential Noise Controls. Limit operational hours, loading activities, and equipment placement for nonresidential uses located near residential or other noise-sensitive land uses.

Policy N.3-3: Hospital Noise Environments. Minimize noise impacts on hospitals by promoting compatible adjacent land uses and incorporating effective sound attenuation and site design measures.

Policy N.3-4: Residential Noise Environments. Minimize noise impacts on residential areas to preserve community well-being by preventing land uses and development that generate excessive noise, implementing sound attenuation measures for mobile and stationary sources, and promoting site and building design practices that reduce interior and exterior noise exposure.

Policy N.3-5: Sensitive Uses from Freeway Noise. Reduce noise exposure from freeways and major roadways on sensitive land uses, including schools, hospitals, parks, and residential areas, by encouraging sound attenuation measures such as noise barriers, building design strategies, and landscape buffers, and by guiding development and site planning to reduce exposure to both mobile and stationary noise sources.

Policy N.3-6: Infrastructure and Design for Noise Reduction. Promote the use of noise-reducing infrastructure, including quiet pavement, building orientation and façade design, and vibration-isolating materials, to minimize exposure to mobile and stationary noise sources near sensitive land uses.

Policy N.3-7: Multi-Benefit Infrastructure and Site Design. Encourage infrastructure and site design that combine noise reduction with additional community benefits, including landscaping, urban greening, and stormwater management.

GOAL N-4: NOISE CONSIDERATIONS INTEGRATED INTO LAND USE AND DEVELOPMENT DECISIONS

Policy N.4-1: Noise in Development Review. Integrate noise considerations into land use planning and discretionary development review to prevent new noise conflicts.

Policy N.4-2: Noise Analysis. Require noise and acoustic analyses for development projects located near major noise sources or noise-sensitive land uses.

Policy N.4-3: Noise Mitigation. Require noise mitigation measures to be incorporated into project design, site plans, and conditions of approval.

Policy N.4-4: Noise Planning for Redevelopment and Infill. Incorporate noise considerations into long-term planning, redevelopment, and infill projects to minimize future conflicts between noise-generating and noise-sensitive land uses.

GOAL N-5: EFFECTIVE NOISE STANDARDS AND CONSISTENT ENFORCEMENT

Policy N.5-1: Noise Management. Maintain, periodically review, and update the city's noise standards, Noise Ordinance, and related regulations to reflect current conditions, evolving technologies, emerging noise sources, cumulative impacts, and community expectations while protecting public health, safety, and welfare.

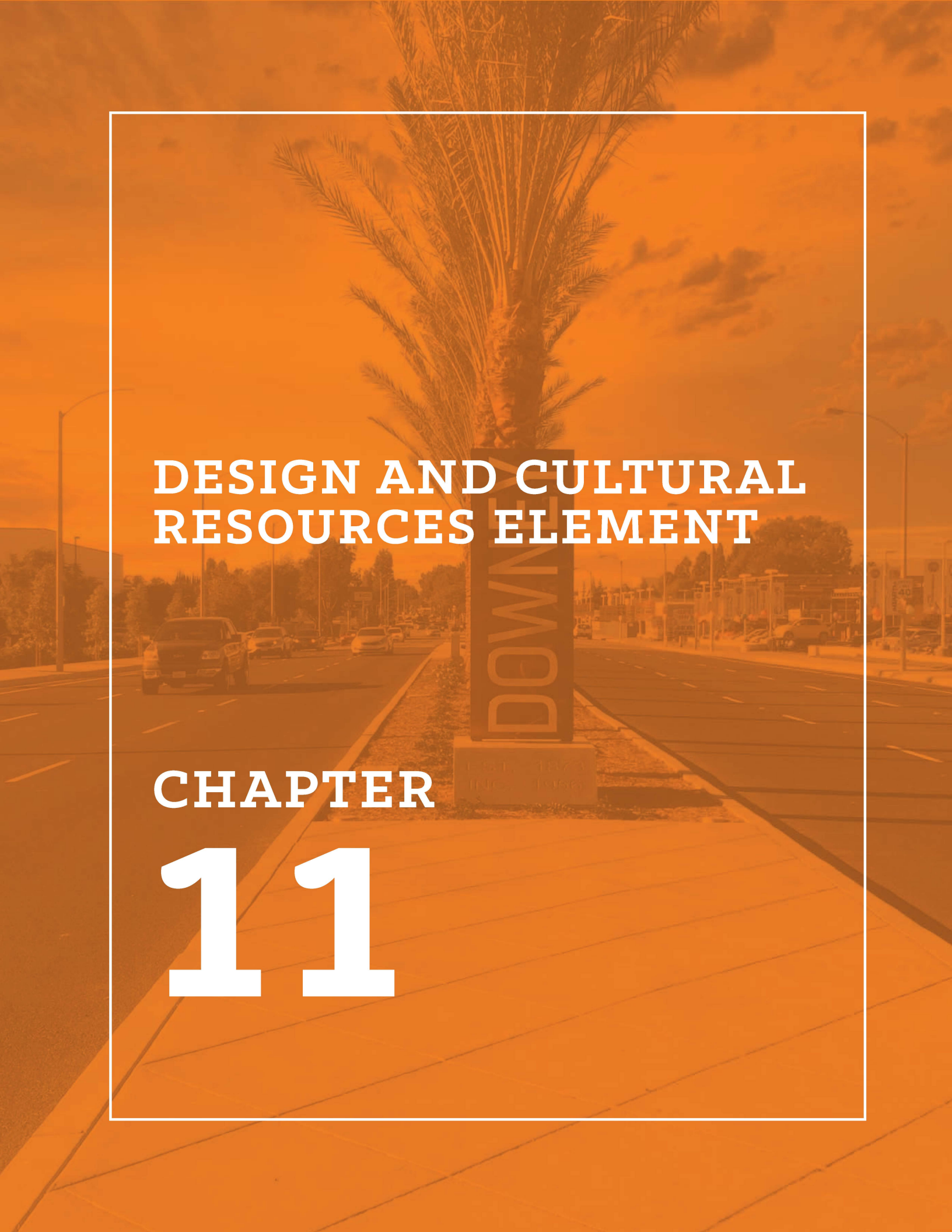
Policy N.5-3: Enforcement. Enforce applicable noise standards and promote public awareness of noise regulations, health impacts, and enforcement procedures.

Policy N.5-4: Regional Coordination. Coordinate with state, regional, and federal agencies, and adjacent jurisdictions, to address noise impacts originating outside city limits.

Policy N.5-5: Smart Noise Management. Support the use of data-driven tools and technologies to identify noise impacts and inform noise management and mitigation efforts.

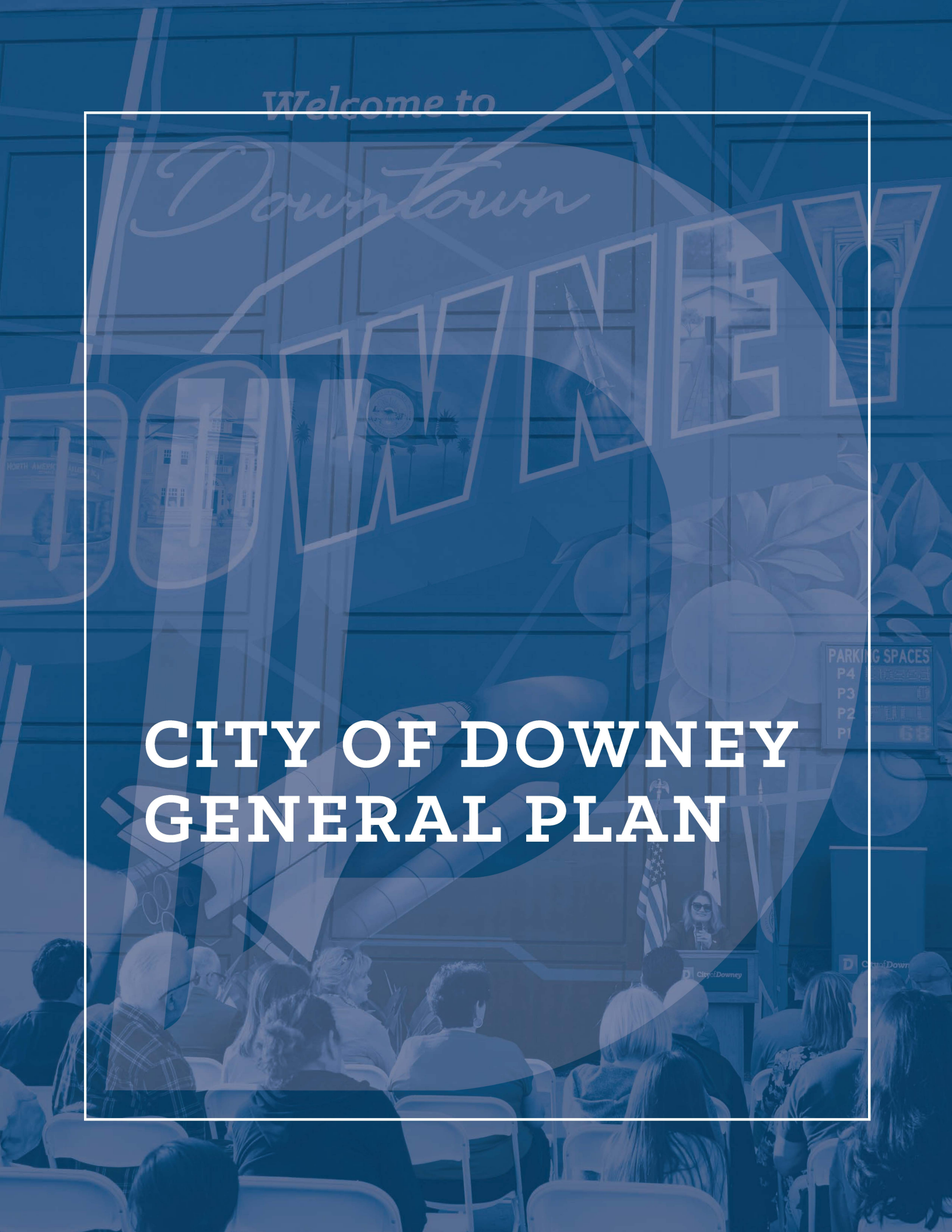
Policy N.5-6: Targeted Noise Monitoring. Conduct targeted noise monitoring and data collection in areas with recurring noise complaints, identified noise-sensitive uses, or potential conflicts between land uses to support informed planning, enforcement, and mitigation efforts.

Policy N.5-7: Noise Education and Community Outreach. Provide education and outreach programs to inform residents, businesses, and institutions about noise impacts, mitigation measures, and complaint procedures.



DESIGN AND CULTURAL RESOURCES ELEMENT

CHAPTER 11



CITY OF DOWNEY GENERAL PLAN

CHAPTER

11

DESIGN & CULTURAL RESOURCES ELEMENT

INTRODUCTION

What this chapter addresses and why these topics are important?

Downey's history dates to early occupation by the Tongva/Gabrielino/Kizh peoples who settled along the banks of the Rio Hondo River. Spanish missionaries and ranching activities associated with the Spanish land grant era gradually displaced these first inhabitants, and the cession of California to the U.S. in 1850 led to waves of pioneers and entrepreneurs. Industrialization began in the 1930s with the Vultee Aircraft Company, with expansive growth during World War II and later, other aviation giants who participated in NASA's Apollo program. This rich mid-twentieth century period of growth is evident in the many subdivisions of ranch-style homes.

The Design and Cultural Resources Element establishes policies and strategies for respcting the city's physical character, visual quality, and identity of the built environment. It addresses how buildings, streets, public spaces, and neighborhoods function together to create attractive, safe, and memorable places. The chapter provides direction for urban form, architectural quality, public realm improvements, and preservation of cultural and historic resources.

High-quality design supports economic vitality, reinforces community identity, improves environmental performance, and enhances the daily experience of residents, businesses, and visitors. As Downey continues to evolve, with a focus on retaining the qualities that define Downey as a highly desirable suburban community. Thoughtful design ensures that new development and reinvestment contribute positively to local character.

Because most of Downey's neighborhoods are well established and expected to remain relatively unchanged, growth will primarily occur through infill development and higher-density or higher-intensity uses in targeted locations along corridors and in districts, and activity centers. These development patterns require careful attention to building form, scale, and site design to ensure that new construction respects neighborhood and provides appropriate

transitions between areas of differing intensity. Design policies therefore emphasize sensitive infill, compatible building scale, and site planning strategies that protect neighborhood character while accommodating desired growth.

As the community continues to mature, this element emphasizes the importance of preserving and strengthening Downey's cultural resources, historic assets, and established neighborhoods. Protecting these resources provides continuity between past and future development, supporting community pride and long-term neighborhood stability.

The Design & Cultural Resources Element supports a coordinated relationship between urban form and transportation systems by promoting development patterns that enhance walkability, accessibility, and connectivity among neighborhoods, commercial areas, and civic destinations.

Through these policies and strategies, this element guides Downey's continued evolution as a cohesive, sustainable, and well-designed community that balances growth with preservation, supports diverse transportation options, and sustains the quality and character of the built environment.

Design for Quality and Lasting Identity

Promote high-quality architecture, attractive streetscapes, and well-designed public spaces that reinforce community character, enhance the visual environment, and ensure new development contributes positively to established neighborhood identity and long-term vitality.

Honor the Past, Shape the Future

Celebrate Downey's heritage by preserving historic places and community traditions, while guiding thoughtful growth that respects the City's character and embraces progress.

GUIDING PRINCIPLES SHAPING THE DESIGN AND CULTURAL RESOURCES ELEMENT

Through these principles, the Design & Cultural Resources Element promotes a balanced approach to community development that protects valued places, supports sensitive infill and redevelopment, strengthens connections between districts and activity centers, and ensures that Downey's built environment



Looking north toward Downey's Downtown and Civic Center

continues to reflect its history while adapting to future opportunities.

COMMUNITY CONSIDERATIONS

Because Downey is largely built-out, design efforts focus on managing reinvestment, revitalizing aging areas, and improving the quality and function of public spaces and corridors. These efforts aim to strengthen community identity, support safe and accessible environments, and ensure that development reflects local character and values.

Downey has identified several design and community character considerations that require thoughtful planning and sensitive implementation.

Maintaining Neighborhood Compatibility

As reinvestment and new development occur, questions may arise about how change relates established neighborhoods character and scale. Attention to building, massing, transitions, site design, and architectural character can achieve compatibility while accommodating reinvestment and gradual growth.

Strengthening Community Identity

Along major corridors and in activity centers, visual character can vary and may benefit from a more cohesive sense of place. Coordinated design approaches, streetscape enhancements, and placemaking elements help reinforce identity and create inviting environments.

Maintaining Building Appearance and Property Upkeep

Residential and commercial properties that show signs of aging, including deferred maintenance or façade wear, can affect neighborhood character and investment decisions. Encouraging maintenance, reinvestment, and façade improvements can support visual quality and long-term stability.

Improving Public Spaces and Streetscapes

The quality and connectivity of public spaces and streetscapes affect how people gather and move about town. Enhancing design, consistency, and connections between plazas, sidewalks, and streetscapes improve accessibility and strengthen the public realm.

Revitalizing Aging Commercial Areas

Sections of commercial corridors show signs of physical aging and varying upkeep, influencing their appearance and activity levels. Supporting reinvestment and design enhancements strengthen these areas and support ongoing economic activity.

Supporting Walkability, Bicycling, and Safety

In some areas, the built environment may not fully support pedestrian comfort, bicycle access, or safety. Improving site and street design enhances walkability, supports bicycling, and creates connected and accessible environments.

Preserving Historic and Cultural Resources

As the city evolves, opportunities arise to balance new development with preservation of historic and culturally significant places. Thoughtful integration of these resources maintain continuity with Downey's heritage and reinforce its identity.

COMMUNITY DESIGN VISION AND FRAMEWORK

Community Identity and Character

Downey's identity is shaped by its neighborhoods, commercial areas, civic spaces, and cultural landmarks, which together create a recognizable sense of place and community character. Residents appreciate the development patterns and approaches that reflects its history. Thoughtful design plays a central role in preserving and enhancing these qualities. Design policies support preserving distinctive character across different areas while encouraging high-quality development that reinforces Downey's generally low-scale, suburban character.

Established neighborhoods, commercial districts, and civic areas contribute to overall city identity through architectural form, landscape variety, and public spaces. Maintaining and strengthening these defining characteristics ensures that new development established patterns. Design strategies emphasize context-sensitive development that respond's to community design sensibilities.

This section reinforces the physical and cultural elements that define Downey's identity, including residential architectural styles, gateways, cultural expression, and cohesive design themes.

Sense of Place

Sense of place refers to the visual identity, physical character, and shared community experience that make Downey recognizable and distinctive. Established residential neighborhoods, active commercial corridors, civic institutions, and community gathering spaces, as well as Downey's unique cultural



Cultural events, such as Día de los Muertos celebrations, at the Downey Theatre



Mural in Downtown Downey celebrating the city's identity and community pride

and historical legacy collectively contribute to Downey's physical and spiritual aesthetics. This includes Downey's role in aerospace innovation, the healthcare and rehabilitation legacy associated with the Rancho Los Amigos National Rehabilitation Center, and longstanding civic and cultural destinations such as the Downey Theatre. These features contribute to community identity and provide opportunities to integrate history, culture, and local character into the design of buildings, streetscapes, and public spaces.

Design policies promote cohesive development patterns, attractive streetscapes, and recognizable landmarks that contribute to a consistent and memorable community image. Key strategies include preserving valued community features, enhancing the quality of public spaces, and encouraging development that reinforces Downey's character by incorporating cultural and historical themes into placemaking, public art, and urban design.

Neighborhood Identity

Downey's residential neighborhoods exemplify the city's identity, characterized primarily by single-family subdivisions developed in the 1950s that exhibit consistent building forms, lot patterns, and landscaped streetscapes. These neighborhoods provide living environments defined by a cohesive physical character, including modest building scale, traditional architectural styles, and well-maintained yards that contribute to community identity and neighborhood pride. The predominance of single-family development establishes a recognizable neighborhood pattern that remains an important component of Downey's character and sense of place.

Design policies emphasize preserving the scale and character of established residential areas through appropriately scaled development, compatible building design, and sensitive transitions between differing land uses. Residential design guidance supports context-sensitive infill and additions that reflect prevailing neighborhood patterns in building massing, height, and architectural form; maintain consistent setbacks, building orientation, and streetscape continuity; and incorporate design elements, materials, and colors that complement existing homes. In areas where one-story homes predominate, new development is encouraged to maintain similar proportions and visual character.

Maintaining neighborhood character includes reinforcing consistent streetscape design and promoting landscaping that enhances neighborhood appearance and separation between properties. Design approaches encourage appropriate placement of garages, driveways, and accessory structures to maintain established development patterns. These principles support well-designed housing environments, protect residential neighborhoods from incompatible scale, and enhance long-term neighborhood stability.



Well-maintained residential neighborhoods in Downey that reflect strong community pride, stability, and neighborhood character

Gateways and Community Image

Gateways and entry corridors create the first impression and strong sense of arrival. Gateways reinforce community image and reinforcing identity through landscape design, signage, architectural features, and streetscape treatments.

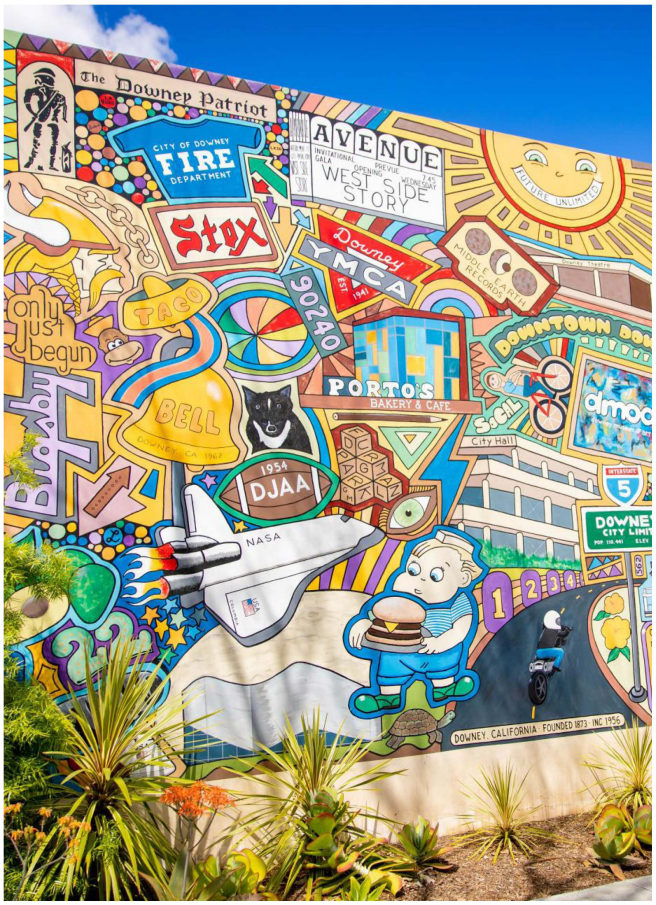
Gateway enhancements along major corridors and key intersections will incorporate landscaping, public art, signage, and coordinated design elements. These features establish visual continuity and strengthen community identity.

Cultural Expression and Community Heritage

Downey's cultural resources, historic features, and community traditions contribute to its identity and reflect social and historical development. Design policies encourage the integration of cultural expression into the built environment through public art, interpretive features, signage, and preservation of historically significant places.

Recognizing and celebrating cultural diversity strengthens community identity, supports civic pride, and ensures that development reflects local heritage.





Playful Downtown Downey mural featuring cultural icons and historic references, adding color and character along the parking structure

Design Themes and Visual Cohesion

Consistent design themes help create visual cohesion across the city while allowing for variation among neighborhoods and districts. These themes may include coordinated architectural character, landscaping patterns, streetscape elements, and public space design that reinforce community identity. Establishing clear design themes supports a unified community image while maintaining the distinct character of different areas.

What Makes Downey Distinct

Downey's design character is defined by its combination of stable residential neighborhoods, active commercial centers, civic institutions, and community-focused public spaces. The community's largely built-out pattern, established urban structure, and mix of neighborhood-serving and regional destinations create a physical environment that clearly defines the patterns new development will emulate. Characteristics that distinguish Downey include:

- Established neighborhoods with consistent scale and landscape character
- Active commercial corridors and community-serving retail districts
- Civic and institutional landmarks that serve as community focal points
- A network of districts, corridors, and activity centers that structure development
- Community gathering spaces that support social interaction and civic life



Looking northwest along Firestone Boulevard through Downtown Downey, highlighting a vibrant commercial corridor and active streetscape

Urban Framework: Districts, Neighborhoods, Corridors, and Activity Nodes

Downey's urban structure iconsists of districts, activity nodes, corridors, and neighborhoods. A well-defined urban framework connects places through coordinated land use, transportation systems, and design character. Clearly identified gateways and entry points, recognizable destinations, and consistent design themes define city identity. Strong connections between activity centers, commercial corridors, and residential neighborhoods supports walkability and enhances the visual quality and function of the built environment.

The City looks to have clear transitions between areas of differing intensity, ensuring that higher-density development is appropriately located and integrated and does not disrupt the character of established neighborhoods.

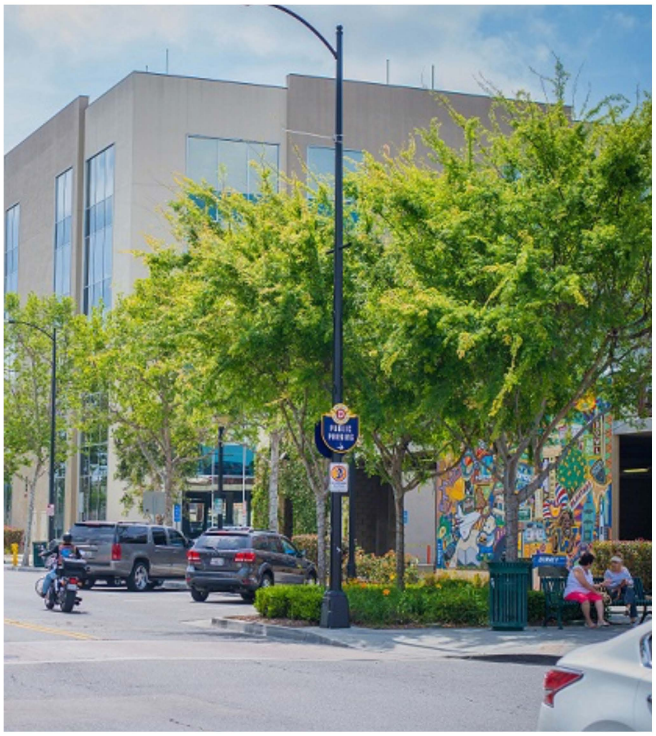
Districts

Districts are areas with distinct character, function, and land uses, such as commercial centers, employment areas, or institutional campuses. Planning and design policies support development that reinforces each district's identity, enhances visual cohesion, and ensures compatibility with surrounding uses. District-based design strategies may include architectural character, streetscape treatments, signage, and public space improvements that reflect each area's unique role in the community.

Key districts include:

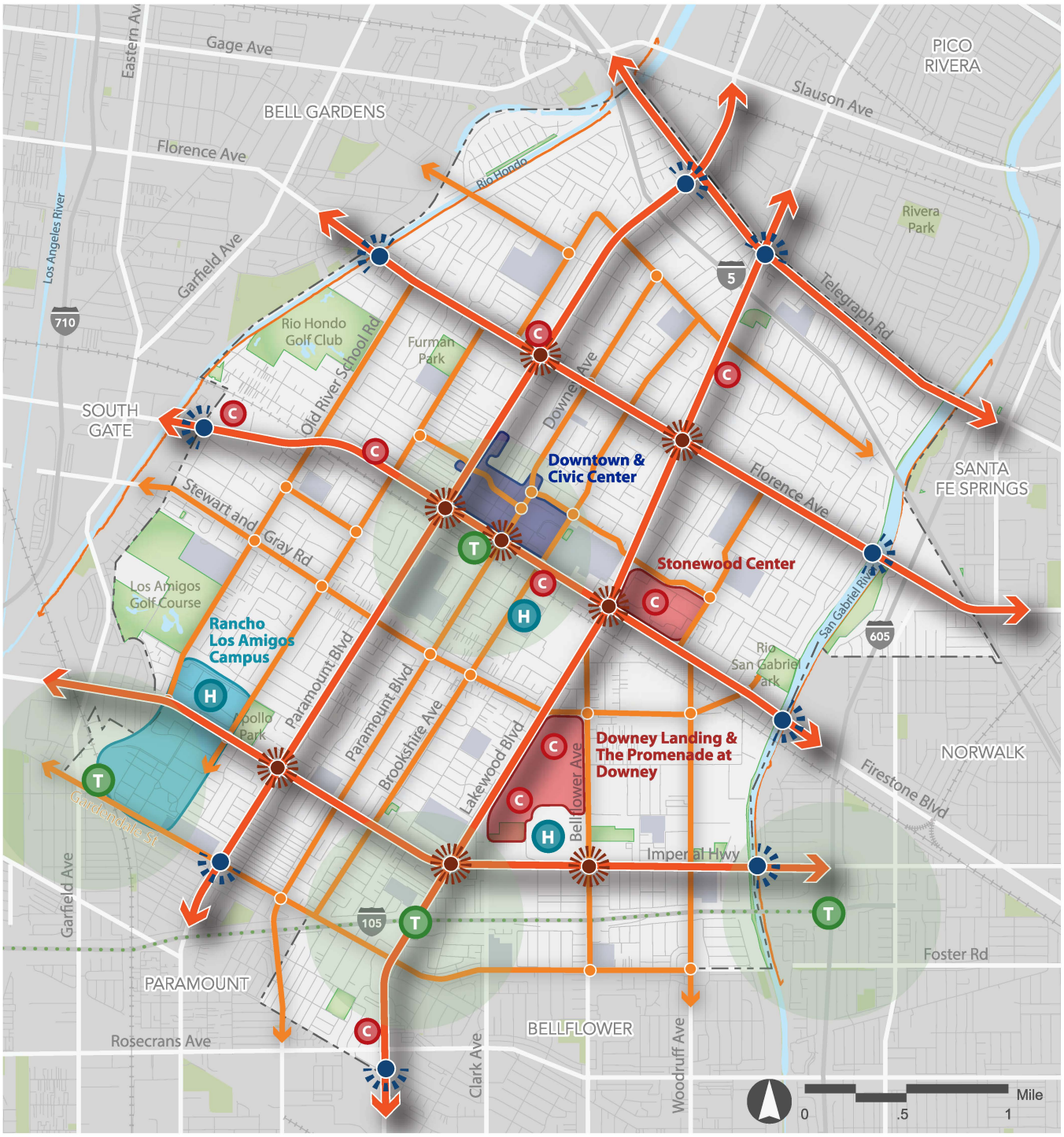
- **Downtown.** Downtown serves as a primary commercial and activity centers, characterized by a concentration of retail, dining, service businesses, and community-serving commercial uses. The district functions as a local destination for shopping, entertainment, and social activity, with a development pattern that includes a mix of storefront retail, small-scale commercial buildings, and pedestrian-oriented streetscapes.

  The physical character of Downtown is defined by active ground-floor uses, visible storefronts, and buildings oriented toward the street, creating a walkable and engaging public environment. Design priorities for Downtown include strengthening its role as a vibrant commercial core through enhanced pedestrian connectivity, cohesive architectural character, improved public spaces, and context-sensitive infill and mixed-use development that reinforces its identity as a community destination.



Downtown Downey: a vibrant hub for dining, shopping, and community activity

FIGURE DCR-1: DISTRICTS, CORRIDORS, AND ACTIVITY NODES



Districts
- Downtown & Civic Center
- Commercial Center Districts
- Transit-Oriented Community

Corridors
- Primary Corridor
- Secondary Corridor

Gateways
- Entry Monumentation

Activity Nodes
- Primary Intersection
- Secondary Intersection
- Hospital & Medical Nodes
- Transit Station Nodes
- Commercial Centers

Basemap Features
- City Boundary
- Metro 'C' Line
- Waterways
- Parks/Open Space

- **Civic Center.** The Civic Center serves as the city's governmental and institutional core, characterized by a concentration of public facilities, community services, and civic gathering spaces. City Hall, Downey City Library, Downey Theatre, Downey Veterans Memorial, public plazas, and other public art pieces establish a strong civic identity while providing essential services to residents.

The physical environment is defined by institutional architecture, prominent public buildings, and structured open spaces designed to emphasize visibility and public use. Design characteristics include formal landscaping, civic landmarks, and well-defined public spaces that support community events and social interaction. The Civic Center functions as an important symbolic and functional center for the community, with opportunities to enhance public space design, expand and improve public plazas and community gathering spaces, and ensure that future development complements the district's civic character and reinforces its role as a focal point for public life.



Art installations throughout the Civic Center highlight Downey's culture and add visual interest to the public realm.



Public spaces around City Hall and the Civic Center provide welcoming gathering areas for community events and everyday use.

- **Downey Landing and The Promenade at Downey.** Downey Landing and The Promenade at Downey are major retail and entertainment districts that serve local and regional markets. These areas are characterized by large-format commercial development, contemporary retail centers, restaurants, entertainment venues, and expansive surface parking lots. The physical character reflects modern commercial architecture, prominent building façades, and auto-oriented site design, with internal pedestrian circulation and gathering areas that support shopping and leisure activities. Design priorities for these districts include enhancing pedestrian connectivity, improving internal circulation, strengthening streetscape edges, incorporating landscaping and shade elements, and encouraging future development that supports more integrated, walkable, and mixed-use environments, including housing.



Outdoor dining and gathering spaces at the Downey Promenade create an active, social environment for shopping, dining, and community interaction.

- **Rancho Los Amigos Campus.** The Rancho Los Amigos Campus is a major institutional district and regional employment center organized around a cohesive healthcare, research, and public service environment. The district includes two complementary campuses—north and south—that establish a unified setting for medical services, Los Angeles County facilities, employment uses, and supportive mixed-use development.

  The north campus is anchored by the Rancho Los Amigos National Rehabilitation Center, a healthcare-focused institutional environment consisting of medical and research and rehabilitation facilities, structured open spaces, and landscaped grounds organized within a coordinated site plan. Its physical character includes large institutional buildings, cohesive architectural design, and landscaped campus settings that create a distinct identity. The design emphasizes accessibility, clear circulation, and supportive outdoor environments for patients, employees, and visitors.

  The south campus complements the medical focus of the north campus by accommodating expansion of Los Angeles County regional facilities and supporting a broader mix of employment-generating, civic, and community-serving uses. The area is planned to incorporate transit-supportive development around the future Metro Southeast Gateway Line - Gardendale Transit Station, along with neighborhood-serving commercial uses, open space nodes, and public gathering areas. The south campus promotes a compact, mixed-use, and multimodal environment that supports economic development, enhances pedestrian-oriented design, strengthens connections to surrounding neighborhoods, and integrates cultural uses, public spaces, and outdoor activities.

  Future design considerations include maintaining a cohesive institutional identity, enhancing mobility and circulation, promoting sustainable design, and ensuring that new development reinforces the campus's role as a regional center for healthcare, employment, and community activity.



Campus view of Rancho Los Amigos National Rehabilitation Center, highlighting its medical campus, research facilities, and role as a regional healthcare institution

- **Stonewood Center.** Stonewood Center, a regional commercial district and major community shopping destination, is characterized by large retail buildings and supporting commercial uses arranged around a central shopping complex. The physical environment includes expansive building footprints and structured and surface parking areas.

  Design characteristics focus on strong commercial visibility from surrounding streets, coordinated site planning, and prominent building forms that define the district's regional presence. Opportunities exist to enhance pedestrian access, strengthen site connectivity, improve landscaping and open space features, and support reinvestment that modernizes the center while maintaining its role as a key retail center.



Stonewood Center serves as a major retail destination in Downey, offering shopping, dining, and a central gathering place for the community.

Neighborhoods

Residential neighborhoods form the foundation of Downey's community character and provide diverse housing types, although single-family subdivision: overwhelmingly represent the predominant development approach. Downey is a first-choice community for first-time homebuyers and young families These neighborhoods reflect architectural stylus popular from the 1920s through 1960s, including many ranch-style buildings. During public workshops for the General Plan, many residents cited these neighborhoods as classic Downey.

Design standards applied to neighborhoods reinforce appropriate building scale, promote and celebrate specific styles, and maintain compatibility between new and existing development. Policies emphasize preservation of neighborhood character, maintenance of property appearance, and sensitive integration of infill development.



Residential neighborhoods in Downey are characterized by cohesive design, tree-lined streets, and a consistent scale that reinforces neighborhood identity.

Corridors

Corridors function as major transportation and commercial routes that connect districts, nodes, and neighborhoods citywide. They serve as primary movement corridors for vehicles, pedestrians, bicyclists, and transit while also shaping the city's visual character and economic activity.

Design improvements along corridors focus on:

- Mobility and accessibility for multiple transportation modes
- Streetscape enhancements such as landscaping, lighting, and street furnishings
- Visual coherence through coordinated signage and building design
- Enhanced pedestrian comfort and safety
- Attractive gateways and community entry points

Key corridors include:

- **Firestone Boulevard.** A major east–west commercial corridor and one of the city's primary activity spines, Firestone Boulevard is characterized by a mix of regional retail centers, auto-oriented uses, service businesses, and community-serving commercial development. The corridor features wide roadway sections, high traffic volumes, and prominent commercial frontages, with opportunities for enhanced streetscape design, improved pedestrian environments, and coordinated building form to strengthen its identity and visual character.
- **Florence Avenue.** Florence Avenue functions primarily as an east–west neighborhood-serving commercial corridor with a mix of retail, service uses, and adjacent residential areas. Development along the corridor generally reflects smaller-scale commercial centers, local businesses, and transitional land uses.



Firestone Boulevard near Downtown features pedestrian-friendly frontages and enhanced streetscape elements that support walkability and complement the character of Downtown.

Design priorities include improving corridor aesthetics, enhancing pedestrian accessibility, and strengthening compatibility with nearby residential neighborhoods.

- **Paramount Boulevard.** Paramount Boulevard is a north–south arterial corridor defined by a mix of commercial, institutional, and residential uses. The corridor includes community-serving retail, schools, and neighborhood-scale development, with segments that transition between commercial activity and residential areas. Design improvements focus on enhancing streetscape consistency, improving pedestrian safety, and reinforcing transitions between land uses.
- **Imperial Highway.** Imperial Highway extends through Downey from Orange County west to El Segundo, accommodating high traffic volumes and large-format commercial and auto-oriented development. The corridor is characterized by wide rights-of-way, prominent signage, and large development parcels. Opportunities exist to enhance visual quality through landscaping, coordinated design standards, improved site planning, and strengthened gateway treatments at key entry points into Downey
- **Telegraph Road.** Telegraph Road is a regional north–south transportation route characterized by a mix of commercial, industrial, and institutional uses. The corridor includes larger building footprints, employment-generating uses, and segments with limited pedestrian amenities. Design priorities include improving visual cohesion, enhancing landscaping and buffering, and supporting mobility for multiple transportation modes.
- **Downey Avenue.** Downey Avenue serves as a central north–south corridor that connects key civic, commercial, and residential areas, including the downtown and civic core. The corridor features a more pedestrian-oriented environment in certain segments, with smaller-scale commercial development, civic facilities, and community destinations. Design emphasis includes strengthening its role as a community main street through enhanced pedestrian and bicycle amenities, streetscape improvements, and context-sensitive infill development.



Bird's-eye view of Lakewood and Firestone Boulevards, highlighting a key commercial intersection

Activity Nodes

Activity Nodes serve as focal points of activity, gathering, and community interaction. These locations typically include commercial centers, civic facilities, transit stations, healthcare campuses, and mixed-use areas. They accommodate higher-intensity uses, pedestrian-oriented environments, and public spaces that support social and economic activity.

These areas are designed to function as recognizable destinations through enhanced urban design, high-quality architecture, and improved public realm features such as plazas, landscaping, and streetscape enhancements.

Examples include:

- Major intersections such as Firestone Boulevard and Lakewood Boulevard.
- The transit-oriented locations Metro C Line station and the Downey Transportation Center
- Healthcare and institutional hubs, including Rancho Los Amigos, PIH Health Downey Hospital, Kaiser Permanente Downey Medical Center, and Columbia Memorial Space Center
- Commercial centers and mixed-use activity areas that serve as community gathering places
- Downtown Dowey and the Civic Center, a focal activity center with gathering places, commercial and entertainment services, and events and actvities
- The Downey Theatre, a prominent civic destination that draws people for events and performances, concentrating activity and supporting surrounding uses



Kaiser Permanente Hospital serves as a major activity node, providing comprehensive medical services and supporting healthcare access for the community and region.

Entryways

Entryways are prominent locations at the city's boundaries that create a first impression for residents, visitors, and businesses entering Downey. Located along major roadways such as Firestone Boulevard, Imperial Highway, Lakewood Boulevard, Paramount Boulevard, and other key gateways, these areas help establish a strong sense of identity and arrival. Entryways are often marked by signage, landscaping, public art, architectural features, monument elements, and other design treatments that communicate community character and reinforce Downey's unique image.

Design priorities for entryways include creating attractive and recognizable gateway features, maintaining high-quality landscaping and streetscape improvements, enhancing visibility and wayfinding, and ensuring that gateway elements complement surrounding development. Coordinated signage, lighting, public art, and landscape design can strengthen community identity, improve the visual experience along major corridors, and reinforce Downey's image as a welcoming and distinctive city.



Eastern City Gateway on Firestone Boulevard. Monument signage, landscaping, and streetscape enhancements at the eastern city boundary create a welcoming gateway and reinforce Downey's community identity.

BUILT ENVIRONMENT AND DESIGN QUALITY

This section establishes a comprehensive framework for maintaining and enhancing the physical form, visual character, and functional quality of development throughout the Downey. It provides guidance for the design of buildings, sites, public spaces, and streets to ensure that future development and reinvestment contribute to a cohesive, attractive community.

As a largely built-out city with established neighborhoods and activity centers, Downey's continued evolution depends on thoughtful design that enhances existing character while accommodating change. The quality of the built environment influences neighborhood stability, economic vitality, public safety, environmental performance, and the overall experience of residents, businesses, and visitors. Coordinated design policies help ensure that new development, infill projects, and property improvements are compatible with surrounding uses, reinforce community identity, and strengthen connections between districts, corridors, and neighborhoods.

This section addresses urban design, including community identity and character, architectural and building form, property appearance and maintenance, the design of the public realm, and sustainable and climate-responsive practices.



Attractive streetscape enhanced with street trees and landscaping, creating a comfortable, shaded, and visually appealing environment for pedestrians, an example of well-designed urban frontage

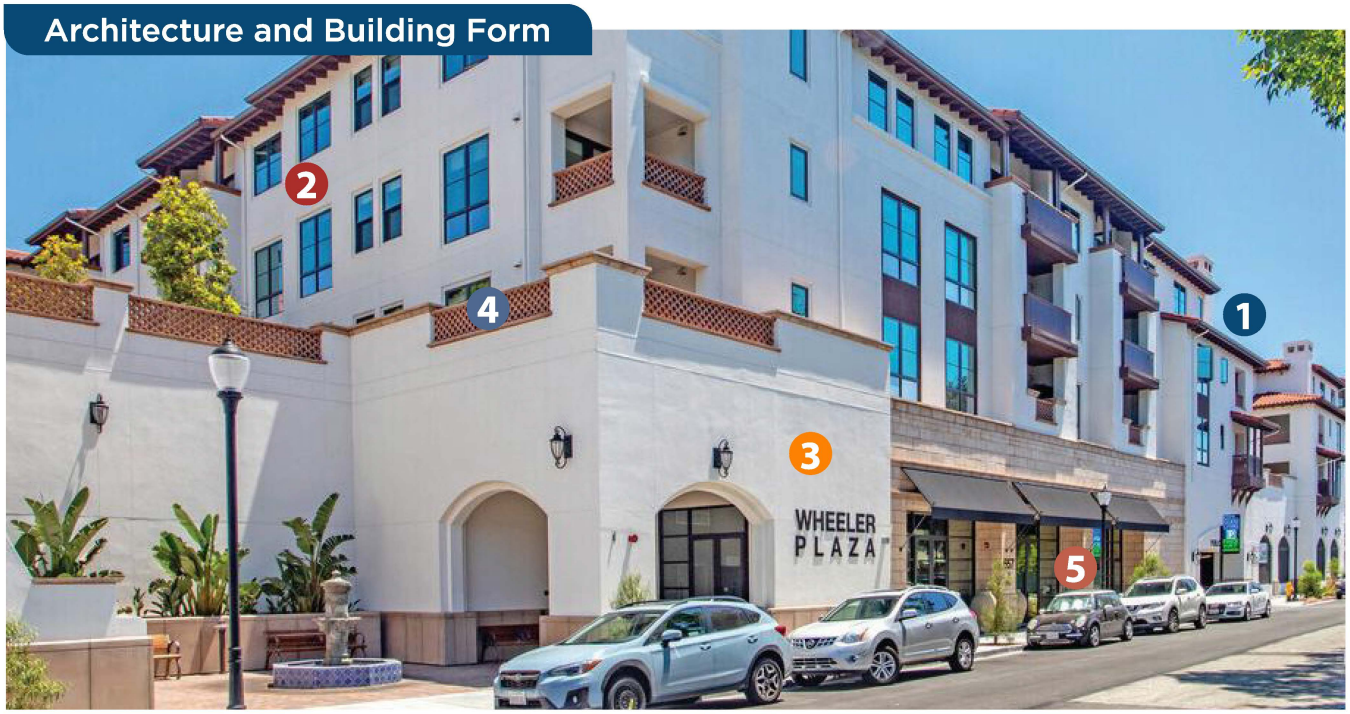
Architecture and Building Form

Building design plays a central role in shaping visual character, defining streetscapes, and creating comfortable and engaging environments for pedestrians. Architectural quality and building form influence how development relates to surrounding uses, contributes to neighborhood character, and supports functional and attractive public spaces.

The City promotes architectural design that is visually cohesive, context sensitive, and responsive to surrounding development. Policies emphasize appropriate building scale, massing, and orientation to ensure compatibility between new and existing structures while supporting innovation and design excellence.

1. **Massing.** Building massing should be articulated to reduce visual bulk, create human-scaled development, and provide transitions between areas of differing intensity.
2. **Scale.** Building height and scale should be compatible with surrounding development, particularly near established residential neighborhoods, to maintain neighborhood character and visual continuity.
3. **Orientation.** Buildings should be oriented toward streets and public spaces to strengthen street presence, improve accessibility, and support pedestrian activity.
4. **Materials.** High-quality, durable materials and finishes should be used to enhance over the long term, appearance, reduce maintenance needs, and contribute to cohesive architectural character.
5. **Ground-Floor Design.** Active and transparent ground-floor design along commercial corridors and activity centers should support pedestrian engagement through storefronts, entrances, and visually accessible uses.

Architecture and Building Form



Public Realm and Streetscape

The public realm includes streets, sidewalks, parks, plazas, and other shared spaces that support community interaction, mobility, and civic life. High-quality public spaces promote social activity and strengthen connections between neighborhoods and activity centers. The design of streets and public areas plays a critical role in creating safe, accessible, and attractive environments for residents and visitors.

Downey's public realm supports multiple transportation modes, provides comfortable pedestrian environments, and creates opportunities for community gathering. Streetscape design, landscaping, and public amenities contribute to the overall experience of moving through the city.

1. **Streets.** Street design should balance mobility and safety while supporting multiple transportation modes and enhancing the visual character of corridors.
2. **Pedestrian Environment.** Sidewalks and walkways should provide safe, accessible, and comfortable conditions through adequate width, shade, lighting, and barrier-free design.
3. **Plazas.** Public plazas and gathering spaces should support community interaction, civic activity, and social engagement through quality design and amenities.
4. **Streetscape Standards.** Consistent streetscape elements, including street trees, lighting, furnishings, and landscaping, should create visual continuity and reinforce district identity.
5. **Connectivity.** The public realm should strengthen connections between neighborhoods, parks, commercial areas, and activity centers through coordinated design and accessible routes.

Public Realm and Streetscape



Property Appearance and Maintenance

Well-maintained properties contribute to neighborhood stability, public safety, and community pride. The visual condition of buildings, landscaping, and site features influences perceptions of quality, supports economic vitality, and helps preserve property values. Ongoing maintenance and attractive site design are essential components of a high-quality built environment.

The City implements standards and programs that encourage property upkeep, minimize visual blight, and ensure that private development contributes positively to the surrounding environment. Design policies address site organization, screening, and maintenance practices that enhance visual quality and reduce potential conflicts between uses.

1. **Site Organization.** Sites should be organized to provide clear circulation, functional layout of buildings and parking, and compatibility with adjacent uses.
2. **Screening.** Utilities, mechanical equipment, parking areas, and service functions should be screened from public view to minimize visual impacts.
3. **Code Standards.** Development and maintenance standards should promote quality site design, reduce visual clutter, and prevent deterioration.
4. **Ongoing Upkeep.** Regular maintenance of buildings, landscaping, and site improvements should preserve property value and neighborhood character.

Property Appearance and Maintenance



Sustainable and Climate-Responsive Design

Sustainable and climate-responsive design supports environmental stewardship, resource conservation, and long-term community resilience. The design of buildings, sites, and public spaces can reduce environmental impacts, improve energy and water efficiency, and help adapt to changing climate conditions.

The City promotes development practices that conserve resources, reduce greenhouse gas emissions, and enhance environmental performance while improving the comfort and health of residents. Climate-responsive design strategies also help address urban heat, manage stormwater, and support resilient infrastructure.

- **Energy Efficiency.** Building orientation, shading, natural ventilation, and site planning should reduce energy demand and improve building performance.
- **Heat Mitigation.** Design should reduce urban heat through shade trees, cool materials, reflective surfaces, and landscaped environments. Architectural features such as overhangs, shading devices, recessed windows, and building orientation should also be incorporated to minimize solar heat gain and improve thermal comfort.
- **Water Efficiency.** Design landscapes and site features to minimize potable water use through drought-tolerant planting, high-efficiency irrigation systems, and strategies that reduce long-term water demand.
- **Green Infrastructure.** Incorporate site design features that capture, treat, and infiltrate stormwater, such as permeable paving, bioswales, rain gardens, and landscaped areas that improve drainage, reduce runoff, and enhance ecological performance.

Sustainable and Climate-Responsive Design



Design for Safety

Safe and welcoming streets, sidewalks, and public spaces support community interaction and pedestrian activity. Thoughtful site and streetscape design can reduce opportunities for crime, enhance natural surveillance, and improve the comfort and sense of security for all users.

Design strategies should organize circulation, lighting, landscaping, and building frontages to foster safety, promote legitimate activity, and encourage social interaction. Incorporating principles of Crime Prevention Through Environmental Design (CPTED) helps ensure that public spaces are well used, visually connected, and resilient to unsafe conditions.

- **Natural Surveillance.** Maximize visibility with active frontages, windows, and clear sightlines to keep "eyes on the street."
- **Access and Visibility.** Clearly define entrances, pathways, and public vs. private spaces to guide movement and reduce hidden areas.
- **Lighting and Maintenance.** Provide consistent, pedestrian-scale lighting, and maintain clean, well-kept spaces to deter unsafe behavior.
- **Activation and Presence.** Encourage regular use through active ground floors, programming, and amenities that increase legitimate activity.

Design for Safety



DESIGN GOALS AND POLICIES

Downey's physical form, from its neighborhoods and districts to its streets and public spaces, reflects the city's history, culture, and community values. These Design Goals and Policies provide a framework to guide development, reinvestment, and public improvements in a way that strengthens the city's identity, enhances visual quality, and supports vibrant, connected, and walkable neighborhoods. By promoting cohesive architecture, streetscape design, sustainable practices, and public safety, these policies aim to create an enduring sense of place, celebrate local heritage, and ensure that both private and public spaces contribute positively to Downey's long-term quality and character.

GOAL D-1: NEIGHBORHOODS, DISTRICTS, AND CORRIDORS WITH A DISTINCT AND RECOGNIZABLE VISUAL AND CULTURAL IDENTITY THAT REFLECTS COMMUNITY CHARACTER

Policy D-1.1: Community Identity. Reinforce neighborhood identity through compatible building scale, landscaping, and architectural features that reflect established development patterns.

Policy D-1.2: Gateways. Enhance community and district entry points through signage, landscaping, architectural features, and public art to create a memorable sense of arrival.

Policy D-1.3: Cultural Expression. Integrate public art, cultural markers, and historically significant design elements that celebrate Downey's heritage and reflect community diversity.

Policy D-1.4: Design Themes. Ensure consistency in design themes, streetscape treatments, and architectural character across districts and corridors while allowing localized identity.

Policy D-1.5: Landmarks. Preserve and enhance defining features, landmarks, and valued open spaces to strengthen community character.

GOAL D-2: AN URBAN FRAMEWORK THAT IS WELL-DEFINED, COORDINATED, AND SUPPORTS VIBRANT, WALKABLE, AND CONNECTED NEIGHBORHOODS, DISTRICTS, AND ACTIVITY CENTERS.

Policy D-2.1: District and Neighborhood Identity. Establish clear identity, character themes, and urban form expectations for districts and neighborhoods through coordinated architecture, signage, landscaping, street trees, public art, and design features that reinforce a cohesive sense of place.

Policy D-2.2: Neighborhood Compatibility and Transitions. Ensure new development respects the scale, height, massing, and setbacks of surrounding areas and incorporates buffers, landscaping, and transitional design between residential neighborhoods and higher-intensity uses.

Policy D-2.3: Active District Centers and Downtown. Encourage active frontages, ground-floor uses, plazas, gathering spaces, and pedestrian-oriented streetscapes in downtown and district centers to support vibrant, walkable environments, including public gathering spaces in the Civic Center.

Policy D-2.4: Corridor Design and Identity. Apply cohesive standards for streetscape, frontage design, landscaping, signage, and gateways along major corridors while supporting localized identity and pedestrian-oriented building design.

Policy D-2.5: Activity Nodes and Focal Points. Promote complementary retail, civic, entertainment, and mixed-use development at activity nodes, incorporating plazas, outdoor seating, and distinctive design features that create visible and vibrant community focal points.

Policy D-2.6: Multimodal Connectivity. Integrate transit, bicycle facilities, sidewalks, and greenways to strengthen connections between neighborhoods, corridors, districts, and activity centers.

Policy D-2.7: Compatible Redevelopment. Encourage redevelopment that enhances visual quality, livability, and walkability while preserving neighborhood and district character.

GOAL D-3: ARCHITECTURE, BUILDING FORM, AND THE PUBLIC REALM THROUGHOUT DOWNEY THAT ARE HIGH-QUALITY, CONTEXT-SENSITIVE, AND CONTRIBUTE TO CITY IDENTITY

Policy D-3.1: Massing. Articulate building massing to reduce visual bulk, create human-scaled development, and transition appropriately between areas of differing intensity.

Policy D-3.2: Scale and Compatibility. Ensure building height, bulk, and architectural character are compatible with adjacent development, particularly near established neighborhoods, and promote internally consistent design within projects.

Policy D-3.3: Orientation. Orient buildings toward streets and public spaces to support pedestrian activity and enhance street presence.

Policy D-3.4: Materials and Construction Quality. Promote high-quality architectural design through durable materials, quality construction, and well-integrated architectural and landscape design that enhances long-term appearance and reduces maintenance.

Policy D-3.5: Ground-Floor Design. Provide transparent, active, and engaging ground-floor design in commercial and mixed-use areas to support walkability and public activity.

Policy D-3.6: Residential Design Quality. Require single- and multi-family development to respect neighborhood context, scale, and setbacks, and incorporate amenities and design features that enhance livability and long-term value.

Policy D-3.7: Design Guidelines and Professional Review. Establish and maintain design guidelines, and utilize design review processes to promote high-quality architecture, site planning, and landscaping for residential and non-residential development.

Policy D-3.8: Professional Design Services. Encourage the use of qualified design professionals in the preparation of architectural, site, and landscape plans.

Policy D-3.9: Sign and Architectural Integration. Promote high-quality signage that is well integrated with building architecture and contributes to overall visual quality.

GOAL D-4: STREETS, SIDEWALKS, AND PUBLIC SPACES THAT ENGAGE, WITH COHESIVE DESIGN THAT SUPPORTS PEDESTRIAN ACTIVITY AND COMMUNITY INTERACTION

Policy D-4.1: Cohesive Streetscape Design. Apply cohesive streetscape standards for lighting, landscaping, paving, street furniture, signage, and other amenities along corridors and districts to create an attractive and consistent public realm.

Policy D-4.2: Pedestrian Environment. Provide safe, accessible, and comfortable sidewalks and walkways that incorporate shade, street trees, lighting, and barrier-free design.

Policy D-4.3: Plazas and Gathering Spaces. Design plazas and public gathering spaces to support social interaction, civic activity, and community events.

Policy D-4.4: Connectivity. Strengthen connections between neighborhoods, parks, commercial areas, transit, and activity centers through coordinated streetscape and pedestrian improvements.

Policy D-4.5: Active Edges and Street Presence. Encourage building placement, consistent street setbacks, and active frontages that frame public spaces and enhance views from public streets.

Policy D-4.6: Street Yard Landscaping and Visual Quality. Maximize landscaped street setbacks, minimize excessive paving, and discourage uses, security features, or site designs that create an uninviting street environment.

Policy D-4.7: Corridor and Gateway Enhancements. Enhance major corridors and City entry points through landscaped medians, gateway features, streetscape improvements, and ongoing maintenance programs.

Policy D-4.8: Streetscape Investment and Stewardship. Support public investment, partnerships, maintenance districts, and community participation to implement and sustain streetscape and urban greening improvements.

GOAL D-5: PRIVATE PROPERTIES AND DEVELOPMENT SITES THAT ARE MAINTAINED TO REINFORCE NEIGHBORHOOD CHARACTER AND COMMUNITY PRIDE. AND SUPPORT FUTURE INVESTMENT

Policy D-5.1: Site Organization and Maintenance. Require that property owners maintain buildings, landscaping, signage, and site improvements to reinforce neighborhood character, property values, and community appearance.

Policy D-5.2: Code Compliance and Enforcement. Promote compliance with municipal codes through proactive enforcement, public education on potential violations, and the elimination of identified violations through development review and property maintenance standards.

Policy D-5.3: Property Upkeep and Neighborhood Preservation. Encourage ongoing property maintenance and designate neighborhood preservation areas where targeted resources and enforcement can address property conditions and community needs.

Policy D-5.4: Screening and Visual Quality. Screen utilities, mechanical equipment, parking, and service areas to minimize visual impacts and improve site appearance.

Policy D-5.5: Parking Area Improvements. Upgrade parking areas with landscaping, shade, lighting, stormwater features, and pedestrian amenities to improve function and visual quality.

Policy D-5.6: Property and Community Beautification. Encourage façade improvements, property upgrades, beautification programs, community clean-up efforts, and initiatives that promote community pride.

Policy D-5.7: Modernized Development Standards. Update and maintain development and property maintenance regulations to remove outdated requirements and support effective code enforcement.

GOAL D-6: BUILDINGS, SITES, AND LANDSCAPES THAT INCORPORATE CLIMATE-RESPONSIVE DESIGN STRATEGIES AND PROMOTE RESILIENCE.

Policy D-6.1: Building Orientation and Form. Encourage buildings to be designed to optimize passive energy performance through solar orientation, natural ventilation, and site layout that enhances daylighting and thermal comfort.

Policy D-6.2: Architectural Heat Mitigation. Encourage building features and site design that reduce urban heat, including shaded façades, overhangs, recessed windows, pergolas, reflective and high-albedo materials, and landscaped outdoor areas.

Policy D-6.3: Integrated Stormwater Design. Promote green infrastructure in site planning, such as permeable pavements, bioswales, planted retention areas, and rain gardens, to manage runoff while enhancing streetscapes, plazas, and open spaces.

Policy D-6.4: Durable and Sustainable Materials. Encourage building and paving materials, roofing systems, and site furnishings that are durable, low maintenance, and environmentally friendly, including cool roofs and energy-efficient systems.

GOAL D-7: WELCOMED STREETS, SIDEWALKS, AND PUBLIC SPACES

Policy D-7.1: Lighting. Ensure regulation promote adequate lighting, maintain clear sightlines, and minimize visual obstructions.

Policy D-7.2: Natural Surveillance. Encourage pedestrian activity, outdoor seating, and active building frontages to increase natural surveillance.

Policy D-7.3: Circulation. Require site planning to organize circulation and access points to support safety, wayfinding, and efficient movement.

Policy D-7.4: CPTED. Incorporate Crime Prevention Through Environmental Design strategies such as strategic landscaping, seating placement, and lighting to enhance natural surveillance.

CULTURAL RESOURCES

Cultural resources, including historic and archaeological sites, enrich Downey's provide tangible connections between the past and present. The city's history is shared through institutions such as the Downey Conservancy, Downey History Center, and Columbia Memorial Space Center, as well as through preserved historic buildings and sites, ranging from the Rives Mansion (1911) to the oldest remaining McDonald's Drive-In and Sign (1953).

Although much of Downey's agricultural past has been lost, its heritage is represented through buildings and sites that reflect innovations in aerospace, postwar Modern roadside commercial architecture, and ranch-style residential neighborhoods. These cultural resources contribute to civic pride, distinctive visual character, and opportunities for heritage tourism.

Like many cities, Downey faces challenges in balancing historic preservation with housing, economic development, and community growth. Strengthened programs for education, recognition, and economic incentives for historic properties can help ensure that the city's history is celebrated, understood, and integrated into its ongoing development, enhancing both community identity and public appreciation of its cultural heritage.

The following sections provide context for these efforts.



The Downey Grammar School Arch served as the main entrance for the Downey Grammar School from 1916-1956 and for the first Downey City Hall from 1957-1984. It was moved from its location on 2nd Street to the Civic Center in 1984.

History of Downey's Development

Indigenous Settlement and Early Land Transformation

While Downey is now characterized by a downtown core with turn-of-the century buildings and extensive post-World War II residential development, the history of the area that is now Downey stretches back much further.[1] The first inhabitants of what would become Downey were the Tongva/Gabrieleño/Kizh, who established the village of Chokiishnga along the banks of what is now the Rio Hondo. However, the arrival of Spanish missionaries and the subsequent establishment of the ranchos decimated the traditional lifeways of Indigenous Californians and transformed the landscape.

Following the admittance of California into the United States in 1850, American emigrants began arriving in the new state; some established the communities of Gallatin and College Settlement in this well-watered valley in the late 1860s-early 1870s.

Railroad Influence and Early Town Formation (1870s–1910s)

The siting of the Southern Pacific Railroad's Los Angeles–Anaheim line between Gallatin and College Settlement shaped the area's future growth. Entrepreneur John Gateley Downey and his Downey Land Association established the new townsite of Downey City along the rail line, drawing businesses and residents from surrounding communities. The Downey depot became the primary freighting hub for the region's expanding agricultural operations.

From the 1870s through the 1910s, Downey's downtown core developed into a commercial and institutional anchor with residential neighborhoods slowly growing in and around it. The Downey Board of Trade (later, Downey Chamber of Commerce) was established in 1903, and the Downey Grammar School and Downey Union High School were constructed in the downtown area.

Agricultural Economy and Early Industrial Development (1920s–1940s)

The regional economic boom of the 1920s brought more modest growth to Downey, resulting in incremental development near the original townsite. The local economy remained largely agricultural, characterized by citrus groves, walnut orchards, and crop production.

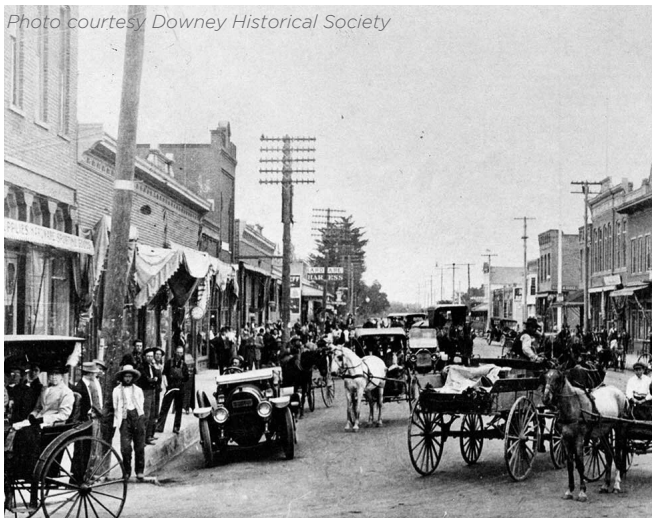
By the late 1930s, industrial development began reshaping the local economy. Vultee Aircraft emerged as a major aircraft manufacturer, building on earlier aviation activity in the area. The company expanded significantly during World War II, becoming a major employer and establishing the aerospace industry as a defining component of Downey's economic base.

Postwar Growth and Suburban Expansion (1950s–1960s)

The postwar period brought unprecedented population and physical growth. Downey incorporated in 1956, and its population increased dramatically from approximately 12,000 residents in 1940 to more than 80,000 by the late 1950s. Residential construction expanded rapidly as returning veterans and new residents moved to the area to work in Southern California's defense and aerospace industries.

Vultee Aircraft later became North American Aviation, which played a central role in missile testing and space exploration, including the Apollo space program in the 1960s. Freeway construction further accelerated suburban development, transforming the former agricultural community into a fully urbanized city.

1. Unless otherwise noted, this historical background is adapted from Architectural Resources Group (ARG), City of Downey: Citywide Historic Context Statement & Reconnaissance Survey Findings, July 28, 2025.



Bustling Downtown Downey in 1911



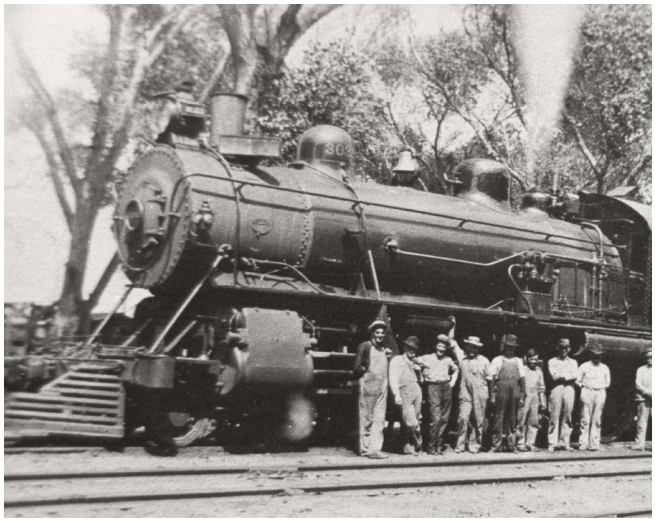
Rockview Milk Farm, 1957



Home of Edwin Price Dismukes in the late 1800's



Heavy flooding along Firestone Boulevard in 1952



Train



Boy Scouts breakfast event circa 1953



Circa 1960s aerial view of AGM-28 supersonic cruise missiles at the Downey facility.



Vultee aircrafts in 1939



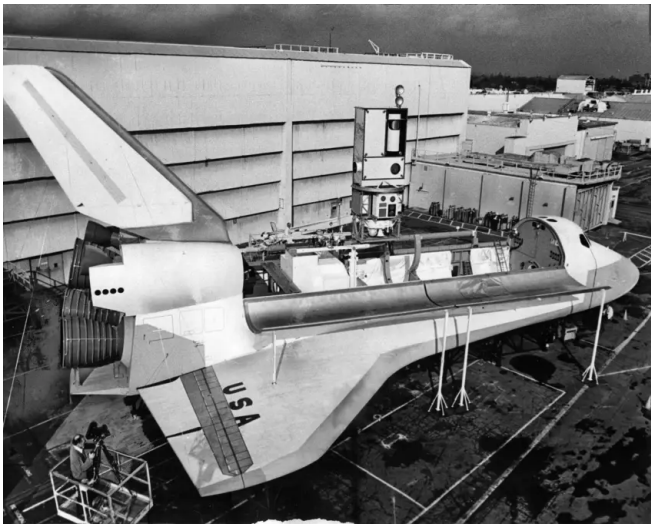
North America Aviation, Inc. Downey Plant



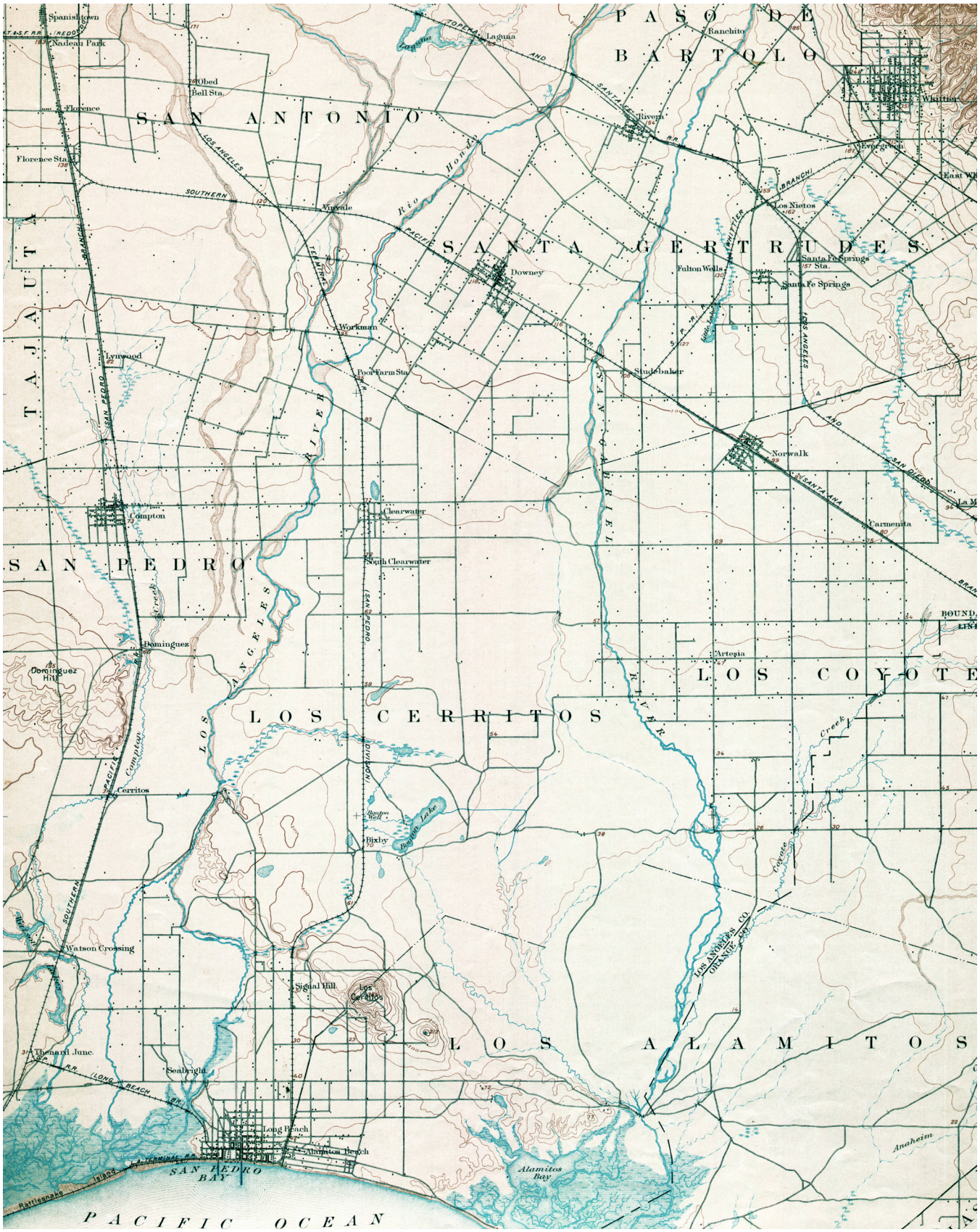
Apollo Command Module final assembly and checkout



Vultee Vengeance bomber production for the Royal Air Force



Space shuttle mockup with satellite deployment in 1975



USGS Map (1899) Southeast Los Angeles County with Downey at the top center

Architectural Development and Community Character

Downey's built environment reflects multiple periods of development and a range of architectural styles. Early development in the late 1800s produced Vernacular Victorian-era cottages and early commercial buildings concentrated around the downtown area. Continued growth in the early 20th century introduced Arts and Crafts and Period Revival residential styles, followed by Minimal Traditional homes in the 1930s (see Figure DCR-2).

After World War II, widespread residential tract development replaced agricultural lands, with ranch-style homes becoming characteristic of the postwar period. Commercial and institutional development during the 1950s and 1960s introduced Mid-Century Modern and Late Modern architectural styles. The distribution of these styles generally reflects the city's historical growth patterns, with earlier styles located near the downtown core and later styles found in postwar neighborhoods.

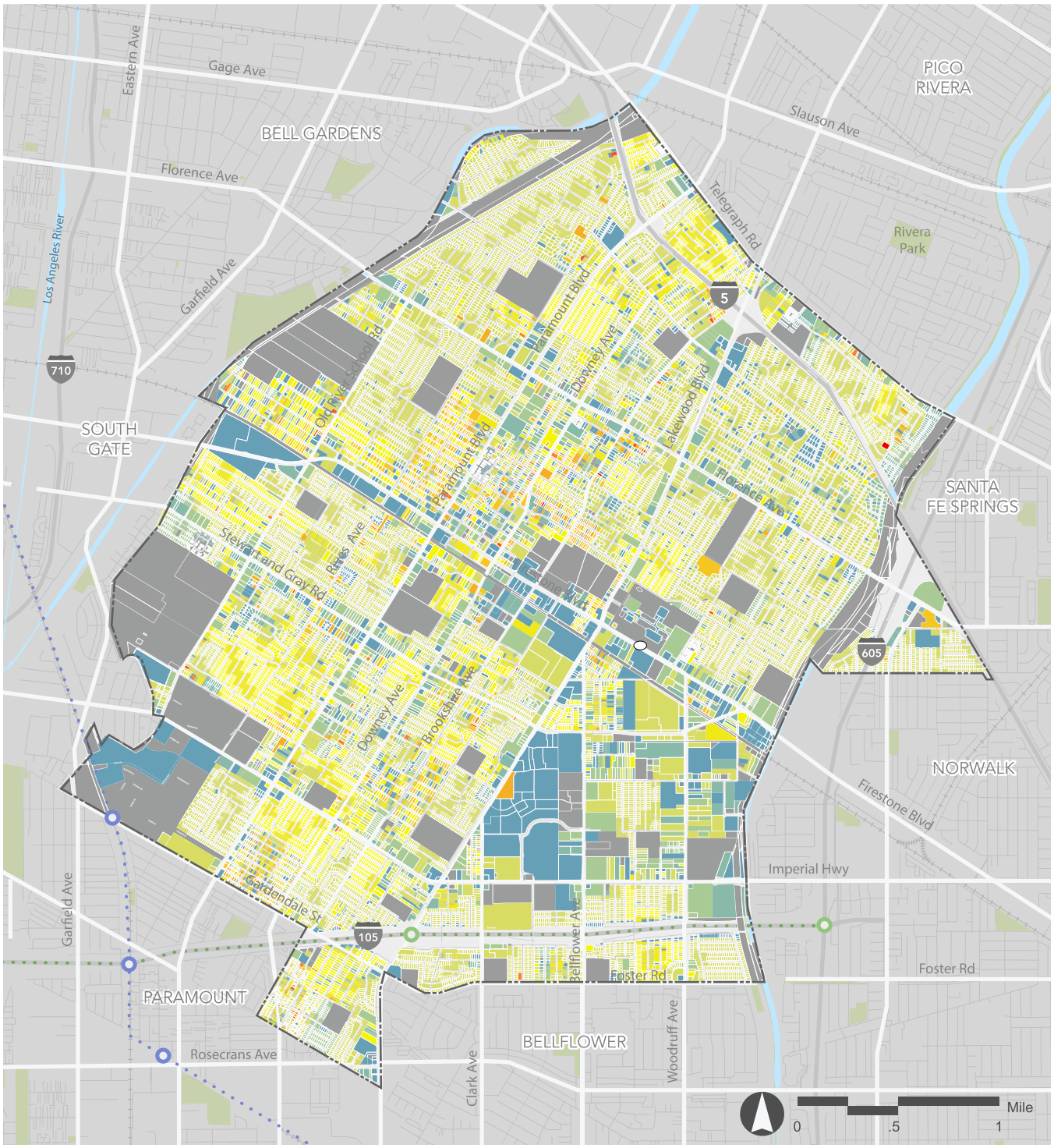
Architectural Style Guidance and Preservation

Architectural style guides have been developed for several of Downey's most common historic architectural styles, including Craftsman, Minimal Traditional, Mid-Century Modern, and Ranch. These guides serve as educational and reference tools for property owners, designers, and developers, supporting rehabilitation and adaptive reuse while preserving the community's architectural character.



Cinderella Ranch homes, a distinctive mid-century style that originated in Downey in the early 1950s, reflect the City's architectural and suburban heritage

FIGURE DCR-2: CHRONOLOGY MAP



Year Built (Assessor Data)

- Pre-1900
- 1900-1909
- 1910-1919
- 1920-1929
- 1930-1939
- 1940-1949
- 1950-1959
- 1960-1969
- 1970-1979
- Post 1980
- No Building Data

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: Architectural Resources Group historic resources inventory; Los Angeles County Office of the Assessor parcel and improvement year-built data, 2025.

CULTURAL AND HISTORIC RESOURCES IN DOWNEY

Designated Historical Resources

As of 2026, Downey had eight designated historical resources, including two resources listed in the National Register of Historic Places (National Register) and six resources listed in the California Register of Historical Resources (California Register).[2] Properties that are listed in the National Register are also automatically listed in the California Register.

The two resources listed in the National Register include:

- 7749 Florence Avenue (Casa de Parley Johnson – listed 1986, 1S)
- 10921 Paramount Boulevard (James C. Rives House – listed 1978, 1S)

The six resources listed in the California Register include:

- 10207 Lakewood Boulevard (McDonald's Drive-in Restaurant and Sign – listed 1984, 2S)
- 7447 Firestone Boulevard (Johnie's Broiler, Harvey's Broiler, Bob's Big Boy Broiler – listed 2008, 2S2)
- 12214 Lakewood Boulevard (Building 125, NASA Industrial Plant; Building 126, Hazardous Materials Storage; Building 127, Mechanical Testing Laboratory; Building 120; NASA Industrial Plant; Building 10, NASA Industrial Plant; Building 25, NASA Industrial Plant; Building 42, Maintenance Center and Garage; Building 1, NASA Industrial Plant; Building 130, Ultra-high Temperature Facility; Building 39, Materials Conservation Building; Building 41, NASA Industrial Plant; Building 290, NASA Industrial Plant; Building 11, NASA Industrial Park; Building 11, NASA Industrial Plant; Building 108, NASA Industrial Plant; Building 26, NASA Industrial Plant, Pump House; Building 6, NASA Industrial Plant; Building 228, NASA Industrial Plant; Building 123, NASA Industrial Plant; Building 128; Propellent Test Laboratory – listed 1999, 2S2) – Partially demolished[3]
- 7601 E. Imperial Highway (Rancho Los Amigos Medical Center Computer Center– listed 1996, 2S2)[4]
- Rancho Los Amigos Historic District (south campus of Rancho Los Amigos – listed 1996, 2S2) – Partially demolished[5]
- 9140 Brookshire Avenue (Downey Park Apartments - 2S2)

Other Potential Historic Resources

The City commissioned a citywide historic context statement and reconnaissance-level historic resource survey in 2025, which identified a number of additional potential historic resources, including previously identified eligible historic resources such as the Dismukes House and Downey Grammar School Arch.

2. Information regarding designated resources was obtained from the California Built Environment Resource Directory (BERD), a database maintained by the California Office of Historic Preservation. Note that resources listed in the National Register or formally determined eligible for listing in the National Register are automatically listed in the California Register. For status code definitions, refer to Office of Historic Preservation, "California Historical Resource Status Codes" (Updated March 1, 2020), accessed December 2025, https://ohp.parks.ca.gov/pages/1068/files/Resource-Status-Codes.pdf.

3. This former Vultee Aircraft Corporation site was largely redeveloped in the 2000-2010s, and all of the associated buildings were demolished except for one building along Lakewood Boulevard near the intersection with Alameda Street.

4. Listed site includes the Harriman House

5. Following an approved Rancho Los Amigos South Campus Specific Plan and Environmental Impact Report in 2021, many of the buildings in the district have been demolished.

HISTORIC RESOURCES IN DOWNEY



McDonald's (10207 Lakewood Blvd.)



James C. Rives House (10921 Paramount Blvd.)



Bob's Big Boy Broiler (7447 Firestone Blvd.)



NASA Industrial Plant (12214 Lakewood Blvd.)

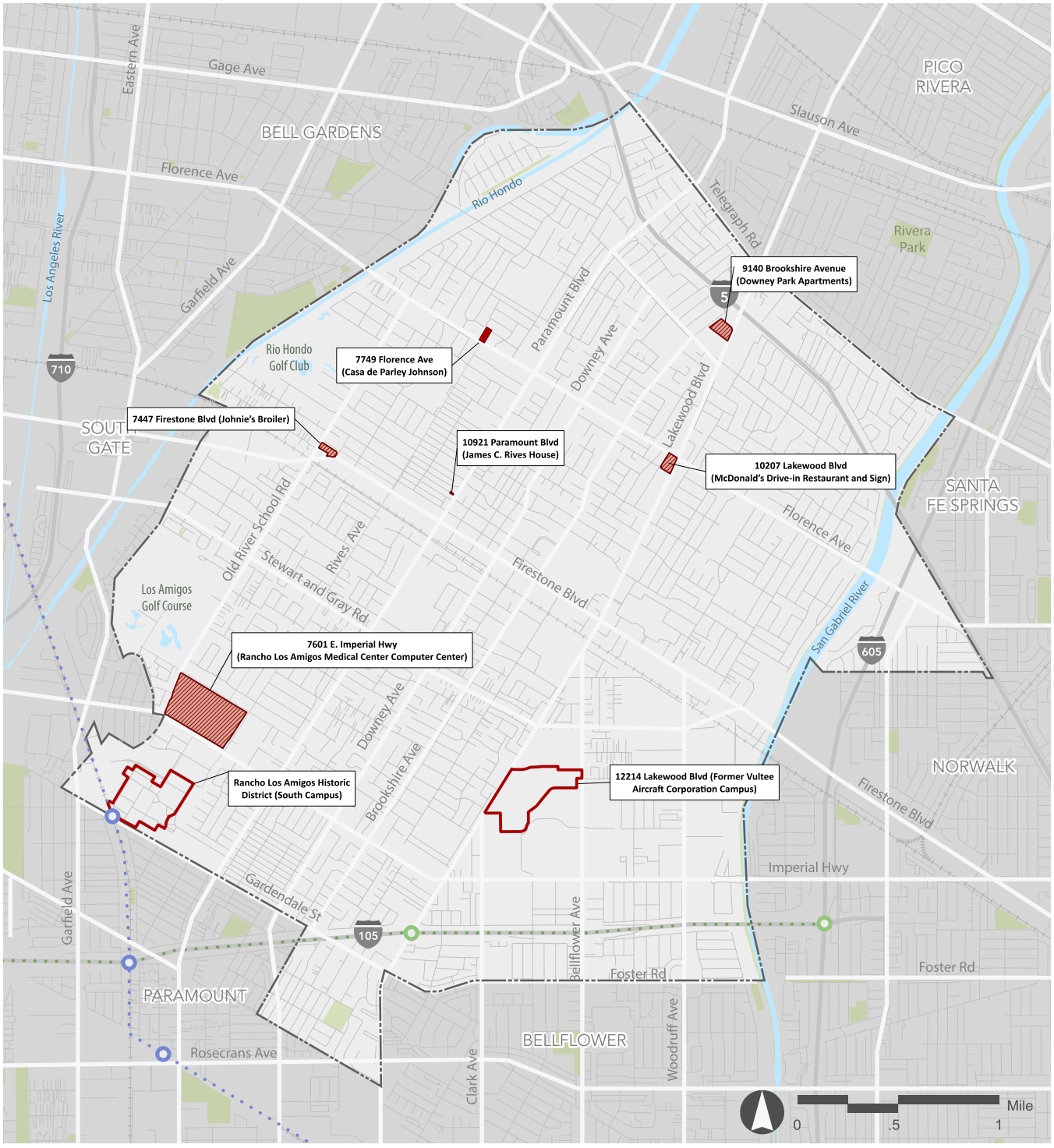


Casa de Parley Johnson (7749 Florence Ave.)



Rancho Los Amigos Historic District

FIGURE DCR-3: DESIGNATED HISTORIC RESOURCES



Year Built (Assessor Data)

- Designated Resource (National Register)
- Designated Resource (California Register)
- Designated District (California Register)

Basemap Features

- City Boundary
- Metro C Line
- Southeast Gateway Line
- Waterways
- Other Parks/Open Space

Source: Architectural Resources Group, using National Register of Historic Places, California Register of Historical Resources, and local historic resources and historic district inventories, 2025.

CULTURAL RESOURCES GOALS AND POLICIES

Downey's cultural and historic resources uniquely define our community. Historic buildings, neighborhoods, landmarks, archaeological sites, and tribal cultural resources reflect Downey's history and contribute to city character civic pride. The following goals and policies provide a framework to protect, preserve, and celebrate these resources, encourage their continued use and adaptive reuse, promote public understanding and access, and ensure that City-owned and culturally significant sites are responsibly managed.

GOAL D-8: CULTURAL AND HISTORIC RESOURCES THAT ARE PROTECTED, PRESERVED, AND CELEBRATED

Policy D-8.1: Historic Preservation Framework. Develop and implement a historic preservation framework that identifies and encourages the protection of local historic resources.

Policy D-8.2: Historic Resource Inventory. Maintain an up-to-date inventory of Downey's historic resources and make it publicly accessible.

Policy D-8.3: Design Standards for Historic Resources. Apply objective design standards for compatible alterations, additions, and infill development near historic resources.

Policy D8.4: Preservation Ordinances. Consider adoption of regulations that encourage preservation policies and incentives.

GOAL D-9: HISTORIC RESOURCES THAT ARE MAINTAINED, REHABILITATED, AND ADAPTED IN WAYS THAT RETAIN THEIR SIGNIFICANCE AND SUPPORT COMMUNITY IDENTITY

Policy D-9.1: Adaptive Reuse. Encourage adaptive reuse of historic buildings to support economic viability while retaining historic character.

Policy D-9.2: Owner Incentives. Provide incentives for owners of historic resources, including Mills Act contracts, historic building code alternatives, and tax credits.

Policy D-9.3: Flexibility for Non-Conforming Uses. Allow flexibility for nonconforming uses in historic resources to encourage preservation.

Policy D-9.4: Demolition Review. Require careful review of proposed demolitions of historic resources and consider preservation alternatives.

Policy D-9.5: Integrated Review. Integrate historic preservation into building and planning review processes to maintain resource integrity.

GOAL D-10: INCREASED AWARENESS OF LOCAL HISTORICAL AND CULTURAL RESOURCES.

Policy D-10.1: Public Access to Resources. Make historic context statements, architectural style guides, and resource inventories publicly accessible as educational tools.

Policy D-10.2: Community Education. Develop programs and materials to educate the public about Downey's history and the benefits of preservation.

Policy D-10.3: Partnerships and Collaboration. Encourage partnerships with local historical organizations, schools, and cultural groups to promote preservation and history.

Policy D-10.4: Recognition and Celebration. Recognize and celebrate successful rehabilitation, adaptive reuse, and stewardship of historic resources through signage or public programs.

GOAL D-11: CITY-OWNED, ARCHAEOLOGICAL, AND TRIBAL CULTURAL RESOURCES THAT ARE PROPERLY MANAGED, PROTECTED, AND CELEBRATED

Policy D-11.1: Stewardship of City-Owned Resources. Ensure City-owned historic resources are preserved and maintained as examples of best practices.

Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.

Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.

Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

DOWNEY GENERAL PLAN GOALS AND POLICIES

LAND USE GOALS AND POLICIES

GOAL LU-1: GROWTH AND CHANGE THAT SERVES COMMUNITY NEEDS, IS COMPATIBLE WITH LONG-ESTABLISHED LAND USE PATTERNS, PRESERVES FISCAL STABILITY, AND ENHANCES QUALITY OF LIFE

Policy LU-1.1: Directed Growth. Concentrate growth along major corridors and in mixed-use districts to preserve established residential neighborhoods, support efficient infrastructure use, and encourage transit use.

Policy LU-1.2: Context-Sensitive Development. Require new infill development to be compatible with surrounding neighborhood or district context, including building form, scale, and site design.

Policy LU-1.3: Land Use Compatibility. Provide appropriate buffers between sensitive land uses (residences, schools, and recreation areas) and major sources of noise, pollution, and emissions, including freeways and industrial operations.

Policy LU-1.4: Fiscal Sustainability. Attract and support revenue-generating uses and investment that strengthen the City's long-term fiscal sustainability and align with service capacity.

Policy LU-1.5: Mixed-Use Environments. Encourage a mix of land uses that supports opportunities to live, work, and access services within the community.

GOAL LU-2: STABLE, HIGH-QUALITY NEIGHBORHOODS THAT REFLECT DIVERSE HOUSING TYPES AND RESPECT ESTABLISHED CHARACTER

Policy LU-2.1: Neighborhood Preservation. Preserve and enhance single-family neighborhoods by maintaining established character, supporting sensitive land use transitions, and ensuring compatible adjacent development.

Policy LU-2.2: Neighborhood Compatibility and Design. Ensure new residential development reflects neighborhood context through appropriate height, massing, setbacks, building scale, and site design.

P**olicy LU-2.3: Residential Scale and Site Integration.** Establish development standards that maintain appropriate relationships between building size and lot size.

Policy LU-2.4: Transit-Supportive Housing. Support higher-density housing in areas with access to transit, services, and employment, including corridors and commercial areas.

Policy LU-2.5: Housing for All. Encourage the development of affordable housing for all income groups, including for persons with developmental disabilities, and encourage the strategic use of available funding sources and development incentives for the production of long-term housing.

GOAL LU-3: COMMERCIAL DISTRICTS THAT PROVIDE COMMUNITY-SERVING USES, ATTRACT LOCAL SPENDING, AND SUPPORT THRIVING BUSINESSES

Policy LU-3.1: Commercial Revitalization and Economic Vitality. Promote reinvestment and adaptive reuse in commercial areas that modernize properties, encourage mixed-use environments, improve site and building conditions, and strengthen local economic activity and fiscal revenue.

Policy LU-3.2: Corridor Development. Establish corridor nodes that accommodate new residential and commercial uses enhance the public realm and economic activity.

Policy LU-3.3: Mixed-Use Development. Promote mixed-use development that increases housing supply, supports economic vitality, and creates walkable environments.

Policy LU-3.4: Parking Strategies. Implement parking solutions that are incentives for creative site planning and urban design (e.g., joint-use parking, parking management systems, parking structures).

Policy LU-3.5: Quality Design. Require high-quality site design, landscaping, architecture, and property maintenance for commercial development and redevelopment.

Policy LU-3.6: Neighborhood Commercial. Encourage neighborhood-serving commercial uses that meet local daily needs, provide convenient access to goods and services, and enhance walkability and community vitality within residential areas.

GOAL LU-4: A DYNAMIC MIX OF BUSINESSES AND EMPLOYMENT-GENERATING USES THAT PROVIDE QUALITY JOBS AND SUSTAIN A STRONG LOCAL ECONOMY

Policy LU-4.1: Employment Clusters. Encourage investment in employment-generating uses that build upon and strengthen existing medical, office, and industrial clusters to support economic growth and innovation.

Policy LU-4.2: Industrial Land Preservation. Protect industrial lands for job generating uses while supporting modernization that reinforces industry clusters and prioritizes operational compatibility with surrounding areas.

Policy LU-4.3: Business Attraction and Retention. Support the attraction, retention, and expansion of manufacturing, industrial, and emerging industry sectors that strengthen the city's economic base, generate revenue, and provide quality employment opportunities.

Policy LU-4.4: Healthcare and Innovation Uses. Promote the development and expansion of medical, health technology, and related industries in areas near major healthcare institutions to enhance healthcare services, foster innovation, and create quality employment opportunities.

Policy LU-4.5: Biomedical Facilities. Encourage the attraction and expansion of medical research, laboratory, and outpatient uses within the established Biomedical Overlay to support healthcare innovation and high-quality employment opportunities.

Policy LU-4.6 Economic Value of Land Uses. Prioritize land uses within employment areas that support productivity, job creation, and community benefit, and discourage uses that provide limited economic or community benefit.

GOAL LU-5: LIVELY MIXED-USE AREAS NEAR TRANSIT THAT PROVIDE OPPORTUNITIES TO LIVE, WORK, SHOP, AND CELEBRATE COMMUNITY LIFE

Policy LU-5.1: Downtown Vitality. Support public and private investment in Downtown to reinforce its role as the city's cultural, civic, and commercial core and a focal point for community activity.

Policy LU-5.2: Transit-Oriented Development. Encourage transit-supportive development near major transit facilities that integrates housing, employment, services, and public spaces.

Policy LU-5.3: Major Activity Centers. Support mixed-use redevelopment in major commercial and institutional areas that enhances economic activity and creates community gathering places.

Policy LU-5.4: Metro C Line Station Area. Encourage transit-oriented, mixed-use development within one-half mile of the C Line station by directing higher-density housing and commercial uses to nearby commercial areas.

Policy LU-5.5: Southeast Gateway Transit-Oriented Development. Support transit-oriented, mixed-use development at the planned Southeast Gateway within the southern portion of the Rancho Los Amigos Campus, supporting higher-density housing, employment uses, and supportive services that leverage regional transit access.

GOAL LU-6: HEALTHY COMMUNITIES WHERE HOUSING, WORK, AND AMENITIES ARE CONVENIENTLY ACCESSIBLE

Policy LU-6.1: Walkable Neighborhoods. Encourage safe and walkable environments as a priority in new development and redevelopment.

Policy LU-6.2: Mobility and Access. Encourage land use and urban design patterns that prioritize safe, accessible, and connected walking and biking routes linking schools, parks, employment areas, and transit stops.

Policy LU-6.3: Reduced Vehicle Dependence. Encourage land use patterns that support walking, bicycling, and transit use to reduce reliance on private vehicles.

Policy LU-6.4: Equitable Access to Services. Promote equitable access to neighborhood amenities, public facilities, and open space citywide.

Policy LU-6.5: Community Health and Wellness. Preserve and expand public facilities, open space, and design features that support health, wellness, and active living.

GOAL LU-7: DISTRICTS AND CORRIDORS THAT SUPPORT GROWTH, INVESTMENT, AND CONNECTIVITY

Policy LU-7.1: Downtown Vitality. Support mixed-use development and investment to enhance cultural, civic, and commercial activity, strengthen pedestrian, bicycle, and transit accessibility, and enhance public spaces.

Policy LU-7.2: Civic Center Vitality. Support continued investment and improvements in the Civic Center area to enhance civic functions and improve public spaces.

Policy LU-7.3: Rancho Los Amigos Campus. Encourage transit-oriented, mixed-use development at the Rancho Los Amigos Campus

and the Southeast Gateway area that integrates employment, housing, services, public spaces while respecting the area's history.

Policy LU-7.4: Mixed-Use Commercial Destinations. Encourage reinvestment and redevelopment at major commercial centers, including Downey Landing, The Promenade at Downey, and Stonewood Center, toward the goal of reinventing those places as vibrant, walkable mixed-use destinations that integrate retail, housing, employment, and public gathering spaces.

CIRCULATION GOALS AND POLICIES

Mobility

GOAL C-1: SAFE, COMFORTABLE, AND UNIVERSALLY ACCESSIBLE FOR ALL USERS

Policy C-1.1: Pedestrian Safety Enhancements. Prioritize pedestrian safety through high-visibility crosswalks, pavement markings, leading pedestrian intervals, protected left- and right-turn phases, curb extensions, signage, and intersection designs near schools, parks, and transit stops that reduce conflicts between vehicles and pedestrians.

Policy C-1.2: Traffic Calming Measures. Encourage traffic calming and roadway safety improvements where warranted based on traffic engineering studies and safety data to reduce vehicle speeds and improve safety for all users.

Policy C-1.3: Enforcement and Education. Coordinate with law enforcement, community organizations, and regional partners to support traffic law enforcement, provide education for drivers, bicyclists, and pedestrians, and promote safe and courteous behavior across all modes of travel.

Policy C-1.4: Safe and Efficient Movement of People and Goods. Maintain and enhance the street system to support safe and efficient movement of people and goods for all users: motorists, pedestrians, bicyclists, transit riders, and freight traffic.

Policy C-1.5: Street System Improvements through Development. Encourage infill development to incorporate improvements consistent with adopted City standards and improvement requirements to enhance safety, connectivity, and multimodal access as part of the development review process.

GOAL C-2: ACCESSIBLE, CONNECTED, AND SUPPORTIVE PEDESTRIAN NETWORKS

Policy C-2.1: Sidewalk Completion and Maintenance. Prioritize sidewalk network and maintaining existing sidewalks to provide continuous, accessible routes throughout the City, with attention to ADA compliance, drainage, and long-term maintenance.

Policy C-2.2: Pedestrian Safety. Pursue improvements that enhance pedestrian safety and comfort and encourage walking, particularly along major corridors, near major transit stops, and in Downtown and neighborhood commercial areas.

Policy C-2.3: Intersection and Crossing Improvements. Pursue improvements to intersections and pedestrian crossings to enhance safety and comfort for pedestrians of all ages and abilities.

Policy C-2.4: Promote Walking as a Mode of Travel. Encourage walking as a safe and practical travel option by supporting improvements to pedestrian routes and crossings, and enhancing connectivity to pedestrian enhance mobility.

GOAL C-3: EXPANDED, CONTINUOUS, PROTECTED, AND INTEGRATED. BICYCLE NETWORKS

Policy C-3.1: Protected and Safe Bicycle Facilities. Develop a connected bicycle network that includes bike lanes, buffered lanes, shared routes, and off-street paths, with safe crossings, and clear wayfinding to improve safety and connectivity.

Policy C-3.2: Bicycle Safety Education. Support education and outreach program to promote safe bicycle use and practices and increase awareness among motorists, bicyclists, and students. Incorporate design standards, educational programs, and enforcement strategies. Consider e-bike speed management and separation from pedestrians.

Policy C-3.3: Bicycle Parking and Transit Connections. Promote secure bicycle parking near commercial centers, transit stops, and key destinations and support bicycle connections to transit.

Policy C-3.4: Promote Bicycling as a Mode of Travel. Promote cycling as a safe, practical, and appealing alternative to vehicle trips to reduce congestion and vehicle emissions.

GOAL C-4: ACCESSIBLE, RELIABLE, AND SEAMLESSLY CONNECTED TRANSIT SYSTEMS

Policy C-4.1: First- and Last-Mile Connectivity. Enhance transit by improving access, connections, including sidewalks and bike lanes that link neighborhoods to bus stops and light rail stations.

Policy C-4.2: Transit-Enhanced Plan for Development. Encourage higher-density, mixed-use development along transit corridors to support frequent, reliable, and convenient service, while reducing dependence on single-occupancy vehicles.

Policy C-4.3:Transit Infrastructure and Service Improvements. Pursue improvements to transit stops, passenger amenities, and first- and last-mile connections, and coordinate with transit providers to support enhanced service coverage, operating hours, and service frequency that improve transit accessibility, reliability, safety, and convenience.

Policy C-4.4: Promote Public Transit as a Mode of Travel. Encourage public transit use as a practical and convenient alternative to driving, improving mobility for all residents and reducing vehicle miles traveled (VMT).

Policy C-4.5: Reduced-Emission Transit Infrastructure Planning. Coordinate with transit service providers to transition to zero-emission fleets and related infrastructure as part of future transmit improvements in accordance with State mandates.

Policy C-4.6: Transportation Demand Management. Support transportation demand management programs that encourage transit use, walking, bicycling, carpooling, telecommuting, and other alternatives to single-occupancy vehicle travel to reduce congestion and vehicle miles traveled.

GOAL C-5: GOODS MOVEMENT IS EFFICIENT, SUSTAINABLE, AND COMPATIBLE WITH NEIGHBORHOOD LIVABILITY

Policy C-5.5: Designated Truck Routes. Define and manage designated truck routes to support efficient goods movement and reduce conflicts with residential neighborhoods while protecting neighborhood safety and community health.

Policy C-5.6: Clean Freight and Logistics. Encourage zero-emission and low-emission delivery fleets and explore freight consolidation and smart logistics systems to reduce congestion, noise, and air pollution.

Policy C-5.7: Regional Collaboration. Coordinate with regional agencies to align freight planning with broader initiatives, including zero-emission corridors and sustainable industrial land use strategies.

Policy C-5.8: Minimize Truck Impacts. Plan land uses to minimize impacts from truck traffic on residential areas and city streets while maintaining economic and freight mobility priorities.

GOAL C-6: LOCAL STREETS WITHOUT THROUGH TRAFFIC

Policy C-6.1: Discourage Regional Cut-Throughs. Design traffic management strategies that discourage regional traffic from using neighborhood streets as shortcuts.

Policy C-6.2: Optimize Local Street Function. Promote street design and management practices on local and collector streets that balance mobility, access, and safety with neighborhood character .

GOAL C-7: PARKING AND CURBSIDE FACILITIES THAT MEET COMMUNITY NEEDS AND SUPPORT MULTIMODAL ACCESS

Policy C-7.1: Encourage Adequate Parking Supply. Require the provision of sufficient parking supply to meet demand while balancing multimodal transportation needs and neighborhood livability.

Policy C-7.2: Smart Parking Management. Promote parking management strategies, including shared parking, time limits, demand-responsive pricing where appropriate, and curbside management practices that improve parking availability, reduce congestion, and support efficient use of parking resources.

Policy C-7.3: Truck Parking. Discourage long-term or overnight parking in residential and sensitive areas, protect neighborhood character, maintain roadway safety and visibility, and preserve street capacity for local access and circulation.

GOAL C.8: RAILROAD CROSSINGS THAT ARE EFFICIENT, SAFE, AND MINIMIZE DELAYS

Policy C-8.1: Improve Rail Crossings. Support improvement to railroad crossings along the Union Pacific Railroad Line to improve traffic flow, safety, and emergency access.

Policy C-8.2: Enhance Railroad Crossing Safety. Promote improvements at railroad crossings that enhance safety, visibility, and operations, while reducing conflicts between trains, vehicles, pedestrians, and bicyclists and maintaining reliable emergency access through enhanced warning devices, visibility improvements, crossing design enhancements, and public education efforts. Prioritize measures that reduce conflicts between trains, vehicles, pedestrians, and cyclists, support emergency response access, and minimize safety risks for all roadway users.

GOAL C-9: INFRASTRUCTURE SYSTEMS THAT ARE CLIMATE RESPONSIVE

Policy C-9.1: Urban Greening and Shade. Promote tree canopy, shade structures, and landscaping along streets and sidewalks to reduce

heat exposure and to enhance comfort along street and sidewalks.

Policy C-9.2: Green Infrastructure Integration. Pursue the integration of green infrastructure within streets and transportation corridors to support stormwater management, improve air quality, and enhance environmental sustainability. Incorporate bioswales, permeable pavement, and stormwater capture systems into transportation projects to improve water management, air quality, and environmental sustainability.

Policy C-9.3: Low-Carbon and Resilient Transportation. Promote infill development, multimodal access, and electrification of vehicles and infrastructure to reduce emissions and enhance long-term resilience.

GOAL C-10: SMART, INNOVATIVE, AND TECHNOLOGICALLY INTEGRATED MOBILITY OPTIONS

Policy C-10.1: Emerging Mobility Infrastructure. Deploy adaptive traffic signals, connected vehicle technologies, and mobility management systems to enhance safety and optimize traffic flow across all modes.

Policy C-10.2: Pilot Programs for New Mobility. Explore electric shuttle services, micromobility options, and shared mobility hubs to complement transit and reduce single-occupancy vehicle trips.

Policy C-10.3: Data-Driven and Equitable Mobility. Use mobility data to guide planning decisions, ensure equitable access, protect privacy, and monitor the performance of emerging mobility technologies.

GOAL C-11: STREETS THAT ARE COMPLETE, MULTIMODAL, AND CONTEXT-SENSITIVE

Policy C-11.1: Complete Streets Design. Ensure all street projects balance the needs of pedestrians, bicyclists, transit riders, and motorists while incorporating safety, comfort, and environmental enhancements.

Policy C-11.2: Street Typology and Function. Design streets consistent with their classification while integrating multimodal improvements and neighborhood context.

Policy C-11.3: Sustainable Street Operations. Incorporate green infrastructure, bike and pedestrian amenities, and multimodal facilities into routine street maintenance, upgrades, and future roadway projects to enhance long-term sustainability and livability.

Infrastructure

GOAL C-12: RELIABLE, RESILIENT, SUSTAINABLE, AND EFFICIENTLY MANAGED WATER SYSTEMS

Policy C-12.1: Infrastructure Maintenance and Upgrades. Maintain and upgrade local water infrastructure systems to ensure continuous service and compliance with health and safety standards.

Policy C-12.2: Water Conservation and Demand Management. Promote efficient water use and implement demand management strategies, including conservation programs, water-efficient technologies, and public education to reduce system demand and support long-term supply reliability.

Policy C-12.3: Smart Water Management. Integrate smart monitoring and leak detection technologies to improve efficiency and system performance.

GOAL C-13: A SAFE, RELIABLE, WASTEWATER CONVEYENCE SYSTEM

Policy C-13.1: Sewer System Management. Manage, operate, and maintain all portions of the sanitary sewer system to ensure reliable service and prevent spills.

Policy C-13.2: Capacity and Capital Improvements. Maintain and expand system capacity to convey peak sanitary flows, aligning upgrades, rehabilitation, and replacement of infrastructure with anticipated future development and community growth.

Policy C-13.3: Advanced Monitoring and Maintenance. Implement advanced monitoring, inspection, and preventive maintenance programs to detect vulnerabilities and address system needs proactively.

Policy C-13.4: Resource Allocation. Provide adequate funding, personnel, and equipment to maintain, operate, and improve the sanitary sewer system and implement capital projects.

GOAL C-14: STORMWATER AND DRAINAGE INFRASTRUCTURE THAT IS CLIMATE-ADAPTIVE, AND EFFECTIVELY MANAGED TO REDUCE FLOOD RISK AND PROTECT PUBLIC SAFETY

Policy C-14.1: System Capacity and Flood Management. Operate, maintain, and upgrade stormwater and drainage systems in the City to ensure adequate capacity during major storm events, reduce flood risk, and protect life and property.

Policy C-14.2: Climate Change Adaptation and Sustainability. Plan and design stormwater infrastructure to address the anticipated impacts of climate change, including increased storm intensity and variability, while promoting sustainable system performance and long-term environmental protection.

Policy C-14.3: Regional Coordination. Coordinate stormwater planning, infrastructure improvements, and flood management strategies with regional stormwater and flood control agencies to enhance system performance, manage watershed-level impacts, and improve regional resilience.

Policy C-14.4: Development Coordination. Coordinate stormwater and drainage planning with development projects to ensure adequate system capacity, minimize runoff impacts, and reduce potential flooding.

GOAL C-15: COMMUNICATIONS INFRASTRUCTURE THAT KEEPS DOWNEY ECONOMICALLY COMPETITIVE AND RESIDENTS CONNECTED

Policy C-15.1: Infrastructure Expansion. Encourage the expansion of high-speed broadband, public Wi-Fi, and cellular coverage citywide.

Policy C-15.2: Smart City Integration. Deploy smart sensors and communication technologies to improve municipal services, traffic management, and public safety.

Policy C-15.3: Emergency Communications. Ensure that the communications systems for first responders and emergency management meets the city's needs and implement enhancements as needed.

Policy C-15.4: Prioritize the use of communications franchise agreements based on the providers' ability to advance business growth and reliability for all users.

GOAL C-16: SOLID WASTE COLLECTION AND RECYCLING SERVICES THAT PROMOTE ENVIRONMENTAL RESPONSIBILITY

Policy C-16.1: Waste Reduction and Diversion. Promote recycling, composting, and zero-waste initiatives in residential, commercial, and industrial sectors.

Policy C-16.2: Public Education and Engagement. Conduct outreach to encourage proper waste management, recycling, and participation in local programs.

ECONOMIC DEVELOPMENT GOALS AND POLICIES

GOAL ED-1: CONTINUED REDEVELOPMENT OF UNDER-USED PROPERTIES TO ELEVATE REVENUE AND JOBS GENERATING POTENTIAL

Policy ED-1.1: Redevelopment of Underutilized Sites. Encourage the redevelopment, infill, and intensification of underutilized commercial and industrial properties to support long-term economic growth in a built-out urban environment.

Policy ED-1.2: Mixed-Use Development. Encourage mixed-use development along commercial corridors and near transit stations to integrate housing, retail, and employment opportunities.

Policy ED-1.3: Streamlined Review and Incentives. Promote policies and institute regulatory frameworks that support timely project review and encourage private investment that strengthens the city's economic base and employment opportunities.

GOAL ED-2: GROWTH IN SUPPORT OF LOCAL BUSINESSES AND ENTREPRENEURSHIP

Policy ED-2.1: Business Support and Technical Assistance. Provide technical assistance, financing support, and business development programs to strengthen small businesses, entrepreneurs, and minority-owned enterprises.

Policy ED-2.2: Regional Partnerships for Economic Support. Foster partnerships with regional economic development organizations to enhance access to business support resources.

Policy ED-2.3: Downtown and Corridor Vitality. Promote the vitality of Downtown and major commercial corridors as economic and community anchors by encouraging business retention, community-serving uses, and active and vibrant environments.

Policy ED-2.4: Retail Diversity and Community Preferences. Promote a range of retail, dining, and neighborhood-serving businesses that serve the needs of the community..

GOAL ED-3: ATTRACT AND RETAIN TARGETED INDUSTRIES AND HIGHER-WAGE JOBS

Policy ED-3.1: Targeted Industry Attraction. Promote the attraction of industries that provide higher-wage employment, including professional services, healthcare, technology, and innovation-based sectors.

Policy ED-3.2: Adaptive and Flexible Workspaces. Encourage flexible and adaptable workspace models that support entrepreneurship, innovation, and evolving workplace trends.

Policy ED-3.3: Compatible Office and Professional Uses. Promote office and

professional uses that support redevelopment sites and mixed-use development patterns.

Policy ED-3.4: Healthcare Sector Growth. Support the expansion of healthcare and medical services by encouraging the growth of hospitals, medical offices, and related health industries. Support their efforts to grow employment opportunities and reinforce Downey's role as a regional healthcare hub.

GOAL ED-4: CONTINUOUS ECONOMIC DEVELOPMENT MARKETING AND INVESTMENT ATTRACTION

Policy ED-4.1: Promote Downey's Economic Assets. Promote Downey's strategic location, redevelopment opportunities, and unique community assets to support business attraction and economic growth.

Policy ED-4.2: Promote Key Local Assets. Encourage the attraction of business that strengthen the City's economic base and expand retail and service options for residents and local workforce.

GOAL ED-5: GROWTH IN THE TOURISM, HOSPITALITY, AND VISITOR-SERVING MARKETS

Policy ED-5.1: Leverage Local Attractions. Promote Downey's unique attractions, such as the Columbia Memorial Space Center, commercial centers, and healthcare facilities, to attract visitors and support regional spending.

Policy ED-5.2: Support Tourism-Serving Uses. Encourage hospitality, dining, and family-friendly entertainment uses within commercial core areas and near the planned light rail station.

Policy ED-5.3: Community Events and Activities. Encourage events and activities that attract visitors that align with Downey's scale and community character.

GOAL ED-6: ALIGN ECONOMIC DEVELOPMENT WITH COMMUNITY CHARACTER

Policy ED-6.1: High-Quality Development and Community Character. Encourage high-quality development, property maintenance, and well designed commercial environments that reinforce Downey's community character.

Policy ED-6.2: Coordinate Land Use and Economic Development. Align economic development strategies with housing growth, land use planning, and transportation infrastructure to support job access and vibrant neighborhoods.

OPEN SPACE GOALS AND POLICIES

GOAL OS-1: A COMPREHENSIVE AND EQUITABLE PARK SYSTEM THAT MEETS THE DIVERSE NEEDS OF ALL RESIDENTS

Policy OS-1.1: Joint-Use Access. Strengthen partnerships with schools and institutions to standardize joint-use agreements, opening playgrounds, athletic fields, and recreational facilities to the public during non-school hours to relieve pressure on high-density neighborhoods.

Policy OS-1.2: Strategic Acquisition and Conversion. Identify opportunities to acquire new parkland or repurpose underutilized public and institutional sites, including utility easements, surplus parking, and municipal property, into pocket parks, plazas, community gardens, and flexible green spaces.

Policy OS-1.3: Neighborhood-Scale Green Spaces. Prioritize pocket parks and neighborhood parks within one-half-mile of neighborhoods to provide immediate access to play areas, social hubs, and informal gathering spaces, particularly in underserved and disadvantaged communities.

Policy OS-1.4: Municipal Sites into Public Amenities. Redesign underutilized areas around public facilities into functional micro-parks, plazas, and community gathering spaces that enhance neighborhood character and provide recreational opportunities.

Policy OS-1.5: Youth-Oriented Multi-Use Spaces. Design parks, plazas, and recreational areas with flexible, multi-use zones, well-lighted paths, and seating to serve as safe "third spaces" for youth recreation, mentorship, and socialization.

GOAL OS-2: COMMUNITY FACILITIES SERVING AS MULTI-PURPOSE HUBS FOR LEARNING, RECREATION, ARTS, AND WELLNESS

Policy OS-2.1: Upgrade and Maintain Facilities. Invest in modernization and ongoing maintenance of community facilities to provide safe, flexible, and welcoming spaces for recreation, learning, arts, and wellness activities.

Policy OS-2.2: Expand Community Partnerships. Collaborate with schools, regional organizations, cultural institutions, and service providers to enhance programming, expand access, and maximize use of community facilities and open spaces.

Policy OS-2.3: Promote Lifelong Learning, Arts, and Wellness. Offer a broad range of educational, cultural, and wellness programs, including intergenerational activities, arts workshops, STEM learning, and health-focused initiatives.

Policy OS-2.4: Accessibility and Technology. Design facilities to meet accessibility standards and integrate updated technology to support diverse programs, flexible scheduling, and inclusive participation.

Policy OS-2.5: Columbia Memorial Space Center. Support expansion and modernization of the Space Center to enhance hands-on STEM learning, outdoor exhibits, interactive play areas, and programs that celebrate Downey's aerospace heritage by leveraging partnerships with local schools, aerospace businesses, and regional organizations to broaden educational impact and community engagement.

Policy OS-2.6: Downey Theatre. Maximize use of the Theatre for performances, arts education, community workshops, and regional cultural events while enhancing flexible spaces,

technology, acoustics, and partnerships with schools, arts organizations, and touring groups.

Policy OS-2.7: Downey Library. Continue to modernize the Library to expand technology, study and meeting spaces, literacy, workforce, and cultural programs, while improving accessibility and parking to strengthen its role as a community hub space.

Policy OS-2.8: Senior Center. Expand programming for older adults, including fitness, wellness, creative arts, technology instruction, and intergenerational activities. Strengthen partnerships with healthcare providers, educational institutions, and senior service organizations, guided by a Senior Strategic Plan, to meet the needs of an aging population.

Policy OS-2.9: Promote Multi-Purpose and Flexible Use. Design or adapt all community facilities to accommodate a variety of activities simultaneously, including recreation, education, arts, wellness, and civic events, to maximize community benefit.

GOAL OS-3: DIVERSE, INCLUSIVE, AND RESPONSIVE RECREATION PROGRAMS THAT SERVE ALL AGES, ABILITIES, AND INTERESTS

Policy OS-3.1: Expand Equitable Access. Provide recreation programs for youth, teens, adults, seniors, and individuals with disabilities, ensuring equitable opportunities across sports, aquatics, arts, cultural, and wellness activities.

Policy OS-3.2: Support Inclusive and Culturally Responsive Programming. Design programs that reflect Downey's cultural diversity and community needs, including multicultural events, language-accessible offerings, and activities that encourage cross-cultural participation.

Policy OS-3.3: Advance Universal Accessibility. Require program locations, facilities, and materials to meet or exceed accessibility standards, including ADA compliance, to remove physical, sensory, and communication barriers.

Policy OS-3.4: Provide Flexible Program Delivery. Offer programs at varied times and locations, using multiple formats such as drop-in, seasonal, intergenerational, and virtual options to maximize participation and convenience.

Policy OS-3.5: Maintain Adaptable Spaces for Programming. Design and manage parks, community facilities, and shared-use spaces to be flexible, multi-purpose, and equipped to support evolving recreation programs, special events, and cultural activities.

Policy OS-3.6: Evaluate and Evolve Programs. Regularly assess participation trends and community feedback to refine offerings, expand successful programs, and introduce innovative recreation opportunities.

GOAL OS-4: HEALTH, FITNESS, AND WELLNESS INTEGRATED INTO PARKS, PROGRAMS, AND COMMUNITY FACILITIES

Policy OS-4.1: Fitness Opportunities. Offer diverse fitness, wellness, exercise classes, and specialized health programs, tailored to a range of abilities and age groups.

Policy OS-4.2: Health and Preventative Practices. Incorporate health education, nutrition, stress reduction, and preventative wellness initiatives into recreational programming to support long-term community health.

Policy OS-4.3: Intergenerational and Family-Oriented Activities. Develop programs that encourage participation across generations, including family fitness, multigenerational arts, and community wellness events.

GOAL OS-5: COMMUNITY ENGAGEMENT AND SOCIAL CONNECTION FOSTERED THROUGH OPEN SPACE AND PROGRAMMING

Policy OS-5.1: Community Input and Participation. Engage residents in program planning, evaluation, and expansion through surveys, focus groups, and community advisory opportunities to align offerings with evolving community needs.

Policy OS-5.2: Spaces for Youth and Teens. Offer structured and unstructured activities in secure, well-lighted, and supervised settings where young people can socialize, learn, and develop leadership and life skills.

Policy OS-5.3: Collaborate with Community Partners. Coordinate with schools, non-profits, regional agencies, and local organizations to expand program reach, diversify offerings, and optimize resources.

GOAL OS-6: ARTS, CULTURE, AND CREATIVE EXPERIENCES AVAILABLE AND ACCESSIBLE ACROSS ALL NEIGHBORHOODS

Policy OS-6.1: Fine and Performing Arts Programs. Offer classes, workshops, performances, and exhibitions that encourage artistic expression and cultural enrichment for all ages.

Policy OS-6.2: Facilities for Creative Programming. Use venues such as the Downey Theatre, libraries, and community centers for arts and cultural programs, including performances, exhibits, and educational workshops.

Policy OS-6.3: Arts, Recreation, and Wellness. Combine creative activities with health and wellness programs to provide holistic, engaging experiences that nurture mind, body, and community connection.

GOAL OS-7: AN INTERCONNECTED NETWORK OF TRAILS, PATHWAYS, AND ACTIVE TRANSPORTATION CORRIDORS

Policy OS-7.1: Trail Networks. Complete missing links in trails and active transportation networks to provide seamless pedestrian and bicycle connections to regional assets such as the Rio Hondo and San Gabriel River corridors.

Policy OS-7.2: Physical Barriers. Improve crossings, underpasses, and infrastructure along arterial streets, freeways, and rail lines to enhance connectivity and safe access to parks and open spaces.

Policy OS-8.3: Transit and Active Transportation. Coordinate park and open space access with public transit to reduce reliance on vehicles and improve connectivity for all residents.

Policy OS-7.4: Trail and Bikeway Networks. Develop off-street trails, greenways, and bikeways that link parks, community facilities, and urban centers while supporting active commuting and recreation.

GOAL OS-8: A RESILIENT URBAN LANDSCAPE THAT MITIGATES CLIMATE IMPACTS AND ENHANCES ECOLOGICAL FUNCTION

Policy OS-8.1: Urban Forests. Increase tree canopy coverage in parks, neighborhoods, and rights-of-way, prioritizing heat-vulnerable and disadvantaged areas.

Policy OS-8.2: Rewilding and Sustainable Landscaping. Convert impervious surfaces, underutilized turf, and ornamental landscapes into drought-tolerant, native, and pollinator-friendly plantings to support wildlife and improve air quality.

Policy OS-8.3: Community Resilience Hubs. Enhance public facilities and surrounding landscapes with shade, green infrastructure, and biophilic elements to provide cooling, refuge during extreme heat events, and community gathering opportunities.

Policy OS-8.4: Ecological Connectivity. Create green corridors and habitat linkages along rivers, utility easements, and linear open spaces to support wildlife movement, strengthen ecological function, and connect neighborhoods to nature.

Policy OS-8.5: Green Infrastructure for Climate Adaptation. Incorporate bioswales, rain gardens, landscaped parkways, and stormwater retention features into streetscapes, parks, and public spaces to manage runoff, reduce flooding, and enhance resilience.

Policy OS-8.6: Green Buffers. Use landscaped setbacks along freeways, industrial areas, and major streets to reduce noise, improve air quality, and visually soften infrastructure impacts.

GOAL OS-9: HIGH-QUALITY, SAFE, AND ACCESSIBLE RECREATIONAL INFRASTRUCTURE

Policy OS-9.1: Maintain and Upgrade Facilities. Invest in maintenance, repairs, and infrastructure upgrades to meet modern safety, functional, and aesthetic standards across all parks and recreational spaces.

Policy OS-9.2: Universal Design. Design pathways, amenities, play areas, and restrooms in accordance with Universal Design principles to support equitable access for seniors, people with disabilities, and residents with limited mobility.

Policy OS-9.3: Multi-Use and Flexible Spaces. Design recreational areas to accommodate diverse programs, community events, sports, and social gatherings that can adapt to changing community needs.

Policy OS-9.4: Partnerships. Coordinate with schools, institutions, and community organizations to increase access, programming, and use of parks, trails, and recreational facilities.

CONSERVATION GOALS AND POLICIES

GOAL CR-1: EFFECTIVE WATER SYSTEMS THAT PROTECT ENVIRONMENTAL QUALITY, PROVIDE FLOOD CONTROL, AND SUPPORT ECOLOGICAL RESTORATION AND RECREATIONAL ACCESS

Policy CR-1.1: River Corridor Runoff Mitigation. Protect and improve water quality in the Rio Hondo and San Gabriel River corridors by using natural systems and green infrastructure to capture, filter, and treat urban runoff before it reaches downstream areas.

Policy CR-1.2: Ecological Partnerships. Collaborate with regional agencies, including the Rivers and Mountains Conservancy, to restore native habitats while maintaining the rivers' primary flood control functions.

Policy CR-1.3: Public Access and Recreation. Develop trails, greenways, and educational opportunities that provide recreational and learning benefits while preserving ecological function.

Policy CR-1.5: Regional Coordination. Coordinate with regional partners to implement integrated flood control, ecological restoration, and community access strategies along the river corridors.

GOAL CR-2: RELIABLE AND SUSTAINED GROUNDWATER AS A CRITICAL RESOURCE FOR DOWNEY AND THE REGION

Policy CR-2.1: Groundwater Protection. Safeguard local groundwater supplies from contamination and overuse through monitoring programs, pollution controls, and safe land use practices near recharge areas.

Policy CR-2.2: Groundwater Recharge. Enhance aquifer replenishment through stormwater capture, green infrastructure, and integration with regional recharge facilities.

Policy CR-2.3: Spreading Grounds Recreation and Access. Enhance public access to spreading grounds by incorporating landscaped trails, pocket parks, and multi-use pathways, promoting opportunities for hiking, walking, and biking while educating the community on local water conservation and the benefits of outdoor recreation.

GOAL CR-3: INTEGRATED GREEN INFRASTRUCTURE PROVIDING ENVIRONMENTAL, SOCIAL, AND CLIMATE BENEFITS THROUGHOUT THE URBAN ENVIRONMENT

Policy CR-3.1: Low-Impact Development (LID) and Green Infrastructure. Incorporate LID techniques, including vegetated channels, bioswales, permeable pavements, rain gardens, and green streets in public and private projects to manage stormwater on-site, reduce flooding, enhance groundwater recharge, and support urban biodiversity.

Policy CR-3.2: Community Gardens and Pocket Parks. Provide small-scale green spaces that improve ecological function, increase urban canopy, and engage residents in stewardship and environmental education.

Policy CR-3.3: Rainwater Harvesting and Cisterns. Encourage collection and reuse of rainwater for irrigation and other non-potable uses to reduce demand on potable water supplies and increase local water resilience.

GOAL CR-4: URBAN BIODIVERSITY AND HABITAT CONNECTIVITY SUPPORTING DIVERSE WILDLIFE AND ECOLOGICAL FUNCTION

Policy CR-4.1: Habitat Enhancement. Expand native vegetation and create microhabitats in parks, river corridors, and landscaped areas to support small mammals, birds, pollinators, and other beneficial insects.

Policy CR-4.2: Ecological Connectivity. Enhance linkages between parks, green spaces, and river corridors to facilitate wildlife movement and strengthen ecosystem resilience.

Policy CR-4.3: Urban Wildlife Management. Promote coexistence with wildlife by protecting habitats, minimizing human-wildlife conflicts, and maintaining healthy populations of native species.

Policy CR-4.4: Protect Nesting Birds. Protect active nests of native birds during construction and other ground-disturbing activities by implementing appropriate avoidance and protection measures consistent with the California Fish and Game Code and the Federal Migratory Bird Treaty Act.

Policy CR-4.5: Rewilding and Restoration. Restore natural processes through native plantings, pollinator gardens, shaded refuges, and small wetlands to improve ecological function and climate resilience.

Policy CR-4.6: Pollinator-Friendly Public Spaces. Integrate pollinator-supportive vegetation and "learning gardens" into city parks, joint-use school sites, and landscaped areas.

Policy CR-4.7: Rio Hondo and San Gabriel River Corridors. Treat the river corridors as essential ecological greenways, prioritizing native habitat restoration to support biodiversity, water quality, and migratory bird populations.

Policy CR-4.8: Native and Drought-Tolerant Landscaping. Promote the use of climate-appropriate native landscaping in public and private spaces to support local wildlife and reduce water demand.

Policy CR-4.9: Groundwater Protection and Recharge. Safeguard the Central Groundwater Basin from contamination, and implement green infrastructure projects that collect, filter, and infiltrate stormwater to enhance local groundwater recharge.

GOAL CR-5: EXPANDED AND RESILIENT TREE CANOPY AND LANDSCAPED AREAS THAT ENHANCE ENVIRONMENTAL QUALITY AND COMMUNITY RESILIENCE

Policy CR-5.1: Tree Canopy Expansion. Significantly increase tree plantings across public and private areas, prioritizing neighborhoods with limited canopy coverage, and along parks, major street corridors, and river corridors.

Policy CR-5.2: Arboricultural Management. Maintain a healthy urban forest through selective removal of declining or dead trees, tree replacement, and proper care practices, ensuring long-term tree health and longevity.

Policy CR-5.3: Mature and Historic Tree Preservation. Protect and preserve mature, heritage, and significant trees during development, construction, and public projects to maintain ecological, aesthetic, and cultural value.

Policy CR-5.4: Environmental Services Maximization. Enhance the environmental benefits of urban trees, including shade, air quality improvement, carbon sequestration, stormwater management, and wildlife habitat.

Policy CR-5.5: Sustainable Landscaping Standards. Promote the use of native and drought-tolerant plants, reduced water demand, and integrated green infrastructure features into both public and private landscapes.

Policy CR-5.6: Neighborhood Tree Initiatives. Expand canopy coverage in residential neighborhoods to improve quality of life, reduce urban heat, and support equitable access to green space.

Policy CR-5.7: Community Engagement and Support. Encourage public participation through free tree programs, educational initiatives, volunteer planting, and stewardship activities to strengthen local ownership of the urban forest.

Policy CR-5.8: Urban Forest Funding. Secure sustainable funding sources to support planting, maintenance, and long-term management of the urban forest, ensuring continued growth and resilience.

GOAL CR-6: LONG-TERM WATER SUSTAINABILITY THROUGH CONSERVATION, PROTECTION, AND EFFICIENT MANAGEMENT OF LOCAL WATER RESOURCES

Policy CR-6.1: Water Demand Reduction. Promote water-efficient fixtures, conservation practices, and public education programs across municipal, residential, and commercial sectors to reduce overall water use.

Policy CR-6.2: Recycled Water Expansion. Support the use of recycled water (purple pipe systems) for irrigation and other non-potable applications wherever feasible to reduce reliance on potable water supplies.

GOAL CR-7: COMMUNITY SUSTAINABILITY REFLECTED IN WASTE REDUCTION, ENERGY EFFICIENCY, AND WATER CONSERVATION

Policy CR-7.1: Energy Efficiency. Improve energy efficiency across municipal operations, residential buildings, and commercial sectors to reduce demand and lower greenhouse gas emissions,

Policy CR-7.2: Renewable Energy Deployment. Support rooftop solar, energy storage, electrification projects, and other renewable energy technologies to reduce reliance on fossil fuels and advance local sustainability goals.

Policy CR-7.3: Compliance with Energy Standards. Require new development, retrofits, and major renovations meet or exceed state energy standards, including California Title 24, to maintain high efficiency and environmental performance.

GOAL CR-8: SUSTAINABLE BUILDING PRACTICES ENHANCING RESILIENCE, REDUCING ENVIRONMENTAL IMPACTS, AND SUPPORTING CLIMATE ADAPTATION

Policy CR-8.1: Sustainable and Locally Sourced Materials. Encourage the use of recycled, locally sourced, and low-impact building materials in both public and private construction to minimize environmental impacts and support local sustainability initiatives.

Policy CR-8.2: Passive and Renewable Energy Design. Promote the integration of passive solar strategies, energy-efficient building orientation, rooftop solar installations, energy storage, and other renewable energy technologies to reduce energy demand, lower greenhouse gas emissions, and improve building performance.

Policy CR-8.3: Climate-Responsive and Resilient Design. Design buildings, streetscapes, and public spaces to withstand climate-related challenges, including extreme heat, drought, and flooding.

Policy CR-8.4: Holistic Sustainability Approaches. Promote sustainable design practices, including cool roofs, water-efficient landscaping, and energy-efficient building features, to support Downey's long-term environmental goals

GOAL CR-9: AIR QUALITY IMPROVEMENT AND GREENHOUSE GAS REDUCTION TO PROTECT PUBLIC HEALTH AND MITIGATE CLIMATE CHANGE IMPACTS

Policy CR-9.1: Emissions Management. Reduce mobile, stationary, and industrial sources of pollutants to improve air quality, protect public health, and mitigate climate change impacts.

Policy CR-9.2: Clean and Active Transportation. Encourage the use of public transit, walking, bicycling, and low-emission vehicles, and support strategies to reduce unnecessary vehicle idling and transportation-related emissions.

Policy CR-9.3: Energy and Buildings Efficiency. Implement greenhouse gas reduction strategies in municipal and community operations, including energy use and building efficiency, in alignment with regional and state climate goals.

Policy CR-9.4: Climate Adaptation and Resilient Infrastructure. Integrate extreme heat planning, flood preparedness, and resilient infrastructure strategies into City operations and planning to reduce vulnerabilities to climate change impacts.

ENVIRONMENTAL JUSTICE GOALS AND POLICIES

GOAL EJ-1: REDUCE EXPOSURE TO POLLUTION, HAZARDOUS MATERIALS, AND ENVIRONMENTAL HEALTH RISKS, WITH EMPHASIS ON NEIGHBORHOODS FACING THE HIGHEST BURDENS.

Policy EJ-1.1: Air Quality and Transportation. Implement land use and transportation strategies that reduce public exposure to toxic air contaminants, including measures that decrease reliance on automobile travel, reduce vehicle emissions, and promote cleaner transportation options.

Policy EJ-1.2: Industrial and Commercial Impacts. Require heavy industrial and high-intensity commercial activities near residential neighborhoods, schools, parks, or other sensitive uses to mitigate impacts such as air pollution, noise, odors, and operational hazards.

Policy EJ-1.3: Development Review for Sensitive Areas. Apply enhanced review standards and limit variances for new or expanded industrial or commercial uses near sensitive receptors, particularly in disadvantaged communities.

Policy EJ-1.4: Vegetation and Green Buffers. Use trees, landscaping, and green infrastructure as buffers between residential neighborhoods and major pollution sources, including freeways, rail corridors, and industrial districts, with priority in disadvantaged areas.

Policy EJ-1.5: Hazardous Materials Oversight. Coordinate with regulatory agencies to monitor ongoing compliance of facilities that handle hazardous materials or generate toxic releases.

Policy EJ-1.6: Contaminated Site Cleanup. Prioritize remediation and reuse of contaminated or underutilized sites within disadvantaged communities to reduce long-term exposure risks and encourage community reinvestment.

Policy EJ-1.7: Lead Exposure Reduction. Encourage the identification and safe remediation of lead hazards in older housing, particularly homes constructed before 1960, through education, rehabilitation programs, and compliance with applicable state and federal regulations.

Policy EJ-1.8: Reduce Heavy Polluting Uses. Promote land use patterns that reduce potential exposure to air emissions, hazardous materials, and other pollutants by discouraging the establishment or expansion of heavy polluting land uses near residential neighborhoods, schools, parks, and other sensitive receptors

Policy EJ-1.9: City-Driven Environmental Monitoring. Implement and support local air quality and environmental monitoring programs to identify environmental conditions, inform planning and regulatory decisions, and support public education and awareness efforts.

Policy EJ-1.10: Truck and Transportation Emissions. Design and enforce truck routes, limit idling near sensitive uses, and support electrification of freight and public transit vehicles to reduce exposure to traffic-related pollution.

GOAL EJ-2: PRIORITIZE COMMUNITY NEEDS AND EQUITABLE INVESTMENTS IN INFRASTRUCTURE, PUBLIC FACILITIES, AND NEIGHBORHOOD IMPROVEMENTS, WITH EMPHASIS ON HISTORICALLY UNDERSERVED AND DISADVANTAGED COMMUNITIES.

Policy EJ-2.1: Infrastructure Upgrades. Target street repairs, sidewalks, drainage, lighting, and other public infrastructure improvements to neighborhoods experiencing historic underinvestment.

Policy EJ-2.2: Safety and Complete Streets. Implement safety-focused street improvements, including traffic calming, crosswalks, and bike/pedestrian enhancements, to reduce hazards and support active transportation in disadvantaged areas.

Policy EJ-2.3: Tree Canopy and Shade. Increase urban tree canopy and shaded areas along streets, sidewalks, and public spaces, prioritizing neighborhoods with limited green cover to reduce heat and improve air quality.

Policy EJ-2.4: Community Facilities Upgrades. Invest in the maintenance, expansion, and programming of libraries, recreation centers, parks, and other community facilities in areas with high vulnerability to ensure equitable access to public services.

Policy EJ-2.5: Resource Allocation Transparency. Use clear criteria and public reporting to guide and communicate how funding and resources are allocated to address the greatest needs and disparities across Downey's neighborhoods.

Policy EJ-2.6: Holistic Neighborhood Revitalization. Promote initiatives that combine environmental remediation, green infrastructure, safe active transportation, and community amenities in historically overburdened neighborhoods to create healthier, safer, and more resilient communities.

Policy EJ-2.7: Neighborhood Cleanliness and Sanitation. Strengthen code enforcement, waste management, and public space maintenance to improve neighborhood health, safety, and livability, particularly in overburdened areas.

Policy EJ-2.8: Connectivity to Services. Improve pedestrian, bicycle, and transit connections between neighborhoods and key community facilities, including parks, libraries, clinics, and schools.

Policy EJ-2.9: Digital and Communication Access. Expand broadband and cellular coverage and improve access to online services to support equitable access to information, programs, and public participation.

Policy EJ 2.10: Community Facilities and Services. Provide equitable access to libraries, community centers, recreation facilities, and cultural programs that support learning, social interaction, wellness, and civic participation in all neighborhoods, with priority for historically underserved areas.

Policy EJ 2.11: Green Infrastructure and Climate Resilience. Integrate green infrastructure, tree canopy, and shaded streets along pedestrian corridors, parks, and public spaces to improve comfort, reduce urban heat, and enhance environmental quality. Strengthen connections to regional resources such as the Rio Hondo and San Gabriel River.

GOAL EJ-3: PROMOTE HEALTHY EATING, ACCESS TO PHYSICAL ACTIVITY, AND VIBRANT, WELLNESS-SUPPORTING COMMUNITIES.

Policy EJ-3.1: Healthy Food Access. Support development of grocery stores, farmers' markets, community-supported agriculture, and other healthy food outlets near residential areas, prioritizing disadvantaged neighborhoods.

Policy EJ-3.2: Nutrition Education and Food Program. Encourage programs that educate residents on nutrition and connect families to affordable, locally grown food.

Policy EJ-3.3: Parks, Recreation, and Physical Activity. Expand and enhance parks, open space, trails, recreation programs, and active living facilities. Ensure that residents of all ages and abilities, particularly in underserved neighborhoods, have safe and convenient access to opportunities for physical activity.

Policy EJ-3.7: Food Equity and Urban Agriculture. Encourage community gardens, urban agriculture programs, and farm-to-community initiatives to improve access to healthy, locally grown food, and promote resident participation in planning, operation, and decision-making to support food security and community engagement.

Policy EJ-3.8: Healthy Living Programs. Support programs that integrate nutrition, physical activity, and wellness education into schools, recreation centers, and community events, and collaborate with local health agencies and nonprofits to provide equitable opportunities for healthy lifestyles.

Policy EJ-3.9: Mobile and Flexible Recreation Programs. Provide traveling or pop-up recreation programs that deliver physical activity opportunities directly to neighborhoods lacking nearby parks or facilities.

Policy EJ-3.10: Equitable Program Access. Ensure recreational programming is accessible to residents of all ages, abilities, and income levels, including youth, seniors, and households with limited private amenities.

GOAL EJ-4: PROMOTE MEANINGFUL, INCLUSIVE, AND TRANSPARENT PARTICIPATION IN CITY DECISION-MAKING.

Policy EJ-4.1: Inclusive Engagement. Implement civic engagement practices that are accessible, culturally responsive, and inclusive of all residents, consistent with the City's Strategic Plan goals.

Policy EJ-4.2: Transparent Outreach. Conduct public meetings and outreach in a transparent manner, providing accommodations for language, accessibility, and schedules that reflect community availability.

Policy EJ-4.3: Clear Information. Provide clear, consistent, and nonpartisan information to support informed participation, build trust, and strengthen public confidence in local decisions.

Policy EJ-4.4: Education on Environmental Justice. Increase awareness and understanding of environmental justice issues to support meaningful resident participation in identifying priorities and shaping solutions.

Policy EJ-4.5: Community Capacity Building. Provide training, workshops, and technical assistance to empower residents to participate in decisions, advocate for community priorities,

and navigate environmental, health, and land-use regulations.

Policy EJ-4.6: Community-Informed Planning. Use feedback from residents, particularly from disadvantaged neighborhoods, to identify priorities, guide targeted investments, and evaluate the effectiveness of environmental justice strategies.

Policy EJ-4.7: Ongoing Engagement and Feedback Loops. Establish regular mechanisms for residents to review progress on environmental justice initiatives and provide input on updates to programs, facilities, and policies.

SAFETY GOALS AND POLICIES

Seismic and Seismic-Related Hazards

GOAL 1: REDUCE THE RISK OF DAMAGE, INJURY, AND LOSS OF LIFE FROM SEISMIC AND GEOLOGIC HAZARDS THROUGH SAFE BUILDING DESIGN, RELIABLE INFRASTRUCTURE, AND EFFECTIVE EMERGENCY READINESS.

Policy S.1-1: Safe Development and Construction. Ensure that new development and major renovations meet current seismic safety standards and incorporate appropriate geotechnical design practices.

Policy S.1-2: Retrofit of Vulnerable Structures. Encourage the retrofit of older buildings, critical facilities, and utilities to reduce risk from earthquakes and related ground failure.

Policy S.1-3: Emergency Readiness. Coordinate with regional partners and utility providers to ensure rapid response and recovery following seismic events.

Policy S.1-4: Public Awareness and Education. Promote community preparedness through public information campaigns and resources on earthquake safety and recovery.

Policy S.1-5: Hazard Mapping and Monitoring. Maintain and use up-to-date hazard maps and data to guide land use decisions and infrastructure investments.

Flood Hazards and Flood Risk

GOAL 2: PROTECT THE COMMUNITY FROM PROPERTY DAMAGE, INFRASTRUCTURE DISRUPTION, AND PUBLIC SAFETY HAZARDS THROUGH EFFECTIVE FLOOD MANAGEMENT AND SAFE DEVELOPMENT PRACTICES.

Policy S.2-1: Flood Management Systems. Maintain and improve the storm drain and flood control infrastructure to reduce localized flooding and protect developed areas.

Policy S.2-2: Safe and Resilient Development. Ensure that new development and redevelopment incorporate drainage, green infrastructure, and flood protection measures consistent with local, state, and federal standards.

Policy S.2-3: Regional Agency Coordination. Collaborate with the Los Angeles County Flood Control District, Caltrans, and other agencies to manage regional drainage systems and mitigate flood risks.

Policy S.2-4: Flood Hazard Information and Awareness. Provide up-to-date floodplain information and guidance to residents, businesses, and developers to reduce flood risks and property loss.

Policy S.2-5: Emergency Preparedness for Flood

Events. Integrate flood response and evacuation procedures into the City's emergency operations planning and public education programs.

Policy S.2-6: Dam Inundation Risk. Coordinate with responsible agencies to monitor dam conditions and support improvements that reduce downstream inundation risk.

Pollution Hazards

GOAL 3: REDUCE THE RISKS TO PUBLIC HEALTH, PROPERTY, AND THE ENVIRONMENT FROM THE STORAGE, USE, TRANSPORT, AND EMISSION OF HAZARDOUS MATERIALS THROUGH RESPONSIBLE MANAGEMENT, PREVENTION, AND REMEDIATION PRACTICES.

Policy S.3-1: Safe and Responsible Management of Hazardous Materials. Enforce storage, transport, treatment, recycling, and disposal requirements consistent with all applicable federal, state, and local regulations.

Policy S.3-2: Assessment and Remediation Before Site Reuse or Redevelopment. Make sure that sites with known or potential contamination are properly assessed and remediated before reuse or redevelopment. Plan future uses of these sites that align with cleanup requirements and site conditions.

Policy S.3-3: Protection of Sensitive Uses. Require new or existing facilities that use hazardous materials to incorporate design and operational measures that protect nearby sensitive uses such as schools, hospitals, childcare centers, and residential areas.

Policy S.3-4: Placement of Sensitive Uses. Limit the placement of sensitive uses near existing industrial operations or hazardous materials users unless effective safeguards and mitigation measures are in place to prevent conflicts or exposure risks.

Policy S.3-5: Toxic Air Emissions Monitoring. Monitor and evaluate facilities that generate toxic air contaminants or hazardous emissions to reduce exposure risks and protect nearby sensitive land uses.

Policy S.3-6: Storage Tanks Design and Storage Compliance. Monitor compliance with state and federal standards for the design, installation, and operation of storage tanks to minimize risks of leaks and exposure.

Emergency Preparedness and Response

GOAL 4: MAINTAIN EFFECTIVE COMMUNITY PREPAREDNESS AND COORDINATED EMERGENCY RESPONSE TO PROTECT LIFE, PROPERTY, AND CRITICAL SERVICES DURING DISASTERS.

Policy S.4-1: Comprehensive Emergency Plans. Keep the city's Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP) up to date, consistent with state and federal standards, and integrated across departments.

Policy S.4-2: Interdepartmental and Interagency Coordination. Ensure collaboration among City departments and with regional, state, and federal partners to strengthen disaster preparedness, response, and recovery.

Policy S.4-3: Public Education and Awareness About Emergency Preparedness. Provide ongoing community outreach and training programs, such as CERT and Downey Alerts, to promote individual and neighborhood preparedness.

Policy S.4-4: Critical Facilities and Services. Identify, maintain, and protect critical facilities and infrastructure needed to support emergency response and community recovery during and after disasters.

Policy S.4-5: Reliable and Accurate Emergency Communications. Maintain reliable, redundant communication systems, including mass notification platforms, to deliver timely and accurate emergency information to the public.

Policy S.4-6: Evacuation Route Planning and Coordination. Coordinate with County and Regional emergency management agencies to identify, maintain, and improve evacuation routes that ensure safe, efficient movement of people during emergencies.

Policy S.4-7: Equity in preparedness and response. Ensure that emergency planning, communication, and recovery programs address the needs of vulnerable and underserved populations across all neighborhoods. Partner with disaster relief agencies like the Red Cross to ensure resources are available to support residents in the aftermath of an event.

Policy S.4-8: Emergency Access and Evacuation for the Treasure Island Neighborhood. Recognize the limited ingress and egress conditions in the Treasure Island Neighborhood by incorporating evacuation planning, emergency access considerations, and coordination with emergency response agencies to allow for safe, timely evacuation and emergency response during flood, storm, or other emergency events.

Policy S.4-9: Emergency Management Technology and Data Systems. Utilize and maintain emergency management technologies, data systems, and decision-support tools—such as real-time monitoring, geographic information systems mapping, mass notification platforms, and interagency data sharing—to enhance situational awareness, coordination, and effective response during emergencies.

Policy S.5-10: Emergency Response Mobility. Reduce congestion-related delays to emergency response by prioritizing emergency vehicle mobility through roadway design, traffic operations, and coordinated land use and transportation planning.

Public Safety: Law Enforcement and Crime Prevention

GOAL 5: MAINTAIN SAFE, SECURE NEIGHBORHOODS SUPPORTED BY PROACTIVE LAW ENFORCEMENT, COMMUNITY TRUST, AND EQUITABLE ACCESS TO PUBLIC SAFETY RESOURCES.

Policy S.5-1: Community-oriented Policing. Encourage ongoing collaboration between police officers, residents, businesses, and community organizations to identify safety concerns and develop local solutions.

Policy S.5-2: Safe Public Spaces. Design and maintain parks, streets, and civic areas to promote natural surveillance, lighting, and activity that enhance both actual and perceived safety. Use Crime Prevention through Environmental Design (CPTED) principles in the design or redevelopment of projects and buildings.

Policy S.5-3: Local Homelessness and Public Safety. Coordinate with social service providers, mental health professionals, and regional partners to address safety concerns related to homelessness through outreach, connection to services, and compassionate enforcement where needed.

Policy S.5-4: Community and Youth Engagement. Encourage active participation in public safety through neighborhood and youth programs that build trust, foster leadership, and strengthen community connections. Support partnerships such as neighborhood watch groups, youth mentorships, and other initiatives that promote shared responsibility for a safe community.

Policy S.5-5: Transparency and Accountability in Public Safety Services. Promote open communication between law enforcement and the public through community meetings, reporting, and feedback opportunities to strengthen trust and accountability.

Policy S.5-6: Regional Coordination. Collaborate with neighboring jurisdictions and county agencies to share information, coordinate public safety responses, and address cross-jurisdictional issues affecting community safety.

Policy S.5-7: Police Services Responsive to Community Needs. Maintain adequate police staffing, equipment, technology, and facility maintenance to provide effective law enforcement services, emergency response, crime prevention, and community policing efforts that meet existing and future community needs.

Fire Protection Services

GOAL 6: MAINTAIN PROMPT AND EFFECTIVE FIRE PROTECTION SERVICES THAT PREVENT LOSS OF LIFE, REDUCE PROPERTY DAMAGE, AND ENSURE RAPID RESPONSE TO EMERGENCIES.

Policy S.6-1: Service Levels Responsive to Population Growth. Ensure adequate staffing, equipment, and facilities to provide timely and effective fire protection and emergency medical response throughout the city.

Policy S.6-2: Development Coordination. Ensure Fire personnel continues to participate in project reviews to ensure that new and redeveloped properties provide sufficient fire access, water supply, and life-safety systems.

Policy S.6-3: Structural and Urban Fire Prevention. Promote fire-safe building design and ongoing maintenance through fire code enforcement, building inspections, and public education.

Policy S.6-4: Public Education and Awareness. Expand public education programs that inform residents and businesses about fire prevention, evacuation procedures, and emergency preparedness.

Policy S.6-5: Hazardous Materials and Industrial Safety. Continue coordination with businesses and regional agencies to prevent and safely manage hazardous materials incidents and industrial fire risks.

Policy S.6-6: Interagency Coordination. Maintain mutual aid and cooperative agreements with neighboring jurisdictions and regional fire agencies to ensure seamless response to emergencies.

Climate Adaptation and Resilience

GOAL 7: ACHIEVE A CLIMATE-RESILIENT COMMUNITY ABLE TO ADAPT TO, WITHSTAND, AND RECOVER FROM THE IMPACTS OF CLIMATE CHANGE WHILE PROTECTING PUBLIC HEALTH AND ESSENTIAL INFRASTRUCTURE.

Policy S.7-1: Local Resilience to Climate Hazards. Plan for and respond to climate-related hazards including extreme heat, drought, flooding, and power disruptions by maintaining reliable infrastructure, emergency systems, and public services that protect community health and safety.

Policy S.7-2: Urban Greening and Heat Mitigation. Implement strategies that increase tree canopy, shade, and cool surfaces through the Urban Forest Management Plan and other initiatives to reduce heat exposure and improve air quality.

Policy S.7-3: Reliable and Sustainable Water Supply. Promote water conservation, recycled water use, and regional coordination to maintain reliable water supplies during droughts and long-term climate stress.

Policy S.7-4: Energy Efficiency and Grid Reliability. Collaborate with regional utilities and programs such as the Clean Power Alliance to expand renewable energy, improve efficiency, and increase backup power capacity for critical facilities.

Policy S.7-5: Vulnerable Populations. Prioritize support for vulnerable residents such as seniors, low-income households, and those with health conditions through equitable access to cooling centers, emergency information, and transportation during climate events.

Policy S.7-6: Public Cooling and Heat Relief Facilities. Identify, operate, and promote cooling centers during extreme heat events, with a focus on accessibility, geographic coverage, and coordination with emergency response and mass notification systems to protect public health.

NOISE GOALS AND POLICIES

Noise Sources and Land Use Compatibility

GOAL N-1: REDUCED MOBILE NOISE IMPACTS FROM TRANSPORTATION AND REGIONAL INFRASTRUCTURE

Policy N.1-1: Roadway and Vehicular Noise. Reduce noise generated by vehicular traffic on freeways, arterials, and local streets through traffic management, enforcement of vehicle noise standards, and roadway and circulation planning that minimizes noise in residential neighborhoods.

Policy N.1-2: Rail Noise. Reduce noise impacts from freight and passenger rail operations near residential and other noise-sensitive land uses through coordination with rail operators, operational controls, infrastructure improvements, and sound attenuation requirements for nearby development.

Policy N.1-3: Aviation Noise. Minimize noise impacts from commercial aircraft, private aircraft, and helicopters through regional coordination, regulation of helicopter facilities, and monitoring of aviation operations affecting the city.

Policy N.1-4: Low-Emission Vehicles and Active Transportation. Encourage the adoption of electric and low-emission vehicles, active transportation networks, and traffic management strategies that reduce vehicular noise and improve air quality.

GOAL N-2: LIMITED NOISE IMPACTS FROM STATIONARY SOURCES

Policy N.2-1: Construction and Operational Noise. Minimize noise generated by construction, maintenance, and operational activities by

limiting hours of activity, encouraging quieter equipment and practices, and enforcing adopted noise standards.

Policy N.2-2: Mixed-Use Development Noise. Require mixed-use developments to incorporate design and construction techniques that reduce noise and vibration between residential and nonresidential uses.

Policy N.2-3: Industrial Noise Near Residential Areas. Minimize noise impacts from industrial uses located adjacent to residential areas by requiring effective noise control measures, including equipment enclosures, operational restrictions, and buffering through structural barriers, and by promoting site design and building techniques that reduce both mobile and stationary noise exposure of nearby residents.

Policy N.2-4: Neighborhood Noise Compatibility. Encourage land use patterns and site designs that reduce noise intrusion into residential neighborhoods and other noise-sensitive areas, particularly during nighttime hours.

GOAL N-3: NOISE-SENSITIVE LAND USES PROTECTED FROM EXCESSIVE NOISE

Policy N.3-1: Noise-Sensitive Uses. Protect existing and planned noise-sensitive land uses by avoiding incompatible siting, requiring interior noise attenuation where needed, and minimizing noise from adjacent non-residential uses.

Policy N.3-2: Non-Residential Noise Controls. Limit operational hours, loading activities, and equipment placement for nonresidential uses located near residential or other noise-sensitive land uses.

Policy N.3-3: Hospital Noise Environments. Minimize noise impacts on hospitals by promoting compatible adjacent land uses and incorporating effective sound attenuation and site design measures.

Policy N.3-4: Residential Noise Environments. Minimize noise impacts on residential areas to preserve community well-being by preventing land uses and development that generate excessive noise, implementing sound attenuation measures for mobile and stationary sources, and promoting site and building design practices that reduce interior and exterior noise exposure.

Policy N.3-5: Sensitive Uses from Freeway Noise. Reduce noise exposure from freeways and major roadways on sensitive land uses, including schools, hospitals, parks, and residential areas, by encouraging sound attenuation measures such as noise barriers, building design strategies, and landscape buffers, and by guiding development and site planning to reduce exposure to both mobile and stationary noise sources.

Policy N.3-6: Infrastructure and Design for Noise Reduction. Promote the use of noise-reducing infrastructure, including quiet pavement, building orientation and façade design, and vibration-isolating materials, to minimize exposure to mobile and stationary noise sources near sensitive land uses.

Policy N.3-7: Multi-Benefit Infrastructure and Site Design. Encourage infrastructure and site design that combine noise reduction with additional community benefits, including landscaping, urban greening, and stormwater management.

GOAL N-4: NOISE CONSIDERATIONS INTEGRATED INTO LAND USE AND DEVELOPMENT DECISIONS

Policy N.4-1: Noise in Development Review. Integrate noise considerations into land use

planning and discretionary development review to prevent new noise conflicts.

Policy N.4-2: Noise Analysis. Require noise and acoustic analyses for development projects located near major noise sources or noise-sensitive land uses.

Policy N.4-3: Noise Mitigation. Require noise mitigation measures to be incorporated into project design, site plans, and conditions of approval.

Policy N.4-4: Noise Planning for Redevelopment and Infill. Incorporate noise considerations into long-term planning, redevelopment, and infill projects to minimize future conflicts between noise-generating and noise-sensitive land uses.

GOAL N-5: EFFECTIVE NOISE STANDARDS AND CONSISTENT ENFORCEMENT

Policy N.5-1: Noise Management. Maintain, periodically review, and update the city's noise standards, Noise Ordinance, and related regulations to reflect current conditions, evolving technologies, emerging noise sources, cumulative impacts, and community expectations while protecting public health, safety, and welfare.

Policy N.5-3: Enforcement. Enforce applicable noise standards and promote public awareness of noise regulations, health impacts, and enforcement procedures.

Policy N.5-4: Regional Coordination. Coordinate with state, regional, and federal agencies, and adjacent jurisdictions, to address noise impacts originating outside city limits.

Policy N.5-5: Smart Noise Management. Support the use of data-driven tools and technologies to identify noise impacts and inform noise management and mitigation efforts

Policy N.5-6: Targeted Noise Monitoring. Conduct targeted noise monitoring and data collection in areas with recurring noise complaints, identified noise-sensitive uses, or potential conflicts between land uses to support informed planning, enforcement, and mitigation efforts.

Policy N.5-7: Noise Education and Community Outreach. Provide education and outreach programs to inform residents, businesses, and institutions about noise impacts, mitigation measures, and complaint procedures.

DESIGN GOALS AND POLICIES

GOAL D-1: NEIGHBORHOODS, DISTRICTS, AND CORRIDORS WITH A DISTINCT AND RECOGNIZABLE VISUAL AND CULTURAL IDENTITY THAT REFLECTS COMMUNITY CHARACTER

Policy D-1.1: Community Identity. Reinforce neighborhood identity through compatible building scale, landscaping, and architectural features that reflect established development patterns.

Policy D-1.2: Gateways. Enhance community and district entry points through signage, landscaping, architectural features, and public art to create a memorable sense of arrival.

Policy D-1.3: Cultural Expression. Integrate public art, cultural markers, and historically significant design elements that celebrate Downey's heritage and reflect community diversity.

Policy D-1.4: Design Themes. Ensure consistency in design themes, streetscape treatments, and architectural character across districts and corridors while allowing localized identity.

Policy D-1.5: Landmarks. Preserve and enhance defining features, landmarks, and valued open spaces to strengthen community character.

GOAL D-2: AN URBAN FRAMEWORK THAT IS WELL-DEFINED, COORDINATED, AND SUPPORTS VIBRANT, WALKABLE, AND CONNECTED NEIGHBORHOODS, DISTRICTS, AND ACTIVITY CENTERS.

Policy D-2.1: District and Neighborhood Identity. Establish clear identity, character themes, and urban form expectations for districts and neighborhoods through coordinated architecture, signage, landscaping, street trees, public art, and design features that reinforce a cohesive sense of place.

Policy D-2.2: Neighborhood Compatibility and Transitions. Ensure new development respects the scale, height, massing, and setbacks of surrounding areas and incorporates buffers, landscaping, and transitional design between residential neighborhoods and higher-intensity uses.

Policy D-2.3: Active District Centers and Downtown. Encourage active frontages, ground-floor uses, plazas, gathering spaces, and pedestrian-oriented streetscapes in downtown and district centers to support vibrant, walkable environments, including public gathering spaces in the Civic Center.

Policy D-2.4: Corridor Design and Identity. Apply cohesive standards for streetscape, frontage design, landscaping, signage, and gateways along major corridors while supporting localized identity and pedestrian-oriented building design.

Policy D-2.5: Activity Nodes and Focal Points. Promote complementary retail, civic, entertainment, and mixed-use development at activity nodes, incorporating plazas, outdoor seating, and distinctive design features that create visible and vibrant community focal points.

Policy D-2.6: Multimodal Connectivity. Integrate transit, bicycle facilities, sidewalks, and greenways to strengthen connections between neighborhoods, corridors, districts, and activity centers.

Policy D-2.7: Compatible Redevelopment. Encourage redevelopment that enhances visual quality, livability, and walkability while preserving neighborhood and district character.

GOAL D-3: ARCHITECTURE, BUILDING FORM, AND THE PUBLIC REALM THROUGHOUT DOWNEY THAT ARE HIGH-QUALITY, CONTEXT-SENSITIVE, AND CONTRIBUTE TO CITY IDENTITY

Policy D-3.1: Massing. Articulate building massing to reduce visual bulk, create human-scaled development, and transition appropriately between areas of differing intensity.

Policy D-3.2: Scale and Compatibility. Ensure building height, bulk, and architectural character are compatible with adjacent development, particularly near established neighborhoods, and promote internally consistent design within projects.

Policy D-3.3: Orientation. Orient buildings toward streets and public spaces to support pedestrian activity and enhance street presence.

Policy D-3.4: Materials and Construction Quality. Promote high-quality architectural design through durable materials, quality construction, and well-integrated architectural and landscape design that enhances long-term appearance and reduces maintenance.

Policy D-3.5: Ground-Floor Design. Provide transparent, active, and engaging ground-floor design in commercial and mixed-use areas to support walkability and public activity.

Policy D-3.6: Residential Design Quality. Require single- and multi-family development to respect neighborhood context, scale, and setbacks, and incorporate amenities and design features that enhance livability and long-term value.

Policy D-3.7: Design Guidelines and Professional Review. Establish and maintain design guidelines, and utilize design review processes to promote high-quality architecture, site planning, and landscaping for residential and non-residential development.

Policy D-3.8: Professional Design Services. Encourage the use of qualified design professionals in the preparation of architectural, site, and landscape plans.

Policy D-3.9: Sign and Architectural Integration. Promote high-quality signage that is well integrated with building architecture and contributes to overall visual quality.

GOAL D-4: STREETS, SIDEWALKS, AND PUBLIC SPACES THAT ENGAGE, WITH COHESIVE DESIGN THAT SUPPORTS PEDESTRIAN ACTIVITY AND COMMUNITY INTERACTION

Policy D-4.1: Cohesive Streetscape Design. Apply cohesive streetscape standards for lighting, landscaping, paving, street furniture, signage, and other amenities along corridors and districts to create an attractive and consistent public realm.

Policy D-4.2: Pedestrian Environment. Provide safe, accessible, and comfortable sidewalks and walkways that incorporate shade, street trees, lighting, and barrier-free design.

Policy D-4.3: Plazas and Gathering Spaces. Design plazas and public gathering spaces to support social interaction, civic activity, and community events.

Policy D-4.4: Connectivity. Strengthen connections between neighborhoods, parks, commercial areas, transit, and activity centers through coordinated streetscape and pedestrian improvements.

Policy D-4.5: Active Edges and Street Presence. Encourage building placement, consistent street setbacks, and active frontages that frame public spaces and enhance views from public streets.

Policy D-4.6: Street Yard Landscaping and Visual Quality. Maximize landscaped street setbacks, minimize excessive paving, and discourage uses, security features, or site designs that create an uninviting street environment.

Policy D-4.7: Corridor and Gateway Enhancements. Enhance major corridors and City entry points through landscaped medians, gateway features, streetscape improvements, and ongoing maintenance programs.

Policy D-4.8: Streetscape Investment and Stewardship. Support public investment, partnerships, maintenance districts, and community participation to implement and sustain streetscape and urban greening improvements.

GOAL D-5: PRIVATE PROPERTIES AND DEVELOPMENT SITES THAT ARE MAINTAINED TO REINFORCE NEIGHBORHOOD CHARACTER AND COMMUNITY PRIDE AND SUPPORT FUTURE INVESTMENT

Policy D-5.1: Site Organization and Maintenance. Require that property owners maintain buildings, landscaping, signage, and site improvements to reinforce neighborhood character, property values, and community appearance.

Policy D-5.2: Code Compliance and Enforcement. Promote compliance with municipal codes through proactive enforcement, public education on potential violations, and the elimination of identified violations through development review and property maintenance standards.

Policy D-5.3: Property Upkeep and Neighborhood Preservation. Encourage ongoing property maintenance and designate neighborhood preservation areas where targeted resources and enforcement can address property conditions and community needs.

Policy D-5.4: Screening and Visual Quality. Screen utilities, mechanical equipment, parking, and service areas to minimize visual impacts and improve site appearance.

Policy D-5.5: Parking Area Improvements. Upgrade parking areas with landscaping, shade, lighting, stormwater features, and pedestrian amenities to improve function and visual quality.

Policy D-5.6: Property and Community Beautification. Encourage façade improvements, property upgrades, beautification programs, community clean-up efforts, and initiatives that promote community pride.

Policy D-5.7: Modernized Development Standards. Update and maintain development and property maintenance regulations to remove outdated requirements and support effective code enforcement.

GOAL D-6: BUILDINGS, SITES, AND LANDSCAPES THAT INCORPORATE CLIMATE-RESPONSIVE DESIGN STRATEGIES AND PROMOTE RESILIENCE.

Policy D-6.1: Building Orientation and Form. Encourage buildings to be designed to optimize passive energy performance through solar orientation, natural ventilation, and site layout that enhances daylighting and thermal comfort.

Policy D-6.2: Architectural Heat Mitigation. Encourage building features and site design that reduce urban heat, including shaded façades, overhangs, recessed windows, pergolas, reflective and high-albedo materials, and landscaped outdoor areas.

Policy D-6.3: Integrated Stormwater Design. Promote green infrastructure in site planning, such as permeable pavements, bioswales, planted retention areas, and rain gardens, to manage runoff while enhancing streetscapes, plazas, and open spaces.

Policy D-6.4: Durable and Sustainable Materials. Encourage building and paving materials, roofing systems, and site furnishings that are durable, low maintenance, and environmentally friendly, including cool roofs and energy-efficient systems.

GOAL D-7: WELCOMED STREETS, SIDEWALKS, AND PUBLIC SPACES

Policy D-7.1: Lighting. Ensure regulation promote adequate lighting, maintain clear sightlines, and minimize visual obstructions.

Policy D-7.2: Natural Surveillance. Encourage pedestrian activity, outdoor seating, and active building frontages to increase natural surveillance.

Policy D-7.3: Circulation. Require site planning to organize circulation and access points to support safety, wayfinding, and efficient movement.

Policy D-7.4: CPTED. Incorporate Crime Prevention Through Environmental Design strategies such as strategic landscaping, seating placement, and lighting to enhance natural surveillance.

CULTURAL RESOURCES GOALS AND POLICIES

GOAL D-8: CULTURAL AND HISTORIC RESOURCES THAT ARE PROTECTED, PRESERVED, AND CELEBRATED

Policy D-8.1: Historic Preservation Framework. Develop and implement a historic preservation framework that identifies and encourages the protection of local historic resources.

Policy D-8.2: Historic Resource Inventory. Maintain an up-to-date inventory of Downey's historic resources and make it publicly accessible.

Policy D-8.3: Design Standards for Historic Resources. Apply objective design standards for compatible alterations, additions, and infill development near historic resources.

Policy D8.4: Preservation Ordinances. Consider adoption of regulations that encourage preservation policies and incentives.

GOAL D-9: HISTORIC RESOURCES THAT ARE MAINTAINED, REHABILITATED, AND ADAPTED IN WAYS THAT RETAIN THEIR SIGNIFICANCE AND SUPPORT COMMUNITY IDENTITY

Policy D-9.1: Adaptive Reuse. Encourage adaptive reuse of historic buildings to support economic viability while retaining historic character.

Policy D-9.2: Owner Incentives. Provide incentives for owners of historic resources, including Mills Act contracts, historic building code alternatives, and tax credits.

Policy D-9.3: Flexibility for Non-Conforming Uses. Allow flexibility for nonconforming uses in historic resources to encourage preservation.

Policy D-9.4: Demolition Review. Require careful review of proposed demolitions of historic resources and consider preservation alternatives.

Policy D-9.5: Integrated Review. Integrate historic preservation into building and planning review processes to maintain resource integrity.

GOAL D-10: INCREASED AWARENESS OF LOCAL HISTORICAL AND CULTURAL RESOURCES.

Policy D-10.1: Public Access to Resources. Make historic context statements, architectural style guides, and resource inventories publicly accessible as educational tools.

Policy D-10.2: Community Education. Develop programs and materials to educate the public

about Downey's history and the benefits of preservation.

Policy D-10.3: Partnerships and Collaboration. Encourage partnerships with local historical organizations, schools, and cultural groups to promote preservation and history.

Policy D-10.4: Recognition and Celebration. Recognize and celebrate successful rehabilitation, adaptive reuse, and stewardship of historic resources through signage or public programs.

GOAL D-11: CITY-OWNED, ARCHAEOLOGICAL, AND TRIBAL CULTURAL RESOURCES THAT ARE PROPERLY MANAGED, PROTECTED, AND CELEBRATED

Policy D-11.1: Stewardship of City-Owned Resources. Ensure City-owned historic resources are preserved and maintained as examples of best practices.

Policy D-11.2: Tribal Consultation. Coordinate with Native American groups and tribal representatives, when required by State law, to identify, protect, and manage tribal cultural resources.

Policy D-11.3: Early Integration in Planning. Integrate archaeological and tribal resource considerations early in planning and development review processes, when required by State law.

Policy D-11.4: Resource Mitigation. Avoid impacts to identified archaeological and tribal cultural resources to the maximum extent feasible in consultation with affected California Native American tribes, and where avoidance is not feasible, implement appropriate measures to minimize impacts and protect the resource.

NOTICE OF PREPARATION
of a Draft Program Environmental Impact Report for the Downey 2045 General Plan Update and Zoning Text and Map Amendment

DATE: March 12, 2026

TO: State Clearinghouse, Responsible Agencies, Trustee Agencies, and Interested Parties

FROM: City of Downey
Community Development Department
11111 Brookshire Avenue
Downey, CA 90241

SUBJECT: Notice of Preparation of a Draft Program Environmental Impact Report for the City of Downey 2045 General Plan Update and Zoning Text and Map Amendment

PROJECT TITLE: City of Downey 2045 General Plan Update and Zoning Text and Map Amendment (project)

PROJECT LOCATION: Entire incorporated boundary of Downey

NOTICE IS HEREBY GIVEN that the City of Downey (City), as Lead Agency, has determined, in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15060 that an EIR is required for the proposed project to comply with CEQA. The City has further determined that in accordance with CEQA Guidelines Section 15168, the EIR should be a Program EIR (PEIR) since the project will be implemented over time. Because the City determined an EIR is clearly required in accordance with CEQA Guidelines 15060(d), an Initial Study has not been prepared.

We are interested in your agency's views as to the appropriate scope and content of the PEIR's environmental information relevant to your agency's statutory responsibilities related to the project. Please include the name of a contact person for your agency in your written response. Also, we would like to be informed of environmental topics or issues that you believe should be included in the PEIR. The proposed project, its location, and its probable environmental effects are described below. The City welcomes public input during the Notice of Preparation (NOP) review period. Pursuant to Public Resources Code Section 21092 and CEQA Guidelines Section 15082(b), your response must be sent not later than 5 PM on April 13, 2026. If no response is received by the end of the review period, the City will presume that you have no response.

NOTICE OF PREPARATION REVIEW PERIOD: March 13, 2026 to April 13, 2026

Please send your comments to:

Attn: Swati Meshram, PhD, AICP, Deputy Director of Community Development-Planning
City of Downey Community Development Department
11111 Brookshire Avenue
Downey, California 90241
generalplan2045@downeyca.org
(562) 904-7154

SCOPING MEETING:

This project is considered a project of statewide, regional or areawide significance pursuant to Section 15206 of the CEQA Guidelines. Therefore, pursuant to CEQA Guidelines Section 15082(c) the City will hold a Scoping Meeting. The purpose of the scoping meeting is to solicit comments of adjacent cities, responsible agencies, trustee agencies, and interested parties requesting notice as to the appropriate scope and content of the Draft PEIR. The public scoping meeting will be held on Thursday April 2, 2026 at 3 p.m. The meeting will include a brief presentation of the project, the EIR process, and the topics to be analyzed in the EIR. Following the presentation, attendees will be given the opportunity to offer their views concerning what environmental issues should be included in the PEIR.

The Public Scoping Meeting will be a web-based video conference that can be accessed at the following link during the aforementioned date and time:

Zoom Link:

https://us06web.zoom.us/j/81496807995

Meeting ID: 814 9680 7995

Passcode: 016377

To allow for mailing, receipt, and CEQA- required public review of this NOP, the comment period closes at 5 PM on April 13, 2026.

PROJECT LOCATION:

The City of Downey encompasses approximately 12.8 square miles and is located in southern Los Angeles County, approximately 8.5 miles southeast of Downtown Los Angeles, and approximately 10.4 miles north of the Ports of Los Angeles and Long Beach (see Figure 1, Regional Context Map). The City of Downey is bordered by the Cities of Bellflower and Paramount to the south; the City of South Gate to the West; the Cities of Commerce, Bell Gardens and Pico Rivera to the north; and the Cities of Santa Fe Springs and Norwalk to the east.

EXISTING GENERAL PLAN:

Each city and county in California must prepare a comprehensive, long-term General Plan to guide its future. The land use element of the General Plan establishes the basic land uses and density of development within the various areas of the City. Under state law, the General Plan elements must be internally consistent, and the City's zoning must be consistent with the General Plan. Downey last comprehensively updated its General Plan in 2005 and has a planning horizon year of 2025. *Downey Vision 2025* is organized into nine elements, which present an integrated and internally consistent set of goals, policies, and implementation measures. Table 1, Existing General Plan Land Use Designations (2005), below provides a general description of each designation along with allowable uses. Figure 3, Existing General Plan Land Use (2005), shows the twelve land use designations of the current General Plan.

Table 1
Existing General Plan Land Use Designations (2005)

Land Use Designation	Acres Total	Percent of Total
Low Density Residential	3,122.6	52.3%
Low/Medium Density Residential	222.5	3.7%
Medium Density Residential	457.3	7.7%
Office	32.5	0.5%
Neighborhood Commercial	72.6	1.2%
General Commercial	280.4	4.7%
Commercial Manufacturing	81.2	1.4%
Manufacturing	245.4	4.1%
Public	492.0	8.2%
Open Space	533.8	8.9%
School	408.9	6.9%
Private School	27.0	0.4%
Total	**5,966.2**	**100%**

Existing Land Use

Figure 4, Existing Land Use (2025), graphically depicts existing land use distribution in Downey as of 2025. Existing land use reflects the current condition of the built environment in a city, which may not always align with the zoning code and map. Downey comprises roughly 22,408 parcels, covering approximately 5,966.2 acres, not including transportation and utility rights-of-way. Most development within the Planning Area is residential (3,802.4 acres). There are an estimated 37,160 dwelling units within the Planning Area. The Planning area also has an estimated population of 111,326 persons.

PROJECT CHARACTERISTICS:

The City of Downey 2045 General Plan Update succeeds the last comprehensive general plan adopted in 2005. The General Plan Update is intended to achieve the land use, transportation, housing, and other goals of the City that reflect the community's growth over the long-term.

General Plan Elements

The 2045 General Plan Update incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The EIR incorporates the goals, policies, and objectives of the each of the Element listed below. These goals, policies, and objectives are utilized to maintain various potential environmental effects of the project at levels that are less than significant and is considered when evaluating the potential environmental impacts of implementing the General Plan. The Housing Element was updated for the 6th cycle in 2022 and planned developments identified in the Land Use Element accommodate the Regional Housing Needs Assessment goal of 6,525 housing units. The 2045 General Plan rewrites all elements except the recently adopted Housing Element and adds a new Environmental Justice Element. The elements are organized as follows:

1. Land Use Element. Guides how land is used and developed to support a balanced mix of housing, jobs, and community amenities.

2. Circulation Element. Plans for safe and efficient movement of people and goods via streets, transit, walking, and biking. Plans for safe, reliable, and capacity-adequate water, wastewater, stormwater, communications, and solid waste/recycling infrastructure.

3. Conservation Element. Promotes the responsible use and protection of natural resources, including water, energy, and air quality.

4. Environmental Justice Element. Aims to prevent disproportionate impacts on vulnerable communities and promote a more inclusive, healthy, and equitable city.

5. Safety Element. Reduces risks from natural and human-made hazards such as earthquakes, flooding, and climate impacts.

6. Noise Element. Minimizes the impact of noise on residents, schools, and sensitive uses through planning and design.

7. Open Space Element. Protects and enhances parks, recreational areas, and natural spaces for public enjoyment and ecological health.

8. Housing Element. Addresses current and future housing needs through policies that support housing production, affordability, and equity. The Housing Element was adopted in 2022 and will not be updated as part of this effort.

9. Design Element. Encourages high-quality architecture, public spaces, and streetscapes, and cultural and historic resources that contribute to a vibrant and welcoming city.

10. Economic Development Element. Supports a diverse, resilient economy by attracting investment, expanding job opportunities, and strengthening local businesses.

Proposed Land Use Plan

The 2045 General Plan Update would establish 4 new land use designations for a total of 16 land use designations. The new set of designations clearly distinguish the land uses allowed and set forth maximum development density and intensity standards. Table 2 compares existing and projected 2045 land use and development capacity for the City of Downey. Figure 5, Proposed General Plan Land Use, illustrates the 2045 General Plan land use plan. The 2045 planning horizon for the Planning Area is estimated to result in increases of approximately 10,350 dwelling units and 2.7 million square feet of non-residential space. An estimated increase of approximately 31,483 residents and 6,649 jobs is projected for the 2045 horizon year.

Table 2
General Plan Update: Comparison of 2025 and 2045

			Existing Conditions (Base Line) - 2025	Future Conditions (Build Out) - 2045	Change	
					Number	Percent
Residential (Housing and Population)	**Dwelling Units**	Single Family	22,500	22,572	72	**0.3%**
		Accessory	813	2,888	2,075	**255.2%**
		Multi-Family	13,847	22,050	8,203	**59.2%**
	Total	**Dwelling Units**	**37,160**	**47,510**	**10,350**	**27.9%**
		Population	**111,326**	**142,809**	**31,483**	**28.3%**
Non-Residential (Building Square Feet and Employees)	Commercial	Building Sq. Ft.	13,093,300	14,265,913	1,172,613	**9.0%**
		Employees	12,927	15,942	3,015	**23.3%**
	Hotels	Rooms	657	957	300	**45.7%**
		Employees	729	1,179	450	**61.8%**
	Office	Building Sq. Ft.	3,226,500	3,692,564	466,064	**14.4%**
		Employees	8,528	9,606	1,078	**12.6%**
	Medical	Building Sq. Ft.	3,576,700	3,673,000	96,300	**2.7%**
		Employees	9,301	9,524	223	**2.4%**
	Industrial	Building Sq. Ft.	3,954,000	4,489,700	535,700	**13.5%**
		Employees	4,242	5,553	1,310	**30.9%**
	Public Facilities	Building Sq. Ft.	6,817,000	7,241,250	**424,250**	**6.2%**
		Employees	8,976	9,548	572	**6.4%**
	Total	**Building Sq. Ft.**	**30,667,500**	**33,362,427**	**2,694,927**	**8.8%**
		Employees	**44,703**	**51,351**	**6,649**	**14.9%**

Zoning Text and Map Amendment

The project includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

PEIR SCOPE:

The EIR for the project will describe existing environmental resource areas and conditions in The City. Pursuant to CEQA Guidelines Section 15125, existing conditions will be described as they exist when this NOP is circulated based on the most recent available data and information. The EIR is intended to be a program-level document that will analyze the broad environmental effects of the project, considering broad alternatives and program-wide mitigation measures. The EIR will evaluate the potentially significant environmental impacts of implementing the proposed General Plan Update and Zoning Amendment and will evaluate whether there are feasible mitigation measures that may lessen or avoid identified significant impacts. No specific development projects are being considered. Rather, the analysis will focus on the reasonably foreseeable direct and indirect physical environmental effects compared to existing conditions that could result from adoption and implementation of the General Plan Update and Zoning Amendment.

In accordance with State CEQA Guidelines Section 15063(a), the City did not prepare an Initial Study, but advises that the EIR will evaluate potentially significant environmental effects on each of the environmental topics outlined in Appendix G of the State CEQA Guidelines. The topics to be analyzed in the EIR include the following:

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

In addition, the EIR will address cumulative impacts, growth inducing impacts, and other issues required by the CEQA Guidelines. Anticipated potentially significant environmental effects of the project include air quality, greenhouse gas emissions, noise, and transportation.

INTENDED USE OF THE PEIR:

The programmatic planning framework proposed in the 2045 General Plan Update would not result in the immediate construction of any new development nor entitlement of any new project. All new development within the City would continue to be subject to the City's permitting, approval, and public participation processes. Elected and appointed officials along with City Staff would review subsequent project applications for consistency with the General Plan, applicable Specific Plans, and the Zoning Code, and would prepare appropriate environmental documentation to comply with CEQA and other applicable environmental requirements.

Pursuant to Section 15168 of the State CEQA Guidelines, this EIR is a Program EIR as it relates to the 2045 General Plan Update. The goals, policies, land use designations, implementation programs, and other substantive components of the General Plan comprise the "program" evaluated in this Program EIR. Subsequent activities undertaken by the City and project proponents to implement the General Plan will be examined and consider this Program EIR to determine the appropriate level of environmental review required under CEQA. Subsequent implementation activities may include but are not limited to the items listed below.

- Rezoning properties to achieve consistency with the General Plan.
- Updating and approval of Specific Plans and other development plans and planning documents.
- Review and approval of general plan amendments, specific plans, and zone changes.
- Approval of annexations, tentative maps, variances, conditional use permits, street vacations, and other land use permits and entitlements.
- Approval of development agreements.
- Approval of facility and service master plans and financing plans.
- Approval and funding of public improvement projects.
- Approval of resource management plans.
- Issuance of permits and other approvals needed for implementation of the General Plan.
- Issuance of permits and other approvals needed for public works and private development projects.

PUBLIC CIRCULATION AND REVIEW OF THE DRAFT PEIR:

After the Draft PEIR has been completed, it will be available for review and comment during a 45-day public review period. Notice of the availability of the Draft PEIR will be released at a later date and will also be available on the City's website. Following that, a Final PEIR will be prepared that includes responses to all comments received during the public review period. Following the release of the Final PEIR, the Planning Commission and City Council will hold public hearings on the PEIR and the project.

QUESTIONS

Please contact Swati Meshram, Deputy Director of Community Development - Planning, at generalplan2045@downeyca.org or (562) 904-7154 for information about the project or if you have any questions regarding this notice.



Figure 1 Regional Context Map

Downey 2045 General Plan Update and Zoning Map Amendment
Downey, California

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Figure 2 Planning Area Map

Downey 2045 General Plan Update and Zoning Map Amendment
Downey, California

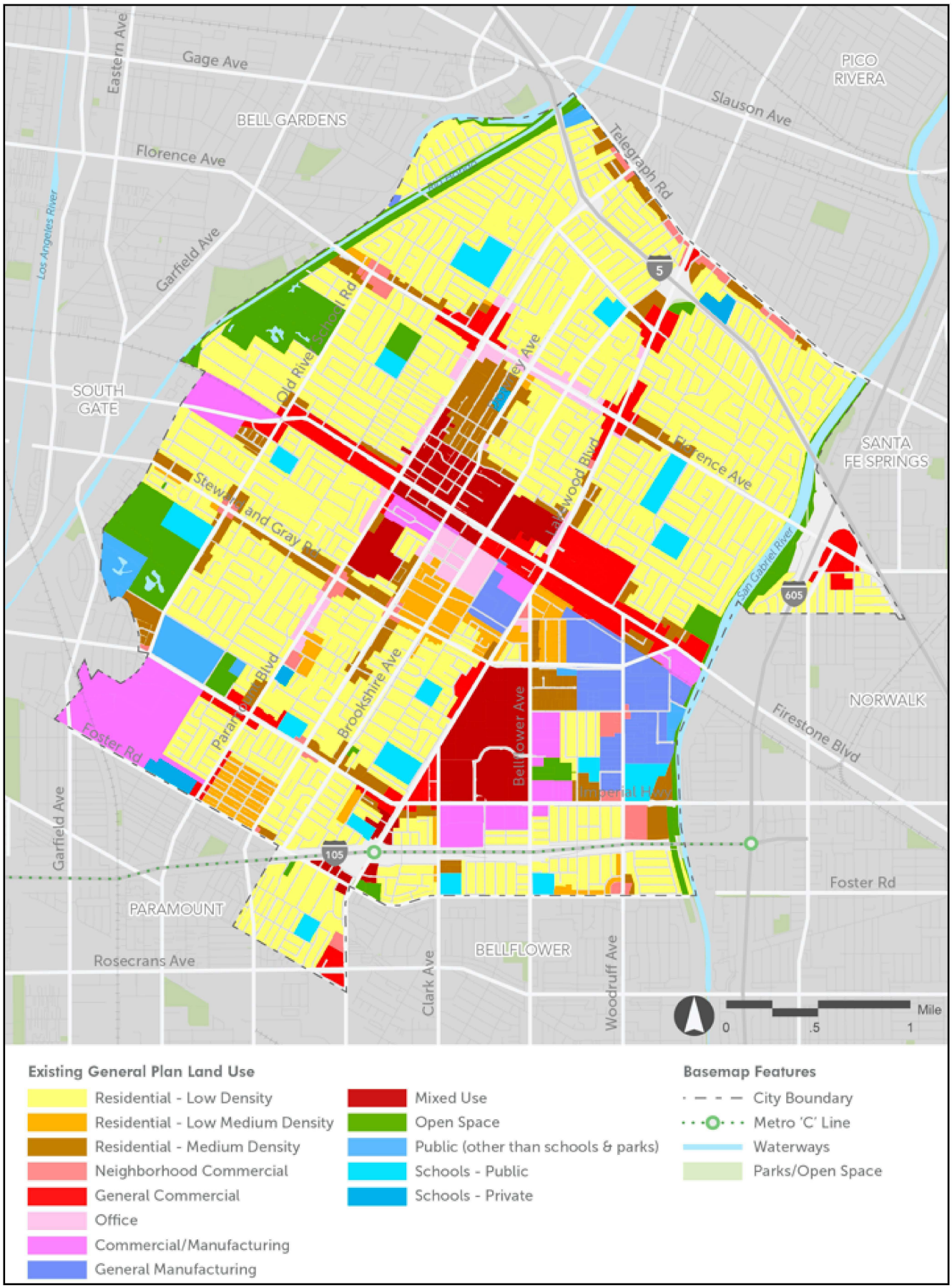


Figure 3 Existing General Plan Land Use Map (2005)

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Downey, California

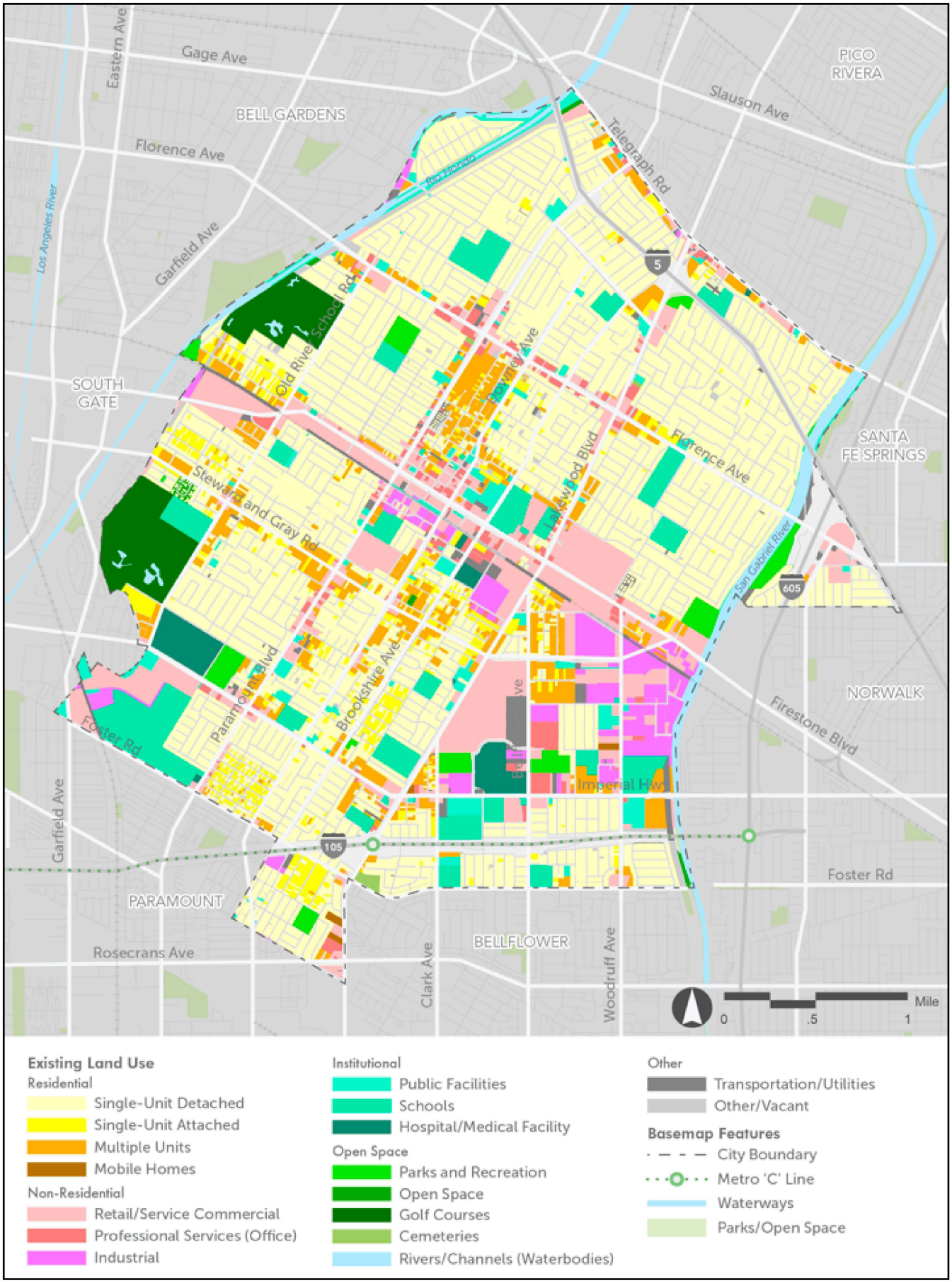
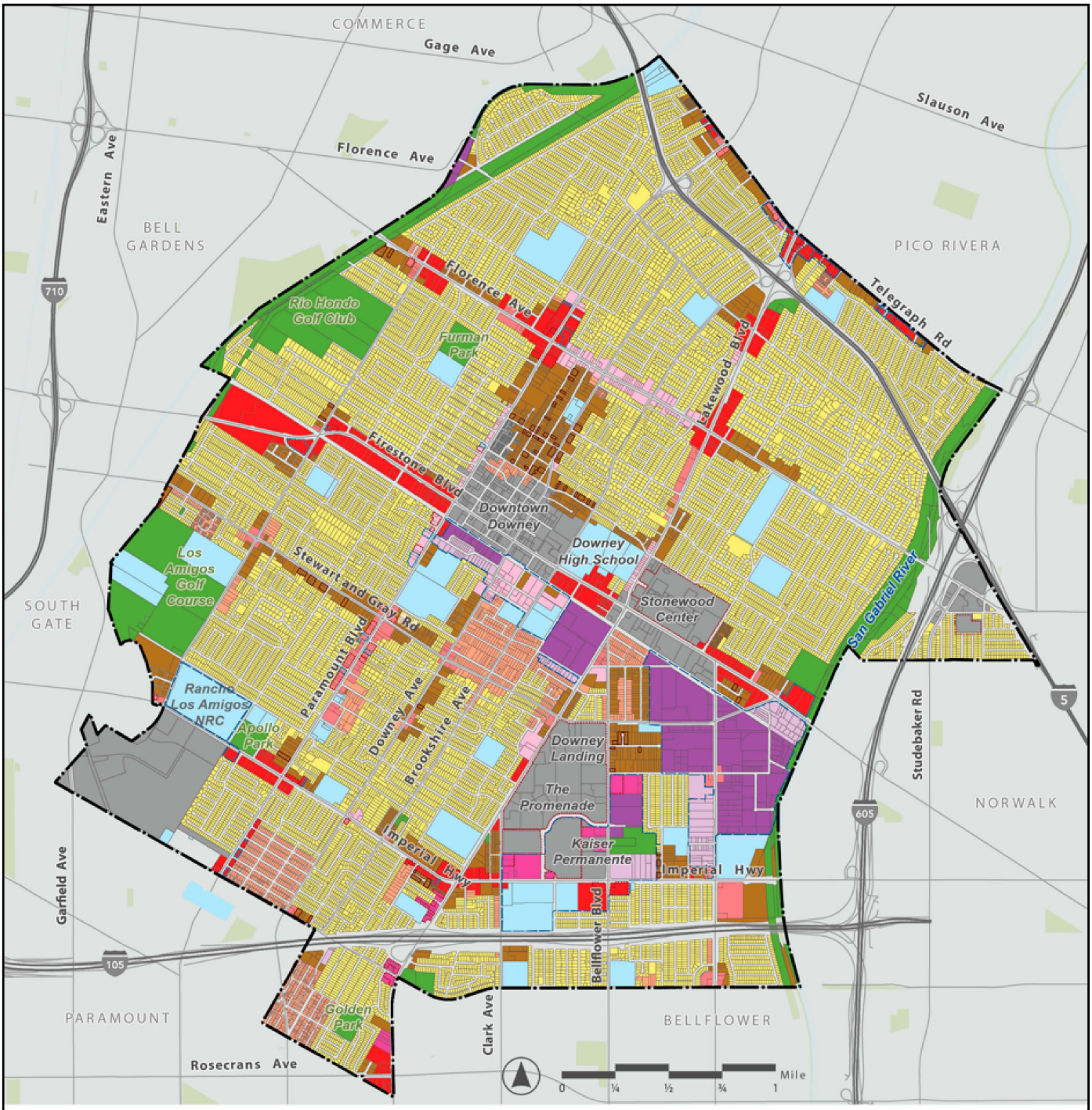


Figure 4 Existing Land Use (2025)

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Downey 2045 General Plan Update and Zoning Map Amendment

Downey, California



Land Use Categories

- LDR: Low Density Residential (1-8.9 du/ac)
- MDR: Medium Density Residential (9-17.9 du/ac)
- HDR: High Density Residential (18-24 du/ac)
- NC: Neighborhood Commercial (0.75 FAR)
- GC: General Commercial (0.75-3.0 FAR)
- MU: Mixed Use (30-50 du/ac, 1.0-4.0 FAR)
- O: Office (1.0 to 2.0 FAR)
- LI: Light Industrial (0.5 to 2.0 FAR)
- I: Industrial (0.5 to 1.0 FAR)
- P/I: Public/Institutional (0.25 to 1.0 FAR)
- P/OS: Parks/Open Space
- SP: Specific Plan
- ROW: Right of Way

Overlays

- HDR + HOU-1: High Density Residential + Housing Element Residential Overlay 1 (18-40 du/ac)
- RCO + HOU-2: Residential Corridor Overlay + Housing Element Residential Overlay 2 (up to 30 du/ac)
- RCO: Residential Corridor Overlay (up to 30 du/ac)
- Biomedical Overlay

Figure 5 Proposed General Plan Land Use Map

Downey 2045 General Plan Update and Zoning Map Amendment
Downey, California

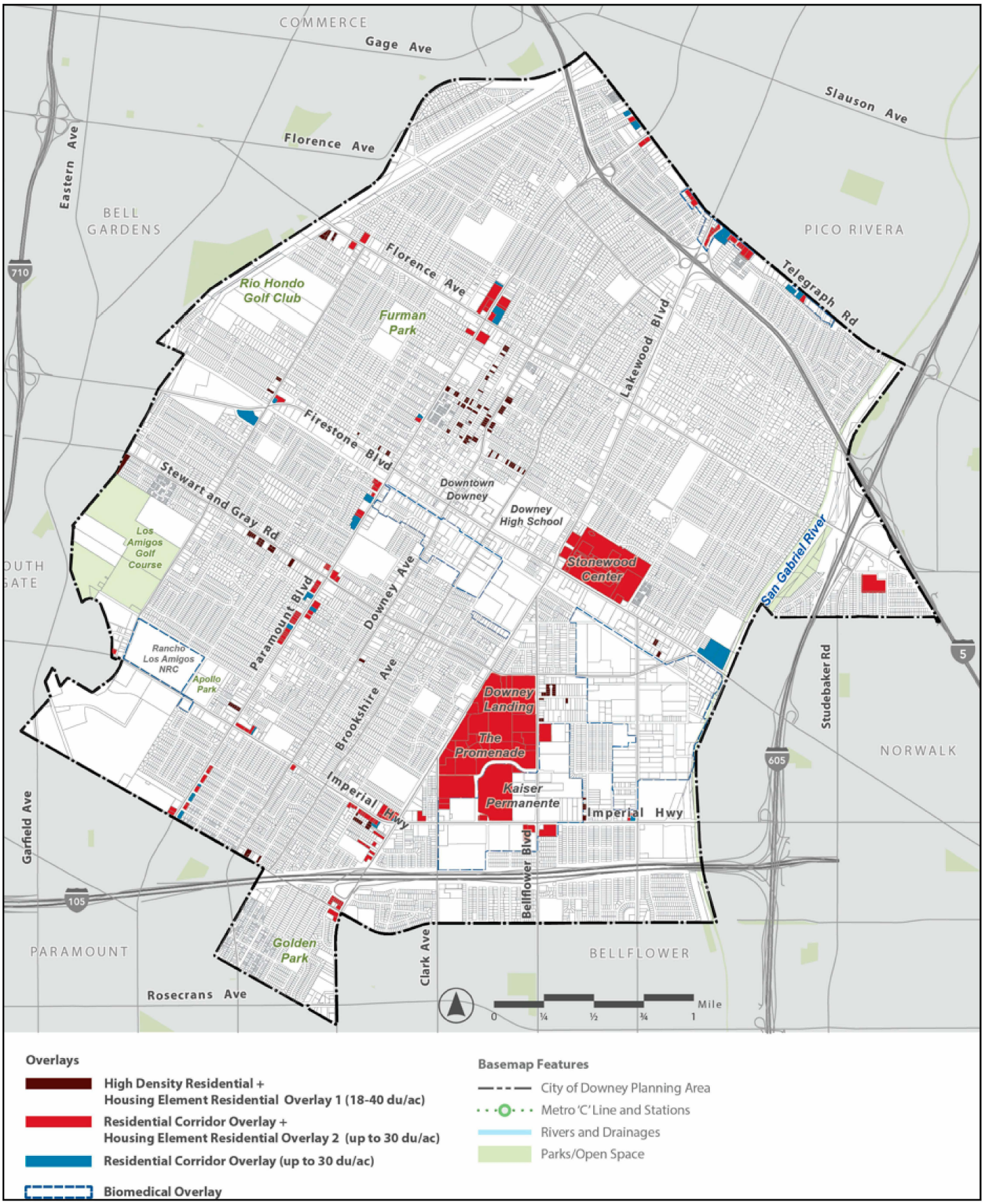


Figure 6 Housing Overlays

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SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

April 7, 2026

Ref. DOC 7750932

VIA EMAIL generalplan2045@downeyca.gov

Ms. Swati Meshram, Deputy Director of Community Development
City of Downey Community Development Department
11111 Brookshire Avenue
Downey, CA 90241

Dear Ms. Meshram:

NOP Response to Downey 2045 General Plan Update and Zoning Text and Map Amendment

The Los Angeles County Sanitation Districts (Districts) received a Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (DPEIR) for the subject project on March 18, 2026. The City of Downey (City) is located within the jurisdictional boundaries of District Nos. 2 and 18. We offer the following comments regarding sewerage service:

1. The Districts own, operate, and maintain the large trunk sewers that form the backbone of the regional wastewater conveyance system. Local collectors and/or lateral sewer lines are the responsibility of the jurisdiction in which they are located. As such, the Districts cannot comment on any deficiencies in the sewerage system in the City except to state that presently no deficiencies exist in Districts' facilities that serve the City.

2. Details for any future individual developments within the City should be submitted to the Districts for review to determine whether or not sufficient trunk sewer capacity exists to serve each development and if Districts' facilities will be affected by the development. This is accomplished through the Districts' Will Serve Program. Information for which can be found on our website at Will Serve Program.

3. The wastewater generated by the City will be treated at the Los Coyotes Water Reclamation Plant located in the City of Cerritos, which has a capacity of 37.5 million gallons per day (mgd) and currently processes an average recycled flow of 21.0 mgd.

4. In order to estimate the volume of wastewater any future individual developments will generate, go to www.lacsd.org, under Services, then Wastewater Program and Permits and select Will Serve Program, and then click on the Table 1, Loadings for Each Class of Land Use link for a copy of the Districts' average wastewater generation factors.

5. The Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is used by the Districts for its capital facilities. Payment of a connection fee may be required before any future individual development is permitted to discharge to the Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, under Services, then Wastewater (Sewage) and select Rates & Fees. In determining the impact to the Sewerage System and applicable connection fees,

the Districts will determine the user category (e.g. Condominium, Single Family Home, etc.) that best represents the actual or anticipated use of the parcel(s) or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, please contact the Districts' Wastewater Fee Public Counter at (562) 908-4288, extension 2727. If an Industrial Wastewater Discharge Permit is required, connection fee charges will be determined by the Industrial Waste Section.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service but is to advise the City that the Districts intend to provide this service up to the levels that are legally permitted and to inform the City of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2742, or phorsley@lacsd.org.

Very truly yours,

Patricia Horsley

Patricia Horsley
Environmental Planner
Facilities Planning Department

PLH:plh

California Department of Transportation

DISTRICT 7
100 SOUTH MAIN STREET, SUITE 100 | LOS ANGELES, CA 90012
PHONE (213) 897-0362 | FAX (213) 897-0360 TTY 711
www.dot.ca.gov

April 9, 2026

City of Downey
Swati Meshram, Deputy Community Development Director-Planning
11111 Brookshire Avenue
Downey, CA, 90241

RE: Downey 2045 General Plan Update and Zoning Text and Map Amendments
SCH # 2026030591
GTS # 07-LA-2026-05042

Dear Swati Meshram:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced environmental document. The Project proposes a comprehensive General Plan Update and associated Zoning Map and Zoning Text Amendments. The 2045 planning horizon for the Planning Area is estimated to result in increases of approximately 10,350 dwelling units and 2.4 million square feet of non-residential space. An estimated increase of approximately 31,483 residents and 6,097 jobs is projected for the 2045 horizon year.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Caltrans is a commenting agency on this project and has the following comments:

The project should conduct a transportation analysis to determine whether significant transportation impacts would occur. If impacts are identified, potential mitigation measures may include Transportation Demand Management (TDM) strategies (e.g. increased transit access, rideshare programs, and improved bicycle and pedestrian facilities), investments in active transportation or transit amenities, lane reassignment, and traffic signal installations, signal phasing or timing modifications to mitigate impacts from project trips.

For the Program Environmental Impact Report (PEIR) and for future developments, please submit a VMT-based Transportation Impact Study. Please follow the Governor's Office of Planning and Research Guidance to identify VMT related impacts and include any potential mitigation

measures necessary. With the enactment of Senate Bill 743 (SB 743), Caltrans is focused on maximizing efficient development patterns, innovative travel demand reduction strategies, and multimodal improvements. For more information on how Caltrans asses VMT analysis for land use projects, please review Caltrans' Transportation Impact Study Guide to ensure a complete VMT-based Traffic Impact Study is prepared.

https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf

If the project will generate pedestrian and bicyclist traffic, consider performing Multi Modal (biking, walking, transit, etc.) access/conflict analysis at the following locations: I-5/Lakewood Blvd, I-605/Florence Ave, and I-105/Lakewood Blvd. Provide Complete Street Access (ADA curb ramps, sidewalks, bike lane, high visibility crosswalks, APS, LPI, etc.).

Consider eliminating car parking requirements as excessive parking supply can lead to induced car trips. Please consider incorporating TDM strategies alongside parking reforms, shared parking arrangements, pricing strategies, and improved first-and last-mile connections.

The proposed General Plan update will set strategies to address greenhouse gas reduction, climate change, and climate planning. With the potential for an increase of an estimated 10,350 dwelling units, 31,483 residents, and 6,649 jobs there will be a need to safely and efficiently move people within and through the City of Downey.

Caltrans encourages the City of Downey to include guidelines that encourage the development of Complete Streets that provide residents and visitors with a range of transportation options, and that further enhance walking, biking, and transit use. Complete Streets improvements also promote regional connectivity, improve air quality, reduce congestion, promote improved first-/last-mile connections, and increase safety for all modes of transportation.

Bike infrastructure should be consistent with or go above the recommendations in the City's existing Bicycle Master Plan (2015) in terms of providing the highest levels of protection for bicyclists. For instance, Class IV separated bikeways with physical barriers provide physical separation from moving vehicles, whereas Class II bike lanes and Class III shared lanes only utilize painted markings on the roadway.

Safe and easy access to river trails such as the Los Angeles River Trail, San Gabriel Trail, and Rio Hondo Bike Path are also important as these trails provide connectivity to the greater Los Angeles County region. The General Plan should also be consistent with the updated Los Angeles County Bicycle Master Plan that is expected to be finalized in 2026. Caltrans encourages the General Plan update to include strategies to connect to the future Southeast

Gateway Line through enhanced transit, walking, and biking networks, as well as through transit-oriented development around the future Gardendale Station.

Caltrans supports and strives to make rail and transit modes of transportation a viable option for all. The Department supports transportation projects that bring all modes of transportation together to increase connectivity, expand the use of public transportation, and advance equity and livability in all communities. Please consider including a discussion on identifying strategies to meet mobility needs such as multimodal strategies on transit connectivity and opportunities to connect bus services to include nearby train stations for regional connectivity. As the population increases, it is important to clarify how the growth will impact the services such as Downey LINK, LA Metro, and Metrolink. Aligning the City's future conditions with these services can result in a more accessible and equitable city.

The PEIR should propose improved mobility strategies, improved zoning codes, and improved regulations and policies. This should include a discussion on the impact of SB 79 Abundant and Affordable Homes Near Transit Act which promotes multi-family housing near transit stops by making it legal for more homes to be built within these said areas. Caltrans encourages the City to incorporate SB 79 implementation considerations into its environmental analysis and transportation modeling to ensure alignment with state housing, climate, and mobility objectives.

The PEIR recommendations should include mitigations that will enhance the sustainability of economic growth factors for population growth, employment services, mobility, and housing needs within the city. The DEIR should emphasize positive environmental impacts, identify reasonable project alternatives to minimize significant impacts, and propose mitigation measures to reduce potential effects.

Please ensure that the Downey 2045 General Plan Update and Text and Map Amendments analyze the challenges in goods movement that are unique to the City. The Plan should also address how the City works to achieve an inter-regional network for longer distance travel and freight movement. Connecting towns, cities, and regions to each other, business centers to major intermodal freight transfer points, and commuters to Downey and Los Angeles County in general in a sustainable and efficient manner, should be an important objective. Discussion of designated areas/parking for freight delivery, package, and transportation network company's pickup and drop-off is also beneficial. Please consider leveraging strategic investments to maintain and modernize a multimodal freight transportation system with innovative approaches, including advanced technology to optimize integrated network efficiency, improve travel time reliability, and achieve sustainable congestion reduction.

The Department firmly embraces racial equity, inclusion, and diversity. These values are foundational to achieving our vision of a cleaner, safer, and more accessible and more

connected transportation system. Caltrans recognizes the shared responsibility to assist communities of color and underserved communities by removing barriers to provide a more equitable transportation system for all.

We acknowledge and support the City of Downey's efforts to meet its Regional Housing Needs Assessment (RHNA) allocation per the California Department of Housing & Community Development (HCD).

If you have any questions, please feel free to contact Mr. Joseph Jamoralin, the project coordinator, at (805) 732-8047 and refer to GTS # 07-LA-2026-05042.

Sincerely,

Anthony Higgins

Anthony Higgins
Acting LDR Branch Chief

Cc: State Clearinghouse

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL: April 10, 2026
generalplan2045@downeyca.org
Swati Meshram, Deputy Director of Community Development
11111 Brookshire Avenue
Downey, California 90241

Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Downey 2045 General Plan Update and Zoning Text and Map Amendments Projects (Proposed Project) (SCH#: 2026030591)

South Coast Air Quality Management District (South Coast AQMD) staff appreciate the opportunity to comment on the above-mentioned document. The following comments provide observations and may include recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft EIR. Please transmit copy of the Draft EIR upon its completion and public release directly to South Coast AQMD. **In the transmittal, please also provide electronic versions of all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses in their original format (e.g., not in .pdf), including but not limited to emission calculation spreadsheets, air quality modeling files, and health risk assessment input and output files.**

CEQA Air Quality Analysis

According to the Notice of Preparation of a Draft EIR, the Proposed Project consists of a comprehensive General Plan Update to guide the City's development through 2045, including 4 new land use designations for a total of 16 designations, a Zoning Text and Map Amendment to create a Residential Corridor Overlay along commercial corridors, and targeted zoning updates to maintain consistency with the General Plan, projected to result in 10,350 new dwelling units and non-residential space (2.7 million square feet), including the land use for manufacturing, by 2045.

Since the upcoming Draft EIR will need to analyze the potential environmental impacts of Downey 2045 General Plan Update and Zoning Text and Map Amendments, the Lead Agency is recommended to include an evaluation in the Draft EIR of a reasonably foreseeable scenario which reflects the maximum development intensity that would be allowed under the proposed land use designations and associated infrastructure expansion at full buildout and disclose the air quality, greenhouse gas, and health risk implications of this growth to the fullest extent feasible.

The Lead Agency should identify all air pollutant sources related to the Proposed Project and analyze/quantify any and all potential air quality and greenhouse gas impacts that could occur during all phases (including overlapping phases) of construction (including demolition) and operation activities associated with the future development that may result from implementing the Community Plan and making the associated infrastructure improvements identified in the Downey 2045 General Plan. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment)

and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). For the Proposed Project, construction-related emissions should also include infrastructure-related activities such as roadway improvements, wastewater and water system improvements, flood control and drainage improvements, utility expansion, and other infrastructure needed to support future growth. Operation-related air quality and greenhouse gas impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality and greenhouse gas impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, if the Lead Agency elects to rely on South Coast AQMD's Air Quality Significance Thresholds,[1] the emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's air quality significance thresholds for *operation* to determine the level of significance.

The Lead Agency is recommended to rely on the guidance provided in the South Coast AQMD's CEQA Air Quality Handbook and website[2] when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the California Air Pollution Control Officers Association's California Emissions Estimator Model (CalEEMod)[3] software, to quantify emissions of air pollutants from typical land use development projects.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially if heavy-duty diesel-fueled vehicles will be used, it is recommended that the Lead Agency performs a mobile source health risk assessment.[4]

South Coast AQMD has developed a methodology[5] to assist lead agencies with analyzing localized air quality impacts from site-specific projects located near sensitive receptors. However, because the scale of the Proposed Project is large and programmatic in nature, the screening tables which contain localized significance thresholds (LSTs) cannot be relied upon to determine localized impacts. Instead, the Lead Agency is recommended to evaluate the potential localized air quality impacts from the Proposed Project by conducting air dispersion modeling to determine whether the applicable ambient air quality standards would be exceeded.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially if heavy-duty diesel-fueled vehicles will be used, the Lead Agency is recommended to perform a mobile source health risk assessment.[6]

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[1] South Coast AQMD Air Quality Significance Thresholds can be found at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf.

[2] South Coast AQMD's CEQA Air Quality Handbook and other resources for preparing air quality analyses can be found at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

[3] CalEEMod is available free of charge at: www.caleemod.com.

[4] South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.

[5] South Coast AQMD's guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

[6] South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants and include schools, daycare centers, nursing homes, elderly care facilities, hospitals, and residential dwelling units. The Proposed Project plans for substantial future residential growth and includes a mix of residential, commercial, mixed-use, light industrial, and heavy industrial land uses. Therefore, the Lead Agency is recommended to evaluate the potential health risks to existing and future sensitive receptors from mobile and stationary sources of toxic air contaminants and disclose those potential health risks in the Draft EIR.[7] To the extent feasible, the Draft EIR should identify areas where future sensitive land uses may be exposed to elevated levels of diesel particulate matter (DPM) and other air pollutants, and should include planning-level policies, siting considerations, and mitigation measures to reduce exposures.

Also, if implementation of the Proposed Project would require the use of new stationary and portable sources, including but not limited to emergency generators, fire water pumps, boilers, spray booths, wastewater-related equipment, electrical infrastructure, etc., one or more air permits from South Coast AQMD will be required, and the role of South Coast AQMD would change from a Commenting Agency under CEQA to a Responsible Agency as defined in CEQA Guidelines Section 15381. The assumptions in the air quality analysis in the EIR will be the basis for evaluating the air permit(s) under CEQA and imposing permit conditions and limits. Questions about air permit requirements should be directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385.

In addition, CEQA Guidelines Section 15096 sets forth specific procedures for a Responsible Agency, including making a decision on the adequacy of the CEQA document for use as part of evaluating the applications for air permits. For these reasons, Draft EIR should include a discussion about any new stationary and portable equipment requiring South Coast AQMD air permits and identify South Coast AQMD as a Responsible Agency for the Proposed Project, if applicable. Also, as set forth in CEQA Guidelines Section15086, the Lead Agency is required to consult with all Responsible Agencies with discretionary approval authority over the Proposed Project. Thus, if air permits are required and South Coast AQMD is identified as a Responsible Agency, please let this comment letter serve as South Coast AQMD's request to convene a meeting with the Lead Agency as required by CEQA Guidelines Section 15104 to discuss the scope and content of the environmental information that will need to be included in the Draft EIR.

Since the Proposed Project will involve local planning and land use decisions, the Lead Agency is recommended to review and consider applying the recommendations contained in the South Coast AQMD *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning,*[8] which includes suggested policies that local governments can use in their General Plans or through local planning to prevent or reduce potential air pollution impacts and protect public health.

Health Risk Reduction Strategies

[7] https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf

[8] South Coast AQMD. 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. Available at: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.

Many strategies are available to reduce exposures, including, but are not limited to, building filtration systems with MERV 13 or better, or in some cases, MERV 15 or better is recommended; building design, orientation, location; vegetation barriers or landscaping screening, etc. Enhanced filtration units are capable of reducing exposures. However, enhanced filtration systems have limitations. For example, in a study that South Coast AQMD conducted to investigate filters,[9] a cost burden is expected to be within the range of $120 to $240 per year to replace each filter panel. The initial start-up cost could substantially increase if an HVAC system needs to be installed and if standalone filter units are required. Installation costs may vary and include costs for conducting site assessments and obtaining permits and approvals before filters can be installed. Other costs may include filter life monitoring, annual maintenance, and training for conducting maintenance and reporting. In addition, because the filters would not have any effectiveness unless the HVAC system is running, there may be increased energy consumption that the Lead Agency should evaluate in the Draft EIR. It is typically assumed that the filters operate 100 percent of the time while residents are indoors, and the environmental analysis does not generally account for the times when the residents have their windows or doors open or are in common space areas of the project. These filters have no ability to filter out any toxic gases. Furthermore, when used filters are replaced, replacement has the potential to result in emissions from the transportation of used filters at disposal sites and generate solid waste that the Lead Agency should evaluate in the Draft EIR. Therefore, the presumed effectiveness and feasibility of any filtration units should be carefully evaluated in more detail prior to assuming that they will sufficiently alleviate exposures to diesel particulate matter emissions.

South Coast AQMD staff are available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact Sahar Ghadimi, Air Quality Specialist, at sghadimi@aqmd.gov.

Sincerely,

Sam Wang

Sam Wang
Program Supervisor, CEQA IGR
Planning, Rule Development & Implementation

SW:SG
RVC260319-02
Control Number

[9] This study evaluated filters rated MERV 13 or better. Accessed at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/aqmdpilotstudyfinalreport.pdf. Also see 2012 Peer Review Journal article by South Coast AQMD: https://onlinelibrary.wiley.com/doi/10.1111/ina.12013.

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April 13, 2026

VIA ELECTRONIC SUBMISSION ONLY

City of Downey
Attn: Swati Meshram, PhD, AICP, Deputy Director of Community Development-Planning
11111 Brookshire Avenue
Downey, CA 90241

Email: generalplan2045@downeyca.org

**SUBJECT: NOTICE OF PREPARATION
DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE DOWNEY 2045 GENERAL PLAN UPDATE AND ZONING TEXT AND MAP AMENDMENT**

Dear Ms. Meshram:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the Draft Program Environmental Impact Report (DPEIR), and for meeting with us remotely this afternoon to discuss the DPEIR. The City of South Gate values the collaborative relationship it shares with the City of Downey. As neighboring jurisdictions with a shared boundary of nearly four miles, our communities are closely connected, and planning efforts in one city can meaningfully influence growth, development, and quality of life in the other.

South Gate is served by two major freeways—the I-710 and I-105—as well as the Los Angeles River and the Rio Hondo River. Additionally, an active rail corridor runs through the city, and Metro has plans to develop this corridor into a light rail line, including two proposed transit centers in South Gate and one in Downey. These shared transportation and infrastructure systems further reinforce the importance of coordinated planning between our cities.

We recognize that Downey is preparing this document to support future growth and community improvements. As a neighboring city, we respectfully request consideration of potential impacts to nearby intersections within South Gate that may experience increased traffic as a result of development. In particular, the following intersections are located within one mile of Downey and may be affected: Firestone Boulevard and Garfield Avenue; Imperial Highway and Garfield Avenue; Century Boulevard and Garfield Avenue; and Gardendale Street and Paramount Boulevard. In addition, freeway access points at the I-710 (Firestone Boulevard and Imperial Highway) and I-105 (Garfield Avenue) may also experience increased activity. We ask that the DPEIR evaluate potential impacts to these intersections, roadway segments, and freeway ramps, particularly with respect to traffic, air quality, and noise.

We understand that Downey adopted the Rancho Los Amigos South Campus Specific Plan several years ago and is now updating its General Plan for consistency. Since the area abuts our boundary and is adjacent to residential neighborhoods in South Gate, we are interested in understanding any further long-range planning efforts for this area. We greatly appreciate the

opportunity to be involved in any planning and development efforts as both cities share sewer infrastructure and other utilities that could be affected by future development. We request that any potential infrastructure impacts be clearly addressed in the DPEIR, particularly as it relates to this area.

The City of South Gate is currently considering a long-term project to construct a pedestrian and bicycle bridge connecting both sides of Southern Avenue across the Los Angeles River and the I-710 Freeway. This proposed improvement is intended to enhance connectivity and may affect properties along Southern Avenue and Stewart and Gray Road. As a long-range planning document, the General Plan and DPEIR should take this proposed project, along with its potential impacts, into consideration.

On Figure 5 (Proposed General Plan and Land Use Map) of the NOP, a light blue area along Paramount Avenue appears to fall within the City of South Gate but is labeled as "P/I: Public/Institutional." We would appreciate clarification regarding this designation and its inclusion, given that the area appears to lie outside of Downey's jurisdiction.

Lastly, the planned Metro station in Downey may have impacts on the City of South Gate. Since the planned station is located near our boundary, we respectfully request that potential effects on our community be considered during the planning and development of the station as it is addressed in any long-range documents, including the DPEIR.

As noted, our cities share a significant boundary, and South Gate has a strong interest in long-range planning efforts that may affect our community. We welcome the opportunity to remain engaged throughout this process and kindly request to be kept informed of upcoming meetings, discussions, and key decisions.

Thank you again for your consideration and for the opportunity to provide input. If you have any questions, please feel free to contact me at 323-563-9569 or email jsigno@sogate.org.

Sincerely,

John F. Signo, AICP
Planning Manager

cc: Gabriel Perez, Community Development Director
Derwin Dy, Water Resources & Development Division Manager
Jose Loera, Transportation & Capital Improvement Program Division Manager

Downey 2045 General Plan Update
City of Downey, California

Appendix D: Air Quality Modeling and Energy Consumption Information
Prepared by: MIG, Inc.
June 2026

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- 2045 No Project Conditions
- 2045 Project Conditions

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- CalEEMod 2045 Winter Inputs
- CalEEMod 2045 Annual Inputs
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Downey Existing Conditions Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Downey Existing Conditions
Operational Year	2026
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.30000
Precipitation (days)	8.00000
Location	Downey, CA, USA
County	Los Angeles-South Coast
City	Downey
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4857
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.44

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
Single Family Housing	23,207.0	Dwelling Unit	3,301.00	45,253,650	271,820,273	—	70,139.0	—

Apartments Mid Rise	13,953.0	Dwelling Unit	463.000	13,394,880	0.00000	—	41,187.0	—
Regional Shopping Center	12,139.3	1000sqft	711.260	12,139,340	0.00000	—	—	—
Hotel	657.000	Room	21.9000	953,964	0.00000	—	—	—
General Office Building	3,226.50	1000sqft	140.301	3,226,500	0.00000	—	—	—
Industrial Park	3,954.00	1000sqft	217.057	3,954,000	0.00000	—	—	—
Government Office Building	1,266.40	1000sqft	234.057	1,266,400	0.00000	—	—	—
Elementary School	4,774.90	1000sqft	408.894	4,774,900	0.00000	0.00000	—	—
Hospital	3,576.70	1000sqft	98.7508	3,576,700	0.00000	—	—	—
City Park	214.894	Acre	214.894	0.00000	0.00000	0.00000	—	—
Golf Course	247.710	Acre	247.710	0.00000	0.00000	0.00000	—	—
Parking Lot	187.353	Acre	187.353	0.00000	0.00000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.3. 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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25,106.3	23,577.7	4,313.33	72,297.7	68.8395	2,735.45	3,155.90	5,891.34	2,682.93	800.202	3,483.13	408,771	7,042,953	7,451,724	7,795.62	328.270	14,877.6	7,759,317
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	24,594.1	23,067.3	4,569.48	68,568.7	68.0090	2,732.14	3,155.90	5,888.04	2,680.45	800.202	3,480.65	408,771	5,960,97	6,369,75	7,839.50	343.489	3,340.91	6,671,43
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14,241.1	13,706.0	3,693.77	51,012.8	22.2066	260.514	2,911.08	3,171.60	253.442	738.181	991.622	84,537.4	5,111,386	5,195,924	6,837.85	314.727	7,775.53	5,468,434
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2,599.00	2,501.34	674.113	9,309.83	4.05271	47.5438	531.273	578.816	46.2531	134.718	180.971	13,996.1	846,248	860,244	1,132.08	52.1066	1,287.33	905,362

2.4. 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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11,788.6	11,368.5	3,083.55	49,743.2	17.7947	45.4725	3,155.90	3,201.37	42.0664	800.202	842.268	—	5,180,337	5,180,337	558.549	285.377	11,843.8	5,291,187
Area	13,268.8	12,184.8	802.298	22,304.7	48.3789	2,656.20	—	2,656.20	2,607.10	—	2,607.10	348,075	676,054	1,024,129	1,038.19	12.7070	—	1,053,870
Energy	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	1,133,231	1,133,231	104.405	7.96641	—	1,138,215
Water	—	—	—	—	—	—	—	—	—	—	—	8,867.61	53,330.9	62,198.5	914.355	22.2202	—	91,679.0
Waste	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,033.83	3,033.83
Total	25,106.3	23,577.7	4,313.33	72,297.7	68.8395	2,735.45	3,155.90	5,891.34	2,682.93	800.202	3,483.13	408,771	7,042,953	7,451,724	7,795.62	328.270	14,877.6	7,759,317
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11,704.8	11,258.3	3,370.99	49,421.2	17.1332	45.5111	3,155.90	3,201.41	42.1034	800.202	842.305	—	4,109,346	4,109,346	602.889	300.688	307.087	4,214,330

Area	12,840.3	11,784.5	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Energy	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	1,133,231	1,133,231	104.405	7.96641	—	1,138,215
Water	—	—	—	—	—	—	—	—	—	—	—	8,867.61	53,330.9	62,198.5	914.355	22.2202	—	91,679.0
Waste	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,033.83	3,033.83
Total	24,594.1	23,067.3	4,569.48	68,568.7	68.0090	2,732.14	3,155.90	5,888.04	2,680.45	800.202	3,480.65	408,771	5,960,979	6,369,750	7,839.50	343.489	3,340.91	6,671,438
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11,083.7	10,664.7	3,192.05	47,135.1	16.1230	42.7546	2,911.08	2,953.84	39.5505	738.181	777.731	—	3,871,749	3,871,749	567.577	283.613	4,741.71	3,975,197
Area	3,108.53	3,016.88	74.2405	3,627.91	3.41780	183.991	—	183.991	180.123	—	180.123	23,840.7	53,075.2	76,916.0	71.3923	0.92745	—	78,977.2
Energy	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	1,133,231	1,133,231	104.405	7.96641	—	1,138,215
Water	—	—	—	—	—	—	—	—	—	—	—	8,867.61	53,330.9	62,198.5	914.355	22.2202	—	91,679.0
Waste	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,033.83	3,033.83
Total	14,241.1	13,706.0	3,693.77	51,012.8	22.2066	260.514	2,911.08	3,171.60	253.442	738.181	991.622	84,537.4	5,111,386	5,195,924	6,837.85	314.727	7,775.53	5,468,434
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2,022.77	1,946.30	582.549	8,602.15	2.94244	7.80272	531.273	539.075	7.21797	134.718	141.936	—	641,012	641,012	93.9688	46.9553	785.044	658,139
Area	567.306	550.581	13.5489	662.093	0.62375	33.5784	—	33.5784	32.8725	—	32.8725	3,947.11	8,787.21	12,734.3	11.8198	0.15355	—	13,075.6
Energy	8.91965	4.45982	78.0153	45.5826	0.48653	6.16267	—	6.16267	6.16267	—	6.16267	—	187,619	187,619	17.2854	1.31893	—	188,445
Water	—	—	—	—	—	—	—	—	—	—	—	1,468.13	8,829.54	10,297.7	151.382	3.67881	—	15,178.5
Waste	—	—	—	—	—	—	—	—	—	—	—	8,580.89	0.00000	8,580.89	857.629	0.00000	—	30,021.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	502.285	502.285
Total	2,599.00	2,501.34	674.113	9,309.83	4.05271	47.5438	531.273	578.816	46.2531	134.718	180.971	13,996.1	846,248	860,244	1,132.08	52.1066	1,287.33	905,362

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2,667.47	2,574.54	687.047	10,937.1	3.84741	9.94804	676.565	686.513	9.20216	171.548	180.750	—	1,130,155	1,130,155	124.778	62.9330	2,539.08	1,154,568
Apartments Mid Rise	924.218	892.023	238.047	3,789.45	1.33304	3.44678	234.415	237.861	3.18835	59.4376	62.6260	—	391,574	391,574	43.2329	21.8049	879.736	400,032
Regional Shopping Center	5,597.97	5,398.89	1,462.31	23,562.9	8.41727	21.5308	1,491.75	1,513.28	19.9179	378.245	398.162	—	2,452,263	2,452,263	264.941	135.215	5,598.40	2,504,779
Hotel	67.4937	65.0043	18.0789	297.455	0.10900	0.27390	19.5598	19.8337	0.25342	4.95955	5.21296	—	31,328.9	31,328.9	3.26176	1.69907	73.4062	31,990.2
General Office Building	386.173	371.930	103.440	1,701.92	0.62363	1.56717	111.914	113.481	1.44995	28.3766	29.8266	—	179,252	179,252	18.6626	9.72142	420.003	183,036
Industrial Park	163.741	157.702	43.8598	721.632	0.26442	0.66450	47.4526	48.1171	0.61479	12.0320	12.6468	—	76,004.6	76,004.6	7.91311	4.12198	178.085	77,608.9
Government Office Building	351.543	338.577	94.1644	1,549.30	0.56771	1.42663	101.878	103.305	1.31993	25.8320	27.1519	—	163,178	163,178	16.9890	8.84965	382.339	166,622
Elementary School	1,145.34	1,103.10	306.792	5,047.70	1.84961	4.64803	331.923	336.571	4.30038	84.1617	88.4621	—	531,640	531,640	55.3509	28.8325	1,245.68	542,861

Hospital	471.161	453.783	126.205	2,076.47	0.76087	1.91206	136.543	138.456	1.76905	34.6216	36.3907	—	218,701	218,701	22.7697	11.8609	512.435	223,317
City Park	2.05973	1.98376	0.55172	9.07753	0.00333	0.00836	0.59691	0.60527	0.00773	0.15135	0.15909	—	956.075	956.075	0.09954	0.05185	2.24016	976.255
Golf Course	11.3843	10.9644	3.04941	50.1724	0.01838	0.04620	3.29921	3.34541	0.04274	0.83654	0.87928	—	5,284.32	5,284.32	0.55017	0.28659	12.3816	5,395.86
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	11,788.6	11,368.5	3,083.55	49,743.2	17.7947	45.4725	3,155.90	3,201.37	42.0664	800.202	842.268	—	5,180,337	5,180,337	558.549	285.377	11,843.8	5,291,187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2,648.48	2,549.51	750.840	10,922.7	3.70610	9.95683	676.565	686.521	9.21057	171.548	180.759	—	889,022	889,022	134.858	66.3297	65.8336	912,226
Apartments Mid Rise	917.638	883.348	260.149	3,784.47	1.28408	3.44982	234.415	237.864	3.19126	59.4376	62.6289	—	308,027	308,027	46.7253	22.9818	22.8099	316,066
Regional Shopping Center	5,558.21	5,346.56	1,598.58	23,420.7	8.10470	21.5491	1,491.75	1,513.30	19.9355	378.245	398.180	—	1,943,908	1,943,908	286.005	142.473	145.156	1,993,660
Hotel	67.0164	64.3778	19.7742	293.288	0.10488	0.27412	19.5598	19.8340	0.25363	4.95955	5.21317	—	25,149.2	25,149.2	3.51378	1.78942	1.90328	25,772.2
General Office Building	383.443	368.345	113.140	1,678.08	0.60006	1.56843	111.914	113.482	1.45116	28.3766	29.8278	—	143,894	143,894	20.1045	10.2384	10.8899	147,458
Industrial Park	162.583	156.182	47.9727	711.523	0.25443	0.66503	47.4526	48.1177	0.61530	12.0320	12.6473	—	61,012.4	61,012.4	8.52450	4.34119	4.61741	62,523.8
Government Office Building	349.057	335.314	102.995	1,527.60	0.54625	1.42778	101.878	103.306	1.32102	25.8320	27.1530	—	130,990	130,990	18.3016	9.32028	9.91332	134,235
Elementary School	1,137.24	1,092.47	335.561	4,976.99	1.77971	4.65177	331.923	336.575	4.30396	84.1617	88.4656	—	426,772	426,772	59.6275	30.3659	32.2980	437,344

Hospital	467.829	449.409	138.040	2,047.39	0.73212	1.91360	136.543	138.457	1.77052	34.6216	36.3922	—	175,561	175,561	24.5290	12.4916	13.2865	179,910
City Park	2.04516	1.96464	0.60346	8.95037	0.00320	0.00837	0.59691	0.60528	0.00774	0.15135	0.15909	—	767.486	767.486	0.10723	0.05461	0.05808	786.498
Golf Course	11.3038	10.8588	3.33536	49.4696	0.01769	0.04624	3.29921	3.34544	0.04278	0.83654	0.87932	—	4,241.97	4,241.97	0.59268	0.30183	0.32103	4,347.05
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	11,704.8	11,258.3	3,370.99	49,421.2	17.1332	45.5111	3,155.90	3,201.41	42.1034	800.202	842.305	—	4,109,346	4,109,346	602.889	300.688	307.087	4,214,330
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	475.975	458.102	136.368	2,008.14	0.68231	1.81619	122.838	124.655	1.68004	31.1488	32.8289	—	148,652	148,652	22.0291	10.9581	181.514	152,650
Apartments Mid Rise	164.915	158.722	47.2485	695.776	0.23641	0.62927	42.5608	43.1900	0.58210	10.7924	11.3745	—	51,504.6	51,504.6	7.63260	3.79675	62.8906	52,889.8
Regional Shopping Center	994.378	957.316	283.259	4,158.48	1.40230	3.74866	251.630	255.379	3.46754	63.8074	67.2750	—	305,538	305,538	45.8323	22.6843	371.826	313,816
Hotel	12.0458	11.5689	3.59579	54.0815	0.01932	0.05000	3.55132	3.60133	0.04626	0.90053	0.94679	—	4,206.42	4,206.42	0.57430	0.29581	5.24767	4,314.18
General Office Building	68.9215	66.1926	20.5737	309.434	0.11053	0.28610	20.3193	20.6054	0.26471	5.15249	5.41720	—	24,067.5	24,067.5	3.28594	1.69254	30.0252	24,684.1
Industrial Park	29.2234	28.0663	8.72347	131.203	0.04686	0.12131	8.61559	8.73690	0.11224	2.18471	2.29694	—	10,204.9	10,204.9	1.39327	0.71765	12.7310	10,466.3
Government Office Building	44.8150	43.0405	13.3777	201.204	0.07187	0.18603	13.2123	13.3983	0.17212	3.35031	3.52244	—	15,649.5	15,649.5	2.13662	1.10054	19.5233	16,050.4
Elementary School	146.009	140.228	43.5852	655.531	0.23415	0.60611	43.0462	43.6523	0.56078	10.9155	11.4763	—	50,986.7	50,986.7	6.96121	3.58562	63.6079	52,292.9
Hospital	84.0894	80.7599	25.1015	377.533	0.13485	0.34907	24.7911	25.1402	0.32296	6.28642	6.60939	—	29,364.2	29,364.2	4.00909	2.06503	36.6330	30,116.5

City Park	0.36761	0.35305	0.10973	1.65042	0.00059	0.00153	0.10838	0.10990	0.00141	0.02748	0.02889	—	128.369	128.369	0.01753	0.00903	0.16014	131.657
Golf Course	2.03179	1.95135	0.60651	9.12206	0.00326	0.00843	0.59901	0.60744	0.00780	0.15189	0.15970	—	709.507	709.507	0.09687	0.04990	0.88514	727.683
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	2,022.77	1,946.30	582.549	8,602.15	2.94244	7.80272	531.273	539.075	7.21797	134.718	141.936	—	641,012	641,012	93.9688	46.9553	785.044	658,139

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	151,772	151,772	14.4672	1.75360	—	152,656
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	48,514.3	48,514.3	4.62446	0.56054	—	48,796.9
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	113,083	113,083	10.7792	1.30657	—	113,742
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	12,661.8	12,661.8	1.20694	0.14630	—	12,735.5
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	54,535.0	54,535.0	5.19837	0.63011	—	54,852.8
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	66,831.4	66,831.4	6.37048	0.77218	—	67,220.8

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	21,405.0	21,405.0	2.04036	0.24732	—	21,529.7
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	28,325.4	28,325.4	2.70002	0.32728	—	28,490.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	99,179.4	99,179.4	9.45395	1.14593	—	99,757.3
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	6,780.81	6,780.81	0.64636	0.07835	—	6,820.32
Total	—	—	—	—	—	—	—	—	—	—	—	—	603,088	603,088	57.4874	6.96816	—	606,601
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	151,772	151,772	14.4672	1.75360	—	152,656
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	48,514.3	48,514.3	4.62446	0.56054	—	48,796.9
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	113,083	113,083	10.7792	1.30657	—	113,742
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	12,661.8	12,661.8	1.20694	0.14630	—	12,735.5
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	54,535.0	54,535.0	5.19837	0.63011	—	54,852.8
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	66,831.4	66,831.4	6.37048	0.77218	—	67,220.8

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	21,405.0	21,405.0	2.04036	0.24732	—	21,529.7
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	28,325.4	28,325.4	2.70002	0.32728	—	28,490.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	99,179.4	99,179.4	9.45395	1.14593	—	99,757.3
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	6,780.81	6,780.81	0.64636	0.07835	—	6,820.32
Total	—	—	—	—	—	—	—	—	—	—	—	—	603,088	603,088	57.4874	6.96816	—	606,601
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	25,127.6	25,127.6	2.39520	0.29033	—	25,274.0
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	8,032.09	8,032.09	0.76563	0.09280	—	8,078.89
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	18,722.1	18,722.1	1.78463	0.21632	—	18,831.2
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	2,096.30	2,096.30	0.19982	0.02422	—	2,108.51
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9,028.90	9,028.90	0.86065	0.10432	—	9,081.50
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	11,064.7	11,064.7	1.05471	0.12784	—	11,129.2

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	3,543.84	3,543.84	0.33780	0.04095	—	3,564.49
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	4,689.59	4,689.59	0.44702	0.05418	—	4,716.91
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	16,420.3	16,420.3	1.56521	0.18972	—	16,516.0
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,122.64	1,122.64	0.10701	0.01297	—	1,129.18
Total	—	—	—	—	—	—	—	—	—	—	—	—	99,848.1	99,848.1	9.51769	1.15366	—	100,430

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	26.2856	13.1428	224.622	95.5840	1.43376	18.1610	—	18.1610	18.1610	—	18.1610	—	285,119	285,119	25.2329	0.53687	—	285,910
Apartments Mid Rise	4.57887	2.28943	39.1285	16.6504	0.24976	3.16358	—	3.16358	3.16358	—	3.16358	—	49,666.8	49,666.8	4.39549	0.09352	—	49,804.6
Regional Shopping Center	2.14734	1.07367	19.5212	16.3978	0.11713	1.48361	—	1.48361	1.48361	—	1.48361	—	23,292.1	23,292.1	2.06134	0.04386	—	23,356.7
Hotel	0.81377	0.40689	7.39795	6.21428	0.04439	0.56224	—	0.56224	0.56224	—	0.56224	—	8,826.99	8,826.99	0.78118	0.01662	—	8,851.47

General Office Building	2.41629	1.20814	21.9663	18.4517	0.13180	1.66944	—	1.66944	1.66944	—	1.66944	—	26,209.4	26,209.4	2.31952	0.04935	—	26,282.1
Industrial Park	2.96110	1.48055	26.9191	22.6121	0.16151	2.04585	—	2.04585	2.04585	—	2.04585	—	32,119.0	32,119.0	2.84252	0.06048	—	32,208.1
Government Office Building	0.94839	0.47420	8.62175	7.24227	0.05173	0.65525	—	0.65525	0.65525	—	0.65525	—	10,287.2	10,287.2	0.91041	0.01937	—	10,315.7
Elementary School	2.95983	1.47992	26.9076	22.6024	0.16145	2.04498	—	2.04498	2.04498	—	2.04498	—	32,105.2	32,105.2	2.84130	0.06045	—	32,194.3
Hospital	5.76358	2.88179	52.3962	44.0128	0.31438	3.98211	—	3.98211	3.98211	—	3.98211	—	62,517.4	62,517.4	5.53276	0.11772	—	62,690.8
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	530,143	530,143	46.9174	0.99824	—	531,614
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	26.2856	13.1428	224.622	95.5840	1.43376	18.1610	—	18.1610	18.1610	—	18.1610	—	285,119	285,119	25.2329	0.53687	—	285,910
Apartments Mid Rise	4.57887	2.28943	39.1285	16.6504	0.24976	3.16358	—	3.16358	3.16358	—	3.16358	—	49,666.8	49,666.8	4.39549	0.09352	—	49,804.6
Regional Shopping Center	2.14734	1.07367	19.5212	16.3978	0.11713	1.48361	—	1.48361	1.48361	—	1.48361	—	23,292.1	23,292.1	2.06134	0.04386	—	23,356.7
Hotel	0.81377	0.40689	7.39795	6.21428	0.04439	0.56224	—	0.56224	0.56224	—	0.56224	—	8,826.99	8,826.99	0.78118	0.01662	—	8,851.47

General Office Building	2.41629	1.20814	21.9663	18.4517	0.13180	1.66944	—	1.66944	1.66944	—	1.66944	—	26,209.4	26,209.4	2.31952	0.04935	—	26,282.1
Industrial Park	2.96110	1.48055	26.9191	22.6121	0.16151	2.04585	—	2.04585	2.04585	—	2.04585	—	32,119.0	32,119.0	2.84252	0.06048	—	32,208.1
Government Office Building	0.94839	0.47420	8.62175	7.24227	0.05173	0.65525	—	0.65525	0.65525	—	0.65525	—	10,287.2	10,287.2	0.91041	0.01937	—	10,315.7
Elementary School	2.95983	1.47992	26.9076	22.6024	0.16145	2.04498	—	2.04498	2.04498	—	2.04498	—	32,105.2	32,105.2	2.84130	0.06045	—	32,194.3
Hospital	5.76358	2.88179	52.3962	44.0128	0.31438	3.98211	—	3.98211	3.98211	—	3.98211	—	62,517.4	62,517.4	5.53276	0.11772	—	62,690.8
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	530,143	530,143	46.9174	0.99824	—	531,614
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.79712	2.39856	40.9936	17.4441	0.26166	3.31438	—	3.31438	3.31438	—	3.31438	—	47,204.7	47,204.7	4.17760	0.08888	—	47,335.7
Apartments Mid Rise	0.83564	0.41782	7.14095	3.03870	0.04558	0.57735	—	0.57735	0.57735	—	0.57735	—	8,222.91	8,222.91	0.72772	0.01548	—	8,245.72
Regional Shopping Center	0.39189	0.19594	3.56263	2.99261	0.02138	0.27076	—	0.27076	0.27076	—	0.27076	—	3,856.27	3,856.27	0.34128	0.00726	—	3,866.97
Hotel	0.14851	0.07426	1.35013	1.13411	0.00810	0.10261	—	0.10261	0.10261	—	0.10261	—	1,461.41	1,461.41	0.12933	0.00275	—	1,465.46
General Office Building	0.44097	0.22049	4.00884	3.36743	0.02405	0.30467	—	0.30467	0.30467	—	0.30467	—	4,339.27	4,339.27	0.38402	0.00817	—	4,351.30

Industria Park	0.54040	0.27020	4.91274	4.12670	0.02948	0.37337	—	0.37337	0.37337	—	0.37337	—	5,317.67	5,317.67	0.47061	0.01001	—	5,332.42
Government Office Building	0.17308	0.08654	1.57347	1.32171	0.00944	0.11958	—	0.11958	0.11958	—	0.11958	—	1,703.16	1,703.16	0.15073	0.00321	—	1,707.88
Elementary School	0.54017	0.27008	4.91063	4.12493	0.02946	0.37321	—	0.37321	0.37321	—	0.37321	—	5,315.39	5,315.39	0.47041	0.01001	—	5,330.13
Hospital	1.05185	0.52593	9.56231	8.03234	0.05737	0.72674	—	0.72674	0.72674	—	0.72674	—	10,350.5	10,350.5	0.91601	0.01949	—	10,379.2
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	8.91965	4.45982	78.0153	45.5826	0.48653	6.16267	—	6.16267	6.16267	—	6.16267	—	87,771.3	87,771.3	7.76772	0.16527	—	88,014.7

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	10,762.5	9,706.60	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Consumer Products	1,900.18	1,900.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	177.699	177.699	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	428.491	400.282	31.2903	3,406.96	0.16899	3.34069	—	3.34069	2.52240	—	2.52240	—	10,982.7	10,982.7	0.45988	0.09264	—	11,021.9
Total	13,268.8	12,184.8	802.298	22,304.7	48.3789	2,656.20	—	2,656.20	2,607.10	—	2,607.10	348,075	676,054	1,024,129	1,038.19	12.7070	—	1,053,870
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	10,762.5	9,706.60	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Consumer Products	1,900.18	1,900.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	177.699	177.699	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	12,840.3	11,784.5	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	134.531	121.333	9.63759	236.222	0.60262	33.1608	—	33.1608	32.5572	—	32.5572	3,947.11	7,541.79	11,488.9	11.7677	0.14304	—	11,825.7
Consumer Products	346.784	346.784	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	32.4301	32.4301	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	53.5614	50.0353	3.91129	425.870	0.02112	0.41759	—	0.41759	0.31530	—	0.31530	—	1,245.42	1,245.42	0.05215	0.01051	—	1,249.86
Total	567.306	550.581	13.5489	662.093	0.62375	33.5784	—	33.5784	32.8725	—	32.8725	3,947.11	8,787.21	12,734.3	11.8198	0.15355	—	13,075.6

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,657.57	29,037.2	30,694.7	172.733	4.37381	—	36,316.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	996.598	3,357.97	4,354.57	102.510	2.46679	—	7,652.42
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,723.06	5,805.75	7,528.81	177.234	4.26495	—	13,230.6
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.9359	107.606	139.542	3.28492	0.07905	—	245.221
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,098.88	3,702.60	4,801.49	113.031	2.71996	—	8,437.80
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,752.13	5,903.70	7,655.83	180.224	4.33691	—	13,453.8

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	482.092	1,624.38	2,106.47	49.5878	1.19328	—	3,701.76
Elementary School	—	—	—	—	—	—	—	—	—	—	—	265.317	893.968	1,159.28	27.2904	0.65672	—	2,037.25
Hospital	—	—	—	—	—	—	—	—	—	—	—	860.018	2,897.77	3,757.79	88.4613	2.12873	—	6,603.69
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	8,867.61	53,330.9	62,198.5	914.355	22.2202	—	91,679.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,657.57	29,037.2	30,694.7	172.733	4.37381	—	36,316.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	996.598	3,357.97	4,354.57	102.510	2.46679	—	7,652.42
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,723.06	5,805.75	7,528.81	177.234	4.26495	—	13,230.6
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.9359	107.606	139.542	3.28492	0.07905	—	245.221
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,098.88	3,702.60	4,801.49	113.031	2.71996	—	8,437.80
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,752.13	5,903.70	7,655.83	180.224	4.33691	—	13,453.8

Government	—	—	—	—	—	—	—	—	—	—	—	482.092	1,624.38	2,106.47	49.5878	1.19328	—	3,701.76
Elementary School	—	—	—	—	—	—	—	—	—	—	—	265.317	893.968	1,159.28	27.2904	0.65672	—	2,037.25
Hospital	—	—	—	—	—	—	—	—	—	—	—	860.018	2,897.77	3,757.79	88.4613	2.12873	—	6,603.69
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	8,867.61	53,330.9	62,198.5	914.355	22.2202	—	91,679.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	274.429	4,807.43	5,081.86	28.5978	0.72413	—	6,012.60
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	164.998	555.951	720.949	16.9717	0.40841	—	1,266.95
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	285.273	961.207	1,246.48	29.3431	0.70611	—	2,190.48
Hotel	—	—	—	—	—	—	—	—	—	—	—	5.28736	17.8154	23.1028	0.54386	0.01309	—	40.5992
General Office Building	—	—	—	—	—	—	—	—	—	—	—	181.932	613.008	794.941	18.7135	0.45032	—	1,396.97
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	290.086	977.425	1,267.51	29.8381	0.71802	—	2,227.44
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	79.8158	268.934	348.750	8.20983	0.19756	—	612.869

Element School	—	—	—	—	—	—	—	—	—	—	—	43.9263	148.007	191.933	4.51824	0.10873	—	337.289
Hospital	—	—	—	—	—	—	—	—	—	—	—	142.386	479.760	622.146	14.6458	0.35244	—	1,093.32
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	1,468.13	8,829.54	10,297.7	151.382	3.67881	—	15,178.5

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,028.2	0.00000	10,028.2	1,002.29	0.00000	—	35,085.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	5,545.32	0.00000	5,545.32	554.235	0.00000	—	19,401.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	6,869.48	0.00000	6,869.48	686.580	0.00000	—	24,034.0
Hotel	—	—	—	—	—	—	—	—	—	—	—	193.860	0.00000	193.860	19.3756	0.00000	—	678.251
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,617.16	0.00000	1,617.16	161.630	0.00000	—	5,657.91

Industria Park	—	—	—	—	—	—	—	—	—	—	—	2,642.40	0.00000	2,642.40	264.098	0.00000	—	9,244.84
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	634.736	0.00000	634.736	63.4396	0.00000	—	2,220.73
Elementary School	—	—	—	—	—	—	—	—	—	—	—	3,345.39	0.00000	3,345.39	334.360	0.00000	—	11,704.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	20,818.3	0.00000	20,818.3	2,080.72	0.00000	—	72,836.2
City Park	—	—	—	—	—	—	—	—	—	—	—	9.96006	0.00000	9.96006	0.99547	0.00000	—	34.8469
Golf Course	—	—	—	—	—	—	—	—	—	—	—	124.156	0.00000	124.156	12.4089	0.00000	—	434.379
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,028.2	0.00000	10,028.2	1,002.29	0.00000	—	35,085.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	5,545.32	0.00000	5,545.32	554.235	0.00000	—	19,401.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	6,869.48	0.00000	6,869.48	686.580	0.00000	—	24,034.0
Hotel	—	—	—	—	—	—	—	—	—	—	—	193.860	0.00000	193.860	19.3756	0.00000	—	678.251
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,617.16	0.00000	1,617.16	161.630	0.00000	—	5,657.91

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,642.40	0.00000	2,642.40	264.098	0.00000	—	9,244.84
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	634.736	0.00000	634.736	63.4396	0.00000	—	2,220.73
Elementary School	—	—	—	—	—	—	—	—	—	—	—	3,345.39	0.00000	3,345.39	334.360	0.00000	—	11,704.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	20,818.3	0.00000	20,818.3	2,080.72	0.00000	—	72,836.2
City Park	—	—	—	—	—	—	—	—	—	—	—	9.96006	0.00000	9.96006	0.99547	0.00000	—	34.8469
Golf Course	—	—	—	—	—	—	—	—	—	—	—	124.156	0.00000	124.156	12.4089	0.00000	—	434.379
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,660.29	0.00000	1,660.29	165.940	0.00000	—	5,808.79
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	918.091	0.00000	918.091	91.7599	0.00000	—	3,212.09
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,137.32	0.00000	1,137.32	113.671	0.00000	—	3,979.10
Hotel	—	—	—	—	—	—	—	—	—	—	—	32.0958	0.00000	32.0958	3.20786	0.00000	—	112.292
General Office Building	—	—	—	—	—	—	—	—	—	—	—	267.740	0.00000	267.740	26.7596	0.00000	—	936.731
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	437.479	0.00000	437.479	43.7244	0.00000	—	1,530.59

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	105.088	0.00000	105.088	10.5032	0.00000	—	367.667
Elementary School	—	—	—	—	—	—	—	—	—	—	—	553.868	0.00000	553.868	55.3571	0.00000	—	1,937.80
Hospital	—	—	—	—	—	—	—	—	—	—	—	3,446.71	0.00000	3,446.71	344.486	0.00000	—	12,058.9
City Park	—	—	—	—	—	—	—	—	—	—	—	1.64900	0.00000	1.64900	0.16481	0.00000	—	5.76929
Golf Course	—	—	—	—	—	—	—	—	—	—	—	20.5554	0.00000	20.5554	2.05444	0.00000	—	71.9163
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	8,580.89	0.00000	8,580.89	857.629	0.00000	—	30,021.6

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	324.107	324.107
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.9342	95.9342
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58.2764	58.2764

Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,491.29	1,491.29
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.84685	7.84685
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,029.24	1,029.24
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.07989	3.07989
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.4447	18.4447
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.60554	5.60554
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,033.83	3,033.83
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	324.107	324.107
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.9342	95.9342
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58.2764	58.2764
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,491.29	1,491.29

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.84685	7.84685
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,029.24	1,029.24
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.07989	3.07989
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.4447	18.4447
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.60554	5.60554
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,033.83	3,033.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53.6596	53.6596
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.8830	15.8830
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.64832	9.64832
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	246.900	246.900
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.29914	1.29914

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170.403	170.403
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.50991	0.50991
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.05373	3.05373
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92806	0.92806
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	502.285	502.285

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

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
Single Family Housing	823,821	823,821	823,821	300,694,645	958,134	958,134	958,134	349,718,859
Apartments Mid Rise	285,436	285,436	285,436	104,184,045	331,972	331,972	331,972	121,169,851
Regional Shopping Center	1,723,272	1,723,272	1,723,272	628,994,343	1,902,758	2,112,579	2,112,579	716,388,022
Hotel	20,654.4	20,654.4	20,654.4	7,538,872	27,700.2	27,700.2	27,700.2	10,110,558
General Office Building	118,177	118,177	118,177	43,134,556	158,490	158,490	158,490	57,848,768
Industrial Park	50,108.2	50,108.2	50,108.2	18,289,476	67,201.2	67,201.2	67,201.2	24,528,447
Government Office Building	107,579	0.00000	0.00000	28,047,478	144,277	0.00000	0.00000	37,615,133
Elementary School	350,498	0.00000	0.00000	91,379,922	470,062	0.00000	0.00000	122,551,764
Hospital	144,185	144,185	144,185	52,627,414	193,369	193,369	193,369	70,579,863
City Park	630.319	630.319	630.319	230,066	845.336	845.336	845.336	308,547

Golf Course	3,483.84	3,483.84	3,483.84	1,271,600	4,672.25	4,672.25	4,672.25	1,705,373
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	1,160	1,160
Single Family Housing	Gas Fireplaces	19,726	19,726
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0
Single Family Housing	No Fireplaces	2,321	2,321
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	1,160	1,160
Single Family Housing	Non-Catalytic Wood Stoves	1,160	1,160
Single Family Housing	Pellet Wood Stoves	0	0
Apartments Mid Rise	Wood Fireplaces	698	698
Apartments Mid Rise	Gas Fireplaces	11,860	11,860
Apartments Mid Rise	Propane Fireplaces	0	0
Apartments Mid Rise	Electric Fireplaces	0	0
Apartments Mid Rise	No Fireplaces	1,395	1,395
Apartments Mid Rise	Conventional Wood Stoves	0	0
Apartments Mid Rise	Catalytic Wood Stoves	698	698
Apartments Mid Rise	Non-Catalytic Wood Stoves	698	698
Apartments Mid Rise	Pellet Wood Stoves	0	0
Regional Shopping Center	Wood Fireplaces	0	0
Regional Shopping Center	Gas Fireplaces	0	0
Regional Shopping Center	Propane Fireplaces	0	0

Regional Shopping Center	Electric Fireplaces	0	0
Regional Shopping Center	No Fireplaces	0	0
Regional Shopping Center	Conventional Wood Stoves	0	0
Regional Shopping Center	Catalytic Wood Stoves	0	0
Regional Shopping Center	Non-Catalytic Wood Stoves	0	0
Regional Shopping Center	Pellet Wood Stoves	0	0
Hotel	Wood Fireplaces	0	0
Hotel	Gas Fireplaces	0	0
Hotel	Propane Fireplaces	0	0
Hotel	Electric Fireplaces	0	0
Hotel	No Fireplaces	0	0
Hotel	Conventional Wood Stoves	0	0
Hotel	Catalytic Wood Stoves	0	0
Hotel	Non-Catalytic Wood Stoves	0	0
Hotel	Pellet Wood Stoves	0	0
General Office Building	Wood Fireplaces	0	0
General Office Building	Gas Fireplaces	0	0
General Office Building	Propane Fireplaces	0	0
General Office Building	Electric Fireplaces	0	0
General Office Building	No Fireplaces	0	0
General Office Building	Conventional Wood Stoves	0	0
General Office Building	Catalytic Wood Stoves	0	0
General Office Building	Non-Catalytic Wood Stoves	0	0
General Office Building	Pellet Wood Stoves	0	0
Industrial Park	Wood Fireplaces	0	0
Industrial Park	Gas Fireplaces	0	0
Industrial Park	Propane Fireplaces	0	0
Industrial Park	Electric Fireplaces	0	0

Industrial Park	No Fireplaces	0	0
Industrial Park	Conventional Wood Stoves	0	0
Industrial Park	Catalytic Wood Stoves	0	0
Industrial Park	Non-Catalytic Wood Stoves	0	0
Industrial Park	Pellet Wood Stoves	0	0
Government Office Building	Wood Fireplaces	0	0
Government Office Building	Gas Fireplaces	0	0
Government Office Building	Propane Fireplaces	0	0
Government Office Building	Electric Fireplaces	0	0
Government Office Building	No Fireplaces	0	0
Government Office Building	Conventional Wood Stoves	0	0
Government Office Building	Catalytic Wood Stoves	0	0
Government Office Building	Non-Catalytic Wood Stoves	0	0
Government Office Building	Pellet Wood Stoves	0	0
Elementary School	Wood Fireplaces	0	0
Elementary School	Gas Fireplaces	0	0
Elementary School	Propane Fireplaces	0	0
Elementary School	Electric Fireplaces	0	0
Elementary School	No Fireplaces	0	0
Elementary School	Conventional Wood Stoves	0	0
Elementary School	Catalytic Wood Stoves	0	0
Elementary School	Non-Catalytic Wood Stoves	0	0
Elementary School	Pellet Wood Stoves	0	0
Hospital	Wood Fireplaces	0	0
Hospital	Gas Fireplaces	0	0
Hospital	Propane Fireplaces	0	0
Hospital	Electric Fireplaces	0	0
Hospital	No Fireplaces	0	0

Hospital	Conventional Wood Stoves	0	0
Hospital	Catalytic Wood Stoves	0	0
Hospital	Non-Catalytic Wood Stoves	0	0
Hospital	Pellet Wood Stoves	0	0
City Park	Wood Fireplaces	0	0
City Park	Gas Fireplaces	0	0
City Park	Propane Fireplaces	0	0
City Park	Electric Fireplaces	0	0
City Park	No Fireplaces	0	0
City Park	Conventional Wood Stoves	0	0
City Park	Catalytic Wood Stoves	0	0
City Park	Non-Catalytic Wood Stoves	0	0
City Park	Pellet Wood Stoves	0	0
Golf Course	Wood Fireplaces	0	0
Golf Course	Gas Fireplaces	0	0
Golf Course	Propane Fireplaces	0	0
Golf Course	Electric Fireplaces	0	0
Golf Course	No Fireplaces	0	0
Golf Course	Conventional Wood Stoves	0	0
Golf Course	Catalytic Wood Stoves	0	0
Golf Course	Non-Catalytic Wood Stoves	0	0
Golf Course	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0

Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	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)
118,763,273	39,587,758	45,172,656	15,057,552	489,666

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

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)
Single Family Housing	160,015,632	346.196	0.0330	0.0040	889,648,379
Apartments Mid Rise	51,149,383	346.196	0.0330	0.0040	154,973,779
Regional Shopping Center	119,224,906	346.196	0.0330	0.0040	72,677,551
Hotel	13,349,489	346.196	0.0330	0.0040	27,542,563
General Office Building	57,497,154	346.196	0.0330	0.0040	81,780,377
Industrial Park	70,461,412	346.196	0.0330	0.0040	100,219,932
Government Office Building	22,567,611	346.196	0.0330	0.0040	32,098,766
Elementary School	29,863,876	346.196	0.0330	0.0040	100,176,881
Hospital	104,566,465	346.196	0.0330	0.0040	195,071,079

City Park	0.00000	346.196	0.0330	0.0040	0.00000
Golf Course	0.00000	346.196	0.0330	0.0040	0.00000
Parking Lot	7,149,117	346.196	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	865,013,077	4,659,314,126
Apartments Mid Rise	520,081,331	0.00000
Regional Shopping Center	899,191,523	0.00000
Hotel	16,665,968	0.00000
General Office Building	573,457,938	0.00000
Industrial Park	914,362,500	0.00000
Government Office Building	251,582,626	0.00000
Elementary School	138,457,380	0.00000
Hospital	448,806,239	0.00000
City Park	0.00000	0.00000
Golf Course	0.00000	0.00000
Parking Lot	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	18,607.4	0.00000
Apartments Mid Rise	10,289.3	0.00000
Regional Shopping Center	12,746.3	0.00000

Hotel	359.707	0.00000
General Office Building	3,000.64	0.00000
Industrial Park	4,902.96	0.00000
Government Office Building	1,177.75	0.00000
Elementary School	6,207.37	0.00000
Hospital	38,628.4	0.00000
City Park	18.4809	0.00000
Golf Course	230.371	0.00000
Parking Lot	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

Hotel	Household refrigerators and/or freezers	R-134a	1,430.00	0.00000	0.60000	0.00000	1.000000
Hotel	Other commercial A/C and heat pumps	R-410A	2,088.00	1.80000	4.00000	4.00000	18.0000
Hotel	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000
General Office Building	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.30000	4.00000	4.00000	18.0000
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Elementary School	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00004	1.000000	0.00000	1.000000
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000
Hospital	Household refrigerators and/or freezers	R-134a	1,430.00	0.00460	0.60000	0.00000	1.000000
Hospital	Chillers	R-134a	1,430.00	0.00230	2.00000	2.00000	23.0000
Hospital	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00001	1.000000	0.00000	1.000000

Hospital	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00015	7.50000	7.50000	20.0000
City Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000
Golf Course	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Golf Course	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

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)

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	11.6600	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	46.9944
AQ-PM	85.6254
AQ-DPM	53.0803
Drinking Water	58.4239
Lead Risk Housing	76.6856
Pesticides	0.00000
Toxic Releases	92.1230
Traffic	63.0875
Effect Indicators	—
CleanUp Sites	53.8820
Groundwater	88.1288
Haz Waste Facilities/Generators	81.8795
Impaired Water Bodies	0.00000
Solid Waste	36.4719
Sensitive Population	—
Asthma	51.3584
Cardio-vascular	85.3190
Low Birth Weights	9.18655
Socioeconomic Factor Indicators	—

Education	80.0304
Housing	60.5577
Linguistic	69.2245
Poverty	68.4799
Unemployment	68.4019

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	28.46143975
Employed	60.23354292
Median HI	25.36892083
Education	—
Bachelor's or higher	15.47542666
High school enrollment	100
Preschool enrollment	67.62479148
Transportation	—
Auto Access	21.12151931
Active commuting	52.05954061
Social	—
2-parent households	10.12447068
Voting	10.88156037
Neighborhood	—
Alcohol availability	22.76401899
Park access	11.44616964
Retail density	60.02823046
Supermarket access	63.96766329

Tree canopy	33.81239574
Housing	—
Homeownership	16.80995765
Housing habitability	14.14089568
Low-inc homeowner severe housing cost burden	49.48030284
Low-inc renter severe housing cost burden	58.02643398
Uncrowded housing	26.88310022
Health Outcomes	—
Insured adults	35.51905556
Arthritis	32.9
Asthma ER Admissions	49.9
High Blood Pressure	39.5
Cancer (excluding skin)	40.8
Asthma	58.2
Coronary Heart Disease	17.4
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	19.9
Life Expectancy at Birth	33.6
Cognitively Disabled	35.0
Physically Disabled	18.7
Heart Attack ER Admissions	41.1
Mental Health Not Good	39.0
Chronic Kidney Disease	14.8
Obesity	30.3
Pedestrian Injuries	88.0
Physical Health Not Good	27.6
Stroke	22.5
Health Risk Behaviors	—

Binge Drinking	61.9
Current Smoker	48.5
No Leisure Time for Physical Activity	31.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	77.6
Elderly	27.3
English Speaking	30.7
Foreign-born	64.3
Outdoor Workers	62.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	9.7
Traffic Density	62.7
Traffic Access	60.2
Other Indices	—
Hardship	67.4
Other Decision Support	—
2016 Voting	15.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0000
Healthy Places Index Score for Project Location (b)	25.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

8.1. Justifications

Screen	Justification
Land Use	Land uses were updated with project-specific information. For residential uses, the number of dwelling units, acreage, and population were updated with project-specific data, while the building square feet and landscape square feet were default values. For the hotel use, project-specific data on the number of rooms and default acres and square feet were used. Hotel land use was separated from retail for CalEEMod modeling. Project-specific values for acreage and building square feet were used for remaining land uses.
Operations: Vehicle Data	Trip generation scaled per total vmt estimate in Ganddini traffic report. Trip length updated based on regional average in traffic report.
Operations: Vehicle EF	Emission factors updated with EMFAC2025 data.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	7,534.74	3,301.00
Population	people	68,693.0	70,139.0
Lot Area	acre	367.184	463.000
Landscape Area	sq. ft	—	0.00000
Population	people	41,301.0	41,187.0

Lot Area	acre	278.681	711.260
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	74.0702	140.301
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	90.7713	217.057
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	29.0725	234.057
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	109.617	408.894
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	82.1097	98.7508
Landscape Area	sq. ft	—	0.00000
Landscape Area	sq. ft	—	0.00000
Recreational Building Area	sq. ft	0.00000	49,300.0
Landscape Area	sq. ft	—	0.00000
Recreational Building Area	sq. ft	0.00000	174,000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Single Family Housing	Weekday Trip Rate	size/day	9.44000	35.4988
Single Family Housing	Saturday Trip Rate	size/day	9.54000	35.4988
Single Family Housing	Sunday Trip Rate	size/day	8.55000	35.4988
Single Family Housing	Res H-W Trip Length	miles	14.9580	9.70000
Single Family Housing	Res H-S Trip Length	miles	8.57462	0.00000
Single Family Housing	Res H-O Trip Length	miles	5.16083	0.00000

Apartments Mid Rise	Weekday Trip Rate	size/day	5.44000	20.4569
Apartments Mid Rise	Saturday Trip Rate	size/day	4.91000	20.4569
Apartments Mid Rise	Sunday Trip Rate	size/day	4.09000	20.4569
Apartments Mid Rise	Res H-W Trip Length	miles	14.9580	9.70000
Apartments Mid Rise	Res H-S Trip Length	miles	8.57462	0.00000
Apartments Mid Rise	Res H-O Trip Length	miles	5.16083	0.00000
Regional Shopping Center	Weekday Trip Rate	size/day	37.7500	141.958
Regional Shopping Center	Saturday Trip Rate	size/day	46.1200	141.958
Regional Shopping Center	Sunday Trip Rate	size/day	21.1000	141.958
Regional Shopping Center	Non-Res H-W Trip Length	miles	14.9580	9.70000
Regional Shopping Center	Non-Res W-O Trip Length	miles	8.99635	0.00000
Regional Shopping Center	Non-Res O-O Trip Length	miles	4.43176	0.00000
Hotel	Weekday Trip Rate	size/day	8.36000	31.4375
Hotel	Saturday Trip Rate	size/day	8.19000	31.4375
Hotel	Sunday Trip Rate	size/day	5.95000	31.4375
Hotel	Non-Res H-W Trip Length	miles	14.9580	9.70000
Hotel	Non-Res W-O Trip Length	miles	8.99635	0.00000
Hotel	Non-Res O-O Trip Length	miles	4.43176	0.00000
General Office Building	Weekday Trip Rate	size/day	9.74000	36.6270
General Office Building	Saturday Trip Rate	size/day	2.21000	36.6270
General Office Building	Sunday Trip Rate	size/day	0.70000	36.6270
General Office Building	Non-Res H-W Trip Length	miles	14.9580	9.70000
General Office Building	Non-Res W-O Trip Length	miles	8.99635	0.00000
General Office Building	Non-Res O-O Trip Length	miles	4.43176	0.00000
Industrial Park	Weekday Trip Rate	size/day	3.37000	12.6728
Industrial Park	Saturday Trip Rate	size/day	2.54000	12.6728
Industrial Park	Sunday Trip Rate	size/day	1.24000	12.6728
Industrial Park	Non-Res H-W Trip Length	miles	14.9580	9.70000

Industrial Park	Non-Res W-O Trip Length	miles	8.99635	0.00000
Industrial Park	Non-Res O-O Trip Length	miles	4.43176	0.00000
Government Office Building	Weekday Trip Rate	size/day	22.5900	84.9490
Government Office Building	Non-Res H-W Trip Length	miles	14.9580	9.70000
Government Office Building	Non-Res W-O Trip Length	miles	8.99635	0.00000
Government Office Building	Non-Res O-O Trip Length	miles	4.43176	0.00000
Elementary School	Weekday Trip Rate	size/day	19.5200	73.4043
Elementary School	Non-Res H-W Trip Length	miles	14.9580	9.70000
Elementary School	Non-Res W-O Trip Length	miles	8.99635	0.00000
Elementary School	Non-Res O-O Trip Length	miles	4.43176	0.00000
Hospital	Weekday Trip Rate	size/day	10.7200	40.3122
Hospital	Saturday Trip Rate	size/day	7.72000	40.3122
Hospital	Sunday Trip Rate	size/day	6.77000	40.3122
Hospital	Non-Res H-W Trip Length	miles	14.9580	9.70000
Hospital	Non-Res W-O Trip Length	miles	8.99635	0.00000
Hospital	Non-Res O-O Trip Length	miles	4.43176	0.00000
City Park	Weekday Trip Rate	size/day	0.78000	2.93316
City Park	Saturday Trip Rate	size/day	1.96000	2.93316
City Park	Sunday Trip Rate	size/day	2.19000	2.93316
City Park	Non-Res H-W Trip Length	miles	14.9580	9.70000
City Park	Non-Res W-O Trip Length	miles	8.99635	0.00000
City Park	Non-Res O-O Trip Length	miles	4.43176	0.00000
Golf Course	Weekday Trip Rate	size/day	3.74000	14.0641
Golf Course	Saturday Trip Rate	size/day	3.74000	14.0641
Golf Course	Sunday Trip Rate	size/day	3.74000	14.0641
Golf Course	Non-Res H-W Trip Length	miles	14.9580	9.70000
Golf Course	Non-Res W-O Trip Length	miles	8.99635	0.00000
Golf Course	Non-Res O-O Trip Length	miles	4.43176	0.00000

Parking Lot	Non-Res H-W Trip Length	miles	14.9580	9.70000
Parking Lot	Non-Res W-O Trip Length	miles	8.99635	0.00000
Parking Lot	Non-Res O-O Trip Length	miles	4.43176	0.00000

8.5.1.3. Vehicle EF

Year	Season	Vehicle Class	Model Parameter	Units	Default Value	New Value
2026	A	HHDT	TOG RUNEX	g/mi	0.08244	0.10242
2026	A	HHDT	TOG IDLEX	g/trip	0.61192	0.57508
2026	A	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2026	A	HHDT	TOG DIURN	g/trip	0.00020	0.00083
2026	A	HHDT	TOG HOTSOAK	g/trip	—	0.00023
2026	A	HHDT	TOG RUNLOSS	g/trip	—	0.00198
2026	A	HHDT	ROG RUNEX	g/mi	0.01379	0.01335
2026	A	HHDT	ROG IDLEX	g/trip	0.27590	0.36225
2026	A	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2026	A	HHDT	ROG DIURN	g/trip	0.00020	0.00018
2026	A	HHDT	ROG HOTSOAK	g/trip	—	0.00023
2026	A	HHDT	ROG RUNLOSS	g/trip	—	0.00198
2026	A	HHDT	NOx RUNEX	g/mi	1.62948	1.04134
2026	A	HHDT	NOx IDLEX	g/trip	3.74136	2.23374
2026	A	HHDT	NOx STREX	g/trip	2.69299	2.12644
2026	A	HHDT	CO RUNEX	g/mi	0.49115	0.55204
2026	A	HHDT	CO IDLEX	g/trip	4.87495	5.75772
2026	A	HHDT	CO STREX	g/trip	0.00336	0.01143
2026	A	HHDT	SOx RUNEX	g/mi	0.01365	0.00462
2026	A	HHDT	SOx IDLEX	g/trip	0.00598	0.00264
2026	A	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2026	A	HHDT	PM2.5 RUNEX	g/mi	0.02168	0.01275

2026	A	HHDT	PM2.5 IDLEX	g/trip	0.00295	0.00142
2026	A	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2026	A	HHDT	PM2.5 PMTW	g/mi	0.00886	0.00885
2026	A	HHDT	PM2.5 PMBW	g/mi	0.02964	0.02921
2026	A	HHDT	PM10 RUNEX	g/mi	0.02266	0.01333
2026	A	HHDT	PM10 IDLEX	g/trip	0.00309	0.00149
2026	A	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2026	A	HHDT	PM10 PMTW	g/mi	0.03545	0.03539
2026	A	HHDT	PM10 PMBW	g/mi	0.08470	0.08345
2026	A	HHDT	CO, RUNEX	g/mi	1,504.75	1,473.21
2026	A	HHDT	CO, IDLEX	g/trip	764.328	874.539
2026	A	HHDT	CO, STREX	g/trip	0.03781	0.12692
2026	A	HHDT	CH„ RUNEX	g/mi	0.06698	0.15930
2026	A	HHDT	CH„ IDLEX	g/trip	0.30913	0.25954
2026	A	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2026	A	HHDT	N,O RUNEX	g/mi	0.23994	0.39007
2026	A	HHDT	N,O IDLEX	g/trip	0.12656	0.00000
2026	A	HHDT	N,O STREX	g/trip	0.00001	0.00003
2026	S	HHDT	TOG RUNEX	g/mi	0.08245	0.10244
2026	S	HHDT	TOG IDLEX	g/trip	0.62866	0.59899
2026	S	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2026	S	HHDT	TOG DIURN	g/trip	0.00024	0.00098
2026	S	HHDT	TOG HOTSOAK	g/trip	—	0.00024
2026	S	HHDT	TOG RUNLOSS	g/trip	—	0.00197
2026	S	HHDT	ROG RUNEX	g/mi	0.01380	0.01337
2026	S	HHDT	ROG IDLEX	g/trip	0.29060	0.38326
2026	S	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2026	S	HHDT	ROG DIURN	g/trip	0.00024	0.00098

2026	S	HHDT	ROG HOTSOAK	g/trip	—	0.00024
2026	S	HHDT	ROG RUNLOSS	g/trip	—	0.00197
2026	S	HHDT	NOx RUNEX	g/mi	1.54310	0.98363
2026	S	HHDT	NOx IDLEX	g/trip	3.60957	2.14068
2026	S	HHDT	NOx STREX	g/trip	2.69298	2.12641
2026	S	HHDT	CO RUNEX	g/mi	0.49142	0.55279
2026	S	HHDT	CO IDLEX	g/trip	4.81285	5.68545
2026	S	HHDT	CO STREX	g/trip	0.00319	0.01086
2026	S	HHDT	SOx RUNEX	g/mi	0.01365	0.00462
2026	S	HHDT	SOx IDLEX	g/trip	0.00593	0.00261
2026	S	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2026	S	HHDT	PM2.5 RUNEX	g/mi	0.02168	0.01275
2026	S	HHDT	PM2.5 IDLEX	g/trip	0.00256	0.00126
2026	S	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2026	S	HHDT	PM2.5 PMTW	g/mi	0.00886	0.00885
2026	S	HHDT	PM2.5 PMBW	g/mi	0.02964	0.02921
2026	S	HHDT	PM10 RUNEX	g/mi	0.02266	0.01333
2026	S	HHDT	PM10 IDLEX	g/trip	0.00269	0.00132
2026	S	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2026	S	HHDT	PM10 PMTW	g/mi	0.03545	0.03539
2026	S	HHDT	PM10 PMBW	g/mi	0.08470	0.08345
2026	S	HHDT	CO, RUNEX	g/mi	1,504.75	1,473.22
2026	S	HHDT	CO, IDLEX	g/trip	758.856	864.483
2026	S	HHDT	CO, STREX	g/trip	0.03754	0.12601
2026	S	HHDT	CH„ RUNEX	g/mi	0.06698	0.15931
2026	S	HHDT	CH„ IDLEX	g/trip	0.30981	0.26052
2026	S	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2026	S	HHDT	N,O RUNEX	g/mi	0.23994	0.39005

2026	S	HHDT	N,O IDLEX	g/trip	0.12569	0.00000
2026	S	HHDT	N,O STREX	g/trip	0.00001	0.00002
2026	W	HHDT	TOG RUNEX	g/mi	0.08244	0.10241
2026	W	HHDT	TOG IDLEX	g/trip	0.58881	0.54205
2026	W	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2026	W	HHDT	TOG DIURN	g/trip	0.00019	0.00084
2026	W	HHDT	TOG HOTSOAK	g/trip	—	0.00023
2026	W	HHDT	TOG RUNLOSS	g/trip	—	0.00208
2026	W	HHDT	ROG RUNEX	g/mi	0.01379	0.01335
2026	W	HHDT	ROG IDLEX	g/trip	0.25560	0.33325
2026	W	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2026	W	HHDT	ROG DIURN	g/trip	0.00019	0.00084
2026	W	HHDT	ROG HOTSOAK	g/trip	—	0.00023
2026	W	HHDT	ROG RUNLOSS	g/trip	—	0.00208
2026	W	HHDT	NOx RUNEX	g/mi	1.60107	1.02264
2026	W	HHDT	NOx IDLEX	g/trip	3.92336	2.36225
2026	W	HHDT	NOx STREX	g/trip	2.69299	2.12645
2026	W	HHDT	CO RUNEX	g/mi	0.49107	0.55183
2026	W	HHDT	CO IDLEX	g/trip	4.96070	5.85753
2026	W	HHDT	CO STREX	g/trip	0.00339	0.01155
2026	W	HHDT	SOx RUNEX	g/mi	0.01365	0.00462
2026	W	HHDT	SOx IDLEX	g/trip	0.00605	0.00269
2026	W	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2026	W	HHDT	PM2.5 RUNEX	g/mi	0.02168	0.01275
2026	W	HHDT	PM2.5 IDLEX	g/trip	0.00347	0.00163
2026	W	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2026	W	HHDT	PM2.5 PMTW	g/mi	0.00886	0.00885
2026	W	HHDT	PM2.5 PMBW	g/mi	0.02964	0.02921

2026	W	HHDT	PM10 RUNEX	g/mi	0.02266	0.01333
2026	W	HHDT	PM10 IDLEX	g/trip	0.00364	0.00171
2026	W	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2026	W	HHDT	PM10 PMTW	g/mi	0.03545	0.03539
2026	W	HHDT	PM10 PMBW	g/mi	0.08470	0.08345
2026	W	HHDT	CO, RUNEX	g/mi	1,504.75	1,473.21
2026	W	HHDT	CO, IDLEX	g/trip	771.884	888.425
2026	W	HHDT	CO, STREX	g/trip	0.03786	0.12710
2026	W	HHDT	CH„ RUNEX	g/mi	0.06698	0.15930
2026	W	HHDT	CH„ IDLEX	g/trip	0.30818	0.25820
2026	W	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2026	W	HHDT	N,O RUNEX	g/mi	0.23994	0.39006
2026	W	HHDT	N,O IDLEX	g/trip	0.12775	0.00000
2026	W	HHDT	N,O STREX	g/trip	0.00001	0.00003
2026	A	LDA	TOG RUNEX	g/mi	0.01182	0.03669
2026	A	LDA	TOG STREX	g/trip	0.27574	0.26812
2026	A	LDA	TOG DIURN	g/trip	0.28417	0.42340
2026	A	LDA	TOG HOTSOAK	g/trip	0.08076	0.18546
2026	A	LDA	TOG RUNLOSS	g/trip	0.14983	0.22778
2026	A	LDA	ROG RUNEX	g/mi	0.00811	0.02825
2026	A	LDA	ROG STREX	g/trip	0.25184	0.24493
2026	A	LDA	ROG DIURN	g/trip	0.28417	0.42340
2026	A	LDA	ROG HOTSOAK	g/trip	0.08076	0.18546
2026	A	LDA	ROG RUNLOSS	g/trip	0.14983	0.22778
2026	A	LDA	NOx RUNEX	g/mi	0.03300	0.05441
2026	A	LDA	NOx STREX	g/trip	0.20722	0.16234
2026	A	LDA	CO RUNEX	g/mi	0.66962	2.19159
2026	A	LDA	CO STREX	g/trip	2.49016	2.73017

2026	A	LDA	SOx RUNEX	g/mi	0.00253	0.00118
2026	A	LDA	SOx STREX	g/trip	0.00062	0.00026
2026	A	LDA	PM2.5 RUNEX	g/mi	0.00124	0.00246
2026	A	LDA	PM2.5 STREX	g/trip	0.00173	0.00178
2026	A	LDA	PM2.5 PMTW	g/mi	0.00200	0.00205
2026	A	LDA	PM2.5 PMBW	g/mi	0.00291	0.00236
2026	A	LDA	PM10 RUNEX	g/mi	0.00134	0.00266
2026	A	LDA	PM10 STREX	g/trip	0.00189	0.00193
2026	A	LDA	PM10 PMTW	g/mi	0.00800	0.00820
2026	A	LDA	PM10 PMBW	g/mi	0.00830	0.00675
2026	A	LDA	CO, RUNEX	g/mi	256.372	276.028
2026	A	LDA	CO, STREX	g/trip	62.8154	62.3739
2026	A	LDA	CH„ RUNEX	g/mi	0.00217	0.00600
2026	A	LDA	CH„ STREX	g/trip	0.05669	0.04299
2026	A	LDA	N,O RUNEX	g/mi	0.00396	0.00532
2026	A	LDA	N,O STREX	g/trip	0.02823	0.01566
2026	S	LDA	TOG RUNEX	g/mi	0.01211	0.03632
2026	S	LDA	TOG STREX	g/trip	0.24643	0.23932
2026	S	LDA	TOG DIURN	g/trip	0.32081	0.48485
2026	S	LDA	TOG HOTSOAK	g/trip	0.08388	0.19199
2026	S	LDA	TOG RUNLOSS	g/trip	0.15103	0.22844
2026	S	LDA	ROG RUNEX	g/mi	0.00831	0.02779
2026	S	LDA	ROG STREX	g/trip	0.22508	0.21862
2026	S	LDA	ROG DIURN	g/trip	0.32081	0.48485
2026	S	LDA	ROG HOTSOAK	g/trip	0.08388	0.19199
2026	S	LDA	ROG RUNLOSS	g/trip	0.15103	0.22844
2026	S	LDA	NOx RUNEX	g/mi	0.02818	0.04659
2026	S	LDA	NOx STREX	g/trip	0.19186	0.15032

2026	S	LDA	CO RUNEX	g/mi	0.78550	2.53242
2026	S	LDA	CO STREX	g/trip	2.12518	2.33237
2026	S	LDA	SOx RUNEX	g/mi	0.00265	0.00124
2026	S	LDA	SOx STREX	g/trip	0.00061	0.00026
2026	S	LDA	PM2.5 RUNEX	g/mi	0.00124	0.00246
2026	S	LDA	PM2.5 STREX	g/trip	0.00173	0.00178
2026	S	LDA	PM2.5 PMTW	g/mi	0.00200	0.00205
2026	S	LDA	PM2.5 PMBW	g/mi	0.00291	0.00236
2026	S	LDA	PM10 RUNEX	g/mi	0.00134	0.00266
2026	S	LDA	PM10 STREX	g/trip	0.00189	0.00193
2026	S	LDA	PM10 PMTW	g/mi	0.00800	0.00820
2026	S	LDA	PM10 PMBW	g/mi	0.00830	0.00675
2026	S	LDA	CO, RUNEX	g/mi	267.834	288.607
2026	S	LDA	CO, STREX	g/trip	62.1464	288.607
2026	S	LDA	CH„ RUNEX	g/mi	0.00225	0.00600
2026	S	LDA	CH„ STREX	g/trip	0.05122	0.03902
2026	S	LDA	N,O RUNEX	g/mi	0.00352	0.00477
2026	S	LDA	N,O STREX	g/trip	0.02710	0.01484
2026	W	LDA	TOG RUNEX	g/mi	0.01173	0.03673
2026	W	LDA	TOG STREX	g/trip	0.28233	0.27460
2026	W	LDA	TOG DIURN	g/trip	0.28160	0.42379
2026	W	LDA	TOG HOTSOAK	g/trip	0.08023	0.18443
2026	W	LDA	TOG RUNLOSS	g/trip	0.15179	0.23191
2026	W	LDA	ROG RUNEX	g/mi	0.00805	0.02833
2026	W	LDA	ROG STREX	g/trip	0.25787	0.25085
2026	W	LDA	ROG DIURN	g/trip	0.28160	0.42379
2026	W	LDA	ROG HOTSOAK	g/trip	0.08023	0.18443
2026	W	LDA	ROG RUNLOSS	g/trip	0.15179	0.23191

2026	W	LDA	NOx RUNEX	g/mi	0.03234	0.05331
2026	W	LDA	NOx STREX	g/trip	0.21064	0.16502
2026	W	LDA	CO RUNEX	g/mi	0.62770	2.06579
2026	W	LDA	CO STREX	g/trip	2.57471	2.82226
2026	W	LDA	SOx RUNEX	g/mi	0.00249	0.00116
2026	W	LDA	SOx STREX	g/trip	0.00062	0.00026
2026	W	LDA	PM2.5 RUNEX	g/mi	0.00124	0.00246
2026	W	LDA	PM2.5 STREX	g/trip	0.00173	0.00178
2026	W	LDA	PM2.5 PMTW	g/mi	0.00200	0.00205
2026	W	LDA	PM2.5 PMBW	g/mi	0.00291	0.00236
2026	W	LDA	PM10 RUNEX	g/mi	0.00134	0.00266
2026	W	LDA	PM10 STREX	g/trip	0.00189	0.00193
2026	W	LDA	PM10 PMTW	g/mi	0.00800	0.00820
2026	W	LDA	PM10 PMBW	g/mi	0.00830	0.00675
2026	W	LDA	CO, RUNEX	g/mi	252.150	271.393
2026	W	LDA	CO, STREX	g/trip	62.9698	62.5395
2026	W	LDA	CH„ RUNEX	g/mi	0.00215	0.00599
2026	W	LDA	CH„ STREX	g/trip	0.05791	0.04387
2026	W	LDA	N,O RUNEX	g/mi	0.00389	0.00524
2026	W	LDA	N,O STREX	g/trip	0.02872	0.01584
2026	A	LDT1	TOG RUNEX	g/mi	0.05259	0.09618
2026	A	LDT1	TOG STREX	g/trip	0.54670	0.60992
2026	A	LDT1	TOG DIURN	g/trip	0.65646	0.89689
2026	A	LDT1	TOG HOTSOAK	g/trip	0.17669	0.30190
2026	A	LDT1	TOG RUNLOSS	g/trip	0.42617	0.58977
2026	A	LDT1	ROG RUNEX	g/mi	0.03605	0.06876
2026	A	LDT1	ROG STREX	g/trip	0.49933	0.55711
2026	A	LDT1	ROG DIURN	g/trip	0.65646	0.89689

2026	A	LDT1	ROG HOTSOAK	g/trip	0.17669	0.30190
2026	A	LDT1	ROG RUNLOSS	g/trip	0.42617	0.58977
2026	A	LDT1	NOx RUNEX	g/mi	0.14623	0.23537
2026	A	LDT1	NOx STREX	g/trip	0.36406	0.36378
2026	A	LDT1	CO RUNEX	g/mi	1.66675	3.71978
2026	A	LDT1	CO STREX	g/trip	4.83070	5.71061
2026	A	LDT1	SOx RUNEX	g/mi	0.00330	0.00149
2026	A	LDT1	SOx STREX	g/trip	0.00083	0.00035
2026	A	LDT1	PM2.5 RUNEX	g/mi	0.00213	0.00367
2026	A	LDT1	PM2.5 STREX	g/trip	0.00264	0.00287
2026	A	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00204
2026	A	LDT1	PM2.5 PMBW	g/mi	0.00376	0.00314
2026	A	LDT1	PM10 RUNEX	g/mi	0.00232	0.00398
2026	A	LDT1	PM10 STREX	g/trip	0.00287	0.00311
2026	A	LDT1	PM10 PMTW	g/mi	0.00800	0.00816
2026	A	LDT1	PM10 PMBW	g/mi	0.01074	0.00897
2026	A	LDT1	CO, RUNEX	g/mi	333.378	346.603
2026	A	LDT1	CO, STREX	g/trip	83.5085	83.1529
2026	A	LDT1	CH„ RUNEX	g/mi	0.00812	0.01508
2026	A	LDT1	CH„ STREX	g/trip	0.09794	0.08632
2026	A	LDT1	N,O RUNEX	g/mi	0.01042	0.01531
2026	A	LDT1	N,O STREX	g/trip	0.03697	0.02623
2026	S	LDT1	TOG RUNEX	g/mi	0.05386	0.09733
2026	S	LDT1	TOG STREX	g/trip	0.48662	0.54223
2026	S	LDT1	TOG DIURN	g/trip	0.74812	1.02622
2026	S	LDT1	TOG HOTSOAK	g/trip	0.18444	0.31416
2026	S	LDT1	TOG RUNLOSS	g/trip	0.42804	0.58917
2026	S	LDT1	ROG RUNEX	g/mi	0.03692	0.06935

2026	S	LDT1	ROG STREX	g/trip	0.44445	0.49528
2026	S	LDT1	ROG DIURN	g/trip	0.74812	1.02622
2026	S	LDT1	ROG HOTSOAK	g/trip	0.18444	0.31416
2026	S	LDT1	ROG RUNLOSS	g/trip	0.42804	0.58917
2026	S	LDT1	NOx RUNEX	g/mi	0.12479	0.20095
2026	S	LDT1	NOx STREX	g/trip	0.33714	0.33692
2026	S	LDT1	CO RUNEX	g/mi	1.94715	4.28372
2026	S	LDT1	CO STREX	g/trip	4.09547	4.84043
2026	S	LDT1	SOx RUNEX	g/mi	0.00343	0.00155
2026	S	LDT1	SOx STREX	g/trip	0.00081	0.00034
2026	S	LDT1	PM2.5 RUNEX	g/mi	0.00213	0.00367
2026	S	LDT1	PM2.5 STREX	g/trip	0.00264	0.00287
2026	S	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00204
2026	S	LDT1	PM2.5 PMBW	g/mi	0.00376	0.00314
2026	S	LDT1	PM10 RUNEX	g/mi	0.00232	0.00398
2026	S	LDT1	PM10 STREX	g/trip	0.00287	0.00311
2026	S	LDT1	PM10 PMTW	g/mi	0.00800	0.00816
2026	S	LDT1	PM10 PMBW	g/mi	0.01074	0.00897
2026	S	LDT1	CO, RUNEX	g/mi	346.859	361.006
2026	S	LDT1	CO, STREX	g/trip	82.1576	81.5680
2026	S	LDT1	CH„ RUNEX	g/mi	0.00837	0.01528
2026	S	LDT1	CH„ STREX	g/trip	0.08800	0.07810
2026	S	LDT1	N,O RUNEX	g/mi	0.00926	0.01371
2026	S	LDT1	N,O STREX	g/trip	0.03556	0.02486
2026	W	LDT1	TOG RUNEX	g/mi	0.05222	0.09578
2026	W	LDT1	TOG STREX	g/trip	0.56019	0.62511
2026	W	LDT1	TOG DIURN	g/trip	0.64370	0.89171
2026	W	LDT1	TOG HOTSOAK	g/trip	0.17526	0.29975

2026	W	LDT1	TOG RUNLOSS	g/trip	0.43746	0.60806
2026	W	LDT1	ROG RUNEX	g/mi	0.03580	0.06852
2026	W	LDT1	ROG STREX	g/trip	0.51165	0.57098
2026	W	LDT1	ROG DIURN	g/trip	0.64370	0.89171
2026	W	LDT1	ROG HOTSOAK	g/trip	0.17526	0.29975
2026	W	LDT1	ROG RUNLOSS	g/trip	0.43746	0.60806
2026	W	LDT1	NOx RUNEX	g/mi	0.14333	0.23068
2026	W	LDT1	NOx STREX	g/trip	0.37008	0.36981
2026	W	LDT1	CO RUNEX	g/mi	1.56514	3.51356
2026	W	LDT1	CO STREX	g/trip	5.00154	5.91287
2026	W	LDT1	SOx RUNEX	g/mi	0.00325	0.00147
2026	W	LDT1	SOx STREX	g/trip	0.00083	0.00035
2026	W	LDT1	PM2.5 RUNEX	g/mi	0.00213	0.00367
2026	W	LDT1	PM2.5 STREX	g/trip	0.00264	0.00287
2026	W	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00204
2026	W	LDT1	PM2.5 PMBW	g/mi	0.00376	0.00314
2026	W	LDT1	PM10 RUNEX	g/mi	0.00232	0.00398
2026	W	LDT1	PM10 STREX	g/trip	0.00287	0.00311
2026	W	LDT1	PM10 PMTW	g/mi	0.00800	0.00816
2026	W	LDT1	PM10 PMBW	g/mi	0.01074	0.00897
2026	W	LDT1	CO, RUNEX	g/mi	328.413	341.298
2026	W	LDT1	CO, STREX	g/trip	83.8210	83.5196
2026	W	LDT1	CH„ RUNEX	g/mi	0.00805	0.01501
2026	W	LDT1	CH„ STREX	g/trip	0.10017	0.08814
2026	W	LDT1	N,O RUNEX	g/mi	0.01024	0.01510
2026	W	LDT1	N,O STREX	g/trip	0.03764	0.02653
2026	A	LDT2	TOG RUNEX	g/mi	0.01739	0.03155
2026	A	LDT2	TOG STREX	g/trip	0.33574	0.32164

2026	A	LDT2	TOG DIURN	g/trip	0.27515	0.33424
2026	A	LDT2	TOG HOTSOAK	g/trip	0.07305	0.10821
2026	A	LDT2	TOG RUNLOSS	g/trip	0.16925	0.22669
2026	A	LDT2	ROG RUNEX	g/mi	0.01193	0.02263
2026	A	LDT2	ROG STREX	g/trip	0.30664	0.29379
2026	A	LDT2	ROG DIURN	g/trip	0.27515	0.33424
2026	A	LDT2	ROG HOTSOAK	g/trip	0.07305	0.10821
2026	A	LDT2	ROG RUNLOSS	g/trip	0.16925	0.22669
2026	A	LDT2	NOx RUNEX	g/mi	0.06101	0.07521
2026	A	LDT2	NOx STREX	g/trip	0.27408	0.24235
2026	A	LDT2	CO RUNEX	g/mi	0.83464	2.36203
2026	A	LDT2	CO STREX	g/trip	2.96730	3.08355
2026	A	LDT2	SOx RUNEX	g/mi	0.00334	0.00156
2026	A	LDT2	SOx STREX	g/trip	0.00081	0.00035
2026	A	LDT2	PM2.5 RUNEX	g/mi	0.00134	0.00236
2026	A	LDT2	PM2.5 STREX	g/trip	0.00181	0.00179
2026	A	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00203
2026	A	LDT2	PM2.5 PMBW	g/mi	0.00357	0.00304
2026	A	LDT2	PM10 RUNEX	g/mi	0.00146	0.00256
2026	A	LDT2	PM10 STREX	g/trip	0.00197	0.00194
2026	A	LDT2	PM10 PMTW	g/mi	0.00800	0.00810
2026	A	LDT2	PM10 PMBW	g/mi	0.01020	0.00868
2026	A	LDT2	CO, RUNEX	g/mi	338.328	362.778
2026	A	LDT2	CO, STREX	g/trip	81.6962	82.5766
2026	A	LDT2	CH„ RUNEX	g/mi	0.00307	0.00584
2026	A	LDT2	CH„ STREX	g/trip	0.06835	0.05082
2026	A	LDT2	N,O RUNEX	g/mi	0.00566	0.00669
2026	A	LDT2	N,O STREX	g/trip	0.03312	0.01968

2026	S	LDT2	TOG RUNEX	g/mi	0.01782	0.03191
2026	S	LDT2	TOG STREX	g/trip	0.30000	0.28716
2026	S	LDT2	TOG DIURN	g/trip	0.30737	0.37240
2026	S	LDT2	TOG HOTSOAK	g/trip	0.07582	0.11203
2026	S	LDT2	TOG RUNLOSS	g/trip	0.17047	0.22742
2026	S	LDT2	ROG RUNEX	g/mi	0.01222	0.02281
2026	S	LDT2	ROG STREX	g/trip	0.27400	0.26229
2026	S	LDT2	ROG DIURN	g/trip	0.30737	0.37240
2026	S	LDT2	ROG HOTSOAK	g/trip	0.07582	0.11203
2026	S	LDT2	ROG RUNLOSS	g/trip	0.17047	0.22742
2026	S	LDT2	NOx RUNEX	g/mi	0.05207	0.06423
2026	S	LDT2	NOx STREX	g/trip	0.25378	0.22439
2026	S	LDT2	CO RUNEX	g/mi	0.97924	2.73554
2026	S	LDT2	CO STREX	g/trip	2.52972	2.62926
2026	S	LDT2	SOx RUNEX	g/mi	0.00347	0.00162
2026	S	LDT2	SOx STREX	g/trip	0.00080	0.00035
2026	S	LDT2	PM2.5 RUNEX	g/mi	0.00134	0.00236
2026	S	LDT2	PM2.5 STREX	g/trip	0.00181	0.00179
2026	S	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00203
2026	S	LDT2	PM2.5 PMBW	g/mi	0.00357	0.00304
2026	S	LDT2	PM10 RUNEX	g/mi	0.00146	0.00256
2026	S	LDT2	PM10 STREX	g/trip	0.00197	0.00194
2026	S	LDT2	PM10 PMTW	g/mi	0.00800	0.00810
2026	S	LDT2	PM10 PMBW	g/mi	0.01020	0.00868
2026	S	LDT2	CO, RUNEX	g/mi	350.606	376.441
2026	S	LDT2	CO, STREX	g/trip	80.8922	81.7518
2026	S	LDT2	CH„ RUNEX	g/mi	0.00318	0.00592
2026	S	LDT2	CH„ STREX	g/trip	0.06172	0.04613

2026	S	LDT2	N,O RUNEX	g/mi	0.00504	0.00600
2026	S	LDT2	N,O STREX	g/trip	0.03181	0.01865
2026	W	LDT2	TOG RUNEX	g/mi	0.01727	0.03143
2026	W	LDT2	TOG STREX	g/trip	0.34379	0.32941
2026	W	LDT2	TOG DIURN	g/trip	0.27293	0.33769
2026	W	LDT2	TOG HOTSOAK	g/trip	0.07258	0.10760
2026	W	LDT2	TOG RUNLOSS	g/trip	0.17139	0.22979
2026	W	LDT2	ROG RUNEX	g/mi	0.01185	0.02256
2026	W	LDT2	ROG STREX	g/trip	0.31400	0.30088
2026	W	LDT2	ROG DIURN	g/trip	0.27293	0.33769
2026	W	LDT2	ROG HOTSOAK	g/trip	0.07258	0.10760
2026	W	LDT2	ROG RUNLOSS	g/trip	0.17139	0.22979
2026	W	LDT2	NOx RUNEX	g/mi	0.05980	0.07371
2026	W	LDT2	NOx STREX	g/trip	0.27860	0.24636
2026	W	LDT2	CO RUNEX	g/mi	0.78233	2.22611
2026	W	LDT2	CO STREX	g/trip	3.06911	3.18922
2026	W	LDT2	SOx RUNEX	g/mi	0.00330	0.00154
2026	W	LDT2	SOx STREX	g/trip	0.00081	0.00035
2026	W	LDT2	PM2.5 RUNEX	g/mi	0.00134	0.00236
2026	W	LDT2	PM2.5 STREX	g/trip	0.00181	0.00179
2026	W	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00203
2026	W	LDT2	PM2.5 PMBW	g/mi	0.00357	0.00304
2026	W	LDT2	PM10 RUNEX	g/mi	0.00146	0.00256
2026	W	LDT2	PM10 STREX	g/trip	0.00197	0.00194
2026	W	LDT2	PM10 PMTW	g/mi	0.00800	0.00810
2026	W	LDT2	PM10 PMBW	g/mi	0.01020	0.00868
2026	W	LDT2	CO, RUNEX	g/mi	333.806	357.745
2026	W	LDT2	CO, STREX	g/trip	81.8824	82.7677

2026	W	LDT2	CH„ RUNEX	g/mi	0.00305	0.00581
2026	W	LDT2	CH„ STREX	g/trip	0.06984	0.05186
2026	W	LDT2	N,O RUNEX	g/mi	0.00556	0.00660
2026	W	LDT2	N,O STREX	g/trip	0.03370	0.01991
2026	A	LHDT1	TOG RUNEX	g/mi	0.04952	0.05924
2026	A	LHDT1	TOG IDLEX	g/trip	0.02846	0.03199
2026	A	LHDT1	TOG STREX	g/trip	0.10872	0.14493
2026	A	LHDT1	TOG DIURN	g/trip	0.12270	0.15610
2026	A	LHDT1	TOG HOTSOAK	g/trip	0.02998	0.03748
2026	A	LHDT1	TOG RUNLOSS	g/trip	0.09618	0.20524
2026	A	LHDT1	ROG RUNEX	g/mi	0.03981	0.04619
2026	A	LHDT1	ROG IDLEX	g/trip	0.02014	0.02240
2026	A	LHDT1	ROG STREX	g/trip	0.09930	0.13237
2026	A	LHDT1	ROG DIURN	g/trip	0.12270	0.15610
2026	A	LHDT1	ROG HOTSOAK	g/trip	0.02998	0.03748
2026	A	LHDT1	ROG RUNLOSS	g/trip	0.09618	0.20524
2026	A	LHDT1	NOx RUNEX	g/mi	0.37276	0.50521
2026	A	LHDT1	NOx IDLEX	g/trip	0.04280	0.03998
2026	A	LHDT1	NOx STREX	g/trip	0.39584	0.42734
2026	A	LHDT1	CO RUNEX	g/mi	0.64526	1.05930
2026	A	LHDT1	CO IDLEX	g/trip	0.19257	0.20593
2026	A	LHDT1	CO STREX	g/trip	2.19272	1.76056
2026	A	LHDT1	SOx RUNEX	g/mi	0.00533	0.00230
2026	A	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2026	A	LHDT1	SOx STREX	g/trip	0.00018	0.00007
2026	A	LHDT1	PM2.5 RUNEX	g/mi	0.00644	0.00700
2026	A	LHDT1	PM2.5 IDLEX	g/trip	0.00070	0.00054
2026	A	LHDT1	PM2.5 STREX	g/trip	0.00019	0.00021

2026	A	LHDT1	PM2.5 PMTW	g/mi	0.00234	0.00230
2026	A	LHDT1	PM2.5 PMBW	g/mi	0.02699	0.02718
2026	A	LHDT1	PM10 RUNEX	g/mi	0.00676	0.00735
2026	A	LHDT1	PM10 IDLEX	g/trip	0.00073	0.00056
2026	A	LHDT1	PM10 STREX	g/trip	0.00020	0.00023
2026	A	LHDT1	PM10 PMTW	g/mi	0.00938	0.00918
2026	A	LHDT1	PM10 PMBW	g/mi	0.07712	0.07767
2026	A	LHDT1	CO, RUNEX	g/mi	545.771	569.761
2026	A	LHDT1	CO, IDLEX	g/trip	8.53385	8.39714
2026	A	LHDT1	CO, STREX	g/trip	17.8052	18.3508
2026	A	LHDT1	CH„ RUNEX	g/mi	0.00390	0.00597
2026	A	LHDT1	CH„ IDLEX	g/trip	0.00500	0.00277
2026	A	LHDT1	CH„ STREX	g/trip	0.02068	0.02548
2026	A	LHDT1	N,O RUNEX	g/mi	0.03108	0.03256
2026	A	LHDT1	N,O IDLEX	g/trip	0.00065	0.00010
2026	A	LHDT1	N,O STREX	g/trip	0.03369	0.02981
2026	S	LHDT1	TOG RUNEX	g/mi	0.04999	0.05995
2026	S	LHDT1	TOG IDLEX	g/trip	0.02846	0.03199
2026	S	LHDT1	TOG STREX	g/trip	0.10477	0.13968
2026	S	LHDT1	TOG DIURN	g/trip	0.13633	0.17248
2026	S	LHDT1	TOG HOTSOAK	g/trip	0.03118	0.03897
2026	S	LHDT1	TOG RUNLOSS	g/trip	0.09669	0.20551
2026	S	LHDT1	ROG RUNEX	g/mi	0.04013	0.04668
2026	S	LHDT1	ROG IDLEX	g/trip	0.02014	0.02240
2026	S	LHDT1	ROG STREX	g/trip	0.09569	0.12758
2026	S	LHDT1	ROG DIURN	g/trip	0.13633	0.17248
2026	S	LHDT1	ROG HOTSOAK	g/trip	0.03118	0.03897
2026	S	LHDT1	ROG RUNLOSS	g/trip	0.09669	0.20551

2026	S	LHDT1	NOx RUNEX	g/mi	0.34804	0.47036
2026	S	LHDT1	NOx IDLEX	g/trip	0.04280	0.03998
2026	S	LHDT1	NOx STREX	g/trip	0.37926	0.40944
2026	S	LHDT1	CO RUNEX	g/mi	0.65713	1.07865
2026	S	LHDT1	CO IDLEX	g/trip	0.19257	0.20593
2026	S	LHDT1	CO STREX	g/trip	2.09889	1.68418
2026	S	LHDT1	SOx RUNEX	g/mi	0.00533	0.00230
2026	S	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2026	S	LHDT1	SOx STREX	g/trip	0.00017	0.00007
2026	S	LHDT1	PM2.5 RUNEX	g/mi	0.00644	0.00700
2026	S	LHDT1	PM2.5 IDLEX	g/trip	0.00070	0.00054
2026	S	LHDT1	PM2.5 STREX	g/trip	0.00019	0.00021
2026	S	LHDT1	PM2.5 PMTW	g/mi	0.00234	0.00230
2026	S	LHDT1	PM2.5 PMBW	g/mi	0.02699	0.02718
2026	S	LHDT1	PM10 RUNEX	g/mi	0.00676	0.00735
2026	S	LHDT1	PM10 IDLEX	g/trip	0.00073	0.00056
2026	S	LHDT1	PM10 STREX	g/trip	0.00020	0.00023
2026	S	LHDT1	PM10 PMTW	g/mi	0.00938	0.00918
2026	S	LHDT1	PM10 PMBW	g/mi	0.07712	0.07767
2026	S	LHDT1	CO, RUNEX	g/mi	545.791	569.794
2026	S	LHDT1	CO, IDLEX	g/trip	8.53385	8.39714
2026	S	LHDT1	CO, STREX	g/trip	17.6443	18.2138
2026	S	LHDT1	CH„ RUNEX	g/mi	0.00396	0.00606
2026	S	LHDT1	CH„ IDLEX	g/trip	0.00502	0.00277
2026	S	LHDT1	CH„ STREX	g/trip	0.01999	0.02472
2026	S	LHDT1	N,O RUNEX	g/mi	0.03064	0.03172
2026	S	LHDT1	N,O IDLEX	g/trip	0.00066	0.00010
2026	S	LHDT1	N,O STREX	g/trip	0.03285	0.02893

2026	W	LHDT1	TOG RUNEX	g/mi	0.04939	0.05904
2026	W	LHDT1	TOG IDLEX	g/trip	0.02846	0.03199
2026	W	LHDT1	TOG STREX	g/trip	0.10957	0.14607
2026	W	LHDT1	TOG DIURN	g/trip	0.12098	0.15680
2026	W	LHDT1	TOG HOTSOAK	g/trip	0.02977	0.03722
2026	W	LHDT1	TOG RUNLOSS	g/trip	0.09847	0.21077
2026	W	LHDT1	ROG RUNEX	g/mi	0.03972	0.04606
2026	W	LHDT1	ROG IDLEX	g/trip	0.02014	0.02240
2026	W	LHDT1	ROG STREX	g/trip	0.10008	0.13342
2026	W	LHDT1	ROG DIURN	g/trip	0.12098	0.15680
2026	W	LHDT1	ROG HOTSOAK	g/trip	0.02977	0.03722
2026	W	LHDT1	ROG RUNLOSS	g/trip	0.09847	0.21077
2026	W	LHDT1	NOx RUNEX	g/mi	0.36561	0.49537
2026	W	LHDT1	NOx IDLEX	g/trip	0.04280	0.03998
2026	W	LHDT1	NOx STREX	g/trip	0.39961	0.43141
2026	W	LHDT1	CO RUNEX	g/mi	0.64217	1.05426
2026	W	LHDT1	CO IDLEX	g/trip	0.19257	0.20593
2026	W	LHDT1	CO STREX	g/trip	2.21015	1.77464
2026	W	LHDT1	SOx RUNEX	g/mi	0.00533	0.00230
2026	W	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2026	W	LHDT1	SOx STREX	g/trip	0.00018	0.00007
2026	W	LHDT1	PM2.5 RUNEX	g/mi	0.00644	0.00700
2026	W	LHDT1	PM2.5 IDLEX	g/trip	0.00070	0.00054
2026	W	LHDT1	PM2.5 STREX	g/trip	0.00019	0.00021
2026	W	LHDT1	PM2.5 PMTW	g/mi	0.00234	0.00230
2026	W	LHDT1	PM2.5 PMBW	g/mi	0.02699	0.02718
2026	W	LHDT1	PM10 RUNEX	g/mi	0.00676	0.00735
2026	W	LHDT1	PM10 IDLEX	g/trip	0.00073	0.00056

2026	W	LHDT1	PM10 STREX	g/trip	0.00020	0.00023
2026	W	LHDT1	PM10 PMTW	g/mi	0.00938	0.00918
2026	W	LHDT1	PM10 PMBW	g/mi	0.07712	0.07767
2026	W	LHDT1	CO, RUNEX	g/mi	545.765	569.753
2026	W	LHDT1	CO, IDLEX	g/trip	8.53385	8.39714
2026	W	LHDT1	CO, STREX	g/trip	17.8355	18.3766
2026	W	LHDT1	CH„ RUNEX	g/mi	0.00388	0.00594
2026	W	LHDT1	CH„ IDLEX	g/trip	0.00500	0.00277
2026	W	LHDT1	CH„ STREX	g/trip	0.02083	0.02565
2026	W	LHDT1	N,O RUNEX	g/mi	0.03098	0.03239
2026	W	LHDT1	N,O IDLEX	g/trip	0.00065	0.00010
2026	W	LHDT1	N,O STREX	g/trip	0.03398	0.03001
2026	A	LHDT2	TOG RUNEX	g/mi	0.06296	0.05890
2026	A	LHDT2	TOG IDLEX	g/trip	0.02106	0.02001
2026	A	LHDT2	TOG STREX	g/trip	0.06864	0.08281
2026	A	LHDT2	TOG DIURN	g/trip	0.08074	0.06202
2026	A	LHDT2	TOG HOTSOAK	g/trip	0.01913	0.01484
2026	A	LHDT2	TOG RUNLOSS	g/trip	0.06035	0.09243
2026	A	LHDT2	ROG RUNEX	g/mi	0.05392	0.04982
2026	A	LHDT2	ROG IDLEX	g/trip	0.01559	0.01485
2026	A	LHDT2	ROG STREX	g/trip	0.06269	0.07563
2026	A	LHDT2	ROG DIURN	g/trip	0.08074	0.06202
2026	A	LHDT2	ROG HOTSOAK	g/trip	0.01913	0.01484
2026	A	LHDT2	ROG RUNLOSS	g/trip	0.06035	0.09243
2026	A	LHDT2	NOx RUNEX	g/mi	0.52646	0.39238
2026	A	LHDT2	NOx IDLEX	g/trip	0.07480	0.06112
2026	A	LHDT2	NOx STREX	g/trip	0.25534	0.22721
2026	A	LHDT2	CO RUNEX	g/mi	0.36767	0.52106

2026	A	LHDT2	CO IDLEX	g/trip	0.14449	0.14242
2026	A	LHDT2	CO STREX	g/trip	1.31814	1.02220
2026	A	LHDT2	SOx RUNEX	g/mi	0.00581	0.00209
2026	A	LHDT2	SOx IDLEX	g/trip	0.00013	0.00004
2026	A	LHDT2	SOx STREX	g/trip	0.00011	0.00003
2026	A	LHDT2	PM2.5 RUNEX	g/mi	0.01104	0.00852
2026	A	LHDT2	PM2.5 IDLEX	g/trip	0.00128	0.00125
2026	A	LHDT2	PM2.5 STREX	g/trip	0.00009	0.00009
2026	A	LHDT2	PM2.5 PMTW	g/mi	0.00262	0.00267
2026	A	LHDT2	PM2.5 PMBW	g/mi	0.03149	0.03154
2026	A	LHDT2	PM10 RUNEX	g/mi	0.01155	0.00892
2026	A	LHDT2	PM10 IDLEX	g/trip	0.00134	0.00131
2026	A	LHDT2	PM10 STREX	g/trip	0.00010	0.00010
2026	A	LHDT2	PM10 PMTW	g/mi	0.01047	0.01069
2026	A	LHDT2	PM10 PMBW	g/mi	0.08998	0.09011
2026	A	LHDT2	CO, RUNEX	g/mi	602.575	572.605
2026	A	LHDT2	CO, IDLEX	g/trip	13.2499	12.6545
2026	A	LHDT2	CO, STREX	g/trip	10.9035	9.49107
2026	A	LHDT2	CH„ RUNEX	g/mi	0.00335	0.00372
2026	A	LHDT2	CH„ IDLEX	g/trip	0.00314	0.00153
2026	A	LHDT2	CH„ STREX	g/trip	0.01305	0.01447
2026	A	LHDT2	N,O RUNEX	g/mi	0.05893	0.06239
2026	A	LHDT2	N,O IDLEX	g/trip	0.00159	0.00005
2026	A	LHDT2	N,O STREX	g/trip	0.02072	0.01601
2026	S	LHDT2	TOG RUNEX	g/mi	0.06311	0.05912
2026	S	LHDT2	TOG IDLEX	g/trip	0.02106	0.02001
2026	S	LHDT2	TOG STREX	g/trip	0.06615	0.07982
2026	S	LHDT2	TOG DIURN	g/trip	0.08921	0.06860

2026	S	LHDT2	TOG HOTSOAK	g/trip	0.01987	0.01543
2026	S	LHDT2	TOG RUNLOSS	g/trip	0.06068	0.09258
2026	S	LHDT2	ROG RUNEX	g/mi	0.05403	0.04997
2026	S	LHDT2	ROG IDLEX	g/trip	0.01559	0.01485
2026	S	LHDT2	ROG STREX	g/trip	0.06042	0.07290
2026	S	LHDT2	ROG DIURN	g/trip	0.08921	0.06860
2026	S	LHDT2	ROG HOTSOAK	g/trip	0.01987	0.01543
2026	S	LHDT2	ROG RUNLOSS	g/trip	0.06068	0.09258
2026	S	LHDT2	NOx RUNEX	g/mi	0.49612	0.36874
2026	S	LHDT2	NOx IDLEX	g/trip	0.07480	0.06112
2026	S	LHDT2	NOx STREX	g/trip	0.24465	0.21769
2026	S	LHDT2	CO RUNEX	g/mi	0.37270	0.52960
2026	S	LHDT2	CO IDLEX	g/trip	0.14449	0.14242
2026	S	LHDT2	CO STREX	g/trip	1.26186	0.97833
2026	S	LHDT2	SOx RUNEX	g/mi	0.00581	0.00209
2026	S	LHDT2	SOx IDLEX	g/trip	0.00013	0.00004
2026	S	LHDT2	SOx STREX	g/trip	0.00011	0.00003
2026	S	LHDT2	PM2.5 RUNEX	g/mi	0.01104	0.00852
2026	S	LHDT2	PM2.5 IDLEX	g/trip	0.00128	0.00125
2026	S	LHDT2	PM2.5 STREX	g/trip	0.00009	0.00009
2026	S	LHDT2	PM2.5 PMTW	g/mi	0.00262	0.00267
2026	S	LHDT2	PM2.5 PMBW	g/mi	0.03149	0.03154
2026	S	LHDT2	PM10 RUNEX	g/mi	0.01155	0.00892
2026	S	LHDT2	PM10 IDLEX	g/trip	0.00134	0.00131
2026	S	LHDT2	PM10 STREX	g/trip	0.00010	0.00010
2026	S	LHDT2	PM10 PMTW	g/mi	0.01047	0.01069
2026	S	LHDT2	PM10 PMBW	g/mi	0.08998	0.09011
2026	S	LHDT2	CO, RUNEX	g/mi	602.583	572.619

2026	S	LHDT2	CO, IDLEX	g/trip	13.2499	12.6545
2026	S	LHDT2	CO, STREX	g/trip	10.8065	9.41248
2026	S	LHDT2	CH„ RUNEX	g/mi	0.00337	0.00375
2026	S	LHDT2	CH„ IDLEX	g/trip	0.00314	0.00153
2026	S	LHDT2	CH„ STREX	g/trip	0.01262	0.01404
2026	S	LHDT2	N,O RUNEX	g/mi	0.05865	0.06204
2026	S	LHDT2	N,O IDLEX	g/trip	0.00159	0.00005
2026	S	LHDT2	N,O STREX	g/trip	0.02023	0.01554
2026	W	LHDT2	TOG RUNEX	g/mi	0.06292	0.05884
2026	W	LHDT2	TOG IDLEX	g/trip	0.02106	0.02001
2026	W	LHDT2	TOG STREX	g/trip	0.06918	0.08346
2026	W	LHDT2	TOG DIURN	g/trip	0.07983	0.06224
2026	W	LHDT2	TOG HOTSOAK	g/trip	0.01900	0.01473
2026	W	LHDT2	TOG RUNLOSS	g/trip	0.06157	0.09486
2026	W	LHDT2	ROG RUNEX	g/mi	0.05389	0.04978
2026	W	LHDT2	ROG IDLEX	g/trip	0.01559	0.01485
2026	W	LHDT2	ROG STREX	g/trip	0.06319	0.07623
2026	W	LHDT2	ROG DIURN	g/trip	0.07983	0.06224
2026	W	LHDT2	ROG HOTSOAK	g/trip	0.01900	0.01473
2026	W	LHDT2	ROG RUNLOSS	g/trip	0.06157	0.09486
2026	W	LHDT2	NOx RUNEX	g/mi	0.51679	0.38508
2026	W	LHDT2	NOx IDLEX	g/trip	0.07480	0.06112
2026	W	LHDT2	NOx STREX	g/trip	0.25778	0.22937
2026	W	LHDT2	CO RUNEX	g/mi	0.36636	0.51885
2026	W	LHDT2	CO IDLEX	g/trip	0.14449	0.14242
2026	W	LHDT2	CO STREX	g/trip	1.32864	1.03035
2026	W	LHDT2	SOx RUNEX	g/mi	0.00581	0.00209
2026	W	LHDT2	SOx IDLEX	g/trip	0.00013	0.00004

2026	W	LHDT2	SOx STREX	g/trip	0.00011	0.00003
2026	W	LHDT2	PM2.5 RUNEX	g/mi	0.01104	0.00852
2026	W	LHDT2	PM2.5 IDLEX	g/trip	0.00128	0.00125
2026	W	LHDT2	PM2.5 STREX	g/trip	0.00009	0.00009
2026	W	LHDT2	PM2.5 PMTW	g/mi	0.00262	0.00267
2026	W	LHDT2	PM2.5 PMBW	g/mi	0.03149	0.03154
2026	W	LHDT2	PM10 RUNEX	g/mi	0.01155	0.00892
2026	W	LHDT2	PM10 IDLEX	g/trip	0.00134	0.00131
2026	W	LHDT2	PM10 STREX	g/trip	0.00010	0.00010
2026	W	LHDT2	PM10 PMTW	g/mi	0.01047	0.01069
2026	W	LHDT2	PM10 PMBW	g/mi	0.08998	0.09011
2026	W	LHDT2	CO, RUNEX	g/mi	602.573	572.601
2026	W	LHDT2	CO, IDLEX	g/trip	13.2499	12.6545
2026	W	LHDT2	CO, STREX	g/trip	10.9218	9.50598
2026	W	LHDT2	CH„ RUNEX	g/mi	0.00334	0.00371
2026	W	LHDT2	CH„ IDLEX	g/trip	0.00313	0.00153
2026	W	LHDT2	CH„ STREX	g/trip	0.01314	0.01456
2026	W	LHDT2	N,O RUNEX	g/mi	0.05886	0.06232
2026	W	LHDT2	N,O IDLEX	g/trip	0.00159	0.00005
2026	W	LHDT2	N,O STREX	g/trip	0.02091	0.01612
2026	A	MCY	TOG RUNEX	g/mi	1.30491	1.54361
2026	A	MCY	TOG STREX	g/trip	1.23762	1.21130
2026	A	MCY	TOG DIURN	g/trip	1.92788	2.01200
2026	A	MCY	TOG HOTSOAK	g/trip	3.60781	3.76519
2026	A	MCY	TOG RUNLOSS	g/trip	3.51331	3.71632
2026	A	MCY	ROG RUNEX	g/mi	1.07066	1.26306
2026	A	MCY	ROG STREX	g/trip	1.13798	1.11372
2026	A	MCY	ROG DIURN	g/trip	1.92788	2.01200

2026	A	MCY	ROG HOTSOAK	g/trip	3.60781	3.76519
2026	A	MCY	ROG RUNLOSS	g/trip	3.51331	3.71632
2026	A	MCY	NOx RUNEX	g/mi	0.51994	0.52403
2026	A	MCY	NOx STREX	g/trip	0.11342	0.11109
2026	A	MCY	CO RUNEX	g/mi	11.9518	12.0689
2026	A	MCY	CO STREX	g/trip	7.27930	7.17572
2026	A	MCY	SOx RUNEX	g/mi	0.00192	0.00090
2026	A	MCY	SOx STREX	g/trip	0.00043	0.00019
2026	A	MCY	PM2.5 RUNEX	g/mi	0.00218	0.00271
2026	A	MCY	PM2.5 STREX	g/trip	0.00333	0.00331
2026	A	MCY	PM10 RUNEX	g/mi	0.00233	0.00291
2026	A	MCY	PM10 STREX	g/trip	0.00355	0.00353
2026	A	MCY	CO, RUNEX	g/mi	193.993	209.690
2026	A	MCY	CO, STREX	g/trip	43.8588	43.1519
2026	A	MCY	CH„ RUNEX	g/mi	0.16830	0.19731
2026	A	MCY	CH„ STREX	g/trip	0.15536	0.16575
2026	A	MCY	N,O RUNEX	g/mi	0.03743	0.03819
2026	A	MCY	N,O STREX	g/trip	0.00695	0.01203
2026	S	MCY	TOG RUNEX	g/mi	1.30099	1.54185
2026	S	MCY	TOG STREX	g/trip	1.10663	1.08370
2026	S	MCY	TOG DIURN	g/trip	2.37016	2.44118
2026	S	MCY	TOG HOTSOAK	g/trip	3.69339	3.85406
2026	S	MCY	TOG RUNLOSS	g/trip	3.44413	3.60498
2026	S	MCY	ROG RUNEX	g/mi	1.06532	1.25923
2026	S	MCY	ROG STREX	g/trip	1.01746	0.99633
2026	S	MCY	ROG DIURN	g/trip	2.37016	2.44118
2026	S	MCY	ROG HOTSOAK	g/trip	3.69339	3.85406
2026	S	MCY	ROG RUNLOSS	g/trip	3.44413	3.60498

2026	S	MCY	NOx RUNEX	g/mi	0.45571	0.45936
2026	S	MCY	NOx STREX	g/trip	0.10736	0.10517
2026	S	MCY	CO RUNEX	g/mi	11.9161	12.0244
2026	S	MCY	CO STREX	g/trip	6.56479	6.46704
2026	S	MCY	SOx RUNEX	g/mi	0.00192	0.00090
2026	S	MCY	SOx STREX	g/trip	0.00042	0.00018
2026	S	MCY	PM2.5 RUNEX	g/mi	0.00218	0.00271
2026	S	MCY	PM2.5 STREX	g/trip	0.00333	0.00331
2026	S	MCY	PM10 RUNEX	g/mi	0.00233	0.00291
2026	S	MCY	PM10 STREX	g/trip	0.00355	0.00353
2026	S	MCY	PM10 PMTW	g/mi	0.00400	0.00400
2026	S	MCY	PM10 PMBW	g/mi	0.01200	0.01200
2026	S	MCY	CO, RUNEX	g/mi	193.924	209.614
2026	S	MCY	CO, STREX	g/trip	42.3248	41.6408
2026	S	MCY	CH„ RUNEX	g/mi	0.16873	0.19750
2026	S	MCY	CH„ STREX	g/trip	0.14019	0.15113
2026	S	MCY	N,O RUNEX	g/mi	0.03411	0.03485
2026	S	MCY	N,O STREX	g/trip	0.00684	0.01159
2026	W	MCY	TOG RUNEX	g/mi	1.30517	1.54325
2026	W	MCY	TOG STREX	g/trip	1.26604	1.23900
2026	W	MCY	TOG DIURN	g/trip	1.93175	2.14413
2026	W	MCY	TOG HOTSOAK	g/trip	3.59983	3.75699
2026	W	MCY	TOG RUNLOSS	g/trip	3.81013	4.04732
2026	W	MCY	ROG RUNEX	g/mi	1.07138	1.26334
2026	W	MCY	ROG STREX	g/trip	1.16413	1.13920
2026	W	MCY	ROG DIURN	g/trip	1.93175	2.14413
2026	W	MCY	ROG HOTSOAK	g/trip	3.59983	3.75699
2026	W	MCY	ROG RUNLOSS	g/trip	3.81013	4.04732

2026	W	MCY	NOx RUNEX	g/mi	0.50735	0.51132
2026	W	MCY	NOx STREX	g/trip	0.11485	0.11248
2026	W	MCY	CO RUNEX	g/mi	11.9482	12.0680
2026	W	MCY	CO STREX	g/trip	7.42362	7.31891
2026	W	MCY	SOx RUNEX	g/mi	0.00192	0.00090
2026	W	MCY	SOx STREX	g/trip	0.00044	0.00019
2026	W	MCY	PM2.5 RUNEX	g/mi	0.00218	0.00271
2026	W	MCY	PM2.5 STREX	g/trip	0.00333	0.00331
2026	W	MCY	PM10 RUNEX	g/mi	0.00233	0.00291
2026	W	MCY	PM10 STREX	g/trip	0.00355	0.00353
2026	W	MCY	CO, RUNEX	g/mi	193.988	209.687
2026	W	MCY	CO, STREX	g/trip	44.1747	43.4631
2026	W	MCY	CH„ RUNEX	g/mi	0.16812	0.19717
2026	W	MCY	CH„ STREX	g/trip	0.15867	0.16889
2026	W	MCY	N,O RUNEX	g/mi	0.03677	0.03753
2026	W	MCY	N,O STREX	g/trip	0.00707	0.01213
2026	A	MDV	TOG RUNEX	g/mi	0.02564	0.04821
2026	A	MDV	TOG STREX	g/trip	0.43220	0.44516
2026	A	MDV	TOG DIURN	g/trip	0.34776	0.41138
2026	A	MDV	TOG HOTSOAK	g/trip	0.08736	0.11696
2026	A	MDV	TOG RUNLOSS	g/trip	0.22524	0.28523
2026	A	MDV	ROG RUNEX	g/mi	0.01761	0.03386
2026	A	MDV	ROG STREX	g/trip	0.39475	0.40660
2026	A	MDV	ROG DIURN	g/trip	0.34776	0.41138
2026	A	MDV	ROG HOTSOAK	g/trip	0.08736	0.11696
2026	A	MDV	ROG RUNLOSS	g/trip	0.22524	0.28523
2026	A	MDV	NOx RUNEX	g/mi	0.09205	0.12361
2026	A	MDV	NOx STREX	g/trip	0.34335	0.33200

2026	A	MDV	CO RUNEX	g/mi	0.98496	2.67757
2026	A	MDV	CO STREX	g/trip	3.17528	3.41073
2026	A	MDV	SOx RUNEX	g/mi	0.00406	0.00188
2026	A	MDV	SOx STREX	g/trip	0.00098	0.00041
2026	A	MDV	PM2.5 RUNEX	g/mi	0.00138	0.00242
2026	A	MDV	PM2.5 STREX	g/trip	0.00182	0.00181
2026	A	MDV	PM2.5 PMTW	g/mi	0.00200	0.00202
2026	A	MDV	PM2.5 PMBW	g/mi	0.00363	0.00313
2026	A	MDV	PM10 RUNEX	g/mi	0.00150	0.00262
2026	A	MDV	PM10 STREX	g/trip	0.00197	0.00197
2026	A	MDV	PM10 PMTW	g/mi	0.00800	0.00808
2026	A	MDV	PM10 PMBW	g/mi	0.01038	0.00895
2026	A	MDV	CO, RUNEX	g/mi	410.622	439.942
2026	A	MDV	CO, STREX	g/trip	98.6418	96.9943
2026	A	MDV	CH„ RUNEX	g/mi	0.00423	0.00832
2026	A	MDV	CH„ STREX	g/trip	0.08183	0.06495
2026	A	MDV	N,O RUNEX	g/mi	0.00787	0.01102
2026	A	MDV	N,O STREX	g/trip	0.03557	0.02282
2026	S	MDV	TOG RUNEX	g/mi	0.02624	0.04907
2026	S	MDV	TOG STREX	g/trip	0.38600	0.39747
2026	S	MDV	TOG DIURN	g/trip	0.38321	0.45315
2026	S	MDV	TOG HOTSOAK	g/trip	0.09050	0.12107
2026	S	MDV	TOG RUNLOSS	g/trip	0.22642	0.28582
2026	S	MDV	ROG RUNEX	g/mi	0.01802	0.03440
2026	S	MDV	ROG STREX	g/trip	0.35255	0.36304
2026	S	MDV	ROG DIURN	g/trip	0.38321	0.45315
2026	S	MDV	ROG HOTSOAK	g/trip	0.09050	0.12107
2026	S	MDV	ROG RUNLOSS	g/trip	0.22642	0.28582

2026	S	MDV	NOx RUNEX	g/mi	0.07860	0.10560
2026	S	MDV	NOx STREX	g/trip	0.31791	0.30739
2026	S	MDV	CO RUNEX	g/mi	1.15344	3.10339
2026	S	MDV	CO STREX	g/trip	2.70516	2.90646
2026	S	MDV	SOx RUNEX	g/mi	0.00418	0.00194
2026	S	MDV	SOx STREX	g/trip	0.00097	0.00041
2026	S	MDV	PM2.5 RUNEX	g/mi	0.00138	0.00242
2026	S	MDV	PM2.5 STREX	g/trip	0.00182	0.00181
2026	S	MDV	PM2.5 PMTW	g/mi	0.00200	0.00202
2026	S	MDV	PM2.5 PMBW	g/mi	0.00363	0.00313
2026	S	MDV	PM10 RUNEX	g/mi	0.00150	0.00262
2026	S	MDV	PM10 STREX	g/trip	0.00197	0.00197
2026	S	MDV	PM10 PMTW	g/mi	0.00800	0.00808
2026	S	MDV	PM10 PMBW	g/mi	0.01038	0.00895
2026	S	MDV	CO, RUNEX	g/mi	423.201	453.708
2026	S	MDV	CO, STREX	g/trip	97.7541	96.0499
2026	S	MDV	CH„ RUNEX	g/mi	0.00437	0.00846
2026	S	MDV	CH„ STREX	g/trip	0.07384	0.05897
2026	S	MDV	N,O RUNEX	g/mi	0.00707	0.01006
2026	S	MDV	N,O STREX	g/trip	0.03419	0.02162
2026	W	MDV	TOG RUNEX	g/mi	0.02546	0.04795
2026	W	MDV	TOG STREX	g/trip	0.44261	0.45590
2026	W	MDV	TOG DIURN	g/trip	0.34606	0.41713
2026	W	MDV	TOG HOTSOAK	g/trip	0.08686	0.11632
2026	W	MDV	TOG RUNLOSS	g/trip	0.22798	0.28930
2026	W	MDV	ROG RUNEX	g/mi	0.01749	0.03370
2026	W	MDV	ROG STREX	g/trip	0.40425	0.41641
2026	W	MDV	ROG DIURN	g/trip	0.34606	0.41713

2026	W	MDV	ROG HOTSOAK	g/trip	0.08686	0.11632
2026	W	MDV	ROG RUNLOSS	g/trip	0.22798	0.28930
2026	W	MDV	NOx RUNEX	g/mi	0.09022	0.12115
2026	W	MDV	NOx STREX	g/trip	0.34902	0.33749
2026	W	MDV	CO RUNEX	g/mi	0.92393	2.52284
2026	W	MDV	CO STREX	g/trip	3.28477	3.52819
2026	W	MDV	SOx RUNEX	g/mi	0.00401	0.00186
2026	W	MDV	SOx STREX	g/trip	0.00098	0.00041
2026	W	MDV	PM2.5 RUNEX	g/mi	0.00138	0.00242
2026	W	MDV	PM2.5 STREX	g/trip	0.00182	0.00181
2026	W	MDV	PM2.5 PMTW	g/mi	0.00200	0.00202
2026	W	MDV	PM2.5 PMBW	g/mi	0.00363	0.00313
2026	W	MDV	PM10 RUNEX	g/mi	0.00150	0.00262
2026	W	MDV	PM10 STREX	g/trip	0.00197	0.00197
2026	W	MDV	PM10 PMTW	g/mi	0.00800	0.00808
2026	W	MDV	PM10 PMBW	g/mi	0.01038	0.00895
2026	W	MDV	CO, RUNEX	g/mi	405.989	434.873
2026	W	MDV	CO, STREX	g/trip	98.8474	97.2131
2026	W	MDV	CH„ RUNEX	g/mi	0.00419	0.00827
2026	W	MDV	CH„ STREX	g/trip	0.08362	0.06629
2026	W	MDV	N,O RUNEX	g/mi	0.00774	0.01089
2026	W	MDV	N,O STREX	g/trip	0.03621	0.02308
2026	A	MH	TOG RUNEX	g/mi	0.06293	0.09164
2026	A	MH	TOG STREX	g/trip	0.11107	0.11786
2026	A	MH	TOG DIURN	g/trip	28.6782	0.00000
2026	A	MH	TOG HOTSOAK	g/trip	7.30506	7.65288
2026	A	MH	TOG RUNLOSS	g/trip	0.10395	0.19126
2026	A	MH	ROG RUNEX	g/mi	0.04697	0.06634

2026	A	MH	ROG STREX	g/trip	0.10145	0.10765
2026	A	MH	ROG DIURN	g/trip	28.6782	0.00000
2026	A	MH	ROG HOTSOAK	g/trip	7.30506	7.65288
2026	A	MH	ROG RUNLOSS	g/trip	0.10395	0.19126
2026	A	MH	NOx RUNEX	g/mi	1.12578	1.15139
2026	A	MH	NOx STREX	g/trip	0.29446	0.29931
2026	A	MH	CO RUNEX	g/mi	0.89076	1.54423
2026	A	MH	CO STREX	g/trip	2.24614	2.41107
2026	A	MH	SOx RUNEX	g/mi	0.01527	0.00647
2026	A	MH	SOx STREX	g/trip	0.00022	0.00010
2026	A	MH	PM2.5 RUNEX	g/mi	0.02158	0.01921
2026	A	MH	PM2.5 STREX	g/trip	0.00027	0.00030
2026	A	MH	PM2.5 PMTW	g/mi	0.00329	0.00327
2026	A	MH	PM2.5 PMBW	g/mi	0.01522	0.01522
2026	A	MH	PM10 RUNEX	g/mi	0.02259	0.02013
2026	A	MH	PM10 STREX	g/trip	0.00029	0.00033
2026	A	MH	PM10 PMTW	g/mi	0.01317	0.01308
2026	A	MH	PM10 PMBW	g/mi	0.04348	0.04349
2026	A	MH	CO, RUNEX	g/mi	1,556.49	1,570.88
2026	A	MH	CO, STREX	g/trip	22.2034	22.9453
2026	A	MH	CH„ RUNEX	g/mi	0.00781	0.01185
2026	A	MH	CH„ STREX	g/trip	0.02564	0.02117
2026	A	MH	N,O RUNEX	g/mi	0.06128	0.10442
2026	A	MH	N,O STREX	g/trip	0.03283	0.02350
2026	S	MH	TOG RUNEX	g/mi	0.06422	0.09399
2026	S	MH	TOG STREX	g/trip	0.10661	0.11313
2026	S	MH	TOG DIURN	g/trip	32.2892	0.00000
2026	S	MH	TOG HOTSOAK	g/trip	7.61330	7.98868

2026	S	MH	TOG RUNLOSS	g/trip	0.10429	0.19082
2026	S	MH	ROG RUNEX	g/mi	0.04786	0.06795
2026	S	MH	ROG STREX	g/trip	0.09738	0.10333
2026	S	MH	ROG DIURN	g/trip	32.2892	0.00000
2026	S	MH	ROG HOTSOAK	g/trip	7.61330	7.98868
2026	S	MH	ROG RUNLOSS	g/trip	0.10429	0.19082
2026	S	MH	NOx RUNEX	g/mi	1.04851	1.06452
2026	S	MH	NOx STREX	g/trip	0.28159	0.28623
2026	S	MH	CO RUNEX	g/mi	0.91254	1.58488
2026	S	MH	CO STREX	g/trip	2.12383	2.27956
2026	S	MH	SOx RUNEX	g/mi	0.01527	0.00647
2026	S	MH	SOx STREX	g/trip	0.00022	0.00010
2026	S	MH	PM2.5 RUNEX	g/mi	0.02158	0.01921
2026	S	MH	PM2.5 STREX	g/trip	0.00027	0.00030
2026	S	MH	PM2.5 PMTW	g/mi	0.00329	0.00327
2026	S	MH	PM2.5 PMBW	g/mi	0.01522	0.01522
2026	S	MH	PM10 RUNEX	g/mi	0.02259	0.02013
2026	S	MH	PM10 STREX	g/trip	0.00029	0.00033
2026	S	MH	PM10 PMTW	g/mi	0.01317	0.01308
2026	S	MH	PM10 PMBW	g/mi	0.04348	0.04349
2026	S	MH	CO, RUNEX	g/mi	1,556.53	1,570.95
2026	S	MH	CO, STREX	g/trip	21.9957	22.7226
2026	S	MH	CH„ RUNEX	g/mi	0.00798	0.01214
2026	S	MH	CH„ STREX	g/trip	0.02455	0.02049
2026	S	MH	N,O RUNEX	g/mi	0.06000	0.10270
2026	S	MH	N,O STREX	g/trip	0.03265	0.02278
2026	W	MH	TOG RUNEX	g/mi	0.06256	0.09097
2026	W	MH	TOG STREX	g/trip	0.11214	0.11900

2026	W	MH	TOG DIURN	g/trip	28.1763	0.00000
2026	W	MH	TOG HOTSOAK	g/trip	7.25017	7.59165
2026	W	MH	TOG RUNLOSS	g/trip	0.10685	0.19829
2026	W	MH	ROG RUNEX	g/mi	0.04672	0.06588
2026	W	MH	ROG STREX	g/trip	0.10242	0.10868
2026	W	MH	ROG DIURN	g/trip	28.1763	0.00000
2026	W	MH	ROG HOTSOAK	g/trip	7.25017	7.59165
2026	W	MH	ROG RUNLOSS	g/trip	0.10685	0.19829
2026	W	MH	NOx RUNEX	g/mi	1.10376	1.12842
2026	W	MH	NOx STREX	g/trip	0.29756	0.30246
2026	W	MH	CO RUNEX	g/mi	0.88459	1.53274
2026	W	MH	CO STREX	g/trip	2.27117	2.43784
2026	W	MH	SOx RUNEX	g/mi	0.01527	0.00647
2026	W	MH	SOx STREX	g/trip	0.00022	0.00010
2026	W	MH	PM2.5 RUNEX	g/mi	0.02158	0.01921
2026	W	MH	PM2.5 STREX	g/trip	0.00027	0.00030
2026	W	MH	PM2.5 PMTW	g/mi	0.00329	0.00327
2026	W	MH	PM2.5 PMBW	g/mi	0.01522	0.01522
2026	W	MH	PM10 RUNEX	g/mi	0.02259	0.02013
2026	W	MH	PM10 STREX	g/trip	0.00029	0.00033
2026	W	MH	PM10 PMTW	g/mi	0.01317	0.01308
2026	W	MH	PM10 PMBW	g/mi	0.04348	0.04349
2026	W	MH	CO, RUNEX	g/mi	1,556.48	1,570.86
2026	W	MH	CO, STREX	g/trip	22.2464	22.9912
2026	W	MH	CH„ RUNEX	g/mi	0.00776	0.01177
2026	W	MH	CH„ STREX	g/trip	0.02590	0.02133
2026	W	MH	N,O RUNEX	g/mi	0.06104	0.10410
2026	W	MH	N,O STREX	g/trip	0.03341	0.02367

2026	A	MHDT	TOG RUNEX	g/mi	0.03463	0.03145
2026	A	MHDT	TOG IDLEX	g/trip	0.06711	0.04422
2026	A	MHDT	TOG STREX	g/trip	0.06874	0.08656
2026	A	MHDT	TOG DIURN	g/trip	0.03574	0.04770
2026	A	MHDT	TOG HOTSOAK	g/trip	0.00833	0.01121
2026	A	MHDT	TOG RUNLOSS	g/trip	0.02832	0.09202
2026	A	MHDT	ROG RUNEX	g/mi	0.02144	0.02025
2026	A	MHDT	ROG IDLEX	g/trip	0.02550	0.02650
2026	A	MHDT	ROG STREX	g/trip	0.06278	0.07906
2026	A	MHDT	ROG DIURN	g/trip	0.03574	0.04770
2026	A	MHDT	ROG HOTSOAK	g/trip	0.00833	0.01121
2026	A	MHDT	ROG RUNLOSS	g/trip	0.02832	0.09202
2026	A	MHDT	NOx RUNEX	g/mi	0.72710	0.51214
2026	A	MHDT	NOx IDLEX	g/trip	1.01661	0.42316
2026	A	MHDT	NOx STREX	g/trip	1.26146	0.99194
2026	A	MHDT	CO RUNEX	g/mi	0.32089	0.39998
2026	A	MHDT	CO IDLEX	g/trip	0.72764	0.63149
2026	A	MHDT	CO STREX	g/trip	1.31149	1.67133
2026	A	MHDT	SOx RUNEX	g/mi	0.01117	0.00439
2026	A	MHDT	SOx IDLEX	g/trip	0.00157	0.00012
2026	A	MHDT	SOx STREX	g/trip	0.00012	0.00005
2026	A	MHDT	PM2.5 RUNEX	g/mi	0.00721	0.00349
2026	A	MHDT	PM2.5 IDLEX	g/trip	0.00150	0.00034
2026	A	MHDT	PM2.5 STREX	g/trip	0.00012	0.00016
2026	A	MHDT	PM2.5 PMBW	g/mi	0.01514	0.01517
2026	A	MHDT	PM10 RUNEX	g/mi	0.00754	0.00366
2026	A	MHDT	PM10 IDLEX	g/trip	0.00157	0.00036
2026	A	MHDT	PM10 STREX	g/trip	0.00013	0.00018

2026	A	MHDT	PM10 PMBW	g/mi	0.04326	0.04335
2026	A	MHDT	CO, RUNEX	g/mi	1,175.30	1,206.43
2026	A	MHDT	CO, IDLEX	g/trip	176.809	117.511
2026	A	MHDT	CO, STREX	g/trip	11.8460	14.5013
2026	A	MHDT	CH„ RUNEX	g/mi	0.00972	0.00975
2026	A	MHDT	CH„ IDLEX	g/trip	0.03813	0.01847
2026	A	MHDT	CH„ STREX	g/trip	0.01182	0.01455
2026	A	MHDT	N,O RUNEX	g/mi	0.13296	0.28295
2026	A	MHDT	N,O IDLEX	g/trip	0.02766	0.00007
2026	A	MHDT	N,O STREX	g/trip	0.00857	0.01066
2026	S	MHDT	TOG RUNEX	g/mi	0.03492	0.03189
2026	S	MHDT	TOG IDLEX	g/trip	0.06685	0.04335
2026	S	MHDT	TOG STREX	g/trip	0.06604	0.08316
2026	S	MHDT	TOG DIURN	g/trip	0.04041	0.05381
2026	S	MHDT	TOG HOTSOAK	g/trip	0.00867	0.01168
2026	S	MHDT	TOG RUNLOSS	g/trip	0.02847	0.09206
2026	S	MHDT	ROG RUNEX	g/mi	0.02164	0.02056
2026	S	MHDT	ROG IDLEX	g/trip	0.02543	0.02601
2026	S	MHDT	ROG STREX	g/trip	0.06031	0.07595
2026	S	MHDT	ROG DIURN	g/trip	0.04041	0.05381
2026	S	MHDT	ROG HOTSOAK	g/trip	0.00867	0.01168
2026	S	MHDT	ROG RUNLOSS	g/trip	0.02847	0.09206
2026	S	MHDT	NOx RUNEX	g/mi	0.68168	0.47690
2026	S	MHDT	NOx IDLEX	g/trip	0.99448	0.40976
2026	S	MHDT	NOx STREX	g/trip	1.25682	0.98597
2026	S	MHDT	CO RUNEX	g/mi	0.32589	0.40744
2026	S	MHDT	CO IDLEX	g/trip	0.67568	0.56037
2026	S	MHDT	CO STREX	g/trip	1.24568	1.58747

2026	S	MHDT	SOx RUNEX	g/mi	0.01117	0.00439
2026	S	MHDT	SOx IDLEX	g/trip	0.00157	0.00040
2026	S	MHDT	SOx STREX	g/trip	0.00012	0.00005
2026	S	MHDT	PM2.5 RUNEX	g/mi	0.00721	0.00349
2026	S	MHDT	PM2.5 IDLEX	g/trip	0.00128	0.00030
2026	S	MHDT	PM2.5 STREX	g/trip	0.00012	0.00016
2026	S	MHDT	PM2.5 PMBW	g/mi	0.01514	0.01517
2026	S	MHDT	PM10 RUNEX	g/mi	0.00754	0.00366
2026	S	MHDT	PM10 IDLEX	g/trip	0.00134	0.00031
2026	S	MHDT	PM10 STREX	g/trip	0.00013	0.00018
2026	S	MHDT	PM10 PMTW	g/mi	0.01200	0.01200
2026	S	MHDT	PM10 PMBW	g/mi	0.04326	0.04335
2026	S	MHDT	CO, RUNEX	g/mi	1,175.31	1,206.44
2026	S	MHDT	CO, IDLEX	g/trip	176.188	116.816
2026	S	MHDT	CO, STREX	g/trip	11.7333	14.3581
2026	S	MHDT	CH„ RUNEX	g/mi	0.00977	0.00981
2026	S	MHDT	CH„ IDLEX	g/trip	0.03801	0.01838
2026	S	MHDT	CH„ STREX	g/trip	0.01140	0.01407
2026	S	MHDT	N,O RUNEX	g/mi	0.13258	0.28243
2026	S	MHDT	N,O IDLEX	g/trip	0.02754	0.00007
2026	S	MHDT	N,O STREX	g/trip	0.00841	0.01033
2026	W	MHDT	TOG RUNEX	g/mi	0.03454	0.03132
2026	W	MHDT	TOG IDLEX	g/trip	0.06749	0.04545
2026	W	MHDT	TOG STREX	g/trip	0.06936	0.08734
2026	W	MHDT	TOG DIURN	g/trip	0.03573	0.04923
2026	W	MHDT	TOG HOTSOAK	g/trip	0.00828	0.01113
2026	W	MHDT	TOG RUNLOSS	g/trip	0.02887	0.09475
2026	W	MHDT	ROG RUNEX	g/mi	0.02138	0.02017

2026	W	MHDT	ROG IDLEX	g/trip	0.02562	0.02719
2026	W	MHDT	ROG STREX	g/trip	0.06335	0.07977
2026	W	MHDT	ROG DIURN	g/trip	0.03573	0.04923
2026	W	MHDT	ROG HOTSOAK	g/trip	0.00828	0.01113
2026	W	MHDT	ROG RUNLOSS	g/trip	0.02887	0.09475
2026	W	MHDT	NOx RUNEX	g/mi	0.71335	0.50219
2026	W	MHDT	NOx IDLEX	g/trip	1.04715	0.44166
2026	W	MHDT	NOx STREX	g/trip	1.26257	0.99336
2026	W	MHDT	CO RUNEX	g/mi	0.31946	0.39785
2026	W	MHDT	CO IDLEX	g/trip	0.80009	0.73093
2026	W	MHDT	CO STREX	g/trip	1.32454	1.68795
2026	W	MHDT	SOx RUNEX	g/mi	0.01117	0.00439
2026	W	MHDT	SOx IDLEX	g/trip	0.00158	0.00041
2026	W	MHDT	SOx STREX	g/trip	0.00012	0.00005
2026	W	MHDT	PM2.5 RUNEX	g/mi	0.00721	0.00349
2026	W	MHDT	PM2.5 IDLEX	g/trip	0.00181	0.00041
2026	W	MHDT	PM2.5 STREX	g/trip	0.00012	0.00016
2026	W	MHDT	PM2.5 PMBW	g/mi	0.01514	0.01517
2026	W	MHDT	PM10 RUNEX	g/mi	0.00754	0.00366
2026	W	MHDT	PM10 IDLEX	g/trip	0.00189	0.00043
2026	W	MHDT	PM10 STREX	g/trip	0.00013	0.00018
2026	W	MHDT	PM10 PMBW	g/mi	0.04326	0.04335
2026	W	MHDT	CO, RUNEX	g/mi	1,175.30	1,206.42
2026	W	MHDT	CO, IDLEX	g/trip	177.663	118.463
2026	W	MHDT	CO, STREX	g/trip	11.8686	14.5300
2026	W	MHDT	CH„ RUNEX	g/mi	0.00971	0.00974
2026	W	MHDT	CH„ IDLEX	g/trip	0.03829	0.01858
2026	W	MHDT	CH„ STREX	g/trip	0.01190	0.01466

2026	W	MHDT	N,O RUNEX	g/mi	0.13288	0.28285
2026	W	MHDT	N,O IDLEX	g/trip	0.02784	0.00007
2026	W	MHDT	N,O STREX	g/trip	0.00868	0.01074
2026	A	OBUS	TOG RUNEX	g/mi	0.09771	0.07411
2026	A	OBUS	TOG IDLEX	g/trip	0.08560	0.09301
2026	A	OBUS	TOG STREX	g/trip	0.13685	0.11337
2026	A	OBUS	TOG DIURN	g/trip	0.11474	0.23902
2026	A	OBUS	TOG HOTSOAK	g/trip	0.02621	0.05401
2026	A	OBUS	TOG RUNLOSS	g/trip	0.04361	0.11169
2026	A	OBUS	ROG RUNEX	g/mi	0.04798	0.05810
2026	A	OBUS	ROG IDLEX	g/trip	0.04353	0.04698
2026	A	OBUS	ROG STREX	g/trip	0.12499	0.10355
2026	A	OBUS	ROG DIURN	g/trip	0.11474	0.23902
2026	A	OBUS	ROG HOTSOAK	g/trip	0.02621	0.05401
2026	A	OBUS	ROG RUNLOSS	g/trip	0.04361	0.11169
2026	A	OBUS	NOx RUNEX	g/mi	1.06371	0.89426
2026	A	OBUS	NOx IDLEX	g/trip	0.32738	0.25433
2026	A	OBUS	NOx STREX	g/trip	0.73936	0.75470
2026	A	OBUS	CO RUNEX	g/mi	0.77455	0.74336
2026	A	OBUS	CO IDLEX	g/trip	0.55464	0.61670
2026	A	OBUS	CO STREX	g/trip	2.54246	2.09203
2026	A	OBUS	SOx RUNEX	g/mi	0.01355	0.00498
2026	A	OBUS	SOx IDLEX	g/trip	0.00073	0.00029
2026	A	OBUS	SOx STREX	g/trip	0.00021	0.00006
2026	A	OBUS	PM2.5 RUNEX	g/mi	0.01656	0.00982
2026	A	OBUS	PM2.5 IDLEX	g/trip	0.00060	0.00031
2026	A	OBUS	PM2.5 STREX	g/trip	0.00019	0.00015
2026	A	OBUS	PM2.5 PMBW	g/mi	0.01958	0.01760

2026	A	OBUS	PM10 RUNEX	g/mi	0.01732	0.01028
2026	A	OBUS	PM10 IDLEX	g/trip	0.00063	0.00032
2026	A	OBUS	PM10 STREX	g/trip	0.00021	0.00016
2026	A	OBUS	PM10 PMBW	g/mi	0.05595	0.05028
2026	A	OBUS	CO, RUNEX	g/mi	1,457.50	1,293.59
2026	A	OBUS	CO, IDLEX	g/trip	84.8238	125.435
2026	A	OBUS	CO, STREX	g/trip	21.0097	17.1599
2026	A	OBUS	CH„ RUNEX	g/mi	0.04191	0.00719
2026	A	OBUS	CH„ IDLEX	g/trip	0.03562	0.06645
2026	A	OBUS	CH„ STREX	g/trip	0.02333	0.01958
2026	A	OBUS	N,O RUNEX	g/mi	0.13449	0.16675
2026	A	OBUS	N,O IDLEX	g/trip	0.01218	0.00009
2026	A	OBUS	N,O STREX	g/trip	0.01993	0.01680
2026	S	OBUS	TOG RUNEX	g/mi	0.09830	0.07485
2026	S	OBUS	TOG IDLEX	g/trip	0.08687	0.09459
2026	S	OBUS	TOG STREX	g/trip	0.13137	0.10883
2026	S	OBUS	TOG DIURN	g/trip	0.12806	0.26489
2026	S	OBUS	TOG HOTSOAK	g/trip	0.02716	0.05594
2026	S	OBUS	TOG RUNLOSS	g/trip	0.04375	0.11169
2026	S	OBUS	ROG RUNEX	g/mi	0.04839	0.05861
2026	S	OBUS	ROG IDLEX	g/trip	0.04464	0.04838
2026	S	OBUS	ROG STREX	g/trip	0.11999	0.09940
2026	S	OBUS	ROG DIURN	g/trip	0.12806	0.26489
2026	S	OBUS	ROG HOTSOAK	g/trip	0.02716	0.05594
2026	S	OBUS	ROG RUNLOSS	g/trip	0.04375	0.11169
2026	S	OBUS	NOx RUNEX	g/mi	0.99525	0.83169
2026	S	OBUS	NOx IDLEX	g/trip	0.31551	0.24680
2026	S	OBUS	NOx STREX	g/trip	0.72768	0.74549

2026	S	OBUS	CO RUNEX	g/mi	0.78429	0.75552
2026	S	OBUS	CO IDLEX	g/trip	0.54693	0.60840
2026	S	OBUS	CO STREX	g/trip	2.40470	1.97868
2026	S	OBUS	SOx RUNEX	g/mi	0.01355	0.00498
2026	S	OBUS	SOx IDLEX	g/trip	0.00073	0.00029
2026	S	OBUS	SOx STREX	g/trip	0.00021	0.00006
2026	S	OBUS	PM2.5 RUNEX	g/mi	0.01656	0.00982
2026	S	OBUS	PM2.5 IDLEX	g/trip	0.00051	0.00027
2026	S	OBUS	PM2.5 STREX	g/trip	0.00019	0.00015
2026	S	OBUS	PM2.5 PMBW	g/mi	0.01958	0.01760
2026	S	OBUS	PM10 RUNEX	g/mi	0.01732	0.01028
2026	S	OBUS	PM10 IDLEX	g/trip	0.00054	0.00028
2026	S	OBUS	PM10 STREX	g/trip	0.00021	0.00016
2026	S	OBUS	PM10 PMTW	g/mi	0.01200	0.01200
2026	S	OBUS	PM10 PMBW	g/mi	0.05595	0.05028
2026	S	OBUS	CO, RUNEX	g/mi	1,457.52	1,293.61
2026	S	OBUS	CO, IDLEX	g/trip	84.1612	124.386
2026	S	OBUS	CO, STREX	g/trip	20.7743	16.9665
2026	S	OBUS	CH„ RUNEX	g/mi	0.04200	0.00729
2026	S	OBUS	CH„ IDLEX	g/trip	0.03569	0.06652
2026	S	OBUS	CH„ STREX	g/trip	0.02245	0.01894
2026	S	OBUS	N,O RUNEX	g/mi	0.13373	0.16579
2026	S	OBUS	N,O IDLEX	g/trip	0.01208	0.00009
2026	S	OBUS	N,O STREX	g/trip	0.01952	0.01628
2026	W	OBUS	TOG RUNEX	g/mi	0.09756	0.07393
2026	W	OBUS	TOG IDLEX	g/trip	0.08386	0.09081
2026	W	OBUS	TOG STREX	g/trip	0.13817	0.11447
2026	W	OBUS	TOG DIURN	g/trip	0.11549	0.25081

2026	W	OBUS	TOG HOTSOAK	g/trip	0.02605	0.05370
2026	W	OBUS	TOG RUNLOSS	g/trip	0.04427	0.11397
2026	W	OBUS	ROG RUNEX	g/mi	0.04788	0.05798
2026	W	OBUS	ROG IDLEX	g/trip	0.04200	0.04506
2026	W	OBUS	ROG STREX	g/trip	0.12620	0.10455
2026	W	OBUS	ROG DIURN	g/trip	0.11549	0.25081
2026	W	OBUS	ROG HOTSOAK	g/trip	0.02605	0.05370
2026	W	OBUS	ROG RUNLOSS	g/trip	0.04427	0.11397
2026	W	OBUS	NOx RUNEX	g/mi	1.04333	0.87641
2026	W	OBUS	NOx IDLEX	g/trip	0.34377	0.26473
2026	W	OBUS	NOx STREX	g/trip	0.74217	0.75692
2026	W	OBUS	CO RUNEX	g/mi	0.77216	0.74038
2026	W	OBUS	CO IDLEX	g/trip	0.56529	0.62817
2026	W	OBUS	CO STREX	g/trip	2.57111	2.11561
2026	W	OBUS	SOx RUNEX	g/mi	0.01355	0.00498
2026	W	OBUS	SOx IDLEX	g/trip	0.00074	0.00029
2026	W	OBUS	SOx STREX	g/trip	0.00021	0.00006
2026	W	OBUS	PM2.5 RUNEX	g/mi	0.01656	0.00982
2026	W	OBUS	PM2.5 IDLEX	g/trip	0.00072	0.00037
2026	W	OBUS	PM2.5 STREX	g/trip	0.00019	0.00015
2026	W	OBUS	PM2.5 PMBW	g/mi	0.01958	0.01760
2026	W	OBUS	PM10 RUNEX	g/mi	0.01732	0.01028
2026	W	OBUS	PM10 IDLEX	g/trip	0.00075	0.00038
2026	W	OBUS	PM10 STREX	g/trip	0.00021	0.00016
2026	W	OBUS	PM10 PMBW	g/mi	0.05595	0.05028
2026	W	OBUS	CO, RUNEX	g/mi	1,457.50	1,293.59
2026	W	OBUS	CO, IDLEX	g/trip	85.7388	126.883
2026	W	OBUS	CO, STREX	g/trip	21.0592	17.2005

2026	W	OBUS	CH„ RUNEX	g/mi	0.04189	0.00717
2026	W	OBUS	CH„ IDLEX	g/trip	0.03554	0.06636
2026	W	OBUS	CH„ STREX	g/trip	0.02354	0.01973
2026	W	OBUS	N,O RUNEX	g/mi	0.13431	0.16655
2026	W	OBUS	N,O IDLEX	g/trip	0.01232	0.00009
2026	W	OBUS	N,O STREX	g/trip	0.02017	0.01692
2026	A	SBUS	TOG RUNEX	g/mi	1.44180	1.54256
2026	A	SBUS	TOG IDLEX	g/trip	1.60016	1.03367
2026	A	SBUS	TOG STREX	g/trip	0.04869	0.05544
2026	A	SBUS	TOG DIURN	g/trip	0.06497	0.06768
2026	A	SBUS	TOG HOTSOAK	g/trip	0.01523	0.01653
2026	A	SBUS	TOG RUNLOSS	g/trip	0.17650	0.04654
2026	A	SBUS	ROG RUNEX	g/mi	0.08015	0.08513
2026	A	SBUS	ROG IDLEX	g/trip	0.85022	0.37021
2026	A	SBUS	ROG STREX	g/trip	0.04447	0.05064
2026	A	SBUS	ROG DIURN	g/trip	0.06497	0.06768
2026	A	SBUS	ROG HOTSOAK	g/trip	0.01523	0.01653
2026	A	SBUS	ROG RUNLOSS	g/trip	0.17650	0.04654
2026	A	SBUS	NOx RUNEX	g/mi	2.26883	1.71342
2026	A	SBUS	NOx IDLEX	g/trip	0.94270	0.97593
2026	A	SBUS	NOx STREX	g/trip	0.17738	0.20025
2026	A	SBUS	CO RUNEX	g/mi	5.17746	5.74929
2026	A	SBUS	CO IDLEX	g/trip	7.14677	3.57532
2026	A	SBUS	CO STREX	g/trip	0.98789	1.15414
2026	A	SBUS	SOx RUNEX	g/mi	0.00681	0.00258
2026	A	SBUS	SOx IDLEX	g/trip	0.00252	0.00056
2026	A	SBUS	SOx STREX	g/trip	0.00006	0.00011
2026	A	SBUS	PM2.5 RUNEX	g/mi	0.01201	0.00634

2026	A	SBUS	PM2.5 IDLEX	g/trip	0.00117	0.00086
2026	A	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2026	A	SBUS	PM2.5 PMTW	g/mi	0.00252	0.00250
2026	A	SBUS	PM2.5 PMBW	g/mi	0.01631	0.01625
2026	A	SBUS	PM10 RUNEX	g/mi	0.01262	0.00671
2026	A	SBUS	PM10 IDLEX	g/trip	0.00123	0.00092
2026	A	SBUS	PM10 STREX	g/trip	0.00006	0.00009
2026	A	SBUS	PM10 PMTW	g/mi	0.01008	0.01001
2026	A	SBUS	PM10 PMBW	g/mi	0.04660	0.04643
2026	A	SBUS	CO, RUNEX	g/mi	1,195.45	1,162.84
2026	A	SBUS	CO, IDLEX	g/trip	358.831	269.804
2026	A	SBUS	CO, STREX	g/trip	6.22938	7.21590
2026	A	SBUS	CH„ RUNEX	g/mi	1.34316	2.94362
2026	A	SBUS	CH„ IDLEX	g/trip	0.55317	1.05571
2026	A	SBUS	CH„ STREX	g/trip	0.00773	0.00848
2026	A	SBUS	N,O RUNEX	g/mi	0.15690	0.16153
2026	A	SBUS	N,O IDLEX	g/trip	0.03548	0.00162
2026	A	SBUS	N,O STREX	g/trip	0.00756	0.00609
2026	S	SBUS	TOG RUNEX	g/mi	1.44256	1.54385
2026	S	SBUS	TOG IDLEX	g/trip	1.60004	1.03357
2026	S	SBUS	TOG STREX	g/trip	0.04342	0.04944
2026	S	SBUS	TOG DIURN	g/trip	0.07221	0.07547
2026	S	SBUS	TOG HOTSOAK	g/trip	0.01574	0.01713
2026	S	SBUS	TOG RUNLOSS	g/trip	0.17586	0.04606
2026	S	SBUS	ROG RUNEX	g/mi	0.08068	0.08601
2026	S	SBUS	ROG IDLEX	g/trip	0.85012	0.37013
2026	S	SBUS	ROG STREX	g/trip	0.03965	0.04516
2026	S	SBUS	ROG DIURN	g/trip	0.07221	0.07547

2026	S	SBUS	ROG HOTSOAK	g/trip	0.01574	0.01713
2026	S	SBUS	ROG RUNLOSS	g/trip	0.17586	0.04606
2026	S	SBUS	NOx RUNEX	g/mi	2.12821	1.59928
2026	S	SBUS	NOx IDLEX	g/trip	0.96434	0.99941
2026	S	SBUS	NOx STREX	g/trip	0.17297	0.19551
2026	S	SBUS	CO RUNEX	g/mi	5.18797	5.76509
2026	S	SBUS	CO IDLEX	g/trip	7.13904	3.56696
2026	S	SBUS	CO STREX	g/trip	0.80609	0.94157
2026	S	SBUS	SOx RUNEX	g/mi	0.00681	0.00258
2026	S	SBUS	SOx IDLEX	g/trip	0.00254	0.00056
2026	S	SBUS	SOx STREX	g/trip	0.00006	0.00011
2026	S	SBUS	PM2.5 RUNEX	g/mi	0.01201	0.00634
2026	S	SBUS	PM2.5 IDLEX	g/trip	0.00103	0.00079
2026	S	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2026	S	SBUS	PM2.5 PMTW	g/mi	0.00252	0.00250
2026	S	SBUS	PM2.5 PMBW	g/mi	0.01631	0.01625
2026	S	SBUS	PM10 RUNEX	g/mi	0.01262	0.00671
2026	S	SBUS	PM10 IDLEX	g/trip	0.00109	0.00084
2026	S	SBUS	PM10 STREX	g/trip	0.00006	0.00009
2026	S	SBUS	PM10 PMTW	g/mi	0.01008	0.01001
2026	S	SBUS	PM10 PMBW	g/mi	0.04660	0.04643
2026	S	SBUS	CO, RUNEX	g/mi	1,195.47	1,162.87
2026	S	SBUS	CO, IDLEX	g/trip	361.006	271.351
2026	S	SBUS	CO, STREX	g/trip	5.92474	6.86097
2026	S	SBUS	CH„ RUNEX	g/mi	1.34327	2.94378
2026	S	SBUS	CH„ IDLEX	g/trip	0.55337	1.05571
2026	S	SBUS	CH„ STREX	g/trip	0.00690	0.00772
2026	S	SBUS	N,O RUNEX	g/mi	0.15581	0.16051

2026	S	SBUS	N,O IDLEX	g/trip	0.03601	0.00162
2026	S	SBUS	N,O STREX	g/trip	0.00738	0.00587
2026	W	SBUS	TOG RUNEX	g/mi	1.44162	1.54226
2026	W	SBUS	TOG IDLEX	g/trip	1.60032	1.03380
2026	W	SBUS	TOG STREX	g/trip	0.04990	0.05682
2026	W	SBUS	TOG DIURN	g/trip	0.06630	0.07165
2026	W	SBUS	TOG HOTSOAK	g/trip	0.01515	0.01642
2026	W	SBUS	TOG RUNLOSS	g/trip	0.17851	0.04754
2026	W	SBUS	ROG RUNEX	g/mi	0.08003	0.08492
2026	W	SBUS	ROG IDLEX	g/trip	0.85036	0.37034
2026	W	SBUS	ROG STREX	g/trip	0.04557	0.05190
2026	W	SBUS	ROG DIURN	g/trip	0.06630	0.07165
2026	W	SBUS	ROG HOTSOAK	g/trip	0.01515	0.01642
2026	W	SBUS	ROG RUNLOSS	g/trip	0.17851	0.04754
2026	W	SBUS	NOx RUNEX	g/mi	2.22772	1.68031
2026	W	SBUS	NOx IDLEX	g/trip	0.91282	0.94351
2026	W	SBUS	NOx STREX	g/trip	0.17867	0.20164
2026	W	SBUS	CO RUNEX	g/mi	5.17492	5.74547
2026	W	SBUS	CO IDLEX	g/trip	7.15743	3.58688
2026	W	SBUS	CO STREX	g/trip	1.02235	1.19440
2026	W	SBUS	SOx RUNEX	g/mi	0.00681	0.00258
2026	W	SBUS	SOx IDLEX	g/trip	0.00249	0.00055
2026	W	SBUS	SOx STREX	g/trip	0.00006	0.00011
2026	W	SBUS	PM2.5 RUNEX	g/mi	0.01201	0.00634
2026	W	SBUS	PM2.5 IDLEX	g/trip	0.00135	0.00096
2026	W	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2026	W	SBUS	PM2.5 PMTW	g/mi	0.00252	0.00250
2026	W	SBUS	PM2.5 PMBW	g/mi	0.01631	0.01625

2026	W	SBUS	PM10 RUNEX	g/mi	0.01262	0.00671
2026	W	SBUS	PM10 IDLEX	g/trip	0.00143	0.00102
2026	W	SBUS	PM10 STREX	g/trip	0.00006	0.00009
2026	W	SBUS	PM10 PMTW	g/mi	0.01008	0.01001
2026	W	SBUS	PM10 PMBW	g/mi	0.04660	0.04643
2026	W	SBUS	CO, RUNEX	g/mi	1,195.45	1,162.84
2026	W	SBUS	CO, IDLEX	g/trip	355.827	267.666
2026	W	SBUS	CO, STREX	g/trip	6.28777	7.28386
2026	W	SBUS	CH„ RUNEX	g/mi	1.34314	2.94359
2026	W	SBUS	CH„ IDLEX	g/trip	0.55313	1.05572
2026	W	SBUS	CH„ STREX	g/trip	0.00792	0.00865
2026	W	SBUS	N,O RUNEX	g/mi	0.15668	0.16133
2026	W	SBUS	N,O IDLEX	g/trip	0.03503	0.00162
2026	W	SBUS	N,O STREX	g/trip	0.00770	0.00616
2026	A	UBUS	TOG RUNEX	g/mi	2.73697	2.64143
2026	A	UBUS	TOG STREX	g/trip	0.04572	0.05343
2026	A	UBUS	TOG DIURN	g/trip	0.01027	0.00984
2026	A	UBUS	TOG HOTSOAK	g/trip	0.00308	0.00302
2026	A	UBUS	TOG RUNLOSS	g/trip	0.00630	0.00858
2026	A	UBUS	ROG RUNEX	g/mi	0.03997	0.03904
2026	A	UBUS	ROG STREX	g/trip	0.04176	0.04880
2026	A	UBUS	ROG DIURN	g/trip	0.01027	0.00984
2026	A	UBUS	ROG HOTSOAK	g/trip	0.00308	0.00302
2026	A	UBUS	ROG RUNLOSS	g/trip	0.00630	0.00858
2026	A	UBUS	NOx RUNEX	g/mi	0.52854	0.47856
2026	A	UBUS	NOx STREX	g/trip	0.07541	0.08233
2026	A	UBUS	CO RUNEX	g/mi	37.1933	35.4310
2026	A	UBUS	CO STREX	g/trip	0.83118	0.84875

2026	A	UBUS	SOx RUNEX	g/mi	0.00127	0.00145
2026	A	UBUS	SOx STREX	g/trip	0.00009	0.00007
2026	A	UBUS	PM2.5 RUNEX	g/mi	0.00051	0.00051
2026	A	UBUS	PM2.5 STREX	g/trip	0.00007	0.00009
2026	A	UBUS	PM2.5 PMTW	g/mi	0.00799	0.00784
2026	A	UBUS	PM2.5 PMBW	g/mi	0.03761	0.03732
2026	A	UBUS	PM10 RUNEX	g/mi	0.00054	0.00054
2026	A	UBUS	PM10 STREX	g/trip	0.00008	0.00010
2026	A	UBUS	PM10 PMTW	g/mi	0.03197	0.03135
2026	A	UBUS	PM10 PMBW	g/mi	0.10747	0.10662
2026	A	UBUS	CO, RUNEX	g/mi	2,394.74	2,254.30
2026	A	UBUS	CO, STREX	g/trip	9.30083	10.5437
2026	A	UBUS	CH„ RUNEX	g/mi	2.67993	3.79820
2026	A	UBUS	CH„ STREX	g/trip	0.00987	0.00821
2026	A	UBUS	N,O RUNEX	g/mi	0.46365	0.35332
2026	A	UBUS	N,O STREX	g/trip	0.00720	0.00511
2026	S	UBUS	TOG RUNEX	g/mi	2.73701	2.64147
2026	S	UBUS	TOG STREX	g/trip	0.04236	0.04946
2026	S	UBUS	TOG DIURN	g/trip	0.01211	0.01146
2026	S	UBUS	TOG HOTSOAK	g/trip	0.00321	0.00314
2026	S	UBUS	TOG RUNLOSS	g/trip	0.00630	0.00853
2026	S	UBUS	ROG RUNEX	g/mi	0.04000	0.03906
2026	S	UBUS	ROG STREX	g/trip	0.03869	0.04518
2026	S	UBUS	ROG DIURN	g/trip	0.01211	0.01146
2026	S	UBUS	ROG HOTSOAK	g/trip	0.00321	0.00314
2026	S	UBUS	ROG RUNLOSS	g/trip	0.00630	0.00853
2026	S	UBUS	NOx RUNEX	g/mi	0.52697	0.47674
2026	S	UBUS	NOx STREX	g/trip	0.07211	0.07874

2026	S	UBUS	CO RUNEX	g/mi	37.1938	35.4314
2026	S	UBUS	CO STREX	g/trip	0.73410	0.74622
2026	S	UBUS	SOx RUNEX	g/mi	0.00127	0.00145
2026	S	UBUS	SOx STREX	g/trip	0.00009	0.00007
2026	S	UBUS	PM2.5 RUNEX	g/mi	0.00051	0.00051
2026	S	UBUS	PM2.5 STREX	g/trip	0.00007	0.00009
2026	S	UBUS	PM2.5 PMTW	g/mi	0.00799	0.00784
2026	S	UBUS	PM2.5 PMBW	g/mi	0.03761	0.03732
2026	S	UBUS	PM10 RUNEX	g/mi	0.00054	0.00054
2026	S	UBUS	PM10 STREX	g/trip	0.00008	0.00010
2026	S	UBUS	PM10 PMTW	g/mi	0.03197	0.03135
2026	S	UBUS	PM10 PMBW	g/mi	0.10747	0.10662
2026	S	UBUS	CO, RUNEX	g/mi	2,394.74	2,254.30
2026	S	UBUS	CO, STREX	g/trip	9.13647	10.3693
2026	S	UBUS	CH„ RUNEX	g/mi	2.67994	3.79821
2026	S	UBUS	CH„ STREX	g/trip	0.00918	0.00769
2026	S	UBUS	N,O RUNEX	g/mi	0.46354	0.35321
2026	S	UBUS	N,O STREX	g/trip	0.00712	0.00496
2026	W	UBUS	TOG RUNEX	g/mi	2.73696	2.64142
2026	W	UBUS	TOG STREX	g/trip	0.04649	0.05432
2026	W	UBUS	TOG DIURN	g/trip	0.01021	0.01020
2026	W	UBUS	TOG HOTSOAK	g/trip	0.00306	0.00299
2026	W	UBUS	TOG RUNLOSS	g/trip	0.00655	0.00894
2026	W	UBUS	ROG RUNEX	g/mi	0.03997	0.03903
2026	W	UBUS	ROG STREX	g/trip	0.04246	0.04961
2026	W	UBUS	ROG DIURN	g/trip	0.01021	0.01020
2026	W	UBUS	ROG HOTSOAK	g/trip	0.00306	0.00299
2026	W	UBUS	ROG RUNLOSS	g/trip	0.00655	0.00894

2026	W	UBUS	NOx RUNEX	g/mi	0.52821	0.47819
2026	W	UBUS	NOx STREX	g/trip	0.07617	0.08316
2026	W	UBUS	CO RUNEX	g/mi	37.1931	35.4309
2026	W	UBUS	CO STREX	g/trip	0.85069	0.86913
2026	W	UBUS	SOx RUNEX	g/mi	0.00127	0.00145
2026	W	UBUS	SOx STREX	g/trip	0.00009	0.00007
2026	W	UBUS	PM2.5 RUNEX	g/mi	0.00051	0.00051
2026	W	UBUS	PM2.5 STREX	g/trip	0.00007	0.00009
2026	W	UBUS	PM2.5 PMTW	g/mi	0.00799	0.00784
2026	W	UBUS	PM2.5 PMBW	g/mi	0.03761	0.03732
2026	W	UBUS	PM10 RUNEX	g/mi	0.00054	0.00054
2026	W	UBUS	PM10 STREX	g/trip	0.00008	0.00010
2026	W	UBUS	PM10 PMTW	g/mi	0.03197	0.03135
2026	W	UBUS	PM10 PMBW	g/mi	0.10747	0.10662
2026	W	UBUS	CO, RUNEX	g/mi	2,394.74	2,254.30
2026	W	UBUS	CO, STREX	g/trip	9.33413	10.5787
2026	W	UBUS	CH„ RUNEX	g/mi	2.67993	3.79820
2026	W	UBUS	CH„ STREX	g/trip	0.01002	0.00833
2026	W	UBUS	N,O RUNEX	g/mi	0.46363	0.35330
2026	W	UBUS	N,O STREX	g/trip	0.00731	0.00515

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Downey 2045 No Project
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.30000
Precipitation (days)	8.00000
Location	Downey, CA, USA
County	Los Angeles-South Coast
City	Downey
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4857
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.44

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
Single Family Housing	23,207.0	Dwelling Unit	7,534.74	45,253,650	271,820,273	—	70,139.0	—

Apartments Mid Rise	13,953.0	Dwelling Unit	367.184	13,394,880	0.00000	—	41,187.0	—
Regional Shopping Center	12,139.3	1000sqft	278.681	12,139,340	0.00000	—	—	—
Hotel	657.000	Room	21.9000	953,964	0.00000	—	—	—
General Office Building	3,226.50	1000sqft	140.301	3,226,500	0.00000	—	—	—
Industrial Park	3,954.00	1000sqft	217.057	3,954,000	0.00000	—	—	—
Government Office Building	1,266.40	1000sqft	234.057	1,266,400	0.00000	—	—	—
Elementary School	4,774.90	1000sqft	408.894	4,774,900	0.00000	0.00000	—	—
Hospital	3,576.70	1000sqft	98.7508	3,576,700	0.00000	—	—	—
City Park	214.894	Acre	214.894	0.00000	0.00000	0.00000	—	—
Golf Course	247.710	Acre	247.710	10,790,263	0.00000	0.00000	—	—
Parking Lot	187.353	Acre	187.353	187.353	0.00000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.3. 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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14,797.2	13,577.5	1,618.47	38,291.4	60.1219	2,702.39	2,818.31	5,520.70	2,652.32	714.286	3,366.60	408,771	3,899,836	4,308,607	7,326.56	175.967	3,758.99	4,547,968
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	14,280.3	13,095.9	1,619.50	32,627.8	59.5725	2,698.31	2,818.31	5,516.62	2,649.23	714.286	3,363.52	408,771	3,804,98	4,213,76	7,327.22	178.486	3,103.09	4,453,23
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4,576.03	4,353.38	922.411	17,904.0	14.6958	229.692	2,729.60	2,959.29	224.931	694.113	919.044	84,537.4	3,168,070	3,252,607	6,359.23	164.144	3,369.61	3,463,872
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	835.125	794.492	168.340	3,267.48	2.68198	41.9188	498.151	540.070	41.0500	126.676	167.726	13,996.1	524,510	538,506	1,052.84	27.1759	557.877	573,484

2.4. 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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,399.50	1,294.60	385.634	15,255.6	9.04907	11.6724	2,818.31	2,829.98	10.8844	714.286	725.171	—	2,197,231	2,197,231	89.4021	133.057	673.363	2,239,790
Area	13,348.8	12,258.4	805.358	22,786.0	48.4069	2,656.95	—	2,656.95	2,607.66	—	2,607.66	348,075	677,984	1,026,058	1,038.27	12.7235	—	1,055,807
Energy	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	984,447	984,447	104.405	7.96641	—	989,431
Water	—	—	—	—	—	—	—	—	—	—	—	8,867.61	40,174.0	49,041.6	914.355	22.2202	—	78,522.1
Waste	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,085.63	3,085.63
Total	14,797.2	13,577.5	1,618.47	38,291.4	60.1219	2,702.39	2,818.31	5,520.70	2,652.32	714.286	3,366.60	408,771	3,899,836	4,308,607	7,326.56	175.967	3,758.99	4,547,968
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,391.03	1,286.94	421.010	13,480.3	8.69672	11.6766	2,818.31	2,829.99	10.8884	714.286	725.175	—	2,115,297	2,115,297	90.6032	135.685	17.4619	2,158,014
Area	12,840.3	11,784.5	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848

Energy	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	984,447	984,447	104.405	7.96641	—	989,431
Water	—	—	—	—	—	—	—	—	—	—	—	8,867.61	40,174.0	49,041.6	914.355	22.2202	—	78,522.1
Waste	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,085.63	3,085.63
Total	14,280.3	13,095.9	1,619.50	32,627.8	59.5725	2,698.31	2,818.31	5,516.62	2,649.23	714.286	3,363.52	408,771	3,804,989	4,213,760	7,327.22	178.486	3,103.09	4,453,233
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,363.84	1,261.60	418.593	13,696.7	8.59290	11.4231	2,729.60	2,741.02	10.6518	694.113	704.765	—	2,089,052	2,089,052	88.8941	133.018	283.982	2,131,198
Area	3,163.31	3,067.34	76.3367	3,957.55	3.43697	184.501	—	184.501	180.512	—	180.512	23,840.7	54,397.1	78,237.8	71.4478	0.93879	—	80,303.7
Energy	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	984,447	984,447	104.405	7.96641	—	989,431
Water	—	—	—	—	—	—	—	—	—	—	—	8,867.61	40,174.0	49,041.6	914.355	22.2202	—	78,522.1
Waste	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,085.63	3,085.63
Total	4,576.03	4,353.38	922.411	17,904.0	14.6958	229.692	2,729.60	2,959.29	224.931	694.113	919.044	84,537.4	3,168,070	3,252,607	6,359.23	164.144	3,369.61	3,463,872
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	248.901	230.243	76.3932	2,499.65	1.56820	2.08471	498.151	500.236	1.94396	126.676	128.620	—	345,866	345,866	14.7174	22.0227	47.0165	352,844
Area	577.305	559.789	13.9314	722.253	0.62725	33.6714	—	33.6714	32.9434	—	32.9434	3,947.11	9,006.05	12,953.2	11.8290	0.15543	—	13,295.2
Energy	8.91965	4.45982	78.0153	45.5826	0.48653	6.16267	—	6.16267	6.16267	—	6.16267	—	162,986	162,986	17.2854	1.31893	—	163,812
Water	—	—	—	—	—	—	—	—	—	—	—	1,468.13	6,651.26	8,119.39	151.382	3.67881	—	13,000.2
Waste	—	—	—	—	—	—	—	—	—	—	—	8,580.89	0.00000	8,580.89	857.629	0.00000	—	30,021.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	510.861	510.861
Total	835.125	794.492	168.340	3,267.48	2.68198	41.9188	498.151	540.070	41.0500	126.676	167.726	13,996.1	524,510	538,506	1,052.84	27.1759	557.877	573,484

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	346.617	316.143	108.983	4,437.70	2.68780	3.42760	843.168	846.596	3.19678	213.697	216.893	—	652,545	652,545	25.1313	39.2541	201.453	665,072
Apartments Mid Rise	120.095	109.536	37.7603	1,537.57	0.93126	1.18759	292.139	293.327	1.10762	74.0411	75.1488	—	226,092	226,092	8.70744	13.6007	69.7991	230,433
Regional Shopping Center	598.168	563.718	133.679	4,996.14	2.83522	3.74819	869.010	872.759	3.49385	220.246	223.740	—	688,627	688,627	31.3016	42.3061	207.628	702,225
Hotel	8.69021	7.92618	2.73238	111.260	0.06739	0.08594	21.1395	21.2254	0.08015	5.35770	5.43785	—	16,360.3	16,360.3	0.63008	0.98416	5.05074	16,674.4
General Office Building	49.7221	45.3506	15.6336	636.587	0.38556	0.49169	120.952	121.444	0.45858	30.6547	31.1133	—	93,607.4	93,607.4	3.60508	5.63099	28.8984	95,404.4
Industrial Park	21.0826	19.2291	6.62881	269.919	0.16348	0.20848	51.2849	51.4934	0.19444	12.9979	13.1923	—	39,690.4	39,690.4	1.52859	2.38760	12.2532	40,452.4
Government Office Building	45.2632	41.2838	14.2317	579.501	0.35099	0.44760	110.106	110.553	0.41745	27.9058	28.3232	—	85,213.1	85,213.1	3.28179	5.12603	26.3070	86,849.1
Elementary School	147.470	134.504	46.3674	1,888.04	1.14354	1.45829	358.730	360.188	1.36009	90.9182	92.2783	—	277,628	277,628	10.6922	16.7008	85.7092	282,958
Hospital	60.6647	55.3311	19.0742	776.684	0.47042	0.59990	147.571	148.171	0.55950	37.4011	37.9606	—	114,208	114,208	4.39847	6.87024	35.2582	116,401
City Park	0.26520	0.24189	0.08338	3.39536	0.00206	0.00262	0.64512	0.64774	0.00245	0.16350	0.16595	—	499.273	499.273	0.01923	0.03003	0.15414	508.858

Golf Course	1.46580	1.33693	0.46088	18.7665	0.01137	0.01449	3.56565	3.58015	0.01352	0.90370	0.91721	—	2,759.53	2,759.53	0.10628	0.16600	0.85192	2,812.51
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	1,399.50	1,294.60	385.634	15,255.6	9.04907	11.6724	2,818.31	2,829.98	10.8844	714.286	725.171	—	2,197,231	2,197,231	89.4021	133.057	673.363	2,239,790
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	344.103	313.956	119.100	3,883.00	2.58212	3.42856	843.168	846.596	3.19770	213.697	216.894	—	627,963	627,963	25.3240	40.0054	5.22417	640,523
Apartments Mid Rise	119.224	108.779	41.2654	1,345.37	0.89465	1.18792	292.139	293.327	1.10793	74.0411	75.1491	—	217,575	217,575	8.77419	13.8610	1.81006	221,927
Regional Shopping Center	595.510	561.107	145.666	4,503.24	2.72717	3.75018	869.010	872.761	3.49576	220.246	223.742	—	663,525	663,525	32.0573	43.1973	5.38428	677,204
Hotel	8.62718	7.87136	2.98601	97.3528	0.06474	0.08596	21.1395	21.2255	0.08017	5.35770	5.43787	—	15,744.0	15,744.0	0.63491	1.00300	0.13098	16,058.9
General Office Building	49.3614	45.0369	17.0848	557.016	0.37040	0.49183	120.952	121.444	0.45871	30.6547	31.1134	—	90,081.1	90,081.1	3.63271	5.73876	0.74940	91,882.8
Industrial Park	20.9297	19.0961	7.24414	236.180	0.15706	0.20854	51.2849	51.4935	0.19450	12.9979	13.1924	—	38,195.3	38,195.3	1.54031	2.43329	0.31776	38,959.2
Government Office Building	44.9349	40.9982	15.5527	507.065	0.33719	0.44772	110.106	110.554	0.41757	27.9058	28.3233	—	82,003.0	82,003.0	3.30695	5.22414	0.68220	83,643.2
Elementary School	146.400	133.574	50.6715	1,652.04	1.09858	1.45869	358.730	360.188	1.36047	90.9182	92.2786	—	267,170	267,170	10.7742	17.0205	2.22264	272,513
Hospital	60.2247	54.9484	20.8448	679.601	0.45192	0.60006	147.571	148.171	0.55966	37.4011	37.9607	—	109,906	109,906	4.43219	7.00172	0.91433	112,104
City Park	0.26328	0.24021	0.09113	2.97095	0.00198	0.00262	0.64512	0.64774	0.00245	0.16350	0.16595	—	480.465	480.465	0.01938	0.03061	0.00400	490.074

Golf Course	1.45517	1.32768	0.50366	16.4207	0.01092	0.01450	3.56565	3.58015	0.01352	0.90370	0.91722	—	2,655.58	2,655.58	0.10709	0.16918	0.02209	2,708.69
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	1,391.03	1,286.94	421.010	13,480.3	8.69672	11.6766	2,818.31	2,829.99	10.8884	714.286	725.175	—	2,115,297	2,115,297	90.6032	135.685	17.4619	2,158,014
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	62.0746	56.5568	22.0498	736.488	0.47642	0.62561	152.589	153.214	0.58348	38.8019	39.3854	—	105,059	105,059	4.18917	6.63993	14.4016	107,156
Apartments Mid Rise	21.5075	19.5957	7.63977	255.177	0.16507	0.21676	52.8685	53.0853	0.20216	13.4440	13.6462	—	36,400.5	36,400.5	1.45146	2.30059	4.98983	37,127.3
Regional Shopping Center	105.392	99.4904	25.4168	796.977	0.46678	0.63838	145.386	146.024	0.59502	36.9703	37.5653	—	102,984	102,984	5.03258	6.67200	13.7218	105,112
Hotel	1.55630	1.41797	0.55282	18.4649	0.01194	0.01568	3.82563	3.84131	0.01463	0.97282	0.98745	—	2,633.98	2,633.98	0.10503	0.16647	0.36107	2,686.57
General Office Building	8.90458	8.11306	3.16304	105.649	0.06834	0.08974	21.8888	21.9785	0.08370	5.56613	5.64983	—	15,070.6	15,070.6	0.60094	0.95250	2.06590	15,371.5
Industrial Park	3.77563	3.44002	1.34116	44.7962	0.02898	0.03805	9.28106	9.31911	0.03549	2.36009	2.39558	—	6,390.09	6,390.09	0.25480	0.40387	0.87596	6,517.69
Government Office Building	8.10606	7.38552	2.87939	96.1750	0.06221	0.08170	19.9259	20.0076	0.07619	5.06698	5.14318	—	13,719.2	13,719.2	0.54705	0.86708	1.88064	13,993.1
Elementary School	26.4099	24.0624	9.38119	313.342	0.20269	0.26617	64.9195	65.1856	0.24825	16.5085	16.7567	—	44,697.6	44,697.6	1.78230	2.82499	6.12722	45,590.2
Hospital	10.8643	9.89854	3.85915	128.900	0.08338	0.10949	26.7060	26.8155	0.10212	6.79109	6.89321	—	18,387.3	18,387.3	0.73319	1.16212	2.52056	18,754.4
City Park	0.04749	0.04327	0.01687	0.56350	0.00036	0.00048	0.11675	0.11723	0.00045	0.02969	0.03013	—	80.3820	80.3820	0.00321	0.00508	0.01102	81.9871
Golf Course	0.26251	0.23917	0.09325	3.11452	0.00201	0.00265	0.64528	0.64792	0.00247	0.16409	0.16656	—	444.279	444.279	0.01772	0.02808	0.06090	453.151

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	248.901	230.243	76.3932	2,499.65	1.56820	2.08471	498.151	500.236	1.94396	126.676	128.620	—	345,866	345,866	14.7174	22.0227	47.0165	352,844

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	114,329	114,329	14.4672	1.75360	—	115,213
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	36,545.6	36,545.6	4.62446	0.56054	—	36,828.3
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	85,184.7	85,184.7	10.7792	1.30657	—	85,843.6
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	9,538.05	9,538.05	1.20694	0.14630	—	9,611.82
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	41,081.0	41,081.0	5.19837	0.63011	—	41,398.7
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	50,343.8	50,343.8	6.37048	0.77218	—	50,733.2
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	16,124.3	16,124.3	2.04036	0.24732	—	16,249.0

Element School	—	—	—	—	—	—	—	—	—	—	—	—	21,337.4	21,337.4	2.70002	0.32728	—	21,502.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	74,711.5	74,711.5	9.45395	1.14593	—	75,289.3
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	5,107.96	5,107.96	0.64636	0.07835	—	5,147.46
Total	—	—	—	—	—	—	—	—	—	—	—	—	454,304	454,304	57.4874	6.96816	—	457,817
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	114,329	114,329	14.4672	1.75360	—	115,213
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	36,545.6	36,545.6	4.62446	0.56054	—	36,828.3
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	85,184.7	85,184.7	10.7792	1.30657	—	85,843.6
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	9,538.05	9,538.05	1.20694	0.14630	—	9,611.82
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	41,081.0	41,081.0	5.19837	0.63011	—	41,398.7
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	50,343.8	50,343.8	6.37048	0.77218	—	50,733.2
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	16,124.3	16,124.3	2.04036	0.24732	—	16,249.0

Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	21,337.4	21,337.4	2.70002	0.32728	—	21,502.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	74,711.5	74,711.5	9.45395	1.14593	—	75,289.3
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	5,107.96	5,107.96	0.64636	0.07835	—	5,147.46
Total	—	—	—	—	—	—	—	—	—	—	—	—	454,304	454,304	57.4874	6.96816	—	457,817
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	18,928.5	18,928.5	2.39520	0.29033	—	19,074.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	6,050.54	6,050.54	0.76563	0.09280	—	6,097.34
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	14,103.3	14,103.3	1.78463	0.21632	—	14,212.4
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,579.13	1,579.13	0.19982	0.02422	—	1,591.35
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	6,801.43	6,801.43	0.86065	0.10432	—	6,854.04
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	8,334.99	8,334.99	1.05471	0.12784	—	8,399.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,669.56	2,669.56	0.33780	0.04095	—	2,690.21
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	3,532.65	3,532.65	0.44702	0.05418	—	3,559.97

Hospital	—	—	—	—	—	—	—	—	—	—	—	—	12,369.3	12,369.3	1.56521	0.18972	—	12,465.0
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	845.681	845.681	0.10701	0.01297	—	852.221
Total	—	—	—	—	—	—	—	—	—	—	—	—	75,215.1	75,215.1	9.51769	1.15366	—	75,796.9

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	26.2856	13.1428	224.622	95.5840	1.43376	18.1610	—	18.1610	18.1610	—	18.1610	—	285,119	285,119	25.2329	0.53687	—	285,910
Apartments Mid Rise	4.57887	2.28943	39.1285	16.6504	0.24976	3.16358	—	3.16358	3.16358	—	3.16358	—	49,666.8	49,666.8	4.39549	0.09352	—	49,804.6
Regional Shopping Center	2.14734	1.07367	19.5212	16.3978	0.11713	1.48361	—	1.48361	1.48361	—	1.48361	—	23,292.1	23,292.1	2.06134	0.04386	—	23,356.7
Hotel	0.81377	0.40689	7.39795	6.21428	0.04439	0.56224	—	0.56224	0.56224	—	0.56224	—	8,826.99	8,826.99	0.78118	0.01662	—	8,851.47
General Office Building	2.41629	1.20814	21.9663	18.4517	0.13180	1.66944	—	1.66944	1.66944	—	1.66944	—	26,209.4	26,209.4	2.31952	0.04935	—	26,282.1
Industrial Park	2.96110	1.48055	26.9191	22.6121	0.16151	2.04585	—	2.04585	2.04585	—	2.04585	—	32,119.0	32,119.0	2.84252	0.06048	—	32,208.1

Government	0.94839	0.47420	8.62175	7.24227	0.05173	0.65525	—	0.65525	0.65525	—	0.65525	—	10,287.2	10,287.2	0.91041	0.01937	—	10,315.7
Elementary School	2.95983	1.47992	26.9076	22.6024	0.16145	2.04498	—	2.04498	2.04498	—	2.04498	—	32,105.2	32,105.2	2.84130	0.06045	—	32,194.3
Hospital	5.76358	2.88179	52.3962	44.0128	0.31438	3.98211	—	3.98211	3.98211	—	3.98211	—	62,517.4	62,517.4	5.53276	0.11772	—	62,690.8
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	530,143	530,143	46.9174	0.99824	—	531,614
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	26.2856	13.1428	224.622	95.5840	1.43376	18.1610	—	18.1610	18.1610	—	18.1610	—	285,119	285,119	25.2329	0.53687	—	285,910
Apartments Mid Rise	4.57887	2.28943	39.1285	16.6504	0.24976	3.16358	—	3.16358	3.16358	—	3.16358	—	49,666.8	49,666.8	4.39549	0.09352	—	49,804.6
Regional Shopping Center	2.14734	1.07367	19.5212	16.3978	0.11713	1.48361	—	1.48361	1.48361	—	1.48361	—	23,292.1	23,292.1	2.06134	0.04386	—	23,356.7
Hotel	0.81377	0.40689	7.39795	6.21428	0.04439	0.56224	—	0.56224	0.56224	—	0.56224	—	8,826.99	8,826.99	0.78118	0.01662	—	8,851.47
General Office Building	2.41629	1.20814	21.9663	18.4517	0.13180	1.66944	—	1.66944	1.66944	—	1.66944	—	26,209.4	26,209.4	2.31952	0.04935	—	26,282.1
Industrial Park	2.96110	1.48055	26.9191	22.6121	0.16151	2.04585	—	2.04585	2.04585	—	2.04585	—	32,119.0	32,119.0	2.84252	0.06048	—	32,208.1

Government Office Building	0.94839	0.47420	8.62175	7.24227	0.05173	0.65525	—	0.65525	0.65525	—	0.65525	—	10,287.2	10,287.2	0.91041	0.01937	—	10,315.7
Elementary School	2.95983	1.47992	26.9076	22.6024	0.16145	2.04498	—	2.04498	2.04498	—	2.04498	—	32,105.2	32,105.2	2.84130	0.06045	—	32,194.3
Hospital	5.76358	2.88179	52.3962	44.0128	0.31438	3.98211	—	3.98211	3.98211	—	3.98211	—	62,517.4	62,517.4	5.53276	0.11772	—	62,690.8
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	48.8748	24.4374	427.481	249.768	2.66590	33.7680	—	33.7680	33.7680	—	33.7680	—	530,143	530,143	46.9174	0.99824	—	531,614
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.79712	2.39856	40.9936	17.4441	0.26166	3.31438	—	3.31438	3.31438	—	3.31438	—	47,204.7	47,204.7	4.17760	0.08888	—	47,335.7
Apartments Mid Rise	0.83564	0.41782	7.14095	3.03870	0.04558	0.57735	—	0.57735	0.57735	—	0.57735	—	8,222.91	8,222.91	0.72772	0.01548	—	8,245.72
Regional Shopping Center	0.39189	0.19594	3.56263	2.99261	0.02138	0.27076	—	0.27076	0.27076	—	0.27076	—	3,856.27	3,856.27	0.34128	0.00726	—	3,866.97
Hotel	0.14851	0.07426	1.35013	1.13411	0.00810	0.10261	—	0.10261	0.10261	—	0.10261	—	1,461.41	1,461.41	0.12933	0.00275	—	1,465.46
General Office Building	0.44097	0.22049	4.00884	3.36743	0.02405	0.30467	—	0.30467	0.30467	—	0.30467	—	4,339.27	4,339.27	0.38402	0.00817	—	4,351.30
Industrial Park	0.54040	0.27020	4.91274	4.12670	0.02948	0.37337	—	0.37337	0.37337	—	0.37337	—	5,317.67	5,317.67	0.47061	0.01001	—	5,332.42

Government Office Building	0.17308	0.08654	1.57347	1.32171	0.00944	0.11958	—	0.11958	0.11958	—	0.11958	—	1,703.16	1,703.16	0.15073	0.00321	—	1,707.88
Elementary School	0.54017	0.27008	4.91063	4.12493	0.02946	0.37321	—	0.37321	0.37321	—	0.37321	—	5,315.39	5,315.39	0.47041	0.01001	—	5,330.13
Hospital	1.05185	0.52593	9.56231	8.03234	0.05737	0.72674	—	0.72674	0.72674	—	0.72674	—	10,350.5	10,350.5	0.91601	0.01949	—	10,379.2
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	8.91965	4.45982	78.0153	45.5826	0.48653	6.16267	—	6.16267	6.16267	—	6.16267	—	87,771.3	87,771.3	7.76772	0.16527	—	88,014.7

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	10,762.5	9,706.60	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Consumer Products	1,900.18	1,900.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	177.699	177.699	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	508.483	473.944	34.3508	3,888.24	0.19699	4.08509	—	4.08509	3.08937	—	3.08937	—	12,912.6	12,912.6	0.54084	0.10920	—	12,958.6
Total	13,348.8	12,258.4	805.358	22,786.0	48.4069	2,656.95	—	2,656.95	2,607.66	—	2,607.66	348,075	677,984	1,026,058	1,038.27	12.7235	—	1,055,807
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	10,762.5	9,706.60	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Consumer Products	1,900.18	1,900.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	177.699	177.699	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	12,840.3	11,784.5	771.008	18,897.8	48.2099	2,652.86	—	2,652.86	2,604.58	—	2,604.58	348,075	665,071	1,013,146	1,037.73	12.6143	—	1,042,848
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	134.531	121.333	9.63759	236.222	0.60262	33.1608	—	33.1608	32.5572	—	32.5572	3,947.11	7,541.79	11,488.9	11.7677	0.14304	—	11,825.7
Consumer Products	346.784	346.784	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	32.4301	32.4301	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	63.5604	59.2430	4.29385	486.030	0.02462	0.51064	—	0.51064	0.38617	—	0.38617	—	1,464.26	1,464.26	0.06133	0.01238	—	1,469.49
Total	577.305	559.789	13.9314	722.253	0.62725	33.6714	—	33.6714	32.9434	—	32.9434	3,947.11	9,006.05	12,953.2	11.8290	0.15543	—	13,295.2

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,657.57	21,873.6	23,531.1	172.733	4.37381	—	29,152.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	996.598	2,529.55	3,526.14	102.510	2.46679	—	6,824.00
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,723.06	4,373.44	6,096.51	177.234	4.26495	—	11,798.3
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.9359	81.0591	112.995	3.28492	0.07905	—	218.674
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,098.88	2,789.16	3,888.04	113.031	2.71996	—	7,524.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,752.13	4,447.23	6,199.37	180.224	4.33691	—	11,997.4
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	482.092	1,223.64	1,705.73	49.5878	1.19328	—	3,301.02
Elementary School	—	—	—	—	—	—	—	—	—	—	—	265.317	673.422	938.739	27.2904	0.65672	—	1,816.70
Hospital	—	—	—	—	—	—	—	—	—	—	—	860.018	2,182.88	3,042.90	88.4613	2.12873	—	5,888.79
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	8,867.61	40,174.0	49,041.6	914.355	22.2202	—	78,522.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,657.57	21,873.6	23,531.1	172.733	4.37381	—	29,152.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	996.598	2,529.55	3,526.14	102.510	2.46679	—	6,824.00
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,723.06	4,373.44	6,096.51	177.234	4.26495	—	11,798.3
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.9359	81.0591	112.995	3.28492	0.07905	—	218.674
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,098.88	2,789.16	3,888.04	113.031	2.71996	—	7,524.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,752.13	4,447.23	6,199.37	180.224	4.33691	—	11,997.4
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	482.092	1,223.64	1,705.73	49.5878	1.19328	—	3,301.02
Elementary School	—	—	—	—	—	—	—	—	—	—	—	265.317	673.422	938.739	27.2904	0.65672	—	1,816.70
Hospital	—	—	—	—	—	—	—	—	—	—	—	860.018	2,182.88	3,042.90	88.4613	2.12873	—	5,888.79
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	8,867.61	40,174.0	49,041.6	914.355	22.2202	—	78,522.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	274.429	3,621.42	3,895.85	28.5978	0.72413	—	4,826.59
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	164.998	418.795	583.793	16.9717	0.40841	—	1,129.79
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	285.273	724.074	1,009.35	29.3431	0.70611	—	1,953.34
Hotel	—	—	—	—	—	—	—	—	—	—	—	5.28736	13.4203	18.7076	0.54386	0.01309	—	36.2040
General Office Building	—	—	—	—	—	—	—	—	—	—	—	181.932	461.777	643.709	18.7135	0.45032	—	1,245.74
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	290.086	736.290	1,026.38	29.8381	0.71802	—	1,986.30
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	79.8158	202.587	282.403	8.20983	0.19756	—	546.521
Elementary School	—	—	—	—	—	—	—	—	—	—	—	43.9263	111.493	155.419	4.51824	0.10873	—	300.776
Hospital	—	—	—	—	—	—	—	—	—	—	—	142.386	361.401	503.787	14.6458	0.35244	—	974.957
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	1,468.13	6,651.26	8,119.39	151.382	3.67881	—	13,000.2

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,028.2	0.00000	10,028.2	1,002.29	0.00000	—	35,085.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	5,545.32	0.00000	5,545.32	554.235	0.00000	—	19,401.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	6,869.48	0.00000	6,869.48	686.580	0.00000	—	24,034.0
Hotel	—	—	—	—	—	—	—	—	—	—	—	193.860	0.00000	193.860	19.3756	0.00000	—	678.251
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,617.16	0.00000	1,617.16	161.630	0.00000	—	5,657.91
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,642.40	0.00000	2,642.40	264.098	0.00000	—	9,244.84
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	634.736	0.00000	634.736	63.4396	0.00000	—	2,220.73

Element School	—	—	—	—	—	—	—	—	—	—	—	3,345.39	0.00000	3,345.39	334.360	0.00000	—	11,704.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	20,818.3	0.00000	20,818.3	2,080.72	0.00000	—	72,836.2
City Park	—	—	—	—	—	—	—	—	—	—	—	9.96006	0.00000	9.96006	0.99547	0.00000	—	34.8469
Golf Course	—	—	—	—	—	—	—	—	—	—	—	124.156	0.00000	124.156	12.4089	0.00000	—	434.379
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,028.2	0.00000	10,028.2	1,002.29	0.00000	—	35,085.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	5,545.32	0.00000	5,545.32	554.235	0.00000	—	19,401.2
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	6,869.48	0.00000	6,869.48	686.580	0.00000	—	24,034.0
Hotel	—	—	—	—	—	—	—	—	—	—	—	193.860	0.00000	193.860	19.3756	0.00000	—	678.251
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,617.16	0.00000	1,617.16	161.630	0.00000	—	5,657.91
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,642.40	0.00000	2,642.40	264.098	0.00000	—	9,244.84
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	634.736	0.00000	634.736	63.4396	0.00000	—	2,220.73

Elementary School	—	—	—	—	—	—	—	—	—	—	—	3,345.39	0.00000	3,345.39	334.360	0.00000	—	11,704.4
Hospital	—	—	—	—	—	—	—	—	—	—	—	20,818.3	0.00000	20,818.3	2,080.72	0.00000	—	72,836.2
City Park	—	—	—	—	—	—	—	—	—	—	—	9.96006	0.00000	9.96006	0.99547	0.00000	—	34.8469
Golf Course	—	—	—	—	—	—	—	—	—	—	—	124.156	0.00000	124.156	12.4089	0.00000	—	434.379
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	51,829.0	0.00000	51,829.0	5,180.13	0.00000	—	181,332
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,660.29	0.00000	1,660.29	165.940	0.00000	—	5,808.79
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	918.091	0.00000	918.091	91.7599	0.00000	—	3,212.09
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,137.32	0.00000	1,137.32	113.671	0.00000	—	3,979.10
Hotel	—	—	—	—	—	—	—	—	—	—	—	32.0958	0.00000	32.0958	3.20786	0.00000	—	112.292
General Office Building	—	—	—	—	—	—	—	—	—	—	—	267.740	0.00000	267.740	26.7596	0.00000	—	936.731
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	437.479	0.00000	437.479	43.7244	0.00000	—	1,530.59
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	105.088	0.00000	105.088	10.5032	0.00000	—	367.667
Elementary School	—	—	—	—	—	—	—	—	—	—	—	553.868	0.00000	553.868	55.3571	0.00000	—	1,937.80

Hospital	—	—	—	—	—	—	—	—	—	—	—	3,446.71	0.00000	3,446.71	344.486	0.00000	—	12,058.9
City Park	—	—	—	—	—	—	—	—	—	—	—	1.64900	0.00000	1.64900	0.16481	0.00000	—	5.76929
Golf Course	—	—	—	—	—	—	—	—	—	—	—	20.5554	0.00000	20.5554	2.05444	0.00000	—	71.9163
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	8,580.89	0.00000	8,580.89	857.629	0.00000	—	30,021.6

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	324.107	324.107
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.9342	95.9342
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58.2764	58.2764
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,491.29	1,491.29
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.84685	7.84685

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,029.24	1,029.24
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.07989	3.07989
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.4447	18.4447
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.60554	5.60554
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.8000	51.8000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,085.63	3,085.63
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	324.107	324.107
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.9342	95.9342
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58.2764	58.2764
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,491.29	1,491.29
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.84685	7.84685
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,029.24	1,029.24

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.07989	3.07989
Element ary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.4447	18.4447
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.60554	5.60554
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.8000	51.8000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,085.63	3,085.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53.6596	53.6596
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.8830	15.8830
Regiona l Shoppin g Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.64832	9.64832
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	246.900	246.900
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.29914	1.29914
Industria l Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170.403	170.403
Govern ment Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.50991	0.50991

Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.05373	3.05373
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92806	0.92806
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.57608	8.57608
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	510.861	510.861

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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)

Equipm Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

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
Single Family Housing	123,065	123,065	123,065	44,918,670	1,193,729	1,193,729	1,193,729	435,711,103
Apartments Mid Rise	42,639.2	42,639.2	42,639.2	15,563,326	413,601	413,601	413,601	150,964,262
Regional Shopping Center	257,428	257,428	257,428	93,961,067	1,100,204	1,230,316	1,230,316	415,143,340
Hotel	3,085.42	3,085.42	3,085.42	1,126,179	29,928.6	29,928.6	29,928.6	10,923,939
General Office Building	17,653.6	17,653.6	17,653.6	6,443,570	171,240	171,240	171,240	62,502,626
Industrial Park	7,485.31	7,485.31	7,485.31	2,732,137	72,607.5	72,607.5	72,607.5	26,501,729
Government Office Building	16,070.5	16,070.5	16,070.5	5,865,743	155,884	155,884	155,884	56,897,710
Elementary School	52,358.5	52,358.5	52,358.5	19,110,851	507,877	507,877	507,877	185,375,252
Hospital	21,538.7	21,538.7	21,538.7	7,861,641	208,926	208,926	208,926	76,257,921
City Park	94.1589	94.1589	94.1589	34,368.0	913.342	913.342	913.342	333,370
Golf Course	520.426	520.426	520.426	189,955	5,048.13	5,048.13	5,048.13	1,842,568
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	1,160	1,160
Single Family Housing	Gas Fireplaces	19,726	19,726
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0
Single Family Housing	No Fireplaces	2,321	2,321
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	1,160	1,160
Single Family Housing	Non-Catalytic Wood Stoves	1,160	1,160
Single Family Housing	Pellet Wood Stoves	0	0
Apartments Mid Rise	Wood Fireplaces	698	698
Apartments Mid Rise	Gas Fireplaces	11,860	11,860
Apartments Mid Rise	Propane Fireplaces	0	0
Apartments Mid Rise	Electric Fireplaces	0	0
Apartments Mid Rise	No Fireplaces	1,395	1,395
Apartments Mid Rise	Conventional Wood Stoves	0	0
Apartments Mid Rise	Catalytic Wood Stoves	698	698
Apartments Mid Rise	Non-Catalytic Wood Stoves	698	698
Apartments Mid Rise	Pellet Wood Stoves	0	0
Regional Shopping Center	Wood Fireplaces	0	0
Regional Shopping Center	Gas Fireplaces	0	0
Regional Shopping Center	Propane Fireplaces	0	0
Regional Shopping Center	Electric Fireplaces	0	0
Regional Shopping Center	No Fireplaces	0	0
Regional Shopping Center	Conventional Wood Stoves	0	0
Regional Shopping Center	Catalytic Wood Stoves	0	0
Regional Shopping Center	Non-Catalytic Wood Stoves	0	0

Regional Shopping Center	Pellet Wood Stoves	0	0
Hotel	Wood Fireplaces	0	0
Hotel	Gas Fireplaces	0	0
Hotel	Propane Fireplaces	0	0
Hotel	Electric Fireplaces	0	0
Hotel	No Fireplaces	0	0
Hotel	Conventional Wood Stoves	0	0
Hotel	Catalytic Wood Stoves	0	0
Hotel	Non-Catalytic Wood Stoves	0	0
Hotel	Pellet Wood Stoves	0	0
General Office Building	Wood Fireplaces	0	0
General Office Building	Gas Fireplaces	0	0
General Office Building	Propane Fireplaces	0	0
General Office Building	Electric Fireplaces	0	0
General Office Building	No Fireplaces	0	0
General Office Building	Conventional Wood Stoves	0	0
General Office Building	Catalytic Wood Stoves	0	0
General Office Building	Non-Catalytic Wood Stoves	0	0
General Office Building	Pellet Wood Stoves	0	0
Industrial Park	Wood Fireplaces	0	0
Industrial Park	Gas Fireplaces	0	0
Industrial Park	Propane Fireplaces	0	0
Industrial Park	Electric Fireplaces	0	0
Industrial Park	No Fireplaces	0	0
Industrial Park	Conventional Wood Stoves	0	0
Industrial Park	Catalytic Wood Stoves	0	0
Industrial Park	Non-Catalytic Wood Stoves	0	0
Industrial Park	Pellet Wood Stoves	0	0

Government Office Building	Wood Fireplaces	0	0
Government Office Building	Gas Fireplaces	0	0
Government Office Building	Propane Fireplaces	0	0
Government Office Building	Electric Fireplaces	0	0
Government Office Building	No Fireplaces	0	0
Government Office Building	Conventional Wood Stoves	0	0
Government Office Building	Catalytic Wood Stoves	0	0
Government Office Building	Non-Catalytic Wood Stoves	0	0
Government Office Building	Pellet Wood Stoves	0	0
Elementary School	Wood Fireplaces	0	0
Elementary School	Gas Fireplaces	0	0
Elementary School	Propane Fireplaces	0	0
Elementary School	Electric Fireplaces	0	0
Elementary School	No Fireplaces	0	0
Elementary School	Conventional Wood Stoves	0	0
Elementary School	Catalytic Wood Stoves	0	0
Elementary School	Non-Catalytic Wood Stoves	0	0
Elementary School	Pellet Wood Stoves	0	0
Hospital	Wood Fireplaces	0	0
Hospital	Gas Fireplaces	0	0
Hospital	Propane Fireplaces	0	0
Hospital	Electric Fireplaces	0	0
Hospital	No Fireplaces	0	0
Hospital	Conventional Wood Stoves	0	0
Hospital	Catalytic Wood Stoves	0	0
Hospital	Non-Catalytic Wood Stoves	0	0
Hospital	Pellet Wood Stoves	0	0
City Park	Wood Fireplaces	0	0

City Park	Gas Fireplaces	0	0
City Park	Propane Fireplaces	0	0
City Park	Electric Fireplaces	0	0
City Park	No Fireplaces	0	0
City Park	Conventional Wood Stoves	0	0
City Park	Catalytic Wood Stoves	0	0
City Park	Non-Catalytic Wood Stoves	0	0
City Park	Pellet Wood Stoves	0	0
Golf Course	Wood Fireplaces	0	0
Golf Course	Gas Fireplaces	0	0
Golf Course	Propane Fireplaces	0	0
Golf Course	Electric Fireplaces	0	0
Golf Course	No Fireplaces	0	0
Golf Course	Conventional Wood Stoves	0	0
Golf Course	Catalytic Wood Stoves	0	0
Golf Course	Non-Catalytic Wood Stoves	0	0
Golf Course	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	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)
118,763,273	39,587,758	45,172,656	15,057,552	489,666

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

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)
Single Family Housing	160,015,632	260.788	0.0330	0.0040	889,648,379
Apartments Mid Rise	51,149,383	260.788	0.0330	0.0040	154,973,779
Regional Shopping Center	119,224,906	260.788	0.0330	0.0040	72,677,551
Hotel	13,349,489	260.788	0.0330	0.0040	27,542,563
General Office Building	57,497,154	260.788	0.0330	0.0040	81,780,377
Industrial Park	70,461,412	260.788	0.0330	0.0040	100,219,932
Government Office Building	22,567,611	260.788	0.0330	0.0040	32,098,766
Elementary School	29,863,876	260.788	0.0330	0.0040	100,176,881
Hospital	104,566,465	260.788	0.0330	0.0040	195,071,079
City Park	0.00000	260.788	0.0330	0.0040	0.00000
Golf Course	0.00000	260.788	0.0330	0.0040	0.00000
Parking Lot	7,149,117	260.788	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	865,013,077	4,659,314,126
Apartments Mid Rise	520,081,331	0.00000
Regional Shopping Center	899,191,523	0.00000
Hotel	16,665,968	0.00000
General Office Building	573,457,938	0.00000
Industrial Park	914,362,500	0.00000
Government Office Building	251,582,626	0.00000
Elementary School	138,457,380	0.00000
Hospital	448,806,239	0.00000
City Park	0.00000	0.00000
Golf Course	0.00000	0.00000
Parking Lot	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	18,607.4	0.00000
Apartments Mid Rise	10,289.3	0.00000
Regional Shopping Center	12,746.3	0.00000
Hotel	359.707	0.00000
General Office Building	3,000.64	0.00000
Industrial Park	4,902.96	0.00000
Government Office Building	1,177.75	0.00000
Elementary School	6,207.37	0.00000
Hospital	38,628.4	0.00000

City Park	18.4809	0.00000
Golf Course	230.371	0.00000
Parking Lot	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000
Hotel	Household refrigerators and/or freezers	R-134a	1,430.00	0.00000	0.60000	0.00000	1.000000
Hotel	Other commercial A/C and heat pumps	R-410A	2,088.00	1.80000	4.00000	4.00000	18.0000
Hotel	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000
General Office Building	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.30000	4.00000	4.00000	18.0000
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Elementary School	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00004	1.000000	0.00000	1.000000
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000
Hospital	Chillers	R-134a	1,430.00	0.00230	2.00000	2.00000	23.0000
Hospital	Household refrigerators and/or freezers	R-134a	1,430.00	0.00460	0.60000	0.00000	1.000000
Hospital	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00001	1.000000	0.00000	1.000000
Hospital	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00015	7.50000	7.50000	20.0000
City Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000
Golf Course	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000

Golf Course	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

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)

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	11.6600	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	46.9944
AQ-PM	85.6254
AQ-DPM	53.0803
Drinking Water	58.4239
Lead Risk Housing	76.6856
Pesticides	0.00000
Toxic Releases	92.1230
Traffic	63.0875
Effect Indicators	—
CleanUp Sites	53.8820
Groundwater	88.1288
Haz Waste Facilities/Generators	81.8795
Impaired Water Bodies	0.00000
Solid Waste	36.4719
Sensitive Population	—
Asthma	51.3584
Cardio-vascular	85.3190
Low Birth Weights	9.18655
Socioeconomic Factor Indicators	—
Education	80.0304
Housing	60.5577
Linguistic	69.2245
Poverty	68.4799
Unemployment	68.4019

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	28.46143975
Employed	60.23354292
Median HI	25.36892083
Education	—
Bachelor's or higher	15.47542666
High school enrollment	100
Preschool enrollment	67.62479148
Transportation	—
Auto Access	21.12151931
Active commuting	52.05954061
Social	—
2-parent households	10.12447068
Voting	10.88156037
Neighborhood	—
Alcohol availability	22.76401899
Park access	11.44616964
Retail density	60.02823046
Supermarket access	63.96766329
Tree canopy	33.81239574
Housing	—
Homeownership	16.80995765
Housing habitability	14.14089568
Low-inc homeowner severe housing cost burden	49.48030284
Low-inc renter severe housing cost burden	58.02643398
Uncrowded housing	26.88310022
Health Outcomes	—

Insured adults	35.51905556
Arthritis	32.9
Asthma ER Admissions	49.9
High Blood Pressure	39.5
Cancer (excluding skin)	40.8
Asthma	58.2
Coronary Heart Disease	17.4
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	19.9
Life Expectancy at Birth	33.6
Cognitively Disabled	35.0
Physically Disabled	18.7
Heart Attack ER Admissions	41.1
Mental Health Not Good	39.0
Chronic Kidney Disease	14.8
Obesity	30.3
Pedestrian Injuries	88.0
Physical Health Not Good	27.6
Stroke	22.5
Health Risk Behaviors	—
Binge Drinking	61.9
Current Smoker	48.5
No Leisure Time for Physical Activity	31.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	77.6
Elderly	27.3

English Speaking	30.7
Foreign-born	64.3
Outdoor Workers	62.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	9.7
Traffic Density	62.7
Traffic Access	60.2
Other Indices	—
Hardship	67.4
Other Decision Support	—
2016 Voting	15.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0000
Healthy Places Index Score for Project Location (b)	25.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

8.1. Justifications

Screen	Justification
Land Use	2045 No Project Test
Operations: Vehicle Data	Trip generation scaled per total vmt estimate in Ganddini traffic report. Trip length updated based on regional average in traffic report.
Operations: Vehicle EF	Trip generation scaled per total vmt estimate in Ganddini traffic report. Trip length updated based on regional average in traffic report.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Population	people	68,693.0	70,139.0
Landscape Area	sq. ft	—	0.00000
Population	people	41,301.0	41,187.0
Lot Area	acre	74.0702	140.301
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	90.7713	217.057
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	29.0725	234.057
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	109.617	408.894
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	82.1097	98.7508
Landscape Area	sq. ft	—	0.00000
Landscape Area	sq. ft	—	0.00000
Recreational Building Area	sq. ft	0.00000	49,300.0
Landscape Area	sq. ft	—	0.00000

Recreational Building Area	sq. ft	0.00000	174,000
Building Area	sq. ft	8,161,092	187.353
Landscape Area	sq. ft	—	0.00000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Single Family Housing	Weekday Trip Rate	size/day	9.44000	5.30292
Single Family Housing	Saturday Trip Rate	size/day	9.54000	5.30292
Single Family Housing	Sunday Trip Rate	size/day	8.55000	5.30292
Single Family Housing	Res H-W Trip Length	miles	14.9580	9.70000
Single Family Housing	Res H-S Trip Length	miles	8.57462	9.70000
Single Family Housing	Res H-O Trip Length	miles	5.16083	9.70000
Apartments Mid Rise	Weekday Trip Rate	size/day	5.44000	3.05592
Apartments Mid Rise	Saturday Trip Rate	size/day	4.91000	3.05592
Apartments Mid Rise	Sunday Trip Rate	size/day	4.09000	3.05592
Apartments Mid Rise	Res H-W Trip Length	miles	14.9580	9.70000
Apartments Mid Rise	Res H-S Trip Length	miles	8.57462	9.70000
Apartments Mid Rise	Res H-O Trip Length	miles	5.16083	9.70000
Regional Shopping Center	Weekday Trip Rate	size/day	37.7500	21.2061
Regional Shopping Center	Saturday Trip Rate	size/day	46.1200	21.2061
Regional Shopping Center	Sunday Trip Rate	size/day	21.1000	21.2061
Regional Shopping Center	Non-Res H-W Trip Length	miles	14.9580	9.70000
Regional Shopping Center	Non-Res W-O Trip Length	miles	8.99635	9.70000
Regional Shopping Center	Non-Res O-O Trip Length	miles	4.43176	9.70000
Hotel	Weekday Trip Rate	size/day	8.36000	4.69623

Hotel	Saturday Trip Rate	size/day	8.19000	4.69623
Hotel	Sunday Trip Rate	size/day	5.95000	4.69623
Hotel	Non-Res H-W Trip Length	miles	14.9580	9.70000
Hotel	Non-Res W-O Trip Length	miles	8.99635	9.70000
Hotel	Non-Res O-O Trip Length	miles	4.43176	9.70000
General Office Building	Weekday Trip Rate	size/day	9.74000	5.47144
General Office Building	Saturday Trip Rate	size/day	2.21000	5.47144
General Office Building	Sunday Trip Rate	size/day	0.70000	5.47144
General Office Building	Non-Res H-W Trip Length	miles	14.9580	9.70000
General Office Building	Non-Res W-O Trip Length	miles	8.99635	9.70000
General Office Building	Non-Res O-O Trip Length	miles	4.43176	9.70000
Industrial Park	Weekday Trip Rate	size/day	3.37000	1.89310
Industrial Park	Saturday Trip Rate	size/day	2.54000	1.89310
Industrial Park	Sunday Trip Rate	size/day	1.24000	1.89310
Industrial Park	Non-Res H-W Trip Length	miles	14.9580	9.70000
Industrial Park	Non-Res W-O Trip Length	miles	8.99635	9.70000
Industrial Park	Non-Res O-O Trip Length	miles	4.43176	9.70000
Government Office Building	Weekday Trip Rate	size/day	22.5900	12.6899
Government Office Building	Saturday Trip Rate	size/day	0.00000	12.6899
Government Office Building	Sunday Trip Rate	size/day	0.00000	12.6899
Government Office Building	Non-Res H-W Trip Length	miles	14.9580	9.70000
Government Office Building	Non-Res W-O Trip Length	miles	8.99635	9.70000
Government Office Building	Non-Res O-O Trip Length	miles	4.43176	9.70000
Elementary School	Weekday Trip Rate	size/day	19.5200	10.9654
Elementary School	Saturday Trip Rate	size/day	0.00000	10.9654
Elementary School	Sunday Trip Rate	size/day	0.00000	10.9654
Elementary School	Non-Res H-W Trip Length	miles	14.9580	9.70000
Elementary School	Non-Res W-O Trip Length	miles	8.99635	9.70000

Elementary School	Non-Res O-O Trip Length	miles	4.43176	9.70000
Hospital	Weekday Trip Rate	size/day	10.7200	6.02196
Hospital	Saturday Trip Rate	size/day	7.72000	6.02196
Hospital	Sunday Trip Rate	size/day	6.77000	6.02196
Hospital	Non-Res H-W Trip Length	miles	14.9580	9.70000
Hospital	Non-Res W-O Trip Length	miles	8.99635	9.70000
Hospital	Non-Res O-O Trip Length	miles	4.43176	9.70000
City Park	Weekday Trip Rate	size/day	0.78000	0.43816
City Park	Saturday Trip Rate	size/day	1.96000	0.43816
City Park	Sunday Trip Rate	size/day	2.19000	0.43816
City Park	Non-Res H-W Trip Length	miles	14.9580	9.70000
City Park	Non-Res W-O Trip Length	miles	8.99635	9.70000
City Park	Non-Res O-O Trip Length	miles	4.43176	9.70000
Golf Course	Weekday Trip Rate	size/day	3.74000	2.10094
Golf Course	Saturday Trip Rate	size/day	3.74000	2.10094
Golf Course	Sunday Trip Rate	size/day	3.74000	2.10094
Golf Course	Non-Res H-W Trip Length	miles	14.9580	9.70000
Golf Course	Non-Res W-O Trip Length	miles	8.99635	9.70000
Golf Course	Non-Res O-O Trip Length	miles	4.43176	9.70000
Parking Lot	Non-Res H-W Trip Length	miles	14.9580	9.70000
Parking Lot	Non-Res W-O Trip Length	miles	8.99635	9.70000
Parking Lot	Non-Res O-O Trip Length	miles	4.43176	9.70000

8.5.1.3. Vehicle EF

Year	Season	Vehicle Class	Model Parameter	Units	Default Value	New Value
2045	A	HHDT	TOG RUNEX	g/mi	0.03356	0.03780
2045	A	HHDT	TOG IDLEX	g/trip	0.53081	0.51297
2045	A	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005

2045	A	HHDT	TOG DIURN	g/trip	—	0.00018
2045	A	HHDT	TOG HOTSOAK	g/trip	—	0.00003
2045	A	HHDT	TOG RUNLOSS	g/trip	—	0.00031
2045	A	HHDT	ROG RUNEX	g/mi	0.00863	0.00971
2045	A	HHDT	ROG IDLEX	g/trip	0.29927	0.37536
2045	A	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	ROG DIURN	g/trip	—	0.00018
2045	A	HHDT	ROG HOTSOAK	g/trip	—	0.00003
2045	A	HHDT	ROG RUNLOSS	g/trip	—	0.00031
2045	A	HHDT	NOx RUNEX	g/mi	0.98799	0.40296
2045	A	HHDT	NOx IDLEX	g/trip	3.62240	0.63541
2045	A	HHDT	NOx STREX	g/trip	2.03265	0.80770
2045	A	HHDT	CO RUNEX	g/mi	0.20316	0.21829
2045	A	HHDT	CO IDLEX	g/trip	5.15038	5.84792
2045	A	HHDT	CO STREX	g/trip	0.00063	0.00152
2045	A	HHDT	SOx RUNEX	g/mi	0.00973	0.00399
2045	A	HHDT	SOx IDLEX	g/trip	0.00539	0.00237
2045	A	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	PM2.5 RUNEX	g/mi	0.01801	0.01108
2045	A	HHDT	PM2.5 IDLEX	g/trip	0.00152	0.00101
2045	A	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	PM2.5 PMTW	g/mi	0.00887	0.00887
2045	A	HHDT	PM2.5 PMBW	g/mi	0.02856	0.03042
2045	A	HHDT	PM10 RUNEX	g/mi	0.01882	0.01158
2045	A	HHDT	PM10 IDLEX	g/trip	0.00159	0.00106
2045	A	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	PM10 PMTW	g/mi	0.03548	0.00887
2045	A	HHDT	PM10 PMBW	g/mi	0.08160	0.03042

2045	A	HHDT	CO, RUNEX	g/mi	1,061.56	1,250.72
2045	A	HHDT	CO, IDLEX	g/trip	669.349	775.997
2045	A	HHDT	CO, STREX	g/trip	0.00574	0.02966
2045	A	HHDT	CH„ RUNEX	g/mi	0.02401	0.02742
2045	A	HHDT	CH„ IDLEX	g/trip	0.20307	0.10306
2045	A	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	N,O RUNEX	g/mi	0.16882	0.39188
2045	A	HHDT	N,O IDLEX	g/trip	0.11007	0.00000
2045	A	HHDT	N,O STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	TOG RUNEX	g/mi	0.03356	0.03780
2045	S	HHDT	TOG IDLEX	g/trip	0.55090	0.53843
2045	S	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	TOG DIURN	g/trip	—	0.00019
2045	S	HHDT	TOG HOTSOAK	g/trip	—	0.00003
2045	S	HHDT	TOG RUNLOSS	g/trip	—	0.00031
2045	S	HHDT	ROG RUNEX	g/mi	0.00863	0.00972
2045	S	HHDT	ROG IDLEX	g/trip	0.31692	0.39772
2045	S	HHDT	ROG STREX	g/trip	< 0.000005	0.00000
2045	S	HHDT	ROG DIURN	g/trip	—	0.00019
2045	S	HHDT	ROG HOTSOAK	g/trip	—	0.00003
2045	S	HHDT	ROG RUNLOSS	g/trip	—	0.00031
2045	S	HHDT	NOx RUNEX	g/mi	0.93624	0.38101
2045	S	HHDT	NOx IDLEX	g/trip	3.45016	0.60563
2045	S	HHDT	NOx STREX	g/trip	2.03265	0.80770
2045	S	HHDT	CO RUNEX	g/mi	0.20321	0.21834
2045	S	HHDT	CO IDLEX	g/trip	5.09301	5.77642
2045	S	HHDT	CO STREX	g/trip	0.00060	0.00144
2045	S	HHDT	SOx RUNEX	g/mi	0.00973	0.00399

2045	S	HHDT	SOx IDLEX	g/trip	0.00533	0.00234
2045	S	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	PM2.5 RUNEX	g/mi	0.01801	0.01108
2045	S	HHDT	PM2.5 IDLEX	g/trip	0.00137	0.00091
2045	S	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	PM2.5 PMTW	g/mi	0.00887	0.00887
2045	S	HHDT	PM2.5 PMBW	g/mi	0.02856	0.03042
2045	S	HHDT	PM10 RUNEX	g/mi	0.01882	0.01158
2045	S	HHDT	PM10 IDLEX	g/trip	0.00145	0.00096
2045	S	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	PM10 PMTW	g/mi	0.03548	0.03547
2045	S	HHDT	PM10 PMBW	g/mi	0.08160	0.08691
2045	S	HHDT	CO, RUNEX	g/mi	1,061.56	1,250.72
2045	S	HHDT	CO, IDLEX	g/trip	662.101	766.097
2045	S	HHDT	CO, STREX	g/trip	0.00569	0.02954
2045	S	HHDT	CH„ RUNEX	g/mi	0.02401	0.02742
2045	S	HHDT	CH„ IDLEX	g/trip	0.20389	0.10410
2045	S	HHDT	CH„ STREX	g/trip	< 0.000005	0.00000
2045	S	HHDT	N,O RUNEX	g/mi	0.16882	0.39188
2045	S	HHDT	N,O IDLEX	g/trip	0.10893	0.00000
2045	S	HHDT	N,O STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	TOG RUNEX	g/mi	0.03356	0.03780
2045	W	HHDT	TOG IDLEX	g/trip	0.50307	0.47781
2045	W	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	TOG DIURN	g/trip	—	0.00018
2045	W	HHDT	TOG HOTSOAK	g/trip	—	0.00003
2045	W	HHDT	TOG RUNLOSS	g/trip	—	0.00031
2045	W	HHDT	ROG RUNEX	g/mi	0.00863	0.00971

2045	W	HHDT	ROG IDLEX	g/trip	0.27490	0.34447
2045	W	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	ROG DIURN	g/trip	—	0.00018
2045	W	HHDT	ROG HOTSOAK	g/trip	—	0.00003
2045	W	HHDT	ROG RUNLOSS	g/trip	—	0.00031
2045	W	HHDT	NOx RUNEX	g/mi	0.97076	0.39573
2045	W	HHDT	NOx IDLEX	g/trip	3.86025	0.67653
2045	W	HHDT	NOx STREX	g/trip	2.03265	0.80770
2045	W	HHDT	CO RUNEX	g/mi	0.20314	0.21827
2045	W	HHDT	CO IDLEX	g/trip	5.22960	5.94666
2045	W	HHDT	CO STREX	g/trip	0.00064	0.00154
2045	W	HHDT	SOx RUNEX	g/mi	0.00973	0.00399
2045	W	HHDT	SOx IDLEX	g/trip	0.00549	0.00242
2045	W	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	PM2.5 RUNEX	g/mi	0.01801	0.01108
2045	W	HHDT	PM2.5 IDLEX	g/trip	0.00171	0.00115
2045	W	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	PM2.5 PMTW	g/mi	0.00887	0.00887
2045	W	HHDT	PM2.5 PMBW	g/mi	0.02856	0.03042
2045	W	HHDT	PM10 RUNEX	g/mi	0.01882	0.01158
2045	W	HHDT	PM10 IDLEX	g/trip	0.00180	0.00120
2045	W	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	PM10 PMTW	g/mi	0.03548	0.03547
2045	W	HHDT	PM10 PMBW	g/mi	0.08160	0.08691
2045	W	HHDT	CO, RUNEX	g/mi	1,061.56	1,250.72
2045	W	HHDT	CO, IDLEX	g/trip	679.357	789.668
2045	W	HHDT	CO, STREX	g/trip	0.00575	0.02969
2045	W	HHDT	CH„ RUNEX	g/mi	0.02401	0.02742

2045	W	HHDT	CH„ IDLEX	g/trip	0.20194	0.10163
2045	W	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	N,O RUNEX	g/mi	0.16882	0.39188
2045	W	HHDT	N,O IDLEX	g/trip	0.11165	0.00000
2045	W	HHDT	N,O STREX	g/trip	< 0.000005	< 0.000005
2045	A	LDA	TOG RUNEX	g/mi	0.00414	0.00699
2045	A	LDA	TOG STREX	g/trip	0.11439	0.05961
2045	A	LDA	TOG DIURN	g/trip	0.17676	0.25646
2045	A	LDA	TOG HOTSOAK	g/trip	0.03388	0.06438
2045	A	LDA	TOG RUNLOSS	g/trip	0.09683	0.12889
2045	A	LDA	ROG RUNEX	g/mi	0.00284	0.00519
2045	A	LDA	ROG STREX	g/trip	0.10447	0.05445
2045	A	LDA	ROG DIURN	g/trip	0.17676	0.25646
2045	A	LDA	ROG HOTSOAK	g/trip	0.03388	0.06438
2045	A	LDA	ROG RUNLOSS	g/trip	0.09683	0.12889
2045	A	LDA	NOx RUNEX	g/mi	0.01649	0.01040
2045	A	LDA	NOx STREX	g/trip	0.13449	0.03292
2045	A	LDA	CO RUNEX	g/mi	0.43708	0.97246
2045	A	LDA	CO STREX	g/trip	1.34366	1.28741
2045	A	LDA	SOx RUNEX	g/mi	0.00208	0.00064
2045	A	LDA	SOx STREX	g/trip	0.00049	0.00016
2045	A	LDA	PM2.5 RUNEX	g/mi	0.00046	0.00064
2045	A	LDA	PM2.5 STREX	g/trip	0.00068	0.00055
2045	A	LDA	PM2.5 PMTW	g/mi	0.00200	0.00215
2045	A	LDA	PM2.5 PMBW	g/mi	0.00281	0.00178
2045	A	LDA	PM10 RUNEX	g/mi	0.00050	0.00069
2045	A	LDA	PM10 STREX	g/trip	0.00074	0.00060
2045	A	LDA	PM10 PMTW	g/mi	0.00800	0.00861

2045	A	LDA	PM10 PMBW	g/mi	0.00803	0.00509
2045	A	LDA	CO, RUNEX	g/mi	210.348	149.009
2045	A	LDA	CO, STREX	g/trip	49.4754	36.9899
2045	A	LDA	CH„ RUNEX	g/mi	0.00097	0.00140
2045	A	LDA	CH„ STREX	g/trip	0.02738	0.01141
2045	A	LDA	N,O RUNEX	g/mi	0.00271	0.00161
2045	A	LDA	N,O STREX	g/trip	0.02130	0.00508
2045	S	LDA	TOG RUNEX	g/mi	0.00425	0.00698
2045	S	LDA	TOG STREX	g/trip	0.10242	0.05289
2045	S	LDA	TOG DIURN	g/trip	0.18727	0.27942
2045	S	LDA	TOG HOTSOAK	g/trip	0.03497	0.06675
2045	S	LDA	TOG RUNLOSS	g/trip	0.09738	0.12914
2045	S	LDA	ROG RUNEX	g/mi	0.00291	0.00517
2045	S	LDA	ROG STREX	g/trip	0.09354	0.04831
2045	S	LDA	ROG DIURN	g/trip	0.18727	0.27942
2045	S	LDA	ROG HOTSOAK	g/trip	0.03497	0.06675
2045	S	LDA	ROG RUNLOSS	g/trip	0.09738	0.12914
2045	S	LDA	NOx RUNEX	g/mi	0.01407	0.00889
2045	S	LDA	NOx STREX	g/trip	0.12451	0.03048
2045	S	LDA	CO RUNEX	g/mi	0.51386	1.12863
2045	S	LDA	CO STREX	g/trip	1.15275	1.10147
2045	S	LDA	SOx RUNEX	g/mi	0.00217	0.00067
2045	S	LDA	SOx STREX	g/trip	0.00049	0.00016
2045	S	LDA	PM2.5 RUNEX	g/mi	0.00046	0.00064
2045	S	LDA	PM2.5 STREX	g/trip	0.00068	0.00055
2045	S	LDA	PM2.5 PMTW	g/mi	0.00200	0.00215
2045	S	LDA	PM2.5 PMBW	g/mi	0.00281	0.00178
2045	S	LDA	PM10 RUNEX	g/mi	0.00050	0.00069

2045	S	LDA	PM10 STREX	g/trip	0.00074	0.00060
2045	S	LDA	PM10 PMTW	g/mi	0.00800	0.00861
2045	S	LDA	PM10 PMBW	g/mi	0.00803	0.00509
2045	S	LDA	CO, RUNEX	g/mi	219.843	155.828
2045	S	LDA	CO, STREX	g/trip	49.1358	36.6749
2045	S	LDA	CH„ RUNEX	g/mi	0.00101	0.00142
2045	S	LDA	CH„ STREX	g/trip	0.02479	0.01030
2045	S	LDA	N,O RUNEX	g/mi	0.00240	0.00144
2045	S	LDA	N,O STREX	g/trip	0.02043	0.00481
2045	W	LDA	TOG RUNEX	g/mi	0.00411	0.00698
2045	W	LDA	TOG STREX	g/trip	0.11707	0.06113
2045	W	LDA	TOG DIURN	g/trip	0.17619	0.25594
2045	W	LDA	TOG HOTSOAK	g/trip	0.03372	0.06400
2045	W	LDA	TOG RUNLOSS	g/trip	0.09716	0.12954
2045	W	LDA	ROG RUNEX	g/mi	0.00282	0.00520
2045	W	LDA	ROG STREX	g/trip	0.10693	0.05584
2045	W	LDA	ROG DIURN	g/trip	0.17619	0.25594
2045	W	LDA	ROG HOTSOAK	g/trip	0.03372	0.06400
2045	W	LDA	ROG RUNLOSS	g/trip	0.09716	0.12954
2045	W	LDA	NOx RUNEX	g/mi	0.01616	0.01019
2045	W	LDA	NOx STREX	g/trip	0.13672	0.03347
2045	W	LDA	CO RUNEX	g/mi	0.40932	0.91555
2045	W	LDA	CO STREX	g/trip	1.38709	1.32989
2045	W	LDA	SOx RUNEX	g/mi	0.00204	0.00063
2045	W	LDA	SOx STREX	g/trip	0.00049	0.00016
2045	W	LDA	PM2.5 RUNEX	g/mi	0.00046	0.00064
2045	W	LDA	PM2.5 STREX	g/trip	0.00068	0.00055
2045	W	LDA	PM2.5 PMTW	g/mi	0.00200	0.00215

2045	W	LDA	PM2.5 PMBW	g/mi	0.00281	0.00178
2045	W	LDA	PM10 RUNEX	g/mi	0.00050	0.00069
2045	W	LDA	PM10 STREX	g/trip	0.00074	0.00060
2045	W	LDA	PM10 PMTW	g/mi	0.00800	0.00861
2045	W	LDA	PM10 PMBW	g/mi	0.00803	0.00509
2045	W	LDA	CO, RUNEX	g/mi	206.849	146.497
2045	W	LDA	CO, STREX	g/trip	49.5526	37.0618
2045	W	LDA	CH„ RUNEX	g/mi	0.00096	0.00140
2045	W	LDA	CH„ STREX	g/trip	0.02796	0.01166
2045	W	LDA	N,O RUNEX	g/mi	0.00266	0.00159
2045	W	LDA	N,O STREX	g/trip	0.02166	0.00514
2045	A	LDT1	TOG RUNEX	g/mi	0.00551	0.00899
2045	A	LDT1	TOG STREX	g/trip	0.14104	0.08539
2045	A	LDT1	TOG DIURN	g/trip	0.30727	0.38480
2045	A	LDT1	TOG HOTSOAK	g/trip	0.05345	0.08266
2045	A	LDT1	TOG RUNLOSS	g/trip	0.19304	0.22639
2045	A	LDT1	ROG RUNEX	g/mi	0.00378	0.00653
2045	A	LDT1	ROG STREX	g/trip	0.12881	0.07799
2045	A	LDT1	ROG DIURN	g/trip	0.30727	0.38480
2045	A	LDT1	ROG HOTSOAK	g/trip	0.05345	0.08266
2045	A	LDT1	ROG RUNLOSS	g/trip	0.19304	0.22639
2045	A	LDT1	NOx RUNEX	g/mi	0.02170	0.01672
2045	A	LDT1	NOx STREX	g/trip	0.16840	0.05443
2045	A	LDT1	CO RUNEX	g/mi	0.54322	1.06475
2045	A	LDT1	CO STREX	g/trip	1.59657	1.38913
2045	A	LDT1	SOx RUNEX	g/mi	0.00269	0.00070
2045	A	LDT1	SOx STREX	g/trip	0.00063	0.00018
2045	A	LDT1	PM2.5 RUNEX	g/mi	0.00059	0.00076

2045	A	LDT1	PM2.5 STREX	g/trip	0.00084	0.00066
2045	A	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00217
2045	A	LDT1	PM2.5 PMBW	g/mi	0.00362	0.00207
2045	A	LDT1	PM10 RUNEX	g/mi	0.00064	0.00083
2045	A	LDT1	PM10 STREX	g/trip	0.00091	0.00071
2045	A	LDT1	PM10 PMTW	g/mi	0.00800	0.00866
2045	A	LDT1	PM10 PMBW	g/mi	0.01035	0.00591
2045	A	LDT1	CO, RUNEX	g/mi	271.978	163.998
2045	A	LDT1	CO, STREX	g/trip	63.6426	41.6129
2045	A	LDT1	CH„ RUNEX	g/mi	0.00125	0.00178
2045	A	LDT1	CH„ STREX	g/trip	0.03317	0.01515
2045	A	LDT1	N,O RUNEX	g/mi	0.00331	0.00208
2045	A	LDT1	N,O STREX	g/trip	0.02570	0.00657
2045	S	LDT1	TOG RUNEX	g/mi	0.00565	0.00905
2045	S	LDT1	TOG STREX	g/trip	0.12633	0.07594
2045	S	LDT1	TOG DIURN	g/trip	0.32188	0.41000
2045	S	LDT1	TOG HOTSOAK	g/trip	0.05504	0.08540
2045	S	LDT1	TOG RUNLOSS	g/trip	0.19365	0.22656
2045	S	LDT1	ROG RUNEX	g/mi	0.00387	0.00654
2045	S	LDT1	ROG STREX	g/trip	0.11538	0.06937
2045	S	LDT1	ROG DIURN	g/trip	0.32188	0.41000
2045	S	LDT1	ROG HOTSOAK	g/trip	0.05504	0.08540
2045	S	LDT1	ROG RUNLOSS	g/trip	0.19365	0.22656
2045	S	LDT1	NOx RUNEX	g/mi	0.01852	0.01428
2045	S	LDT1	NOx STREX	g/trip	0.15590	0.05040
2045	S	LDT1	CO RUNEX	g/mi	0.63785	1.23454
2045	S	LDT1	CO STREX	g/trip	1.36957	1.18716
2045	S	LDT1	SOx RUNEX	g/mi	0.00279	0.00073

2045	S	LDT1	SOx STREX	g/trip	0.00063	0.00018
2045	S	LDT1	PM2.5 RUNEX	g/mi	0.00059	0.00076
2045	S	LDT1	PM2.5 STREX	g/trip	0.00084	0.00066
2045	S	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00217
2045	S	LDT1	PM2.5 PMBW	g/mi	0.00362	0.00207
2045	S	LDT1	PM10 RUNEX	g/mi	0.00064	0.00083
2045	S	LDT1	PM10 STREX	g/trip	0.00091	0.00071
2045	S	LDT1	PM10 PMTW	g/mi	0.00800	0.00866
2045	S	LDT1	PM10 PMBW	g/mi	0.01035	0.00591
2045	S	LDT1	CO, RUNEX	g/mi	282.632	170.643
2045	S	LDT1	CO, STREX	g/trip	63.2373	41.2642
2045	S	LDT1	CH„ RUNEX	g/mi	0.00130	0.00181
2045	S	LDT1	CH„ STREX	g/trip	0.03003	0.01370
2045	S	LDT1	N,O RUNEX	g/mi	0.00292	0.00187
2045	S	LDT1	N,O STREX	g/trip	0.02465	0.00623
2045	W	LDT1	TOG RUNEX	g/mi	0.00547	0.00896
2045	W	LDT1	TOG STREX	g/trip	0.14434	0.08752
2045	W	LDT1	TOG DIURN	g/trip	0.30723	0.38746
2045	W	LDT1	TOG HOTSOAK	g/trip	0.05324	0.08225
2045	W	LDT1	TOG RUNLOSS	g/trip	0.19371	0.22752
2045	W	LDT1	ROG RUNEX	g/mi	0.00375	0.00651
2045	W	LDT1	ROG STREX	g/trip	0.13183	0.07994
2045	W	LDT1	ROG DIURN	g/trip	0.30723	0.38746
2045	W	LDT1	ROG HOTSOAK	g/trip	0.05324	0.08225
2045	W	LDT1	ROG RUNLOSS	g/trip	0.19371	0.22752
2045	W	LDT1	NOx RUNEX	g/mi	0.02127	0.01639
2045	W	LDT1	NOx STREX	g/trip	0.17118	0.05534
2045	W	LDT1	CO RUNEX	g/mi	0.50899	1.00291

2045	W	LDT1	CO STREX	g/trip	1.64829	1.43549
2045	W	LDT1	SOx RUNEX	g/mi	0.00265	0.00069
2045	W	LDT1	SOx STREX	g/trip	0.00063	0.00018
2045	W	LDT1	PM2.5 RUNEX	g/mi	0.00059	0.00076
2045	W	LDT1	PM2.5 STREX	g/trip	0.00084	0.00066
2045	W	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00217
2045	W	LDT1	PM2.5 PMBW	g/mi	0.00362	0.00207
2045	W	LDT1	PM10 RUNEX	g/mi	0.00064	0.00083
2045	W	LDT1	PM10 STREX	g/trip	0.00091	0.00071
2045	W	LDT1	PM10 PMTW	g/mi	0.00800	0.00866
2045	W	LDT1	PM10 PMBW	g/mi	0.01035	0.00591
2045	W	LDT1	CO, RUNEX	g/mi	268.054	161.551
2045	W	LDT1	CO, STREX	g/trip	63.7348	41.6928
2045	W	LDT1	CH„ RUNEX	g/mi	0.00124	0.00178
2045	W	LDT1	CH„ STREX	g/trip	0.03387	0.01548
2045	W	LDT1	N,O RUNEX	g/mi	0.00324	0.00205
2045	W	LDT1	N,O STREX	g/trip	0.02614	0.00665
2045	A	LDT2	TOG RUNEX	g/mi	0.00662	0.00868
2045	A	LDT2	TOG STREX	g/trip	0.16318	0.11769
2045	A	LDT2	TOG DIURN	g/trip	0.20263	0.26072
2045	A	LDT2	TOG HOTSOAK	g/trip	0.03782	0.05160
2045	A	LDT2	TOG RUNLOSS	g/trip	0.13170	0.16712
2045	A	LDT2	ROG RUNEX	g/mi	0.00455	0.00606
2045	A	LDT2	ROG STREX	g/trip	0.14904	0.10749
2045	A	LDT2	ROG DIURN	g/trip	0.20263	0.26072
2045	A	LDT2	ROG HOTSOAK	g/trip	0.03782	0.05160
2045	A	LDT2	ROG RUNLOSS	g/trip	0.13170	0.16712
2045	A	LDT2	NOx RUNEX	g/mi	0.02231	0.01455

2045	A	LDT2	NOx STREX	g/trip	0.18590	0.05918
2045	A	LDT2	CO RUNEX	g/mi	0.58065	1.47250
2045	A	LDT2	CO STREX	g/trip	1.87049	1.92592
2045	A	LDT2	SOx RUNEX	g/mi	0.00285	0.00109
2045	A	LDT2	SOx STREX	g/trip	0.00066	0.00028
2045	A	LDT2	PM2.5 RUNEX	g/mi	0.00055	0.00086
2045	A	LDT2	PM2.5 STREX	g/trip	0.00075	0.00075
2045	A	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00209
2045	A	LDT2	PM2.5 PMBW	g/mi	0.00356	0.00262
2045	A	LDT2	PM10 RUNEX	g/mi	0.00060	0.00094
2045	A	LDT2	PM10 STREX	g/trip	0.00081	0.00081
2045	A	LDT2	PM10 PMTW	g/mi	0.00800	0.00835
2045	A	LDT2	PM10 PMBW	g/mi	0.01018	0.00750
2045	A	LDT2	CO, RUNEX	g/mi	287.883	254.976
2045	A	LDT2	CO, STREX	g/trip	67.2369	64.1271
2045	A	LDT2	CH„ RUNEX	g/mi	0.00147	0.00205
2045	A	LDT2	CH„ STREX	g/trip	0.03790	0.02199
2045	A	LDT2	N,O RUNEX	g/mi	0.00347	0.00254
2045	A	LDT2	N,O STREX	g/trip	0.02801	0.00859
2045	S	LDT2	TOG RUNEX	g/mi	0.00679	0.00885
2045	S	LDT2	TOG STREX	g/trip	0.14605	0.10473
2045	S	LDT2	TOG DIURN	g/trip	0.21415	0.27651
2045	S	LDT2	TOG HOTSOAK	g/trip	0.03903	0.05331
2045	S	LDT2	TOG RUNLOSS	g/trip	0.13230	0.16752
2045	S	LDT2	ROG RUNEX	g/mi	0.00466	0.00617
2045	S	LDT2	ROG STREX	g/trip	0.13340	0.09566
2045	S	LDT2	ROG DIURN	g/trip	0.21415	0.27651
2045	S	LDT2	ROG HOTSOAK	g/trip	0.03903	0.05331

2045	S	LDT2	ROG RUNLOSS	g/trip	0.13230	0.16752
2045	S	LDT2	NOx RUNEX	g/mi	0.01905	0.01243
2045	S	LDT2	NOx STREX	g/trip	0.17211	0.05479
2045	S	LDT2	CO RUNEX	g/mi	0.68224	1.71218
2045	S	LDT2	CO STREX	g/trip	1.60035	1.64464
2045	S	LDT2	SOx RUNEX	g/mi	0.00295	0.00114
2045	S	LDT2	SOx STREX	g/trip	0.00066	0.00027
2045	S	LDT2	PM2.5 RUNEX	g/mi	0.00055	0.00086
2045	S	LDT2	PM2.5 STREX	g/trip	0.00075	0.00075
2045	S	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00209
2045	S	LDT2	PM2.5 PMBW	g/mi	0.00356	0.00262
2045	S	LDT2	PM10 RUNEX	g/mi	0.00060	0.00094
2045	S	LDT2	PM10 STREX	g/trip	0.00081	0.00081
2045	S	LDT2	PM10 PMTW	g/mi	0.00800	0.00835
2045	S	LDT2	PM10 PMBW	g/mi	0.01018	0.00750
2045	S	LDT2	CO, RUNEX	g/mi	298.179	264.508
2045	S	LDT2	CO, STREX	g/trip	66.7557	63.6421
2045	S	LDT2	CH„ RUNEX	g/mi	0.00153	0.00209
2045	S	LDT2	CH„ STREX	g/trip	0.03428	0.01990
2045	S	LDT2	N,O RUNEX	g/mi	0.00309	0.00228
2045	S	LDT2	N,O STREX	g/trip	0.02685	0.00814
2045	W	LDT2	TOG RUNEX	g/mi	0.00658	0.00863
2045	W	LDT2	TOG STREX	g/trip	0.16703	0.12061
2045	W	LDT2	TOG DIURN	g/trip	0.20207	0.26246
2045	W	LDT2	TOG HOTSOAK	g/trip	0.03765	0.05134
2045	W	LDT2	TOG RUNLOSS	g/trip	0.13215	0.16780
2045	W	LDT2	ROG RUNEX	g/mi	0.00452	0.00603
2045	W	LDT2	ROG STREX	g/trip	0.15256	0.11016

2045	W	LDT2	ROG DIURN	g/trip	0.20207	0.26246
2045	W	LDT2	ROG HOTSOAK	g/trip	0.03765	0.05134
2045	W	LDT2	ROG RUNLOSS	g/trip	0.13215	0.16780
2045	W	LDT2	NOx RUNEX	g/mi	0.02187	0.01426
2045	W	LDT2	NOx STREX	g/trip	0.18896	0.06018
2045	W	LDT2	CO RUNEX	g/mi	0.54391	1.38558
2045	W	LDT2	CO STREX	g/trip	1.93276	1.99076
2045	W	LDT2	SOx RUNEX	g/mi	0.00281	0.00108
2045	W	LDT2	SOx STREX	g/trip	0.00067	0.00028
2045	W	LDT2	PM2.5 RUNEX	g/mi	0.00055	0.00086
2045	W	LDT2	PM2.5 STREX	g/trip	0.00075	0.00075
2045	W	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00209
2045	W	LDT2	PM2.5 PMBW	g/mi	0.00356	0.00262
2045	W	LDT2	PM10 RUNEX	g/mi	0.00060	0.00094
2045	W	LDT2	PM10 STREX	g/trip	0.00081	0.00081
2045	W	LDT2	PM10 PMTW	g/mi	0.00800	0.00835
2045	W	LDT2	PM10 PMBW	g/mi	0.01018	0.00750
2045	W	LDT2	CO, RUNEX	g/mi	284.090	251.465
2045	W	LDT2	CO, STREX	g/trip	67.3475	64.2387
2045	W	LDT2	CH„ RUNEX	g/mi	0.00146	0.00204
2045	W	LDT2	CH„ STREX	g/trip	0.03871	0.02246
2045	W	LDT2	N,O RUNEX	g/mi	0.00341	0.00251
2045	W	LDT2	N,O STREX	g/trip	0.02848	0.00869
2045	A	LHDT1	TOG RUNEX	g/mi	0.01304	0.01746
2045	A	LHDT1	TOG IDLEX	g/trip	0.01990	0.02064
2045	A	LHDT1	TOG STREX	g/trip	0.03397	0.10529
2045	A	LHDT1	TOG DIURN	g/trip	0.05198	0.08518
2045	A	LHDT1	TOG HOTSOAK	g/trip	0.00752	0.01277

2045	A	LHDT1	TOG RUNLOSS	g/trip	0.04357	0.11412
2045	A	LHDT1	ROG RUNEX	g/mi	0.01130	0.01447
2045	A	LHDT1	ROG IDLEX	g/trip	0.01446	0.01474
2045	A	LHDT1	ROG STREX	g/trip	0.03102	0.09616
2045	A	LHDT1	ROG DIURN	g/trip	0.05198	0.08518
2045	A	LHDT1	ROG HOTSOAK	g/trip	0.00752	0.01277
2045	A	LHDT1	ROG RUNLOSS	g/trip	0.04357	0.11412
2045	A	LHDT1	NOx RUNEX	g/mi	0.04705	0.11890
2045	A	LHDT1	NOx IDLEX	g/trip	0.03122	0.03014
2045	A	LHDT1	NOx STREX	g/trip	0.14295	0.21941
2045	A	LHDT1	CO RUNEX	g/mi	0.18421	0.63500
2045	A	LHDT1	CO IDLEX	g/trip	0.17589	0.18345
2045	A	LHDT1	CO STREX	g/trip	1.18584	1.07847
2045	A	LHDT1	SOx RUNEX	g/mi	0.00264	0.00175
2045	A	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2045	A	LHDT1	SOx STREX	g/trip	0.00009	0.00005
2045	A	LHDT1	PM2.5 RUNEX	g/mi	0.00296	0.00446
2045	A	LHDT1	PM2.5 IDLEX	g/trip	0.00090	0.00064
2045	A	LHDT1	PM2.5 STREX	g/trip	0.00004	0.00006
2045	A	LHDT1	PM2.5 PMTW	g/mi	0.00223	0.00235
2045	A	LHDT1	PM2.5 PMBW	g/mi	0.02117	0.02642
2045	A	LHDT1	PM10 RUNEX	g/mi	0.00311	0.00468
2045	A	LHDT1	PM10 IDLEX	g/trip	0.00094	0.00067
2045	A	LHDT1	PM10 STREX	g/trip	0.00004	0.00007
2045	A	LHDT1	PM10 PMTW	g/mi	0.00894	0.00939
2045	A	LHDT1	PM10 PMBW	g/mi	0.06049	0.07549
2045	A	LHDT1	CO, RUNEX	g/mi	271.744	445.089
2045	A	LHDT1	CO, IDLEX	g/trip	8.01320	7.05078

2045	A	LHDT1	CO, STREX	g/trip	8.66651	13.1326
2045	A	LHDT1	CH„ RUNEX	g/mi	0.00066	0.00172
2045	A	LHDT1	CH„ IDLEX	g/trip	0.00337	0.00180
2045	A	LHDT1	CH„ STREX	g/trip	0.00711	0.01905
2045	A	LHDT1	N,O RUNEX	g/mi	0.01784	0.02929
2045	A	LHDT1	N,O IDLEX	g/trip	0.00071	0.00006
2045	A	LHDT1	N,O STREX	g/trip	0.01401	0.01812
2045	S	LHDT1	TOG RUNEX	g/mi	0.01306	0.01755
2045	S	LHDT1	TOG IDLEX	g/trip	0.01990	0.02064
2045	S	LHDT1	TOG STREX	g/trip	0.03276	0.10153
2045	S	LHDT1	TOG DIURN	g/trip	0.05370	0.08807
2045	S	LHDT1	TOG HOTSOAK	g/trip	0.00774	0.01313
2045	S	LHDT1	TOG RUNLOSS	g/trip	0.04361	0.11405
2045	S	LHDT1	ROG RUNEX	g/mi	0.01131	0.01453
2045	S	LHDT1	ROG IDLEX	g/trip	0.01446	0.01474
2045	S	LHDT1	ROG STREX	g/trip	0.02992	0.09274
2045	S	LHDT1	ROG DIURN	g/trip	0.05370	0.08807
2045	S	LHDT1	ROG HOTSOAK	g/trip	0.00774	0.01313
2045	S	LHDT1	ROG RUNLOSS	g/trip	0.04361	0.11405
2045	S	LHDT1	NOx RUNEX	g/mi	0.04423	0.11044
2045	S	LHDT1	NOx IDLEX	g/trip	0.03122	0.03014
2045	S	LHDT1	NOx STREX	g/trip	0.13696	0.21022
2045	S	LHDT1	CO RUNEX	g/mi	0.18733	0.64558
2045	S	LHDT1	CO IDLEX	g/trip	0.17589	0.18345
2045	S	LHDT1	CO STREX	g/trip	1.13646	1.03351
2045	S	LHDT1	SOx RUNEX	g/mi	0.00264	0.00175
2045	S	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2045	S	LHDT1	SOx STREX	g/trip	0.00008	0.00005

2045	S	LHDT1	PM2.5 RUNEX	g/mi	0.00296	0.00446
2045	S	LHDT1	PM2.5 IDLEX	g/trip	0.00090	0.00064
2045	S	LHDT1	PM2.5 STREX	g/trip	0.00004	0.00006
2045	S	LHDT1	PM2.5 PMTW	g/mi	0.00223	0.00235
2045	S	LHDT1	PM2.5 PMBW	g/mi	0.02117	0.02642
2045	S	LHDT1	PM10 RUNEX	g/mi	0.00311	0.00468
2045	S	LHDT1	PM10 IDLEX	g/trip	0.00094	0.00067
2045	S	LHDT1	PM10 STREX	g/trip	0.00004	0.00007
2045	S	LHDT1	PM10 PMTW	g/mi	0.00894	0.00939
2045	S	LHDT1	PM10 PMBW	g/mi	0.06049	0.07549
2045	S	LHDT1	CO, RUNEX	g/mi	271.749	445.106
2045	S	LHDT1	CO, IDLEX	g/trip	8.01320	7.05078
2045	S	LHDT1	CO, STREX	g/trip	8.58444	13.0499
2045	S	LHDT1	CH„ RUNEX	g/mi	0.00067	0.00174
2045	S	LHDT1	CH„ IDLEX	g/trip	0.00338	0.00180
2045	S	LHDT1	CH„ STREX	g/trip	0.00688	0.01850
2045	S	LHDT1	N,O RUNEX	g/mi	0.01779	0.02888
2045	S	LHDT1	N,O IDLEX	g/trip	0.00071	0.00006
2045	S	LHDT1	N,O STREX	g/trip	0.01362	0.01759
2045	W	LHDT1	TOG RUNEX	g/mi	0.01304	0.01744
2045	W	LHDT1	TOG IDLEX	g/trip	0.01990	0.02064
2045	W	LHDT1	TOG STREX	g/trip	0.03424	0.10612
2045	W	LHDT1	TOG DIURN	g/trip	0.05196	0.08596
2045	W	LHDT1	TOG HOTSOAK	g/trip	0.00750	0.01272
2045	W	LHDT1	TOG RUNLOSS	g/trip	0.04408	0.11530
2045	W	LHDT1	ROG RUNEX	g/mi	0.01130	0.01445
2045	W	LHDT1	ROG IDLEX	g/trip	0.01446	0.01474
2045	W	LHDT1	ROG STREX	g/trip	0.03127	0.09692

2045	W	LHDT1	ROG DIURN	g/trip	0.05196	0.08596
2045	W	LHDT1	ROG HOTSOAK	g/trip	0.00750	0.01272
2045	W	LHDT1	ROG RUNLOSS	g/trip	0.04408	0.11530
2045	W	LHDT1	NOx RUNEX	g/mi	0.04617	0.11655
2045	W	LHDT1	NOx IDLEX	g/trip	0.03122	0.03014
2045	W	LHDT1	NOx STREX	g/trip	0.14432	0.22151
2045	W	LHDT1	CO RUNEX	g/mi	0.18341	0.63230
2045	W	LHDT1	CO IDLEX	g/trip	0.17589	0.18345
2045	W	LHDT1	CO STREX	g/trip	1.19519	1.08698
2045	W	LHDT1	SOx RUNEX	g/mi	0.00264	0.00175
2045	W	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2045	W	LHDT1	SOx STREX	g/trip	0.00009	0.00005
2045	W	LHDT1	PM2.5 RUNEX	g/mi	0.00296	0.00446
2045	W	LHDT1	PM2.5 IDLEX	g/trip	0.00090	0.00064
2045	W	LHDT1	PM2.5 STREX	g/trip	0.00004	0.00006
2045	W	LHDT1	PM2.5 PMTW	g/mi	0.00223	0.00235
2045	W	LHDT1	PM2.5 PMBW	g/mi	0.02117	0.02642
2045	W	LHDT1	PM10 RUNEX	g/mi	0.00311	0.00468
2045	W	LHDT1	PM10 IDLEX	g/trip	0.00094	0.00067
2045	W	LHDT1	PM10 STREX	g/trip	0.00004	0.00007
2045	W	LHDT1	PM10 PMTW	g/mi	0.00894	0.00939
2045	W	LHDT1	PM10 PMBW	g/mi	0.06049	0.07549
2045	W	LHDT1	CO, RUNEX	g/mi	271.742	445.085
2045	W	LHDT1	CO, IDLEX	g/trip	8.01320	7.05078
2045	W	LHDT1	CO, STREX	g/trip	8.68217	13.1486
2045	W	LHDT1	CH„ RUNEX	g/mi	0.00066	0.00171
2045	W	LHDT1	CH„ IDLEX	g/trip	0.00337	0.00180
2045	W	LHDT1	CH„ STREX	g/trip	0.00716	0.01918

2045	W	LHDT1	N,O RUNEX	g/mi	0.01783	0.02921
2045	W	LHDT1	N,O IDLEX	g/trip	0.00071	0.00006
2045	W	LHDT1	N,O STREX	g/trip	0.01411	0.01824
2045	A	LHDT2	TOG RUNEX	g/mi	0.02630	0.04354
2045	A	LHDT2	TOG IDLEX	g/trip	0.01388	0.01208
2045	A	LHDT2	TOG STREX	g/trip	0.01564	0.05069
2045	A	LHDT2	TOG DIURN	g/trip	0.03074	0.02756
2045	A	LHDT2	TOG HOTSOAK	g/trip	0.00428	0.00406
2045	A	LHDT2	TOG RUNLOSS	g/trip	0.02531	0.03672
2045	A	LHDT2	ROG RUNEX	g/mi	0.02303	0.03785
2045	A	LHDT2	ROG IDLEX	g/trip	0.01089	0.00961
2045	A	LHDT2	ROG STREX	g/trip	0.01429	0.04629
2045	A	LHDT2	ROG DIURN	g/trip	0.03074	0.02756
2045	A	LHDT2	ROG HOTSOAK	g/trip	0.00428	0.00406
2045	A	LHDT2	ROG RUNLOSS	g/trip	0.02531	0.03672
2045	A	LHDT2	NOx RUNEX	g/mi	0.10684	0.13586
2045	A	LHDT2	NOx IDLEX	g/trip	0.05408	0.04469
2045	A	LHDT2	NOx STREX	g/trip	0.06644	0.09717
2045	A	LHDT2	CO RUNEX	g/mi	0.13078	0.32306
2045	A	LHDT2	CO IDLEX	g/trip	0.12371	0.10825
2045	A	LHDT2	CO STREX	g/trip	0.63673	0.51831
2045	A	LHDT2	SOx RUNEX	g/mi	0.00300	0.00169
2045	A	LHDT2	SOx IDLEX	g/trip	0.00012	0.00004
2045	A	LHDT2	SOx STREX	g/trip	0.00004	0.00002
2045	A	LHDT2	PM2.5 RUNEX	g/mi	0.00581	0.00845
2045	A	LHDT2	PM2.5 IDLEX	g/trip	0.00150	0.00145
2045	A	LHDT2	PM2.5 STREX	g/trip	0.00002	0.00002
2045	A	LHDT2	PM2.5 PMTW	g/mi	0.00240	0.00272

2045	A	LHDT2	PM2.5 PMBW	g/mi	0.02492	0.03057
2045	A	LHDT2	PM10 RUNEX	g/mi	0.00608	0.00884
2045	A	LHDT2	PM10 IDLEX	g/trip	0.00157	0.00151
2045	A	LHDT2	PM10 STREX	g/trip	0.00002	0.00002
2045	A	LHDT2	PM10 PMTW	g/mi	0.00962	0.01089
2045	A	LHDT2	PM10 PMBW	g/mi	0.07120	0.08733
2045	A	LHDT2	CO, RUNEX	g/mi	313.102	481.007
2045	A	LHDT2	CO, IDLEX	g/trip	12.9621	11.3553
2045	A	LHDT2	CO, STREX	g/trip	4.54707	4.83703
2045	A	LHDT2	CH„ RUNEX	g/mi	0.00113	0.00221
2045	A	LHDT2	CH„ IDLEX	g/trip	0.00169	0.00079
2045	A	LHDT2	CH„ STREX	g/trip	0.00332	0.00883
2045	A	LHDT2	N,O RUNEX	g/mi	0.03516	0.06077
2045	A	LHDT2	N,O IDLEX	g/trip	0.00171	0.00002
2045	A	LHDT2	N,O STREX	g/trip	0.00658	0.00765
2045	S	LHDT2	TOG RUNEX	g/mi	0.02630	0.04358
2045	S	LHDT2	TOG IDLEX	g/trip	0.01388	0.01208
2045	S	LHDT2	TOG STREX	g/trip	0.01509	0.04888
2045	S	LHDT2	TOG DIURN	g/trip	0.03170	0.02850
2045	S	LHDT2	TOG HOTSOAK	g/trip	0.00440	0.00418
2045	S	LHDT2	TOG RUNLOSS	g/trip	0.02533	0.03669
2045	S	LHDT2	ROG RUNEX	g/mi	0.02303	0.03788
2045	S	LHDT2	ROG IDLEX	g/trip	0.01089	0.00961
2045	S	LHDT2	ROG STREX	g/trip	0.01378	0.04465
2045	S	LHDT2	ROG DIURN	g/trip	0.03170	0.02850
2045	S	LHDT2	ROG HOTSOAK	g/trip	0.00440	0.00418
2045	S	LHDT2	ROG RUNLOSS	g/trip	0.02533	0.03669
2045	S	LHDT2	NOx RUNEX	g/mi	0.10109	0.12785

2045	S	LHDT2	NOx IDLEX	g/trip	0.05408	0.04469
2045	S	LHDT2	NOx STREX	g/trip	0.06366	0.09310
2045	S	LHDT2	CO RUNEX	g/mi	0.13239	0.32799
2045	S	LHDT2	CO IDLEX	g/trip	0.12371	0.10825
2045	S	LHDT2	CO STREX	g/trip	0.61024	0.49674
2045	S	LHDT2	SOx RUNEX	g/mi	0.00300	0.00169
2045	S	LHDT2	SOx IDLEX	g/trip	0.00012	0.00004
2045	S	LHDT2	SOx STREX	g/trip	0.00004	0.00002
2045	S	LHDT2	PM2.5 RUNEX	g/mi	0.00581	0.00845
2045	S	LHDT2	PM2.5 IDLEX	g/trip	0.00150	0.00145
2045	S	LHDT2	PM2.5 STREX	g/trip	0.00002	0.00002
2045	S	LHDT2	PM2.5 PMTW	g/mi	0.00240	0.00272
2045	S	LHDT2	PM2.5 PMBW	g/mi	0.02492	0.03057
2045	S	LHDT2	PM10 RUNEX	g/mi	0.00608	0.00884
2045	S	LHDT2	PM10 IDLEX	g/trip	0.00157	0.00151
2045	S	LHDT2	PM10 STREX	g/trip	0.00002	0.00002
2045	S	LHDT2	PM10 PMTW	g/mi	0.00962	0.01089
2045	S	LHDT2	PM10 PMBW	g/mi	0.07120	0.08733
2045	S	LHDT2	CO, RUNEX	g/mi	313.105	481.015
2045	S	LHDT2	CO, IDLEX	g/trip	12.9621	11.3553
2045	S	LHDT2	CO, STREX	g/trip	4.50334	4.79737
2045	S	LHDT2	CH„ RUNEX	g/mi	0.00113	0.00222
2045	S	LHDT2	CH„ IDLEX	g/trip	0.00169	0.00079
2045	S	LHDT2	CH„ STREX	g/trip	0.00321	0.00857
2045	S	LHDT2	N,O RUNEX	g/mi	0.03512	0.06061
2045	S	LHDT2	N,O IDLEX	g/trip	0.00171	0.00002
2045	S	LHDT2	N,O STREX	g/trip	0.00641	0.00743
2045	W	LHDT2	TOG RUNEX	g/mi	0.02629	0.04353

2045	W	LHDT2	TOG IDLEX	g/trip	0.01388	0.01208
2045	W	LHDT2	TOG STREX	g/trip	0.01577	0.05109
2045	W	LHDT2	TOG DIURN	g/trip	0.03074	0.02778
2045	W	LHDT2	TOG HOTSOAK	g/trip	0.00427	0.00404
2045	W	LHDT2	TOG RUNLOSS	g/trip	0.02557	0.03714
2045	W	LHDT2	ROG RUNEX	g/mi	0.02303	0.03784
2045	W	LHDT2	ROG IDLEX	g/trip	0.01089	0.00961
2045	W	LHDT2	ROG STREX	g/trip	0.01440	0.04666
2045	W	LHDT2	ROG DIURN	g/trip	0.03074	0.02778
2045	W	LHDT2	ROG HOTSOAK	g/trip	0.00427	0.00404
2045	W	LHDT2	ROG RUNLOSS	g/trip	0.02557	0.03714
2045	W	LHDT2	NOx RUNEX	g/mi	0.10492	0.13335
2045	W	LHDT2	NOx IDLEX	g/trip	0.05408	0.04469
2045	W	LHDT2	NOx STREX	g/trip	0.06708	0.09810
2045	W	LHDT2	CO RUNEX	g/mi	0.13037	0.32181
2045	W	LHDT2	CO IDLEX	g/trip	0.12371	0.10825
2045	W	LHDT2	CO STREX	g/trip	0.64175	0.52239
2045	W	LHDT2	SOx RUNEX	g/mi	0.00300	0.00169
2045	W	LHDT2	SOx IDLEX	g/trip	0.00012	0.00004
2045	W	LHDT2	SOx STREX	g/trip	0.00005	0.00002
2045	W	LHDT2	PM2.5 RUNEX	g/mi	0.00581	0.00845
2045	W	LHDT2	PM2.5 IDLEX	g/trip	0.00150	0.00145
2045	W	LHDT2	PM2.5 STREX	g/trip	0.00002	0.00002
2045	W	LHDT2	PM2.5 PMTW	g/mi	0.00240	0.00272
2045	W	LHDT2	PM2.5 PMBW	g/mi	0.02492	0.03057
2045	W	LHDT2	PM10 RUNEX	g/mi	0.00608	0.00884
2045	W	LHDT2	PM10 IDLEX	g/trip	0.00157	0.00151
2045	W	LHDT2	PM10 STREX	g/trip	0.00002	0.00002

2045	W	LHDT2	PM10 PMTW	g/mi	0.00962	0.01089
2045	W	LHDT2	PM10 PMBW	g/mi	0.07120	0.08733
2045	W	LHDT2	CO, RUNEX	g/mi	313.101	481.005
2045	W	LHDT2	CO, IDLEX	g/trip	12.9621	11.3553
2045	W	LHDT2	CO, STREX	g/trip	4.55541	4.84473
2045	W	LHDT2	CH„ RUNEX	g/mi	0.00113	0.00221
2045	W	LHDT2	CH„ IDLEX	g/trip	0.00169	0.00079
2045	W	LHDT2	CH„ STREX	g/trip	0.00335	0.00889
2045	W	LHDT2	N,O RUNEX	g/mi	0.03515	0.06074
2045	W	LHDT2	N,O IDLEX	g/trip	0.00171	0.00002
2045	W	LHDT2	N,O STREX	g/trip	0.00663	0.00770
2045	A	MCY	TOG RUNEX	g/mi	1.12338	1.35814
2045	A	MCY	TOG STREX	g/trip	0.93712	0.89496
2045	A	MCY	TOG DIURN	g/trip	1.71476	1.65320
2045	A	MCY	TOG HOTSOAK	g/trip	3.60004	3.85107
2045	A	MCY	TOG RUNLOSS	g/trip	3.52886	3.70842
2045	A	MCY	ROG RUNEX	g/mi	0.89811	1.08405
2045	A	MCY	ROG STREX	g/trip	0.86051	0.82167
2045	A	MCY	ROG DIURN	g/trip	1.71476	1.65320
2045	A	MCY	ROG HOTSOAK	g/trip	3.60004	3.85107
2045	A	MCY	ROG RUNLOSS	g/trip	3.52886	3.70842
2045	A	MCY	NOx RUNEX	g/mi	0.46853	0.47949
2045	A	MCY	NOx STREX	g/trip	0.06431	0.05922
2045	A	MCY	CO RUNEX	g/mi	10.5401	10.4682
2045	A	MCY	CO STREX	g/trip	7.18590	7.04619
2045	A	MCY	SOx RUNEX	g/mi	0.00190	0.00089
2045	A	MCY	SOx STREX	g/trip	0.00035	0.00015
2045	A	MCY	PM2.5 RUNEX	g/mi	0.00234	0.00293

2045	A	MCY	PM2.5 STREX	g/trip	0.00337	0.00345
2045	A	MCY	PM10 RUNEX	g/mi	0.00251	0.00314
2045	A	MCY	PM10 STREX	g/trip	0.00361	0.00370
2045	A	MCY	CO, RUNEX	g/mi	192.683	207.820
2045	A	MCY	CO, STREX	g/trip	35.5891	34.3793
2045	A	MCY	CH„ RUNEX	g/mi	0.14957	0.17830
2045	A	MCY	CH„ STREX	g/trip	0.12269	0.12955
2045	A	MCY	N,O RUNEX	g/mi	0.03541	0.03637
2045	A	MCY	N,O STREX	g/trip	0.00431	0.00811
2045	S	MCY	TOG RUNEX	g/mi	1.14258	1.38322
2045	S	MCY	TOG STREX	g/trip	0.85865	0.82279
2045	S	MCY	TOG DIURN	g/trip	2.02052	1.93667
2045	S	MCY	TOG HOTSOAK	g/trip	3.67783	3.93321
2045	S	MCY	TOG RUNLOSS	g/trip	3.45652	3.59098
2045	S	MCY	ROG RUNEX	g/mi	0.91311	1.10379
2045	S	MCY	ROG STREX	g/trip	0.78842	0.75538
2045	S	MCY	ROG DIURN	g/trip	2.02052	1.93667
2045	S	MCY	ROG HOTSOAK	g/trip	3.67783	3.93321
2045	S	MCY	ROG RUNLOSS	g/trip	3.45652	3.59098
2045	S	MCY	NOx RUNEX	g/mi	0.41173	0.42139
2045	S	MCY	NOx STREX	g/trip	0.06116	0.05638
2045	S	MCY	CO RUNEX	g/mi	10.7169	10.6528
2045	S	MCY	CO STREX	g/trip	6.39789	6.26697
2045	S	MCY	SOx RUNEX	g/mi	0.00191	0.00089
2045	S	MCY	SOx STREX	g/trip	0.00034	0.00014
2045	S	MCY	PM2.5 RUNEX	g/mi	0.00234	0.00293
2045	S	MCY	PM2.5 STREX	g/trip	0.00337	0.00345
2045	S	MCY	PM10 RUNEX	g/mi	0.00251	0.00314

2045	S	MCY	PM10 STREX	g/trip	0.00361	0.00370
2045	S	MCY	PM10 PMTW	g/mi	0.00400	0.00400
2045	S	MCY	PM10 PMBW	g/mi	0.01200	0.01200
2045	S	MCY	CO, RUNEX	g/mi	193.020	208.187
2045	S	MCY	CO, STREX	g/trip	34.0988	32.9253
2045	S	MCY	CH„ RUNEX	g/mi	0.15226	0.18119
2045	S	MCY	CH„ STREX	g/trip	0.11294	0.12072
2045	S	MCY	N,O RUNEX	g/mi	0.03233	0.03324
2045	S	MCY	N,O STREX	g/trip	0.00426	0.00785
2045	W	MCY	TOG RUNEX	g/mi	1.11831	1.35149
2045	W	MCY	TOG STREX	g/trip	0.95502	0.91158
2045	W	MCY	TOG DIURN	g/trip	1.75799	1.83455
2045	W	MCY	TOG HOTSOAK	g/trip	3.59428	3.84523
2045	W	MCY	TOG RUNLOSS	g/trip	3.82662	4.04123
2045	W	MCY	ROG RUNEX	g/mi	0.89414	1.07882
2045	W	MCY	ROG STREX	g/trip	0.87696	0.83693
2045	W	MCY	ROG DIURN	g/trip	1.75799	1.83455
2045	W	MCY	ROG HOTSOAK	g/trip	3.59428	3.84523
2045	W	MCY	ROG RUNLOSS	g/trip	3.82662	4.04123
2045	W	MCY	NOx RUNEX	g/mi	0.45690	0.46758
2045	W	MCY	NOx STREX	g/trip	0.06505	0.05990
2045	W	MCY	CO RUNEX	g/mi	10.4925	10.4191
2045	W	MCY	CO STREX	g/trip	7.35041	7.20947
2045	W	MCY	SOx RUNEX	g/mi	0.00190	0.00089
2045	W	MCY	SOx STREX	g/trip	0.00035	0.00015
2045	W	MCY	PM2.5 RUNEX	g/mi	0.00234	0.00293
2045	W	MCY	PM2.5 STREX	g/trip	0.00337	0.00345
2045	W	MCY	PM10 RUNEX	g/mi	0.00251	0.00314

2045	W	MCY	PM10 STREX	g/trip	0.00361	0.00370
2045	W	MCY	CO, RUNEX	g/mi	192.592	207.723
2045	W	MCY	CO, STREX	g/trip	35.9048	34.6885
2045	W	MCY	CH„ RUNEX	g/mi	0.14887	0.17754
2045	W	MCY	CH„ STREX	g/trip	0.12493	0.13156
2045	W	MCY	N,O RUNEX	g/mi	0.03478	0.03573
2045	W	MCY	N,O STREX	g/trip	0.00439	0.00818
2045	A	MDV	TOG RUNEX	g/mi	0.00743	0.00937
2045	A	MDV	TOG STREX	g/trip	0.17269	0.09835
2045	A	MDV	TOG DIURN	g/trip	0.22714	0.23710
2045	A	MDV	TOG HOTSOAK	g/trip	0.04088	0.04268
2045	A	MDV	TOG RUNLOSS	g/trip	0.15136	0.15897
2045	A	MDV	ROG RUNEX	g/mi	0.00511	0.00659
2045	A	MDV	ROG STREX	g/trip	0.15773	0.08983
2045	A	MDV	ROG DIURN	g/trip	0.22714	0.23710
2045	A	MDV	ROG HOTSOAK	g/trip	0.04088	0.04268
2045	A	MDV	ROG RUNLOSS	g/trip	0.15136	0.15897
2045	A	MDV	NOx RUNEX	g/mi	0.02551	0.01832
2045	A	MDV	NOx STREX	g/trip	0.19656	0.05566
2045	A	MDV	CO RUNEX	g/mi	0.60204	1.25444
2045	A	MDV	CO STREX	g/trip	1.87255	1.47045
2045	A	MDV	SOx RUNEX	g/mi	0.00339	0.00103
2045	A	MDV	SOx STREX	g/trip	0.00079	0.00022
2045	A	MDV	PM2.5 RUNEX	g/mi	0.00055	0.00072
2045	A	MDV	PM2.5 STREX	g/trip	0.00075	0.00054
2045	A	MDV	PM2.5 PMTW	g/mi	0.00200	0.00212
2045	A	MDV	PM2.5 PMBW	g/mi	0.00359	0.00237
2045	A	MDV	PM10 RUNEX	g/mi	0.00060	0.00078

2045	A	MDV	PM10 STREX	g/trip	0.00081	0.00059
2045	A	MDV	PM10 PMTW	g/mi	0.00800	0.00850
2045	A	MDV	PM10 PMBW	g/mi	0.01026	0.00678
2045	A	MDV	CO, RUNEX	g/mi	342.601	243.366
2045	A	MDV	CO, STREX	g/trip	79.7410	52.3302
2045	A	MDV	CH„ RUNEX	g/mi	0.00158	0.00194
2045	A	MDV	CH„ STREX	g/trip	0.03893	0.01726
2045	A	MDV	N,O RUNEX	g/mi	0.00402	0.00504
2045	A	MDV	N,O STREX	g/trip	0.02824	0.00626
2045	S	MDV	TOG RUNEX	g/mi	0.00761	0.00955
2045	S	MDV	TOG STREX	g/trip	0.15455	0.08781
2045	S	MDV	TOG DIURN	g/trip	0.23899	0.24862
2045	S	MDV	TOG HOTSOAK	g/trip	0.04215	0.04399
2045	S	MDV	TOG RUNLOSS	g/trip	0.15194	0.15921
2045	S	MDV	ROG RUNEX	g/mi	0.00523	0.00671
2045	S	MDV	ROG STREX	g/trip	0.14116	0.08020
2045	S	MDV	ROG DIURN	g/trip	0.23899	0.24862
2045	S	MDV	ROG HOTSOAK	g/trip	0.04215	0.04399
2045	S	MDV	ROG RUNLOSS	g/trip	0.15194	0.15921
2045	S	MDV	NOx RUNEX	g/mi	0.02178	0.01569
2045	S	MDV	NOx STREX	g/trip	0.18198	0.05152
2045	S	MDV	CO RUNEX	g/mi	0.70685	1.45459
2045	S	MDV	CO STREX	g/trip	1.60193	1.25772
2045	S	MDV	SOx RUNEX	g/mi	0.00349	0.00106
2045	S	MDV	SOx STREX	g/trip	0.00078	0.00022
2045	S	MDV	PM2.5 RUNEX	g/mi	0.00055	0.00072
2045	S	MDV	PM2.5 STREX	g/trip	0.00075	0.00054
2045	S	MDV	PM2.5 PMTW	g/mi	0.00200	0.00212

2045	S	MDV	PM2.5 PMBW	g/mi	0.00359	0.00237
2045	S	MDV	PM10 RUNEX	g/mi	0.00060	0.00078
2045	S	MDV	PM10 STREX	g/trip	0.00081	0.00059
2045	S	MDV	PM10 PMTW	g/mi	0.00800	0.00850
2045	S	MDV	PM10 PMBW	g/mi	0.01026	0.00678
2045	S	MDV	CO, RUNEX	g/mi	352.702	250.311
2045	S	MDV	CO, STREX	g/trip	79.2559	51.9611
2045	S	MDV	CH„ RUNEX	g/mi	0.00164	0.00198
2045	S	MDV	CH„ STREX	g/trip	0.03522	0.01567
2045	S	MDV	N,O RUNEX	g/mi	0.00362	0.00480
2045	S	MDV	N,O STREX	g/trip	0.02707	0.00593
2045	W	MDV	TOG RUNEX	g/mi	0.00738	0.00931
2045	W	MDV	TOG STREX	g/trip	0.17678	0.10073
2045	W	MDV	TOG DIURN	g/trip	0.22672	0.23943
2045	W	MDV	TOG HOTSOAK	g/trip	0.04071	0.04250
2045	W	MDV	TOG RUNLOSS	g/trip	0.15187	0.15960
2045	W	MDV	ROG RUNEX	g/mi	0.00507	0.00656
2045	W	MDV	ROG STREX	g/trip	0.16146	0.09200
2045	W	MDV	ROG DIURN	g/trip	0.22672	0.23943
2045	W	MDV	ROG HOTSOAK	g/trip	0.04071	0.04250
2045	W	MDV	ROG RUNLOSS	g/trip	0.15187	0.15960
2045	W	MDV	NOx RUNEX	g/mi	0.02500	0.01795
2045	W	MDV	NOx STREX	g/trip	0.19980	0.05659
2045	W	MDV	CO RUNEX	g/mi	0.56414	1.18185
2045	W	MDV	CO STREX	g/trip	1.93495	1.51943
2045	W	MDV	SOx RUNEX	g/mi	0.00335	0.00102
2045	W	MDV	SOx STREX	g/trip	0.00079	0.00022
2045	W	MDV	PM2.5 RUNEX	g/mi	0.00055	0.00072

2045	W	MDV	PM2.5 STREX	g/trip	0.00075	0.00054
2045	W	MDV	PM2.5 PMTW	g/mi	0.00200	0.00212
2045	W	MDV	PM2.5 PMBW	g/mi	0.00359	0.00237
2045	W	MDV	PM10 RUNEX	g/mi	0.00060	0.00078
2045	W	MDV	PM10 STREX	g/trip	0.00081	0.00059
2045	W	MDV	PM10 PMTW	g/mi	0.00800	0.00850
2045	W	MDV	PM10 PMBW	g/mi	0.01026	0.00678
2045	W	MDV	CO, RUNEX	g/mi	338.880	240.808
2045	W	MDV	CO, STREX	g/trip	79.8525	52.4150
2045	W	MDV	CH„ RUNEX	g/mi	0.00157	0.00193
2045	W	MDV	CH„ STREX	g/trip	0.03977	0.01762
2045	W	MDV	N,O RUNEX	g/mi	0.00395	0.00500
2045	W	MDV	N,O STREX	g/trip	0.02871	0.00633
2045	A	MH	TOG RUNEX	g/mi	0.02344	0.02094
2045	A	MH	TOG STREX	g/trip	0.07845	0.08952
2045	A	MH	TOG DIURN	g/trip	11.3725	12.6788
2045	A	MH	TOG HOTSOAK	g/trip	1.72208	1.88799
2045	A	MH	TOG RUNLOSS	g/trip	0.04551	0.07899
2045	A	MH	ROG RUNEX	g/mi	0.01899	0.01665
2045	A	MH	ROG STREX	g/trip	0.07165	0.08176
2045	A	MH	ROG DIURN	g/trip	11.3725	12.6788
2045	A	MH	ROG HOTSOAK	g/trip	1.72208	1.88799
2045	A	MH	ROG RUNLOSS	g/trip	0.04551	0.07899
2045	A	MH	NOx RUNEX	g/mi	0.80129	0.66315
2045	A	MH	NOx STREX	g/trip	0.21460	0.24764
2045	A	MH	CO RUNEX	g/mi	0.13970	0.14181
2045	A	MH	CO STREX	g/trip	1.54476	1.75821
2045	A	MH	SOx RUNEX	g/mi	0.01479	0.00642

2045	A	MH	SOx STREX	g/trip	0.00018	0.00009
2045	A	MH	PM2.5 RUNEX	g/mi	0.00767	0.00585
2045	A	MH	PM2.5 STREX	g/trip	0.00021	0.00025
2045	A	MH	PM2.5 PMTW	g/mi	0.00335	0.00328
2045	A	MH	PM2.5 PMBW	g/mi	0.01518	0.01519
2045	A	MH	PM10 RUNEX	g/mi	0.00805	0.00615
2045	A	MH	PM10 STREX	g/trip	0.00023	0.00027
2045	A	MH	PM10 PMTW	g/mi	0.01341	0.01312
2045	A	MH	PM10 PMBW	g/mi	0.04338	0.04340
2045	A	MH	CO, RUNEX	g/mi	1,510.96	1,562.51
2045	A	MH	CO, STREX	g/trip	18.6608	21.3865
2045	A	MH	CH„ RUNEX	g/mi	0.00269	0.00276
2045	A	MH	CH„ STREX	g/trip	0.02035	0.01683
2045	A	MH	N,O RUNEX	g/mi	0.06783	0.12227
2045	A	MH	N,O STREX	g/trip	0.02524	0.01993
2045	S	MH	TOG RUNEX	g/mi	0.02362	0.02114
2045	S	MH	TOG STREX	g/trip	0.07531	0.08593
2045	S	MH	TOG DIURN	g/trip	11.8007	13.1115
2045	S	MH	TOG HOTSOAK	g/trip	1.77069	1.94055
2045	S	MH	TOG RUNLOSS	g/trip	0.04551	0.07887
2045	S	MH	ROG RUNEX	g/mi	0.01911	0.01678
2045	S	MH	ROG STREX	g/trip	0.06878	0.07848
2045	S	MH	ROG DIURN	g/trip	11.8007	13.1115
2045	S	MH	ROG HOTSOAK	g/trip	1.77069	1.94055
2045	S	MH	ROG RUNLOSS	g/trip	0.04551	0.07887
2045	S	MH	NOx RUNEX	g/mi	0.74872	0.61780
2045	S	MH	NOx STREX	g/trip	0.20522	0.23682
2045	S	MH	CO RUNEX	g/mi	0.14181	0.14416

2045	S	MH	CO STREX	g/trip	1.46111	1.66299
2045	S	MH	SOx RUNEX	g/mi	0.01479	0.00642
2045	S	MH	SOx STREX	g/trip	0.00018	0.00009
2045	S	MH	PM2.5 RUNEX	g/mi	0.00767	0.00585
2045	S	MH	PM2.5 STREX	g/trip	0.00021	0.00025
2045	S	MH	PM2.5 PMTW	g/mi	0.00335	0.00328
2045	S	MH	PM2.5 PMBW	g/mi	0.01518	0.01519
2045	S	MH	PM10 RUNEX	g/mi	0.00805	0.00615
2045	S	MH	PM10 STREX	g/trip	0.00023	0.00027
2045	S	MH	PM10 PMTW	g/mi	0.01341	0.01312
2045	S	MH	PM10 PMBW	g/mi	0.04338	0.04340
2045	S	MH	CO, RUNEX	g/mi	1,510.97	1,562.52
2045	S	MH	CO, STREX	g/trip	18.5184	21.2247
2045	S	MH	CH„ RUNEX	g/mi	0.00273	0.00280
2045	S	MH	CH„ STREX	g/trip	0.01949	0.01629
2045	S	MH	N,O RUNEX	g/mi	0.06684	0.12120
2045	S	MH	N,O STREX	g/trip	0.02510	0.01932
2045	W	MH	TOG RUNEX	g/mi	0.02339	0.02089
2045	W	MH	TOG STREX	g/trip	0.07921	0.09038
2045	W	MH	TOG DIURN	g/trip	11.3695	12.8052
2045	W	MH	TOG HOTSOAK	g/trip	1.71609	1.88164
2045	W	MH	TOG RUNLOSS	g/trip	0.04619	0.07984
2045	W	MH	ROG RUNEX	g/mi	0.01895	0.01661
2045	W	MH	ROG STREX	g/trip	0.07234	0.08255
2045	W	MH	ROG DIURN	g/trip	11.3695	12.8052
2045	W	MH	ROG HOTSOAK	g/trip	1.71609	1.88164
2045	W	MH	ROG RUNLOSS	g/trip	0.04619	0.07984
2045	W	MH	NOx RUNEX	g/mi	0.78570	0.65010

2045	W	MH	NOx STREX	g/trip	0.21685	0.25025
2045	W	MH	CO RUNEX	g/mi	0.13909	0.14114
2045	W	MH	CO STREX	g/trip	1.56219	1.77804
2045	W	MH	SOx RUNEX	g/mi	0.01479	0.00642
2045	W	MH	SOx STREX	g/trip	0.00018	0.00009
2045	W	MH	PM2.5 RUNEX	g/mi	0.00767	0.00585
2045	W	MH	PM2.5 STREX	g/trip	0.00021	0.00025
2045	W	MH	PM2.5 PMTW	g/mi	0.00335	0.00328
2045	W	MH	PM2.5 PMBW	g/mi	0.01518	0.01519
2045	W	MH	PM10 RUNEX	g/mi	0.00805	0.00615
2045	W	MH	PM10 STREX	g/trip	0.00023	0.00027
2045	W	MH	PM10 PMTW	g/mi	0.01341	0.01312
2045	W	MH	PM10 PMBW	g/mi	0.04338	0.04340
2045	W	MH	CO, RUNEX	g/mi	1,510.96	1,562.51
2045	W	MH	CO, STREX	g/trip	18.6908	21.4205
2045	W	MH	CH„ RUNEX	g/mi	0.00268	0.00275
2045	W	MH	CH„ STREX	g/trip	0.02055	0.01696
2045	W	MH	N,O RUNEX	g/mi	0.06764	0.12207
2045	W	MH	N,O STREX	g/trip	0.02568	0.02007
2045	A	MHDT	TOG RUNEX	g/mi	0.00864	0.01008
2045	A	MHDT	TOG IDLEX	g/trip	0.06439	0.02746
2045	A	MHDT	TOG STREX	g/trip	0.01942	0.02856
2045	A	MHDT	TOG DIURN	g/trip	0.01143	0.02381
2045	A	MHDT	TOG HOTSOAK	g/trip	0.00155	0.00319
2045	A	MHDT	TOG RUNLOSS	g/trip	0.00940	0.04419
2045	A	MHDT	ROG RUNEX	g/mi	0.00293	0.00458
2045	A	MHDT	ROG IDLEX	g/trip	0.02009	0.01662
2045	A	MHDT	ROG STREX	g/trip	0.01774	0.02608

2045	A	MHDT	ROG DIURN	g/trip	0.01143	0.02381
2045	A	MHDT	ROG HOTSOAK	g/trip	0.00155	0.00319
2045	A	MHDT	ROG RUNLOSS	g/trip	0.00940	0.04419
2045	A	MHDT	NOx RUNEX	g/mi	0.12047	0.07464
2045	A	MHDT	NOx IDLEX	g/trip	0.81094	0.12086
2045	A	MHDT	NOx STREX	g/trip	0.53973	0.34617
2045	A	MHDT	CO RUNEX	g/mi	0.04783	0.06511
2045	A	MHDT	CO IDLEX	g/trip	0.77118	0.53152
2045	A	MHDT	CO STREX	g/trip	0.32693	0.46646
2045	A	MHDT	SOx RUNEX	g/mi	0.00501	0.00279
2045	A	MHDT	SOx IDLEX	g/trip	0.00139	0.00034
2045	A	MHDT	SOx STREX	g/trip	0.00004	0.00001
2045	A	MHDT	PM2.5 RUNEX	g/mi	0.00164	0.00206
2045	A	MHDT	PM2.5 IDLEX	g/trip	0.00026	0.00013
2045	A	MHDT	PM2.5 STREX	g/trip	0.00004	0.00006
2045	A	MHDT	PM2.5 PMBW	g/mi	0.01154	0.01401
2045	A	MHDT	PM10 RUNEX	g/mi	0.00172	0.00216
2045	A	MHDT	PM10 IDLEX	g/trip	0.00028	0.00013
2045	A	MHDT	PM10 STREX	g/trip	0.00005	0.00006
2045	A	MHDT	PM10 PMBW	g/mi	0.03297	0.04004
2045	A	MHDT	CO, RUNEX	g/mi	531.792	824.112
2045	A	MHDT	CO, IDLEX	g/trip	160.994	99.8827
2045	A	MHDT	CO, STREX	g/trip	3.63397	5.05368
2045	A	MHDT	CH„ RUNEX	g/mi	0.00535	0.00505
2045	A	MHDT	CH„ IDLEX	g/trip	0.04164	0.00780
2045	A	MHDT	CH„ STREX	g/trip	0.00362	0.00501
2045	A	MHDT	N,O RUNEX	g/mi	0.06897	0.30714
2045	A	MHDT	N,O IDLEX	g/trip	0.02561	0.00002

2045	A	MHDT	N,O STREX	g/trip	0.00287	0.00371
2045	S	MHDT	TOG RUNEX	g/mi	0.00866	0.01011
2045	S	MHDT	TOG IDLEX	g/trip	0.06483	0.02759
2045	S	MHDT	TOG STREX	g/trip	0.01866	0.02744
2045	S	MHDT	TOG DIURN	g/trip	0.01192	0.02469
2045	S	MHDT	TOG HOTSOAK	g/trip	0.00159	0.00328
2045	S	MHDT	TOG RUNLOSS	g/trip	0.00941	0.04419
2045	S	MHDT	ROG RUNEX	g/mi	0.00295	0.00460
2045	S	MHDT	ROG IDLEX	g/trip	0.02057	0.01684
2045	S	MHDT	ROG STREX	g/trip	0.01704	0.02506
2045	S	MHDT	ROG DIURN	g/trip	0.01192	0.02469
2045	S	MHDT	ROG HOTSOAK	g/trip	0.00159	0.00328
2045	S	MHDT	ROG RUNLOSS	g/trip	0.00941	0.04419
2045	S	MHDT	NOx RUNEX	g/mi	0.11344	0.06995
2045	S	MHDT	NOx IDLEX	g/trip	0.77199	0.11490
2045	S	MHDT	NOx STREX	g/trip	0.53829	0.34422
2045	S	MHDT	CO RUNEX	g/mi	0.04811	0.06558
2045	S	MHDT	CO IDLEX	g/trip	0.73958	0.49966
2045	S	MHDT	CO STREX	g/trip	0.31053	0.44306
2045	S	MHDT	SOx RUNEX	g/mi	0.00501	0.00279
2045	S	MHDT	SOx IDLEX	g/trip	0.00137	0.00034
2045	S	MHDT	SOx STREX	g/trip	0.00004	0.00001
2045	S	MHDT	PM2.5 RUNEX	g/mi	0.00164	0.00206
2045	S	MHDT	PM2.5 IDLEX	g/trip	0.00024	0.00011
2045	S	MHDT	PM2.5 STREX	g/trip	0.00004	0.00006
2045	S	MHDT	PM2.5 PMBW	g/mi	0.01154	0.01401
2045	S	MHDT	PM10 RUNEX	g/mi	0.00172	0.00216
2045	S	MHDT	PM10 IDLEX	g/trip	0.00025	0.00012

2045	S	MHDT	PM10 STREX	g/trip	0.00005	0.00006
2045	S	MHDT	PM10 PMTW	g/mi	0.01200	0.01200
2045	S	MHDT	PM10 PMBW	g/mi	0.03297	0.04004
2045	S	MHDT	CO, RUNEX	g/mi	531.793	824.113
2045	S	MHDT	CO, IDLEX	g/trip	159.057	98.5591
2045	S	MHDT	CO, STREX	g/trip	3.60561	5.01319
2045	S	MHDT	CH„ RUNEX	g/mi	0.00536	0.00505
2045	S	MHDT	CH„ IDLEX	g/trip	0.04159	0.00779
2045	S	MHDT	CH„ STREX	g/trip	0.00349	0.00485
2045	S	MHDT	N,O RUNEX	g/mi	0.06892	0.30707
2045	S	MHDT	N,O IDLEX	g/trip	0.02529	0.00002
2045	S	MHDT	N,O STREX	g/trip	0.00280	0.00359
2045	W	MHDT	TOG RUNEX	g/mi	0.00864	0.01007
2045	W	MHDT	TOG IDLEX	g/trip	0.06380	0.02730
2045	W	MHDT	TOG STREX	g/trip	0.01960	0.02882
2045	W	MHDT	TOG DIURN	g/trip	0.01149	0.02440
2045	W	MHDT	TOG HOTSOAK	g/trip	0.00154	0.00318
2045	W	MHDT	TOG RUNLOSS	g/trip	0.00952	0.04445
2045	W	MHDT	ROG RUNEX	g/mi	0.00293	0.00458
2045	W	MHDT	ROG IDLEX	g/trip	0.01942	0.01632
2045	W	MHDT	ROG STREX	g/trip	0.01790	0.02632
2045	W	MHDT	ROG DIURN	g/trip	0.01149	0.02440
2045	W	MHDT	ROG HOTSOAK	g/trip	0.00154	0.00318
2045	W	MHDT	ROG RUNLOSS	g/trip	0.00952	0.04445
2045	W	MHDT	NOx RUNEX	g/mi	0.11824	0.07323
2045	W	MHDT	NOx IDLEX	g/trip	0.86473	0.12910
2045	W	MHDT	NOx STREX	g/trip	0.54008	0.34664
2045	W	MHDT	CO RUNEX	g/mi	0.04776	0.06498

2045	W	MHDT	CO IDLEX	g/trip	0.81526	0.57601
2045	W	MHDT	CO STREX	g/trip	0.33018	0.47111
2045	W	MHDT	SOx RUNEX	g/mi	0.00501	0.00279
2045	W	MHDT	SOx IDLEX	g/trip	0.00142	0.00035
2045	W	MHDT	SOx STREX	g/trip	0.00004	0.00001
2045	W	MHDT	PM2.5 RUNEX	g/mi	0.00164	0.00206
2045	W	MHDT	PM2.5 IDLEX	g/trip	0.00029	0.00014
2045	W	MHDT	PM2.5 STREX	g/trip	0.00004	0.00006
2045	W	MHDT	PM2.5 PMBW	g/mi	0.01154	0.01401
2045	W	MHDT	PM10 RUNEX	g/mi	0.00172	0.00216
2045	W	MHDT	PM10 IDLEX	g/trip	0.00031	0.00015
2045	W	MHDT	PM10 STREX	g/trip	0.00005	0.00006
2045	W	MHDT	PM10 PMBW	g/mi	0.03297	0.04004
2045	W	MHDT	CO, RUNEX	g/mi	531.792	824.112
2045	W	MHDT	CO, IDLEX	g/trip	163.667	101.709
2045	W	MHDT	CO, STREX	g/trip	3.63968	5.06182
2045	W	MHDT	CH„ RUNEX	g/mi	0.00535	0.00505
2045	W	MHDT	CH„ IDLEX	g/trip	0.04171	0.00782
2045	W	MHDT	CH„ STREX	g/trip	0.00364	0.00505
2045	W	MHDT	N,O RUNEX	g/mi	0.06896	0.30713
2045	W	MHDT	N,O IDLEX	g/trip	0.02606	0.00002
2045	W	MHDT	N,O STREX	g/trip	0.00290	0.00373
2045	A	OBUS	TOG RUNEX	g/mi	0.06442	0.01816
2045	A	OBUS	TOG IDLEX	g/trip	0.10013	0.10000
2045	A	OBUS	TOG STREX	g/trip	0.06887	0.03865
2045	A	OBUS	TOG DIURN	g/trip	0.07706	0.13980
2045	A	OBUS	TOG HOTSOAK	g/trip	0.01228	0.02216
2045	A	OBUS	TOG RUNLOSS	g/trip	0.01770	0.06407

2045	A	OBUS	ROG RUNEX	g/mi	0.01270	0.01536
2045	A	OBUS	ROG IDLEX	g/trip	0.04590	0.05420
2045	A	OBUS	ROG STREX	g/trip	0.06290	0.03530
2045	A	OBUS	ROG DIURN	g/trip	0.07706	0.13980
2045	A	OBUS	ROG HOTSOAK	g/trip	0.01228	0.02216
2045	A	OBUS	ROG RUNLOSS	g/trip	0.01770	0.06407
2045	A	OBUS	NOx RUNEX	g/mi	0.56641	0.36452
2045	A	OBUS	NOx IDLEX	g/trip	0.23884	0.14158
2045	A	OBUS	NOx STREX	g/trip	0.49135	0.45094
2045	A	OBUS	CO RUNEX	g/mi	0.31248	0.10964
2045	A	OBUS	CO IDLEX	g/trip	0.72402	0.85231
2045	A	OBUS	CO STREX	g/trip	1.16413	0.63051
2045	A	OBUS	SOx RUNEX	g/mi	0.00936	0.00274
2045	A	OBUS	SOx IDLEX	g/trip	0.00084	0.00038
2045	A	OBUS	SOx STREX	g/trip	0.00011	0.00001
2045	A	OBUS	PM2.5 RUNEX	g/mi	0.00755	0.00491
2045	A	OBUS	PM2.5 IDLEX	g/trip	0.00026	0.00020
2045	A	OBUS	PM2.5 STREX	g/trip	0.00010	0.00005
2045	A	OBUS	PM2.5 PMBW	g/mi	0.02019	0.01845
2045	A	OBUS	PM10 RUNEX	g/mi	0.00790	0.00513
2045	A	OBUS	PM10 IDLEX	g/trip	0.00027	0.00021
2045	A	OBUS	PM10 STREX	g/trip	0.00011	0.00005
2045	A	OBUS	PM10 PMBW	g/mi	0.05770	0.05273
2045	A	OBUS	CO, RUNEX	g/mi	1,041.97	802.929
2045	A	OBUS	CO, IDLEX	g/trip	101.610	161.062
2045	A	OBUS	CO, STREX	g/trip	10.8854	6.09205
2045	A	OBUS	CH„ RUNEX	g/mi	0.04989	0.00114
2045	A	OBUS	CH„ IDLEX	g/trip	0.04808	0.05812

2045	A	OBUS	CH„ STREX	g/trip	0.01158	0.00684
2045	A	OBUS	N,O RUNEX	g/mi	0.13327	0.20878
2045	A	OBUS	N,O IDLEX	g/trip	0.01564	0.00003
2045	A	OBUS	N,O STREX	g/trip	0.00913	0.00625
2045	S	OBUS	TOG RUNEX	g/mi	0.06450	0.01822
2045	S	OBUS	TOG IDLEX	g/trip	0.10221	0.10309
2045	S	OBUS	TOG STREX	g/trip	0.06611	0.03710
2045	S	OBUS	TOG DIURN	g/trip	0.08111	0.14645
2045	S	OBUS	TOG HOTSOAK	g/trip	0.01262	0.02274
2045	S	OBUS	TOG RUNLOSS	g/trip	0.01771	0.06411
2045	S	OBUS	ROG RUNEX	g/mi	0.01276	0.01540
2045	S	OBUS	ROG IDLEX	g/trip	0.04773	0.05691
2045	S	OBUS	ROG STREX	g/trip	0.06038	0.03388
2045	S	OBUS	ROG DIURN	g/trip	0.08111	0.14645
2045	S	OBUS	ROG HOTSOAK	g/trip	0.01262	0.02274
2045	S	OBUS	ROG RUNLOSS	g/trip	0.01771	0.06411
2045	S	OBUS	NOx RUNEX	g/mi	0.53349	0.34344
2045	S	OBUS	NOx IDLEX	g/trip	0.22898	0.13700
2045	S	OBUS	NOx STREX	g/trip	0.48549	0.44759
2045	S	OBUS	CO RUNEX	g/mi	0.31377	0.11059
2045	S	OBUS	CO IDLEX	g/trip	0.71683	0.84233
2045	S	OBUS	CO STREX	g/trip	1.10109	0.59636
2045	S	OBUS	SOx RUNEX	g/mi	0.00936	0.00274
2045	S	OBUS	SOx IDLEX	g/trip	0.00083	0.00037
2045	S	OBUS	SOx STREX	g/trip	0.00011	0.00001
2045	S	OBUS	PM2.5 RUNEX	g/mi	0.00755	0.00491
2045	S	OBUS	PM2.5 IDLEX	g/trip	0.00023	0.00018
2045	S	OBUS	PM2.5 STREX	g/trip	0.00010	0.00005

2045	S	OBUS	PM2.5 PMBW	g/mi	0.02019	0.01845
2045	S	OBUS	PM10 RUNEX	g/mi	0.00790	0.00513
2045	S	OBUS	PM10 IDLEX	g/trip	0.00024	0.00019
2045	S	OBUS	PM10 STREX	g/trip	0.00011	0.00005
2045	S	OBUS	PM10 PMTW	g/mi	0.01200	0.01200
2045	S	OBUS	PM10 PMBW	g/mi	0.05770	0.05273
2045	S	OBUS	CO, RUNEX	g/mi	1,041.97	802.930
2045	S	OBUS	CO, IDLEX	g/trip	100.576	159.202
2045	S	OBUS	CO, STREX	g/trip	10.7769	6.03325
2045	S	OBUS	CH„ RUNEX	g/mi	0.04990	0.00115
2045	S	OBUS	CH„ IDLEX	g/trip	0.04818	0.05825
2045	S	OBUS	CH„ STREX	g/trip	0.01116	0.00662
2045	S	OBUS	N,O RUNEX	g/mi	0.13306	0.20867
2045	S	OBUS	N,O IDLEX	g/trip	0.01547	0.00003
2045	S	OBUS	N,O STREX	g/trip	0.00890	0.00606
2045	W	OBUS	TOG RUNEX	g/mi	0.06440	0.01814
2045	W	OBUS	TOG IDLEX	g/trip	0.09726	0.09574
2045	W	OBUS	TOG STREX	g/trip	0.06953	0.03902
2045	W	OBUS	TOG DIURN	g/trip	0.07794	0.14534
2045	W	OBUS	TOG HOTSOAK	g/trip	0.01224	0.02210
2045	W	OBUS	TOG RUNLOSS	g/trip	0.01787	0.06434
2045	W	OBUS	ROG RUNEX	g/mi	0.01268	0.01535
2045	W	OBUS	ROG IDLEX	g/trip	0.04338	0.05045
2045	W	OBUS	ROG STREX	g/trip	0.06351	0.03564
2045	W	OBUS	ROG DIURN	g/trip	0.07794	0.14534
2045	W	OBUS	ROG HOTSOAK	g/trip	0.01224	0.02210
2045	W	OBUS	ROG RUNLOSS	g/trip	0.01787	0.06434
2045	W	OBUS	NOx RUNEX	g/mi	0.55602	0.35777

2045	W	OBUS	NOx IDLEX	g/trip	0.25245	0.14790
2045	W	OBUS	NOx STREX	g/trip	0.49276	0.45175
2045	W	OBUS	CO RUNEX	g/mi	0.31217	0.10941
2045	W	OBUS	CO IDLEX	g/trip	0.73395	0.86609
2045	W	OBUS	CO STREX	g/trip	1.17727	0.63762
2045	W	OBUS	SOx RUNEX	g/mi	0.00936	0.00274
2045	W	OBUS	SOx IDLEX	g/trip	0.00085	0.00039
2045	W	OBUS	SOx STREX	g/trip	0.00011	0.00001
2045	W	OBUS	PM2.5 RUNEX	g/mi	0.00755	0.00491
2045	W	OBUS	PM2.5 IDLEX	g/trip	0.00029	0.00023
2045	W	OBUS	PM2.5 STREX	g/trip	0.00010	0.00005
2045	W	OBUS	PM2.5 PMBW	g/mi	0.02019	0.01845
2045	W	OBUS	PM10 RUNEX	g/mi	0.00790	0.00513
2045	W	OBUS	PM10 IDLEX	g/trip	0.00031	0.00024
2045	W	OBUS	PM10 STREX	g/trip	0.00011	0.00005
2045	W	OBUS	PM10 PMBW	g/mi	0.05770	0.05273
2045	W	OBUS	CO, RUNEX	g/mi	1,041.97	802.928
2045	W	OBUS	CO, IDLEX	g/trip	103.039	163.630
2045	W	OBUS	CO, STREX	g/trip	10.9083	6.10445
2045	W	OBUS	CH„ RUNEX	g/mi	0.04989	0.00114
2045	W	OBUS	CH„ IDLEX	g/trip	0.04796	0.05795
2045	W	OBUS	CH„ STREX	g/trip	0.01168	0.00689
2045	W	OBUS	N,O RUNEX	g/mi	0.13322	0.20875
2045	W	OBUS	N,O IDLEX	g/trip	0.01586	0.00003
2045	W	OBUS	N,O STREX	g/trip	0.00922	0.00630
2045	A	SBUS	TOG RUNEX	g/mi	0.76366	0.97141
2045	A	SBUS	TOG IDLEX	g/trip	1.78941	0.92970
2045	A	SBUS	TOG STREX	g/trip	0.03118	0.04539

2045	A	SBUS	TOG DIURN	g/trip	0.07876	0.10781
2045	A	SBUS	TOG HOTSOAK	g/trip	0.01017	0.01345
2045	A	SBUS	TOG RUNLOSS	g/trip	0.22115	0.07755
2045	A	SBUS	ROG RUNEX	g/mi	0.01501	0.01881
2045	A	SBUS	ROG IDLEX	g/trip	0.94548	0.31067
2045	A	SBUS	ROG STREX	g/trip	0.02847	0.04145
2045	A	SBUS	ROG DIURN	g/trip	0.07876	0.10781
2045	A	SBUS	ROG HOTSOAK	g/trip	0.01017	0.01345
2045	A	SBUS	ROG RUNLOSS	g/trip	0.22115	0.07755
2045	A	SBUS	NOx RUNEX	g/mi	0.14525	0.11947
2045	A	SBUS	NOx IDLEX	g/trip	0.33729	0.24723
2045	A	SBUS	NOx STREX	g/trip	0.13484	0.12751
2045	A	SBUS	CO RUNEX	g/mi	2.26910	2.94593
2045	A	SBUS	CO IDLEX	g/trip	8.41596	3.56773
2045	A	SBUS	CO STREX	g/trip	0.60173	0.83148
2045	A	SBUS	SOx RUNEX	g/mi	0.00332	0.00133
2045	A	SBUS	SOx IDLEX	g/trip	0.00225	0.00035
2045	A	SBUS	SOx STREX	g/trip	0.00004	0.00006
2045	A	SBUS	PM2.5 RUNEX	g/mi	0.00162	0.00173
2045	A	SBUS	PM2.5 IDLEX	g/trip	0.00058	0.00061
2045	A	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2045	A	SBUS	PM2.5 PMTW	g/mi	0.00251	0.00238
2045	A	SBUS	PM2.5 PMBW	g/mi	0.01316	0.01357
2045	A	SBUS	PM10 RUNEX	g/mi	0.00175	0.00188
2045	A	SBUS	PM10 IDLEX	g/trip	0.00063	0.00066
2045	A	SBUS	PM10 STREX	g/trip	0.00007	0.00009
2045	A	SBUS	PM10 PMTW	g/mi	0.01005	0.00950
2045	A	SBUS	PM10 PMBW	g/mi	0.03761	0.03878

2045	A	SBUS	CO, RUNEX	g/mi	655.619	703.295
2045	A	SBUS	CO, IDLEX	g/trip	368.351	210.836
2045	A	SBUS	CO, STREX	g/trip	3.96776	5.35733
2045	A	SBUS	CH„ RUNEX	g/mi	0.74308	1.38189
2045	A	SBUS	CH„ IDLEX	g/trip	0.62532	0.75640
2045	A	SBUS	CH„ STREX	g/trip	0.00507	0.00705
2045	A	SBUS	N,O RUNEX	g/mi	0.08166	0.14616
2045	A	SBUS	N,O IDLEX	g/trip	0.03801	0.00112
2045	A	SBUS	N,O STREX	g/trip	0.00462	0.00410
2045	S	SBUS	TOG RUNEX	g/mi	0.76376	0.97153
2045	S	SBUS	TOG IDLEX	g/trip	1.78956	0.92986
2045	S	SBUS	TOG STREX	g/trip	0.02780	0.04047
2045	S	SBUS	TOG DIURN	g/trip	0.08149	0.11091
2045	S	SBUS	TOG HOTSOAK	g/trip	0.01044	0.01379
2045	S	SBUS	TOG RUNLOSS	g/trip	0.22074	0.07735
2045	S	SBUS	ROG RUNEX	g/mi	0.01508	0.01889
2045	S	SBUS	ROG IDLEX	g/trip	0.94560	0.31081
2045	S	SBUS	ROG STREX	g/trip	0.02539	0.03697
2045	S	SBUS	ROG DIURN	g/trip	0.08149	0.11091
2045	S	SBUS	ROG HOTSOAK	g/trip	0.01044	0.01379
2045	S	SBUS	ROG RUNLOSS	g/trip	0.22074	0.07735
2045	S	SBUS	NOx RUNEX	g/mi	0.13479	0.10788
2045	S	SBUS	NOx IDLEX	g/trip	0.33152	0.24535
2045	S	SBUS	NOx STREX	g/trip	0.13233	0.12452
2045	S	SBUS	CO RUNEX	g/mi	2.27036	2.94744
2045	S	SBUS	CO IDLEX	g/trip	8.41481	3.56643
2045	S	SBUS	CO STREX	g/trip	0.49099	0.67845
2045	S	SBUS	SOx RUNEX	g/mi	0.00332	0.00133

2045	S	SBUS	SOx IDLEX	g/trip	0.00224	0.00035
2045	S	SBUS	SOx STREX	g/trip	0.00004	0.00006
2045	S	SBUS	PM2.5 RUNEX	g/mi	0.00162	0.00173
2045	S	SBUS	PM2.5 IDLEX	g/trip	0.00058	0.00061
2045	S	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2045	S	SBUS	PM2.5 PMTW	g/mi	0.00251	0.00238
2045	S	SBUS	PM2.5 PMBW	g/mi	0.01316	0.01357
2045	S	SBUS	PM10 RUNEX	g/mi	0.00175	0.00188
2045	S	SBUS	PM10 IDLEX	g/trip	0.00063	0.00066
2045	S	SBUS	PM10 STREX	g/trip	0.00007	0.00009
2045	S	SBUS	PM10 PMTW	g/mi	0.01005	0.00950
2045	S	SBUS	PM10 PMBW	g/mi	0.03761	0.03878
2045	S	SBUS	CO, RUNEX	g/mi	655.621	703.298
2045	S	SBUS	CO, IDLEX	g/trip	368.032	210.549
2045	S	SBUS	CO, STREX	g/trip	3.78170	5.10002
2045	S	SBUS	CH„ RUNEX	g/mi	0.74310	1.38191
2045	S	SBUS	CH„ IDLEX	g/trip	0.62559	0.75641
2045	S	SBUS	CH„ STREX	g/trip	0.00453	0.00642
2045	S	SBUS	N,O RUNEX	g/mi	0.08134	0.14583
2045	S	SBUS	N,O IDLEX	g/trip	0.03813	0.00112
2045	S	SBUS	N,O STREX	g/trip	0.00450	0.00395
2045	W	SBUS	TOG RUNEX	g/mi	0.76364	0.97138
2045	W	SBUS	TOG IDLEX	g/trip	1.78922	0.92948
2045	W	SBUS	TOG STREX	g/trip	0.03195	0.04652
2045	W	SBUS	TOG DIURN	g/trip	0.07953	0.11056
2045	W	SBUS	TOG HOTSOAK	g/trip	0.01014	0.01340
2045	W	SBUS	TOG RUNLOSS	g/trip	0.22210	0.07794
2045	W	SBUS	ROG RUNEX	g/mi	0.01500	0.01879

2045	W	SBUS	ROG IDLEX	g/trip	0.94531	0.31048
2045	W	SBUS	ROG STREX	g/trip	0.02918	0.04248
2045	W	SBUS	ROG DIURN	g/trip	0.07953	0.11056
2045	W	SBUS	ROG HOTSOAK	g/trip	0.01014	0.01340
2045	W	SBUS	ROG RUNLOSS	g/trip	0.22210	0.07794
2045	W	SBUS	NOx RUNEX	g/mi	0.14247	0.11632
2045	W	SBUS	NOx IDLEX	g/trip	0.34525	0.24984
2045	W	SBUS	NOx STREX	g/trip	0.13557	0.12839
2045	W	SBUS	CO RUNEX	g/mi	2.26879	2.94556
2045	W	SBUS	CO IDLEX	g/trip	8.41755	3.56953
2045	W	SBUS	CO STREX	g/trip	0.62272	0.86048
2045	W	SBUS	SOx RUNEX	g/mi	0.00332	0.00133
2045	W	SBUS	SOx IDLEX	g/trip	0.00225	0.00036
2045	W	SBUS	SOx STREX	g/trip	0.00004	0.00006
2045	W	SBUS	PM2.5 RUNEX	g/mi	0.00162	0.00173
2045	W	SBUS	PM2.5 IDLEX	g/trip	0.00058	0.00061
2045	W	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2045	W	SBUS	PM2.5 PMTW	g/mi	0.00251	0.00238
2045	W	SBUS	PM2.5 PMBW	g/mi	0.01316	0.01357
2045	W	SBUS	PM10 RUNEX	g/mi	0.00175	0.00188
2045	W	SBUS	PM10 IDLEX	g/trip	0.00063	0.00066
2045	W	SBUS	PM10 STREX	g/trip	0.00007	0.00009
2045	W	SBUS	PM10 PMTW	g/mi	0.01005	0.00950
2045	W	SBUS	PM10 PMBW	g/mi	0.03761	0.03878
2045	W	SBUS	CO, RUNEX	g/mi	655.618	703.295
2045	W	SBUS	CO, IDLEX	g/trip	368.792	211.231
2045	W	SBUS	CO, STREX	g/trip	4.00344	5.40670
2045	W	SBUS	CH„ RUNEX	g/mi	0.74308	1.38188

2045	W	SBUS	CH„ IDLEX	g/trip	0.62525	0.75639
2045	W	SBUS	CH„ STREX	g/trip	0.00520	0.00719
2045	W	SBUS	N,O RUNEX	g/mi	0.08159	0.14610
2045	W	SBUS	N,O IDLEX	g/trip	0.03810	0.00112
2045	W	SBUS	N,O STREX	g/trip	0.00470	0.00414
2045	A	UBUS	TOG RUNEX	g/mi	0.00042	0.00047
2045	A	UBUS	TOG STREX	g/trip	0.00321	0.00065
2045	A	UBUS	TOG DIURN	g/trip	0.00282	0.00023
2045	A	UBUS	TOG HOTSOAK	g/trip	0.00080	0.00006
2045	A	UBUS	TOG RUNLOSS	g/trip	0.00166	0.00023
2045	A	UBUS	ROG RUNEX	g/mi	0.00036	0.00041
2045	A	UBUS	ROG STREX	g/trip	0.00293	0.00059
2045	A	UBUS	ROG DIURN	g/trip	0.00282	0.00023
2045	A	UBUS	ROG HOTSOAK	g/trip	0.00080	0.00006
2045	A	UBUS	ROG RUNLOSS	g/trip	0.00166	0.00023
2045	A	UBUS	NOx RUNEX	g/mi	0.00110	0.00097
2045	A	UBUS	NOx STREX	g/trip	0.00900	0.00075
2045	A	UBUS	CO RUNEX	g/mi	0.00906	0.00149
2045	A	UBUS	CO STREX	g/trip	0.18154	0.00739
2045	A	UBUS	SOx RUNEX	g/mi	—	< 0.000005
2045	A	UBUS	SOx STREX	g/trip	0.00001	< 0.000005
2045	A	UBUS	PM2.5 RUNEX	g/mi	—	0.00006
2045	A	UBUS	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	A	UBUS	PM2.5 PMTW	g/mi	0.00821	0.00805
2045	A	UBUS	PM2.5 PMBW	g/mi	0.01955	0.01936
2045	A	UBUS	PM10 RUNEX	g/mi	—	0.00007
2045	A	UBUS	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	A	UBUS	PM10 PMTW	g/mi	0.03284	0.03219

2045	A	UBUS	PM10 PMBW	g/mi	0.05587	0.05531
2045	A	UBUS	CO, RUNEX	g/mi	13.5791	4.45681
2045	A	UBUS	CO, STREX	g/trip	1.08857	0.06232
2045	A	UBUS	CH„ RUNEX	g/mi	—	0.00002
2045	A	UBUS	CH„ STREX	g/trip	0.00087	0.00011
2045	A	UBUS	N,O RUNEX	g/mi	0.00076	0.00312
2045	A	UBUS	N,O STREX	g/trip	0.00147	0.00006
2045	A	UBUS	HFC RUNEX	g/mi	—	0.00000
2045	S	UBUS	TOG RUNEX	g/mi	0.00042	0.00047
2045	S	UBUS	TOG STREX	g/trip	0.00299	0.00061
2045	S	UBUS	TOG DIURN	g/trip	0.00321	0.00026
2045	S	UBUS	TOG HOTSOAK	g/trip	0.00083	0.00006
2045	S	UBUS	TOG RUNLOSS	g/trip	0.00165	0.00022
2045	S	UBUS	ROG RUNEX	g/mi	0.00036	0.00041
2045	S	UBUS	ROG STREX	g/trip	0.00273	0.00055
2045	S	UBUS	ROG DIURN	g/trip	0.00321	0.00026
2045	S	UBUS	ROG HOTSOAK	g/trip	0.00083	0.00006
2045	S	UBUS	ROG RUNLOSS	g/trip	0.00165	0.00022
2045	S	UBUS	NOx RUNEX	g/mi	0.00102	0.00091
2045	S	UBUS	NOx STREX	g/trip	0.00860	0.00072
2045	S	UBUS	CO RUNEX	g/mi	0.00922	0.00151
2045	S	UBUS	CO STREX	g/trip	0.16315	0.00664
2045	S	UBUS	SOx RUNEX	g/mi	—	< 0.000005
2045	S	UBUS	SOx STREX	g/trip	0.00001	< 0.000005
2045	S	UBUS	PM2.5 RUNEX	g/mi	—	0.00006
2045	S	UBUS	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	S	UBUS	PM2.5 PMTW	g/mi	0.00821	0.00805
2045	S	UBUS	PM2.5 PMBW	g/mi	0.01955	0.01936

2045	S	UBUS	PM10 RUNEX	g/mi	—	0.00007
2045	S	UBUS	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	S	UBUS	PM10 PMTW	g/mi	0.03284	0.03219
2045	S	UBUS	PM10 PMBW	g/mi	0.05587	0.05531
2045	S	UBUS	CO, RUNEX	g/mi	13.5793	4.45684
2045	S	UBUS	CO, STREX	g/trip	1.05873	0.06100
2045	S	UBUS	CH„ RUNEX	g/mi	—	0.00002
2045	S	UBUS	CH„ STREX	g/trip	0.00082	0.00010
2045	S	UBUS	N,O RUNEX	g/mi	0.00076	0.00312
2045	S	UBUS	N,O STREX	g/trip	0.00144	0.00006
2045	S	UBUS	HFC RUNEX	g/mi	—	0.00000
2045	W	UBUS	TOG RUNEX	g/mi	0.00042	0.00047
2045	W	UBUS	TOG STREX	g/trip	0.00326	0.00066
2045	W	UBUS	TOG DIURN	g/trip	0.00279	0.00024
2045	W	UBUS	TOG HOTSOAK	g/trip	0.00080	0.00006
2045	W	UBUS	TOG RUNLOSS	g/trip	0.00172	0.00023
2045	W	UBUS	ROG RUNEX	g/mi	0.00036	0.00041
2045	W	UBUS	ROG STREX	g/trip	0.00297	0.00060
2045	W	UBUS	ROG DIURN	g/trip	0.00279	0.00024
2045	W	UBUS	ROG HOTSOAK	g/trip	0.00080	0.00006
2045	W	UBUS	ROG RUNLOSS	g/trip	0.00172	0.00023
2045	W	UBUS	NOx RUNEX	g/mi	0.00108	0.00095
2045	W	UBUS	NOx STREX	g/trip	0.00909	0.00076
2045	W	UBUS	CO RUNEX	g/mi	0.00901	0.00148
2045	W	UBUS	CO STREX	g/trip	0.18542	0.00754
2045	W	UBUS	SOx RUNEX	g/mi	—	< 0.000005
2045	W	UBUS	SOx STREX	g/trip	0.00001	< 0.000005
2045	W	UBUS	PM2.5 RUNEX	g/mi	—	0.00006

2045	W	UBUS	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	W	UBUS	PM2.5 PMTW	g/mi	0.00821	0.00805
2045	W	UBUS	PM2.5 PMBW	g/mi	0.01955	0.01936
2045	W	UBUS	PM10 RUNEX	g/mi	—	0.00007
2045	W	UBUS	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	W	UBUS	PM10 PMTW	g/mi	0.03284	0.03219
2045	W	UBUS	PM10 PMBW	g/mi	0.05587	0.05531
2045	W	UBUS	CO, RUNEX	g/mi	13.5790	4.45680
2045	W	UBUS	CO, STREX	g/trip	1.09489	0.06260
2045	W	UBUS	CH„ RUNEX	g/mi	—	0.00002
2045	W	UBUS	CH„ STREX	g/trip	0.00089	0.00011
2045	W	UBUS	N,O RUNEX	g/mi	0.00076	0.00312
2045	W	UBUS	N,O STREX	g/trip	0.00149	0.00006
2045	W	UBUS	HFC RUNEX	g/mi	—	0.00000

Downey 2045 Project Conditions Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Downey 2045 Project Conditions
Operational Year	2045
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.30000
Precipitation (days)	8.00000
Location	Downey, CA, USA
County	Los Angeles-South Coast
City	Downey
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4857
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.44

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
Single Family Housing	24,951.0	Dwelling Unit	3,158.89	48,654,450	292,247,495	—	72,628.0	—

Apartments Low Rise	3,118.00	Dwelling Unit	222.500	3,305,080	0.00000	—	17,647.0	—
Apartments Mid Rise	19,441.0	Dwelling Unit	741.700	18,663,360	0.00000	—	52,535.0	—
Regional Shopping Center	12,013.8	1000sqft	458.521	12,013,849	0.00000	—	—	—
Hotel	957.000	Room	31.9000	1,389,564	0.00000	—	—	—
General Office Building	3,476.96	1000sqft	43.4491	3,476,964	0.00000	—	—	—
Industrial Park	4,489.70	1000sqft	374.141	4,489,700	0.00000	—	—	—
Government Office Building	2,496.35	1000sqft	193.500	2,496,350	0.00000	—	—	—
Elementary School	4,744.90	1000sqft	408.894	4,744,900	0.00000	0.00000	—	—
Hospital	3,673.00	1000sqft	49.6000	3,673,000	0.00000	—	—	—
City Park	286.090	Acre	286.090	0.00000	0.00000	0.00000	—	—
Golf Course	247.710	Acre	247.710	0.00000	0.00000	0.00000	—	—
Parking Lot	29.0000	Acre	29.0000	0.00000	0.00000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.3. 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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18,279.0	16,749.4	1,949.76	45,895.2	75.2107	3,447.53	3,213.99	6,661.52	3,383.99	814.569	4,198.56	513,187	4,533,595	5,046,782	8,392.81	202.779	4,710.92	5,321,741

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17,772.1	16,275.8	1,953.17	39,743.4	74.6081	3,443.83	3,213.99	6,657.82	3,381.20	814.569	4,195.77	513,187	4,427,142	4,940,330	8,393.55	205.649	3,961.86	5,215,414
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5,266.13	5,007.00	1,058.54	20,344.9	17.2410	286.671	3,122.56	3,409.23	280.946	794.039	1,074.99	98,646.0	3,621,258	3,719,904	7,156.33	188.109	4,267.88	3,959,137
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	961.069	913.778	193.184	3,712.94	3.14649	52.3175	569.867	622.184	51.2726	144.912	196.185	16,332.0	599,541	615,873	1,184.81	31.1436	706.597	655,480

2.4. 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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,559.95	1,440.77	436.581	17,336.6	10.3098	13.2789	3,213.99	3,227.27	12.3828	814.569	826.952	—	2,503,307	2,503,307	101.146	151.461	767.900	2,551,739
Area	16,662.9	15,280.6	1,022.45	28,274.4	61.8382	3,395.45	—	3,395.45	3,332.81	—	3,332.81	445,022	863,291	1,308,313	1,327.31	16.2371	—	1,346,335
Energy	56.1491	28.0745	490.732	284.203	3.06268	38.7939	—	38.7939	38.7939	—	38.7939	—	1,121,565	1,121,565	118.754	9.00788	—	1,127,218
Water	—	—	—	—	—	—	—	—	—	—	—	10,416.0	45,431.7	55,847.8	1,073.79	26.0732	—	90,462.4
Waste	—	—	—	—	—	—	—	—	—	—	—	57,749.0	0.00000	57,749.0	5,771.81	0.00000	—	202,044
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,943.02	3,943.02
Total	18,279.0	16,749.4	1,949.76	45,895.2	75.2107	3,447.53	3,213.99	6,661.52	3,383.99	814.569	4,198.56	513,187	4,533,595	5,046,782	8,392.81	202.779	4,710.92	5,321,741
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	1,550.30	1,432.08	476.690	15,297.9	9.90785	13.2835	3,213.99	3,227.27	12.3872	814.569	826.956	—	2,409,83	2,409,83	102.432	154.440	18.8396	2,458,43
Area	16,165.6	14,815.7	985.753	24,161.3	61.6376	3,391.75	—	3,391.75	3,330.02	—	3,330.02	445,022	850,310	1,295,333	1,326.76	16.1278	—	1,333,308
Energy	56.1491	28.0745	490.732	284.203	3.06268	38.7939	—	38.7939	38.7939	—	38.7939	—	1,121,565	1,121,565	118.754	9.00788	—	1,127,218
Water	—	—	—	—	—	—	—	—	—	—	—	10,416.0	45,431.7	55,847.8	1,073.79	26.0732	—	90,462.4
Waste	—	—	—	—	—	—	—	—	—	—	—	57,749.0	0.00000	57,749.0	5,771.81	0.00000	—	202,044
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,943.02	3,943.02
Total	17,772.1	16,275.8	1,953.17	39,743.4	74.6081	3,443.83	3,213.99	6,657.82	3,381.20	814.569	4,195.77	513,187	4,427,142	4,940,330	8,393.55	205.649	3,961.86	5,215,414
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,521.37	1,404.96	475.156	15,588.6	9.81917	13.0321	3,122.56	3,135.59	12.1525	794.039	806.192	—	2,387,130	2,387,130	100.728	151.848	324.865	2,435,224
Area	3,688.61	3,573.97	92.6530	4,472.11	4.35920	234.845	—	234.845	230.000	—	230.000	30,481.0	67,131.3	97,612.2	91.2464	1.17953	—	100,245
Energy	56.1491	28.0745	490.732	284.203	3.06268	38.7939	—	38.7939	38.7939	—	38.7939	—	1,121,565	1,121,565	118.754	9.00788	—	1,127,218
Water	—	—	—	—	—	—	—	—	—	—	—	10,416.0	45,431.7	55,847.8	1,073.79	26.0732	—	90,462.4
Waste	—	—	—	—	—	—	—	—	—	—	—	57,749.0	0.00000	57,749.0	5,771.81	0.00000	—	202,044
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,943.02	3,943.02
Total	5,266.13	5,007.00	1,058.54	20,344.9	17.2410	286.671	3,122.56	3,409.23	280.946	794.039	1,074.99	98,646.0	3,621,258	3,719,904	7,156.33	188.109	4,267.88	3,959,137
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	277.650	256.405	86.7159	2,844.92	1.79200	2.37836	569.867	572.245	2.21783	144.912	147.130	—	395,217	395,217	16.6767	25.1402	53.7851	403,179
Area	673.172	652.250	16.9092	816.160	0.79555	42.8593	—	42.8593	41.9749	—	41.9749	5,046.47	11,114.3	16,160.8	15.1069	0.19528	—	16,596.7
Energy	10.2472	5.12360	89.5586	51.8670	0.55894	7.07989	—	7.07989	7.07989	—	7.07989	—	185,688	185,688	19.6611	1.49136	—	186,624
Water	—	—	—	—	—	—	—	—	—	—	—	1,724.49	7,521.74	9,246.23	177.779	4.31672	—	14,977.1
Waste	—	—	—	—	—	—	—	—	—	—	—	9,561.01	0.00000	9,561.01	955.589	0.00000	—	33,450.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	652.812	652.812
Total	961.069	913.778	193.184	3,712.94	3.14649	52.3175	569.867	622.184	51.2726	144.912	196.185	16,332.0	599,541	615,873	1,184.81	31.1436	706.597	655,480

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	373.093	340.292	117.308	4,777.20	2.89311	3.68942	907.574	911.263	3.44097	230.020	233.461	—	702,390	702,390	27.0510	42.2526	216.841	715,874
Apartments Low Rise	36.1530	32.9745	11.3672	462.915	0.28034	0.35751	87.9446	88.3021	0.33343	22.2891	22.6225	—	68,062.1	68,062.1	2.62126	4.09431	21.0121	69,368.8
Apartments Mid Rise	167.523	152.795	52.6727	2,145.02	1.29904	1.65659	407.511	409.168	1.54504	103.282	104.827	—	315,381	315,381	12.1462	18.9719	97.3643	321,436
Regional Shopping Center	592.665	558.532	132.449	4,951.19	2.80913	3.71370	861.016	864.729	3.46171	218.220	221.682	—	682,292	682,292	31.0136	41.9169	205.718	695,764
Hotel	12.6729	11.5587	3.98461	162.268	0.09827	0.12532	30.8276	30.9530	0.11688	7.81311	7.92999	—	23,858.1	23,858.1	0.91884	1.43520	7.36547	24,316.2
General Office Building	53.6434	48.9272	16.8666	686.868	0.41597	0.53047	130.491	131.022	0.49474	33.0723	33.5671	—	100,990	100,990	3.88940	6.07509	31.1775	102,929
Industrial Park	23.9665	21.8594	7.53555	306.875	0.18585	0.23700	58.3001	58.5371	0.22104	14.7759	14.9969	—	45,119.6	45,119.6	1.73768	2.71419	13.9293	45,985.8
Government Office Building	89.3262	81.4729	28.0860	1,143.76	0.69267	0.88332	217.292	218.175	0.82384	55.0716	55.8954	—	168,167	168,167	6.47657	10.1161	51.9163	171,395

Element School	146.712	133.813	46.1291	1,878.54	1.13766	1.45079	356.886	358.336	1.35309	90.4508	91.8039	—	276,201	276,201	10.6373	16.6150	85.2686	281,504
Hospital	62.3696	56.8862	19.6103	798.600	0.48364	0.61676	151.718	152.335	0.57522	38.4522	39.0274	—	117,418	117,418	4.52209	7.06332	36.2492	119,672
City Park	0.35347	0.32239	0.11114	4.52596	0.00274	0.00350	0.85984	0.86334	0.00326	0.21792	0.22118	—	665.450	665.450	0.02563	0.04003	0.20544	678.225
Golf Course	1.46748	1.33847	0.46141	18.7901	0.01138	0.01451	3.56975	3.58426	0.01353	0.90473	0.91827	—	2,762.70	2,762.70	0.10640	0.16619	0.85290	2,815.74
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	1,559.95	1,440.77	436.581	17,336.6	10.3098	13.2789	3,213.99	3,227.27	12.3828	814.569	826.952	—	2,503,307	2,503,307	101.146	151.461	767.900	2,551,739
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	370.387	337.938	128.197	4,179.61	2.77936	3.69045	907.574	911.264	3.44195	230.020	233.462	—	675,930	675,930	27.2583	43.0612	5.31996	689,449
Apartments Low Rise	35.8908	32.7465	12.4224	405.007	0.26932	0.35761	87.9446	88.3022	0.33353	22.2891	22.6226	—	65,498.1	65,498.1	2.64135	4.17266	0.51551	66,808.1
Apartments Mid Rise	166.308	151.738	57.5621	1,876.69	1.24797	1.65705	407.511	409.168	1.54548	103.282	104.827	—	303,500	303,500	12.2393	19.3350	2.38872	309,571
Regional Shopping Center	590.032	555.945	144.326	4,461.81	2.70208	3.71568	861.016	864.731	3.46360	218.220	221.684	—	657,420	657,420	31.7624	42.7999	5.04705	670,974
Hotel	12.5810	11.4788	4.35449	141.969	0.09441	0.12535	30.8276	30.9530	0.11691	7.81311	7.93002	—	22,959.4	22,959.4	0.92589	1.46266	0.18070	23,418.6
General Office Building	53.2544	48.5888	18.4322	600.945	0.39962	0.53061	130.491	131.022	0.49488	33.0723	33.5672	—	97,185.4	97,185.4	3.91921	6.19135	0.76491	99,129.2
Industrial Park	23.7927	21.7082	8.23505	268.487	0.17854	0.23706	58.3001	58.5372	0.22110	14.7759	14.9970	—	43,419.9	43,419.9	1.75100	2.76614	0.34174	44,288.3

Government Office Building	88.6784	80.9094	30.6931	1,000.69	0.66544	0.88357	217.292	218.176	0.82408	55.0715	55.8956	—	161,832	161,832	6.52621	10.3097	1.27371	165,068
Elementary School	145.647	132.887	50.4111	1,643.55	1.09293	1.45120	356.886	358.337	1.35348	90.4508	91.8043	—	265,796	265,796	10.7188	16.9330	2.09197	271,112
Hospital	61.9173	56.4928	21.4306	698.701	0.46462	0.61693	151.718	152.335	0.57539	38.4522	39.0276	—	112,995	112,995	4.55675	7.19850	0.88933	115,255
City Park	0.35091	0.32016	0.12146	3.95979	0.00263	0.00350	0.85984	0.86334	0.00326	0.21792	0.22118	—	640.381	640.381	0.02582	0.04080	0.00504	653.189
Golf Course	1.45684	1.32921	0.50424	16.4396	0.01093	0.01452	3.56975	3.58427	0.01354	0.90473	0.91827	—	2,658.63	2,658.63	0.10721	0.16937	0.02092	2,711.80
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	1,550.30	1,432.08	476.690	15,297.9	9.90785	13.2835	3,213.99	3,227.27	12.3872	814.569	826.956	—	2,409,835	2,409,835	102.432	154.440	18.8396	2,458,438
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	66.8162	60.8770	23.7341	792.746	0.51281	0.67340	164.244	164.917	0.62805	41.7658	42.3939	—	113,083	113,083	4.50917	7.14713	15.5017	115,342
Apartments Low Rise	6.47454	5.89902	2.29985	76.8177	0.04969	0.06525	15.9154	15.9806	0.06086	4.04714	4.10800	—	10,957.9	10,957.9	0.43694	0.69256	1.50212	11,176.7
Apartments Mid Rise	30.0012	27.3345	10.6569	355.952	0.23026	0.30236	73.7475	74.0499	0.28200	18.7533	19.0354	—	50,775.8	50,775.8	2.02467	3.20914	6.96043	51,789.7
Regional Shopping Center	104.422	98.5751	25.1829	789.645	0.46249	0.63251	144.048	144.681	0.58954	36.6302	37.2197	—	102,037	102,037	4.98628	6.61062	13.5955	104,145
Hotel	2.26955	2.06781	0.80618	26.9273	0.01742	0.02287	5.57889	5.60177	0.02133	1.41866	1.44000	—	3,841.12	3,841.12	0.15316	0.24277	0.52655	3,917.82
General Office Building	9.60685	8.75290	3.41250	113.981	0.07373	0.09682	23.6151	23.7119	0.09030	6.00510	6.09540	—	16,259.2	16,259.2	0.64833	1.02762	2.22883	16,583.8

Industrial Park	4.29209	3.91057	1.52462	50.9238	0.03294	0.04326	10.5506	10.5939	0.04034	2.68293	2.72327	—	7,264.18	7,264.18	0.28966	0.45911	0.99579	7,409.23
Government Office Building	15.9972	14.5752	5.68244	189.800	0.12278	0.16123	39.3234	39.4847	0.15037	9.99961	10.1500	—	27,074.5	27,074.5	1.07959	1.71117	3.71142	27,615.2
Elementary School	26.2741	23.9387	9.33297	311.732	0.20165	0.26480	64.5858	64.8506	0.24697	16.4236	16.6706	—	44,467.9	44,467.9	1.77314	2.81047	6.09572	45,355.8
Hospital	11.1696	10.1767	3.96761	132.523	0.08573	0.11257	27.4565	27.5691	0.10499	6.98196	7.08695	—	18,904.1	18,904.1	0.75379	1.19478	2.59140	19,281.5
City Park	0.06330	0.05768	0.02249	0.75105	0.00049	0.00064	0.15561	0.15624	0.00060	0.03957	0.04016	—	107.136	107.136	0.00427	0.00677	0.01469	109.275
Golf Course	0.26281	0.23945	0.09335	3.11810	0.00202	0.00265	0.64602	0.64867	0.00247	0.16428	0.16675	—	444.790	444.790	0.01774	0.02811	0.06097	453.672
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	277.650	256.405	86.7159	2,844.92	1.79200	2.37836	569.867	572.245	2.21783	144.912	147.130	—	395,217	395,217	16.6767	25.1402	53.7851	403,179

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	122,921	122,921	15.5544	1.88538	—	123,872
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	8,543.61	8,543.61	1.08110	0.13104	—	8,609.69

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	50,919.7	50,919.7	6.44336	0.78101	—	51,313.6
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	84,304.1	84,304.1	10.6678	1.29307	—	84,956.2
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	13,893.3	13,893.3	1.75805	0.21310	—	14,000.8
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	44,270.0	44,270.0	5.60191	0.67902	—	44,612.4
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	57,164.6	57,164.6	7.23358	0.87680	—	57,606.7
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	31,784.5	31,784.5	4.02199	0.48751	—	32,030.3
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	21,203.3	21,203.3	2.68306	0.32522	—	21,367.3
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	76,723.0	76,723.0	9.70850	1.17679	—	77,316.4
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	790.651	790.651	0.10005	0.01213	—	796.766
Total	—	—	—	—	—	—	—	—	—	—	—	—	512,518	512,518	64.8538	7.86106	—	516,482
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	122,921	122,921	15.5544	1.88538	—	123,872

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	8,543.61	8,543.61	1.08110	0.13104	—	8,609.69
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	50,919.7	50,919.7	6.44336	0.78101	—	51,313.6
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	84,304.1	84,304.1	10.6678	1.29307	—	84,956.2
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	13,893.3	13,893.3	1.75805	0.21310	—	14,000.8
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	44,270.0	44,270.0	5.60191	0.67902	—	44,612.4
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	57,164.6	57,164.6	7.23358	0.87680	—	57,606.7
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	31,784.5	31,784.5	4.02199	0.48751	—	32,030.3
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	21,203.3	21,203.3	2.68306	0.32522	—	21,367.3
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	76,723.0	76,723.0	9.70850	1.17679	—	77,316.4
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	790.651	790.651	0.10005	0.01213	—	796.766
Total	—	—	—	—	—	—	—	—	—	—	—	—	512,518	512,518	64.8538	7.86106	—	516,482
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	20,351.0	20,351.0	2.57520	0.31215	—	20,508.4

Apartment Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,414.49	1,414.49	0.17899	0.02170	—	1,425.43
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	8,430.35	8,430.35	1.06677	0.12931	—	8,495.55
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	13,957.5	13,957.5	1.76618	0.21408	—	14,065.5
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	2,300.20	2,300.20	0.29107	0.03528	—	2,317.99
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	7,329.41	7,329.41	0.92746	0.11242	—	7,386.09
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	9,464.24	9,464.24	1.19760	0.14516	—	9,537.44
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,262.28	5,262.28	0.66589	0.08071	—	5,302.98
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	3,510.45	3,510.45	0.44421	0.05384	—	3,537.60
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	12,702.4	12,702.4	1.60735	0.19483	—	12,800.6
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130.901	130.901	0.01656	0.00201	—	131.914
Total	—	—	—	—	—	—	—	—	—	—	—	—	84,853.2	84,853.2	10.7373	1.30149	—	85,509.5

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	28.2610	14.1305	241.503	102.767	1.54151	19.5258	—	19.5258	19.5258	—	19.5258	—	306,546	306,546	27.1292	0.57722	—	307,396
Apartments Low Rise	1.50215	0.75108	12.8366	5.46238	0.08194	1.03785	—	1.03785	1.03785	—	1.03785	—	16,293.8	16,293.8	1.44200	0.03068	—	16,339.0
Apartments Mid Rise	6.37983	3.18991	54.5185	23.1994	0.34799	4.40788	—	4.40788	4.40788	—	4.40788	—	69,201.8	69,201.8	6.12433	0.13030	—	69,393.7
Regional Shopping Center	2.12514	1.06257	19.3194	16.2283	0.11592	1.46828	—	1.46828	1.46828	—	1.46828	—	23,051.3	23,051.3	2.04003	0.04340	—	23,115.2
Hotel	1.18536	0.59268	10.7760	9.05185	0.06466	0.81898	—	0.81898	0.81898	—	0.81898	—	12,857.6	12,857.6	1.13789	0.02421	—	12,893.2
General Office Building	2.60386	1.30193	23.6714	19.8840	0.14203	1.79903	—	1.79903	1.79903	—	1.79903	—	28,244.0	28,244.0	2.49958	0.05318	—	28,322.3
Industrial Park	3.36228	1.68114	30.5662	25.6756	0.18340	2.32303	—	2.32303	2.32303	—	2.32303	—	36,470.6	36,470.6	3.22763	0.06867	—	36,571.8
Government Office Building	1.86949	0.93474	16.9953	14.2761	0.10197	1.29165	—	1.29165	1.29165	—	1.29165	—	20,278.3	20,278.3	1.79462	0.03818	—	20,334.5
Elementary School	2.94124	1.47062	26.7385	22.4604	0.16043	2.03213	—	2.03213	2.03213	—	2.03213	—	31,903.5	31,903.5	2.82345	0.06007	—	31,992.0
Hospital	5.91876	2.95938	53.8069	45.1978	0.32284	4.08933	—	4.08933	4.08933	—	4.08933	—	64,200.6	64,200.6	5.68173	0.12089	—	64,378.7
City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	56.1491	28.0745	490.732	284.203	3.06268	38.7939	—	38.7939	38.7939	—	38.7939	—	609,047	609,047	53.9004	1.14682	—	610,737
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	28.2610	14.1305	241.503	102.767	1.54151	19.5258	—	19.5258	19.5258	—	19.5258	—	306,546	306,546	27.1292	0.57722	—	307,396
Apartments Low Rise	1.50215	0.75108	12.8366	5.46238	0.08194	1.03785	—	1.03785	1.03785	—	1.03785	—	16,293.8	16,293.8	1.44200	0.03068	—	16,339.0
Apartments Mid Rise	6.37983	3.18991	54.5185	23.1994	0.34799	4.40788	—	4.40788	4.40788	—	4.40788	—	69,201.8	69,201.8	6.12433	0.13030	—	69,393.7
Regional Shopping Center	2.12514	1.06257	19.3194	16.2283	0.11592	1.46828	—	1.46828	1.46828	—	1.46828	—	23,051.3	23,051.3	2.04003	0.04340	—	23,115.2
Hotel	1.18536	0.59268	10.7760	9.05185	0.06466	0.81898	—	0.81898	0.81898	—	0.81898	—	12,857.6	12,857.6	1.13789	0.02421	—	12,893.2
General Office Building	2.60386	1.30193	23.6714	19.8840	0.14203	1.79903	—	1.79903	1.79903	—	1.79903	—	28,244.0	28,244.0	2.49958	0.05318	—	28,322.3
Industrial Park	3.36228	1.68114	30.5662	25.6756	0.18340	2.32303	—	2.32303	2.32303	—	2.32303	—	36,470.6	36,470.6	3.22763	0.06867	—	36,571.8
Government Office Building	1.86949	0.93474	16.9953	14.2761	0.10197	1.29165	—	1.29165	1.29165	—	1.29165	—	20,278.3	20,278.3	1.79462	0.03818	—	20,334.5
Elementary School	2.94124	1.47062	26.7385	22.4604	0.16043	2.03213	—	2.03213	2.03213	—	2.03213	—	31,903.5	31,903.5	2.82345	0.06007	—	31,992.0
Hospital	5.91876	2.95938	53.8069	45.1978	0.32284	4.08933	—	4.08933	4.08933	—	4.08933	—	64,200.6	64,200.6	5.68173	0.12089	—	64,378.7

City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	56.1491	28.0745	490.732	284.203	3.06268	38.7939	—	38.7939	38.7939	—	38.7939	—	609,047	609,047	53.9004	1.14682	—	610,737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	5.15763	2.57881	44.0743	18.7550	0.28132	3.56345	—	3.56345	3.56345	—	3.56345	—	50,752.2	50,752.2	4.49154	0.09556	—	50,892.9
Apartments Low Rise	0.27414	0.13707	2.34268	0.99688	0.01495	0.18941	—	0.18941	0.18941	—	0.18941	—	2,697.63	2,697.63	0.23874	0.00508	—	2,705.11
Apartments Mid Rise	1.16432	0.58216	9.94963	4.23389	0.06351	0.80444	—	0.80444	0.80444	—	0.80444	—	11,457.1	11,457.1	1.01395	0.02157	—	11,488.9
Regional Shopping Center	0.38784	0.19392	3.52580	2.96167	0.02115	0.26796	—	0.26796	0.26796	—	0.26796	—	3,816.41	3,816.41	0.33775	0.00719	—	3,826.99
Hotel	0.21633	0.10816	1.96662	1.65196	0.01180	0.14946	—	0.14946	0.14946	—	0.14946	—	2,128.72	2,128.72	0.18839	0.00401	—	2,134.62
General Office Building	0.47520	0.23760	4.32004	3.62883	0.02592	0.32832	—	0.32832	0.32832	—	0.32832	—	4,676.11	4,676.11	0.41383	0.00880	—	4,689.08
Industrial Park	0.61362	0.30681	5.57834	4.68580	0.03347	0.42395	—	0.42395	0.42395	—	0.42395	—	6,038.12	6,038.12	0.53437	0.01137	—	6,054.87
Government Office Building	0.34118	0.17059	3.10165	2.60539	0.01861	0.23573	—	0.23573	0.23573	—	0.23573	—	3,357.30	3,357.30	0.29712	0.00632	—	3,366.61
Elementary School	0.53678	0.26839	4.87978	4.09901	0.02928	0.37086	—	0.37086	0.37086	—	0.37086	—	5,281.99	5,281.99	0.46745	0.00995	—	5,296.64
Hospital	1.08017	0.54009	9.81977	8.24860	0.05892	0.74630	—	0.74630	0.74630	—	0.74630	—	10,629.2	10,629.2	0.94067	0.02001	—	10,658.6

City Park	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	10.2472	5.12360	89.5586	51.8670	0.55894	7.07989	—	7.07989	7.07989	—	7.07989	—	100,835	100,835	8.92383	0.18987	—	101,114

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	13,760.1	12,410.1	985.753	24,161.3	61.6376	3,391.75	—	3,391.75	3,330.02	—	3,330.02	445,022	850,310	1,295,333	1,326.76	16.1278	—	1,333,308
Consumer Products	2,202.31	2,202.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	203.218	203.218	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	497.290	464.908	36.6981	4,113.15	0.20067	3.69880	—	3.69880	2.79770	—	2.79770	—	12,980.6	12,980.6	0.54345	0.10934	—	13,026.8
Total	16,662.9	15,280.6	1,022.45	28,274.4	61.8382	3,395.45	—	3,395.45	3,332.81	—	3,332.81	445,022	863,291	1,308,313	1,327.31	16.2371	—	1,346,335
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	13,760.1	12,410.1	985.753	24,161.3	61.6376	3,391.75	—	3,391.75	3,330.02	—	3,330.02	445,022	850,310	1,295,33	1,326.76	16.1278	—	1,333,30
Consumer Products	2,202.31	2,202.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	203.218	203.218	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	16,165.6	14,815.7	985.753	24,161.3	61.6376	3,391.75	—	3,391.75	3,330.02	—	3,330.02	445,022	850,310	1,295,333	1,326.76	16.1278	—	1,333,308
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	172.001	155.127	12.3219	302.016	0.77047	42.3969	—	42.3969	41.6252	—	41.6252	5,046.47	9,642.37	14,688.8	15.0453	0.18289	—	15,119.5
Consumer Products	401.922	401.922	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	37.0873	37.0873	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	62.1612	58.1135	4.58726	514.144	0.02508	0.46235	—	0.46235	0.34971	—	0.34971	—	1,471.98	1,471.98	0.06163	0.01240	—	1,477.21
Total	673.172	652.250	16.9092	816.160	0.79555	42.8593	—	42.8593	41.9749	—	41.9749	5,046.47	11,114.3	16,160.8	15.1069	0.19528	—	16,596.7

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,782.13	23,517.4	25,299.5	185.713	4.70250	—	31,343.7
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	222.704	565.264	787.968	22.9073	0.55124	—	1,524.92
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,388.58	3,524.47	4,913.05	142.829	3.43704	—	9,508.01
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,705.25	4,328.23	6,033.48	175.402	4.22086	—	11,676.3
Hotel	—	—	—	—	—	—	—	—	—	—	—	46.5185	118.072	164.591	4.78488	0.11514	—	318.526
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,184.18	3,005.67	4,189.85	121.805	2.93111	—	8,108.44
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,989.52	5,049.76	7,039.27	204.641	4.92448	—	13,622.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	950.307	2,412.05	3,362.36	97.7484	2.35221	—	6,507.03
Elementary School	—	—	—	—	—	—	—	—	—	—	—	263.650	669.191	932.841	27.1190	0.65259	—	1,805.29
Hospital	—	—	—	—	—	—	—	—	—	—	—	883.174	2,241.65	3,124.83	90.8430	2.18604	—	6,047.35
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	10,416.0	45,431.7	55,847.8	1,073.79	26.0732	—	90,462.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,782.13	23,517.4	25,299.5	185.713	4.70250	—	31,343.7
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	222.704	565.264	787.968	22.9073	0.55124	—	1,524.92
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,388.58	3,524.47	4,913.05	142.829	3.43704	—	9,508.01
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,705.25	4,328.23	6,033.48	175.402	4.22086	—	11,676.3
Hotel	—	—	—	—	—	—	—	—	—	—	—	46.5185	118.072	164.591	4.78488	0.11514	—	318.526
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,184.18	3,005.67	4,189.85	121.805	2.93111	—	8,108.44
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,989.52	5,049.76	7,039.27	204.641	4.92448	—	13,622.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	950.307	2,412.05	3,362.36	97.7484	2.35221	—	6,507.03
Elementary School	—	—	—	—	—	—	—	—	—	—	—	263.650	669.191	932.841	27.1190	0.65259	—	1,805.29
Hospital	—	—	—	—	—	—	—	—	—	—	—	883.174	2,241.65	3,124.83	90.8430	2.18604	—	6,047.35
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	10,416.0	45,431.7	55,847.8	1,073.79	26.0732	—	90,462.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	295.053	3,893.57	4,188.62	30.7470	0.77855	—	5,189.30
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	36.8712	93.5859	130.457	3.79257	0.09126	—	252.468
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	229.895	583.516	813.411	23.6470	0.56904	—	1,574.16
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	282.324	716.588	998.912	29.0397	0.69881	—	1,933.15
Hotel	—	—	—	—	—	—	—	—	—	—	—	7.70167	19.5482	27.2499	0.79219	0.01906	—	52.7356
General Office Building	—	—	—	—	—	—	—	—	—	—	—	196.055	497.623	693.678	20.1662	0.48528	—	1,342.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	329.387	836.045	1,165.43	33.8807	0.81530	—	2,255.41
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	157.334	399.343	556.677	16.1834	0.38944	—	1,077.31
Elementary School	—	—	—	—	—	—	—	—	—	—	—	43.6503	110.792	154.443	4.48985	0.10804	—	298.886
Hospital	—	—	—	—	—	—	—	—	—	—	—	146.220	371.131	517.351	15.0401	0.36192	—	1,001.21
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Golf Course	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	1,724.49	7,521.74	9,246.23	177.779	4.31672	—	14,977.1

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,384.1	0.00000	10,384.1	1,037.86	0.00000	—	36,330.5
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	2,375.95	0.00000	2,375.95	237.468	0.00000	—	8,312.64
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7,073.19	0.00000	7,073.19	706.940	0.00000	—	24,746.7
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	6,798.47	0.00000	6,798.47	679.482	0.00000	—	23,785.5
Hotel	—	—	—	—	—	—	—	—	—	—	—	282.381	0.00000	282.381	28.2230	0.00000	—	987.955
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,742.70	0.00000	1,742.70	174.177	0.00000	—	6,097.11

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	3,000.40	0.00000	3,000.40	299.879	0.00000	—	10,497.4
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1,251.20	0.00000	1,251.20	125.053	0.00000	—	4,377.54
Elementary School	—	—	—	—	—	—	—	—	—	—	—	3,324.37	0.00000	3,324.37	332.259	0.00000	—	11,630.9
Hospital	—	—	—	—	—	—	—	—	—	—	—	21,378.8	0.00000	21,378.8	2,136.74	0.00000	—	74,797.3
City Park	—	—	—	—	—	—	—	—	—	—	—	13.2599	0.00000	13.2599	1.32528	0.00000	—	46.3919
Golf Course	—	—	—	—	—	—	—	—	—	—	—	124.156	0.00000	124.156	12.4089	0.00000	—	434.379
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	57,749.0	0.00000	57,749.0	5,771.81	0.00000	—	202,044
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,384.1	0.00000	10,384.1	1,037.86	0.00000	—	36,330.5
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	2,375.95	0.00000	2,375.95	237.468	0.00000	—	8,312.64
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7,073.19	0.00000	7,073.19	706.940	0.00000	—	24,746.7
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	6,798.47	0.00000	6,798.47	679.482	0.00000	—	23,785.5
Hotel	—	—	—	—	—	—	—	—	—	—	—	282.381	0.00000	282.381	28.2230	0.00000	—	987.955

General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,742.70	0.00000	1,742.70	174.177	0.00000	—	6,097.11
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	3,000.40	0.00000	3,000.40	299.879	0.00000	—	10,497.4
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1,251.20	0.00000	1,251.20	125.053	0.00000	—	4,377.54
Elementary School	—	—	—	—	—	—	—	—	—	—	—	3,324.37	0.00000	3,324.37	332.259	0.00000	—	11,630.9
Hospital	—	—	—	—	—	—	—	—	—	—	—	21,378.8	0.00000	21,378.8	2,136.74	0.00000	—	74,797.3
City Park	—	—	—	—	—	—	—	—	—	—	—	13.2599	0.00000	13.2599	1.32528	0.00000	—	46.3919
Golf Course	—	—	—	—	—	—	—	—	—	—	—	124.156	0.00000	124.156	12.4089	0.00000	—	434.379
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	57,749.0	0.00000	57,749.0	5,771.81	0.00000	—	202,044
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,719.21	0.00000	1,719.21	171.829	0.00000	—	6,014.93
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	393.366	0.00000	393.366	39.3155	0.00000	—	1,376.25
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,171.05	0.00000	1,171.05	117.042	0.00000	—	4,097.09
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,125.56	0.00000	1,125.56	112.496	0.00000	—	3,937.96
Hotel	—	—	—	—	—	—	—	—	—	—	—	46.7514	0.00000	46.7514	4.67263	0.00000	—	163.567

General Office Building	—	—	—	—	—	—	—	—	—	—	—	288.524	0.00000	288.524	28.8369	0.00000	—	1,009.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	496.750	0.00000	496.750	49.6483	0.00000	—	1,737.96
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	207.151	0.00000	207.151	20.7040	0.00000	—	724.751
Elementary School	—	—	—	—	—	—	—	—	—	—	—	550.388	0.00000	550.388	55.0093	0.00000	—	1,925.62
Hospital	—	—	—	—	—	—	—	—	—	—	—	3,539.51	0.00000	3,539.51	353.761	0.00000	—	12,383.5
City Park	—	—	—	—	—	—	—	—	—	—	—	2.19533	0.00000	2.19533	0.21942	0.00000	—	7.68070
Golf Course	—	—	—	—	—	—	—	—	—	—	—	20.5554	0.00000	20.5554	2.05444	0.00000	—	71.9163
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	9,561.01	0.00000	9,561.01	955.589	0.00000	—	33,450.7

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	348.463	348.463

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.6710	23.6710
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	133.667	133.667
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57.6739	57.6739
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,172.24	2,172.24
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.45598	8.45598
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,168.69	1,168.69
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.07113	6.07113
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.3288	18.3288
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.75647	5.75647
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,943.02	3,943.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	348.463	348.463

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.6710	23.6710
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	133.667	133.667
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57.6739	57.6739
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,172.24	2,172.24
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.45598	8.45598
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,168.69	1,168.69
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.07113	6.07113
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.3288	18.3288
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.75647	5.75647
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,943.02	3,943.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57.6921	57.6921
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.91900	3.91900

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.1301	22.1301
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.54858	9.54858
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	359.639	359.639
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.39998	1.39998
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	193.490	193.490
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.00514	1.00514
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.03455	3.03455
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.95305	0.95305
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Golf Course	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	652.812	652.812

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

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
Single Family Housing	132,465	132,465	132,465	48,349,816	1,284,913	1,284,913	1,284,913	468,993,216

Apartments Low Rise	12,836.0	12,836.0	12,836.0	4,685,135	124,509	124,509	124,509	45,445,807
Apartments Mid Rise	59,478.4	59,478.4	59,478.4	21,709,629	576,941	576,941	576,941	210,583,400
Regional Shopping Center	255,059	255,059	255,059	93,096,641	1,090,083	1,218,997	1,218,997	411,324,093
Hotel	4,499.46	4,499.46	4,499.46	1,642,302	43,644.7	43,644.7	43,644.7	15,930,332
General Office Building	19,045.9	19,045.9	19,045.9	6,951,748	184,745	184,745	184,745	67,431,958
Industrial Park	8,509.21	8,509.21	8,509.21	3,105,862	82,539.3	82,539.3	82,539.3	30,126,858
Government Office Building	31,714.9	31,714.9	31,714.9	11,575,949	307,635	307,635	307,635	112,286,704
Elementary School	52,089.3	52,089.3	52,089.3	19,012,611	505,267	505,267	505,267	184,422,331
Hospital	22,144.1	22,144.1	22,144.1	8,082,591	214,798	214,798	214,798	78,401,134
City Park	125.499	125.499	125.499	45,807.0	1,217.34	1,217.34	1,217.34	444,328
Golf Course	521.024	521.024	521.024	190,174	5,053.93	5,053.93	5,053.93	1,844,686
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	1,248	1,248
Single Family Housing	Gas Fireplaces	21,208	21,208
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0
Single Family Housing	No Fireplaces	2,495	2,495
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	1,248	1,248
Single Family Housing	Non-Catalytic Wood Stoves	1,248	1,248

Single Family Housing	Pellet Wood Stoves	0	0
Apartments Low Rise	Wood Fireplaces	156	156
Apartments Low Rise	Gas Fireplaces	2,650	2,650
Apartments Low Rise	Propane Fireplaces	0	0
Apartments Low Rise	Electric Fireplaces	0	0
Apartments Low Rise	No Fireplaces	312	312
Apartments Low Rise	Conventional Wood Stoves	0	0
Apartments Low Rise	Catalytic Wood Stoves	156	156
Apartments Low Rise	Non-Catalytic Wood Stoves	156	156
Apartments Low Rise	Pellet Wood Stoves	0	0
Apartments Mid Rise	Wood Fireplaces	972	972
Apartments Mid Rise	Gas Fireplaces	16,525	16,525
Apartments Mid Rise	Propane Fireplaces	0	0
Apartments Mid Rise	Electric Fireplaces	0	0
Apartments Mid Rise	No Fireplaces	1,944	1,944
Apartments Mid Rise	Conventional Wood Stoves	0	0
Apartments Mid Rise	Catalytic Wood Stoves	972	972
Apartments Mid Rise	Non-Catalytic Wood Stoves	972	972
Apartments Mid Rise	Pellet Wood Stoves	0	0
Regional Shopping Center	Wood Fireplaces	0	0
Regional Shopping Center	Gas Fireplaces	0	0
Regional Shopping Center	Propane Fireplaces	0	0
Regional Shopping Center	Electric Fireplaces	0	0
Regional Shopping Center	No Fireplaces	0	0
Regional Shopping Center	Conventional Wood Stoves	0	0
Regional Shopping Center	Catalytic Wood Stoves	0	0
Regional Shopping Center	Non-Catalytic Wood Stoves	0	0
Regional Shopping Center	Pellet Wood Stoves	0	0

Hotel	Wood Fireplaces	0	0
Hotel	Gas Fireplaces	0	0
Hotel	Propane Fireplaces	0	0
Hotel	Electric Fireplaces	0	0
Hotel	No Fireplaces	0	0
Hotel	Conventional Wood Stoves	0	0
Hotel	Catalytic Wood Stoves	0	0
Hotel	Non-Catalytic Wood Stoves	0	0
Hotel	Pellet Wood Stoves	0	0
General Office Building	Wood Fireplaces	0	0
General Office Building	Gas Fireplaces	0	0
General Office Building	Propane Fireplaces	0	0
General Office Building	Electric Fireplaces	0	0
General Office Building	No Fireplaces	0	0
General Office Building	Conventional Wood Stoves	0	0
General Office Building	Catalytic Wood Stoves	0	0
General Office Building	Non-Catalytic Wood Stoves	0	0
General Office Building	Pellet Wood Stoves	0	0
Industrial Park	Wood Fireplaces	0	0
Industrial Park	Gas Fireplaces	0	0
Industrial Park	Propane Fireplaces	0	0
Industrial Park	Electric Fireplaces	0	0
Industrial Park	No Fireplaces	0	0
Industrial Park	Conventional Wood Stoves	0	0
Industrial Park	Catalytic Wood Stoves	0	0
Industrial Park	Non-Catalytic Wood Stoves	0	0
Industrial Park	Pellet Wood Stoves	0	0
Government Office Building	Wood Fireplaces	0	0

Government Office Building	Gas Fireplaces	0	0
Government Office Building	Propane Fireplaces	0	0
Government Office Building	Electric Fireplaces	0	0
Government Office Building	No Fireplaces	0	0
Government Office Building	Conventional Wood Stoves	0	0
Government Office Building	Catalytic Wood Stoves	0	0
Government Office Building	Non-Catalytic Wood Stoves	0	0
Government Office Building	Pellet Wood Stoves	0	0
Elementary School	Wood Fireplaces	0	0
Elementary School	Gas Fireplaces	0	0
Elementary School	Propane Fireplaces	0	0
Elementary School	Electric Fireplaces	0	0
Elementary School	No Fireplaces	0	0
Elementary School	Conventional Wood Stoves	0	0
Elementary School	Catalytic Wood Stoves	0	0
Elementary School	Non-Catalytic Wood Stoves	0	0
Elementary School	Pellet Wood Stoves	0	0
Hospital	Wood Fireplaces	0	0
Hospital	Gas Fireplaces	0	0
Hospital	Propane Fireplaces	0	0
Hospital	Electric Fireplaces	0	0
Hospital	No Fireplaces	0	0
Hospital	Conventional Wood Stoves	0	0
Hospital	Catalytic Wood Stoves	0	0
Hospital	Non-Catalytic Wood Stoves	0	0
Hospital	Pellet Wood Stoves	0	0
City Park	Wood Fireplaces	0	0
City Park	Gas Fireplaces	0	0

City Park	Propane Fireplaces	0	0
City Park	Electric Fireplaces	0	0
City Park	No Fireplaces	0	0
City Park	Conventional Wood Stoves	0	0
City Park	Catalytic Wood Stoves	0	0
City Park	Non-Catalytic Wood Stoves	0	0
City Park	Pellet Wood Stoves	0	0
Golf Course	Wood Fireplaces	0	0
Golf Course	Gas Fireplaces	0	0
Golf Course	Propane Fireplaces	0	0
Golf Course	Electric Fireplaces	0	0
Golf Course	No Fireplaces	0	0
Golf Course	Conventional Wood Stoves	0	0
Golf Course	Catalytic Wood Stoves	0	0
Golf Course	Non-Catalytic Wood Stoves	0	0
Golf Course	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	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)
143,011,352	47,670,451	48,426,491	16,142,164	75,794.4

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

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)
Single Family Housing	172,040,765	260.788	0.0330	0.0040	956,505,223
Apartments Low Rise	11,957,672	260.788	0.0330	0.0040	50,841,096
Apartments Mid Rise	71,267,481	260.788	0.0330	0.0040	215,928,133
Regional Shopping Center	117,992,413	260.788	0.0330	0.0040	71,926,243
Hotel	19,445,146	260.788	0.0330	0.0040	40,119,076
General Office Building	61,960,494	260.788	0.0330	0.0040	88,128,755
Industrial Park	80,007,739	260.788	0.0330	0.0040	113,798,035
Government Office Building	44,485,672	260.788	0.0330	0.0040	63,273,654
Elementary School	29,676,245	260.788	0.0330	0.0040	99,547,484
Hospital	107,381,840	260.788	0.0330	0.0040	200,323,224
City Park	0.00000	260.788	0.0330	0.0040	0.00000
Golf Course	0.00000	260.788	0.0330	0.0040	0.00000
Parking Lot	1,106,598	260.788	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	930,018,584	5,009,460,357
Apartments Low Rise	116,219,708	0.00000
Apartments Mid Rise	724,639,946	0.00000
Regional Shopping Center	889,896,088	0.00000
Hotel	24,275,999	0.00000
General Office Building	617,973,843	0.00000
Industrial Park	1,038,243,125	0.00000
Government Office Building	495,924,107	0.00000
Elementary School	137,587,472	0.00000
Hospital	460,890,015	0.00000
City Park	0.00000	0.00000
Golf Course	0.00000	0.00000
Parking Lot	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	19,267.7	0.00000
Apartments Low Rise	4,408.57	0.00000
Apartments Mid Rise	13,124.3	0.00000
Regional Shopping Center	12,614.5	0.00000
Hotel	523.957	0.00000
General Office Building	3,233.58	0.00000

Industrial Park	5,567.23	0.00000
Government Office Building	2,321.61	0.00000
Elementary School	6,168.37	0.00000
Hospital	39,668.4	0.00000
City Park	24.6037	0.00000
Golf Course	230.371	0.00000
Parking Lot	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000

Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000
Hotel	Household refrigerators and/or freezers	R-134a	1,430.00	0.00000	0.60000	0.00000	1.000000
Hotel	Other commercial A/C and heat pumps	R-410A	2,088.00	1.80000	4.00000	4.00000	18.0000
Hotel	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000
General Office Building	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.30000	4.00000	4.00000	18.0000
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Elementary School	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00004	1.000000	0.00000	1.000000
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000
Hospital	Chillers	R-134a	1,430.00	0.00230	2.00000	2.00000	23.0000
Hospital	Household refrigerators and/or freezers	R-134a	1,430.00	0.00460	0.60000	0.00000	1.000000

Hospital	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00001	1.000000	0.00000	1.000000
Hospital	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00015	7.50000	7.50000	20.0000
City Park	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000
Golf Course	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000
Golf Course	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.03750	1.000000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

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)

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	11.6600	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	46.9944
AQ-PM	85.6254
AQ-DPM	53.0803
Drinking Water	58.4239
Lead Risk Housing	76.6856
Pesticides	0.00000
Toxic Releases	92.1230
Traffic	63.0875
Effect Indicators	—
CleanUp Sites	53.8820
Groundwater	88.1288
Haz Waste Facilities/Generators	81.8795
Impaired Water Bodies	0.00000
Solid Waste	36.4719
Sensitive Population	—
Asthma	51.3584
Cardio-vascular	85.3190
Low Birth Weights	9.18655

Socioeconomic Factor Indicators	—
Education	80.0304
Housing	60.5577
Linguistic	69.2245
Poverty	68.4799
Unemployment	68.4019

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	28.46143975
Employed	60.23354292
Median HI	25.36892083
Education	—
Bachelor's or higher	15.47542666
High school enrollment	100
Preschool enrollment	67.62479148
Transportation	—
Auto Access	21.12151931
Active commuting	52.05954061
Social	—
2-parent households	10.12447068
Voting	10.88156037
Neighborhood	—
Alcohol availability	22.76401899
Park access	11.44616964
Retail density	60.02823046

Supermarket access	63.96766329
Tree canopy	33.81239574
Housing	—
Homeownership	16.80995765
Housing habitability	14.14089568
Low-inc homeowner severe housing cost burden	49.48030284
Low-inc renter severe housing cost burden	58.02643398
Uncrowded housing	26.88310022
Health Outcomes	—
Insured adults	35.51905556
Arthritis	32.9
Asthma ER Admissions	49.9
High Blood Pressure	39.5
Cancer (excluding skin)	40.8
Asthma	58.2
Coronary Heart Disease	17.4
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	19.9
Life Expectancy at Birth	33.6
Cognitively Disabled	35.0
Physically Disabled	18.7
Heart Attack ER Admissions	41.1
Mental Health Not Good	39.0
Chronic Kidney Disease	14.8
Obesity	30.3
Pedestrian Injuries	88.0
Physical Health Not Good	27.6
Stroke	22.5

Health Risk Behaviors	—
Binge Drinking	61.9
Current Smoker	48.5
No Leisure Time for Physical Activity	31.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	77.6
Elderly	27.3
English Speaking	30.7
Foreign-born	64.3
Outdoor Workers	62.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	9.7
Traffic Density	62.7
Traffic Access	60.2
Other Indices	—
Hardship	67.4
Other Decision Support	—
2016 Voting	15.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0000
Healthy Places Index Score for Project Location (b)	25.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

8.1. Justifications

Screen	Justification
Land Use	Land use data updated based on project information. Residential building square feet and landscaped area and hotel acres and building square feet used default values.
Operations: Vehicle Data	Trip generation scaled per total vmt estimate in Ganddini traffic report. Trip length updated based on regional average in traffic report.
Operations: Vehicle EF	Emission rates updated with EMFAC2025 emission rates.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	8,100.97	3,158.89
Population	people	73,855.0	72,628.0
Lot Area	acre	194.875	222.500
Landscape Area	sq. ft	—	0.00000
Population	people	9,229.00	17,647.0
Lot Area	acre	511.605	741.700
Landscape Area	sq. ft	—	0.00000

Population	people	57,545.0	52,535.0
Lot Area	acre	275.800	458.521
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	79.8201	43.4491
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	103.069	374.141
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	57.3083	193.500
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	108.928	408.894
Landscape Area	sq. ft	—	0.00000
Lot Area	acre	84.3205	49.6000
Landscape Area	sq. ft	—	0.00000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Single Family Housing	Weekday Trip Rate	size/day	9.44000	5.30902
Single Family Housing	Saturday Trip Rate	size/day	9.54000	5.30902
Single Family Housing	Sunday Trip Rate	size/day	8.55000	5.30902
Single Family Housing	Res H-W Trip Length	miles	14.9580	9.70000
Single Family Housing	Res H-S Trip Length	miles	8.57462	9.70000
Single Family Housing	Res H-O Trip Length	miles	5.16083	9.70000
Apartments Low Rise	Weekday Trip Rate	size/day	7.32000	4.11674
Apartments Low Rise	Saturday Trip Rate	size/day	8.14000	4.11674
Apartments Low Rise	Sunday Trip Rate	size/day	6.28000	4.11674

Apartments Low Rise	Res H-W Trip Length	miles	14.9580	9.70000
Apartments Low Rise	Res H-S Trip Length	miles	8.57462	9.70000
Apartments Low Rise	Res H-O Trip Length	miles	5.16083	9.70000
Apartments Mid Rise	Weekday Trip Rate	size/day	5.44000	3.05943
Apartments Mid Rise	Saturday Trip Rate	size/day	4.91000	3.05943
Apartments Mid Rise	Sunday Trip Rate	size/day	4.09000	3.05943
Apartments Mid Rise	Res H-W Trip Length	miles	14.9580	9.70000
Apartments Mid Rise	Res H-S Trip Length	miles	8.57462	9.70000
Apartments Mid Rise	Res H-O Trip Length	miles	5.16083	9.70000
Regional Shopping Center	Weekday Trip Rate	size/day	37.7500	21.2304
Regional Shopping Center	Saturday Trip Rate	size/day	46.1200	21.2304
Regional Shopping Center	Sunday Trip Rate	size/day	21.1000	21.2304
Regional Shopping Center	Non-Res H-W Trip Length	miles	14.9580	9.70000
Regional Shopping Center	Non-Res W-O Trip Length	miles	8.99635	9.70000
Regional Shopping Center	Non-Res O-O Trip Length	miles	4.43176	9.70000
Hotel	Weekday Trip Rate	size/day	8.36000	4.70163
Hotel	Saturday Trip Rate	size/day	8.19000	4.70163
Hotel	Sunday Trip Rate	size/day	5.95000	4.70163
Hotel	Non-Res H-W Trip Length	miles	14.9580	9.70000
Hotel	Non-Res W-O Trip Length	miles	8.99635	9.70000
Hotel	Non-Res O-O Trip Length	miles	4.43176	9.70000
General Office Building	Weekday Trip Rate	size/day	9.74000	5.47773
General Office Building	Saturday Trip Rate	size/day	2.21000	5.47773
General Office Building	Sunday Trip Rate	size/day	0.70000	5.47773
General Office Building	Non-Res H-W Trip Length	miles	14.9580	9.70000
General Office Building	Non-Res W-O Trip Length	miles	8.99635	9.70000
General Office Building	Non-Res O-O Trip Length	miles	4.43176	9.70000
Industrial Park	Weekday Trip Rate	size/day	3.37000	1.89527

Industrial Park	Saturday Trip Rate	size/day	2.54000	1.89527
Industrial Park	Sunday Trip Rate	size/day	1.24000	1.89527
Industrial Park	Non-Res H-W Trip Length	miles	14.9580	9.70000
Industrial Park	Non-Res W-O Trip Length	miles	8.99635	9.70000
Industrial Park	Non-Res O-O Trip Length	miles	4.43176	9.70000
Government Office Building	Weekday Trip Rate	size/day	22.5900	12.7045
Government Office Building	Saturday Trip Rate	size/day	0.00000	12.7045
Government Office Building	Sunday Trip Rate	size/day	0.00000	12.7045
Government Office Building	Non-Res H-W Trip Length	miles	14.9580	9.70000
Government Office Building	Non-Res W-O Trip Length	miles	8.99635	9.70000
Government Office Building	Non-Res O-O Trip Length	miles	4.43176	9.70000
Elementary School	Weekday Trip Rate	size/day	19.5200	10.9780
Elementary School	Saturday Trip Rate	size/day	0.00000	10.9780
Elementary School	Sunday Trip Rate	size/day	0.00000	10.9780
Elementary School	Non-Res H-W Trip Length	miles	14.9580	9.70000
Elementary School	Non-Res W-O Trip Length	miles	8.99635	9.70000
Elementary School	Non-Res O-O Trip Length	miles	4.43176	9.70000
Hospital	Weekday Trip Rate	size/day	10.7200	6.02888
Hospital	Saturday Trip Rate	size/day	7.72000	6.02888
Hospital	Sunday Trip Rate	size/day	6.77000	6.02888
Hospital	Non-Res H-W Trip Length	miles	14.9580	9.70000
Hospital	Non-Res W-O Trip Length	miles	8.99635	9.70000
Hospital	Non-Res O-O Trip Length	miles	4.43176	9.70000
City Park	Weekday Trip Rate	size/day	0.78000	0.43867
City Park	Saturday Trip Rate	size/day	1.96000	0.43867
City Park	Sunday Trip Rate	size/day	2.19000	0.43867
City Park	Non-Res H-W Trip Length	miles	14.9580	9.70000
City Park	Non-Res W-O Trip Length	miles	8.99635	9.70000

City Park	Non-Res O-O Trip Length	miles	4.43176	9.70000
Golf Course	Weekday Trip Rate	size/day	3.74000	2.10336
Golf Course	Saturday Trip Rate	size/day	3.74000	2.10336
Golf Course	Sunday Trip Rate	size/day	3.74000	2.10336
Golf Course	Non-Res H-W Trip Length	miles	14.9580	9.70000
Golf Course	Non-Res W-O Trip Length	miles	8.99635	9.70000
Golf Course	Non-Res O-O Trip Length	miles	4.43176	9.70000
Parking Lot	Non-Res H-W Trip Length	miles	14.9580	9.70000
Parking Lot	Non-Res W-O Trip Length	miles	8.99635	9.70000
Parking Lot	Non-Res O-O Trip Length	miles	4.43176	9.70000

8.5.1.3. Vehicle EF

Year	Season	Vehicle Class	Model Parameter	Units	Default Value	New Value
2045	A	HHDT	TOG RUNEX	g/mi	0.03356	0.03780
2045	A	HHDT	TOG IDLEX	g/trip	0.53081	0.51297
2045	A	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	TOG DIURN	g/trip	—	0.00018
2045	A	HHDT	TOG HOTSOAK	g/trip	—	0.00003
2045	A	HHDT	TOG RUNLOSS	g/trip	—	0.00031
2045	A	HHDT	ROG RUNEX	g/mi	0.00863	0.00971
2045	A	HHDT	ROG IDLEX	g/trip	0.29927	0.37536
2045	A	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	ROG DIURN	g/trip	—	0.00018
2045	A	HHDT	ROG HOTSOAK	g/trip	—	0.00003
2045	A	HHDT	ROG RUNLOSS	g/trip	—	0.00031
2045	A	HHDT	NOx RUNEX	g/mi	0.98799	0.40296
2045	A	HHDT	NOx IDLEX	g/trip	3.62240	0.63541
2045	A	HHDT	NOx STREX	g/trip	2.03265	0.80770

2045	A	HHDT	CO RUNEX	g/mi	0.20316	0.21829
2045	A	HHDT	CO IDLEX	g/trip	5.15038	5.84792
2045	A	HHDT	CO STREX	g/trip	0.00063	0.00152
2045	A	HHDT	SOx RUNEX	g/mi	0.00973	0.00399
2045	A	HHDT	SOx IDLEX	g/trip	0.00539	0.00237
2045	A	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	PM2.5 RUNEX	g/mi	0.01801	0.01108
2045	A	HHDT	PM2.5 IDLEX	g/trip	0.00152	0.00101
2045	A	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	PM2.5 PMTW	g/mi	0.00887	0.00887
2045	A	HHDT	PM2.5 PMBW	g/mi	0.02856	0.03042
2045	A	HHDT	PM10 RUNEX	g/mi	0.01882	0.01158
2045	A	HHDT	PM10 IDLEX	g/trip	0.00159	0.00106
2045	A	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	PM10 PMTW	g/mi	0.03548	0.00887
2045	A	HHDT	PM10 PMBW	g/mi	0.08160	0.03042
2045	A	HHDT	CO, RUNEX	g/mi	1,061.56	1,250.72
2045	A	HHDT	CO, IDLEX	g/trip	669.349	775.997
2045	A	HHDT	CO, STREX	g/trip	0.00574	0.02966
2045	A	HHDT	CH„ RUNEX	g/mi	0.02401	0.02742
2045	A	HHDT	CH„ IDLEX	g/trip	0.20307	0.10306
2045	A	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2045	A	HHDT	N,O RUNEX	g/mi	0.16882	0.39188
2045	A	HHDT	N,O IDLEX	g/trip	0.11007	0.00000
2045	A	HHDT	N,O STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	TOG RUNEX	g/mi	0.03356	0.03780
2045	S	HHDT	TOG IDLEX	g/trip	0.55090	0.53843
2045	S	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005

2045	S	HHDT	TOG DIURN	g/trip	—	0.00019
2045	S	HHDT	TOG HOTSOAK	g/trip	—	0.00003
2045	S	HHDT	TOG RUNLOSS	g/trip	—	0.00031
2045	S	HHDT	ROG RUNEX	g/mi	0.00863	0.00972
2045	S	HHDT	ROG IDLEX	g/trip	0.31692	0.39772
2045	S	HHDT	ROG STREX	g/trip	< 0.000005	0.00000
2045	S	HHDT	ROG DIURN	g/trip	—	0.00019
2045	S	HHDT	ROG HOTSOAK	g/trip	—	0.00003
2045	S	HHDT	ROG RUNLOSS	g/trip	—	0.00031
2045	S	HHDT	NOx RUNEX	g/mi	0.93624	0.38101
2045	S	HHDT	NOx IDLEX	g/trip	3.45016	0.60563
2045	S	HHDT	NOx STREX	g/trip	2.03265	0.80770
2045	S	HHDT	CO RUNEX	g/mi	0.20321	0.21834
2045	S	HHDT	CO IDLEX	g/trip	5.09301	5.77642
2045	S	HHDT	CO STREX	g/trip	0.00060	0.00144
2045	S	HHDT	SOx RUNEX	g/mi	0.00973	0.00399
2045	S	HHDT	SOx IDLEX	g/trip	0.00533	0.00234
2045	S	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	PM2.5 RUNEX	g/mi	0.01801	0.01108
2045	S	HHDT	PM2.5 IDLEX	g/trip	0.00137	0.00091
2045	S	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	PM2.5 PMTW	g/mi	0.00887	0.00887
2045	S	HHDT	PM2.5 PMBW	g/mi	0.02856	0.03042
2045	S	HHDT	PM10 RUNEX	g/mi	0.01882	0.01158
2045	S	HHDT	PM10 IDLEX	g/trip	0.00145	0.00096
2045	S	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	PM10 PMTW	g/mi	0.03548	0.03547
2045	S	HHDT	PM10 PMBW	g/mi	0.08160	0.08691

2045	S	HHDT	CO, RUNEX	g/mi	1,061.56	1,250.72
2045	S	HHDT	CO, IDLEX	g/trip	662.101	766.097
2045	S	HHDT	CO, STREX	g/trip	0.00569	0.02954
2045	S	HHDT	CH„ RUNEX	g/mi	0.02401	0.02742
2045	S	HHDT	CH„ IDLEX	g/trip	0.20389	0.10410
2045	S	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2045	S	HHDT	N,O RUNEX	g/mi	0.16882	0.39188
2045	S	HHDT	N,O IDLEX	g/trip	0.10893	0.00000
2045	S	HHDT	N,O STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	TOG RUNEX	g/mi	0.03356	0.03780
2045	W	HHDT	TOG IDLEX	g/trip	0.50307	0.47781
2045	W	HHDT	TOG STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	TOG DIURN	g/trip	—	0.00018
2045	W	HHDT	TOG HOTSOAK	g/trip	—	0.00003
2045	W	HHDT	TOG RUNLOSS	g/trip	—	0.00031
2045	W	HHDT	ROG RUNEX	g/mi	0.00863	0.00971
2045	W	HHDT	ROG IDLEX	g/trip	0.27490	0.34447
2045	W	HHDT	ROG STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	ROG DIURN	g/trip	—	0.00018
2045	W	HHDT	ROG HOTSOAK	g/trip	—	0.00003
2045	W	HHDT	ROG RUNLOSS	g/trip	—	0.00031
2045	W	HHDT	NOx RUNEX	g/mi	0.97076	0.39573
2045	W	HHDT	NOx IDLEX	g/trip	3.86025	0.67653
2045	W	HHDT	NOx STREX	g/trip	2.03265	0.80770
2045	W	HHDT	CO RUNEX	g/mi	0.20314	0.21827
2045	W	HHDT	CO IDLEX	g/trip	5.22960	5.94666
2045	W	HHDT	CO STREX	g/trip	0.00064	0.00154
2045	W	HHDT	SOx RUNEX	g/mi	0.00973	0.00399

2045	W	HHDT	SOx IDLEX	g/trip	0.00549	0.00242
2045	W	HHDT	SOx STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	PM2.5 RUNEX	g/mi	0.01801	0.01108
2045	W	HHDT	PM2.5 IDLEX	g/trip	0.00171	0.00115
2045	W	HHDT	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	PM2.5 PMTW	g/mi	0.00887	0.00887
2045	W	HHDT	PM2.5 PMBW	g/mi	0.02856	0.03042
2045	W	HHDT	PM10 RUNEX	g/mi	0.01882	0.01158
2045	W	HHDT	PM10 IDLEX	g/trip	0.00180	0.00120
2045	W	HHDT	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	PM10 PMTW	g/mi	0.03548	0.03547
2045	W	HHDT	PM10 PMBW	g/mi	0.08160	0.08691
2045	W	HHDT	CO, RUNEX	g/mi	1,061.56	1,250.72
2045	W	HHDT	CO, IDLEX	g/trip	679.357	789.668
2045	W	HHDT	CO, STREX	g/trip	0.00575	0.02969
2045	W	HHDT	CH„ RUNEX	g/mi	0.02401	0.02742
2045	W	HHDT	CH„ IDLEX	g/trip	0.20194	0.10163
2045	W	HHDT	CH„ STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	N,O RUNEX	g/mi	0.16882	0.39188
2045	W	HHDT	N,O IDLEX	g/trip	0.11165	0.00000
2045	W	HHDT	N,O STREX	g/trip	< 0.000005	< 0.000005
2045	W	HHDT	HFC RUNEX	g/mi	0.00001	0.00000
2045	A	LDA	TOG RUNEX	g/mi	0.00414	0.00699
2045	A	LDA	TOG STREX	g/trip	0.11439	0.05961
2045	A	LDA	TOG DIURN	g/trip	0.17676	0.25646
2045	A	LDA	TOG HOTSOAK	g/trip	0.03388	0.06438
2045	A	LDA	TOG RUNLOSS	g/trip	0.09683	0.12889
2045	A	LDA	ROG RUNEX	g/mi	0.00284	0.00519

2045	A	LDA	ROG STREX	g/trip	0.10447	0.05445
2045	A	LDA	ROG DIURN	g/trip	0.17676	0.25646
2045	A	LDA	ROG HOTSOAK	g/trip	0.03388	0.06438
2045	A	LDA	ROG RUNLOSS	g/trip	0.09683	0.12889
2045	A	LDA	NOx RUNEX	g/mi	0.01649	0.01040
2045	A	LDA	NOx STREX	g/trip	0.13449	0.03292
2045	A	LDA	CO RUNEX	g/mi	0.43708	0.97246
2045	A	LDA	CO STREX	g/trip	1.34366	1.28741
2045	A	LDA	SOx RUNEX	g/mi	0.00208	0.00064
2045	A	LDA	SOx STREX	g/trip	0.00049	0.00016
2045	A	LDA	PM2.5 RUNEX	g/mi	0.00046	0.00064
2045	A	LDA	PM2.5 STREX	g/trip	0.00068	0.00055
2045	A	LDA	PM2.5 PMTW	g/mi	0.00200	0.00215
2045	A	LDA	PM2.5 PMBW	g/mi	0.00281	0.00178
2045	A	LDA	PM10 RUNEX	g/mi	0.00050	0.00069
2045	A	LDA	PM10 STREX	g/trip	0.00074	0.00060
2045	A	LDA	PM10 PMTW	g/mi	0.00800	0.00861
2045	A	LDA	PM10 PMBW	g/mi	0.00803	0.00509
2045	A	LDA	CO, RUNEX	g/mi	210.348	149.009
2045	A	LDA	CO, STREX	g/trip	49.4754	36.9899
2045	A	LDA	CH„ RUNEX	g/mi	0.00097	0.00140
2045	A	LDA	CH„ STREX	g/trip	0.02738	0.01141
2045	A	LDA	N,O RUNEX	g/mi	0.00271	0.00161
2045	A	LDA	N,O STREX	g/trip	0.02130	0.00508
2045	S	LDA	TOG RUNEX	g/mi	0.00425	0.00698
2045	S	LDA	TOG STREX	g/trip	0.10242	0.05289
2045	S	LDA	TOG DIURN	g/trip	0.18727	0.27942
2045	S	LDA	TOG HOTSOAK	g/trip	0.03497	0.06675

2045	S	LDA	TOG RUNLOSS	g/trip	0.09738	0.12914
2045	S	LDA	ROG RUNEX	g/mi	0.00291	0.00517
2045	S	LDA	ROG STREX	g/trip	0.09354	0.04831
2045	S	LDA	ROG DIURN	g/trip	0.18727	0.27942
2045	S	LDA	ROG HOTSOAK	g/trip	0.03497	0.06675
2045	S	LDA	ROG RUNLOSS	g/trip	0.09738	0.12914
2045	S	LDA	NOx RUNEX	g/mi	0.01407	0.00889
2045	S	LDA	NOx STREX	g/trip	0.12451	0.03048
2045	S	LDA	CO RUNEX	g/mi	0.51386	1.12863
2045	S	LDA	CO STREX	g/trip	1.15275	1.10147
2045	S	LDA	SOx RUNEX	g/mi	0.00217	0.00067
2045	S	LDA	SOx STREX	g/trip	0.00049	0.00016
2045	S	LDA	PM2.5 RUNEX	g/mi	0.00046	0.00064
2045	S	LDA	PM2.5 STREX	g/trip	0.00068	0.00055
2045	S	LDA	PM2.5 PMTW	g/mi	0.00200	0.00215
2045	S	LDA	PM2.5 PMBW	g/mi	0.00281	0.00178
2045	S	LDA	PM10 RUNEX	g/mi	0.00050	0.00069
2045	S	LDA	PM10 STREX	g/trip	0.00074	0.00060
2045	S	LDA	PM10 PMTW	g/mi	0.00800	0.00861
2045	S	LDA	PM10 PMBW	g/mi	0.00803	0.00509
2045	S	LDA	CO, RUNEX	g/mi	219.843	155.828
2045	S	LDA	CO, STREX	g/trip	49.1358	36.6749
2045	S	LDA	CH„ RUNEX	g/mi	0.00101	0.00142
2045	S	LDA	CH„ STREX	g/trip	0.02479	0.01030
2045	S	LDA	N,O RUNEX	g/mi	0.00240	0.00144
2045	S	LDA	N,O STREX	g/trip	0.02043	0.00481
2045	W	LDA	TOG RUNEX	g/mi	0.00411	0.00698
2045	W	LDA	TOG STREX	g/trip	0.11707	0.06113

2045	W	LDA	TOG DIURN	g/trip	0.17619	0.25594
2045	W	LDA	TOG HOTSOAK	g/trip	0.03372	0.06400
2045	W	LDA	TOG RUNLOSS	g/trip	0.09716	0.12954
2045	W	LDA	ROG RUNEX	g/mi	0.00282	0.00520
2045	W	LDA	ROG STREX	g/trip	0.10693	0.05584
2045	W	LDA	ROG DIURN	g/trip	0.17619	0.25594
2045	W	LDA	ROG HOTSOAK	g/trip	0.03372	0.06400
2045	W	LDA	ROG RUNLOSS	g/trip	0.09716	0.12954
2045	W	LDA	NOx RUNEX	g/mi	0.01616	0.01019
2045	W	LDA	NOx STREX	g/trip	0.13672	0.03347
2045	W	LDA	CO RUNEX	g/mi	0.40932	0.91555
2045	W	LDA	CO STREX	g/trip	1.38709	1.32989
2045	W	LDA	SOx RUNEX	g/mi	0.00204	0.00063
2045	W	LDA	SOx STREX	g/trip	0.00049	0.00016
2045	W	LDA	PM2.5 RUNEX	g/mi	0.00046	0.00064
2045	W	LDA	PM2.5 STREX	g/trip	0.00068	0.00055
2045	W	LDA	PM2.5 PMTW	g/mi	0.00200	0.00215
2045	W	LDA	PM2.5 PMBW	g/mi	0.00281	0.00178
2045	W	LDA	PM10 RUNEX	g/mi	0.00050	0.00069
2045	W	LDA	PM10 STREX	g/trip	0.00074	0.00060
2045	W	LDA	PM10 PMTW	g/mi	0.00800	0.00861
2045	W	LDA	PM10 PMBW	g/mi	0.00803	0.00509
2045	W	LDA	CO, RUNEX	g/mi	206.849	146.497
2045	W	LDA	CO, STREX	g/trip	49.5526	37.0618
2045	W	LDA	CH„ RUNEX	g/mi	0.00096	0.00140
2045	W	LDA	CH„ STREX	g/trip	0.02796	0.01166
2045	W	LDA	N,O RUNEX	g/mi	0.00266	0.00159
2045	W	LDA	N,O STREX	g/trip	0.02166	0.00514

2045	A	LDT1	TOG RUNEX	g/mi	0.00551	0.00899
2045	A	LDT1	TOG STREX	g/trip	0.14104	0.08539
2045	A	LDT1	TOG DIURN	g/trip	0.30727	0.38480
2045	A	LDT1	TOG HOTSOAK	g/trip	0.05345	0.08266
2045	A	LDT1	TOG RUNLOSS	g/trip	0.19304	0.22639
2045	A	LDT1	ROG RUNEX	g/mi	0.00378	0.00653
2045	A	LDT1	ROG STREX	g/trip	0.12881	0.07799
2045	A	LDT1	ROG DIURN	g/trip	0.30727	0.38480
2045	A	LDT1	ROG HOTSOAK	g/trip	0.05345	0.08266
2045	A	LDT1	ROG RUNLOSS	g/trip	0.19304	0.22639
2045	A	LDT1	NOx RUNEX	g/mi	0.02170	0.01672
2045	A	LDT1	NOx STREX	g/trip	0.16840	0.05443
2045	A	LDT1	CO RUNEX	g/mi	0.54322	1.06475
2045	A	LDT1	CO STREX	g/trip	1.59657	1.38913
2045	A	LDT1	SOx RUNEX	g/mi	0.00269	0.00070
2045	A	LDT1	SOx STREX	g/trip	0.00063	0.00018
2045	A	LDT1	PM2.5 RUNEX	g/mi	0.00059	0.00076
2045	A	LDT1	PM2.5 STREX	g/trip	0.00084	0.00066
2045	A	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00217
2045	A	LDT1	PM2.5 PMBW	g/mi	0.00362	0.00207
2045	A	LDT1	PM10 RUNEX	g/mi	0.00064	0.00083
2045	A	LDT1	PM10 STREX	g/trip	0.00091	0.00071
2045	A	LDT1	PM10 PMTW	g/mi	0.00800	0.00866
2045	A	LDT1	PM10 PMBW	g/mi	0.01035	0.00591
2045	A	LDT1	CO, RUNEX	g/mi	271.978	163.998
2045	A	LDT1	CO, STREX	g/trip	63.6426	41.6129
2045	A	LDT1	CH„ RUNEX	g/mi	0.00125	0.00178
2045	A	LDT1	CH„ STREX	g/trip	0.03317	0.01515

2045	A	LDT1	N,O RUNEX	g/mi	0.00331	0.00208
2045	A	LDT1	N,O STREX	g/trip	0.02570	0.00657
2045	S	LDT1	TOG RUNEX	g/mi	0.00565	0.00905
2045	S	LDT1	TOG STREX	g/trip	0.12633	0.07594
2045	S	LDT1	TOG DIURN	g/trip	0.32188	0.41000
2045	S	LDT1	TOG HOTSOAK	g/trip	0.05504	0.08540
2045	S	LDT1	TOG RUNLOSS	g/trip	0.19365	0.22656
2045	S	LDT1	ROG RUNEX	g/mi	0.00387	0.00654
2045	S	LDT1	ROG STREX	g/trip	0.11538	0.06937
2045	S	LDT1	ROG DIURN	g/trip	0.32188	0.41000
2045	S	LDT1	ROG HOTSOAK	g/trip	0.05504	0.08540
2045	S	LDT1	ROG RUNLOSS	g/trip	0.19365	0.22656
2045	S	LDT1	NOx RUNEX	g/mi	0.01852	0.01428
2045	S	LDT1	NOx STREX	g/trip	0.15590	0.05040
2045	S	LDT1	CO RUNEX	g/mi	0.63785	1.23454
2045	S	LDT1	CO IDLEX	g/trip	0.00000	0.05040
2045	S	LDT1	CO STREX	g/trip	1.36957	1.18716
2045	S	LDT1	SOx RUNEX	g/mi	0.00279	0.00073
2045	S	LDT1	SOx STREX	g/trip	0.00063	0.00018
2045	S	LDT1	PM2.5 RUNEX	g/mi	0.00059	0.00076
2045	S	LDT1	PM2.5 STREX	g/trip	0.00084	0.00066
2045	S	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00217
2045	S	LDT1	PM2.5 PMBW	g/mi	0.00362	0.00207
2045	S	LDT1	PM10 RUNEX	g/mi	0.00064	0.00083
2045	S	LDT1	PM10 STREX	g/trip	0.00091	0.00071
2045	S	LDT1	PM10 PMTW	g/mi	0.00800	0.00866
2045	S	LDT1	PM10 PMBW	g/mi	0.01035	0.00591
2045	S	LDT1	CO, RUNEX	g/mi	282.632	170.643

2045	S	LDT1	CO, STREX	g/trip	63.2373	41.2642
2045	S	LDT1	CH„ RUNEX	g/mi	0.00130	0.00181
2045	S	LDT1	CH„ STREX	g/trip	0.03003	0.01370
2045	S	LDT1	N,O RUNEX	g/mi	0.00292	0.00187
2045	S	LDT1	N,O STREX	g/trip	0.02465	0.00623
2045	W	LDT1	TOG RUNEX	g/mi	0.00547	0.00896
2045	W	LDT1	TOG STREX	g/trip	0.14434	0.08752
2045	W	LDT1	TOG DIURN	g/trip	0.30723	0.38746
2045	W	LDT1	TOG HOTSOAK	g/trip	0.05324	0.08225
2045	W	LDT1	TOG RUNLOSS	g/trip	0.19371	0.22752
2045	W	LDT1	ROG RUNEX	g/mi	0.00375	0.00651
2045	W	LDT1	ROG STREX	g/trip	0.13183	0.07994
2045	W	LDT1	ROG DIURN	g/trip	0.30723	0.38746
2045	W	LDT1	ROG HOTSOAK	g/trip	0.05324	0.08225
2045	W	LDT1	ROG RUNLOSS	g/trip	0.19371	0.22752
2045	W	LDT1	NOx RUNEX	g/mi	0.02127	0.01639
2045	W	LDT1	NOx STREX	g/trip	0.17118	0.05534
2045	W	LDT1	CO RUNEX	g/mi	0.50899	1.00291
2045	W	LDT1	CO STREX	g/trip	1.64829	1.43549
2045	W	LDT1	SOx RUNEX	g/mi	0.00265	0.00069
2045	W	LDT1	SOx STREX	g/trip	0.00063	0.00018
2045	W	LDT1	PM2.5 RUNEX	g/mi	0.00059	0.00076
2045	W	LDT1	PM2.5 STREX	g/trip	0.00084	0.00066
2045	W	LDT1	PM2.5 PMTW	g/mi	0.00200	0.00217
2045	W	LDT1	PM2.5 PMBW	g/mi	0.00362	0.00207
2045	W	LDT1	PM10 RUNEX	g/mi	0.00064	0.00083
2045	W	LDT1	PM10 STREX	g/trip	0.00091	0.00071
2045	W	LDT1	PM10 PMTW	g/mi	0.00800	0.00866

2045	W	LDT1	PM10 PMBW	g/mi	0.01035	0.00591
2045	W	LDT1	CO, RUNEX	g/mi	268.054	161.551
2045	W	LDT1	CO, STREX	g/trip	63.7348	41.6928
2045	W	LDT1	CH„ RUNEX	g/mi	0.00124	0.00178
2045	W	LDT1	CH„ STREX	g/trip	0.03387	0.01548
2045	W	LDT1	N,O RUNEX	g/mi	0.00324	0.00205
2045	W	LDT1	N,O STREX	g/trip	0.02614	0.00665
2045	A	LDT2	TOG RUNEX	g/mi	0.00662	0.00868
2045	A	LDT2	TOG STREX	g/trip	0.16318	0.11769
2045	A	LDT2	TOG DIURN	g/trip	0.20263	0.26072
2045	A	LDT2	TOG HOTSOAK	g/trip	0.03782	0.05160
2045	A	LDT2	TOG RUNLOSS	g/trip	0.13170	0.16712
2045	A	LDT2	ROG RUNEX	g/mi	0.00455	0.00606
2045	A	LDT2	ROG STREX	g/trip	0.14904	0.10749
2045	A	LDT2	ROG DIURN	g/trip	0.20263	0.26072
2045	A	LDT2	ROG HOTSOAK	g/trip	0.03782	0.05160
2045	A	LDT2	ROG RUNLOSS	g/trip	0.13170	0.16712
2045	A	LDT2	NOx RUNEX	g/mi	0.02231	0.01455
2045	A	LDT2	NOx STREX	g/trip	0.18590	0.05918
2045	A	LDT2	CO RUNEX	g/mi	0.58065	1.47250
2045	A	LDT2	CO STREX	g/trip	1.87049	1.92592
2045	A	LDT2	SOx RUNEX	g/mi	0.00285	0.00109
2045	A	LDT2	SOx STREX	g/trip	0.00066	0.00028
2045	A	LDT2	PM2.5 RUNEX	g/mi	0.00055	0.00086
2045	A	LDT2	PM2.5 STREX	g/trip	0.00075	0.00075
2045	A	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00209
2045	A	LDT2	PM2.5 PMBW	g/mi	0.00356	0.00262
2045	A	LDT2	PM10 RUNEX	g/mi	0.00060	0.00094

2045	A	LDT2	PM10 STREX	g/trip	0.00081	0.00081
2045	A	LDT2	PM10 PMTW	g/mi	0.00800	0.00835
2045	A	LDT2	PM10 PMBW	g/mi	0.01018	0.00750
2045	A	LDT2	CO, RUNEX	g/mi	287.883	254.976
2045	A	LDT2	CO, STREX	g/trip	67.2369	64.1271
2045	A	LDT2	CH„ RUNEX	g/mi	0.00147	0.00205
2045	A	LDT2	CH„ STREX	g/trip	0.03790	0.02199
2045	A	LDT2	N,O RUNEX	g/mi	0.00347	0.00254
2045	A	LDT2	N,O STREX	g/trip	0.02801	0.00859
2045	S	LDT2	TOG RUNEX	g/mi	0.00679	0.00885
2045	S	LDT2	TOG STREX	g/trip	0.14605	0.10473
2045	S	LDT2	TOG DIURN	g/trip	0.21415	0.27651
2045	S	LDT2	TOG HOTSOAK	g/trip	0.03903	0.05331
2045	S	LDT2	TOG RUNLOSS	g/trip	0.13230	0.16752
2045	S	LDT2	ROG RUNEX	g/mi	0.00466	0.00617
2045	S	LDT2	ROG STREX	g/trip	0.13340	0.09566
2045	S	LDT2	ROG DIURN	g/trip	0.21415	0.27651
2045	S	LDT2	ROG HOTSOAK	g/trip	0.03903	0.05331
2045	S	LDT2	ROG RUNLOSS	g/trip	0.13230	0.16752
2045	S	LDT2	NOx RUNEX	g/mi	0.01905	0.01243
2045	S	LDT2	NOx STREX	g/trip	0.17211	0.05479
2045	S	LDT2	CO RUNEX	g/mi	0.68224	1.71218
2045	S	LDT2	CO STREX	g/trip	1.60035	1.64464
2045	S	LDT2	SOx RUNEX	g/mi	0.00295	0.00114
2045	S	LDT2	SOx STREX	g/trip	0.00066	0.00027
2045	S	LDT2	PM2.5 RUNEX	g/mi	0.00055	0.00086
2045	S	LDT2	PM2.5 STREX	g/trip	0.00075	0.00075
2045	S	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00209

2045	S	LDT2	PM2.5 PMBW	g/mi	0.00356	0.00262
2045	S	LDT2	PM10 RUNEX	g/mi	0.00060	0.00094
2045	S	LDT2	PM10 STREX	g/trip	0.00081	0.00081
2045	S	LDT2	PM10 PMTW	g/mi	0.00800	0.00835
2045	S	LDT2	PM10 PMBW	g/mi	0.01018	0.00750
2045	S	LDT2	CO, RUNEX	g/mi	298.179	264.508
2045	S	LDT2	CO, STREX	g/trip	66.7557	63.6421
2045	S	LDT2	CH„ RUNEX	g/mi	0.00153	0.00209
2045	S	LDT2	CH„ STREX	g/trip	0.03428	0.01990
2045	S	LDT2	N,O RUNEX	g/mi	0.00309	0.00228
2045	S	LDT2	N,O STREX	g/trip	0.02685	0.00814
2045	W	LDT2	TOG RUNEX	g/mi	0.00658	0.00863
2045	W	LDT2	TOG STREX	g/trip	0.16703	0.12061
2045	W	LDT2	TOG DIURN	g/trip	0.20207	0.26246
2045	W	LDT2	TOG HOTSOAK	g/trip	0.03765	0.05134
2045	W	LDT2	TOG RUNLOSS	g/trip	0.13215	0.16780
2045	W	LDT2	ROG RUNEX	g/mi	0.00452	0.00603
2045	W	LDT2	ROG STREX	g/trip	0.15256	0.11016
2045	W	LDT2	ROG DIURN	g/trip	0.20207	0.26246
2045	W	LDT2	ROG HOTSOAK	g/trip	0.03765	0.05134
2045	W	LDT2	ROG RUNLOSS	g/trip	0.13215	0.16780
2045	W	LDT2	NOx RUNEX	g/mi	0.02187	0.01426
2045	W	LDT2	NOx STREX	g/trip	0.18896	0.06018
2045	W	LDT2	CO RUNEX	g/mi	0.54391	1.38558
2045	W	LDT2	CO STREX	g/trip	1.93276	1.99076
2045	W	LDT2	SOx RUNEX	g/mi	0.00281	0.00108
2045	W	LDT2	SOx STREX	g/trip	0.00067	0.00028
2045	W	LDT2	PM2.5 RUNEX	g/mi	0.00055	0.00086

2045	W	LDT2	PM2.5 STREX	g/trip	0.00075	0.00075
2045	W	LDT2	PM2.5 PMTW	g/mi	0.00200	0.00209
2045	W	LDT2	PM2.5 PMBW	g/mi	0.00356	0.00262
2045	W	LDT2	PM10 RUNEX	g/mi	0.00060	0.00094
2045	W	LDT2	PM10 STREX	g/trip	0.00081	0.00081
2045	W	LDT2	PM10 PMTW	g/mi	0.00800	0.00835
2045	W	LDT2	PM10 PMBW	g/mi	0.01018	0.00750
2045	W	LDT2	CO, RUNEX	g/mi	284.090	251.465
2045	W	LDT2	CO, STREX	g/trip	67.3475	64.2387
2045	W	LDT2	CH„ RUNEX	g/mi	0.00146	0.00204
2045	W	LDT2	CH„ STREX	g/trip	0.03871	0.02246
2045	W	LDT2	N,O RUNEX	g/mi	0.00341	0.00251
2045	W	LDT2	N,O STREX	g/trip	0.02848	0.00869
2045	A	LHDT1	TOG RUNEX	g/mi	0.01304	0.01746
2045	A	LHDT1	TOG IDLEX	g/trip	0.01990	0.02064
2045	A	LHDT1	TOG STREX	g/trip	0.03397	0.10529
2045	A	LHDT1	TOG DIURN	g/trip	0.05198	0.08518
2045	A	LHDT1	TOG HOTSOAK	g/trip	0.00752	0.01277
2045	A	LHDT1	TOG RUNLOSS	g/trip	0.04357	0.11412
2045	A	LHDT1	ROG RUNEX	g/mi	0.01130	0.01447
2045	A	LHDT1	ROG IDLEX	g/trip	0.01446	0.01474
2045	A	LHDT1	ROG STREX	g/trip	0.03102	0.09616
2045	A	LHDT1	ROG DIURN	g/trip	0.05198	0.08518
2045	A	LHDT1	ROG HOTSOAK	g/trip	0.00752	0.01277
2045	A	LHDT1	ROG RUNLOSS	g/trip	0.04357	0.11412
2045	A	LHDT1	NOx RUNEX	g/mi	0.04705	0.11890
2045	A	LHDT1	NOx IDLEX	g/trip	0.03122	0.03014
2045	A	LHDT1	NOx STREX	g/trip	0.14295	0.21941

2045	A	LHDT1	CO RUNEX	g/mi	0.18421	0.63500
2045	A	LHDT1	CO IDLEX	g/trip	0.17589	0.18345
2045	A	LHDT1	CO STREX	g/trip	1.18584	1.07847
2045	A	LHDT1	SOx RUNEX	g/mi	0.00264	0.00175
2045	A	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2045	A	LHDT1	SOx STREX	g/trip	0.00009	0.00005
2045	A	LHDT1	PM2.5 RUNEX	g/mi	0.00296	0.00446
2045	A	LHDT1	PM2.5 IDLEX	g/trip	0.00090	0.00064
2045	A	LHDT1	PM2.5 STREX	g/trip	0.00004	0.00006
2045	A	LHDT1	PM2.5 PMTW	g/mi	0.00223	0.00235
2045	A	LHDT1	PM2.5 PMBW	g/mi	0.02117	0.02642
2045	A	LHDT1	PM10 RUNEX	g/mi	0.00311	0.00468
2045	A	LHDT1	PM10 IDLEX	g/trip	0.00094	0.00067
2045	A	LHDT1	PM10 STREX	g/trip	0.00004	0.00007
2045	A	LHDT1	PM10 PMTW	g/mi	0.00894	0.00939
2045	A	LHDT1	PM10 PMBW	g/mi	0.06049	0.07549
2045	A	LHDT1	CO, RUNEX	g/mi	271.744	445.089
2045	A	LHDT1	CO, IDLEX	g/trip	8.01320	7.05078
2045	A	LHDT1	CO, STREX	g/trip	8.66651	13.1326
2045	A	LHDT1	CH„ RUNEX	g/mi	0.00066	0.00172
2045	A	LHDT1	CH„ IDLEX	g/trip	0.00337	0.00180
2045	A	LHDT1	CH„ STREX	g/trip	0.00711	0.01905
2045	A	LHDT1	N,O RUNEX	g/mi	0.01784	0.02929
2045	A	LHDT1	N,O IDLEX	g/trip	0.00071	0.00006
2045	A	LHDT1	N,O STREX	g/trip	0.01401	0.01812
2045	S	LHDT1	TOG RUNEX	g/mi	0.01306	0.01755
2045	S	LHDT1	TOG IDLEX	g/trip	0.01990	0.02064
2045	S	LHDT1	TOG STREX	g/trip	0.03276	0.10153

2045	S	LHDT1	TOG DIURN	g/trip	0.05370	0.08807
2045	S	LHDT1	TOG HOTSOAK	g/trip	0.00774	0.01313
2045	S	LHDT1	TOG RUNLOSS	g/trip	0.04361	0.11405
2045	S	LHDT1	ROG RUNEX	g/mi	0.01131	0.01453
2045	S	LHDT1	ROG IDLEX	g/trip	0.01446	0.01474
2045	S	LHDT1	ROG STREX	g/trip	0.02992	0.09274
2045	S	LHDT1	ROG DIURN	g/trip	0.05370	0.08807
2045	S	LHDT1	ROG HOTSOAK	g/trip	0.00774	0.01313
2045	S	LHDT1	ROG RUNLOSS	g/trip	0.04361	0.11405
2045	S	LHDT1	NOx RUNEX	g/mi	0.04423	0.11044
2045	S	LHDT1	NOx IDLEX	g/trip	0.03122	0.03014
2045	S	LHDT1	NOx STREX	g/trip	0.13696	0.21022
2045	S	LHDT1	CO RUNEX	g/mi	0.18733	0.64558
2045	S	LHDT1	CO IDLEX	g/trip	0.17589	0.18345
2045	S	LHDT1	CO STREX	g/trip	1.13646	1.03351
2045	S	LHDT1	SOx RUNEX	g/mi	0.00264	0.00175
2045	S	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2045	S	LHDT1	SOx STREX	g/trip	0.00008	0.00005
2045	S	LHDT1	PM2.5 RUNEX	g/mi	0.00296	0.00446
2045	S	LHDT1	PM2.5 IDLEX	g/trip	0.00090	0.00064
2045	S	LHDT1	PM2.5 STREX	g/trip	0.00004	0.00006
2045	S	LHDT1	PM2.5 PMTW	g/mi	0.00223	0.00235
2045	S	LHDT1	PM2.5 PMBW	g/mi	0.02117	0.02642
2045	S	LHDT1	PM10 RUNEX	g/mi	0.00311	0.00468
2045	S	LHDT1	PM10 IDLEX	g/trip	0.00094	0.00067
2045	S	LHDT1	PM10 STREX	g/trip	0.00004	0.00007
2045	S	LHDT1	PM10 PMTW	g/mi	0.00894	0.00939
2045	S	LHDT1	PM10 PMBW	g/mi	0.06049	0.07549

2045	S	LHDT1	CO, RUNEX	g/mi	271.749	445.106
2045	S	LHDT1	CO, IDLEX	g/trip	8.01320	7.05078
2045	S	LHDT1	CO, STREX	g/trip	8.58444	13.0499
2045	S	LHDT1	CH„ RUNEX	g/mi	0.00067	0.00174
2045	S	LHDT1	CH„ IDLEX	g/trip	0.00338	0.00180
2045	S	LHDT1	CH„ STREX	g/trip	0.00688	0.01850
2045	S	LHDT1	N,O RUNEX	g/mi	0.01779	0.02888
2045	S	LHDT1	N,O IDLEX	g/trip	0.00071	0.00006
2045	S	LHDT1	N,O STREX	g/trip	0.01362	0.01759
2045	W	LHDT1	TOG RUNEX	g/mi	0.01304	0.01744
2045	W	LHDT1	TOG IDLEX	g/trip	0.01990	0.02064
2045	W	LHDT1	TOG STREX	g/trip	0.03424	0.10612
2045	W	LHDT1	TOG DIURN	g/trip	0.05196	0.08596
2045	W	LHDT1	TOG HOTSOAK	g/trip	0.00750	0.01272
2045	W	LHDT1	TOG RUNLOSS	g/trip	0.04408	0.11530
2045	W	LHDT1	ROG RUNEX	g/mi	0.01130	0.01445
2045	W	LHDT1	ROG IDLEX	g/trip	0.01446	0.01474
2045	W	LHDT1	ROG STREX	g/trip	0.03127	0.09692
2045	W	LHDT1	ROG DIURN	g/trip	0.05196	0.08596
2045	W	LHDT1	ROG HOTSOAK	g/trip	0.00750	0.01272
2045	W	LHDT1	ROG RUNLOSS	g/trip	0.04408	0.11530
2045	W	LHDT1	NOx RUNEX	g/mi	0.04617	0.11655
2045	W	LHDT1	NOx IDLEX	g/trip	0.03122	0.03014
2045	W	LHDT1	NOx STREX	g/trip	0.14432	0.22151
2045	W	LHDT1	CO RUNEX	g/mi	0.18341	0.63230
2045	W	LHDT1	CO IDLEX	g/trip	0.17589	0.18345
2045	W	LHDT1	CO STREX	g/trip	1.19519	1.08698
2045	W	LHDT1	SOx RUNEX	g/mi	0.00264	0.00175

2045	W	LHDT1	SOx IDLEX	g/trip	0.00008	0.00003
2045	W	LHDT1	SOx STREX	g/trip	0.00009	0.00005
2045	W	LHDT1	PM2.5 RUNEX	g/mi	0.00296	0.00446
2045	W	LHDT1	PM2.5 IDLEX	g/trip	0.00090	0.00064
2045	W	LHDT1	PM2.5 STREX	g/trip	0.00004	0.00006
2045	W	LHDT1	PM2.5 PMTW	g/mi	0.00223	0.00235
2045	W	LHDT1	PM2.5 PMBW	g/mi	0.02117	0.02642
2045	W	LHDT1	PM10 RUNEX	g/mi	0.00311	0.00468
2045	W	LHDT1	PM10 IDLEX	g/trip	0.00094	0.00067
2045	W	LHDT1	PM10 STREX	g/trip	0.00004	0.00007
2045	W	LHDT1	PM10 PMTW	g/mi	0.00894	0.00939
2045	W	LHDT1	PM10 PMBW	g/mi	0.06049	0.07549
2045	W	LHDT1	CO, RUNEX	g/mi	271.742	445.085
2045	W	LHDT1	CO, IDLEX	g/trip	8.01320	7.05078
2045	W	LHDT1	CO, STREX	g/trip	8.68217	13.1486
2045	W	LHDT1	CH„ RUNEX	g/mi	0.00066	0.00171
2045	W	LHDT1	CH„ IDLEX	g/trip	0.00337	0.00180
2045	W	LHDT1	CH„ STREX	g/trip	0.00716	0.01918
2045	W	LHDT1	N,O RUNEX	g/mi	0.01783	0.02921
2045	W	LHDT1	N,O IDLEX	g/trip	0.00071	0.00006
2045	W	LHDT1	N,O STREX	g/trip	0.01411	0.01824
2045	A	LHDT2	TOG RUNEX	g/mi	0.02630	0.04354
2045	A	LHDT2	TOG IDLEX	g/trip	0.01388	0.01208
2045	A	LHDT2	TOG STREX	g/trip	0.01564	0.05069
2045	A	LHDT2	TOG DIURN	g/trip	0.03074	0.02756
2045	A	LHDT2	TOG HOTSOAK	g/trip	0.00428	0.00406
2045	A	LHDT2	TOG RUNLOSS	g/trip	0.02531	0.03672
2045	A	LHDT2	ROG RUNEX	g/mi	0.02303	0.03785

2045	A	LHDT2	ROG IDLEX	g/trip	0.01089	0.00961
2045	A	LHDT2	ROG STREX	g/trip	0.01429	0.04629
2045	A	LHDT2	ROG DIURN	g/trip	0.03074	0.02756
2045	A	LHDT2	ROG HOTSOAK	g/trip	0.00428	0.00406
2045	A	LHDT2	ROG RUNLOSS	g/trip	0.02531	0.03672
2045	A	LHDT2	NOx RUNEX	g/mi	0.10684	0.13586
2045	A	LHDT2	NOx IDLEX	g/trip	0.05408	0.04469
2045	A	LHDT2	NOx STREX	g/trip	0.06644	0.09717
2045	A	LHDT2	CO RUNEX	g/mi	0.13078	0.32306
2045	A	LHDT2	CO IDLEX	g/trip	0.12371	0.10825
2045	A	LHDT2	CO STREX	g/trip	0.63673	0.51831
2045	A	LHDT2	SOx RUNEX	g/mi	0.00300	0.00169
2045	A	LHDT2	SOx IDLEX	g/trip	0.00012	0.00004
2045	A	LHDT2	SOx STREX	g/trip	0.00004	0.00002
2045	A	LHDT2	PM2.5 RUNEX	g/mi	0.00581	0.00845
2045	A	LHDT2	PM2.5 IDLEX	g/trip	0.00150	0.00145
2045	A	LHDT2	PM2.5 STREX	g/trip	0.00002	0.00002
2045	A	LHDT2	PM2.5 PMTW	g/mi	0.00240	0.00272
2045	A	LHDT2	PM2.5 PMBW	g/mi	0.02492	0.03057
2045	A	LHDT2	PM10 RUNEX	g/mi	0.00608	0.00884
2045	A	LHDT2	PM10 IDLEX	g/trip	0.00157	0.00151
2045	A	LHDT2	PM10 STREX	g/trip	0.00002	0.00002
2045	A	LHDT2	PM10 PMTW	g/mi	0.00962	0.01089
2045	A	LHDT2	PM10 PMBW	g/mi	0.07120	0.08733
2045	A	LHDT2	CO, RUNEX	g/mi	313.102	481.007
2045	A	LHDT2	CO, IDLEX	g/trip	12.9621	11.3553
2045	A	LHDT2	CO, STREX	g/trip	4.54707	4.83703
2045	A	LHDT2	CH„ RUNEX	g/mi	0.00113	0.00221

2045	A	LHDT2	CH„ IDLEX	g/trip	0.00169	0.00079
2045	A	LHDT2	CH„ STREX	g/trip	0.00332	0.00883
2045	A	LHDT2	N,O RUNEX	g/mi	0.03516	0.06077
2045	A	LHDT2	N,O IDLEX	g/trip	0.00171	0.00002
2045	A	LHDT2	N,O STREX	g/trip	0.00658	0.00765
2045	S	LHDT2	TOG RUNEX	g/mi	0.02630	0.04358
2045	S	LHDT2	TOG IDLEX	g/trip	0.01388	0.01208
2045	S	LHDT2	TOG STREX	g/trip	0.01509	0.04888
2045	S	LHDT2	TOG DIURN	g/trip	0.03170	0.02850
2045	S	LHDT2	TOG HOTSOAK	g/trip	0.00440	0.00418
2045	S	LHDT2	TOG RUNLOSS	g/trip	0.02533	0.03669
2045	S	LHDT2	ROG RUNEX	g/mi	0.02303	0.03788
2045	S	LHDT2	ROG IDLEX	g/trip	0.01089	0.00961
2045	S	LHDT2	ROG STREX	g/trip	0.01378	0.04465
2045	S	LHDT2	ROG DIURN	g/trip	0.03170	0.02850
2045	S	LHDT2	ROG HOTSOAK	g/trip	0.00440	0.00418
2045	S	LHDT2	ROG RUNLOSS	g/trip	0.02533	0.03669
2045	S	LHDT2	NOx RUNEX	g/mi	0.10109	0.12785
2045	S	LHDT2	NOx IDLEX	g/trip	0.05408	0.04469
2045	S	LHDT2	NOx STREX	g/trip	0.06366	0.09310
2045	S	LHDT2	CO RUNEX	g/mi	0.13239	0.32799
2045	S	LHDT2	CO IDLEX	g/trip	0.12371	0.10825
2045	S	LHDT2	CO STREX	g/trip	0.61024	0.49674
2045	S	LHDT2	SOx RUNEX	g/mi	0.00300	0.00169
2045	S	LHDT2	SOx IDLEX	g/trip	0.00012	0.00004
2045	S	LHDT2	SOx STREX	g/trip	0.00004	0.00002
2045	S	LHDT2	PM2.5 RUNEX	g/mi	0.00581	0.00845
2045	S	LHDT2	PM2.5 IDLEX	g/trip	0.00150	0.00145

2045	S	LHDT2	PM2.5 STREX	g/trip	0.00002	0.00002
2045	S	LHDT2	PM2.5 PMTW	g/mi	0.00240	0.00272
2045	S	LHDT2	PM2.5 PMBW	g/mi	0.02492	0.03057
2045	S	LHDT2	PM10 RUNEX	g/mi	0.00608	0.00884
2045	S	LHDT2	PM10 IDLEX	g/trip	0.00157	0.00151
2045	S	LHDT2	PM10 STREX	g/trip	0.00002	0.00002
2045	S	LHDT2	PM10 PMTW	g/mi	0.00962	0.01089
2045	S	LHDT2	PM10 PMBW	g/mi	0.07120	0.08733
2045	S	LHDT2	CO, RUNEX	g/mi	313.105	481.015
2045	S	LHDT2	CO, IDLEX	g/trip	12.9621	11.3553
2045	S	LHDT2	CO, STREX	g/trip	4.50334	4.79737
2045	S	LHDT2	CH„ RUNEX	g/mi	0.00113	0.00222
2045	S	LHDT2	CH„ IDLEX	g/trip	0.00169	0.00079
2045	S	LHDT2	CH„ STREX	g/trip	0.00321	0.00857
2045	S	LHDT2	N,O RUNEX	g/mi	0.03512	0.06061
2045	S	LHDT2	N,O IDLEX	g/trip	0.00171	0.00002
2045	S	LHDT2	N,O STREX	g/trip	0.00641	0.00743
2045	W	LHDT2	TOG RUNEX	g/mi	0.02629	0.04353
2045	W	LHDT2	TOG IDLEX	g/trip	0.01388	0.01208
2045	W	LHDT2	TOG STREX	g/trip	0.01577	0.05109
2045	W	LHDT2	TOG DIURN	g/trip	0.03074	0.02778
2045	W	LHDT2	TOG HOTSOAK	g/trip	0.00427	0.00404
2045	W	LHDT2	TOG RUNLOSS	g/trip	0.02557	0.03714
2045	W	LHDT2	ROG RUNEX	g/mi	0.02303	0.03784
2045	W	LHDT2	ROG IDLEX	g/trip	0.01089	0.00961
2045	W	LHDT2	ROG STREX	g/trip	0.01440	0.04666
2045	W	LHDT2	ROG DIURN	g/trip	0.03074	0.02778
2045	W	LHDT2	ROG HOTSOAK	g/trip	0.00427	0.00404

2045	W	LHDT2	ROG RUNLOSS	g/trip	0.02557	0.03714
2045	W	LHDT2	NOx RUNEX	g/mi	0.10492	0.13335
2045	W	LHDT2	NOx IDLEX	g/trip	0.05408	0.04469
2045	W	LHDT2	NOx STREX	g/trip	0.06708	0.09810
2045	W	LHDT2	CO RUNEX	g/mi	0.13037	0.32181
2045	W	LHDT2	CO IDLEX	g/trip	0.12371	0.10825
2045	W	LHDT2	CO STREX	g/trip	0.64175	0.52239
2045	W	LHDT2	SOx RUNEX	g/mi	0.00300	0.00169
2045	W	LHDT2	SOx IDLEX	g/trip	0.00012	0.00004
2045	W	LHDT2	SOx STREX	g/trip	0.00005	0.00002
2045	W	LHDT2	PM2.5 RUNEX	g/mi	0.00581	0.00845
2045	W	LHDT2	PM2.5 IDLEX	g/trip	0.00150	0.00145
2045	W	LHDT2	PM2.5 STREX	g/trip	0.00002	0.00002
2045	W	LHDT2	PM2.5 PMTW	g/mi	0.00240	0.00272
2045	W	LHDT2	PM2.5 PMBW	g/mi	0.02492	0.03057
2045	W	LHDT2	PM10 RUNEX	g/mi	0.00608	0.00884
2045	W	LHDT2	PM10 IDLEX	g/trip	0.00157	0.00151
2045	W	LHDT2	PM10 STREX	g/trip	0.00002	0.00002
2045	W	LHDT2	PM10 PMTW	g/mi	0.00962	0.01089
2045	W	LHDT2	PM10 PMBW	g/mi	0.07120	0.08733
2045	W	LHDT2	CO, RUNEX	g/mi	313.101	481.005
2045	W	LHDT2	CO, IDLEX	g/trip	12.9621	11.3553
2045	W	LHDT2	CO, STREX	g/trip	4.55541	4.84473
2045	W	LHDT2	CH„ RUNEX	g/mi	0.00113	0.00221
2045	W	LHDT2	CH„ IDLEX	g/trip	0.00169	0.00079
2045	W	LHDT2	CH„ STREX	g/trip	0.00335	0.00889
2045	W	LHDT2	N,O RUNEX	g/mi	0.03515	0.06074
2045	W	LHDT2	N,O IDLEX	g/trip	0.00171	0.00002

2045	W	LHDT2	N,O STREX	g/trip	0.00663	0.00770
2045	A	MCY	TOG RUNEX	g/mi	1.12338	1.35814
2045	A	MCY	TOG STREX	g/trip	0.93712	0.89496
2045	A	MCY	TOG DIURN	g/trip	1.71476	1.65320
2045	A	MCY	TOG HOTSOAK	g/trip	3.60004	3.85107
2045	A	MCY	TOG RUNLOSS	g/trip	3.52886	3.70842
2045	A	MCY	ROG RUNEX	g/mi	0.89811	1.08405
2045	A	MCY	ROG STREX	g/trip	0.86051	0.82167
2045	A	MCY	ROG DIURN	g/trip	1.71476	1.65320
2045	A	MCY	ROG HOTSOAK	g/trip	3.60004	3.85107
2045	A	MCY	ROG RUNLOSS	g/trip	3.52886	3.70842
2045	A	MCY	NOx RUNEX	g/mi	0.46853	0.47949
2045	A	MCY	NOx STREX	g/trip	0.06431	0.05922
2045	A	MCY	CO RUNEX	g/mi	10.5401	10.4682
2045	A	MCY	CO STREX	g/trip	7.18590	7.04619
2045	A	MCY	SOx RUNEX	g/mi	0.00190	0.00089
2045	A	MCY	SOx STREX	g/trip	0.00035	0.00015
2045	A	MCY	PM2.5 RUNEX	g/mi	0.00234	0.00293
2045	A	MCY	PM2.5 STREX	g/trip	0.00337	0.00345
2045	A	MCY	PM10 RUNEX	g/mi	0.00251	0.00314
2045	A	MCY	PM10 STREX	g/trip	0.00361	0.00370
2045	A	MCY	CO, RUNEX	g/mi	192.683	207.820
2045	A	MCY	CO, STREX	g/trip	35.5891	34.3793
2045	A	MCY	CH„ RUNEX	g/mi	0.14957	0.17830
2045	A	MCY	CH„ STREX	g/trip	0.12269	0.12955
2045	A	MCY	N,O RUNEX	g/mi	0.03541	0.03637
2045	A	MCY	N,O STREX	g/trip	0.00431	0.00811
2045	S	MCY	TOG RUNEX	g/mi	1.14258	1.38322

2045	S	MCY	TOG STREX	g/trip	0.85865	0.82279
2045	S	MCY	TOG DIURN	g/trip	2.02052	1.93667
2045	S	MCY	TOG HOTSOAK	g/trip	3.67783	3.93321
2045	S	MCY	TOG RUNLOSS	g/trip	3.45652	3.59098
2045	S	MCY	ROG RUNEX	g/mi	0.91311	1.10379
2045	S	MCY	ROG STREX	g/trip	0.78842	0.75538
2045	S	MCY	ROG DIURN	g/trip	2.02052	1.93667
2045	S	MCY	ROG HOTSOAK	g/trip	3.67783	3.93321
2045	S	MCY	ROG RUNLOSS	g/trip	3.45652	3.59098
2045	S	MCY	NOx RUNEX	g/mi	0.41173	0.42139
2045	S	MCY	NOx STREX	g/trip	0.06116	0.05638
2045	S	MCY	CO RUNEX	g/mi	10.7169	10.6528
2045	S	MCY	CO STREX	g/trip	6.39789	6.26697
2045	S	MCY	SOx RUNEX	g/mi	0.00191	0.00089
2045	S	MCY	SOx STREX	g/trip	0.00034	0.00014
2045	S	MCY	PM2.5 RUNEX	g/mi	0.00234	0.00293
2045	S	MCY	PM2.5 STREX	g/trip	0.00337	0.00345
2045	S	MCY	PM10 RUNEX	g/mi	0.00251	0.00314
2045	S	MCY	PM10 STREX	g/trip	0.00361	0.00370
2045	S	MCY	PM10 PMTW	g/mi	0.00400	0.00400
2045	S	MCY	PM10 PMBW	g/mi	0.01200	0.01200
2045	S	MCY	CO, RUNEX	g/mi	193.020	208.187
2045	S	MCY	CO, STREX	g/trip	34.0988	32.9253
2045	S	MCY	CH„ RUNEX	g/mi	0.15226	0.18119
2045	S	MCY	CH„ STREX	g/trip	0.11294	0.12072
2045	S	MCY	N,O RUNEX	g/mi	0.03233	0.03324
2045	S	MCY	N,O STREX	g/trip	0.00426	0.00785
2045	W	MCY	TOG RUNEX	g/mi	1.11831	1.35149

2045	W	MCY	TOG STREX	g/trip	0.95502	0.91158
2045	W	MCY	TOG DIURN	g/trip	1.75799	1.83455
2045	W	MCY	TOG HOTSOAK	g/trip	3.59428	3.84523
2045	W	MCY	TOG RUNLOSS	g/trip	3.82662	4.04123
2045	W	MCY	ROG RUNEX	g/mi	0.89414	1.07882
2045	W	MCY	ROG STREX	g/trip	0.87696	0.83693
2045	W	MCY	ROG DIURN	g/trip	1.75799	1.83455
2045	W	MCY	ROG HOTSOAK	g/trip	3.59428	3.84523
2045	W	MCY	ROG RUNLOSS	g/trip	3.82662	4.04123
2045	W	MCY	NOx RUNEX	g/mi	0.45690	0.46758
2045	W	MCY	NOx STREX	g/trip	0.06505	0.05990
2045	W	MCY	CO RUNEX	g/mi	10.4925	10.4191
2045	W	MCY	CO STREX	g/trip	7.35041	7.20947
2045	W	MCY	SOx RUNEX	g/mi	0.00190	0.00089
2045	W	MCY	SOx STREX	g/trip	0.00035	0.00015
2045	W	MCY	PM2.5 RUNEX	g/mi	0.00234	0.00293
2045	W	MCY	PM2.5 STREX	g/trip	0.00337	0.00345
2045	W	MCY	PM10 RUNEX	g/mi	0.00251	0.00314
2045	W	MCY	PM10 STREX	g/trip	0.00361	0.00370
2045	W	MCY	CO, RUNEX	g/mi	192.592	207.723
2045	W	MCY	CO, STREX	g/trip	35.9048	34.6885
2045	W	MCY	CH„ RUNEX	g/mi	0.14887	0.17754
2045	W	MCY	CH„ STREX	g/trip	0.12493	0.13156
2045	W	MCY	N,O RUNEX	g/mi	0.03478	0.03573
2045	W	MCY	N,O STREX	g/trip	0.00439	0.00818
2045	A	MDV	TOG RUNEX	g/mi	0.00743	0.00937
2045	A	MDV	TOG STREX	g/trip	0.17269	0.09835
2045	A	MDV	TOG DIURN	g/trip	0.22714	0.23710

2045	A	MDV	TOG HOTSOAK	g/trip	0.04088	0.04268
2045	A	MDV	TOG RUNLOSS	g/trip	0.15136	0.15897
2045	A	MDV	ROG RUNEX	g/mi	0.00511	0.00659
2045	A	MDV	ROG STREX	g/trip	0.15773	0.08983
2045	A	MDV	ROG DIURN	g/trip	0.22714	0.23710
2045	A	MDV	ROG HOTSOAK	g/trip	0.04088	0.04268
2045	A	MDV	ROG RUNLOSS	g/trip	0.15136	0.15897
2045	A	MDV	NOx RUNEX	g/mi	0.02551	0.01832
2045	A	MDV	NOx STREX	g/trip	0.19656	0.05566
2045	A	MDV	CO RUNEX	g/mi	0.60204	1.25444
2045	A	MDV	CO STREX	g/trip	1.87255	1.47045
2045	A	MDV	SOx RUNEX	g/mi	0.00339	0.00103
2045	A	MDV	SOx STREX	g/trip	0.00079	0.00022
2045	A	MDV	PM2.5 RUNEX	g/mi	0.00055	0.00072
2045	A	MDV	PM2.5 STREX	g/trip	0.00075	0.00054
2045	A	MDV	PM2.5 PMTW	g/mi	0.00200	0.00212
2045	A	MDV	PM2.5 PMBW	g/mi	0.00359	0.00237
2045	A	MDV	PM10 RUNEX	g/mi	0.00060	0.00078
2045	A	MDV	PM10 STREX	g/trip	0.00081	0.00059
2045	A	MDV	PM10 PMTW	g/mi	0.00800	0.00850
2045	A	MDV	PM10 PMBW	g/mi	0.01026	0.00678
2045	A	MDV	CO, RUNEX	g/mi	342.601	243.366
2045	A	MDV	CO, STREX	g/trip	79.7410	52.3302
2045	A	MDV	CH„ RUNEX	g/mi	0.00158	0.00194
2045	A	MDV	CH„ STREX	g/trip	0.03893	0.01726
2045	A	MDV	N,O RUNEX	g/mi	0.00402	0.00504
2045	A	MDV	N,O STREX	g/trip	0.02824	0.00626
2045	S	MDV	TOG RUNEX	g/mi	0.00761	0.00955

2045	S	MDV	TOG STREX	g/trip	0.15455	0.08781
2045	S	MDV	TOG DIURN	g/trip	0.23899	0.24862
2045	S	MDV	TOG HOTSOAK	g/trip	0.04215	0.04399
2045	S	MDV	TOG RUNLOSS	g/trip	0.15194	0.15921
2045	S	MDV	ROG RUNEX	g/mi	0.00523	0.00671
2045	S	MDV	ROG STREX	g/trip	0.14116	0.08020
2045	S	MDV	ROG DIURN	g/trip	0.23899	0.24862
2045	S	MDV	ROG HOTSOAK	g/trip	0.04215	0.04399
2045	S	MDV	ROG RUNLOSS	g/trip	0.15194	0.15921
2045	S	MDV	NOx RUNEX	g/mi	0.02178	0.01569
2045	S	MDV	NOx STREX	g/trip	0.18198	0.05152
2045	S	MDV	CO RUNEX	g/mi	0.70685	1.45459
2045	S	MDV	CO STREX	g/trip	1.60193	1.25772
2045	S	MDV	SOx RUNEX	g/mi	0.00349	0.00106
2045	S	MDV	SOx STREX	g/trip	0.00078	0.00022
2045	S	MDV	PM2.5 RUNEX	g/mi	0.00055	0.00072
2045	S	MDV	PM2.5 STREX	g/trip	0.00075	0.00054
2045	S	MDV	PM2.5 PMTW	g/mi	0.00200	0.00212
2045	S	MDV	PM2.5 PMBW	g/mi	0.00359	0.00237
2045	S	MDV	PM10 RUNEX	g/mi	0.00060	0.00078
2045	S	MDV	PM10 STREX	g/trip	0.00081	0.00059
2045	S	MDV	PM10 PMTW	g/mi	0.00800	0.00850
2045	S	MDV	PM10 PMBW	g/mi	0.01026	0.00678
2045	S	MDV	CO, RUNEX	g/mi	352.702	250.311
2045	S	MDV	CO, STREX	g/trip	79.2559	51.9611
2045	S	MDV	CH„ RUNEX	g/mi	0.00164	0.00198
2045	S	MDV	CH„ STREX	g/trip	0.03522	0.01567
2045	S	MDV	N,O RUNEX	g/mi	0.00362	0.00480

2045	S	MDV	N,O STREX	g/trip	0.02707	0.00593
2045	W	MDV	TOG RUNEX	g/mi	0.00738	0.00931
2045	W	MDV	TOG STREX	g/trip	0.17678	0.10073
2045	W	MDV	TOG DIURN	g/trip	0.22672	0.23943
2045	W	MDV	TOG HOTSOAK	g/trip	0.04071	0.04250
2045	W	MDV	TOG RUNLOSS	g/trip	0.15187	0.15960
2045	W	MDV	ROG RUNEX	g/mi	0.00507	0.00656
2045	W	MDV	ROG STREX	g/trip	0.16146	0.09200
2045	W	MDV	ROG DIURN	g/trip	0.22672	0.23943
2045	W	MDV	ROG HOTSOAK	g/trip	0.04071	0.04250
2045	W	MDV	ROG RUNLOSS	g/trip	0.15187	0.15960
2045	W	MDV	NOx RUNEX	g/mi	0.02500	0.01795
2045	W	MDV	NOx STREX	g/trip	0.19980	0.05659
2045	W	MDV	CO RUNEX	g/mi	0.56414	1.18185
2045	W	MDV	CO STREX	g/trip	1.93495	1.51943
2045	W	MDV	SOx RUNEX	g/mi	0.00335	0.00102
2045	W	MDV	SOx STREX	g/trip	0.00079	0.00022
2045	W	MDV	PM2.5 RUNEX	g/mi	0.00055	0.00072
2045	W	MDV	PM2.5 STREX	g/trip	0.00075	0.00054
2045	W	MDV	PM2.5 PMTW	g/mi	0.00200	0.00212
2045	W	MDV	PM2.5 PMBW	g/mi	0.00359	0.00237
2045	W	MDV	PM10 RUNEX	g/mi	0.00060	0.00078
2045	W	MDV	PM10 STREX	g/trip	0.00081	0.00059
2045	W	MDV	PM10 PMTW	g/mi	0.00800	0.00850
2045	W	MDV	PM10 PMBW	g/mi	0.01026	0.00678
2045	W	MDV	CO, RUNEX	g/mi	338.880	240.808
2045	W	MDV	CO, STREX	g/trip	79.8525	52.4150
2045	W	MDV	CH„ RUNEX	g/mi	0.00157	0.00193

2045	W	MDV	CH„ STREX	g/trip	0.03977	0.01762
2045	W	MDV	N,O RUNEX	g/mi	0.00395	0.00500
2045	W	MDV	N,O STREX	g/trip	0.02871	0.00633
2045	A	MH	TOG RUNEX	g/mi	0.02344	0.02094
2045	A	MH	TOG STREX	g/trip	0.07845	0.08952
2045	A	MH	TOG DIURN	g/trip	11.3725	12.6788
2045	A	MH	TOG HOTSOAK	g/trip	1.72208	1.88799
2045	A	MH	TOG RUNLOSS	g/trip	0.04551	0.07899
2045	A	MH	ROG RUNEX	g/mi	0.01899	0.01665
2045	A	MH	ROG STREX	g/trip	0.07165	0.08176
2045	A	MH	ROG DIURN	g/trip	11.3725	12.6788
2045	A	MH	ROG HOTSOAK	g/trip	1.72208	1.88799
2045	A	MH	ROG RUNLOSS	g/trip	0.04551	0.07899
2045	A	MH	NOx RUNEX	g/mi	0.80129	0.66315
2045	A	MH	NOx STREX	g/trip	0.21460	0.24764
2045	A	MH	CO RUNEX	g/mi	0.13970	0.14181
2045	A	MH	CO STREX	g/trip	1.54476	1.75821
2045	A	MH	SOx RUNEX	g/mi	0.01479	0.00642
2045	A	MH	SOx STREX	g/trip	0.00018	0.00009
2045	A	MH	PM2.5 RUNEX	g/mi	0.00767	0.00585
2045	A	MH	PM2.5 STREX	g/trip	0.00021	0.00025
2045	A	MH	PM2.5 PMTW	g/mi	0.00335	0.00328
2045	A	MH	PM2.5 PMBW	g/mi	0.01518	0.01519
2045	A	MH	PM10 RUNEX	g/mi	0.00805	0.00615
2045	A	MH	PM10 STREX	g/trip	0.00023	0.00027
2045	A	MH	PM10 PMTW	g/mi	0.01341	0.01312
2045	A	MH	PM10 PMBW	g/mi	0.04338	0.04340
2045	A	MH	CO, RUNEX	g/mi	1,510.96	1,562.51

2045	A	MH	CO, STREX	g/trip	18.6608	21.3865
2045	A	MH	CH„ RUNEX	g/mi	0.00269	0.00276
2045	A	MH	CH„ STREX	g/trip	0.02035	0.01683
2045	A	MH	N,O RUNEX	g/mi	0.06783	0.12227
2045	A	MH	N,O STREX	g/trip	0.02524	0.01993
2045	S	MH	TOG RUNEX	g/mi	0.02362	0.02114
2045	S	MH	TOG STREX	g/trip	0.07531	0.08593
2045	S	MH	TOG DIURN	g/trip	11.8007	13.1115
2045	S	MH	TOG HOTSOAK	g/trip	1.77069	1.94055
2045	S	MH	TOG RUNLOSS	g/trip	0.04551	0.07887
2045	S	MH	ROG RUNEX	g/mi	0.01911	0.01678
2045	S	MH	ROG STREX	g/trip	0.06878	0.07848
2045	S	MH	ROG DIURN	g/trip	11.8007	13.1115
2045	S	MH	ROG HOTSOAK	g/trip	1.77069	1.94055
2045	S	MH	ROG RUNLOSS	g/trip	0.04551	0.07887
2045	S	MH	NOx RUNEX	g/mi	0.74872	0.61780
2045	S	MH	NOx STREX	g/trip	0.20522	0.23682
2045	S	MH	CO RUNEX	g/mi	0.14181	0.14416
2045	S	MH	CO STREX	g/trip	1.46111	1.66299
2045	S	MH	SOx RUNEX	g/mi	0.01479	0.00642
2045	S	MH	SOx STREX	g/trip	0.00018	0.00009
2045	S	MH	PM2.5 RUNEX	g/mi	0.00767	0.00585
2045	S	MH	PM2.5 STREX	g/trip	0.00021	0.00025
2045	S	MH	PM2.5 PMTW	g/mi	0.00335	0.00328
2045	S	MH	PM2.5 PMBW	g/mi	0.01518	0.01519
2045	S	MH	PM10 RUNEX	g/mi	0.00805	0.00615
2045	S	MH	PM10 STREX	g/trip	0.00023	0.00027
2045	S	MH	PM10 PMTW	g/mi	0.01341	0.01312

2045	S	MH	PM10 PMBW	g/mi	0.04338	0.04340
2045	S	MH	CO, RUNEX	g/mi	1,510.97	1,562.52
2045	S	MH	CO, STREX	g/trip	18.5184	21.2247
2045	S	MH	CH„ RUNEX	g/mi	0.00273	0.00280
2045	S	MH	CH„ STREX	g/trip	0.01949	0.01629
2045	S	MH	N,O RUNEX	g/mi	0.06684	0.12120
2045	S	MH	N,O STREX	g/trip	0.02510	0.01932
2045	W	MH	TOG RUNEX	g/mi	0.02339	0.02089
2045	W	MH	TOG STREX	g/trip	0.07921	0.09038
2045	W	MH	TOG DIURN	g/trip	11.3695	12.8052
2045	W	MH	TOG HOTSOAK	g/trip	1.71609	1.88164
2045	W	MH	TOG RUNLOSS	g/trip	0.04619	0.07984
2045	W	MH	ROG RUNEX	g/mi	0.01895	0.01661
2045	W	MH	ROG STREX	g/trip	0.07234	0.08255
2045	W	MH	ROG DIURN	g/trip	11.3695	12.8052
2045	W	MH	ROG HOTSOAK	g/trip	1.71609	1.88164
2045	W	MH	ROG RUNLOSS	g/trip	0.04619	0.07984
2045	W	MH	NOx RUNEX	g/mi	0.78570	0.65010
2045	W	MH	NOx STREX	g/trip	0.21685	0.25025
2045	W	MH	CO RUNEX	g/mi	0.13909	0.14114
2045	W	MH	CO STREX	g/trip	1.56219	1.77804
2045	W	MH	SOx RUNEX	g/mi	0.01479	0.00642
2045	W	MH	SOx STREX	g/trip	0.00018	0.00009
2045	W	MH	PM2.5 RUNEX	g/mi	0.00767	0.00585
2045	W	MH	PM2.5 STREX	g/trip	0.00021	0.00025
2045	W	MH	PM2.5 PMTW	g/mi	0.00335	0.00328
2045	W	MH	PM2.5 PMBW	g/mi	0.01518	0.01519
2045	W	MH	PM10 RUNEX	g/mi	0.00805	0.00615

2045	W	MH	PM10 STREX	g/trip	0.00023	0.00027
2045	W	MH	PM10 PMTW	g/mi	0.01341	0.01312
2045	W	MH	PM10 PMBW	g/mi	0.04338	0.04340
2045	W	MH	CO, RUNEX	g/mi	1,510.96	1,562.51
2045	W	MH	CO, STREX	g/trip	18.6908	21.4205
2045	W	MH	CH„ RUNEX	g/mi	0.00268	0.00275
2045	W	MH	CH„ STREX	g/trip	0.02055	0.01696
2045	W	MH	N,O RUNEX	g/mi	0.06764	0.12207
2045	W	MH	N,O STREX	g/trip	0.02568	0.02007
2045	A	MHDT	TOG RUNEX	g/mi	0.00864	0.01008
2045	A	MHDT	TOG IDLEX	g/trip	0.06439	0.02746
2045	A	MHDT	TOG STREX	g/trip	0.01942	0.02856
2045	A	MHDT	TOG DIURN	g/trip	0.01143	0.02381
2045	A	MHDT	TOG HOTSOAK	g/trip	0.00155	0.00319
2045	A	MHDT	TOG RUNLOSS	g/trip	0.00940	0.04419
2045	A	MHDT	ROG RUNEX	g/mi	0.00293	0.00458
2045	A	MHDT	ROG IDLEX	g/trip	0.02009	0.01662
2045	A	MHDT	ROG STREX	g/trip	0.01774	0.02608
2045	A	MHDT	ROG DIURN	g/trip	0.01143	0.02381
2045	A	MHDT	ROG HOTSOAK	g/trip	0.00155	0.00319
2045	A	MHDT	ROG RUNLOSS	g/trip	0.00940	0.04419
2045	A	MHDT	NOx RUNEX	g/mi	0.12047	0.07464
2045	A	MHDT	NOx IDLEX	g/trip	0.81094	0.12086
2045	A	MHDT	NOx STREX	g/trip	0.53973	0.34617
2045	A	MHDT	CO RUNEX	g/mi	0.04783	0.06511
2045	A	MHDT	CO IDLEX	g/trip	0.77118	0.53152
2045	A	MHDT	CO STREX	g/trip	0.32693	0.46646
2045	A	MHDT	SOx RUNEX	g/mi	0.00501	0.00279

2045	A	MHDT	SOx IDLEX	g/trip	0.00139	0.00034
2045	A	MHDT	SOx STREX	g/trip	0.00004	0.00001
2045	A	MHDT	PM2.5 RUNEX	g/mi	0.00164	0.00206
2045	A	MHDT	PM2.5 IDLEX	g/trip	0.00026	0.00013
2045	A	MHDT	PM2.5 STREX	g/trip	0.00004	0.00006
2045	A	MHDT	PM2.5 PMBW	g/mi	0.01154	0.01401
2045	A	MHDT	PM10 RUNEX	g/mi	0.00172	0.00216
2045	A	MHDT	PM10 IDLEX	g/trip	0.00028	0.00013
2045	A	MHDT	PM10 STREX	g/trip	0.00005	0.00006
2045	A	MHDT	PM10 PMBW	g/mi	0.03297	0.04004
2045	A	MHDT	CO, RUNEX	g/mi	531.792	824.112
2045	A	MHDT	CO, IDLEX	g/trip	160.994	99.8827
2045	A	MHDT	CO, STREX	g/trip	3.63397	5.05368
2045	A	MHDT	CH„ RUNEX	g/mi	0.00535	0.00505
2045	A	MHDT	CH„ IDLEX	g/trip	0.04164	0.00780
2045	A	MHDT	CH„ STREX	g/trip	0.00362	0.00501
2045	A	MHDT	N,O RUNEX	g/mi	0.06897	0.30714
2045	A	MHDT	N,O IDLEX	g/trip	0.02561	0.00002
2045	A	MHDT	N,O STREX	g/trip	0.00287	0.00371
2045	S	MHDT	TOG RUNEX	g/mi	0.00866	0.01011
2045	S	MHDT	TOG IDLEX	g/trip	0.06483	0.02759
2045	S	MHDT	TOG STREX	g/trip	0.01866	0.02744
2045	S	MHDT	TOG DIURN	g/trip	0.01192	0.02469
2045	S	MHDT	TOG HOTSOAK	g/trip	0.00159	0.00328
2045	S	MHDT	TOG RUNLOSS	g/trip	0.00941	0.04419
2045	S	MHDT	ROG RUNEX	g/mi	0.00295	0.00460
2045	S	MHDT	ROG IDLEX	g/trip	0.02057	0.01684
2045	S	MHDT	ROG STREX	g/trip	0.01704	0.02506

2045	S	MHDT	ROG DIURN	g/trip	0.01192	0.02469
2045	S	MHDT	ROG HOTSOAK	g/trip	0.00159	0.00328
2045	S	MHDT	ROG RUNLOSS	g/trip	0.00941	0.04419
2045	S	MHDT	NOx RUNEX	g/mi	0.11344	0.06995
2045	S	MHDT	NOx IDLEX	g/trip	0.77199	0.11490
2045	S	MHDT	NOx STREX	g/trip	0.53829	0.34422
2045	S	MHDT	CO RUNEX	g/mi	0.04811	0.06558
2045	S	MHDT	CO IDLEX	g/trip	0.73958	0.49966
2045	S	MHDT	CO STREX	g/trip	0.31053	0.44306
2045	S	MHDT	SOx RUNEX	g/mi	0.00501	0.00279
2045	S	MHDT	SOx IDLEX	g/trip	0.00137	0.00034
2045	S	MHDT	SOx STREX	g/trip	0.00004	0.00001
2045	S	MHDT	PM2.5 RUNEX	g/mi	0.00164	0.00206
2045	S	MHDT	PM2.5 IDLEX	g/trip	0.00024	0.00011
2045	S	MHDT	PM2.5 STREX	g/trip	0.00004	0.00006
2045	S	MHDT	PM2.5 PMBW	g/mi	0.01154	0.01401
2045	S	MHDT	PM10 RUNEX	g/mi	0.00172	0.00216
2045	S	MHDT	PM10 IDLEX	g/trip	0.00025	0.00012
2045	S	MHDT	PM10 STREX	g/trip	0.00005	0.00006
2045	S	MHDT	PM10 PMTW	g/mi	0.01200	0.01200
2045	S	MHDT	PM10 PMBW	g/mi	0.03297	0.04004
2045	S	MHDT	CO, RUNEX	g/mi	531.793	824.113
2045	S	MHDT	CO, IDLEX	g/trip	159.057	98.5591
2045	S	MHDT	CO, STREX	g/trip	3.60561	5.01319
2045	S	MHDT	CH„ RUNEX	g/mi	0.00536	0.00505
2045	S	MHDT	CH„ IDLEX	g/trip	0.04159	0.00779
2045	S	MHDT	CH„ STREX	g/trip	0.00349	0.00485
2045	S	MHDT	N,O RUNEX	g/mi	0.06892	0.30707

2045	S	MHDT	N,O IDLEX	g/trip	0.02529	0.00002
2045	S	MHDT	N,O STREX	g/trip	0.00280	0.00359
2045	W	MHDT	TOG RUNEX	g/mi	0.00864	0.01007
2045	W	MHDT	TOG IDLEX	g/trip	0.06380	0.02730
2045	W	MHDT	TOG STREX	g/trip	0.01960	0.02882
2045	W	MHDT	TOG DIURN	g/trip	0.01149	0.02440
2045	W	MHDT	TOG HOTSOAK	g/trip	0.00154	0.00318
2045	W	MHDT	TOG RUNLOSS	g/trip	0.00952	0.04445
2045	W	MHDT	ROG RUNEX	g/mi	0.00293	0.00458
2045	W	MHDT	ROG IDLEX	g/trip	0.01942	0.01632
2045	W	MHDT	ROG STREX	g/trip	0.01790	0.02632
2045	W	MHDT	ROG DIURN	g/trip	0.01149	0.02440
2045	W	MHDT	ROG HOTSOAK	g/trip	0.00154	0.00318
2045	W	MHDT	ROG RUNLOSS	g/trip	0.00952	0.04445
2045	W	MHDT	NOx RUNEX	g/mi	0.11824	0.07323
2045	W	MHDT	NOx IDLEX	g/trip	0.86473	0.12910
2045	W	MHDT	NOx STREX	g/trip	0.54008	0.34664
2045	W	MHDT	CO RUNEX	g/mi	0.04776	0.06498
2045	W	MHDT	CO IDLEX	g/trip	0.81526	0.57601
2045	W	MHDT	CO STREX	g/trip	0.33018	0.47111
2045	W	MHDT	SOx RUNEX	g/mi	0.00501	0.00279
2045	W	MHDT	SOx IDLEX	g/trip	0.00142	0.00035
2045	W	MHDT	SOx STREX	g/trip	0.00004	0.00001
2045	W	MHDT	PM2.5 RUNEX	g/mi	0.00164	0.00206
2045	W	MHDT	PM2.5 IDLEX	g/trip	0.00029	0.00014
2045	W	MHDT	PM2.5 STREX	g/trip	0.00004	0.00006
2045	W	MHDT	PM2.5 PMBW	g/mi	0.01154	0.01401
2045	W	MHDT	PM10 RUNEX	g/mi	0.00172	0.00216

2045	W	MHDT	PM10 IDLEX	g/trip	0.00031	0.00015
2045	W	MHDT	PM10 STREX	g/trip	0.00005	0.00006
2045	W	MHDT	PM10 PMBW	g/mi	0.03297	0.04004
2045	W	MHDT	CO, RUNEX	g/mi	531.792	824.112
2045	W	MHDT	CO, IDLEX	g/trip	163.667	101.709
2045	W	MHDT	CO, STREX	g/trip	3.63968	5.06182
2045	W	MHDT	CH„ RUNEX	g/mi	0.00535	0.00505
2045	W	MHDT	CH„ IDLEX	g/trip	0.04171	0.00782
2045	W	MHDT	CH„ STREX	g/trip	0.00364	0.00505
2045	W	MHDT	N,O RUNEX	g/mi	0.06896	0.30713
2045	W	MHDT	N,O IDLEX	g/trip	0.02606	0.00002
2045	W	MHDT	N,O STREX	g/trip	0.00290	0.00373
2045	A	OBUS	TOG RUNEX	g/mi	0.06442	0.01816
2045	A	OBUS	TOG IDLEX	g/trip	0.10013	0.10000
2045	A	OBUS	TOG STREX	g/trip	0.06887	0.03865
2045	A	OBUS	TOG DIURN	g/trip	0.07706	0.13980
2045	A	OBUS	TOG HOTSOAK	g/trip	0.01228	0.02216
2045	A	OBUS	TOG RUNLOSS	g/trip	0.01770	0.06407
2045	A	OBUS	ROG RUNEX	g/mi	0.01270	0.01536
2045	A	OBUS	ROG IDLEX	g/trip	0.04590	0.05420
2045	A	OBUS	ROG STREX	g/trip	0.06290	0.03530
2045	A	OBUS	ROG DIURN	g/trip	0.07706	0.13980
2045	A	OBUS	ROG HOTSOAK	g/trip	0.01228	0.02216
2045	A	OBUS	ROG RUNLOSS	g/trip	0.01770	0.06407
2045	A	OBUS	NOx RUNEX	g/mi	0.56641	0.36452
2045	A	OBUS	NOx IDLEX	g/trip	0.23884	0.14158
2045	A	OBUS	NOx STREX	g/trip	0.49135	0.45094
2045	A	OBUS	CO RUNEX	g/mi	0.31248	0.10964

2045	A	OBUS	CO IDLEX	g/trip	0.72402	0.85231
2045	A	OBUS	CO STREX	g/trip	1.16413	0.63051
2045	A	OBUS	SOx RUNEX	g/mi	0.00936	0.00274
2045	A	OBUS	SOx IDLEX	g/trip	0.00084	0.00038
2045	A	OBUS	SOx STREX	g/trip	0.00011	0.00001
2045	A	OBUS	PM2.5 RUNEX	g/mi	0.00755	0.00491
2045	A	OBUS	PM2.5 IDLEX	g/trip	0.00026	0.00020
2045	A	OBUS	PM2.5 STREX	g/trip	0.00010	0.00005
2045	A	OBUS	PM2.5 PMBW	g/mi	0.02019	0.01845
2045	A	OBUS	PM10 RUNEX	g/mi	0.00790	0.00513
2045	A	OBUS	PM10 IDLEX	g/trip	0.00027	0.00021
2045	A	OBUS	PM10 STREX	g/trip	0.00011	0.00005
2045	A	OBUS	PM10 PMBW	g/mi	0.05770	0.05273
2045	A	OBUS	CO, RUNEX	g/mi	1,041.97	802.929
2045	A	OBUS	CO, IDLEX	g/trip	101.610	161.062
2045	A	OBUS	CO, STREX	g/trip	10.8854	6.09205
2045	A	OBUS	CH„ RUNEX	g/mi	0.04989	0.00114
2045	A	OBUS	CH„ IDLEX	g/trip	0.04808	0.05812
2045	A	OBUS	CH„ STREX	g/trip	0.01158	0.00684
2045	A	OBUS	N,O RUNEX	g/mi	0.13327	0.20878
2045	A	OBUS	N,O IDLEX	g/trip	0.01564	0.00003
2045	A	OBUS	N,O STREX	g/trip	0.00913	0.00625
2045	S	OBUS	TOG RUNEX	g/mi	0.06450	0.01822
2045	S	OBUS	TOG IDLEX	g/trip	0.10221	0.10309
2045	S	OBUS	TOG STREX	g/trip	0.06611	0.03710
2045	S	OBUS	TOG DIURN	g/trip	0.08111	0.14645
2045	S	OBUS	TOG HOTSOAK	g/trip	0.01262	0.02274
2045	S	OBUS	TOG RUNLOSS	g/trip	0.01771	0.06411

2045	S	OBUS	ROG RUNEX	g/mi	0.01276	0.01540
2045	S	OBUS	ROG IDLEX	g/trip	0.04773	0.05691
2045	S	OBUS	ROG STREX	g/trip	0.06038	0.03388
2045	S	OBUS	ROG DIURN	g/trip	0.08111	0.14645
2045	S	OBUS	ROG HOTSOAK	g/trip	0.01262	0.02274
2045	S	OBUS	ROG RUNLOSS	g/trip	0.01771	0.06411
2045	S	OBUS	NOx RUNEX	g/mi	0.53349	0.34344
2045	S	OBUS	NOx IDLEX	g/trip	0.22898	0.13700
2045	S	OBUS	NOx STREX	g/trip	0.48549	0.44759
2045	S	OBUS	CO RUNEX	g/mi	0.31377	0.11059
2045	S	OBUS	CO IDLEX	g/trip	0.71683	0.84233
2045	S	OBUS	CO STREX	g/trip	1.10109	0.59636
2045	S	OBUS	SOx RUNEX	g/mi	0.00936	0.00274
2045	S	OBUS	SOx IDLEX	g/trip	0.00083	0.00037
2045	S	OBUS	SOx STREX	g/trip	0.00011	0.00001
2045	S	OBUS	PM2.5 RUNEX	g/mi	0.00755	0.00491
2045	S	OBUS	PM2.5 IDLEX	g/trip	0.00023	0.00018
2045	S	OBUS	PM2.5 STREX	g/trip	0.00010	0.00005
2045	S	OBUS	PM2.5 PMBW	g/mi	0.02019	0.01845
2045	S	OBUS	PM10 RUNEX	g/mi	0.00790	0.00513
2045	S	OBUS	PM10 IDLEX	g/trip	0.00024	0.00019
2045	S	OBUS	PM10 STREX	g/trip	0.00011	0.00005
2045	S	OBUS	PM10 PMTW	g/mi	0.01200	0.01200
2045	S	OBUS	PM10 PMBW	g/mi	0.05770	0.05273
2045	S	OBUS	CO, RUNEX	g/mi	1,041.97	802.930
2045	S	OBUS	CO, IDLEX	g/trip	100.576	159.202
2045	S	OBUS	CO, STREX	g/trip	10.7769	6.03325
2045	S	OBUS	CH„ RUNEX	g/mi	0.04990	0.00115

2045	S	OBUS	CH„ IDLEX	g/trip	0.04818	0.05825
2045	S	OBUS	CH„ STREX	g/trip	0.01116	0.00662
2045	S	OBUS	N,O RUNEX	g/mi	0.13306	0.20867
2045	S	OBUS	N,O IDLEX	g/trip	0.01547	0.00003
2045	S	OBUS	N,O STREX	g/trip	0.00890	0.00606
2045	W	OBUS	TOG RUNEX	g/mi	0.06440	0.01814
2045	W	OBUS	TOG IDLEX	g/trip	0.09726	0.09574
2045	W	OBUS	TOG STREX	g/trip	0.06953	0.03902
2045	W	OBUS	TOG DIURN	g/trip	0.07794	0.14534
2045	W	OBUS	TOG HOTSOAK	g/trip	0.01224	0.02210
2045	W	OBUS	TOG RUNLOSS	g/trip	0.01787	0.06434
2045	W	OBUS	ROG RUNEX	g/mi	0.01268	0.01535
2045	W	OBUS	ROG IDLEX	g/trip	0.04338	0.05045
2045	W	OBUS	ROG STREX	g/trip	0.06351	0.03564
2045	W	OBUS	ROG DIURN	g/trip	0.07794	0.14534
2045	W	OBUS	ROG HOTSOAK	g/trip	0.01224	0.02210
2045	W	OBUS	ROG RUNLOSS	g/trip	0.01787	0.06434
2045	W	OBUS	NOx RUNEX	g/mi	0.55602	0.35777
2045	W	OBUS	NOx IDLEX	g/trip	0.25245	0.14790
2045	W	OBUS	NOx STREX	g/trip	0.49276	0.45175
2045	W	OBUS	CO RUNEX	g/mi	0.31217	0.10941
2045	W	OBUS	CO IDLEX	g/trip	0.73395	0.86609
2045	W	OBUS	CO STREX	g/trip	1.17727	0.63762
2045	W	OBUS	SOx RUNEX	g/mi	0.00936	0.00274
2045	W	OBUS	SOx IDLEX	g/trip	0.00085	0.00039
2045	W	OBUS	SOx STREX	g/trip	0.00011	0.00001
2045	W	OBUS	PM2.5 RUNEX	g/mi	0.00755	0.00491
2045	W	OBUS	PM2.5 IDLEX	g/trip	0.00029	0.00023

2045	W	OBUS	PM2.5 STREX	g/trip	0.00010	0.00005
2045	W	OBUS	PM2.5 PMBW	g/mi	0.02019	0.01845
2045	W	OBUS	PM10 RUNEX	g/mi	0.00790	0.00513
2045	W	OBUS	PM10 IDLEX	g/trip	0.00031	0.00024
2045	W	OBUS	PM10 STREX	g/trip	0.00011	0.00005
2045	W	OBUS	PM10 PMBW	g/mi	0.05770	0.05273
2045	W	OBUS	CO, RUNEX	g/mi	1,041.97	802.928
2045	W	OBUS	CO, IDLEX	g/trip	103.039	163.630
2045	W	OBUS	CO, STREX	g/trip	10.9083	6.10445
2045	W	OBUS	CH„ RUNEX	g/mi	0.04989	0.00114
2045	W	OBUS	CH„ IDLEX	g/trip	0.04796	0.05795
2045	W	OBUS	CH„ STREX	g/trip	0.01168	0.00689
2045	W	OBUS	N,O RUNEX	g/mi	0.13322	0.20875
2045	W	OBUS	N,O IDLEX	g/trip	0.01586	0.00003
2045	W	OBUS	N,O STREX	g/trip	0.00922	0.00630
2045	A	SBUS	TOG RUNEX	g/mi	0.76366	0.97141
2045	A	SBUS	TOG IDLEX	g/trip	1.78941	0.92970
2045	A	SBUS	TOG STREX	g/trip	0.03118	0.04539
2045	A	SBUS	TOG DIURN	g/trip	0.07876	0.10781
2045	A	SBUS	TOG HOTSOAK	g/trip	0.01017	0.01345
2045	A	SBUS	TOG RUNLOSS	g/trip	0.22115	0.07755
2045	A	SBUS	ROG RUNEX	g/mi	0.01501	0.01881
2045	A	SBUS	ROG IDLEX	g/trip	0.94548	0.31067
2045	A	SBUS	ROG STREX	g/trip	0.02847	0.04145
2045	A	SBUS	ROG DIURN	g/trip	0.07876	0.10781
2045	A	SBUS	ROG HOTSOAK	g/trip	0.01017	0.01345
2045	A	SBUS	ROG RUNLOSS	g/trip	0.22115	0.07755
2045	A	SBUS	NOx RUNEX	g/mi	0.14525	0.11947

2045	A	SBUS	NOx IDLEX	g/trip	0.33729	0.24723
2045	A	SBUS	NOx STREX	g/trip	0.13484	0.12751
2045	A	SBUS	CO RUNEX	g/mi	2.26910	2.94593
2045	A	SBUS	CO IDLEX	g/trip	8.41596	3.56773
2045	A	SBUS	CO STREX	g/trip	0.60173	0.83148
2045	A	SBUS	SOx RUNEX	g/mi	0.00332	0.00133
2045	A	SBUS	SOx IDLEX	g/trip	0.00225	0.00035
2045	A	SBUS	SOx STREX	g/trip	0.00004	0.00006
2045	A	SBUS	PM2.5 RUNEX	g/mi	0.00162	0.00173
2045	A	SBUS	PM2.5 IDLEX	g/trip	0.00058	0.00061
2045	A	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2045	A	SBUS	PM2.5 PMTW	g/mi	0.00251	0.00238
2045	A	SBUS	PM2.5 PMBW	g/mi	0.01316	0.01357
2045	A	SBUS	PM10 RUNEX	g/mi	0.00175	0.00188
2045	A	SBUS	PM10 IDLEX	g/trip	0.00063	0.00066
2045	A	SBUS	PM10 STREX	g/trip	0.00007	0.00009
2045	A	SBUS	PM10 PMTW	g/mi	0.01005	0.00950
2045	A	SBUS	PM10 PMBW	g/mi	0.03761	0.03878
2045	A	SBUS	CO, RUNEX	g/mi	655.619	703.295
2045	A	SBUS	CO, IDLEX	g/trip	368.351	210.836
2045	A	SBUS	CO, STREX	g/trip	3.96776	5.35733
2045	A	SBUS	CH„ RUNEX	g/mi	0.74308	1.38189
2045	A	SBUS	CH„ IDLEX	g/trip	0.62532	0.75640
2045	A	SBUS	CH„ STREX	g/trip	0.00507	0.00705
2045	A	SBUS	N,O RUNEX	g/mi	0.08166	0.14616
2045	A	SBUS	N,O IDLEX	g/trip	0.03801	0.00112
2045	A	SBUS	N,O STREX	g/trip	0.00462	0.00410
2045	S	SBUS	TOG RUNEX	g/mi	0.76376	0.97153

2045	S	SBUS	TOG IDLEX	g/trip	1.78956	0.92986
2045	S	SBUS	TOG STREX	g/trip	0.02780	0.04047
2045	S	SBUS	TOG DIURN	g/trip	0.08149	0.11091
2045	S	SBUS	TOG HOTSOAK	g/trip	0.01044	0.01379
2045	S	SBUS	TOG RUNLOSS	g/trip	0.22074	0.07735
2045	S	SBUS	ROG RUNEX	g/mi	0.01508	0.01889
2045	S	SBUS	ROG IDLEX	g/trip	0.94560	0.31081
2045	S	SBUS	ROG STREX	g/trip	0.02539	0.03697
2045	S	SBUS	ROG DIURN	g/trip	0.08149	0.11091
2045	S	SBUS	ROG HOTSOAK	g/trip	0.01044	0.01379
2045	S	SBUS	ROG RUNLOSS	g/trip	0.22074	0.07735
2045	S	SBUS	NOx RUNEX	g/mi	0.13479	0.10788
2045	S	SBUS	NOx IDLEX	g/trip	0.33152	0.24535
2045	S	SBUS	NOx STREX	g/trip	0.13233	0.12452
2045	S	SBUS	CO RUNEX	g/mi	2.27036	2.94744
2045	S	SBUS	CO IDLEX	g/trip	8.41481	3.56643
2045	S	SBUS	CO STREX	g/trip	0.49099	0.67845
2045	S	SBUS	SOx RUNEX	g/mi	0.00332	0.00133
2045	S	SBUS	SOx IDLEX	g/trip	0.00224	0.00035
2045	S	SBUS	SOx STREX	g/trip	0.00004	0.00006
2045	S	SBUS	PM2.5 RUNEX	g/mi	0.00162	0.00173
2045	S	SBUS	PM2.5 IDLEX	g/trip	0.00058	0.00061
2045	S	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2045	S	SBUS	PM2.5 PMTW	g/mi	0.00251	0.00238
2045	S	SBUS	PM2.5 PMBW	g/mi	0.01316	0.01357
2045	S	SBUS	PM10 RUNEX	g/mi	0.00175	0.00188
2045	S	SBUS	PM10 IDLEX	g/trip	0.00063	0.00066
2045	S	SBUS	PM10 STREX	g/trip	0.00007	0.00009

2045	S	SBUS	PM10 PMTW	g/mi	0.01005	0.00950
2045	S	SBUS	PM10 PMBW	g/mi	0.03761	0.03878
2045	S	SBUS	CO, RUNEX	g/mi	655.621	703.298
2045	S	SBUS	CO, IDLEX	g/trip	368.032	210.549
2045	S	SBUS	CO, STREX	g/trip	3.78170	5.10002
2045	S	SBUS	CH„ RUNEX	g/mi	0.74310	1.38191
2045	S	SBUS	CH„ IDLEX	g/trip	0.62559	0.75641
2045	S	SBUS	CH„ STREX	g/trip	0.00453	0.00642
2045	S	SBUS	N,O RUNEX	g/mi	0.08134	0.14583
2045	S	SBUS	N,O IDLEX	g/trip	0.03813	0.00112
2045	S	SBUS	N,O STREX	g/trip	0.00450	0.00395
2045	W	SBUS	TOG RUNEX	g/mi	0.76364	0.97138
2045	W	SBUS	TOG IDLEX	g/trip	1.78922	0.92948
2045	W	SBUS	TOG STREX	g/trip	0.03195	0.04652
2045	W	SBUS	TOG DIURN	g/trip	0.07953	0.11056
2045	W	SBUS	TOG HOTSOAK	g/trip	0.01014	0.01340
2045	W	SBUS	TOG RUNLOSS	g/trip	0.22210	0.07794
2045	W	SBUS	ROG RUNEX	g/mi	0.01500	0.01879
2045	W	SBUS	ROG IDLEX	g/trip	0.94531	0.31048
2045	W	SBUS	ROG STREX	g/trip	0.02918	0.04248
2045	W	SBUS	ROG DIURN	g/trip	0.07953	0.11056
2045	W	SBUS	ROG HOTSOAK	g/trip	0.01014	0.01340
2045	W	SBUS	ROG RUNLOSS	g/trip	0.22210	0.07794
2045	W	SBUS	NOx RUNEX	g/mi	0.14247	0.11632
2045	W	SBUS	NOx IDLEX	g/trip	0.34525	0.24984
2045	W	SBUS	NOx STREX	g/trip	0.13557	0.12839
2045	W	SBUS	CO RUNEX	g/mi	2.26879	2.94556
2045	W	SBUS	CO IDLEX	g/trip	8.41755	3.56953

2045	W	SBUS	CO STREX	g/trip	0.62272	0.86048
2045	W	SBUS	SOx RUNEX	g/mi	0.00332	0.00133
2045	W	SBUS	SOx IDLEX	g/trip	0.00225	0.00036
2045	W	SBUS	SOx STREX	g/trip	0.00004	0.00006
2045	W	SBUS	PM2.5 RUNEX	g/mi	0.00162	0.00173
2045	W	SBUS	PM2.5 IDLEX	g/trip	0.00058	0.00061
2045	W	SBUS	PM2.5 STREX	g/trip	0.00006	0.00008
2045	W	SBUS	PM2.5 PMTW	g/mi	0.00251	0.00238
2045	W	SBUS	PM2.5 PMBW	g/mi	0.01316	0.01357
2045	W	SBUS	PM10 RUNEX	g/mi	0.00175	0.00188
2045	W	SBUS	PM10 IDLEX	g/trip	0.00063	0.00066
2045	W	SBUS	PM10 STREX	g/trip	0.00007	0.00009
2045	W	SBUS	PM10 PMTW	g/mi	0.01005	0.00950
2045	W	SBUS	PM10 PMBW	g/mi	0.03761	0.03878
2045	W	SBUS	CO, RUNEX	g/mi	655.618	703.295
2045	W	SBUS	CO, IDLEX	g/trip	368.792	211.231
2045	W	SBUS	CO, STREX	g/trip	4.00344	5.40670
2045	W	SBUS	CH„ RUNEX	g/mi	0.74308	1.38188
2045	W	SBUS	CH„ IDLEX	g/trip	0.62525	0.75639
2045	W	SBUS	CH„ STREX	g/trip	0.00520	0.00719
2045	W	SBUS	N,O RUNEX	g/mi	0.08159	0.14610
2045	W	SBUS	N,O IDLEX	g/trip	0.03810	0.00112
2045	W	SBUS	N,O STREX	g/trip	0.00470	0.00414
2045	A	UBUS	TOG RUNEX	g/mi	0.00042	0.00047
2045	A	UBUS	TOG STREX	g/trip	0.00321	0.00065
2045	A	UBUS	TOG DIURN	g/trip	0.00282	0.00023
2045	A	UBUS	TOG HOTSOAK	g/trip	0.00080	0.00006
2045	A	UBUS	TOG RUNLOSS	g/trip	0.00166	0.00023

2045	A	UBUS	ROG RUNEX	g/mi	0.00036	0.00041
2045	A	UBUS	ROG STREX	g/trip	0.00293	0.00059
2045	A	UBUS	ROG DIURN	g/trip	0.00282	0.00023
2045	A	UBUS	ROG HOTSOAK	g/trip	0.00080	0.00006
2045	A	UBUS	ROG RUNLOSS	g/trip	0.00166	0.00023
2045	A	UBUS	NOx RUNEX	g/mi	0.00110	0.00097
2045	A	UBUS	NOx STREX	g/trip	0.00900	0.00075
2045	A	UBUS	CO RUNEX	g/mi	0.00906	0.00149
2045	A	UBUS	CO STREX	g/trip	0.18154	0.00739
2045	A	UBUS	SOx RUNEX	g/mi	—	< 0.000005
2045	A	UBUS	SOx STREX	g/trip	0.00001	< 0.000005
2045	A	UBUS	PM2.5 RUNEX	g/mi	—	0.00006
2045	A	UBUS	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	A	UBUS	PM2.5 PMTW	g/mi	0.00821	0.00805
2045	A	UBUS	PM2.5 PMBW	g/mi	0.01955	0.01936
2045	A	UBUS	PM10 RUNEX	g/mi	—	0.00007
2045	A	UBUS	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	A	UBUS	PM10 PMTW	g/mi	0.03284	0.03219
2045	A	UBUS	PM10 PMBW	g/mi	0.05587	0.05531
2045	A	UBUS	CO, RUNEX	g/mi	13.5791	4.45681
2045	A	UBUS	CO, STREX	g/trip	1.08857	0.06232
2045	A	UBUS	CH„ RUNEX	g/mi	—	0.00002
2045	A	UBUS	CH„ STREX	g/trip	0.00087	0.00011
2045	A	UBUS	N,O RUNEX	g/mi	0.00076	0.00312
2045	A	UBUS	N,O STREX	g/trip	0.00147	0.00006
2045	S	UBUS	TOG RUNEX	g/mi	0.00042	0.00047
2045	S	UBUS	TOG STREX	g/trip	0.00299	0.00061
2045	S	UBUS	TOG DIURN	g/trip	0.00321	0.00026

2045	S	UBUS	TOG HOTSOAK	g/trip	0.00083	0.00006
2045	S	UBUS	TOG RUNLOSS	g/trip	0.00165	0.00022
2045	S	UBUS	ROG RUNEX	g/mi	0.00036	0.00041
2045	S	UBUS	ROG STREX	g/trip	0.00273	0.00055
2045	S	UBUS	ROG DIURN	g/trip	0.00321	0.00026
2045	S	UBUS	ROG HOTSOAK	g/trip	0.00083	0.00006
2045	S	UBUS	ROG RUNLOSS	g/trip	0.00165	0.00022
2045	S	UBUS	NOx RUNEX	g/mi	0.00102	0.00091
2045	S	UBUS	NOx STREX	g/trip	0.00860	0.00072
2045	S	UBUS	CO RUNEX	g/mi	0.00922	0.00151
2045	S	UBUS	CO STREX	g/trip	0.16315	0.00664
2045	S	UBUS	SOx RUNEX	g/mi	—	< 0.000005
2045	S	UBUS	SOx STREX	g/trip	0.00001	< 0.000005
2045	S	UBUS	PM2.5 RUNEX	g/mi	—	0.00006
2045	S	UBUS	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	S	UBUS	PM2.5 PMTW	g/mi	0.00821	0.00805
2045	S	UBUS	PM2.5 PMBW	g/mi	0.01955	0.01936
2045	S	UBUS	PM10 RUNEX	g/mi	—	0.00007
2045	S	UBUS	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	S	UBUS	PM10 PMTW	g/mi	0.03284	0.03219
2045	S	UBUS	PM10 PMBW	g/mi	0.05587	0.05531
2045	S	UBUS	CO, RUNEX	g/mi	13.5793	4.45684
2045	S	UBUS	CO, STREX	g/trip	1.05873	0.06100
2045	S	UBUS	CH„ RUNEX	g/mi	—	0.00002
2045	S	UBUS	CH„ STREX	g/trip	0.00082	0.00010
2045	S	UBUS	N,O RUNEX	g/mi	0.00076	0.00312
2045	S	UBUS	N,O STREX	g/trip	0.00144	0.00006
2045	S	UBUS	HFC RUNEX	g/mi	—	0.00000

2045	W	UBUS	TOG RUNEX	g/mi	0.00042	0.00047
2045	W	UBUS	TOG STREX	g/trip	0.00326	0.00066
2045	W	UBUS	TOG DIURN	g/trip	0.00279	0.00024
2045	W	UBUS	TOG HOTSOAK	g/trip	0.00080	0.00006
2045	W	UBUS	TOG RUNLOSS	g/trip	0.00172	0.00023
2045	W	UBUS	ROG RUNEX	g/mi	0.00036	0.00041
2045	W	UBUS	ROG STREX	g/trip	0.00297	0.00060
2045	W	UBUS	ROG DIURN	g/trip	0.00279	0.00024
2045	W	UBUS	ROG HOTSOAK	g/trip	0.00080	0.00006
2045	W	UBUS	ROG RUNLOSS	g/trip	0.00172	0.00023
2045	W	UBUS	NOx RUNEX	g/mi	0.00108	0.00095
2045	W	UBUS	NOx STREX	g/trip	0.00909	0.00076
2045	W	UBUS	CO RUNEX	g/mi	0.00901	0.00148
2045	W	UBUS	CO STREX	g/trip	0.18542	0.00754
2045	W	UBUS	SOx RUNEX	g/mi	—	< 0.000005
2045	W	UBUS	SOx STREX	g/trip	0.00001	< 0.000005
2045	W	UBUS	PM2.5 RUNEX	g/mi	—	0.00006
2045	W	UBUS	PM2.5 STREX	g/trip	< 0.000005	< 0.000005
2045	W	UBUS	PM2.5 PMTW	g/mi	0.00821	0.00805
2045	W	UBUS	PM2.5 PMBW	g/mi	0.01955	0.01936
2045	W	UBUS	PM10 RUNEX	g/mi	—	0.00007
2045	W	UBUS	PM10 STREX	g/trip	< 0.000005	< 0.000005
2045	W	UBUS	PM10 PMTW	g/mi	0.03284	0.03219
2045	W	UBUS	PM10 PMBW	g/mi	0.05587	0.05531
2045	W	UBUS	CO, RUNEX	g/mi	13.5790	4.45680
2045	W	UBUS	CO, STREX	g/trip	1.09489	0.06260
2045	W	UBUS	CH„ RUNEX	g/mi	—	0.00002
2045	W	UBUS	CH„ STREX	g/trip	0.00089	0.00011

2045	W	UBUS	N,O RUNEX	g/mi	0.00076	0.00312
2045	W	UBUS	N,O STREX	g/trip	0.00149	0.00006
2045	W	UBUS	HFC RUNEX	g/mi	—	0.00000

Downey 2045 General Plan Update
City of Downey, California

Appendix D: EMFAC Adjustments
Prepared by: MIG, Inc.
June 2026

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Sheet 1: CalEEMod 2026 Summer Inputs

Table 1: CalEEMod 2026 Summer Inputs

Operational Year	Vehicle Type	TOG RUNEX (g/mi)	TOG IDLEX (g/trip)	TOG STREX (g/trip)	TOG DIURN (g/trip)	TOG HOTSOAK (g/trip)	TOG RUNLOSS (g/trip)	ROG RUNEX (g/mi)	ROG IDLEX (g/trip)	ROG STREX (g/trip)	ROG DIURN (g/trip)	ROG HOTSOAK (g/trip)	ROG RUNLOSS (g/trip)	NOx RUNEX (g/mi)	NOx IDLEX (g/trip)	NOx STREX (g/trip)	CO RUNEX (g/mi)	CO IDLEX (g/trip)	CO STREX (g/trip)
2026	HHDT	0.10244201	0.59898965	0.00000012	0.00097660	0.00024035	0.00197441	0.01337070	0.38326069	0.00000011	0.00097660	0.00024035	0.00197441	0.98363457	2.14068389	2.12640768	0.55279325	5.68545423	0.01085970
2026	LDA	0.03632076	0.00000000	0.23932226	0.48484927	0.19198757	0.22843840	0.02778645	0.00000000	0.21861596	0.48484927	0.19198757	0.22843840	0.04659374	0.00000000	0.15031788	2.53242222	0.00000000	2.33237446
2026	LDT1	0.09732818	0.00000000	0.54223282	1.02621958	0.31416182	0.58916974	0.06935417	0.00000000	0.49527716	1.02621958	0.31416182	0.58916974	0.20095115	0.00000000	0.33691504	4.28372478	0.00000000	4.84042519
2026	LDT2	0.03191466	0.00000000	0.28716474	0.37240384	0.11203464	0.22741787	0.02280830	0.00000000	0.26229260	0.37240384	0.11203464	0.22741787	0.06422788	0.00000000	0.22439036	2.73554445	0.00000000	2.62925910
2026	LHDT1	0.05995488	0.03199164	0.13968063	0.17247848	0.03896649	0.20551023	0.04668222	0.02240397	0.12757689	0.17247848	0.03896649	0.20551023	0.47036228	0.03997866	0.40944433	1.07865093	0.20593442	1.68418046
2026	LHDT2	0.05911766	0.02001350	0.07981988	0.06860446	0.01543229	0.09258357	0.04996869	0.01484762	0.07290325	0.06860446	0.01543229	0.09258357	0.36874326	0.06111909	0.21769284	0.52959772	0.14242144	0.97833310
2026	MCY	1.54185164	0.00000000	1.08370173	2.44118307	3.85406408	3.60498139	1.25923368	0.00000000	0.99632643	2.44118307	3.85406408	3.60498139	0.45935613	0.00000000	0.10516879	12.02435218	0.00000000	6.46703844
2026	MDV	0.04907139	0.00000000	0.39747458	0.45314835	0.12106997	0.28581837	0.03440052	0.00000000	0.36304049	0.45314835	0.12106997	0.28581837	0.10560239	0.00000000	0.30739187	3.10338607	0.00000000	2.90646493
2026	MH	0.09399238	0.00000000	0.11312905	0.00000000	7.98867585	0.19081685	0.06794688	0.00000000	0.10332608	0.00000000	7.98867585	0.19081685	1.06451955	0.00000000	0.28623240	1.58488381	0.00000000	2.27955955
2026	MHDT	0.03189258	0.04335401	0.08316105	0.05381053	0.01168102	0.09206247	0.02055994	0.02601352	0.07595490	0.05381053	0.01168102	0.09206247	0.47690234	0.40976352	0.98597129	0.40744380	0.56036746	1.58746784
2026	OBUS	0.07485125	0.09459477	0.10883331	0.26489189	0.05594168	0.11168500	0.05861001	0.04837613	0.09940258	0.26489189	0.05594168	0.11168500	0.83168649	0.24680425	0.74548893	0.75552107	0.60840349	1.97868385
2026	SBUS	1.54385451	1.03356578	0.04943984	0.07546925	0.01713359	0.04605762	0.08601317	0.37012677	0.04515573	0.07546925	0.01713359	0.04605762	1.59928015	0.99940780	0.19551131	5.76508975	3.56695565	0.94157115
2026	UBUS	2.64147167	0.00000000	0.04946258	0.01146245	0.00313944	0.00852976	0.03906456	0.00000000	0.04517650	0.01146245	0.00313944	0.00852976	0.47673747	0.00000000	0.07873903	35.43140105	0.00000000	0.74622320

Operational Year	Vehicle Type	SOx RUNEX (g/mi)	SOx IDLEX (g/trip)	SOx STREX (g/trip)	PM2.5 RUNEX (g/mi)	PM2.5 IDLEX (g/trip)	PM2.5 STREX (g/trip)	PM2.5 PMTW (g/mi)	PM2.5 PMBW (g/mi)	PM10 RUNEX (g/mi)	PM10 IDLEX (g/trip)	PM10 STREX (g/trip)	PM10 PMTW (g/mi)	PM10 PMBW (g/mi)	CO_2 RUNEX (g/mi)	CO_2 IDLEX (g/trip)	CO_2 STREX (g/trip)	CH_4 RUNEX (g/mi)	CH_4 IDLEX (g/trip)	CH_4 STREX (g/trip)	N_2O RUNEX (g/mi)	N_2O IDLEX (g/trip)	N_2O STREX (g/trip)
2026	HHDT	0.00461507	0.00261060	0.00000016	0.01274611	0.00125925	0.00000282	0.00884785	0.02920666	0.01332578	0.00132309	0.00000306	0.03539139	0.08344761	1473.21600494	864.48336055	0.12601362	0.15930686	0.26051867	0.00000003	0.39005261	0.00000000	0.00002495
2026	LDA	0.00123863	0.00000000	0.00026071	0.00245634	0.00000000	0.00178013	0.00205081	0.00236130	0.00266266	0.00000000	0.00193430	0.00820323	0.00674656	288.60662643	0.00000000	61.65588252	0.00600489	0.00000000	0.03901807	0.00477113	0.00000000	0.01484307
2026	LDT1	0.00154973	0.00000000	0.00034249	0.00367004	0.00000000	0.00286566	0.00203895	0.00314024	0.00398335	0.00000000	0.00311499	0.00815580	0.00897211	361.00554852	0.00000000	81.56795573	0.01528071	0.00000000	0.07809963	0.01371196	0.00000000	0.02485838
2026	LDT2	0.00161558	0.00000000	0.00034965	0.00235860	0.00000000	0.00178507	0.00202525	0.00303970	0.00256296	0.00000000	0.00194079	0.00810100	0.00868485	376.44135053	0.00000000	81.75182131	0.00592460	0.00000000	0.04612956	0.00599977	0.00000000	0.01865437
2026	LHDT1	0.00230107	0.00003356	0.00007312	0.00700225	0.00053575	0.00020881	0.00229504	0.02718415	0.00735248	0.00055997	0.00022710	0.00918017	0.07766899	569.79384749	8.39713644	18.21379632	0.00606387	0.00277419	0.02471815	0.03172491	0.00009592	0.02893203
2026	LHDT2	0.00208653	0.00004469	0.00003159	0.00852136	0.00124904	0.00008994	0.00267176	0.03153820	0.00892058	0.00130551	0.00009782	0.01068703	0.09010913	572.61871998	12.65446419	9.41247625	0.00374957	0.00153366	0.01403889	0.06203666	0.00004708	0.01554071
2026	MCY	0.00089992	0.00000000	0.00017877	0.00271319	0.00000000	0.00331129	0.00100000	0.00420000	0.00290602	0.00000000	0.00353227	0.00400000	0.01200000	209.61361300	0.00000000	41.64082970	0.19750278	0.00000000	0.15112557	0.03485136	0.00000000	0.01158905
2026	MDV	0.00193594	0.00000000	0.00040806	0.00241519	0.00000000	0.00181246	0.00202120	0.00313286	0.00262144	0.00000000	0.00197074	0.00808481	0.00895104	453.70782102	0.00000000	96.04987197	0.00846203	0.00000000	0.05896540	0.01006257	0.00000000	0.02162472
2026	MH	0.00646587	0.00000000	0.00009669	0.01921209	0.00000000	0.00030299	0.00327087	0.01522075	0.02012611	0.00000000	0.00032953	0.01308349	0.04348784	1570.94687454	0.00000000	22.72259816	0.01213952	0.00000000	0.02048559	0.10269886	0.00000000	0.02277668
2026	MHDT	0.00438630	0.00040380	0.00005283	0.00348610	0.00029623	0.00016390	0.00300000	0.01517405	0.00365590	0.00030998	0.00017825	0.01200000	0.04335443	1206.43889680	116.81591654	14.35807635	0.00981205	0.01838351	0.01406579	0.28243009	0.00006985	0.01033440
2026	OBUS	0.00498482	0.00028858	0.00005745	0.00982195	0.00026897	0.00014998	0.00300000	0.01759903	0.01028063	0.00028238	0.00016312	0.01200000	0.05028294	1293.61435153	124.38594491	16.96650857	0.00729100	0.06651502	0.01894360	0.16578668	0.00009159	0.01628491
2026	SBUS	0.00257827	0.00056437	0.00010665	0.00634132	0.00078782	0.00008421	0.00250278	0.01624983	0.00670912	0.00083989	0.00009158	0.01001114	0.04642808	1162.87278205	271.35128750	6.86096626	2.94377599	1.05570722	0.00771937	0.16050888	0.00161787	0.00586952
2026	UBUS	0.00144680	0.00000000	0.00007189	0.00051432	0.00000000	0.00008743	0.00783631	0.03731719	0.00054281	0.00000000	0.00009509	0.03134525	0.10662055	2254.30036045	0.00000000	10.36927168	3.79820695	0.00000000	0.00768824	0.35320527	0.00000000	0.00495759

Sheet 2: CalEEMod 2026 Winter Inputs

Table 2: CalEEMod 2026 Winter Inputs

Operational Year	Vehicle Type	TOG RUNEX (g/mi)	TOG IDLEX (g/trip)	TOG STREX (g/trip)	TOG DIURN (g/trip)	TOG HOTSOAK (g/trip)	TOG RUNLOSS (g/trip)	ROG RUNEX (g/mi)	ROG IDLEX (g/trip)	ROG STREX (g/trip)	ROG DIURN (g/trip)	ROG HOTSOAK (g/trip)	ROG RUNLOSS (g/trip)	NOx RUNEX (g/mi)	NOx IDLEX (g/trip)	NOx STREX (g/trip)	CO RUNEX (g/mi)	CO IDLEX (g/trip)	CO STREX (g/trip)	SOx RUNEX (g/mi)	SOx IDLEX (g/trip)
2026	HHDT	0.1024095120	0.5420522404	0.0000001226	0.0008365234	0.0002266508	0.0020785967	0.0133484337	0.3332464431	0.0000001120	0.0008365234	0.0002266508	0.0020785967	1.0226437483	2.3622504181	2.1264484149	0.5518267986	5.8575262599	0.0115472039	0.0046150672	0.0026858191
2026	LDA	0.0367316961	0.0000000000	0.2746044047	0.4237852570	0.1844339191	0.2319125117	0.0283268545	0.0000000000	0.2508467271	0.4237852570	0.1844339191	0.2319125117	0.0533137566	0.0000000000	0.1650194383	2.0657892031	0.0000000000	2.8222560844	0.0011647235	0.0000000000
2026	LDT1	0.0957769118	0.0000000000	0.6251092172	0.8917091793	0.2997498503	0.6080631558	0.0685248333	0.0000000000	0.5709778966	0.8917091793	0.2997498503	0.6080631558	0.2306773327	0.0000000000	0.3698095642	3.5135635642	0.0000000000	5.9128701039	0.0014651278	0.0000000000
2026	LDT2	0.0314312952	0.0000000000	0.3294105479	0.3376932557	0.1075987318	0.2297862115	0.0225592334	0.0000000000	0.3008798882	0.3376932557	0.1075987318	0.2297862115	0.0737056675	0.0000000000	0.2463567675	2.2261109555	0.0000000000	3.1892206332	0.0015353104	0.0000000000
2026	LHDT1	0.0590426319	0.0319916373	0.1460734381	0.1567986533	0.0372230381	0.2107736015	0.0460570485	0.0224039665	0.1334157365	0.1567986533	0.0372230381	0.2107736015	0.4953739532	0.0399786609	0.4314072838	1.0542605016	0.2059344176	1.7746383063	0.0023008975	0.0000335577
2026	LHDT2	0.0588407487	0.0200134960	0.0834608735	0.0622416290	0.0147338117	0.0948642248	0.0497789184	0.0148476172	0.0762287384	0.0622416290	0.0147338117	0.0948642248	0.3850774555	0.0611190911	0.2293733029	0.5188549433	0.1424214405	1.0303492001	0.0020864570	0.0000446890
2026	MCY	1.5432538692	0.0000000000	1.2389998503	2.1441277886	3.7569920214	4.0473163270	1.2633437511	0.0000000000	1.1392036337	2.1441277886	3.7569920214	4.0473163270	0.5113168765	0.0000000000	0.1124816608	12.0679959212	0.0000000000	7.3189134309	0.0009002341	0.0000000000
2026	MDV	0.0479520074	0.0000000000	0.4559020822	0.4171337241	0.1163161296	0.2893038571	0.0336956708	0.0000000000	0.4164066224	0.4171337241	0.1163161296	0.2893038571	0.1211485544	0.0000000000	0.3374878701	2.5228374063	0.0000000000	3.5281906888	0.0018550747	0.0000000000
2026	MH	0.0909708047	0.0000000000	0.1189950349	0.0000000000	7.5916549572	0.1982879404	0.0658761709	0.0000000000	0.1086837581	0.0000000000	7.5916549572	0.1982879404	1.1284232063	0.0000000000	0.3024580611	1.5327380123	0.0000000000	2.4378420827	0.0064654741	0.0000000000
2026	MHDT	0.0313198578	0.0454512268	0.0873434009	0.0492269040	0.0111326698	0.0947532925	0.0201674433	0.0271944781	0.0797748332	0.0492269040	0.0111326698	0.0947532925	0.5021873645	0.4416634947	0.9933634788	0.3978494318	0.7309291872	1.6879504596	0.0043862289	0.0004096047
2026	OBUS	0.0739309960	0.0908147738	0.1144681368	0.2508109363	0.0537037816	0.1139651617	0.0579793502	0.0450557525	0.1045491293	0.2508109363	0.0537037816	0.1139651617	0.8764090993	0.2647292037	0.7569170701	0.7403751541	0.6281682230	2.1156075753	0.0049847030	0.0002943513
2026	SBUS	1.5422586752	1.0338042595	0.0568204239	0.0716467502	0.0164155043	0.0475394277	0.0849195289	0.3703362508	0.0518967637	0.0716467502	0.0164155043	0.0475394277	1.6803146489	0.9435110858	0.2016376453	5.7454695920	3.5868813241	1.1944046704	0.0025781127	0.0005466657
2026	UBUS	2.6414212931	0.0000000000	0.0543215996	0.0102008507	0.0029937002	0.0089418106	0.0390300396	0.0000000000	0.0496144701	0.0102008507	0.0029937002	0.0089418106	0.4781888656	0.0000000000	0.0831594324	35.4308756637	0.0000000000	0.8691281994	0.0014467872	0.0000000000

Operational Year	Vehicle Type	SOx STREX (g/trip)	PM2.5 RUNEX (g/mi)	PM2.5 IDLEX (g/trip)	PM2.5 STREX (g/trip)	PM2.5 PMTW (g/mi)	PM2.5 PMBW (g/mi)	PM10 RUNEX (g/mi)	PM10 IDLEX (g/trip)	PM10 STREX (g/trip)	PM10 PMTW (g/mi)	PM10 PMBW (g/mi)	CO_2 RUNEX (g/mi)	CO_2 IDLEX (g/trip)	CO_2 STREX (g/trip)	CH_4 RUNEX (g/mi)	CH_4 IDLEX (g/trip)	CH_4 STREX (g/trip)	N_2O RUNEX (g/mi)	N_2O IDLEX (g/trip)	N_2O STREX (g/trip)
2026	HHDT	0.0000001606	0.0127461131	0.0016319191	0.0000028161	0.0088478467	0.0292066633	0.0133257822	0.0017126062	0.0000030628	0.0353913868	0.0834476095	###############	888.4253549372	0.1271021008	0.1593034911	0.2581956374	0.0000000263	0.3900634060	0.0000000000	0.0000259163
2026	LDA	0.0002644054	0.0024563375	0.0000000000	0.0017801335	0.0020508077	0.0023612961	0.0026626574	0.0000000000	0.0019343005	0.0082032308	0.0067465603	271.3925213080	0.0000000000	62.5394972289	0.0059867844	0.0000000000	0.0438712493	0.0052436644	0.0000000000	0.0158422799
2026	LDT1	0.0003505853	0.0036700360	0.0000000000	0.0028656645	0.0020389502	0.0031402400	0.0039833462	0.0000000000	0.0031149939	0.0081558009	0.0089721143	341.2984709511	0.0000000000	83.5196324216	0.0150087819	0.0000000000	0.0881442120	0.0150962090	0.0000000000	0.0265276919
2026	LDT2	0.0003539440	0.0023586028	0.0000000000	0.0017850719	0.0020252509	0.0030396981	0.0025629554	0.0000000000	0.0019407891	0.0081010035	0.0086848518	357.7451926356	0.0000000000	82.7677180768	0.0058131205	0.0000000000	0.0518602184	0.0065965119	0.0000000000	0.0199106899
2026	LHDT1	0.0000737778	0.0070022525	0.0005357490	0.0002088085	0.0022950433	0.0271841462	0.0073524806	0.0005599732	0.0002270983	0.0091801731	0.0776689891	569.7525393953	8.3971364422	18.3765860428	0.0059438511	0.0027741930	0.0256462906	0.0323929503	0.0000959225	0.0300062384
2026	LHDT2	0.0000319047	0.0085213647	0.0012490364	0.0000899440	0.0026717575	0.0315381971	0.0089205828	0.0013055123	0.0000978224	0.0106870301	0.0901091344	572.6008944503	12.6544641921	9.5059780593	0.0037092575	0.0015336559	0.0145636179	0.0623214451	0.0000470780	0.0161178753
2026	MCY	0.0001865968	0.0027131930	0.0000000000	0.0033112851	0.0010000003	0.0042000012	0.0029060173	0.0000000000	0.0035322726	0.0040000011	0.0120000034	209.6872484355	0.0000000000	43.4631079879	0.1971720041	0.0000000000	0.1688912522	0.0375334013	0.0000000000	0.0121268448
2026	MDV	0.0004129801	0.0024151901	0.0000000000	0.0018124638	0.0020212034	0.0031328640	0.0026214447	0.0000000000	0.0019707428	0.0080848135	0.0089510401	434.8734108272	0.0000000000	97.2131058601	0.0082725198	0.0000000000	0.0662865492	0.0108913727	0.0000000000	0.0230798162
2026	MH	0.0000978340	0.0192120899	0.0000000000	0.0003029924	0.0032708736	0.0152207457	0.0201261112	0.0000000000	0.0003295319	0.0130834943	0.0434878448	###############	0.0000000000	22.9911559188	0.0117685883	0.0000000000	0.0213336331	0.1041031122	0.0000000000	0.0236675041
2026	MHDT	0.0000534610	0.0034861040	0.0004109346	0.0001638959	0.0030000009	0.0151740502	0.0036559013	0.0004298758	0.0001782518	0.0120000034	0.0433544291	###############	118.4630322803	14.5299688710	0.0097350071	0.0185810298	0.0146567040	0.2828539652	0.0000658136	0.0107363515
2026	OBUS	0.0000582400	0.0098219529	0.0003658672	0.0001499797	0.0030000009	0.0175990291	0.0102806314	0.0003836587	0.0001631166	0.0120000034	0.0502829402	###############	126.8833312104	17.2005428707	0.0071684587	0.0663607929	0.0197285748	0.1665495564	0.0000915906	0.0169216382
2026	SBUS	0.0001132249	0.0063413212	0.0009625721	0.0000842070	0.0025027849	0.0162498297	0.0067091183	0.0010225475	0.0000915828	0.0100111395	0.0464280848	###############	267.6662270300	7.2838566403	2.9435888504	1.0557169490	0.0086501324	0.1613342772	0.0016178721	0.0061555331
2026	UBUS	0.0000733421	0.0005143162	0.0000000000	0.0000874323	0.0078363130	0.0373171922	0.0005428099	0.0000000000	0.0000950906	0.0313452519	0.1066205492	###############	0.0000000000	10.5787357160	3.7981973226	0.0000000000	0.0083286094	0.3532981115	0.0000000000	0.0051493000

Sheet 3: CalEEMod 2026 Annual Inputs

Table 3: CalEEMod 2026 Annual Inputs

Operational Year	Vehicle Type	TOG RUNEX (g/mi)	TOG IDLEX (g/trip)	TOG STREX (g/trip)	TOG DIURN (g/trip)	TOG HOTSOAK (g/trip)	TOG RUNLOSS (g/trip)	ROG RUNEX (g/mi)	ROG IDLEX (g/trip)	ROG STREX (g/trip)	ROG DIURN (g/trip)	ROG HOTSOAK (g/trip)	ROG RUNLOSS (g/trip)	NOx RUNEX (g/mi)	NOx IDLEX (g/trip)	NOx STREX (g/trip)	CO RUNEX (g/mi)	CO IDLEX (g/trip)	CO STREX (g/trip)	SOx RUNEX (g/mi)	SOx IDLEX (g/trip)
2026	HHDT	0.1024167203	0.5750759381	0.0000001215	0.0008323018	0.0002288736	0.0019788245	0.0133533736	0.3622547047	0.0000001110	#REF!	0.0002288736	0.0019788245	1.0413429399	2.2337418322	2.1264405883	0.5520404433	5.7577244841	0.0114333431	0.0046150687	0.0026421919
2026	LDA	0.0366874654	0.0000000000	0.2681239633	0.4233996683	0.1854592841	0.2277789821	0.0282481433	0.0000000000	0.2449267958	0.4233996683	0.1854592841	0.2277789821	0.0544114674	0.0000000000	0.1623380986	2.1915870409	0.0000000000	2.7301749415	0.0011846260	0.0000000000
2026	LDT1	0.0961811941	0.0000000000	0.6099236004	0.8968871256	0.3018955293	0.5897689506	0.0687585441	0.0000000000	0.5571071373	0.8968871256	0.3018955293	0.5897689506	0.2353698904	0.0000000000	0.3637817673	3.7197751874	0.0000000000	5.7106095249	0.0014879021	0.0000000000
2026	LDT2	0.0315539806	0.0000000000	0.3216436432	0.3342395278	0.1082056427	0.2266859876	0.0226280665	0.0000000000	0.2937856220	0.3342395278	0.1082056427	0.2266859876	0.0752104058	0.0000000000	0.2423481964	2.3620261817	0.0000000000	3.0835508980	0.0015569156	0.0000000000
2026	LHDT1	0.0592354885	0.0319916373	0.1449297134	0.1561041692	0.0374789722	0.2052401805	0.0461892146	0.0224039665	0.1323711190	0.1561041692	0.0374789722	0.2052401805	0.5052104523	0.0399786609	0.4273417893	1.0592959030	0.2059344176	1.7605570595	0.0023009342	0.0000335577
2026	LHDT2	0.0588992235	0.0200134960	0.0828071179	0.0620163624	0.0148370696	0.0924273098	0.0498189917	0.0148476172	0.0756316327	0.0620163624	0.0148370696	0.0924273098	0.3923832855	0.0611190911	0.2272092641	0.5210636943	0.1424214405	1.0221968635	0.0020864728	0.0000446890
2026	MCY	1.5436061675	0.0000000000	1.2112957955	2.0119996338	3.7651885480	3.7163196312	1.2630622581	0.0000000000	1.1137180206	2.0119996338	3.7651885480	3.7163196312	0.5240270307	0.0000000000	0.1110901335	12.0688695944	0.0000000000	7.1757165308	0.0009002442	0.0000000000
2026	MDV	0.0482145855	0.0000000000	0.4451602965	0.4113751949	0.1169634806	0.2852293902	0.0338639536	0.0000000000	0.4065953731	0.4113751949	0.1169634806	0.2852293902	0.1236130758	0.0000000000	0.3319960979	2.6775699310	0.0000000000	3.4107336985	0.0018768371	0.0000000000
2026	MH	0.0916440669	0.0000000000	0.1178623607	0.0000000000	7.6528794033	0.1912639548	0.0663375630	0.0000000000	0.1076492335	0.0000000000	7.6528794033	0.1912639548	1.1513933605	0.0000000000	0.2993131661	1.5442295759	0.0000000000	2.4110730623	0.0064655608	0.0000000000
2026	MHDT	0.0314472053	0.0442234278	0.0865605123	0.0477027068	0.0112142123	0.0920203627	0.0202547155	0.0265017014	0.0790597842	0.0477027068	0.0112142123	0.0920203627	0.5121435901	0.4231619216	0.9919431849	0.3999788796	0.6314941317	1.6713299080	0.0043862450	0.0001171100
2026	OBUS	0.0741139899	0.0930071722	0.1133746888	0.2390239007	0.0540102735	0.1116930077	0.0581047575	0.0469815715	0.1035504319	0.2390239007	0.0540102735	0.1116930077	0.8942623520	0.2543327314	0.7547020337	0.7433576219	0.6167046755	2.0920318017	0.0049847256	0.0002910061
2026	SBUS	1.5425620431	1.0336659412	0.0554431058	0.0676816927	0.0165254237	0.0465372268	0.0851274294	0.3702147510	0.0506387944	0.0676816927	0.0165254237	0.0465372268	1.7134187992	0.9759311783	0.2002517400	5.7492894795	3.5753244331	1.1541445808	0.0025781425	0.0005569334
2026	UBUS	2.6414316341	0.0000000000	0.0534252774	0.0098417266	0.0030155714	0.0085781042	0.0390371264	0.0000000000	0.0487958169	0.0098417266	0.0030155714	0.0085781042	0.4785639595	0.0000000000	0.0823301242	35.4309833583	0.0000000000	0.8487507392	0.0014467892	0.0000000000

Operational Year	Vehicle Type	SOx STREX (g/trip)	PM2.5 RUNEX (g/mi)	PM2.5 IDLEX (g/trip)	PM2.5 STREX (g/trip)	PM2.5 PMTW (g/mi)	PM2.5 PMBW (g/mi)	PM10 RUNEX (g/mi)	PM10 IDLEX (g/trip)	PM10 STREX (g/trip)	PM10 PMTW (g/mi)	PM10 PMBW (g/mi)	CO_2 RUNEX (g/mi)	CO_2 IDLEX (g/trip)	CO_2 STREX (g/trip)	CH_4 RUNEX (g/mi)	CH_4 IDLEX (g/trip)	CH_4 STREX (g/trip)	N_2O RUNEX (g/mi)	N_2O IDLEX (g/trip)	N_2O STREX (g/trip)
2026	HHDT	0.0000001604	0.0127461131	0.0014157705	0.0000028161	0.0088478467	0.0292066633	0.0133257822	0.0014866843	0.0000030628	0.0353913868	0.0834476095	1473.2147384433	874.5389981914	0.1269218311	0.1593042391	0.2595429960	0.0000000261	0.3900658625	0.0000000000	0.0000257308
2026	LDA	0.0002637132	0.0024563375	0.0000000000	0.0017801335	0.0020508077	0.0023612961	0.0026626574	0.0000000000	0.0019343005	0.0082032308	0.0067465603	276.0282978645	0.0000000000	62.3738710897	0.0059954302	0.0000000000	0.0429882328	0.0053177569	0.0000000000	0.0156619063
2026	LDT1	0.0003490649	0.0036700360	0.0000000000	0.0028656645	0.0020389502	0.0031402400	0.0039833462	0.0000000000	0.0031149939	0.0081558009	0.0089721143	346.6031956154	0.0000000000	83.1529122924	0.0150754445	0.0000000000	0.0863216930	0.0153106637	0.0000000000	0.0262258136
2026	LDT2	0.0003531360	0.0023586028	0.0000000000	0.0017850719	0.0020252509	0.0030396981	0.0025629554	0.0000000000	0.0019407891	0.0081010035	0.0086848518	362.7775992026	0.0000000000	82.5766377514	0.0058393332	0.0000000000	0.0508166108	0.0066893553	0.0000000000	0.0196838869
2026	LHDT1	0.0000736742	0.0070022525	0.0005357490	0.0002088085	0.0022950433	0.0271841462	0.0073524806	0.0005599732	0.0002270983	0.0091801731	0.0776689891	569.7610807998	8.3971364422	18.3507901895	0.0059692513	0.0027741930	0.0254807234	0.0325630240	0.0000959225	0.0298083223
2026	LHDT2	0.0000318547	0.0085213647	0.0012490364	0.0000899440	0.0026717575	0.0315381971	0.0089205828	0.0013055123	0.0000978224	0.0106870301	0.0901091344	572.6045639880	12.6544641921	9.4910692852	0.0037177755	0.0015336559	0.0144697034	0.0623943338	0.0000470780	0.0160114669
2026	MCY	0.0001852608	0.0027131930	0.0000000000	0.0033112851	0.0010000003	0.0042000012	0.0029060173	0.0000000000	0.0035322726	0.0040000011	0.0120000034	209.6896053257	0.0000000000	43.1519088397	0.1973085379	0.0000000000	0.1657514943	0.0381871196	0.0000000000	0.0120250231
2026	MDV	0.0004120550	0.0024151901	0.0000000000	0.0018124638	0.0020212034	0.0031328640	0.0026214447	0.0000000000	0.0019707428	0.0080848135	0.0089510401	439.9424213598	0.0000000000	96.9942541989	0.0083159791	0.0000000000	0.0649534639	0.0110198931	0.0000000000	0.0228175457
2026	MH	0.0000976389	0.0192120899	0.0000000000	0.0003029924	0.0032708736	0.0152207457	0.0201261112	0.0000000000	0.0003295319	0.0130834943	0.0434878448	1570.8755783655	0.0000000000	22.9453064003	0.0118513963	0.0000000000	0.0211705207	0.1044183418	0.0000000000	0.0234961382
2026	MHDT	0.0000533554	0.0034861040	0.0003444043	0.0001638959	0.0030000009	0.0151740502	0.0036559013	0.0003603372	0.0001782518	0.0120000034	0.0433544291	1206.4257635527	117.5111864982	14.5012576565	0.0097521515	0.0184662226	0.0145467482	0.2829523815	0.0000681825	0.0106595067
2026	OBUS	0.0000581023	0.0098219529	0.0003096670	0.0001499797	0.0030000009	0.0175990291	0.0102806314	0.0003249174	0.0001631166	0.0120000034	0.0502829402	1293.5929179281	125.4348471568	17.1598690698	0.0071927754	0.0664502422	0.0195767963	0.1667517525	0.0000915906	0.0167991506
2026	SBUS	0.0001121685	0.0063413212	0.0008612163	0.0000842070	0.0025027849	0.0162498297	0.0067091183	0.0009166088	0.0000915828	0.0100111395	0.0464280848	1162.8439517083	269.8035621053	7.2158987079	2.9436245922	1.0557113057	0.0084754434	0.1615267394	0.0016178721	0.0060911705
2026	UBUS	0.0000730994	0.0005143162	0.0000000000	0.0000874323	0.0078363130	0.0373171922	0.0005428099	0.0000000000	0.0000950906	0.0313452519	0.1066205492	2254.2995809840	0.0000000000	10.5437291556	3.7981993009	0.0000000000	0.0082116656	0.3533208473	0.0000000000	0.0051137116

Sheet 4: CalEEMod 2045 Summer Inputs

Table 4: CalEEMod 2045 Summer Inputs

Operational Year	Vehicle Type	TOG RUNEX (g/mi)	TOG IDLEX (g/trip)	TOG STREX (g/trip)	TOG DIURN (g/trip)	TOG HOTSOAK (g/trip)	TOG RUNLOSS (g/trip)	ROG RUNEX (g/mi)	ROG IDLEX (g/trip)	ROG STREX (g/trip)	ROG DIURN (g/trip)	ROG HOTSOAK (g/trip)	ROG RUNLOSS (g/trip)	NOx RUNEX (g/mi)	NOx IDLEX (g/trip)	NOx STREX (g/trip)	CO RUNEX (g/mi)	CO IDLEX (g/trip)	CO STREX (g/trip)	SOx RUNEX (g/mi)	SOx IDLEX (g/trip)
2045	HHDT	0.03779680	0.53842753	0.00000001	0.00018557	0.00002998	0.00031099	0.00971538	0.39772013	0.00000000	0.00018557	0.00002998	0.00031099	0.38101453	0.60562522	0.80770263	0.21833597	5.77642412	0.00144458	0.00398565	0.00234159
2045	LDA	0.00698466	0.00000000	0.05289248	0.27941665	0.06675182	0.12914359	0.00516612	0.00000000	0.04831383	0.27941665	0.06675182	0.12914359	0.00888942	0.00000000	0.03048372	1.12863010	0.00000000	1.10146923	0.00066899	0.00000000
2045	LDT1	0.00904772	0.00000000	0.07594406	0.40999617	0.08540400	0.22656408	0.00654274	0.00000000	0.06936773	0.40999617	0.08540400	0.22656408	0.01427686	0.00000000	0.05039573	1.23453623	0.00000000	1.18716262	0.00073261	0.00000000
2045	LDT2	0.00884816	0.00000000	0.10473116	0.27651249	0.05330763	0.16752153	0.00616693	0.00000000	0.09565717	0.27651249	0.05330763	0.16752153	0.01242697	0.00000000	0.05479208	1.71218434	0.00000000	1.64463943	0.00113522	0.00000000
2045	LHDT1	0.01755499	0.02064385	0.10153403	0.08807421	0.01312814	0.11405060	0.01452989	0.01473733	0.09273580	0.08807421	0.01312814	0.11405060	0.11043583	0.03014218	0.21021910	0.64557822	0.18345309	1.03350925	0.00175464	0.00002774
2045	LHDT2	0.04357961	0.01208471	0.04888248	0.02850320	0.00417597	0.03668856	0.03787759	0.00960591	0.04464667	0.02850320	0.00417597	0.03668856	0.12784518	0.04468962	0.09309943	0.32798675	0.10825282	0.49674053	0.00168926	0.00003923
2045	MCY	1.38322278	0.00000000	0.82278956	1.93667243	3.93321252	3.59097734	1.10378653	0.00000000	0.75538080	1.93667243	3.93321252	3.59097734	0.42139299	0.00000000	0.05637654	10.65279119	0.00000000	6.26696822	0.00089379	0.00000000
2045	MDV	0.00955130	0.00000000	0.08781069	0.24861572	0.04399409	0.15921044	0.00671440	0.00000000	0.08020254	0.24861572	0.04399409	0.15921044	0.01568678	0.00000000	0.05152305	1.45458647	0.00000000	1.25772047	0.00105706	0.00000000
2045	MH	0.02113949	0.00000000	0.08593031	13.11150957	1.94055298	0.07886544	0.01678163	0.00000000	0.07848419	13.11150957	1.94055298	0.07886544	0.61779994	0.00000000	0.23682318	0.14415741	0.00000000	1.66298883	0.00641966	0.00000000
2045	MHDT	0.01010995	0.02758912	0.02743603	0.02469228	0.00328038	0.04418923	0.00460349	0.01684397	0.02505861	0.02469228	0.00328038	0.04418923	0.06995271	0.11490163	0.34421541	0.06557639	0.49965881	0.44305823	0.00279125	0.00033710
2045	OBUS	0.01821604	0.10308964	0.03709957	0.14645290	0.02273702	0.06410749	0.01539880	0.05690866	0.03388478	0.14645290	0.02273702	0.06410749	0.34344239	0.13699901	0.44759211	0.11058661	0.84233266	0.59636478	0.00274152	0.00037488
2045	SBUS	0.97153003	0.92986043	0.04047338	0.11090596	0.01379305	0.07735062	0.01889374	0.31081349	0.03696624	0.11090596	0.01379305	0.07735062	0.10787724	0.24534515	0.12452028	2.94744436	3.56642538	0.67845488	0.00132628	0.00035262
2045	UBUS	0.00047264	0.00000000	0.00060701	0.00025818	0.00005818	0.00022414	0.00041375	0.00000000	0.00055441	0.00025818	0.00005818	0.00022414	0.00091143	0.00000000	0.00072131	0.00150725	0.00000000	0.00663691	0.00000392	0.00000000

Operational Year	Vehicle Type	SOx STREX (g/trip)	PM2.5 RUNEX (g/mi)	PM2.5 IDLEX (g/trip)	PM2.5 STREX (g/trip)	PM2.5 PMTW (g/mi)	PM2.5 PMBW (g/mi)	PM10 RUNEX (g/mi)	PM10 IDLEX (g/trip)	PM10 STREX (g/trip)	PM10 PMTW (g/mi)	PM10 PMBW (g/mi)	CO_2 RUNEX (g/mi)	CO_2 IDLEX (g/trip)	CO_2 STREX (g/trip)	CH_4 RUNEX (g/mi)	CH_4 IDLEX (g/trip)	CH_4 STREX (g/trip)	N_2O RUNEX (g/mi)	N_2O IDLEX (g/trip)	N_2O STREX (g/trip)
2045	HHDT	0.00000002	0.01107508	0.00091421	0.00000016	0.00886661	0.03041963	0.01157835	0.00096136	0.00000017	0.03546643	0.08691323	1250.72231270	766.09718765	0.02954223	0.02741648	0.10410061	0.00000000	0.39187614	0.00000000	0.00000033
2045	LDA	0.00015904	0.00063930	0.00000000	0.00055010	0.00215217	0.00178292	0.00069462	0.00000000	0.00059804	0.00860867	0.00509405	155.82797421	0.00000000	36.67491292	0.00141748	0.00000000	0.01029960	0.00144369	0.00000000	0.00481273
2045	LDT1	0.00017818	0.00076346	0.00000000	0.00065586	0.00216619	0.00206723	0.00082974	0.00000000	0.00071306	0.00866475	0.00590638	170.64311808	0.00000000	41.26420224	0.00180621	0.00000000	0.01370304	0.00186604	0.00000000	0.00622731
2045	LDT2	0.00027304	0.00086137	0.00000000	0.00074620	0.00208707	0.00262441	0.00093642	0.00000000	0.00081149	0.00834829	0.00749831	264.50784426	0.00000000	63.64205595	0.00209207	0.00000000	0.01989750	0.00228277	0.00000000	0.00813932
2045	LHDT1	0.00005190	0.00445688	0.00064419	0.00006222	0.00234725	0.02642085	0.00468273	0.00067332	0.00006767	0.00938898	0.07548813	445.10619483	7.05077977	13.04994823	0.00173854	0.00179817	0.01849615	0.02888167	0.00006371	0.01758676
2045	LHDT2	0.00001761	0.00844576	0.00144930	0.00002136	0.00272300	0.03056696	0.00883579	0.00151483	0.00002323	0.01089198	0.08733418	481.01491650	11.35533748	4.79736662	0.00221885	0.00079011	0.00857026	0.06060507	0.00002006	0.00742658
2045	MCY	0.00014136	0.00292726	0.00000000	0.00344693	0.00100000	0.00420000	0.00313998	0.00000000	0.00369620	0.00400000	0.01200000	208.18667679	0.00000000	32.92530750	0.18119134	0.00000000	0.12071821	0.03323879	0.00000000	0.00784760
2045	MDV	0.00021990	0.00072223	0.00000000	0.00053990	0.00212489	0.00237190	0.00078369	0.00000000	0.00058714	0.00849955	0.00677685	250.31109902	0.00000000	51.96107630	0.00197965	0.00000000	0.01566636	0.00479696	0.00000000	0.00592748
2045	MH	0.00009126	0.00585239	0.00000000	0.00024702	0.00328045	0.01518911	0.00614843	0.00000000	0.00026866	0.01312178	0.04339745	1562.51813234	0.00000000	21.22472934	0.00280378	0.00000000	0.01628804	0.12120453	0.00000000	0.01931666
2045	MHDT	0.00001184	0.00205941	0.00011339	0.00005731	0.00300000	0.01401484	0.00215606	0.00011896	0.00006233	0.01200000	0.04004240	824.11290867	98.55908507	5.01318955	0.00505277	0.00778926	0.00484770	0.30707247	0.00002340	0.00359285
2045	OBUS	0.00000825	0.00490807	0.00018375	0.00004592	0.00300000	0.01845481	0.00513242	0.00019386	0.00004994	0.01200000	0.05272803	802.93022727	159.20176778	6.03325144	0.00115035	0.05824557	0.00661612	0.20866704	0.00003356	0.00605822
2045	SBUS	0.00005777	0.00173470	0.00060592	0.00008430	0.00237543	0.01357392	0.00187730	0.00065818	0.00009168	0.00950173	0.03878262	703.29806791	210.54931868	5.10001674	1.38191157	0.75640745	0.00641714	0.14583199	0.00111773	0.00394745
2045	UBUS	0.00000022	0.00006289	0.00000000	0.00000028	0.00804762	0.01935724	0.00006576	0.00000000	0.00000030	0.03219050	0.05530640	4.45683887	0.00000000	0.06100438	0.00002085	0.00000000	0.00010017	0.00311531	0.00000000	0.00006064

Sheet 5: CalEEMod 2045 Winter Inputs

Table 5: CalEEMod 2045 Winter Inputs

Operational Year	Vehicle Type	TOG RUNEX (g/mi)	TOG IDLEX (g/trip)	TOG STREX (g/trip)	TOG DIURN (g/trip)	TOG HOTSOAK (g/trip)	TOG RUNLOSS (g/trip)	ROG RUNEX (g/mi)	ROG IDLEX (g/trip)	ROG STREX (g/trip)	ROG DIURN (g/trip)	ROG HOTSOAK (g/trip)	ROG RUNLOSS (g/trip)	NOx RUNEX (g/mi)	NOx IDLEX (g/trip)	NOx STREX (g/trip)	CO RUNEX (g/mi)	CO IDLEX (g/trip)	CO STREX (g/trip)	SOx RUNEX (g/mi)	SOx IDLEX (g/trip)
2045	HHDT	0.0377950462	0.4778111850	0.0000000057	0.0001831401	0.0000290875	0.0003121555	0.0097141823	0.3444742834	0.0000000052	0.0001831401	0.0000290875	0.0003121555	0.3957317552	0.6765312669	0.8077030484	0.2182713055	5.9466641218	0.0015360274	0.0039856520	0.0024157417
2045	LDA	0.0069773821	0.0000000000	0.0611270137	0.2559429866	0.0639950675	0.1295414675	0.0051950565	0.0000000000	0.0558356884	0.2559429866	0.0639950675	0.1295414675	0.0101944625	0.0000000000	0.0334742891	0.9155534934	0.0000000000	1.3298876834	0.0006289248	0.0000000000
2045	LDT1	0.0089593877	0.0000000000	0.0875201005	0.3874620383	0.0822533761	0.2275218874	0.0065122562	0.0000000000	0.0799415411	0.3874620383	0.0822533761	0.2275218874	0.0163857581	0.0000000000	0.0553382469	1.0029068964	0.0000000000	1.4354855124	0.0006935739	0.0000000000
2045	LDT2	0.0086314219	0.0000000000	0.1206141580	0.2624649634	0.0513422925	0.1677963677	0.0060267699	0.0000000000	0.1101641162	0.2624649634	0.0513422925	0.1677963677	0.0142608095	0.0000000000	0.0601827265	1.3855797934	0.0000000000	1.9907631502	0.0010792213	0.0000000000
2045	LHDT1	0.0174403766	0.0206438516	0.1061183663	0.0859554477	0.0127194464	0.1153012530	0.0144513452	0.0147373312	0.0969228915	0.0859554477	0.0127194464	0.1153012530	0.1165484839	0.0301421820	0.2215131715	0.6322989621	0.1834530931	1.0869759984	0.0017545472	0.0000277370
2045	LHDT2	0.0435277827	0.0120847111	0.0510876726	0.0277750793	0.0040433573	0.0371402173	0.0378420720	0.0096059065	0.0466607725	0.0277750793	0.0040433573	0.0371402173	0.1333454054	0.0446896193	0.0981020891	0.3218067008	0.1082528213	0.5223909081	0.0016892126	0.0000392278
2045	MCY	1.3514899656	0.0000000000	0.9115837914	1.8345500344	3.8452348514	4.0412312534	1.0788161232	0.0000000000	0.8369340336	1.8345500344	3.8452348514	4.0412312534	0.4675785007	0.0000000000	0.0599007374	10.4190862725	0.0000000000	7.2094665709	0.0008917994	0.0000000000
2045	MDV	0.0093137783	0.0000000000	0.1007301205	0.2394316649	0.0424951609	0.1596035085	0.0065582698	0.0000000000	0.0920026360	0.2394316649	0.0424951609	0.1596035085	0.0179527672	0.0000000000	0.0565899159	1.1818532243	0.0000000000	1.5194333476	0.0010162629	0.0000000000
2045	MH	0.0208860888	0.0000000000	0.0903793329	12.8052166561	1.8816362396	0.0798358349	0.0166079771	0.0000000000	0.0825476925	12.8052166561	1.8816362396	0.0798358349	0.6501033286	0.0000000000	0.2502453421	0.1411392380	0.0000000000	1.7780393286	0.0064196365	0.0000000000
2045	MHDT	0.0100711694	0.0272989701	0.0288158440	0.0243986029	0.0031828511	0.0444540143	0.0045769101	0.0163162117	0.0263188647	0.0243986029	0.0031828511	0.0444540143	0.0732286874	0.1290977950	0.3466410414	0.0649785897	0.5760142909	0.4711070711	0.0027912454	0.0003474637
2045	OBUS	0.0181409018	0.0957393463	0.0390203938	0.1453405174	0.0220971460	0.0643372649	0.0153473050	0.0504521116	0.0356391597	0.1453405174	0.0220971460	0.0643372649	0.3577735196	0.1478950206	0.4517483431	0.1094050751	0.8660877565	0.6376230579	0.0027415129	0.0003855735
2045	SBUS	0.9713800047	0.9294797962	0.0465154226	0.1105605750	0.0133989611	0.0779374925	0.0187909261	0.3104791385	0.0424847217	0.1105605750	0.0133989611	0.0779374925	0.1163158657	0.2498447472	0.1283899368	2.9455600698	3.5695288454	0.8604771870	0.0013262635	0.0003554295
2045	UBUS	0.0004724517	0.0000000000	0.0006606734	0.0002383835	0.0000556861	0.0002347481	0.0004136197	0.0000000000	0.0006034240	0.0002383835	0.0000556861	0.0002347481	0.0009497845	0.0000000000	0.0007625167	0.0014842704	0.0000000000	0.0075430880	0.0000039164	0.0000000000

Operational Year	Vehicle Type	SOx STREX (g/trip)	PM2.5 RUNEX (g/mi)	PM2.5 IDLEX (g/trip)	PM2.5 STREX (g/trip)	PM2.5 PMTW (g/mi)	PM2.5 PMBW (g/mi)	PM10 RUNEX (g/mi)	PM10 IDLEX (g/trip)	PM10 STREX (g/trip)	PM10 PMTW (g/mi)	PM10 PMBW (g/mi)	CO_2 RUNEX (g/mi)	CO_2 IDLEX (g/trip)	CO_2 STREX (g/trip)	CH_4 RUNEX (g/mi)	CH_4 IDLEX (g/trip)	CH_4 STREX (g/trip)	N_2O RUNEX (g/mi)	N_2O IDLEX (g/trip)	N_2O STREX (g/trip)
2045	HHDT	0.0000000153	0.0110750752	0.0011463221	0.0000001588	0.0088666076	0.0304196305	0.0115783535	0.0012039621	0.0000001727	0.0354664305	0.0869132300	1250.7222051586	789.6677684926	0.0296870242	0.0274162735	0.1016274735	0.0000000012	0.3918769532	0.0000000000	0.0000003451
2045	LDA	0.0001606292	0.0006392981	0.0000000000	0.0005501030	0.0021521670	0.0017829164	0.0006946159	0.0000000000	0.0005980363	0.0086086682	0.0050940468	146.4968638500	0.0000000000	37.0617621125	0.0013991268	0.0000000000	0.0116560351	0.0015890700	0.0000000000	0.0051380825
2045	LDT1	0.0001799299	0.0007634634	0.0000000000	0.0006558578	0.0021661864	0.0020672329	0.0008297440	0.0000000000	0.0007130617	0.0086647458	0.0059063796	161.5510126501	0.0000000000	41.6927964860	0.0017758539	0.0000000000	0.0154758601	0.0020545347	0.0000000000	0.0066481764
2045	LDT2	0.0002754646	0.0008613678	0.0000000000	0.0007462043	0.0020870721	0.0026244076	0.0009364174	0.0000000000	0.0008114948	0.0083482884	0.0074983075	251.4653783403	0.0000000000	64.2386796112	0.0020415384	0.0000000000	0.0224571927	0.0025074750	0.0000000000	0.0086906211
2045	LHDT1	0.0000522898	0.0044568817	0.0006441919	0.0000622204	0.0023472457	0.0264208460	0.0046827317	0.0006733194	0.0000676703	0.0093889828	0.0754881315	445.0848325749	7.0507797706	13.1486353328	0.0017125081	0.0017981703	0.0191774327	0.0292073938	0.0000637062	0.0182407219
2045	LHDT2	0.0000177801	0.0084457598	0.0014492959	0.0000213635	0.0027229953	0.0305669633	0.0088357938	0.0015148266	0.0000232348	0.0108919813	0.0873341810	481.0049791609	11.3553374824	4.8447292161	0.0022075418	0.0007901142	0.0088855538	0.0607372206	0.0000200633	0.0077027722
2045	MCY	0.0001489256	0.0029272635	0.0000000000	0.0034469297	0.0010000003	0.0042000012	0.0031399798	0.0000000000	0.0036962045	0.0040000011	0.0120000034	207.7225945990	0.0000000000	34.6885247596	0.1775404765	0.0000000000	0.1315631915	0.0357342279	0.0000000000	0.0081769265
2045	MDV	0.0002217825	0.0007222257	0.0000000000	0.0005398992	0.0021248886	0.0023718979	0.0007836909	0.0000000000	0.0005871379	0.0084995543	0.0067768511	240.8080112566	0.0000000000	52.4149846843	0.0019313868	0.0000000000	0.0176205654	0.0050037347	0.0000000000	0.0063284206
2045	MH	0.0000921055	0.0058523914	0.0000000000	0.0002470228	0.0032804453	0.0151891089	0.0061484320	0.0000000000	0.0002686599	0.0131217813	0.0433974539	1562.5126059374	0.0000000000	21.4205025473	0.0027488591	0.0000000000	0.0169629779	0.1220675987	0.0000000000	0.0200718925
2045	MHDT	0.0000119499	0.0020594112	0.0001442717	0.0000573079	0.0030000009	0.0140148384	0.0021560616	0.0001512334	0.0000623276	0.0120000034	0.0400423954	824.1118477448	101.7087047230	5.0618220654	0.0050456767	0.0078234583	0.0050513539	0.3071257210	0.0000220478	0.0037325842
2045	OBUS	0.0000083434	0.0049080741	0.0002301089	0.0000459193	0.0030000009	0.0184548111	0.0051324223	0.0002423206	0.0000499415	0.0120000034	0.0527280318	802.9281348564	163.6299436151	6.1044539810	0.0011392308	0.0579456829	0.0068902805	0.2087524741	0.0000335638	0.0062950788
2045	SBUS	0.0000612438	0.0017346969	0.0006116748	0.0000842989	0.0023754336	0.0135739177	0.0018772973	0.0006641931	0.0000916828	0.0095017342	0.0387826220	703.2946418164	211.2307527751	5.4066988346	1.3818829523	0.7563919195	0.0071908908	0.1460971720	0.0011177268	0.0041397903
2045	UBUS	0.0000002215	0.0000628884	0.0000000000	0.0000002762	0.0080476238	0.0193572387	0.0000657627	0.0000000000	0.0000003004	0.0321904950	0.0553063964	4.4568019507	0.0000000000	0.0626033756	0.0000208092	0.0000000000	0.0001071102	0.0031157736	0.0000000000	0.0000630289

Sheet 6: CalEEMod 2045 Annual Inputs

Table 6: CalEEMod 2045 Annual Inputs

Operational Year	Vehicle Type	TOG RUNEX (g/mi)	TOG IDLEX (g/trip)	TOG STREX (g/trip)	TOG DIURN (g/trip)	TOG HOTSOAK (g/trip)	TOG RUNLOSS (g/trip)	ROG RUNEX (g/mi)	ROG IDLEX (g/trip)	ROG STREX (g/trip)	ROG DIURN (g/trip)	ROG HOTSOAK (g/trip)	ROG RUNLOSS (g/trip)	NOx RUNEX (g/mi)	NOx IDLEX (g/trip)	NOx STREX (g/trip)	CO RUNEX (g/mi)	CO IDLEX (g/trip)	CO STREX (g/trip)	SOx RUNEX (g/mi)	SOx IDLEX (g/trip)
2045	2045	0.0377954331	0.5129686663	8.63725422	0.00000000	0.00297232	0.00002918	0.00031074	0.00000000	6.32017699	0.00000000	0.00297232	0.00002918	0.00031074	0.00000000	10.69882322	0.80770297	0.00000000	98.46608089	0.00152088	0.00000000
2045	2045	0.0069864423	0.0000000000	0.0596096145	0.2564589883	0.0643812385	0.1288888913	0.0051949504	0.0000000000	0.0544496221	0.2564589883	0.0643812385	0.1288888913	0.0104030266	0.0000000000	0.0329182951	0.9724571886	0.0000000000	1.2874114874	0.0006397090	0.0000000000
2045	2045	0.0089861870	0.0000000000	0.0853876857	0.3848019841	0.0826627053	0.2263875391	0.0065250840	0.0000000000	0.0779937544	0.3848019841	0.0826627053	0.2263875391	0.0167199557	0.0000000000	0.0544264019	1.0647480398	0.0000000000	1.3891258299	0.0007040813	0.0000000000
2045	2045	0.0086811391	0.0000000000	0.1176866941	0.2607200331	0.0515981947	0.1671242781	0.0060592981	0.0000000000	0.1074902819	0.2607200331	0.0515981947	0.1671242781	0.0145521716	0.0000000000	0.0591799348	1.4724980751	0.0000000000	1.9259202058	0.0010942921	0.0000000000
2045	2045	0.0174644024	0.0206438516	0.1052860682	0.0851844598	0.0127650759	0.1141191343	0.0144678103	0.0147373312	0.0961627146	0.0851844598	0.0127650759	0.1141191343	0.1188976451	0.0301421820	0.2194123913	0.6349998749	0.1834530931	1.0784685370	0.0017545659	0.0000277370
2045	2045	0.0435386434	0.0120847111	0.0506869436	0.0275593846	0.0040584656	0.0367192626	0.0378495149	0.0096059065	0.0462947679	0.0275593846	0.0040584656	0.0367192626	0.1358571034	0.0446896193	0.0971710661	0.3230633902	0.1082528213	0.5183055274	0.0016892213	0.0000392278
2045	2045	1.3581388029	0.0000000000	0.8949648532	1.6532030086	3.8510745997	3.7084181594	1.0840542322	0.0000000000	0.8216715949	1.6532030086	3.8510745997	3.7084181594	0.4794855050	0.0000000000	0.0592234051	10.4682059046	0.0000000000	7.0461868461	0.0008922179	0.0000000000
2045	2045	0.0093675255	0.0000000000	0.0983518719	0.2370974070	0.0426785517	0.1589667716	0.0065938638	0.0000000000	0.0898304395	0.2370974070	0.0426785517	0.1589667716	0.0183185682	0.0000000000	0.0556555900	1.2544357750	0.0000000000	1.4704499513	0.0010272431	0.0000000000
2045	2045	0.0209423847	0.0000000000	0.0895159913	12.6787803096	1.8879944878	0.0789865943	0.0166465572	0.0000000000	0.0817591621	12.6787803096	1.8879944878	0.0789865943	0.6631467049	0.0000000000	0.2476438182	0.1418112916	0.0000000000	1.7582051407	0.0064196418	0.0000000000
2045	2045	0.0100797861	0.0274625458	0.0285575578	0.0238103349	0.0031929554	0.0441946509	0.0045828152	0.0166190846	0.0260829598	0.0238103349	0.0031929554	0.0441946509	0.0746372290	0.1208641486	0.3461749944	0.0651117005	0.5315185352	0.4664617378	0.0027912464	0.0003414565
2045	2045	0.0181558585	0.1000025141	0.0386476546	0.1397993912	0.0221605425	0.0640749887	0.0153575549	0.0541969098	0.0352987194	0.1397993912	0.0221605425	0.0640749887	0.3645242627	0.1415753339	0.4509427694	0.1096382504	0.8523098030	0.6305103157	0.0027415147	0.0003793691
2045	2045	0.9714081849	0.9297005654	0.0453878962	0.1078089076	0.0134459784	0.0775530491	0.0188102382	0.3106730639	0.0414548988	0.1078089076	0.0134459784	0.0775530491	0.1194654439	0.2472349826	0.1275145391	2.9459266079	3.5677288367	0.8314762480	0.0013262664	0.0003538011
2045	2045	0.0004724897	0.0000000000	0.0006502435	0.0002314594	0.0000560453	0.0002259988	0.0004136458	0.0000000000	0.0005938979	0.0002314594	0.0000560453	0.0002259988	0.0009678406	0.0000000000	0.0007548959	0.0014888622	0.0000000000	0.0073851340	0.0000039165	0.0000000000

Operational Year	Vehicle Type	SOx STREX (g/trip)	PM2.5 RUNEX (g/mi)	PM2.5 IDLEX (g/trip)	PM2.5 STREX (g/trip)	PM2.5 PMTW (g/mi)	PM2.5 PMBW (g/mi)	PM10 RUNEX (g/mi)	PM10 IDLEX (g/trip)	PM10 STREX (g/trip)	PM10 PMTW (g/mi)	PM10 PMBW (g/mi)	CO_2 RUNEX (g/mi)	CO_2 IDLEX (g/trip)	CO_2 STREX (g/trip)	CH_4 RUNEX (g/mi)	CH_4 IDLEX (g/trip)	CH_4 STREX (g/trip)	N_2O RUNEX (g/mi)	N_2O IDLEX (g/trip)	N_2O STREX (g/trip)
2045	2045	0.03995157	0.00000002	0.00000000	0.01703477	0.00000016	0.00886661	0.03041963	0.00000000	0.01790281	0.00000017	0.03546643	0.08691323	0.00000000	13066.06493823	0.02966304	0.00000000	1.73533356	0.00000000	0.00000000	0.00000000
2045	2045	0.0001603333	0.0006392981	0.0000000000	0.0005501030	0.0021521670	0.0017829164	0.0006946159	0.0000000000	0.0005980363	0.0086086682	0.0050940468	149.0087833943	0.0000000000	36.9898669536	0.0014039368	0.0000000000	0.0114086305	0.0016117073	0.0000000000	0.0050781968
2045	2045	0.0001796037	0.0007634634	0.0000000000	0.0006558578	0.0021661864	0.0020672329	0.0008297440	0.0000000000	0.0007130617	0.0086647458	0.0059063796	163.9984664128	0.0000000000	41.6128696914	0.0017832976	0.0000000000	0.0151525292	0.0020838244	0.0000000000	0.0065710612
2045	2045	0.0002750103	0.0008613678	0.0000000000	0.0007462043	0.0020870721	0.0026244076	0.0009364174	0.0000000000	0.0008114948	0.0083482884	0.0074983075	254.9757507241	0.0000000000	64.1270550858	0.0020528789	0.0000000000	0.0219901806	0.0025424280	0.0000000000	0.0085891267
2045	2045	0.0000522261	0.0044568817	0.0006441919	0.0000622204	0.0023472457	0.0264208460	0.0046827317	0.0006733194	0.0000676703	0.0093889828	0.0754881315	445.0891796256	7.0507797706	13.1326176072	0.0017179673	0.0017981703	0.0190542018	0.0292911741	0.0000637062	0.0181198153
2045	2045	0.0000177518	0.0084457598	0.0014492959	0.0000213635	0.0027229953	0.0305669633	0.0088357938	0.0015148266	0.0000232348	0.0108919813	0.0873341810	481.0070008317	11.3553374824	4.8370341052	0.0022099125	0.0007901142	0.0088284731	0.0607712187	0.0000200633	0.0076516932
2045	2045	0.0001475979	0.0029272635	0.0000000000	0.0034469297	0.0010000003	0.0042000012	0.0031399798	0.0000000000	0.0036962045	0.0040000011	0.0120000034	207.8200738737	0.0000000000	34.3792870691	0.1783041943	0.0000000000	0.1295477927	0.0363684571	0.0000000000	0.0081140311
2045	2045	0.0002214313	0.0007222257	0.0000000000	0.0005398992	0.0021248886	0.0023718979	0.0007836909	0.0000000000	0.0005871379	0.0084995543	0.0067768511	243.3655796421	0.0000000000	52.3301509866	0.0019421729	0.0000000000	0.0172643198	0.0050358883	0.0000000000	0.0062552126
2045	2045	0.0000919591	0.0058523914	0.0000000000	0.0002470228	0.0032804453	0.0151891089	0.0061484320	0.0000000000	0.0002686599	0.0131217813	0.0433974539	1562.5138361175	0.0000000000	21.3864570945	0.0027610674	0.0000000000	0.0168324760	0.1222685239	0.0000000000	0.0199266078
2045	2045	0.0000119307	0.0020594112	0.0001263615	0.0000573079	0.0030000009	0.0140148384	0.0021560616	0.0001325133	0.0000623276	0.0120000034	0.0400423954	824.1120839227	99.8827205424	5.0536765997	0.0050472545	0.0078035236	0.0050134583	0.3071381192	0.0000228414	0.0037058699
2045	2045	0.0000083264	0.0049080741	0.0002032181	0.0000459193	0.0030000009	0.0184548111	0.0051324223	0.0002142139	0.0000499415	0.0120000034	0.0527280318	802.9285481723	161.0616016313	6.0920516060	0.0011414392	0.0581196191	0.0068372713	0.2087751411	0.0000335638	0.0062495136
2045	2045	0.0000606846	0.0017346969	0.0006083358	0.0000842989	0.0023754336	0.0135739177	0.0018772973	0.0006607030	0.0000916828	0.0095017342	0.0387826220	703.2953053075	210.8355209992	5.3573314669	1.3818883671	0.7564009269	0.0070456711	0.1461595323	0.0011177268	0.0040965059
2045	2045	0.0000002205	0.0000628884	0.0000000000	0.0000002762	0.0080476238	0.0193572387	0.0000657627	0.0000000000	0.0000003004	0.0321904950	0.0553063964	4.4568093328	0.0000000000	0.0623213629	0.0000208176	0.0000000000	0.0001057712	0.0031158869	0.0000000000	0.0000625893

Sheet 7: Emission Factors from EMFAC2025 (v2.1.0) Emission Rates for Los Angeles (SC) Sub-Area Summer 2026

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_DIUR	TOG_HOTS	TOG_RUNI	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_DIUR	ROG_HOTS	ROG_RUNI	NOx_RUNE	NOx_IDLE	NOx_STRE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLE	SOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STI	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLI	PM10_STR	PM10_PM1	PM10_PMI	CO2_RUNI	CO2_IDLE	CO2_STRE	CH4_RUNI	CH4_IDLE	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	NH3_RUNEX
Los Angele	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84488	4046.703	4046.703	0	1717.584	1.388056	0	5.14E-05	8.602916	0.105819	0.869288	0.951246	0	4.69E-05	8.602916	0.105819	0.869288	6.813842	0	0.31775	46.45521	0	4.781274	0.009294	0	0.000238	0.001735	0	0.00124	0.005	0.034283	0.001886	0	0.001348	0.02	0.097951	2164.702	0	55.48084	0.172582	0	1.11E-05	0.202347	0	0.010983	0.044725
Los Angele	2026	HHDT	Aggregate	Aggregate	Diesel	43166.22	5635385	5635385	0	712925	0.01406	7.597442	0	0	0	0	0.01235	6.67365	0	0	0	0	1.009952	36.31876	2.254752	0.066011	91.08211	0	0.004951	0.045734	0	0.013607	0.019208	0	0.008839	0.028175	0.014222	0.020077	0	0.035358	0.0805	1507.638	13926.94	0	0.000574	0.309974	0	0.394263	0	0	0.216876
Los Angele	2026	HHDT	Aggregate	Aggregate	Electricity	477.1548	47414.86	0	47414.86	5330.531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008999	0.014475	0	0	0	0.035997	0.041356	0	0	0	0	0	0	0	0	0
Los Angele	2026	HHDT	Aggregate	Aggregate	Natural Ga	4726.781	365382.5	365382.5	0	36077.09	1.465016	26.44725	0	0	0	0	0.02051	0.370262	0	0	0	0	0.644395	10.80385	0	7.625932	77.79908	0	0	0	0	0.001289	0.026046	0	0.009	0.047025	0.001402	0.028328	0	0.036	0.134358	1131.22	8670.325	0	2.628597	38.84821	0	0.37924	0	0	0.86316
Los Angele	2026	HHDT	Aggregate	Aggregate	Fuel Cell E	11.02775	1334.67	0	1334.67	161.8647	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.009	0.01469	0	0	0	0.036	0.041971	0	0	0	0	0	0	0	0	0
										756212.1																																							
		Population	48467.03		Total HHDT VMT	6053564			Total Trips	756212.1																																									
	Vehicle				Miles				Trip																																									
	Gasoline		0.18%		Gasoline		0.07%		Gasoline	0.23%	0.000928	0	1.17E-07	0.015237	0.00024	0.001974	0.000636	0	1.07E-07	0.015237	0.00024	0.001974	0.004555	0	0.000722	0.031055	0	0.01086	6.21E-06	0	1.59E-07	1.16E-06	0	2.82E-06	3.34E-06	2.29E-05	1.26E-06	0	3.06E-06	1.34E-05	6.55E-05	1.447065	0	0.126014	0.000115	0	2.53E-08	0.000135	0	2.49E-05	2.99E-05	
	Diesel		89.06%		Diesel		93.09%		Diesel	94.28%	0.013088	6.766515	0.00E+00	0	0	0	0.011497	5.943757	0.00E+00	0	0	0	0.940185	32.3466	2.125686	0.061451	81.12051	0	0.004609	0.040732	0	0.012667	0.017107	0	0.008229	0.026229	0.01324	0.017881	0	0.032915	0.074939	1403.49	12964.87	0	0.000534	0.276072	0.00E+00	0.367027	0	0	0.201894	
	Electricity		0.98%		Electricity		0.78%		Electricity	0.70%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.05E-05	0.000113	0	0	0	0.000282	0.000324	0	0	0	0	0	0	0	0
	Natural Gas		9.75%		Natural Gas		6.04%		Natural Ga	4.77%	0.088426	2.579287	0.00E+00	0	0	0	0.001238	0.03611	0.00E+00	0	0	0	0.038895	1.053653	0	0.460288	7.58741	0	0	0	0	7.78E-05	0.00254	0	0.000543	0.002838	8.46E-05	0.002763	0	0.002173	0.00811	68.27846	523.3256	0	0.158657	3.786699	0.00E+00	0.02289	0	0	0.052099	
	Fuel Cell Electric Vehic		0.02%		Fuel Cell Electric Vehic		0.02%		Fuel Cell E	0.02%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.98E-06	3.24E-06	0	0	0	0	7.94E-06	9.25E-06	0	0	0	0	0	0	0	0
											0.102442	9.345802	1.17E-07	0.015237	0.00024	0.001974	0.013371	5.979867	1.07E-07	0.015237	0.00024	0.001974	0.983635	33.40025	2.126408	0.552793	88.70792	0.01086	0.004615	0.040732	1.59E-07	0.012746	0.019648	2.82E-06	0.008848	0.029207	0.013326	0.020644	3.06E-06	0.035391	0.083448	1473.216	13488.2	0.126014	0.159307	4.064771	2.53E-08	0.390053	0	2.49E-05	0.254023	
												452963.2		738.5163				289826.4		738.5163				1618811		4299409				1974.167		952.2594								1000.533			6.54E+08			197007.4					
												0.59899		0.000977				0.383261		0.000977				2.140684		5.685454				0.002611		0.001259								0.001323			864.4834			0.260519					
Los Angele	2026	LDA	Aggregate	Aggregate	Gasoline	2936460	86723722	86723722	0	12839242	0.043381	0	0.270982	2.433047	0.22078	0.263368	0.033182	0	0.247537	2.433047	0.22078	0.263368	0.055247	0	0.170011	3.029608	0	2.656526	0.001441	0	0.000294	0.002775	0	0.001983	0.002	0.002646	0.003012	0	0.002155	0.008	0.00756	335.7367	0	68.41648	0.007174	0	0.044027	0.005611	0	0.016229	0.030271	
Los Angele	2026	LDA	Aggregate	Aggregate	Diesel	6241.251	146250.6	146250.6	0	24401.74	0.119382	0	0	0	0	0	0.104865	0	0	0	0	0	0.423976	0	0	0.964314	0	0	0.000991	0	0	0.066326	0	0	0	0.002	0.002734	0.069325	0	0	0	0.008	0.00781	301.7326	0	0	0.004871	0	0	0.047554	0	0	0.0031	
Los Angele	2026	LDA	Aggregate	Aggregate	Electricity	281465	10908486	0	10908486	1380216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000888	0	0	0	0.0092	0.002537	0	0	0	0	0	0	0	0	0
Los Angele	2026	LDA	Aggregate	Aggregate	Plug-in Hyl	170168.2	6785925	3057640	3728285	645954.6	0.002779	0	0.131153	0.444835	0.037735	0.03157	0.001905	0	0.119789	0.444835	0.037735	0.03157	0.002885	0	0.086205	0.289553	0	0.96803	0.000647	0	0.000264	0.000964	0	0.001621	0.0023	0.001085	0.001049	0	0.001763	0.0092	0.003101	150.676	0	61.53204	0.000751	0	0.024411	0.000799	0	0.019611	0.014594	
Los Angele	2026	LDA	Aggregate	Aggregate	Fuel Cell E	374.0038	17219.12	0	17219.12	1913.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000882	0	0	0	0.0092	0.002521	0	0	0	0	0	0	0	0	0
										14891728																																						
		Population	3394709		Total HHDT VMT	1.05E+08			Total Trips	14891728																																								
	Vehicle				Miles				Trip																																									
	Gasoline		86.50%		Gasoline		82.92%		Gasoline	86.22%	0.035973	0	2.34E-01	2.104613	0.190351	0.227069	0.027516	0	2.13E-01	2.104613	0.190351	0.227069	0.045814	0	0.146579	2.512286	0	2.290384	0.001195	0	0.000244	0.002301	0	0.00171	0.001658	0.002194	0.002498	0	0.001858	0.006634	0.006269	278.4078	0	58.98682	0.005949	0	3.80E-02	0.004653	0	0.013992	0.025102	
	Diesel		0.18%		Diesel		0.14%		Diesel	0.16%	0.000167	0	0.00E+00	0	0	0	0.000147	0	0.00E+00	0	0	0	0.000593	0	0	0.001349	0	0	1.39E-06	0	0	9.28E-05	0	0	2.8E-06	3.82E-06	9.69E-05	0	0	1.12E-05	1.09E-05	0.421954	0	0	6.81E-06	0	0.00E+00	6.65E-05	0	0	4.34E-06	
	Electricity		8.29%		Electricity		10.43%		Electricity	9.27%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00024	9.26E-05	0	0	0	0.00096	0.000265	0	0	0	0	0.00E+00	0	0	0
	Plug-in Hybrid		5.01%		Plug-in Hybrid		6.49%		Plug-in Hyt	4.34%	0.00018	0	5.69E-03	0.022298	0.001637	0.001369	0.000124	0	5.20E-03	0.022298	0.001637	0.001369	0.000187	0	0.003739	0.018788	0	0.04199	4.2E-05	0	1.71E-05	6.26E-05	0	7.03E-05	0.000149	7.04E-05	6.81E-05	0	7.65E-05	0.000597	0.000201	9.776827	0	2.669059	4.87E-05	0	1.06E-03	5.19E-05	0	0.000851	0.000947	
	Fuel Cell Electric Vehic		0.01%		Fuel Cell Electric Vehic		0.02%		Fuel Cell E	0.01%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.79E-07	1.45E-07	0	0	0	1.51E-06	4.15E-07	0	0	0	0	0	0	0	0
											0.036321	0	0.239322	2.126911	0.191988	0.228438	0.027786	0	0.218616	2.126911	0.191988	0.228438	0.046594	0	0.150318	2.532422	0	2.332374	0.001239	0	0.000261	0.002456	0	0.00178	0.002051	0.002361	0.002663	0	0.001934	0.008203	0.006747	288.6066	0	61.65588	0.006005	0	0.039018	0.004771	0	0.014843	0.026054	
												0		7220244				0		7220244				0		0				0		0								0				0				0		
												0		0.484849				0		0.484849				0		0				0		0								0				0				0		
Los Angele	2026	LDT1	Aggregate	Aggregate	Gasoline	272982.7	7809301	7809301	0	1106898	0.111563	0	0.593847	4.584591	0.346088	0.649956	0.079478	0	0.542422	4.584591	0.346088	0.649956	0.23034	0	0.368765	4.905077	0	5.308897	0.001739	0	0.000376	0.00407	0	0.003119	0.002	0.003464	0.004421	0	0.00339	0.008	0.009898	405.125	0	87.59618	0.017512	0	0.085326	0.015686	0	0.026824	0.034616	
Los Angele	2026	LDT1	Aggregate	Aggregate	Diesel	117.9735	2602.513	2602.513	0	317.8184	0.436956	0	0	0	0	0	0.383822	0	0	0	0	0	1.455922	0	0	2.092186	0	0	0.297124	0	0	0.002	0.003866	0.310559	0	0	0	0.008	0.011046	488.378	0	0	0.017828	0	0	0.076971	0	0	0.0031	
Los Angele	2026	LDT1	Aggregate	Aggregate	Electricity	15133.04	697779.1	0	697779.1	75101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092	0.002531	0	0	0	0	0	0	0	0	0
Los Angele	2026	LDT1	Aggregate	Aggregate	Plug-in Hyl	9905.566	467784.8	229603.2	241181.6	40340.24	0.002988	0	0.139741	0.323141	0.025486	0.022751	0.002048	0	0.127632	0.323141	0.025486	0.022751	0.003101	0	0.09286	0.312811	0	1.035572	0.000697	0	0.000295	0.00084	0	0.001281	0.0023	0.001087	0.000914	0	0.001393	0.0092	0.003106	162.258	0	68.65718	0.000807	0	0.025822	0.00086	0	0.01739	0.015986	
										1222657																																						
		Population	298139.3		Total HHDT VMT	8977468			Total Trips	1222657																																								
	Vehicle				Miles				Trip																																									
	Gasoline		91.56%		Gasoline		86.99%		Gasoline	90.53%	0.097046	0	5.38E-01	4.197749	0.313321	0.588419	0.069136	0	4.91E-01	4.197749	0.313321	0.588419	0.200367	0	0.333851	4.266819	0	4.806258	0.001513	0	0.000327	0.00354	0	0.002823	0.00174	0.003014	0.003846	0	0.003069	0.006959	0.00861	352.4093	0	79.30269	0.015233	0	7.72E-02	0.013645	0	0.024285	0.030112	
	Diesel		0.04%		Diesel		0.03%		Diesel	0.03%	0.000127	0	0.00E+00	0	0	0	0.000111	0	0.00E+00	0	0	0	0.000422	0	0	0.000607	0	0	4.65E-07	0	0	8.61E-05	0	0	5.8E-07	1.12E-06	9E-05	0	0	2.32E-06	3.2E-06	0.141578	0	0	5.17E-06	0	0.00E+00	2.23E-05	0	0	8.99E-07	
	Electricity		5.08%		Electricity		7.77%		Electricity	6.14%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000179	6.88E-05	0	0	0	0.000715	0.000197	0	0	0	0	0.00E+00	0	0	0
	Plug-in Hybrid		3.32%		Plug-in Hybrid		5.21%		Plug-in Hyt	3.30%	0.000156	0	4.61E-03	0.010736	0.000841	0.000751	0.000107	0	4.21E-03	0.010736	0.000841	0.000751	0.000162	0	0.003064	0.016299	0	0.034168	3.63E-05	0	1.54E-05	4.38E-05	0	4.23E-05	0.00012	5.67E-05	4.76E-05	0	4.6E-05	0.000479	0.000162	8.454703	0	2.265268	4.21E-05	0	8.52E-04	4.48E-05	0	0.000574	0.000833	
											0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
											0.097328	0	0.542233	4.208485	0.314162	0.58917	0.069354	0	0.495277	4.208485	0.314162	0.58917	0.200951	0	0.336915	4.283725	0	4.840425	0.00155	0	0.000342	0.00367	0	0.002866	0.002039	0.00314	0.003983	0	0.003115	0.008156	0.008972	361.0055	0	81.56796	0.015281	0	0.0781	0.013712	0	0.024858	0.030945	
												0		1254715				0		1254715				0		0				0		0								0				0				0		
												0		1.02622				0		1.02622				0		0				0		0								0				0				0		
Los Angele	2026	LDT2	Aggregate	Aggregate	Gasoline	1560649	54295985	54295985	0	7511761	0.034578	0	0.297612	1.88634	0.117845	0.240697	0.024707	0	0.271836	1.88634	0.117845	0.240697	0.069855	0	0.23348	2.964446	0	2.738837	0.001705	0	0.000356	0.002488	0	0.001825	0.002	0.00322	0.002705	0	0.001984	0.008	0.009201	397.1037	0	82.87168	0.006407	0	0.047616	0.006391	0	0.018761	0.031472	
Los Angele	2026	LDT2	Aggregate	Aggregate	Diesel	2703.519	92706.6	92706.6	0	13159.03	0.041774	0	0	0	0	0	0.036694	0	0	0	0	0	0.07442	0	0	0.353646	0	0	0.00119	0	0	0.000799	0	0	0	0.002	0.003261	0.010242	0	0	0	0.008	0.009317	362.1532	0	0	0.001704	0	0	0.057077	0	0	0.0031	
Los Angele	2026	LDT2	Aggregate	Aggregate	Electricity	8259.685	376058.4	0	376058.4	43687.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092	0.002531	0	0	0	0	0	0	0	0	0
Los Angele	2026	LDT2	Aggregate	Aggregate	Plug-in Hyl	99946.9	4622422	2273214	2349208	425641.1	0.003033	0	0.141139	0.331919	0.024462	0.02344	0.002079	0	0.128909	0.331919	0.024462	0.02344	0.003148	0	0.093943	0.317142	0	1.046568	0.000707	0	0.000313	0.000877	0	0.001323	0.0023	0.001089	0.000954	0	0.001439	0.0092	0.003111	164.6493	0	72.9067	0.00082	0	0.026052	0.000873	0	0.019267	0.016228	
										7994248																																						
		Population	1671559		Total HHDT VMT	59387171			Total Trips	7994248																																								
	Vehicle				Miles				Trip																																									
	Gasoline		93.36%		Gasoline		91.43%		Gasoline	93.96%	0.031613	0	2.80E-01	1.761179	0.110732	0.22617	0.022589	0	2.55E-01	1.761179	0.110732	0.22617	0.063867	0	0.219389	2.710307	0	2.573536	0.001559	0	0.000325	0.002275	0	0.001715	0.001829	0.002944	0.002473	0	0.001864	0.007314	0.008412	363.0605	0	77.87002	0.005858	0	4.47E-02	0.005843	0	0.017629	0.028774	
	Diesel		0.16%		Diesel		0.16%		Diesel	0.16%	6.52E-05	0	0.00E+00	0	0	0	5.73E-05	0	0.00E+00	0	0	0	0.000116	0	0	0.000552	0	0	1.66E-06	0	0	1.53E-05	0	0	3.12E-06	5.09E-06	1.6E-05	0	0	1.25E-05	1.45E-05	0.565341	0	0	2.66E-06	0	0.00E+00	8.91E-05	0	0	4.84E-06	
	Electricity		0.49%		Electricity		0.63%		Electricity	0.55%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.46E-05	5.61E-06	0	0	0	5.83E-05	1.6E-05	0	0	0	0	0.00E+00	0	0	0
	Plug-in Hybrid		5.98%		Plug-in Hybrid		7.78%		Plug-in Hyt	5.32%	0.000236	0	7.51E-03	0.019846	0.001302	0.001248	0.000162	0	6.86E-03	0.019846	0.001302	0.001248	0.000245	0	0.005002	0.024685	0	0.055723	5.5E-05	0	2.44E-05	6.83E-05	0	7.04E-05	0.000179	8.48E-05	7.43E-05	0	7.66E-05	0.000716	0.000242	12.81553	0	3.881802	6.38E-05	0	1.39E-03	6.79E-05	0	0.001026	0.001263	
											0.031915	0	0.287165	1.781025	0.112035	0.227418	0.022808	0	0.262293	1.781025	0.112035	0.227418	0.064228	0	0.22439	2.735544	0	2.629259	0.001616	0	0.00035	0.002359	0	0.001785	0.002025	0.00304	0.002563	0	0.001941	0.008101	0.008685	376.4414	0	81.75182	0.005925	0	0.04613	0.006	0	0.018654	0.030042	
												0		2977089				0		2977089				0		0				0		0								0				0				0		
												0		0.372404				0		0.372404				0		0				0		0								0				0				0		
Los Angele	2026	LHDT1	Aggregate	Aggregate	Gasoline	115818.1	3885776	3885776	0	1662872	0.044483	0.568823	0.187548	3.325007	0.05232	0.275936	0.030484	0.389819	0.171296	3.325007	0.05232	0.275936	0.161334	0.034018	0.549756	1.397667	3.621179	2.261329	0.002624	0.000485	0.000105	0.001139	0	0.00028	0.002	0.0273	0.001239	0	0.000305	0.008	0.078	611.1704	113.0655	24.45545	0.007009	0.051526	0.033189	0.012935	0.001849	0.038847	0.044936	
Los Angele	2026	LHDT1	Aggregate	Aggregate	Diesel	46075.94	1646116	1646116	0	158535.8	0.098203	0.120418	0	0	0	0	0.086261	0.105775	0	0	0	0	1.213376	1.851751	0	0.356622	0.876717	0	0.001605	0.000406	0	0.021044	0.025961	0	0.003	0.0273	0.021996	0.027135	0	0.012	0.078	488.5137	123.5434	0	0.004007	0.004913	0	0.076992	0	0	0.182847	
Los Angele	2026	LHDT1	Aggregate	Aggregate	Electricity	856.811	47356.84	0	47356.84	11311.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0
										2232719																																						
		Population	162750.9		Total HHDT VMT	5579250			Total Trips	2232719																																								
	Vehicle				Miles				Trip																																									
	Gasoline		71.16%		Gasoline		69.65%		Gasoline	74.48%	0.030981	0.40479	0.139681	2.366169	0.038966	0.20551	0.021231	0.277406	1.28E-01	2.366169	0.038966	0.20551	0.112365	0.024209	0.409444	0.973432	2.576934	1.68418	0.001827	0.000345	7.31E-05	0.000793	0	2.09E-04	0.001393	0.019014	0.000863	0	0.000227	0.005572	0.054325	425.6615	78.74665	18.2138	0.004882	0.036667	2.47E-02	0.009009	0.001316	0.028932	0.031296	
	Diesel		28.31%		Diesel		29.50%		Diesel	25.02%	0.028974	0.034091	0.000000	0	0	0	0.025451	0.029946	0.00E+00	0	0	0	0.357998	0.524244	0	0.105219	0.248205	0	0.000474	0.000115	0	0.006209	0.00735	0	0.000885	0.008055	0.00649	0.007682	0	0.003541	0.023013	144.1324	36.45057	0	0.001182	0.001391	0.00E+00	0.022716	0	0	0.053948	
	Electricity		0.53%		Electricity		0.85%		Electricity	0.51%	0	0	0.000000	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7E-05	0.000116	0	0	0	6.79E-05	0.000331	0	0	0	0	0.00E+00	0	0	0
											0.

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Sheet 8: Emission Factors from EMFAC2025 (v2.1.0) Emission Rates for Los Angeles (SC) Sub-Area Winter 2026

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_DIUR	TOG_HOTS	TOG_RUNI	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_DIUR	ROG_HOTS	ROG_RUNI	NOx_RUNE	NOx_IDLE	NOx_STRE	CO_RUNE	CO_IDLE	CO_STREX	SOx_RUNE	SOx_IDLE	SOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STI	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLI	PM10_STR	PM10_PM1	PM10_PMI	CO2_RUNI	CO2_IDLE	CO2_STRE	CH4_RUNI	CH4_IDLE	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	NH3_RUNEX
Los Angele	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84488	4046.703	4046.703	0	1717.584	1.339444	0	5.40E-05	7.36898	0.099789	0.915157	0.917932	0	4.93E-05	7.36898	0.099789	0.915157	7.608871	0	0.335684	45.00948	0	5.083963	0.009283	0	0.00024	0.001735	0	0.00124	0.005	0.034283	0.001886	0	0.001348	0.02	0.097951	2162.269	0	55.96008	0.167547	0	1.16E-05	0.218496	0	0.01141	0.044725
Los Angele	2026	HHDT	Aggregate	Aggregate	Diesel	43166.22	5635385	5635385	0	712925	0.01406	6.599978	0	0	0	0	0.01235	5.79747	0	0	0	0	1.048245	40.2003	2.254752	0.066011	94.09657	0	0.004951	0.047052	0	0.013607	0.025737	0	0.008839	0.028175	0.014222	0.026901	0	0.035358	0.0805	1507.638	14328.22	0	0.000574	0.269277	0	0.394263	0	0	0.216876
Los Angele	2026	HHDT	Aggregate	Aggregate	Electricity	477.1548	47414.86	0	47414.86	5330.531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.035997	0.041356	0	0	0	0	0	0	0	0	0
Los Angele	2026	HHDT	Aggregate	Aggregate	Natural Ga	4726.781	365382.5	365382.5	0	36077.09	1.465016	26.44725	0	0	0	0	0	0.02051	0.370262	0	0	0	0	0.691291	10.80385	0	7.625932	77.79908	0	0	0	0	0.001289	0.026046	0	0.009	0.047025	0.001402	0.028328	0	0.036	0.134358	1131.22	8670.325	0	2.628597	38.84821	0	0.37924	0	0	0.86316
Los Angele	2026	HHDT	Aggregate	Aggregate	Fuel Cell E	11.02775	1334.67	0	1334.67	161.8647	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
										756212.1																																									
			Population	48467.03		Total HHDT VMT	6053564		Total Trips	756212.1																																											
		Vehicle				Miles			Trip																																											
		Gasoline		0.18%		Gasoline	0.07%		Gasoline	0.23%	0.000895	0	1.23E-07	0.013052	0.000227	0.002079	0.000614	0	1.12E-07	0.013052	0.000227	0.002079	0.005086	0	0.000762	0.030088	0	0.011547	6.21E-06	0	1.61E-07	1.16E-06	0	2.82E-06	3.34E-06	2.29E-05	1.26E-06	0	3.06E-06	1.34E-05	6.55E-05	1.445439	0	0.127102	0.000112	0	2.63E-08	0.000146	0	2.59E-05	2.99E-05	
		Diesel		89.06%		Diesel	93.09%		Diesel	94.28%	0.013088	6.878142	0.00E+00	0	0	0	0.011497	5.163404	0.00E+00	0	0	0	0.975832	35.80362	2.125686	0.061451	83.80528	0	0.004609	0.041906	0	0.012667	0.025737	0	0.008229	0.026229	0.01324	0.023958	0	0.032915	0.074939	1403.49	13338.43	0	0.000534	0.239827	0.00E+00	0.367027	0	0	0.201894
		Electricity		0.98%		Electricity	0.78%		Electricity	0.70%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.05E-05	0.000113	0	0	0	0.00E+00	0	0	0.00E+00	0	0
		Natural Gas		9.75%		Natural Gas	6.04%		Natural Ga	4.77%	0.088426	2.579287	0.00E+00	0	0	0	0.001238	0.03611	0.00E+00	0	0	0	0.041725	1.053653	0	0.460288	7.58741	0	0	0	0	0	7.78E-05	0.00254	0	0.000543	0.002838	8.46E-05	0.002763	0	0.002173	0.00811	68.27846	523.3256	0	0.158657	3.786699	0.00E+00	0.02289	0	0	0.052099
		Fuel Cell Electric Vehic		0.02%		Fuel Cell Electric Vehic	0.02%		Fuel Cell E	0.02%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.94E-06	9.25E-06	0	0	0	0.00E+00	0	0	0.00E+00	0	0
											0.10241	8.457429	1.23E-07	0.013052	0.000227	0.002079	0.013348	5.199514	1.12E-07	0.013052	0.000227	0.002079	1.022644	36.85727	2.126448	0.551827	91.39269	0.011547	0.004615	0.041906	1.61E-07	0.012746	0.025462	2.82E-06	0.008848	0.029207	0.013326	0.026721	3.06E-06	0.035391	0.083448	1473.214	13861.75	0.127102	0.159303	4.028526	2.63E-08	0.390063	0	2.59E-05	0.254023	
												409906.5		632.5891						632.5891				1786362		4429532		2031.049			1234.077						1295.094			6.72E+08		195250.7				0				
												0.542052		0.000837					0.333246	0.000837				2.36225		5.857526		0.002686			0.001632						0.001713			888.4254		0.258196				0				
Los Angele	2026	LDA	Aggregate	Aggregate	Gasoline	2936460	86723722	86723722	0	12839242	0.043883	0	0.310744	2.127022	0.212107	0.267408	0.033839	0	0.283861	2.127022	0.212107	0.267408	0.06329	0	0.186625	2.471616	0	3.212912	0.001356	0	0.000298	0.002775	0	0.001983	0.002	0.002646	0.003012	0	0.002155	0.008	0.00756	315.7483	0	69.4191	0.007154	0	0.049474	0.006174	0	0.01732	0.030271	
Los Angele	2026	LDA	Aggregate	Aggregate	Diesel	6241.251	146250.6	146250.6	0	24401.74	0.119382	0	0	0	0	0	0.104865	0	0	0	0	0	0.440131	0	0	0.964314	0	0	0.000991	0	0	0.066326	0	0	0	0.008	0.00781	301.7326	0	0	0.004871	0	0	0.047554	0	0	0.0031	0	0	0.0031	
Los Angele	2026	LDA	Aggregate	Aggregate	Electricity	281465	10908486	0	10908486	1380216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000888	0	0	0	0.0092	0.002537	0	0	0	0	0	0	0	0	0
Los Angele	2026	LDA	Aggregate	Aggregate	Plug-in Hyl	170168.2	6785925	3057640	3728285	645954.6	0.002692	0	0.154218	0.38186	0.035992	0.031369	0.001845	0	0.140854	0.38186	0.035992	0.031369	0.003315	0	0.094902	0.229112	0	1.20274	0.000605	0	0.000266	0.000964	0	0.001621	0.0023	0.001085	0.001049	0	0.001763	0.0092	0.003101	140.8316	0	61.97426	0.000731	0	0.028028	0.000881	0	0.020972	0.014594	
Los Angele	2026	LDA	Aggregate	Aggregate	Fuel Cell E	374.0038	17219.12	0	17219.12	1913.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000882	0	0	0	0.0092	0.002521	0	0	0	0	0	0	0	0	0
										14891728																																							
			Population	3394709		Total HHDT VMT	1.05E+08		Total Trips	14891728																																										
		Vehicle				Miles			Trip																																										
		Gasoline		86.50%		Gasoline	82.92%		Gasoline	86.22%	0.03639	0	2.68E-01	1.839897	0.182873	0.230552	0.02806	0	2.45E-01	1.839897	0.182873	0.230552	0.052483	0	0.160903	2.049574	0	2.770085	0.001124	0	0.000247	0.002301	0	0.00171	0.001658	0.002194	0.002498	0	0.001858	0.006634	0.006269	261.8325	0	59.85126	0.005933	0	4.27E-02	0.00512	0	0.014933	0.025102	
		Diesel		0.18%		Diesel	0.14%		Diesel	0.16%	0.000167	0	0.00E+00	0	0	0	0.000147	0	0.00E+00	0	0	0	0.000615	0	0	0.001349	0	0	1.39E-06	0	0	9.28E-05	0	0	2.8E-06	3.82E-06	9.69E-05	0	0	1.12E-05	1.09E-05	0.421954	0	0	6.81E-06	0	0.00E+00	6.65E-05	0	0	4.34E-06	
		Electricity		8.29%		Electricity	10.43%		Electricity	9.27%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00024	9.26E-05	0	0	0	0.00E+00	0	0	0.00E+00	0	0	0	0	0	0
		Plug-in Hybrid		5.01%		Plug-in Hybrid	6.49%		Plug-in Hyt	4.34%	0.000175	0	6.69E-03	0.019142	0.001561	0.001361	0.00012	0	6.11E-03	0.019142	0.001561	0.001361	0.000215	0	0.004117	0.014866	0	0.052171	3.92E-05	0	1.73E-05	6.26E-05	0	7.03E-05	0.000149	7.04E-05	6.81E-05	0	7.65E-05	0.000597	0.000201	9.138055	0	2.688241	4.74E-05	0	1.22E-03	5.71E-05	0	0.00091	0.000947	
		Fuel Cell Electric Vehic		0.01%		Fuel Cell Electric Vehic	0.02%		Fuel Cell E	0.01%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.79E-07	1.45E-07	0	0	0	0.00E+00	0	0	0.00E+00	0	0
											0.036732	0	0.274604	1.859039	0.184434	0.231913	0.028327	0	0.250847	1.859039	0.184434	0.231913	0.053314	0	0.165019	2.065789	0	2.822256	0.001165	0	0.000264	0.002456	0	0.00178	0.002051	0.002361	0.002663	0	0.001934	0.008203	0.006747	271.3925	0	62.5395	0.005987	0	0.043871	0.005244	0	0.015842	0.026054	
												0		6310895					0	6310895				0		0		0		0		0		0		0		0		0		0		0		0		0		
												0		0.423785					0	0.423785				0		0		0		0		0		0		0		0		0		0		0		0		
Los Angele	2026	LDT1	Aggregate	Aggregate	Gasoline	272982.7	7809301	7809301	0	1106898	0.109785	0	0.684513	3.983852	0.330211	0.670839	0.078528	0	0.625238	3.983852	0.330211	0.670839	0.264466	0	0.404758	4.02369	0	6.484554	0.001645	0	0.000385	0.00407	0	0.003119	0.002	0.003464	0.004421	0	0.00339	0.008	0.009898	383.1194	0	89.73511	0.017201	0	0.096285	0.017272	0	0.028624	0.034616	
Los Angele	2026	LDT1	Aggregate	Aggregate	Diesel	117.9735	2602.513	2602.513	0	317.8184	0.436956	0	0	0	0	0	0.383822	0	0	0	0	0	1.511389	0	0	2.092186	0	0	0.001605	0	0	0.297124	0	0	0	0.008	0.011046	488.378	0	0	0.017828	0	0	0.076971	0	0	0.0031	0	0	0.0031	
Los Angele	2026	LDT1	Aggregate	Aggregate	Electricity	15133.04	697779.1	0	697779.1	75101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092	0.002531	0	0	0	0	0	0	0	0	0
Los Angele	2026	LDT1	Aggregate	Aggregate	Plug-in Hyl	9905.566	467784.8	229603.2	241181.6	40340.24	0.002894	0	0.163806	0.275812	0.024321	0.022387	0.001984	0	0.149612	0.275812	0.024321	0.022387	0.003564	0	0.102255	0.246372	0	1.280986	0.00065	0	0.000297	0.00084	0	0.001281	0.0023	0.001087	0.000914	0	0.001393	0.0092	0.003106	151.4163	0	69.11941	0.000786	0	0.029561	0.000947	0	0.0186	0.015986	
										1222657																																								
			Population	298139.3		Total HHDT VMT	8977468		Total Trips	1222657																																									
		Vehicle				Miles			Trip																																										
		Gasoline		91.56%		Gasoline	86.99%		Gasoline	90.53%	0.095499	0	6.20E-01	3.6477	0.298947	0.607325	0.06831	0	5.66E-01	3.6477	0.298947	0.607325	0.230053	0	0.366436	3.500119	0	5.870605	0.001431	0	0.000335	0.00354	0	0.002823	0.00174	0.003014	0.003846	0	0.003069	0.006959	0.00861	333.2671	0	81.23911	0.014963	0	8.72E-02	0.015025	0	0.025914	0.030112	
		Diesel		0.04%		Diesel	0.03%		Diesel	0.03%	0.000127	0	0.00E+00	0	0	0	0.000111	0	0.00E+00	0	0	0	0.000438	0	0	0.000607	0	0	4.65E-07	0	0	8.61E-05	0	0	5.8E-07	1.12E-06	9E-05	0	0	2.32E-06	3.2E-06	0.141578	0	0	5.17E-06	0	0.00E+00	2.23E-05	0	0	8.99E-07	
		Electricity		5.08%		Electricity	7.77%		Electricity	6.14%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000179	6.88E-05	0	0	0	0.00E+00	0	0	0.00E+00	0	0	0	0	0	0
		Plug-in Hybrid		3.32%		Plug-in Hybrid	5.21%		Plug-in Hyt	3.30%	0.000151	0	5.40E-03	0.009164	0.000802	0.000739	0.000103	0	4.94E-03	0.009164	0.000802	0.000739	0.000186	0	0.003374	0.012838	0	0.042265	3.39E-05	0	1.55E-05	4.38E-05	0	4.23E-05	0.00012	5.67E-05	4.76E-05	0	4.6E-05	0.000479	0.000162	7.889778	0	2.280519	4.09E-05	0	9.75E-04	4.93E-05	0	0.000614	0.000833	
											0.095777	0	0.625109	3.656864	0.29975	0.608063	0.068525	0	0.570978	3.656864	0.29975	0.608063	0.230677	0	0.36981	3.513564	0	5.91287	0.001465	0	0.000351	0.00367	0	0.002866	0.002039	0.00314	0.003983	0	0.003115	0.008156	0.008972	341.2985	0	83.51963	0.015009	0	0.088144	0.015096	0	0.026528	0.030945	
												0		1090255					0	1090255				0		0		0		0		0		0		0		0		0		0		0		0		
												0		0.891709					0	0.891709				0		0		0		0		0		0		0		0		0		0		0		0		
Los Angele	2026	LDT2	Aggregate	Aggregate	Gasoline	1560649	54295985	54295985	0	7511761	0.034057	0	0.341199	1.711665	0.113188	0.243238	0.02444	0	0.311647	1.711665	0.113188	0.243238	0.080177	0	0.256319	2.412962	0	3.320761	0.001621	0	0.00036	0.002488	0	0.001825	0.002	0.00322	0.002705	0	0.001984	0.008	0.009201	377.5853	0	83.92646	0.006287	0	0.053502	0.007036	0	0.020022	0.031472	
Los Angele	2026	LDT2	Aggregate	Aggregate	Diesel	2703.519	92706.6	92706.6	0	13159.03	0.041774	0	0	0	0	0	0.036694	0	0	0	0	0	0.077259	0	0	0.333646	0	0	0.00119	0	0	0.009799	0	0	0	0.008	0.009317	362.1532	0	0	0.001704	0	0	0.057077	0	0	0.0031	0	0	0.0031	
Los Angele	2026	LDT2	Aggregate	Aggregate	Electricity	8259.685	376058.4	0	376058.4	43687.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092	0.002531	0	0	0	0	0	0	0	0	0
Los Angele	2026	LDT2	Aggregate	Aggregate	Plug-in Hyl	99946.9	4622422	2273214	2349208	425641.1	0.002938	0	0.165367	0.283111	0.023322	0.023085	0.002014	0	0.151038	0.283111	0.023322	0.023085	0.003618	0	0.103453	0.2501	0	1.293725	0.00066	0	0.000315	0.000877	0	0.001323	0.0023	0.001089	0.000954	0	0.001439	0.0092	0.003111	153.7146	0	73.3722	0.000797	0	0.029811	0.000961	0	0.020607	0.016228	
										7994248																																								
			Population	1671559		Total HHDT VMT	59387171		Total Trips	7994248																																									
		Vehicle				Miles			Trip																																										
		Gasoline		93.36%		Gasoline	91.43%		Gasoline	93.96%	0.031137	0	3.21E-01	1.598094	0.106357	0.228557	0.022345	0	2.93E-01	1.598094	0.106357	0.228557	0.073303	0	0.240849	2.206092	0	3.120338	0.001482	0	0.000329	0.002275	0	0.001715	0.001829	0.002944	0.002473	0	0.001864	0.007314	0.008412	345.2154	0	78.86113	0.005748	0	5.03E-02	0.006433	0	0.018813	0.028774	
		Diesel		0.16%		Diesel	0.16%		Diesel	0.16%	6.52E-05	0	0.00E+00	0	0	0	5.73E-05	0	0.00E+00	0	0	0	0.000121	0	0	0.000552	0	0	1.66E-06	0	0	1.53E-05	0	0	3.12E-06	5.09E-06	1.6E-05	0	0	1.25E-05	1.45E-05	0.565341	0	0	2.66E-06	0	0.00E+00	8.91E-05	0	0	4.84E-06	
		Electricity		0.49%		Electricity	0.63%		Electricity	0.55%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.46E-05	5.61E-06	0	0	0	0.00E+00	0	0	0.00E+00	0	0	0	0	0	0
		Plug-in Hybrid		5.98%		Plug-in Hybrid	7.78%		Plug-in Hyt	5.32%	0.000229	0	8.80E-03	0.016928	0.001242	0.001229	0.000157	0	8.04E-03	0.016928	0.001242	0.001229	0.000282	0	0.005508	0.019467	0	0.068882	5.14E-05	0	2.45E-05	6.83E-05	0	7.04E-05	0.000179	8.48E-05	7.43E-05	0	7.66E-05	0.000716	0.000242	11.96443	0	3.906586	6.21E-05	0	1.59E-03	7.48E-05	0	0.001097	0.001263	
											0.031431	0	0.329411	1.615022	0.107599	0.229786	0.022559	0	0.30088	1.615022	0.107599	0.229786	0.073706	0	0.246357	2.226111	0	3.189221	0.001535	0	0.000354	0.002359	0	0.001785	0.002025	0.00304	0.002563	0	0.001941	0.008101	0.008685	357.7452	0	82.76772	0.005813	0	0.05186	0.006597	0	0.019911	0.030042	
												0		2699604					0	2699604				0		0		0		0		0		0		0		0		0		0		0		0		
												0		0.337693					0	0.337693				0		0		0		0		0		0		0		0		0		0		0		0		
Los Angele	2026	LHDT1	Aggregate	Aggregate	Gasoline	115818.1	3885776	3885776	0	1662872	0.043173	0.568823	0.196131	3.022734	0.049979	0.283003	0.029587	0.389819	0.179136	3.022734	0.049979	0.283003	0.178843	0.034018	0.579245	1.362647	3.621179	2.382786	0.002624	0.000485	0.000106	0.001139	0	0.00028	0.002	0.0273	0.001239	0	0.000305	0.008	0.078	611.1111	113.0655	24.67403	0.006837	0.051526	0.034435	0.013894	0.001849	0.040289	0.044936	
Los Angele	2026	LHDT1	Aggregate	Aggregate	Diesel	46075.94	1646116	1646116	0	58535.8	0.098203	0.120418	0	0	0	0	0.098261	0.105775	0	0	0	0	1.25682	1.851751	0	0.356622	0.876717	0	0.001605	0.000406	0	0.021044	0.025961	0	0.003	0.0273	0.021996	0.027135	0	0.012	0.078	488.5137	123.5434	0	0.004007	0.004913	0	0.076992	0	0	0.182847	
Los Angele	2026	LHDT1	Aggregate	Aggregate	Electricity	856.811	47356.84	0	47356.84	11311.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0
										2232719																																							
			Population	162750.9		Total HHDT VMT	5579250		Total Trips	2232719																																									
		Vehicle				Miles			Trip																																										
		Gasoline		71.16%		Gasoline	69.65%		Gasoline	74.48%	0.030069	0.40479	0.146073	2.151063	0.037223	0.210774	0.020606	0.277406	1.33E-01	2.151063	0.037223	0.210774	0.124558	0.024209	0.431407	0.949042	2.576934	1.774638	0.001827	0.000345	7.38E-05	0.000793	0	2.09E-04	0.001393	0.019014	0.000863	0	0.000227	0.005572	0.054325	425.6202	78.74665	18.37659	0.004762	0.036667	2.56E-02	0.009677	0.001316	0.030006	0.031296	
		Diesel		28.31%		Diesel	29.50%		Diesel	25.02%	0.028974	0.034091	0.000000	0	0	0	0.025451	0.029946	0.00E+00	0	0	0	0.370816	0.524244	0	0.105219	0.248205	0	0.000474	0.000115	0	0.006209	0.00735	0	0.000885	0.008055	0.00649	0.007682	0	0.003541	0.023013	144.1324	36.45057	0	0.001182	0.001391	0.00E+00	0.022716	0	0	0.053948	
		Electricity		0.53%		Electricity	0.85%		Electricity	0.51%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7E-05	0.000116	0	0	0	6.79E-05	0.000331	0	0	0.00E+00	0	0	0	0	0
											0.059043	0.438881	0.146073	2.151063	0.037223	0.210774	0.046057	0.307352	0.133416	2.151063	0.037223	0.210774	0.495374	0.548453	0.431407	1.054261	2.825138	1.774638	0.002301	0.00046	7.38E-05	0.007002

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Sheet 9: Emission Factors from EMFAC2025 (v1.1.0) Emission Rates for Los Angeles (SC) Sub-Area Annual 2026

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_DIURN	TOG_HOTSOA	TOG_RUNLO	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_DIURN	ROG_HOTSOA	ROG_RUNLO	NOx_RUNEX	NOx_IDLEX	NOx_STREX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMBW	PM2.5_PMTW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMBW	PM10_PMTW	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	NH3_RUNEX
Los Angeles	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84498	4946.763	4946.763	0	1717.584	1.3502269	0	5.35E-05	7.33179686	0.01976769	0.87123	0.9253215	0	4.89E-05	7.33179686	0.01976769	0.87123	7.7922068	0	0.3332386	65.3290733	0	5.033833	0.0092854	0	0.0001399	0.00173454	0	0.0012864	0	0.0001345	0.02	0.0975507	2162.807643	0	55.8807077	0.1686662	0	1.15E-05	0.2222171	0	0.0113287	0.5467251	0
Los Angeles	2026	HHDT	Aggregate	Aggregate	Diesel	43166.22	9635365	9635365	0	713925	0.1545595	7.17855741	0	0	0	0	0.61235	6.3595485	0	0	0	0	1.9668523	37.9490795	2.2547534	0.0691987	92.34817616	0	0.0045509	0.04928526	0	0.0030769	0.01907718	0.02395216	0	0.0088394	0.0391751	0.0142234	0.02294267	0	0.0353577	0.0955003	1907.67773	14995.4769	0	0.0055736	0.2928612299	0	0.3642826	0	0.2168758
Los Angeles	2026	HHDT	Aggregate	Aggregate	Electricity	477.1548	47414.86	0	47414.86	5330.531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angeles	2026	HHDT	Aggregate	Aggregate	Natural Ga	4736.761	38382.5	38382.5	0	36077.09	1.4650165	26.44725205	0	0	0	0	0.0265102	0.3702815129	0	0	0	0	0.7132732	10.80364583	0	7.62393169	77.7990769	0	0	0	0	0	0.001269176	0.02664258	0	0.009	0.0475252	0.0014021	0.028327582	0	0.038	0.1145578	1131.220988	8670.334811	0	2.62859067	38.84839873	0	0.3792482	0	0.8631663
Los Angeles	2026	HHDT	Aggregate	Aggregate	Fuel Cell	11.82775	1334.67	0	1334.67	551.8647	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population	48467.03	Total HHDT VMT	6053564	Total Trips	756212.1
Vehicle%		Miles%		Trip%	
Gasoline	0.16%	Gasoline	0.07%	Gasoline	0.23%
Diesel	89.06%	Diesel	93.99%	Diesel	94.28%
Electricity	0.98%	Electricity	0.78%	Electricity	0.70%
Natural Gas	9.75%	Natural Gas	6.04%	Natural Ga	4.77%
Fuel Cell Electric Vehic	0.02%	Fuel Cell Electric Vehic	0.02%	Fuel Cell El	0.02%

						0.10241672	8.97565821	0.00000012	0.01296608	0.00022387	0.00197882	0.01335337	5.65211864	0.00000011	0.01296608	0.00022387	0.00197882	0.01335337	0.36225479	0.00063230		2.23374183		1.75773448		0.60144377		0.00148668				674.53884819			0.25054300		0.00000000														
							434879.38549898		629.39666217				273041.36260193		629.39666217				168192.61199759		435490.94975422		1666.05755567		1078.62779384		1124.24866559			661136976.30563100			190269.55525276		0.00000000														
									0.57537594		0.00083230				0.00083230				0.36225479		0.00063230		2.23374183		1.75773448		0.60144377		0.00148668			674.53884819			0.25054300		0.00000000														

Los Angeles	2026	LDA	Aggregate	Aggregate	Gasoline	2936490	86723722	86723722	0	1283924	0.04382653	0.00000000	0.36544358	2.12567823	0.21328394	0.26262694	0.03374366	0.00000000	0.27719171	2.12507823	0.21328394	0.26262694	0.06459453	0.00000000	0.18360206	2.62206290	0.00000000	3.10835869	0.00137869	0.00000000	0.00029723	0.00277482	0.00000000	0.00196317	0.00000000	0.00266416	0.00301196	0.00756045	321.13122377	0.00000000	69.23121916	0.00716425	0.00000000	0.04848370	0.06262689	0.00000000	0.01712366	0.03277142
Los Angeles	2026	LDA	Aggregate	Aggregate	Diesel	6241.251	146256.6	146256.6	0	26401.76	0.11938193	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00488269	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.44881917	0.00000000	0.00000000	0.00000000	0.96401383	0.00000000	0.00099149	0.00000000	0.00000000	0.00022579	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Los Angeles	2026	LDA	Aggregate	Aggregate	Electricity	281465	10968466	0	10968466	1283216	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000

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Sheet 10: Emission Factors from EMFAC2025 (v2.1.0) Emission Rates for Los Angeles (SC) Sub-Area Summer 2045

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	TOG RUNE	TOG IDLE	TOG STRE	TOG DIUR	TOG HOTS	TOG RUNI	ROG RUNI	ROG IDLE	ROG STRE	ROG DIUR	ROG HOTS	ROG RUNI	NOx_RUNEX	NOx_IDLEX	NOx_STREX	CO RUNEX	CO_IDLEX	CO STREX	SOx RUNE	SOx IDLEX	SOx STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5 PM	PM2.5 PM	PM10 RUN	PM10 IDLI	PM10 STR	PM10 PMT	PM10 PME	CO2 RUNI	CO2 IDLE	CO2 STRE	CH4 RUNI	CH4 IDLE	CH4 STRE	N2O RUNE	N2O IDLE	N2O STRE	NH3_RUNEX
Los Angele	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.5124	694.5124	0	710.558	0.915405	0	9.30E-06	6.343448	0.051221	0.531325	0.627334	0	6.50E-06	6.343448	0.051221	0.531325	3.922901405	0	0.012541576	34.52801	0	2.468058	0.008823	0	0.000217	0.000688784	0	0.000271345	0.005	0.033368	0.00075	0	0.095337	2055.133	0	50.47294	0.124652	0	2.05E-06	0.14683	0	0.000568	0.045
Los Angele	2045	HHDT	Aggregate	Aggregate	Diesel	64930.25	9302178	9302178	0	1149776	0.011252	8.439498	0	0	0	0	0.009884	7.413318	0	0	0	0	0.391269033	10.64877605	0.852803554	0.045902	102.0215	0	0.004239	0.04378	0	0.011718395	0.014530994	0	0.008859	0.030096	0.012248	0.015187	0	0.035434	0.085988	1290.924	13331.97	0	0.000459	0.344329	0	0.399988	0	0	0.219992
Los Angele	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164863	0	164863	19024.99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008994	0.015871	0	0	0	0	0.035977	0.045344	0	0	0	0	0	0	0	0
Los Angele	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.631	392455.1	392455.1	0	40217.98	0.684701	24.29879	0	0	0	0	0.009586	0.340183	0	0	0	0	0.326550465	10.07089825	0	4.356102	89.27726	0	0	0	0	0.001493802	0.038265929	0	0.0069	0.045532	0.001625	0.041617	0	0.036	0.13009	934.3374	9247.799	0	0.680186	23.92008	0	0.399959	0	0	0.894794
Los Angele	2045	HHDT	Aggregate	Aggregate	Fuel Cell E	396.6577	35302.17	0	35302.17	4259.316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008907	0.01565	0	0	0	0	0.035868	0.044715	0	0	0	0	0	0	0	0
										1213989																																								
		Poopulation	72099.12		Total HHDT VMT	9895493			Total Trips	1213989																																										
		Vehicle			Miles				Trip																																										
		Gasoline	0.05%		Gasoline	0.06%	6.42E-05	0	5.45E-09	0.003125	3E-05	0.000311	4.4E-05	0	4.97E-09	0.003125	3E-05	0.000311	0.000254251	0	7.34069E-06	0.002423	0	0.001445	6.19E-07	0	1.52E-08	4.84123E-08	0	1.58762E-07	3.51E-07	2.34E-06	5.27E-08	0	1.73E-07	1.4E-06	6.69E-06	0.144239	0	0.029542	8.75E-06	0	1.20E-09	1.03E-05	0	3.32E-07	3.16E-06		
		Diesel	90.06%		Diesel	94.70%	0.010577	7.600353	0.00E+00	0	0	0	0.000291	6.676207	0.00E+00	0	0	0	0.00E+00	0	0	0	0.367080929	9.589962625	0.807695293	0.04315	91.87744	0	0.003985	0.039427	0	0.011015783	0.013085356	0	0.008327	0.028291	0.011514	0.013677	0	0.033309	0.080832	1213.522	12532.61	0	0.000432	0.310093	0.00E+00	0.376003	0	0	0.206802		
		Electricity	3.31%		Electricity	1.67%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00015	0.000264	0	0	0	0.000599	0.000755	0	0	0	0.00E+00	0	0	0.00E+00	0	0
		Natural Gas	6.03%		Natural Gas	3.97%	0.027155	1.465572	0.00E+00	0	0	0	0.00038	0.026518	0.00E+00	0	0	0	0.00E+00	0	0	0	0.012950987	0.607422378	0	0.172763	5.384724	0	0	0	0	0.000357	0.001806	6.44E-05	0.00251	0	0.001428	0.005159	37.05581	366.7676	0	0.026976	1.442731	0.00E+00	0.015862	0	0	0.035488		
		Fuel Cell Electric Vehic	0.55%		Fuel Cell Electric Vehic	0.36%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	3.21E-05	5.58E-05	0	0	0	0.000128	0.00016	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
							0.037797	9.065925	5.45E-09	0.003125	3E-05	0.000311	0.000715	6.696725	4.97E-09	0.003125	3E-05	0.000311	0.381014528	10.197385	0.807702634	0.218336	97.26217	0.001445	0.003986	0.039427	1.52E-08	0.011075075	0.015393333	1.58762E-07	0.008867	0.03042	0.011578	0.016187	1.73E-07	0.035466	0.086913	1250.722	12899.38	0.029542	0.027416	1.752823	1.2E-09	0.391876	0	3.32E-07	0.242293		
									653645.2		225.2793			483827.9		225.2793			735222.4489			7012516			2842.664			1109.845727									1167.079			9.3E+08			126377						
									0.538428		0.000186			0.39772		0.000186			0.60562522			5.776424			0.002342			0.000914214									0.000961			766.0972			0.104101						
Los Angele	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	41775385	41775385	0	6815193	0.013719	0	0.084247	2.041976	0.111462	0.222752	0.010171	0	0.076955	2.041976	0.111462	0.222752	0.017543515	0	0.04871384	2.243963	0	1.917967	0.001253	0	0.000248	0.001219339	0	0.000873964	0.002	0.002646	0.001325	0	0.00095	0.008	0.00756	291.8574	0	57.68237	0.003755	0	0.0163	0.002794	0	0.006776	0.032751		
Los Angele	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.817	5963.817	0	1179.636	0.042394	0	0	0	0	0	0.037239	0	0	0	0	0	0.214488262	0	0	0.686839	0	0	0	0.000876	0	0	0	0	0	0.002	0.002768	0.012504	0	0	0.008	0.007908	266.4442	0	0	0.00173	0	0	0.041993	0	0	0.0031		
Los Angele	2045	LDA	Aggregate	Aggregate	Electricity	894839.3	29528590	0	29528590	4428940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDA	Aggregate	Aggregate	Plug-in Hyb	432984.2	13305963	3052573	10253391	1107645	0.001415	0	0.07275	0.772499	0.060185	0.072701	0.00097	0	0.066446	0.772499	0.060185	0.072701	0.001468749	0	0.040946449	0.146322	0	0.508868	0.000329	0	0.000236	0.00024009	0	0.000770391	0.0023	0.001066	0.000261	0	0.000838	0.0092	0.003045	76.52085	0	54.95507	0.000382	0	0.014812	0.000407	0	0.012093	0.007565		
Los Angele	2045	LDA	Aggregate	Aggregate	Fuel Cell E	5389.461	171366.5	0	171366.5	25726.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0	0	0	0	0	0	0	0
										12278683																																							
		Poopulation	2863395		Total HHDT VMT	84787269			Total Trips	12278683																																										
		Vehicle			Miles				Trip																																										
		Gasoline	53.43%		Gasoline	49.27%	Gasoline	55.06%	0.00676	0	4.64E-02	1.091128	0.061366	0.122638	0.005011	0	4.24E-02	1.091128	0.061366	0.122638	0.008643834	0	0.026819833	1.105619	0	1.055954	0.000617	0	0.000122	0.000600778	0	0.000481168	0.000985	0.001304	0.000653	0	0.000523	0.003942	0.003725	143.8005	0	31.75753	0.001357	0	8.97E-03	0.001377	0	0.003731	0.016137		
		Diesel	0.01%		Diesel	0.01%	Diesel	0.01%	2.98E-06	0	0.00E+00	0	0	0	2.62E-06	0	0.00E+00	0	0	0	1.50868E-05	0	0	4.83E-05	0	0	6.16E-08	0	0	0	8.14175E-07	0	0	1.41E-07	1.95E-07	8.8E-07	0	0	5.63E-07	5.56E-07	0.018741	0	0	1.22E-07	0	0.00E+00	2.95E-06	0	0	2.18E-07		
		Electricity	31.25%		Electricity	34.83%	Electricity	35.78%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0.000801	0.00031	0	0	0	0.002204	0.000886	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
		Plug-in Hybrid	15.12%		Plug-in Hybrid	15.69%	Plug-in Hyb	8.95%	0.000222	0	6.51E-03	0.116812	0.005385	0.006505	0.000152	0	5.95E-03	0.116812	0.005385	0.006505	0.000230496	0	0.003963889	0.022963	0	0.045516	5.16E-05	0	3.7E-05	3.76782E-05	0	6.89346E-05	0.000361	0.000167	4.1E-05	0	7.5E-05	0.001444	0.000478	12.00869	0	4.91738	6E-05	0	1.33E-03	6.39E-05	0	0.001082	0.001187		
		Fuel Cell Electric Vehic	0.18%		Fuel Cell Electric Vehic	0.20%	Fuel Cell E	0.21%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.65E-06	1.8E-06	0	0	0	1.86E-05	5.14E-06	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
							0.006985	0	0.052892	1.20794	0.066752	0.129144	0.005196	0	0.048314	1.20794	0.066752	0.129144	0.008889417	0	0.030483721	1.12863	0	1.101469	0.000669	0	0.000159	0.000639298	0	0.000550103	0.002152	0.001783	0.000695	0	0.000598	0.008609	0.005094	155.828	0	36.67491	0.001417	0	0.0103	0.001444	0	0.004813	0.017324		
									0	3458810				0		3458810				0			0			0			0									0			0			0						
									0	0.279417				0		0.279417				0			0			0			0									0			0			0						
Los Angele	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511	3312511	0	532860	0.019646	0	0.134736	3.216393	0.158588	0.430823	0.014231	0	0.123069	3.216393	0.158588	0.430823	0.031341992	0	0.096553062	2.70187	0	2.249349	0.001494	0	0.0003	0.00160133	0	0.001152867	0.002	0.003461	0.00174	0	0.001253	0.008	0.009889	348.0944	0	69.80189	0.003877	0	0.024023	0.004	0	0.009875	0.03194		
Los Angele	2045	LDT1	Aggregate	Aggregate	Diesel	0.380451	7.653894	7.653894	0	1.033222	0.121274	0	0	0	0	0	0.106527	0	0	0	0	0	1.570022192	0	0	1.234337	0	0	0	0.002021	0	0	0	0	0	0.002	0.003898	0.065058	0	0	0.008	0.011046	615.1553	0	0	0.004948	0	0	0.096951	0	0	0.0031		
Los Angele	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880202	0	2880202	421540.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Plug-in Hyb	37496.06	1199845	342504	857341	104226	0.001761	0	0.086057	0.933165	0.060631	0.109147	0.001207	0	0.0786	0.933165	0.060631	0.109147	0.001827547	0	0.061258394	0.181822	0	0.613332	0.000409	0	0.000276	0.000304102	0	0.000767996	0.0023	0.001074	0.000331	0	0.000868	0.0092	0.003069	95.17676	0	64.17698	0.000476	0	0.016999	0.000506	0	0.013053	0.00942		
Los Angele	2045	LDT1	Aggregate	Aggregate	Fuel Cell E	948.8189	33819.89	0	33819.89	4876.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002545	0	0	0	0	0	0	0	0	0
										1063528																																							
		Poopulation	246349.8		Total HHDT VMT	7426386			Total Trips	1063528																																										
		Vehicle			Miles				Trip																																										
		Gasoline	50.62%		Gasoline	44.60%	Gasoline	50.11%	0.008763	0	6.75E-02	1.62798	0.079462	0.215868	0.006348	0	6.17E-02	1.62798	0.079462	0.215868	0.013979978	0	0.045372396	1.205159	0	1.127056	0.000667	0	0.000134	0.000714267	0	0.000577654	0.000892	0.001544	0.000776	0	0.000628	0.003568	0.004411	155.2662	0	34.97484	0.001729	0	1.20E-02	0.001784	0	0.004948	0.014247		
		Diesel	0.00%		Diesel	0.00%	Diesel	0.00%	1.25E-07	0	0.00E+00	0	0	0	1.1E-07	0	0.00E+00	0	0	0	1.61812E-06	0	0	1.27E-06	0	0	2.08E-09	0	0	0	6.41055E-08	0	0	2.06E-09	3.98E-09	6.71E-08	0	0	8.25E-09	1.14E-08	0.000634	0	0	5.1E-09	0	0.00E+00	9.99E-08	0	0	3.19E-09		
		Electricity	33.78%		Electricity	38.78%	Electricity	39.64%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0.000892	0.000348	0	0	0	0.003568	0.000988	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
		Plug-in Hybrid	15.22%		Plug-in Hybrid	16.16%	Plug-in Hyb	9.80%	0.000284	0	8.43E-03	0.140234	0.005942	0.010696	0.000195	0	7.70E-03	0.140234	0.005942	0.010696	0.000295268	0	0.005023335	0.029376	0	0.060107	6.6E-05	0	4.45E-05	4.91322E-05	0	7.82038E-05	0.000372	0.000174	5.34E-05	0	8.51E-05	0.001486	0.000496	15.37828	0	6.289359	7.69E-05	0	1.67E-03	8.18E-05	0	0.001279	0.001522		
		Fuel Cell Electric Vehic	0.39%		Fuel Cell Electric Vehic	0.46%	Fuel Cell E	0.46%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.05E-05	4.06E-06	0	0	0	4.19E-05	1.16E-05	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
							0.009048	0	0.075944	1.770014	0.085404	0.226564	0.006543	0	0.069368	1.770014	0.085404	0.226564	0.014276864	0	0.050395731	1.234536	0	1.187163	0.000733	0	0.000178	0.000763463	0	0.000655858	0.002166	0.002067	0.00083	0	0.000713	0.008865	0.005906	170.6431	0	41.2642	0.001806	0	0.013703	0.001866	0	0.006227	0.015769		
									0	436642.5				0		436642.5				0			0			0			0									0			0			0						
									0	0.409896				0		0.409896				0			0			0			0									0			0			0						
Los Angele	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510	44059510	0	6499926	0.011927	0	0.119756	1.405093	0.058475	0.198859	0.008308	0	0.10938	1.405093	0.058475	0.198859	0.016951989	0	0.062017195	2.363781	0	1.985101	0.001484	0	0.000299	0.001124357	0	0.00082101	0.002	0.003328	0.001223	0	0.000893	0.008	0.009371	345.5576	0	69.6625	0.002814	0	0.022617	0.002994	0	0.008094	0.032818		
Los Angele	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74848.47	74848.47	0	10766.89	0.03405	0	0	0	0	0	0.02091	0	0	0	0	0	0.038073488	0	0	0.312709	0	0	0	0.001029	0	0	0	0	0	0.002	0.003257	0.004847	0	0	0.008	0.009304	313.1617	0	0	0.001389	0	0	0.049356	0	0	0.0031		
Los Angele	2045	LDT2	Aggregate	Aggregate	Electricity	128805.1	4669381	0	4669381	634707	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Plug-in Hyb	385281.9	13204349	3593086	9611263	1012671	0.001678	0	0.077485	0.720334	0.055359	0.077055	0.00115	0	0.070771	0.720334	0.055359	0.077055	0.001742122	0	0.044616358	0.173794	0	0.545917	0.00039	0	0.000288	0.000278586	0	0.000759051	0.0023	0.001007	0.000303	0	0.000826	0.0092	0.003058	90.80542	0	67.04552	0.000454	0	0.01559	0.000483	0	0.013808	0.00898		
Los Angele	2045	LDT2	Aggregate	Aggregate	Fuel Cell E	4763.076	173522.8	0	173522.8	25535.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002542	0	0	0	0	0	0	0	0	0
										8181637																																							
		Poopulation	1933733		Total HHDT VMT	62180812			Total Trips	8181637																																										
		Vehicle			Miles				Trip																																										
		Gasoline	73.05%		Gasoline	70.86%	Gasoline	79.45%	0.008451	0	9.51E-02	1.026405	0.046456	0.157984	0.005887	0	8.69E-02	1.026405	0.046456	0.157984	0.012011685	0	0.049269751	1.674906	0	1.577069	0.001051	0	0.000212	0.000796686	0	0.000652254	0.001417	0.002324	0.000866	0	0.000709	0.005669	0.00664	244.852	0	55.34358	0.001994	0	1.80E-02	0.002121	0	0.00643	0.023254		
		Diesel	0.12%		Diesel	0.13%	4.05E-05	0	0.00E+00	0	0	0	3.56E-05	0	0.00E+00	0	0	0	0.00E+00	0	0	0	4.53389E-05	0	0	0.000372	0	0	1.23E-06	0	0	5.52265E-06	0	0	2.38E-06	3.88E-06	5.77E-06	0	0	9.53E-06	1.11E-05	0.372931	0	0	1.65E-06	0	0.00E+00	5.88E-05	0	0	3.69E-06		
		Electricity	6.66%		Electricity	7.51%	Electricity	7.76%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0.000173	6.68E-05	0	0	0	0.000891	0.000191	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
		Plug-in Hybrid	19.92%		Plug-in Hybrid	21.24%	Plug-in Hyb	12.38%	0.000356	0	9.59E-03	0.143521	0.006852	0.009537	0.000244	0	8.76E-03	0.143521	0.006852	0.009537	0.000369947	0	0.005522331	0.036906	0	0.06757	8.28E-05	0	6.11E-05	5.91588E-05	0	9.39506E-05	0.000488	0.000227	6.43E-05	0	0.000102	0.001954	0.000649	19.2829	0	8.298471	9.63E-05	0	1.93E-03	0.000103	0	0.001709	0.001907		
		Fuel Cell Electric Vehic	0.25%		Fuel Cell Electric Vehic	0.28%	Fuel Cell E	0.29%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.42E-06	2.48E-06	0	0	0	2.57E-05	7.1E-06	0	0	0	0.00E+00	0	0	0.00E+00	0	0			
							0.008848	0	0.104731	1.169926	0.053308	0.167522	0.006167	0	0.095657	1.169926	0.053308	0.167522	0.012426971	0	0.054792082	1.712184	0	1.644639	0.001135	0	0.000273	0.000861368	0	0.000746204	0.002087	0.002624	0.000936	0	0.000811	0.008348	0.007498	264.5078	0	63.64206	0.002092	0	0.019898	0.002283	0	0.008139	0.025164		
									0	2262325				0		2262325				0			0			0			0									0			0			0						
									0	0.276512				0		0.276512				0			0			0			0									0			0			0						
Los Angele	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479677	3479677	0	1633691	0.007838	0.469722	0.159857	2.051659	0.020669	0.179563	0.005371	0.280786	0.146605	2.051659	0.020669	0.179563	0.051691816	0.024447318	0.330972033	0.954309	3.755318	1.627172	0.002116	0.00044	8.82E-05	0.000975849	0	9.80E-05	0.002	0.0273	0.001061	0	0.000107	0.008	0.078	492.7867	102.5962	20.54603	0.002057	0.038084	0.029121	0.007521	0.001484	0.027689	0.045	
Los Angele	2045	LHDT1	Aggregate	Aggregate	Diesel	63326.98	2053719	2053719	0	791067.6	0.037275	0.134092	0	0	0	0	0.033743	0.109003	0	0	0	0	0.23045132	1.181656167	0	0.242229	0.903471	0	0.001468	0.000359	0	0.011181567	0.026165099	0	0.003	0.0273	0.011667	0.027348	0	0.012	0.078	446.8765	109.1258	0	0.001521	0.005063	0	0.07043	0	0	0.216246		
Los Angele	2045	LHDT1	Aggregate	Aggregate	Electricity	9796.951	343816.6	0	343816.6	133279.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0
Los Angele	2045	LHDT1	Aggregate	Aggregate	Fuel Cell E	1034.182	37109.68	0	37109.68	14069.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008

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Sheet 11: Emission Factors from EMFAC2025 (v2.1.0) Emission Rates for Los Angeles (SC) Sub-Area Winter 2045

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_DIUR	TOG_HOTS	TOG_RUNI	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_DIUR	ROG_HOTS	ROG_RUNI	NOx_RUNE	NOx_IDLE	NOx_STRE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLE	SOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STI	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLI	PM10_STR	PM10_PM1	PM10_PMI	CO2_RUNI	CO2_IDLE	CO2_STRE	CH4_RUNI	CH4_IDLE	CH4_STRE	N2O_RUNI	N2O_IDLE	N2O_STRE	NH3_RUNEX
Los Angele	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.5124	694.5124	0	710.558	0.890468	0	9.77E-06	6.26040	0.046696	0.533318	0.610245	0	8.92E-06	6.26040	0.046696	0.533318	4.038863	0	0.013249	33.60665	0	2.624305	0.008817	0	0.000218	0.00069	0	0.000271	0.005	0.033368	0.00075	0	0.000295	0.02	0.095337	2053.601	0	50.72031	0.121712	0	2.13E-06	0.158398	0	0.00059	0.045
Los Angele	2045	HHDT	Aggregate	Aggregate	Diesel	64930.25	9302178	9302178	0	1149776	0.011252	7.306165	0	0	0	0	0.009884	6.41779	0	0	0	0	0.40591	11.9745	0.852804	0.045902	105.2045	0	0.004239	0.045167	0	0.011718	0.01887	0	0.008859	0.030096	0.012248	0.019723	0	0.035434	0.085988	1290.924	13754.16	0	0.000459	0.29809	0	0.399986	0	0	0.219992
Los Angele	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164863	0	164863	19024.99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008994	0.015871	0	0	0	0.035977	0.043344	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.631	392455.1	392455.1	0	40217.98	0.684701	24.29879	0	0	0	0	0.009586	0.340183	0	0	0	0	0.349872	10.0709	0	4.356102	89.27726	0	0	0	0	0.001494	0.038266	0	0.009	0.045532	0.001625	0.041617	0	0.036	0.13009	934.3374	9247.799	0	0.680186	23.92008	0	0.399959	0	0	0.894794
Los Angele	2045	HHDT	Aggregate	Aggregate	Fuel Cell E	396.6577	35302.17	0	35302.17	4259.316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008997	0.01565	0	0	0	0.035988	0.044715	0	0	0	0	0	0	0	0	0	0
										1213989																																							
					Population	72099.12		Total HHDT VMT		9895493		Total Trips	1213989																																									
					Vehicle			Miles				Trip																																								
					Gasoline	0.05%		Gasoline	0.01%		Gasoline	0.06%	6.25E-05	0	5.72E-09	0.003084	2.91E-05	0.000312	4.28E-05	0	5.22E-09	0.003084	2.91E-05	0.000312	0.000283	0	7.76E-06	0.002359	0	0.001536	6.19E-07	0	1.53E-08	4.84E-08	0	1.59E-07	3.51E-07	2.34E-06	5.27E-08	0	1.73E-07	1.4E-06	6.69E-06	0.144131	0	0.029687	8.54E-06	0	1.25E-09	1.11E-05	0	3.45E-07	3.16E-06
					Diesel	90.06%		Diesel	94.00%		Diesel	94.71%	0.010577	6.579708	0.00E+00	0	0	0	0.009291	5.779665	0.00E+00	0	0	0	0.381572	10.78386	0.807695	0.04315	94.74391	0	0.003985	0.040676	0	0.011016	0.016994	0	0.008327	0.028291	0.011514	0.017762	0	0.033309	0.080832	1213.522	12929.49	0	0.000432	0.26845	0.00E+00	0.376003	0	0	0.206802
					Electricity	3.31%		Electricity	1.67%		Electricity	1.57%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00015	0.000264	0	0	0	0.00E+00	0	0	0	0	0
					Natural Gas	6.03%		Natural Gas	3.97%		Natural Ga	3.31%	0.027155	1.465572	0.00E+00	0	0	0	0.00038	0.020518	0.00E+00	0	0	0	0.013876	0.607422	0	0.172763	5.384724	0	0	0	0	5.92E-05	0.002308	0	0.000357	0.001806	6.44E-05	0.00251	0	0.001428	0.005159	37.05581	366.7676	0	0.026976	1.442731	0.00E+00	0.015862	0	0	0.035488
					Fuel Cell Electric Vehic	0.55%		Fuel Cell Electric Vehic	0.36%		Fuel Cell E	0.35%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.21E-05	5.58E-05	0	0	0	0	0.00E+00	0	0	0	0
											0.037795	8.04528	5.72E-09	0.003084	2.91E-05	0.000312	0.009714	5.800183	5.22E-09	0.003084	2.91E-05	0.000312	0.395732	11.39129	0.807703	0.218271	100.1286	0.001536	0.003986	0.040676	1.53E-08	0.011075	0.019302	1.59E-07	0.008867	0.03042	0.011578	0.020272	1.73E-07	0.035466	0.086913	1250.722	13296.25	0.029687	0.027416	1.711181	1.25E-09	0.391877	0	3.45E-07	0.242293
												580057.6		222.3301				418188		222.3301				821301.6		7219186				2932.684		1391.623				1461.597				9.59E+08		123374.7								
												0.477811		0.000183				0.344474		0.000183				0.676531		5.946664				0.002416		0.001146				0.001204				789.6678		0.101627								
												0		0				0		0				0		0				0		0				0				0		0								
Los Angele	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	41775385	41775385	0	6815193	0.013719	0	0.096562	1.864412	0.10682	0.223463	0.010239	0	0.088204	1.864412	0.10682	0.223463	0.020121	0	0.053505	1.820966	0	2.306537	0.001178	0	0.00025	0.001219	0	0.000874	0.002	0.002646	0.001325	0	0.00095	0.008	0.00756	274.4557	0	58.33526	0.002721	0	0.01831	0.003076	0	0.007234	0.032751
Los Angele	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.817	5963.817	0	1179.636	0.042394	0	0	0	0	0	0.037239	0	0	0	0	0	0.222663	0	0	0.686839	0	0	0.000876	0	0	0.011963	0	0	0.002	0.002768	0.012504	0	0	0.008	0.007908	266.4442	0	0	0.00173	0	0.041993	0	0	0.0031
Los Angele	2045	LDA	Aggregate	Aggregate	Electricity	894839.3	29528590	0	29528590	4428940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDA	Aggregate	Aggregate	Plug-in Hyl	432984.2	13305963	3052573	10253391	1107645	0.001371	0	0.089005	0.728871	0.057937	0.072774	0.000939	0	0.081292	0.728871	0.057937	0.072774	0.001688	0	0.044889	0.11661	0	0.670582	0.000308	0	0.000237	0.00024	0	0.00077	0.0023	0.001066	0.000261	0	0.000838	0.0092	0.003045	71.69624	0	55.26119	0.000372	0	0.017604	0.000448	0	0.012911	0.007565
Los Angele	2045	LDA	Aggregate	Aggregate	Fuel Cell E	5189.461	171366.5	0	171366.5	25726.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0	0	0	0	0	0	0	0	0
										12378683																																							
					Population	2863395		Total HHDT VMT		84787269		Total Trips	12378683																																								
					Vehicle			Miles				Trip																																								
					Gasoline	53.43%		Gasoline	49.27%		Gasoline	55.06%	0.006759	0	5.32E-02	0.996247	0.058811	0.12303	0.005045	0	4.86E-02	0.996247	0.058811	0.12303	0.009914	0	0.029458	0.897205	0	1.269884	0.000581	0	0.000123	0.000601	0	0.000481	0.000985	0.001304	0.000653	0	0.000523	0.003942	0.003725	135.2266	0	32.11699	0.001341	0	1.01E-02	0.001516	0	0.003983	0.016137
					Diesel	0.01%		Diesel	0.01%		Diesel	0.01%	2.98E-06	0	0.00E+00	0	0	0	2.62E-06	0	0.00E+00	0	0	0	1.57E-05	0	0	4.83E-05	0	0	6.16E-08	0	0	8.41E-07	0	0	1.41E-07	1.95E-07	8.8E-07	0	0	5.63E-07	5.56E-07	0.018741	0	0	1.22E-07	0	0.00E+00	2.95E-06	0	0	2.18E-07
					Electricity	31.25%		Electricity	34.83%		Electricity	35.78%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000801	0.00031	0	0	0	0.003204	0.000886	0	0	0	0.00E+00	0	0	0	0
					Plug-in Hybrid	15.12%		Plug-in Hybrid	15.69%		Plug-in Hyt	8.95%	0.000215	0	7.96E-03	0.110215	0.005184	0.006512	0.000147	0	7.27E-03	0.110215	0.005184	0.006512	0.000265	0	0.004017	0.0183	0	0.060004	4.83E-05	0	3.72E-05	3.77E-05	0	6.89E-05	0.000361	0.000167	4.1E-05	0	7.5E-05	0.001444	0.000478	11.25154	0	4.944771	5.84E-05	0	1.58E-03	7.04E-05	0	0.001155	0.001187
					Fuel Cell Electric Vehic	0.18%		Fuel Cell Electric Vehic	0.20%		Fuel Cell E	0.21%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.65E-06	1.8E-06	0	0	0	1.86E-05	5.14E-06	0	0	0	0.00E+00	0	0	0	0
											0.006977	0	0.061127	1.106462	0.063995	0.129541	0.005195	0	0.055836	1.106462	0.063995	0.129541	0.010194	0	0.033474	0.915553	0	1.329888	0.000629	0	0.000161	0.000639	0	0.00055	0.002152	0.001783	0.000695	0	0.000598	0.008609	0.005094	146.4969	0	37.06176	0.001399	0	0.011656	0.001589	0	0.005138	0.017324
												0		3168237				0		3168237				0		0				0		0				0				0		0								
												0		0.255943				0		0.255943				0		0				0		0				0				0		0								
Los Angele	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511	3312511	0	532890	0.019468	0	0.154356	3.036876	0.152723	0.432708	0.014176	0	0.140991	3.036876	0.152723	0.432708	0.035971	0	0.099434	2.195881	0	2.710034	0.001416	0	0.000303	0.001601	0	0.001153	0.002	0.003461	0.00174	0	0.001253	0.008	0.009889	329.8701	0	70.59133	0.003814	0	0.026979	0.004404	0	0.010541	0.03194
Los Angele	2045	LDT1	Aggregate	Aggregate	Diesel	0.360451	7.653894	7.653894	0	1.033222	0.121274	0	0	0	0	0	0.106527	0	0	0	0	0	1.629837	0	0	1.234337	0	0	0.002021	0	0	0.062244	0	0	0.002	0.003866	0.065058	0	0	0.008	0.011046	615.1553	0	0	0.004948	0	0.096951	0	0	0.0031
Los Angele	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880202	0	2880202	421540.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002547	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Plug-in Hyl	37496.06	1199845	342504	857341	104226	0.001706	0	0.103863	0.89098	0.058469	0.109285	0.001169	0	0.094863	0.89098	0.058469	0.109285	0.0021	0	0.056284	0.145088	0	0.791832	0.000383	0	0.000277	0.000304	0	0.000798	0.0023	0.001074	0.000331	0	0.000868	0.0092	0.003069	89.20907	0	64.51411	0.000463	0	0.019979	0.000558	0	0.013942	0.00942
Los Angele	2045	LDT1	Aggregate	Aggregate	Fuel Cell E	948.8189	33819.89	0	33819.89	4870.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002545	0	0	0	0	0	0	0	0	0	0
										1063528																																							
					Population	246349.8		Total HHDT VMT		7426386		Total Trips	1063528																																							
					Vehicle			Miles				Trip																																								
					Gasoline	50.62%		Gasoline	44.60%		Gasoline	50.11%	0.008684	0	7.73E-02	1.537117	0.076523	0.216812	0.006323	0	7.06E-02	1.537117	0.076523	0.216812	0.016045	0	0.049822	0.979465	0	1.357886	0.000632	0	0.000135	0.000714	0	0.000578	0.000892	0.001544	0.000776	0	0.000628	0.003568	0.004411	147.1373	0	35.3704	0.001701	0	1.35E-02	0.001964	0	0.005282	0.014247
					Diesel	0.00%		Diesel	0.00%		Diesel	0.00%	1.25E-07	0	0.00E+00	0	0	0	1.1E-07	0	0.00E+00	0	0	0	1.68E-06	0	0	1.27E-06	0	0	2.08E-09	0	0	6.42E-08	0	0	2.06E-09	3.98E-09	6.71E-08	0	0	8.25E-09	1.14E-08	0.000634	0	0	5.1E-09	9.99E-08	0	0	3.19E-09
					Electricity	33.78%		Electricity	38.78%		Electricity	39.64%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000892	0.000346	0	0	0	0.003568	0.000988	0	0	0	0.00E+00	0	0	0	0
					Plug-in Hybrid	15.22%		Plug-in Hybrid	16.16%		Plug-in Hyt	9.80%	0.000276	0	1.02E-02	0.135613	0.00573	0.01071	0.000189	0	9.30E-03	0.135613	0.00573	0.01071	0.000339	0	0.005516	0.023441	0	0.0776	6.19E-05	0	4.47E-05	4.91E-05	0	7.82E-05	0.000372	0.000174	5.34E-05	0	8.51E-05	0.001486	0.000496	14.41308	0	6.322398	7.48E-05	0	1.96E-03	9.01E-05	0	0.001366	0.001522
					Fuel Cell Electric Vehic	0.39%		Fuel Cell Electric Vehic	0.46%		Fuel Cell E	0.46%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.05E-05	4.06E-06	0	0	0	4.19E-05	1.16E-05	0	0	0	0	0	0	0	0
											0.008959	0	0.08752	1.67273	0.082253	0.227522	0.006512	0	0.079942	1.67273	0.082253	0.227522	0.016386	0	0.055338	1.002907	0	1.435486	0.000694	0	0.00018	0.000763	0	0.000656	0.002166	0.002067	0.000833	0	0.000713	0.008665	0.005906	161.551	0	41.6928	0.001776	0	0.015476	0.002055	0	0.006648	0.015769
												0		412076.8				0		412076.8				0		0				0		0				0				0		0								
												0		0.387462				0		0.387462				0		0				0		0				0				0		0								
Los Angele	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510	44059510	0	6499926	0.011637	0	0.13713	1.335636	0.056331	0.1992	0.008121	0	0.125249	1.335636	0.056331	0.1992	0.01946	0	0.068128	1.913477	0	2.394631	0.001412	0	0.000302	0.001124	0	0.000821	0.002	0.00328	0.001223	0	0.000893	0.008	0.009371	328.878	0	70.36407	0.002747	0	0.025393	0.003296	0	0.008641	0.032818
Los Angele	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74048.47	74048.47	0	10796.89	0.03405	0	0	0	0	0	0.02991	0	0	0	0	0	0.039527	0	0	0.312709	0	0	0.001029	0	0	0.004638	0	0	0.002	0.003257	0.004847	0	0	0.008	0.009304	313.1617	0	0	0.001389	0	0.049356	0	0	0.0031
Los Angele	2045	LDT2	Aggregate	Aggregate	Electricity	128805.1	4669381	0	4669381	634707	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Plug-in Hyl	385281.9	13204349	3593086	9611263	1012671	0.001626	0	0.094293	0.67668	0.053245	0.07709	0.001114	0	0.086122	0.67668	0.053245	0.07709	0.002002	0	0.048944	0.138323	0	0.713734	0.000365	0	0.000289	0.000279	0	0.000759	0.0023	0.001107	0.000303	0	0.000826	0.0092	0.003058	85.04242	0	67.36268	0.000441	0	0.018449	0.000532	0	0.014748	0.00898
Los Angele	2045	LDT2	Aggregate	Aggregate	Fuel Cell E	4763.076	173522.8	0	173522.8	23535.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002542	0	0	0	0	0	0	0	0	0	0
										8181637																																							
					Population	1933733		Total HHDT VMT		62180812		Total Trips	8181637																																							
					Vehicle			Miles				Trip																																								
					Gasoline	73.05%		Gasoline	70.86%		Gasoline	79.45%	0.008246	0	1.09E-01	0.975667	0.044752	0.158255	0.005755	0	9.95E-02	0.975667	0.044752	0.158255	0.013789	0	0.054125	1.355834	0	1.902422	0.001	0	0.000214	0.000797	0	0.000652	0.001417	0.002324	0.000866	0	0.000709	0.005669	0.00664	233.0333	0	55.90095	0.001946	0	2.02E-02	0.002336	0	0.006865	0.023254
					Diesel	0.12%		Diesel	0.12%		Diesel	0.13%	4.05E-05	0	0.00E+00	0	0	0	3.56E-05	0	0.00E+00	0	0	0	4.71E-05	0	0	0.000372	0	0	1.23E-06	0	0	5.52E-06	0	0	2.38E-06	3.88E-06	5.77E-06	0	0	9.53E-06	1.11E-05	0.372931	0	0	1.65E-06	0	0.00E+00	5.88E-05	0	0	3.69E-06
					Electricity	6.66%		Electricity	7.51%		Electricity	7.76%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000691	0.000191	0	0	0	0.00E+00	0	0	0	0	0
					Plug-in Hybrid	19.92%		Plug-in Hybrid	21.24%		Plug-in Hyt	12.38%	0.000345	0	1.17E-02	0.134824	0.00659	0.009542	0.000237	0	1.07E-02	0.134824	0.00659	0.009542	0.000425	0	0.006058	0.029374	0	0.088341	7.75E-05	0	6.14E-05	5.92E-05	0	9.4E-05	0.000488	0.000227	6.43E-05	0	0.000102	0.001954	0.000649	18.0591	0	8.337727	9.37E-05	0	2.28E-03	0.000113	0	0.001825	0.001907
					Fuel Cell Electric Vehic	0.25%		Fuel Cell Electric Vehic	0.28%		Fuel Cell E	0.29%	0	0	0.00E+00	0	0	0	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.42E-06	2.48E-06	0	0	0	2.57E-05	7.1E-06	0	0	0	0.00E+00	0	0	0	0
											0.008631	0	0.120614	1.110491	0.051342	0.167796	0.006027	0	0.110164	1.110491	0.051342	0.167796	0.014261	0	0.060183	1.38558	0	1.990763	0.001079	0	0.000275	0.000861	0	0.000746	0.002087	0.002624	0.000936	0	0.000811	0.008348	0.007498	251.4654	0	64.23868	0.002042	0	0.022457	0.002507	0	0.008691	0.025164
												0		2147393				0		2147393				0		0				0		0				0				0		0								
												0		0.262465				0		0.262465				0		0				0		0				0				0		0								
Los Angele	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479677	3479677	0	1633691	0.007643	0.409722	0.167074	2.002303	0.020026	0.181532	0.005238	0.280786	0.152597	2.002303	0.020026	0.181532	0.057223	0.024447	0.348754	0.931738	3.755318	1.711351	0.002115	0.00044	8.89E-05	0.000976	0	9.80E-05	0.002	0.0273	0.001061	0	0.000107	0.008	0.078	492.7504	102.5962	20.7014	0.002013	0.038984	0.030193	0.008075	0.001484	0.028718	0.045
Los Angele	2045	LHDT1	Aggregate	Aggregate	Diesel	63325.98	2053719	2053719	0	791067.6	0.037275	0.124092	0	0	0	0	0.032

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Sheet 12: Emission Factors from EMFAC2025 (v1.1.0) Emission Rates for Los Angeles (SC) Sub-Area Annual 2045

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Miles Vehicle Trip TOG_RUNEX	Vehicle Trip TOG_IDLEX	Vehicle Trip TOG_STREX	Vehicle Trip TOG_DIURN	Trip TOG_HOTSOAK	Trip TOG_RUNLOSS	Miles ROG_RUNEX	Vehicle ROG_IDLEX	Trip ROG_STREX	Vehicle ROG_DIURN	Trip ROG_HOTSOAK	Trip ROG_RUNLOSS	Miles NOx_RUNEX	Vehicle NOx_IDLEX	Trip NOx_STREX	Miles CO_RUNEX	Vehicle CO_IDLEX	Trip CO_STREX	Miles SOx_RUNEX	Vehicle SOx_IDLEX	Trip SOx_STREX	Miles PM2.5_RUNEX	Vehicle PM2.5_IDLEX	Trip PM2.5_STREX	Miles PM10_RUNEX	Vehicle PM10_IDLEX	Trip PM10_STREX	Miles CO2_RUNEX	Vehicle CO2_IDLEX	Trip CO2_STREX	Miles CH4_RUNEX	Vehicle CH4_IDLEX	Trip CH4_STREX	Miles N2O_RUNEX	Vehicle N2O_IDLEX	Trip N2O_STREX	Miles NH3_RUNEX
Los Angele	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.514364	694.5124	0	710.558	0.885861378	0	9.68E-06	0.034329663	0.049854205	0.530978525	0.614922314	0	8.84E-06	0.034329663	0.049854205	0.530978525	0.614922314	0	0.01311345	3.814179656	0	2.55842773	0.09861693	0	0.000217576	0.000689784	0	0.000272145	0.005900691	0.020930006	0.095336762	0.085336792	0.253.941938	0	50.67334648	0.122363144	0	2.12E-06	0.001900023	0	0.000585382	0.045
Los Angele	2045	HHDT	Aggregate	Aggregate	Diesel	66930.25	3302177.766	9302178	0	1145776	0.011251985	7.96349842	0	0	0	0	0.098983766	6.96619629	0	0	0	0	0.641165922	11.20557961	0.852802554	0.945801872	193.3583499	0	0.004236038	0.044362567	0	0.013726395	0.034935746	0.034535761	0	0.008583512	0.033905746	0.012166346	0.017592161	0	0.035434549	0.085987645	1266.925577	13569.28847	0	0.000458077	0.324998747	0	0.398968559	0.219992295
Los Angele	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164963.6473	0	164963	19024.99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.613	39265.0968	39265.1	0	6027.98	0.484701439	24.39678619	0	0	0	0	0.009365582	0.346183607	0	0	0	0	0.360863198	10.07868625	0	0.356102118	89.27725901	0	0.001493602	0.038365629	0	0.000600303	0.045318168	0.001624646	0.041617363	0	0.000600303	0.110060395	934.3373777	9347.796059	0	0.048018524	23.92080366	0	0.396958911	0	0	0.894794452
Los Angele	2045	HHDT	Aggregate	Aggregate	Fuel Cell	396.6577	35302.16969	0	35302.17	4259.316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population 72099.12 Total HHDT VMT 9895482.592 Total Trips 1213569

Vehicle		Miles		Trip	
Gasoline	0.05%	Gasoline	0.01%	Gasoline	0.06%
Diesel	96.06%	Diesel	94.00%	Diesel	94.71%
Electricity	3.31%	Electricity	1.67%	Electricity	1.57%
Natural Gas	6.03%	Natural Gas	3.97%	Natural Ga	3.31%
Fuel Cell Electric Vehic	0.55%	Fuel Cell Electric Vehic	0.36%	Fuel Cell E	0.35%

							0.037795433	6.637254215	5.66812E-09	0.092972316	2.91810E-05	0.000310745	4.30951E-05	0	5.18E-09	0.002972316	2.91810E-05	0.000310745	0.002950394	0	7.67541E-06	0.000273965	0	0.001520882	6.18591E-07	0	1.53799E-08	4.64123E-08	0	1.58782E-07	3.55924E-07	2.34192E-06	5.26528E-08	0	1.72968E-07	1.40936E-06	6.69119E-06	0.16415535	0	0.029660045	8.58802E-06	0	1.24E-09	1.13062E-05	0	3.43617E-07	3.15810E-06	0
											622738.3976		214.3013535				455679.1771		214.3013535				771375.7001		7599317.434				2880.472618		1238.191868			1290.776824			942051737.7			125116.9167								
											0.512986966		0.000176527				0.375250876		0.000176527				0.63545576		5.647636822				0.002372723		0.001911699			0.001063252			775.8663316			0.103581689								

Los Angele	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	47775365.43	45775365	0	6815193	0.013733883	0	0.004396978	1.87605256	0	1.167474977	0.222316627	0.010233692	0	0.008618245	1.87605256	0	1.167474977	0.222316627	0.020533125	0	0.052629548	1.933945468	0	2.23453457	0.001196411	0	0.000437668	0.001219339	0.000365918	0.001324837	0	0.000955696	0.008930002	0.007558767	279.1491517	0	58.21434295	0.002729857	0	0.017644367	0.003182284	0	0.007558959	0.032759663
Los Angele	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.617667	5963.817	0	1179.636	0.042390353	0	0	0	0	0	0.03723876	0	0	0	0	0	0.226858512	0	0	0	0.686839161	0	0	0.009875529	0	0	0.011962309	0	0.000300001	0.000300001	0.000760739	0.012564132	0	0.000300001	0.000760739	266.6442677	0	0	0.001729669	0	0	0.041992852	0	0	0.0031
Los Angele	2045	LDA	Aggregate	Aggregate	Electricity	6948.813	265383589.9	0	2653835	442994.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDA	Aggregate	Aggregate	Plug-in Hyb	432864.2	13365963.4	3052573	10253391	1107645	0.001390904	0	0.000563211	0.723696372	0.05823023	0.072335863	0.009946139	0	0.000361441	0.723696372	0.05823023	0.072335863	0.009172894	0	0.044192042	0.124468747	0	0.638899759	0.090031385	0	0.000236992	0.00324009	0	0.000077091	0.002300001	0.000165804	0.000296112	0	0.000077091	0.002300001	0.000365155	72.96519211	0	35.20171307	0.000374317	0	0.017609868	0.000454739	0	0.012754317	0.007565235
Los Angele	2045	LDA	Aggregate	Aggregate	Fuel Cell El	5189.461	171366.4726	0	171366.5	25726.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population 2863395 Total HHDT VMT 84787269.02 Total Trips 12376683

Vehicle		Miles		Trip	
Gasoline	53.43%	Gasoline	49.27%	Gasoline	55.06%
Diesel	0.01%	Diesel	0.01%	Diesel	0.01%
Electricity	31.25%	Electricity	34.83%	Electricity	25.78%
Plug-in Hybrid	15.12%	Plug-in Hybrid	15.69%	Plug-in Hyb	8.95%
Fuel Cell Electric Vehic	0.18%	Fuel Cell Electric Vehic	0.21%	Fuel Cell E	0.21%

							0.006986642	0	0.059606614	1.10669251	0.064381239	0.128868891	0.05519495	0	0.054649622	1.10669251	0.064381239	0.128868891	0.010400027	0	0.023918295	0.972457189	0	1.287411487	0.000639769	0	0.000160333	0.000639298	0	0.000550103	0.002152167	0.007629916	0.000968416	0	0.000596036	0.008636868	0.005984497	149.0087834	0	36.86986605	0.001403937	0	0.011468631	0.001611707	0	0.005576197	0.017323978
											0		3174824.496				0		3174824.496				0		0				0		0				0		0				0		0				0		
											0		0.256458988				0		0.256458988				0		0				0		0				0		0				0		0				0		

Los Angele	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511.478	3312511	0	532690	0.019523793	0	0.150751836	3.91624832	0.153487026	0.430555479	0.016200245	0	0.137698632	3.91624832	0.153487026	0.430555479	0.036704866	0	0.097809178	2.330901114	0	2.62429891	0.001637367	0	0.001152867	0.002000001	0.003661243	0.001740271	0	0.001353382	0.008930002	0.009892065	354.7756763	0	70.44455808	0.003829394	0	0.026647703	0.004669592	0	0.01042082	0.023949158
Los Angele	2045	LDT1	Aggregate	Aggregate	Diesel	1.3924E-05	0.000363	0.000363	0	0.132729	0.121273934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.234337162	0	0	0.000201268	0	0	0.000201268	0.000366164	0.000268359	0	0.000201268	0.001046164	615.1552796	0	0.000467977	0	0	0.000467977	0	0	0.0031	0	0	0.0031
Los Angele	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880201.863	0	2880202	421945.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Plug-in Hyb	27686.06	1199845.044	342504	857341	104226	0.001717669	0	0.000526216	0.38412777	0.058741768	0.109806524	0.001177269	0	0.001926451	0.38412777	0.058741768	0.109806524	0.002142532	0	0.005288291	0.154841326	0	0.757181363	0.000389485	0	0.000276994	0.000394102	0.001074211	0.000330738	0	0.000367994	0.000920003	0.000969174	90.8141648	0	64.44936222	0.000465758	0	0.019143342	0.000585826	0	0.013771591	0.009423076
Los Angele	2045	LDT1	Aggregate	Aggregate	Fuel Cell El	948.9189	33818.89344	0	33818.89	4870.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population 2463409.8 Total HHDT VMT 74263835.932 Total Trips 10620528

Vehicle		Miles		Trip	
Gasoline	50.62%	Gasoline	44.66%	Gasoline	50.11%
Diesel	0.00%	Diesel	0.00%	Diesel	0.00%
Electricity	33.76%	Electricity	38.78%	Electricity	39.64%
Plug-in Hybrid	15.22%	Plug-in Hybrid	16.18%	Plug-in Hyb	9.92%
Fuel Cell Electric Vehic	0.39%	Fuel Cell Electric Vehic	0.46%	Fuel Cell E	0.46%

							0.008866187	0	0.065387686	1.66124664	0.082662765	0.226287539	0.095529584	0	0.077990754	1.66124664	0.082662765	0.226287539	0.016719956	0	0.054436402	1.06474804	0	1.38921583	0.000704981	0	0.000176604	0.000763463	0	0.000605858	0.002160186	0.002067333	0.000839744	0	0.000731062	0.009664746	0.005908538	163.9984664	0	41.61286969	0.001783298	0	0.015152529	0.002692824	0	0.006571061	0.015768746
											0		469247.7552				0		469247.7552				0		0				0		0				0		0				0		0				0		
											0		0.384601984				0		0.384601984				0		0				0		0				0		0				0		0				0		

Los Angele	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510.34	44059510	0	6499636	0.011703622	0	0.133924625	1.336502586	0.056808916	0.19836531	0.00816494	0	0.122330667	1.326502586	0.056808916	0.19836531	0.018578551	0	0.066999073	2.033321857	0	2.31611591	0.001431239	0	0.000331527	0.001124357	0	0.000821015	0.002600001	0.003270779	0.001222656	0	0.000826264	0.008930002	0.009376797	333.3671294	0	70.23164138	0.002761815	0	0.024887315	0.003345599	0	0.008541762	0.032817971
Los Angele	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74648.46921	74648.47	0	16796.89	0.034505017	0	0	0	0	0	0.029939669	0	0	0	0	0	0.04029161	0	0	0	0.311739988	0	0	0.009419041	0	0	0.00225653	0.002600001	0.003467334	0	0.000600002	0.003634372	313.1617186	0	0.000439742	0	0	0.000439742	0	0	0.0031	0	0	0.0031
Los Angele	2045	LDT2	Aggregate	Aggregate	Electricity	12865.1	486038.1476	0	486038	63470.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Plug-in Hyb	3852919	132634549.03	3550098	9611263	1012671	0.001437551	0	0.000145684	0.677431279	0.053525652	0.078685387	0.00112224	0	0.000251399	0.677431279	0.053525652	0.078685387	0.002402364	0	0.048088368	0.147741902	0	0.680985566	0.000371747	0	0.000280839	0.000276586	0	0.000759951	0.002300001	0.001970202	0.002302997	0	0.000925533	0.008930002	0.009357719	86.59451731	0	67.39120001	0.000443968	0	0.017923645	0.000538079	0	0.014596064	0.008979727
Los Angele	2045	LDT2	Aggregate	Aggregate	Fuel Cell El	4763.076	173522.8307	0	173522.8	23535.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population 1933733 Total HHDT VMT 62180812.15 Total Trips 8181637

Vehicle		Miles		Trip	
Gasoline	73.05%	Gasoline	70.86%	Gasoline	79.45%
Diesel	0.12%	Diesel	0.12%	Diesel	0.13%
Electricity	6.66%	Electricity	7.51%	Electricity	5.18%
Plug-in Hybrid	19.92%	Plug-in Hybrid	21.24%	Plug-in Hyb	12.38%
Fuel Cell Electric Vehic	0.25%	Fuel Cell Electric Vehic	0.28%	Fuel Cell E	0.29%

							0.008681139	0	0.117686894	1.103106059	0.051598195	0.167124278	0.096039298	0	0.107490382	1.103106059	0.051598195	0.167124278	0.014552172	0	0.059179935	1.473498975	0	1.925920306	0.001094292	0	0.000327501	0.000961368	0	0.000746304	0.002587072	0.002624658	0.000936417	0	0.000911485	0.008348288	0.007484397	254.9757567	0	64.12785598	0.002652879	0	0.021996181	0.003542428	0	0.008589127	0.025166463
											0		213116.55				0		213116.55				0		0				0		0				0		0				0		0				0		
											0		0.260726033				0		0.260726033				0		0				0		0				0		0				0		0				0		

Los Angele	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479676.698	3479677	0	1633691	0.007883815	0.469731985	0.167563822	1.984342287	0.020997523	0.17967864	0.055267761	0.260785804	0.151139999	1.984342287	0.020997523	0.17967864	0.055267761	0.260785804	0.151139999	1.697956898	0.032135159	0.000340468	8.88E-05	0.000975849	0	9.80E-05	0.000300001	0.027300008	0.001061324	0	0.000106541	0.008930002	0.007600022	492.7579257	102.5962183	20.67618597	0.003023387	0.038964551	0.029699215	0.009217355	0.001468414	0.028529163	0.045
Los Angele	2045	LHDT1	Aggregate	Aggregate	Diesel	62325.96	2853718.799	2853719	0	791667.6	0.037275261	0.124092367	0	0	0	0	0.03274259	0.109027705	0	0	0	0	0.042909875	1.160856167	0	0.242232809	0.98347092	0	0.091468431	0.009258564	0	0.011181567	0.026365999	0	0.003000091	0.027300008	0.011687148	0.027348168	0	0.012000003	0.078000022	466.8784731	109.1257792	0	0.001528031	0.005629969	0	0.070439135	0	0	0.219245908
Los Angele	2045	LHDT1	Aggregate	Aggregate	Electricity	9796.951	343818.8356	0	343818.8	113279.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LHDT1	Aggregate	Aggregate	Fuel Cell El	1634.182	57159.68305	0	57159.68	14069.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population 184573.3 Total HHDT VMT 5914321.806 Total Trips 2572107

Vehicle		Miles		Trip	
Gasoline	59.82%	Gasoline	58.83%	Gasoline	63.52%
Diesel	34.31%	Diesel	34.72%	Diesel	30.76%
Electricity	5.31%	Electricity	5.81%	Electricity	5.18%
Fuel Cell Electric Vehic	0.56%	Fuel Cell Electric Vehic	0.63%	Fuel Cell E	0.55%

							0.017664602	0.267680856	0.052686968	1.187691680	0.012765076	0.114119134	0.044678161	0.265370861	0.096160715	1.187691693	0.012765076	0.114119134	0.011887645	0.420364132	0.219412391	0.934899875	2.556496911	1.070468537	0.091754566	0.000386527	5.2216E-05	0.004456882	0.008977889	6.2210E-05	0.002347246	0.026420846	0.004982732	0.959302993	6.76703E-05	0.009389863	0.075468132	645.0891796	98.25561615	13.13361761	0.001717967	0.025563268	0.019654202	0.029291474	0.009867772	0.018199815	0.010595954
											53098.31497		219103.5443				37905.99252		219103.5443				77539.917		471965.8397				71.34254286		1656.930569			1721.649638			1853539.92			4625.096396			163.8596562					
											0.020643832		0.08518446				0.014737331		0.08518446				0.030142182		0.183453393				2.77376-05		0.064464192			0.066931319			7.55077971			0.17984			6.37983E-05					

Los Angele	2045	LHDT2	Aggregate	Aggregate	Gasoline	29664.31	983151.6765	983151.7	0	432273.4	0.010492293	0.33124211	0.220572925	1.746454295	0.017661209	0.159790166	0.067213573	0.227002908	0.201459619	1.746454295	0.017661209	0.159790166	0.067206805	0.019764576	0.422385053	1.305382048	3.696077596	2.355485361	0.922357387	0.00945364	9.04E-05	0.000979591	0	9.30E-05	0.000300001	0.031850009	0.001065395	0	0.000101011	0.008930002	0.009100026	549.0956744	114.9813831	21.04918317	0.003533915	0.039614614	0.039967686	0.009127424	0.033297655	0.045
Los Angele	2045	LHDT2	Aggregate	Aggregate	Diesel	105621	3681832.3	3681832.3	0	1298603	0.057391676	0.122134787	0	0	0	0	0.055412948	0.107283197	0	0	0	0	0.067187217	0.790366801	0	0.092174122	0.688218497	0	0.091695922	0.009259912	0	0.011415492	0.02581196	0	0.003000091	0.031850009	0.011819164	0.026979684	0	0.012000003	0.094500026	516.1082362	176.3946119	0	0.002134158	0.006983099	0	0.083141226	0	0	0.219300771
Los Angele	2045	LHDT2	Aggregate	Aggregate	Electricity	10155.75	356918.3128	0	356918.3	135914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angele	2045	LHDT2	Aggregate	Aggregate	Fuel Cell El	1069.616	39217.24259	0	39217.24	14321.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Population 1465257 Total HHDT VMT 50849009.532 Total Trips 1881112

Vehicle		Miles		Trip	
Gasoline	20.26%	Gasoline	19.64%	Gasoline	22.98%
Diesel	72.08%	Diesel	72.36%	Diesel	69.03%
Electricity	6.93%	Electricity	7.27%	Electricity	6.00%
Fuel Cell Electric Vehic	0.73%	Fuel Cell Electric Vehic	0.78%	Fuel Cell E	0.76%

							0.045338463	0.155144759	0.050688944	0.353810203	0.064554666	0.036719263	0.037845515	0.122321612	0.048294766	0.353810203	0.064554666	0.036719263	0.013957193	0.573723961	0.069717066	0.32393339	1.368766809	0.516305527	0.091668221	0.00950361	1.7751E-05	0.00044576	0.001680269	2.1063E-05	0.002722995	0.035566963	0.006835794	0.0194475	2.32368E-05	0.00315715	0.017675813	187.4628374	22.58961065	4.837034105	0.005516963	0.006551569	8.63E-03	0.031961956	0.009257575	0.007651693	0.008839685
											22732.69291		53162.28574				18663.78499		53162.28574				84686.17362		203635.698				73.70395585		2726.287743			2845.558377			21268662.22			1498.292161			27.74134372					
											0.012084711		0.027559385				0.009935907		0.027559385				0.044689819		0.108525821				3.92278E-05		0.001449296			0.001514827			11.35333748			0.007976114			2.00633E-05					

Los Angele	2045	MCY	Aggregate	Aggregate	Gasoline	195025.8	1014891.871	1014892	0	3639966.6	1.358138803	0	0.894964853	3.08554146	3.8510746	3.708418159	1.066054232	0	0.821671595	3.08554146	3.8510746	3.708418159	0.479465505	0	0.659223405	10.4682059	0	7.946168846	0.093802218	0	0.000147598	0.001927263	0	0.00344693	0.001	0.004200001	0.00311998	0	0.003696205	0.004000001	0.012000003	267.8200739	0	34.37938707	0.178304194	0	0.129547793	0.043686457	0	0.008314031	0.009178218
											0		691760.3303				0		691760.3303				0		0				0		0				0		0				0		0				0		
											0		1.653203069				0		1.653203069				0		0				0		0				0		0				0		0				0		

| Los Angele | 2045 | MDV | Aggregate | Aggregate | Gasoline | 696870.1 | 23011790.19 | 21011790 | 0 | 3071588 |



Source: EMFAC2025 (v2.1.0) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2026
Season: Summer
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	PM2.5_RUN	PM2.5_IDLI	PM2.5_STR	PM2.5_PMT	PM2.5_PMI	PM10_RUN	PM10_IDLE	PM10_STRE	PM10_PMT
Los Angeles	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84488	4046.703	4046.703	0	1717.584	6.813842	0	0.31775	0.001735	0	0.00124	0.005	0.034283	0.001886	0	0.001348	0.02
Los Angeles	2026	HHDT	Aggregate	Aggregate	Diesel	43166.22	5635385	5635385	0	712925	1.009952	36.31876	2.254752	0.013607	0.019208	0	0.008839	0.028175	0.014222	0.020077	0	0.035358
Los Angeles	2026	HHDT	Aggregate	Aggregate	Electricity	477.1548	47414.86	0	47414.86	5330.531	0	0	0	0	0	0	0.008999	0.014475	0	0	0	0.035997
Los Angeles	2026	HHDT	Aggregate	Aggregate	Natural Ga	4726.781	365382.5	365382.5	0	36077.09	0.644395	10.80385	0	0.001289	0.026046	0	0.009	0.047025	0.001402	0.028328	0	0.036
Los Angeles	2026	HHDT	Aggregate	Aggregate	Fuel Cell El	11.02775	1334.67	0	1334.67	161.8647	0	0	0	0	0	0	0.009	0.01469	0	0	0	0.036
Los Angeles	2026	LDA	Aggregate	Aggregate	Gasoline	2936460	86723722	86723722	0	12839242	0.055247	0	0.170011	0.002775	0	0.001983	0.002	0.002646	0.003012	0	0.002155	0.008
Los Angeles	2026	LDA	Aggregate	Aggregate	Diesel	6241.251	146250.6	146250.6	0	24401.74	0.423976	0	0	0.066326	0	0	0.002	0.002734	0.069325	0	0	0.008
Los Angeles	2026	LDA	Aggregate	Aggregate	Electricity	281465	10908486	0	10908486	1380216	0	0	0	0	0	0	0.0023	0.000888	0	0	0	0.0092
Los Angeles	2026	LDA	Aggregate	Aggregate	Plug-in Hyb	170168.2	6785925	3057640	3728285	645954.6	0.002885	0	0.086205	0.000964	0	0.001621	0.0023	0.001085	0.001049	0	0.001763	0.0092
Los Angeles	2026	LDA	Aggregate	Aggregate	Fuel Cell El	374.0038	17219.12	0	17219.12	1913.73	0	0	0	0	0	0	0.0023	0.000882	0	0	0	0.0092
Los Angeles	2026	LDT1	Aggregate	Aggregate	Gasoline	272982.7	7809301	7809301	0	1106898	0.23034	0	0.368765	0.00407	0	0.003119	0.002	0.003464	0.004421	0	0.00339	0.008
Los Angeles	2026	LDT1	Aggregate	Aggregate	Diesel	117.9735	2602.513	2602.513	0	317.8184	1.455922	0	0	0.297124	0	0	0.002	0.003866	0.310559	0	0	0.008
Los Angeles	2026	LDT1	Aggregate	Aggregate	Electricity	15133.04	697779.1	0	697779.1	75101.5	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092
Los Angeles	2026	LDT1	Aggregate	Aggregate	Plug-in Hyb	9905.566	467784.8	226603.2	241181.6	40340.24	0.003101	0	0.09286	0.00084	0	0.001281	0.0023	0.001087	0.000914	0	0.001393	0.0092
Los Angeles	2026	LDT2	Aggregate	Aggregate	Gasoline	1560649	54295985	54295985	0	7511761	0.069855	0	0.23348	0.002488	0	0.001825	0.002	0.00322	0.002705	0	0.001984	0.008
Los Angeles	2026	LDT2	Aggregate	Aggregate	Diesel	2703.519	92706.6	92706.6	0	13159.03	0.07442	0	0	0.009799	0	0	0.002	0.003261	0.010242	0	0	0.008
Los Angeles	2026	LDT2	Aggregate	Aggregate	Electricity	8259.685	376058.4	0	376058.4	43687.23	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092
Los Angeles	2026	LDT2	Aggregate	Aggregate	Plug-in Hyb	99946.9	4622422	2273214	2349208	425641.1	0.003148	0	0.093943	0.000877	0	0.001323	0.0023	0.001089	0.000954	0	0.001439	0.0092
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Gasoline	115818.1	3885776	3885776	0	1662872	0.161334	0.034018	0.549756	0.001139	0	0.00028	0.002	0.0273	0.001239	0	0.000305	0.008
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Diesel	46075.94	1646116	1646116	0	558535.8	1.213376	1.851751	0	0.021044	0.025961	0	0.003	0.0273	0.021996	0.027135	0	0.012
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Electricity	856.811	47356.84	0	47356.84	11311.02	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Gasoline	22369.44	837974.9	837974.9	0	365037.7	0.141058	0.034962	0.551359	0.001064	0	0.000228	0.002	0.03185	0.001157	0	0.000248	0.008
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Diesel	39609.47	1823720	1823720	0	545727.6	0.484109	1.406867	0	0.012196	0.029154	0	0.003	0.03185	0.012748	0.030473	0	0.012
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Electricity	918.3643	53156.89	0	53156.89	13779.45	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008
Los Angeles	2026	MCY	Aggregate	Aggregate	Gasoline	147185.6	881925.5	881925.5	0	282207.8	0.459356	0	0.105169	0.002713	0	0.003311	0.001	0.0042	0.002906	0	0.003532	0.004
Los Angeles	2026	MDV	Aggregate	Aggregate	Gasoline	936532.6	32241999	32241999	0	4275682	0.115818	0	0.332118	0.002538	0	0.001937	0.002	0.003304	0.002759	0	0.002106	0.008
Los Angeles	2026	MDV	Aggregate	Aggregate	Diesel	23829.25	978126.4	978126.4	0	116599.8	0.038089	0	0	0.003537	0	0	0.002	0.003076	0.003697	0	0	0.008
Los Angeles	2026	MDV	Aggregate	Aggregate	Electricity	31047.12	1447378	0	1447378	158270.3	0	0	0	0	0	0	0.0023	0.000885	0	0	0	0.0092
Los Angeles	2026	MDV	Aggregate	Aggregate	Plug-in Hyb	23961.85	1079046	539324.9	539720.8	99139.09	0.0032	0	0.093248	0.000965	0	0.001455	0.0023	0.001091	0.00105	0	0.001583	0.0092
Los Angeles	2026	MH	Aggregate	Aggregate	Gasoline	17272.37	161038.4	161038.4	0	1835.917	0.387333	0	0.3891	0.001467	0	0.000412	0.003	0.015247	0.001596	0	0.000448	0.012
Los Angeles	2026	MH	Aggregate	Aggregate	Diesel	6209.891	59826.16	59826.16	0	659.7984	2.887352	0	0	0.066977	0	0	0.004	0.01515	0.070005	0	0	0.016
Los Angeles	2026	MHDT	Aggregate	Aggregate	Gasoline	18454.61	868545	868545	0	369239.8	0.305777	0.092467	0.403025	0.001007	0	0.000504	0.003	0.015247	0.001096	0	0.000549	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Diesel	60382.95	2186752	2186752	0	752977.8	0.557653	7.62197	1.290271	0.004562	0.005414	0	0.003	0.015282	0.004769	0.005659	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Electricity	595.345	39779.81	0	39779.81	8687.796	0	0	0	0	0	0	0.003	0.007631	0	0	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Natural Ga	566.3628	23596.85	23596.85	0	5378.689	0.098843	6.480724	0	0.00088	0.017068	0	0.003	0.015236	0.000957	0.018564	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Fuel Cell El	1.439499	123.8574	0	123.8574	14.93387	0	0	0	0	0	0	0.003	0.007637	0	0	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Gasoline	3598.428	107134.8	107134.8	0	32038.82	0.430451	0.028881	0.369739	0.0008	0	0.000275	0.003	0.015433	0.00087	0	0.000299	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Diesel	1799.906	105496.8	105496.8	0	20972.6	1.526607	7.611219	1.523477	0.022379	0.007818	0	0.003	0.021509	0.023391	0.008171	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Electricity	192.3272	13143.52	0	13143.52	1711.738	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Natural Ga	452.0269	23309.53	23309.53	0	4023.039	0	1.540335	0	0	0.00383	0	0.003	0.015433	0	0.004165	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Fuel Cell El	0.395291	9.757475	0	9.757475	3.518088	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012
Los Angeles	2026	SBUS	Aggregate	Aggregate	Gasoline	1515.948	58236.18	58236.18	0	6063.791	0.34017	0.923902	0.638358	0.00134	0	0.000622	0.002	0.016396	0.001457	0	0.000676	0.008
Los Angeles	2026	SBUS	Aggregate	Aggregate	Diesel	1150.644	22216.1	22216.1	0	16661.32	6.933105	30.94001	0.293035	0.02367	0.015547	0	0.003	0.016396	0.024741	0.01625	0	0.012
Los Angeles	2026	SBUS	Aggregate	Aggregate	Electricity	63.71903	2113.92	0	2113.92	701.033	0	0	0	0	0	0	0.002617	0.008198	0	0	0	0.010467
Los Angeles	2026	SBUS	Aggregate	Aggregate	Natural Ga	1474.088	36187.69	36187.69	0	21344.8	0.444459	5.252678	0	0.004122	0.011792	0	0.003	0.016396	0.004483	0.012825	0	0.012
Los Angeles	2026	UBUS	Aggregate	Aggregate	Gasoline	401.0487	24243.83	24243.83	0	1604.195	0.206245	0	0.895044	0.002008	0	0.000994	0.002988	0.03842	0.002184	0	0.001081	0.011952
Los Angeles	2026	UBUS	Aggregate	Aggregate	Diesel	17.12539	1329.269	1329.269	0	68.50158	0.701843	0	0	0.005362	0	0	0.008044	0.0385	0.005604	0	0	0.032175
Los Angeles	2026	UBUS	Aggregate	Aggregate	Electricity	282.4009	23040.46	0	23040.46	1129.604	0	0	0	0	0	0	0.008143	0.01925	0	0	0	0.032572
Los Angeles	2026	UBUS	Aggregate	Aggregate	Natural Ga	3858.236	345206.1	345206.1	0	15432.94	0.526687	0	0	0.000425	0	0	0.008156	0.038441	0.000444	0	0	0.032622

PM10_PMB	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_DIURI	NH3_RUNE
0.097951	2164.702	0	55.48084	0.172582	0	1.11E-05	0.202347	0	0.010983	0.951246	0	4.69E-05	0.105819	0.869288	8.602916	1.388056	0	5.14E-05	0.105819	0.869288	8.602916	0.044725
0.0805	1507.638	13926.94	0	0.000574	0.309974	0	0.394263	0	0	0.01235	6.67365	0	0	0	0	0.01406	7.597442	0	0	0	0	0.216876
0.041356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.134358	1131.22	8670.325	0	2.628597	38.84821	0	0.37924	0	0	0.02051	0.370262	0	0	0	0	1.465016	26.44725	0	0	0	0	0.86316
0.041971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00756	335.7367	0	68.41648	0.007174	0	0.044027	0.005611	0	0.016229	0.033182	0	0.247537	0.22078	0.263368	2.433047	0.043381	0	0.270982	0.22078	0.263368	2.433047	0.030271
0.00781	301.7326	0	0	0.004871	0	0	0.047554	0	0	0.104865	0	0	0	0	0	0.119382	0	0	0	0	0	0.0031
0.002537	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003101	150.676	0	61.53204	0.000751	0	0.024411	0.000799	0	0.019611	0.001905	0	0.119789	0.037735	0.03157	0.444835	0.002779	0	0.131153	0.037735	0.03157	0.444835	0.014594
0.002521	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.009898	405.125	0	87.59618	0.017512	0	0.085326	0.015686	0	0.026824	0.079478	0	0.542422	0.346088	0.649956	4.584591	0.111563	0	0.593847	0.346088	0.649956	4.584591	0.034616
0.011046	488.378	0	0	0.017828	0	0	0.076971	0	0	0.383822	0	0	0	0	0	0.436956	0	0	0	0	0	0.0031
0.002531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003106	162.258	0	68.65718	0.000807	0	0.025822	0.00086	0	0.01739	0.002048	0	0.127632	0.025486	0.022751	0.323141	0.002988	0	0.139741	0.025486	0.022751	0.323141	0.015986
0.009201	397.1037	0	82.87168	0.006407	0	0.047616	0.006391	0	0.018761	0.024707	0	0.271836	0.117845	0.240697	1.88634	0.034578	0	0.297612	0.117845	0.240697	1.88634	0.031472
0.009317	362.1532	0	0	0.001704	0	0	0.057077	0	0	0.036694	0	0	0	0	0	0.041774	0	0	0	0	0	0.0031
0.002531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003111	164.6493	0	72.9067	0.00082	0	0.026052	0.000873	0	0.019267	0.002079	0	0.128909	0.024462	0.02344	0.331919	0.003033	0	0.141139	0.024462	0.02344	0.331919	0.016228
0.078	611.1704	113.0655	24.45545	0.007009	0.051526	0.033189	0.012935	0.001849	0.038847	0.030484	0.389819	0.171296	0.05232	0.275936	3.325007	0.044483	0.568823	0.187548	0.05232	0.275936	3.325007	0.044936
0.078	488.5137	123.5434	0	0.004007	0.004913	0	0.076992	0	0	0.086261	0.105775	0	0	0	0	0.098203	0.120418	0	0	0	0	0.182847
0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.091	659.1278	145.6295	23.83934	0.005675	0.053499	0.035557	0.012485	0.001946	0.039361	0.02254	0.400787	0.184645	0.039086	0.23449	2.83547	0.03289	0.584827	0.202163	0.039086	0.23449	2.83547	0.044976
0.091	549.5594	209.9883	0	0.002974	0.005584	0	0.086613	0	0	0.064028	0.120222	0	0	0	0	0.072892	0.136864	0	0	0	0	0.206882
0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.012	209.6136	0	41.64083	0.197503	0	0.151126	0.034851	0	0.011589	1.259234	0	0.996326	3.854064	3.604981	4.680626	1.541852	0	1.083702	3.854064	3.604981	4.680626	0.008959
0.009439	484.2914	0	102.3591	0.009334	0	0.063523	0.009056	0	0.023045	0.037643	0	0.391827	0.131033	0.310217	2.24052	0.053817	0	0.428991	0.131033	0.310217	2.24052	0.031586
0.008788	432.9896	0	0	0.000653	0	0	0.068241	0	0	0.014054	0	0	0	0	0	0.015999	0	0	0	0	0	0.0031
0.00253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003117	167.2275	0	90.25066	0.000833	0	0.025904	0.000887	0	0.020317	0.002113	0	0.12809	0.027046	0.025996	0.362227	0.003083	0	0.140242	0.027046	0.025996	0.362227	0.016494
0.043563	1775.264	0	30.88873	0.015625	0	0.027848	0.023955	0	0.030962	0.071146	0	0.14046	10.85968	0.259393	4.802941	0.103815	0	0.153786	10.85968	0.259393	4.802941	0.044791
0.043286	1020.972	0	0	0.002756	0	0	0.314661	0	0	0.059337	0	0	0	0	0	0.067551	0	0	0	0	0	0.173635
0.043563	1582.035	552.1712	44.18556	0.011274	0.118192	0.043286	0.019285	0.004301	0.031803	0.049085	0.94331	0.233744	0.035947	0.283313	3.313257	0.071625	1.376476	0.25592	0.035947	0.283313	3.313257	0.04498
0.043663	1083.529	2093.379	0	0.000453	0.009237	0	0.390986	0	0	0.009744	0.198865	0	0	0	0	0.011093	0.226393	0	0	0	0	0.215094
0.021803	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.043532	811.9706	4977.234	0	0.839945	32.04702	0	0.385721	0	0	0.007713	0.251901	0	0	0	0	0.55092	17.99296	0	0	0	0	1.06
0.021819	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.044095	1697.144	169.6894	31.11155	0.013359	0.042835	0.034737	0.024134	0.001495	0.029862	0.058916	0.331033	0.182275	0.10258	0.204797	4.324756	0.085969	0.483042	0.199568	0.10258	0.204797	4.324756	0.044983
0.061454	1330.93	2424.902	0	0.003649	0.04189	0	0.366939	0	0	0.078557	0.901875	0	0	0	0	0.089431	1.026716	0	0	0	0	0.202171
0.022048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.044095	0	1167.763	0	0	8.137128	0	0	0	0	0	0.061052	0	0	0	0	0	4.360874	0	0	0	0	1.06
0.022048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.046845	853.9515	2484.988	50.65675	0.016293	1.370976	0.056995	0.021992	0.047781	0.043337	0.080024	10.60186	0.333399	0.126503	0.340058	2.228856	0.116771	15.47021	0.36503	0.126503	0.340058	2.228856	0.044911
0.046845	1270.291	2406.814	0	0.006549	0.007366	0	0.18366	0	0	0.141001	0.158578	0	0	0	0	0.160519	0.180529	0	0	0	0	0.101709
0.023423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.046845	1661.998	4005.626	0	9.630085	30.64823	0	0.378585	0	0	0.066918	0.214774	0	0	0	0	4.779867	15.34098	0	0	0	0	1.06
0.109772	2285.728	0	117.8699	0.007143	0	0.087394	0.020006	0	0.056354	0.022191	0	0.513531	0.035687	0.09696	0.521185	0.032381	0	0.562252	0.035687	0.09696	0.521185	0.045
0.11	1647.523	0	0	0.004306	0	0	0.4	0	0	0.092697	0	0	0	0	0	0.105529	0	0	0	0	0	0.22
0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.109832	2404.891	0	0	4.33257	0	0	0.4	0	0	0.04265	0	0	0	0	0	3.010776	0	0	0	0	0	0.97

CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
46.45521	0	4.781274	0.009294	0	0.000238
0.066011	91.0821	0	0.004951	0.045734	0
0	0	0	0	0	0
7.625932	77.79908	0	0	0	0
0	0	0	0	0	0
3.029608	0	2.656526	0.001441	0	0.000294
0.964314	0	0	0.000991	0	0
0	0	0	0	0	0
0.289553	0	0.96803	0.000647	0	0.000264
0	0	0	0	0	0
4.905077	0	5.308897	0.001739	0	0.000376
2.092186	0	0	0.001605	0	0
0	0	0	0	0	0
0.312811	0	1.035572	0.000697	0	0.000295
2.964446	0	2.738837	0.001705	0	0.000356
0.353646	0	0	0.00119	0	0
0	0	0	0	0	0
0.317142	0	1.046568	0.000707	0	0.000313
1.397667	3.621179	2.261329	0.002624	0.000485	0.000105
0.356622	0.876717	0	0.001605	0.000406	0
0	0	0	0	0	0
1.434201	4.121953	2.477861	0.00283	0.000625	0.000102
0.129381	0.996459	0	0.001806	0.00069	0
0	0	0	0	0	0
12.02435	0	6.467038	0.0009	0	0.000179
3.420428	0	3.136601	0.002079	0	0.000439
0.313634	0	0	0.001423	0	0
0	0	0	0	0	0
0.32169	0	1.039517	0.000718	0	0.000387
2.086099	0	3.098796	0.007622	0	0.000133
0.235727	0	0	0.003355	0	0
1.266235	10.44633	4.885275	0.006792	0.002371	0.00019
0.052833	7.04856	0	0.003558	0.006874	0
0	0	0	0	0	0
2.348652	32.39831	0	0	0	0
0	0	0	0	0	0
1.485434	2.563315	3.62832	0.007286	0.000729	0.000134
0.275405	12.92671	0	0.004371	0.007963	0
0	0	0	0	0	0
0	7.195949	0	0	0	0
0	0	0	0	0	0
1.568521	82.00277	6.951927	0.003666	0.010669	0.000217
0.344335	2.917552	0	0.004171	0.007904	0
0	0	0	0	0	0
16.18319	21.72664	0	0	0	0
0.347633	0	8.482488	0.022646	0	0.001168
0.117815	0	0	0.015616	0	0
0	0	0	0	0	0
40.39615	0	0	0	0	0

Source: EMFAC2025 (v2.1.0) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2026
Season: Winter
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RUN	PM2.5_IDLI	PM2.5_STR	PM2.5_PMT	PM2.5_PMI	PM10_RUN	PM10_IDLE	PM10_STRE	PM10_PMT
Los Angeles	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84488	4046.703	4046.703	0	1717.584	7.608871	0	0.335684	0.001735	0	0.00124	0.005	0.034283	0.001886	0	0.001348	0.02
Los Angeles	2026	HHDT	Aggregate	Aggregate	Diesel	43166.22	5635385	5635385	0	712925	1.048245	40.2003	2.254752	0.013607	0.025737	0	0.008839	0.028175	0.014222	0.026901	0	0.035358
Los Angeles	2026	HHDT	Aggregate	Aggregate	Electricity	477.1548	47414.86	0	47414.86	5330.531	0	0	0	0	0	0	0.008999	0.014475	0	0	0	0.035997
Los Angeles	2026	HHDT	Aggregate	Aggregate	Natural Ga	4726.781	365382.5	365382.5	0	36077.09	0.691291	10.80385	0	0.001289	0.026046	0	0.009	0.047025	0.001402	0.028328	0	0.036
Los Angeles	2026	HHDT	Aggregate	Aggregate	Fuel Cell El	11.02775	1334.67	0	1334.67	161.8647	0	0	0	0	0	0	0.009	0.01469	0	0	0	0.036
Los Angeles	2026	LDA	Aggregate	Aggregate	Gasoline	2936460	86723722	86723722	0	12839242	0.06329	0	0.186625	0.002775	0	0.001983	0.002	0.002646	0.003012	0	0.002155	0.008
Los Angeles	2026	LDA	Aggregate	Aggregate	Diesel	6241.251	146250.6	146250.6	0	24401.74	0.440131	0	0	0.066326	0	0	0.002	0.002734	0.069325	0	0	0.008
Los Angeles	2026	LDA	Aggregate	Aggregate	Electricity	281465	10908486	0	10908486	1380216	0	0	0	0	0	0	0.0023	0.000888	0	0	0	0.0092
Los Angeles	2026	LDA	Aggregate	Aggregate	Plug-in Hyb	170168.2	6785925	3057640	3728285	645954.6	0.003315	0	0.094902	0.000964	0	0.001621	0.0023	0.001085	0.001049	0	0.001763	0.0092
Los Angeles	2026	LDA	Aggregate	Aggregate	Fuel Cell El	374.0038	17219.12	0	17219.12	1913.73	0	0	0	0	0	0	0.0023	0.000882	0	0	0	0.0092
Los Angeles	2026	LDT1	Aggregate	Aggregate	Gasoline	272982.7	7809301	7809301	0	1106898	0.264466	0	0.404758	0.00407	0	0.003119	0.002	0.003464	0.004421	0	0.00339	0.008
Los Angeles	2026	LDT1	Aggregate	Aggregate	Diesel	117.9735	2602.513	2602.513	0	317.8184	1.511389	0	0	0.297124	0	0	0.002	0.003866	0.310559	0	0	0.008
Los Angeles	2026	LDT1	Aggregate	Aggregate	Electricity	15133.04	697779.1	0	697779.1	75101.5	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092
Los Angeles	2026	LDT1	Aggregate	Aggregate	Plug-in Hyb	9905.566	467784.8	226603.2	241181.6	40340.24	0.003564	0	0.102255	0.00084	0	0.001281	0.0023	0.001087	0.000914	0	0.001393	0.0092
Los Angeles	2026	LDT2	Aggregate	Aggregate	Gasoline	1560649	54295985	54295985	0	7511761	0.080177	0	0.256319	0.002488	0	0.001825	0.002	0.00322	0.002705	0	0.001984	0.008
Los Angeles	2026	LDT2	Aggregate	Aggregate	Diesel	2703.519	92706.6	92706.6	0	13159.03	0.077259	0	0	0.009799	0	0	0.002	0.003261	0.010242	0	0	0.008
Los Angeles	2026	LDT2	Aggregate	Aggregate	Electricity	8259.685	376058.4	0	376058.4	43687.23	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092
Los Angeles	2026	LDT2	Aggregate	Aggregate	Plug-in Hyb	99946.9	4622422	2273214	2349208	425641.1	0.003618	0	0.103453	0.000877	0	0.001323	0.0023	0.001089	0.000954	0	0.001439	0.0092
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Gasoline	115818.1	3885776	3885776	0	1662872	0.178843	0.034018	0.579245	0.001139	0	0.00028	0.002	0.0273	0.001239	0	0.000305	0.008
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Diesel	46075.94	1646116	1646116	0	558535.8	1.25682	1.851751	0	0.021044	0.025961	0	0.003	0.0273	0.021996	0.027135	0	0.012
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Electricity	856.811	47356.84	0	47356.84	11311.02	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Gasoline	22369.44	837974.9	837974.9	0	365037.7	0.156276	0.034962	0.580942	0.001064	0	0.000228	0.002	0.03185	0.001157	0	0.000248	0.008
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Diesel	39609.47	1823720	1823720	0	545727.6	0.501433	1.406867	0	0.012196	0.029154	0	0.003	0.03185	0.012748	0.030473	0	0.012
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Electricity	918.3643	53156.89	0	53156.89	13779.45	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008
Los Angeles	2026	MCY	Aggregate	Aggregate	Gasoline	147185.6	881925.5	881925.5	0	282207.8	0.511317	0	0.112482	0.002713	0	0.003311	0.001	0.0042	0.002906	0	0.003532	0.004
Los Angeles	2026	MDV	Aggregate	Aggregate	Gasoline	936532.6	32241999	32241999	0	4275682	0.132994	0	0.364628	0.002538	0	0.001937	0.002	0.003304	0.002759	0	0.002106	0.008
Los Angeles	2026	MDV	Aggregate	Aggregate	Diesel	23829.25	978126.4	978126.4	0	116599.8	0.039542	0	0	0.003537	0	0	0.002	0.003076	0.003697	0	0	0.008
Los Angeles	2026	MDV	Aggregate	Aggregate	Electricity	31047.12	1447378	0	1447378	158270.3	0	0	0	0	0	0	0.0023	0.000885	0	0	0	0.0092
Los Angeles	2026	MDV	Aggregate	Aggregate	Plug-in Hyb	23961.85	1079046	539324.9	539720.8	99139.09	0.003677	0	0.102685	0.000965	0	0.001455	0.0023	0.001091	0.00105	0	0.001583	0.0092
Los Angeles	2026	MH	Aggregate	Aggregate	Gasoline	17272.37	161038.4	161038.4	0	1835.917	0.433301	0	0.411157	0.001467	0	0.000412	0.003	0.015247	0.001596	0	0.000448	0.012
Los Angeles	2026	MH	Aggregate	Aggregate	Diesel	6209.891	59826.16	59826.16	0	659.7984	2.999534	0	0	0.066977	0	0	0.004	0.01515	0.070005	0	0	0.016
Los Angeles	2026	MHDT	Aggregate	Aggregate	Gasoline	18454.61	868545	868545	0	369239.8	0.34101	0.084896	0.425774	0.001007	0	0.000504	0.003	0.015247	0.001096	0	0.000549	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Diesel	60382.95	2186752	2186752	0	752977.8	0.579646	8.224584	1.290271	0.004562	0.007573	0	0.003	0.015282	0.004769	0.007915	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Electricity	595.345	39779.81	0	39779.81	8687.796	0	0	0	0	0	0	0.003	0.007631	0	0	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Natural Ga	566.3628	23596.85	23596.85	0	5378.689	0.105758	6.480724	0	0.00088	0.017068	0	0.003	0.015236	0.000957	0.018564	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Fuel Cell El	1.439499	123.8574	0	123.8574	14.93387	0	0	0	0	0	0	0.003	0.007637	0	0	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Gasoline	3598.428	107134.8	107134.8	0	32038.82	0.476567	0.028881	0.390695	0.0008	0	0.000275	0.003	0.015433	0.00087	0	0.000299	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Diesel	1799.906	105496.8	105496.8	0	20972.6	1.585372	8.196297	1.523477	0.022379	0.01098	0	0.003	0.021509	0.023391	0.011477	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Electricity	192.3272	13143.52	0	13143.52	1711.738	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Natural Ga	452.0269	23309.53	23309.53	0	4023.039	0	1.540335	0	0	0.00383	0	0.003	0.015433	0	0.004165	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Fuel Cell El	0.395291	9.757475	0	9.757475	3.518088	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012
Los Angeles	2026	SBUS	Aggregate	Aggregate	Gasoline	1515.948	58236.18	58236.18	0	6063.791	0.37831	0.923902	0.683591	0.00134	0	0.000622	0.002	0.016396	0.001457	0	0.000676	0.008
Los Angeles	2026	SBUS	Aggregate	Aggregate	Diesel	1150.644	22216.1	22216.1	0	16661.32	7.214535	28.7651	0.293035	0.02367	0.022347	0	0.003	0.016396	0.024741	0.023357	0	0.012
Los Angeles	2026	SBUS	Aggregate	Aggregate	Electricity	63.71903	2113.92	0	2113.92	701.033	0	0	0	0	0	0	0.002617	0.008198	0	0	0	0.010467
Los Angeles	2026	SBUS	Aggregate	Aggregate	Natural Ga	1474.088	36187.69	36187.69	0	21344.8	0.476232	5.252678	0	0.004122	0.011792	0	0.003	0.016396	0.004483	0.012825	0	0.012
Los Angeles	2026	UBUS	Aggregate	Aggregate	Gasoline	401.0487	24243.83	24243.83	0	1604.195	0.228914	0	0.945292	0.002008	0	0.000994	0.002988	0.03842	0.002184	0	0.001081	0.011952
Los Angeles	2026	UBUS	Aggregate	Aggregate	Diesel	17.12539	1329.269	1329.269	0	68.50158	0.701843	0	0	0.005362	0	0	0.008044	0.0385	0.005604	0	0	0.032175
Los Angeles	2026	UBUS	Aggregate	Aggregate	Electricity	282.4009	23040.46	0	23040.46	1129.604	0	0	0	0	0	0	0.008143	0.01925	0	0	0	0.032572
Los Angeles	2026	UBUS	Aggregate	Aggregate	Natural Ga	3858.236	345206.1	345206.1	0	15432.94	0.52675	0	0	0.000425	0	0	0.008156	0.038441	0.000444	0	0	0.032622

PM10_PMB	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_DIURI	NH3_RUNE
0.097951	2162.269	0	55.96008	0.167547	0	1.16E-05	0.218496	0	0.01141	0.917932	0	4.93E-05	0.099789	0.915157	7.36898	1.339444	0	5.40E-05	0.099789	0.915157	7.36898	0.044725
0.0805	1507.638	14328.22	0	0.000574	0.269277	0	0.394263	0	0	0.01235	5.79747	0	0	0	0	0.01406	6.599978	0	0	0	0	0.216876
0.041356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.134358	1131.22	8670.325	0	2.628597	38.84821	0	0.37924	0	0	0.02051	0.370262	0	0	0	0	1.465016	26.44725	0	0	0	0	0.86316
0.041971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00756	315.7483	0	69.4191	0.007154	0	0.049474	0.006174	0	0.01732	0.033839	0	0.283861	0.212107	0.267408	2.127022	0.043883	0	0.310744	0.212107	0.267408	2.127022	0.030271
0.00781	301.7326	0	0	0.004871	0	0	0.047554	0	0	0.104865	0	0	0	0	0	0.119382	0	0	0	0	0	0.0031
0.002537	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003101	140.8316	0	61.97426	0.000731	0	0.028028	0.000881	0	0.020972	0.001845	0	0.140854	0.035992	0.031369	0.38186	0.002692	0	0.154218	0.035992	0.031369	0.38186	0.014594
0.002521	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.009898	383.1194	0	89.73511	0.017201	0	0.096285	0.017272	0	0.028624	0.078528	0	0.625238	0.330211	0.670839	3.983852	0.109785	0	0.684513	0.330211	0.670839	3.983852	0.034616
0.011046	488.378	0	0	0.017828	0	0	0.076971	0	0	0.383822	0	0	0	0	0	0.436956	0	0	0	0	0	0.0031
0.002531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003106	151.4163	0	69.11941	0.000786	0	0.029561	0.000947	0	0.0186	0.001984	0	0.149612	0.024321	0.022387	0.275812	0.002894	0	0.163806	0.024321	0.022387	0.275812	0.015986
0.009201	377.5853	0	83.92646	0.006287	0	0.053502	0.007036	0	0.020022	0.02444	0	0.311647	0.113188	0.243238	1.711665	0.034057	0	0.341199	0.113188	0.243238	1.711665	0.031472
0.009317	362.1532	0	0	0.001704	0	0	0.057077	0	0	0.036694	0	0	0	0	0	0.041774	0	0	0	0	0	0.0031
0.002531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003111	153.7146	0	73.3722	0.000797	0	0.029811	0.000961	0	0.020607	0.002014	0	0.151038	0.023322	0.023085	0.283111	0.002938	0	0.165367	0.023322	0.023085	0.283111	0.016228
0.078	611.1111	113.0655	24.67403	0.006837	0.051526	0.034435	0.013894	0.001849	0.040289	0.029587	0.389819	0.179136	0.049979	0.283003	3.022734	0.043173	0.568823	0.196131	0.049979	0.283003	3.022734	0.044936
0.078	488.5137	123.5434	0	0.004007	0.004913	0	0.076992	0	0	0.086261	0.105775	0	0	0	0	0.098203	0.120418	0	0	0	0	0.182847
0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.091	659.07	145.6295	24.07615	0.005545	0.053499	0.036886	0.013408	0.001946	0.040822	0.021925	0.400787	0.193067	0.037317	0.240266	2.57249	0.031993	0.584827	0.211385	0.037317	0.240266	2.57249	0.044976
0.091	549.5594	209.9883	0	0.002974	0.005584	0	0.086613	0	0	0.064028	0.120222	0	0	0	0	0.072892	0.136864	0	0	0	0	0.206882
0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.012	209.6872	0	43.46311	0.197172	0	0.168891	0.037533	0	0.012127	1.263344	0	1.139204	3.756992	4.047316	4.111064	1.543254	0	1.239	3.756992	4.047316	4.111064	0.008959
0.009439	463.7781	0	103.6133	0.009125	0	0.071397	0.009972	0	0.024595	0.036863	0	0.44935	0.125893	0.314015	2.063061	0.052579	0	0.49197	0.125893	0.314015	2.063061	0.031586
0.008788	432.9896	0	0	0.000653	0	0	0.068241	0	0	0.014054	0	0	0	0	0	0.015999	0	0	0	0	0	0.0031
0.00253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003117	156.2222	0	90.71406	0.00081	0	0.029651	0.000977	0	0.02173	0.002047	0	0.150124	0.025769	0.025686	0.309632	0.002986	0	0.164366	0.025769	0.025686	0.309632	0.016494
0.043563	1775.138	0	31.2538	0.015117	0	0.029001	0.02588	0	0.032173	0.068306	0	0.147743	10.31997	0.269549	4.228409	0.099671	0	0.16176	10.31997	0.269549	4.228409	0.044791
0.043286	1020.972	0	0	0.002756	0	0	0.314661	0	0	0.059337	0	0	0	0	0	0.067551	0	0	0	0	0	0.173635
0.043563	1581.974	498.9036	44.71454	0.010997	0.133688	0.045105	0.020808	0.004052	0.03304	0.047676	1.087808	0.245499	0.03426	0.291594	3.031031	0.069568	1.587326	0.268791	0.03426	0.291594	3.031031	0.04498
0.043663	1083.529	2147.903	0	0.000453	0.008218	0	0.390986	0	0	0.009744	0.176926	0	0	0	0	0.011093	0.201417	0	0	0	0	0.215094
0.021803	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.043532	811.9706	4977.234	0	0.839945	32.04702	0	0.385721	0	0	0.007713	0.251901	0	0	0	0	0.55092	17.99296	0	0	0	0	1.06
0.021819	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.044095	1697.082	169.6894	31.5407	0.013074	0.042835	0.036176	0.025908	0.001495	0.031029	0.057449	0.331033	0.191712	0.098477	0.208978	4.094863	0.08383	0.483042	0.209901	0.098477	0.208978	4.094863	0.044983
0.061454	1330.93	2482.228	0	0.003649	0.036856	0	0.366939	0	0	0.078557	0.793496	0	0	0	0	0.089431	0.903335	0	0	0	0	0.202171
0.022048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.044095	0	1167.763	0	0	8.137128	0	0	0	0	0	0.061052	0	0	0	0	0	4.360874	0	0	0	0	1.06
0.022048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.046845	853.8786	2484.988	53.77909	0.015911	1.370976	0.063867	0.023675	0.047781	0.045448	0.077794	10.60186	0.383171	0.121201	0.350999	2.115965	0.113517	15.47021	0.419524	0.121201	0.350999	2.115965	0.044911
0.046845	1270.291	2197.057	0	0.006549	0.007744	0	0.18366	0	0	0.141001	0.166729	0	0	0	0	0.160519	0.189808	0	0	0	0	0.101709
0.023423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.046845	1661.998	4005.626	0	9.630085	30.64823	0	0.378585	0	0	0.066918	0.214774	0	0	0	0	4.779867	15.34098	0	0	0	0	1.06
0.109772	2285.712	0	120.2509	0.006987	0	0.094673	0.021514	0	0.058533	0.02163	0	0.563979	0.03403	0.101644	0.463821	0.031563	0	0.617486	0.03403	0.101644	0.463821	0.045
0.11	1647.523	0	0	0.004306	0	0	0.4	0	0	0.092697	0	0	0	0	0	0.105529	0	0	0	0	0	0.22
0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.109832	2404.891	0	0	4.33257	0	0	0.4	0	0	0.04265	0	0	0	0	0	3.010776	0	0	0	0	0	0.97

CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
45.00948	0	5.083963	0.009283	0	0.00024
0.066011	94.09657	0	0.004951	0.047052	0
0	0	0	0	0	0
7.625932	77.79908	0	0	0	0
0	0	0	0	0	0
2.471616	0	3.212912	0.001356	0	0.000298
0.964314	0	0	0.000991	0	0
0	0	0	0	0	0
0.229112	0	1.20274	0.000605	0	0.000266
0	0	0	0	0	0
4.02369	0	6.484554	0.001645	0	0.000385
2.092186	0	0	0.001605	0	0
0	0	0	0	0	0
0.246372	0	1.280986	0.00065	0	0.000297
2.412952	0	3.320761	0.001621	0	0.00036
0.353646	0	0	0.00119	0	0
0	0	0	0	0	0
0.2501	0	1.293725	0.00066	0	0.000315
1.362647	3.621179	2.382786	0.002624	0.000485	0.000106
0.356622	0.876717	0	0.001605	0.000406	0
0	0	0	0	0	0
1.399397	4.121953	2.609604	0.00283	0.000625	0.000103
0.129381	0.996459	0	0.001806	0.00069	0
0	0	0	0	0	0
12.068	0	7.318913	0.0009	0	0.000187
2.779037	0	3.807006	0.001991	0	0.000445
0.313634	0	0	0.001423	0	0
0	0	0	0	0	0
0.254164	0	1.285556	0.000671	0	0.000389
2.014581	0	3.313963	0.007621	0	0.000134
0.235727	0	0	0.003355	0	0
1.231783	19.8532	5.194501	0.006792	0.002142	0.000192
0.052833	7.383241	0	0.003558	0.007053	0
0	0	0	0	0	0
2.348652	32.39831	0	0	0	0
0	0	0	0	0	0
1.450219	2.563315	3.879398	0.007286	0.000729	0.000135
0.275405	13.57184	0	0.004371	0.008151	0
0	0	0	0	0	0
0	7.195949	0	0	0	0
0	0	0	0	0	0
1.528512	82.00277	8.818679	0.003666	0.010669	0.000231
0.344335	3.69285	0	0.004171	0.007215	0
0	0	0	0	0	0
16.18319	21.72664	0	0	0	0
0.339098	0	9.879577	0.022646	0	0.001191
0.117815	0	0	0.015616	0	0
0	0	0	0	0	0
40.39615	0	0	0	0	0

Source: EMFAC2025 (v2.1.0) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RUN	PM2.5_IDLI	PM2.5_STR	PM2.5_PMT	PM2.5_PMI	PM10_RUN	PM10_IDLE	PM10_STRE	PM10_PMT
Los Angeles	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84488	4046.703	4046.703	0	1717.584	7.792327	0	0.332239	0.001735	0	0.00124	0.005	0.034283	0.001886	0	0.001348	0.02
Los Angeles	2026	HHDT	Aggregate	Aggregate	Diesel	43166.22	5635385	5635385	0	712925	1.066852	37.94901	2.254752	0.013607	0.02195	0	0.008839	0.028175	0.014222	0.022943	0	0.035358
Los Angeles	2026	HHDT	Aggregate	Aggregate	Electricity	477.1548	47414.86	0	47414.86	5330.531	0	0	0	0	0	0	0.008999	0.014475	0	0	0	0.035997
Los Angeles	2026	HHDT	Aggregate	Aggregate	Natural Ga	4726.781	365382.5	365382.5	0	36077.09	0.712073	10.80385	0	0.001289	0.026046	0	0.009	0.047025	0.001402	0.028328	0	0.036
Los Angeles	2026	HHDT	Aggregate	Aggregate	Fuel Cell El	11.02775	1334.67	0	1334.67	161.8647	0	0	0	0	0	0	0.009	0.01469	0	0	0	0.036
Los Angeles	2026	LDA	Aggregate	Aggregate	Gasoline	2936460	86723722	86723722	0	12839242	0.064595	0	0.183602	0.002775	0	0.001983	0.002	0.002646	0.003012	0	0.002155	0.008
Los Angeles	2026	LDA	Aggregate	Aggregate	Diesel	6241.251	146250.6	146250.6	0	24401.74	0.448619	0	0	0.066326	0	0	0.002	0.002734	0.069325	0	0	0.008
Los Angeles	2026	LDA	Aggregate	Aggregate	Electricity	281465	10908486	0	10908486	1380216	0	0	0	0	0	0	0.0023	0.000888	0	0	0	0.0092
Los Angeles	2026	LDA	Aggregate	Aggregate	Plug-in Hyb	170168.2	6785925	3057640	3728285	645954.6	0.003382	0	0.09317	0.000964	0	0.001621	0.0023	0.001085	0.001049	0	0.001763	0.0092
Los Angeles	2026	LDA	Aggregate	Aggregate	Fuel Cell El	374.0038	17219.12	0	17219.12	1913.73	0	0	0	0	0	0	0.0023	0.000882	0	0	0	0.0092
Los Angeles	2026	LDT1	Aggregate	Aggregate	Gasoline	272982.7	7809301	7809301	0	1106898	0.269847	0	0.398168	0.00407	0	0.003119	0.002	0.003464	0.004421	0	0.00339	0.008
Los Angeles	2026	LDT1	Aggregate	Aggregate	Diesel	117.9735	2602.513	2602.513	0	317.8184	1.540528	0	0	0.297124	0	0	0.002	0.003866	0.310559	0	0	0.008
Los Angeles	2026	LDT1	Aggregate	Aggregate	Electricity	15133.04	697779.1	0	697779.1	75101.5	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092
Los Angeles	2026	LDT1	Aggregate	Aggregate	Plug-in Hyb	9905.566	467784.8	226603.2	241181.6	40340.24	0.003636	0	0.100384	0.00084	0	0.001281	0.0023	0.001087	0.000914	0	0.001393	0.0092
Los Angeles	2026	LDT2	Aggregate	Aggregate	Gasoline	1560649	54295985	54295985	0	7511761	0.081814	0	0.25216	0.002488	0	0.001825	0.002	0.00322	0.002705	0	0.001984	0.008
Los Angeles	2026	LDT2	Aggregate	Aggregate	Diesel	2703.519	92706.6	92706.6	0	13159.03	0.078751	0	0	0.009799	0	0	0.002	0.003261	0.010242	0	0	0.008
Los Angeles	2026	LDT2	Aggregate	Aggregate	Electricity	8259.685	376058.4	0	376058.4	43687.23	0	0	0	0	0	0	0.0023	0.000886	0	0	0	0.0092
Los Angeles	2026	LDT2	Aggregate	Aggregate	Plug-in Hyb	99946.9	4622422	2273214	2349208	425641.1	0.003691	0	0.101558	0.000877	0	0.001323	0.0023	0.001089	0.000954	0	0.001439	0.0092
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Gasoline	115818.1	3885776	3885776	0	1662872	0.183341	0.034018	0.573787	0.001139	0	0.00028	0.002	0.0273	0.001239	0	0.000305	0.008
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Diesel	46075.94	1646116	1646116	0	558535.8	1.27954	1.851751	0	0.021044	0.025961	0	0.003	0.0273	0.021996	0.027135	0	0.012
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Electricity	856.811	47356.84	0	47356.84	11311.02	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Gasoline	22369.44	837974.9	837974.9	0	365037.7	0.160222	0.034962	0.575462	0.001064	0	0.000228	0.002	0.03185	0.001157	0	0.000248	0.008
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Diesel	39609.47	1823720	1823720	0	545727.6	0.510495	1.406867	0	0.012196	0.029154	0	0.003	0.03185	0.012748	0.030473	0	0.012
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Electricity	918.3643	53156.89	0	53156.89	13779.45	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008
Los Angeles	2026	MCY	Aggregate	Aggregate	Gasoline	147185.6	881925.5	881925.5	0	282207.8	0.524027	0	0.11109	0.002713	0	0.003311	0.001	0.0042	0.002906	0	0.003532	0.004
Los Angeles	2026	MDV	Aggregate	Aggregate	Gasoline	936532.6	32241999	32241999	0	4275682	0.135701	0	0.3587	0.002538	0	0.001937	0.002	0.003304	0.002759	0	0.002106	0.008
Los Angeles	2026	MDV	Aggregate	Aggregate	Diesel	23829.25	978126.4	978126.4	0	116599.8	0.040305	0	0	0.003537	0	0	0.002	0.003076	0.003697	0	0	0.008
Los Angeles	2026	MDV	Aggregate	Aggregate	Electricity	31047.12	1447378	0	1447378	158270.3	0	0	0	0	0	0	0.0023	0.000885	0	0	0	0.0092
Los Angeles	2026	MDV	Aggregate	Aggregate	Plug-in Hyb	23961.85	1079046	539324.9	539720.8	99139.09	0.003751	0	0.100805	0.000965	0	0.001455	0.0023	0.001091	0.00105	0	0.001583	0.0092
Los Angeles	2026	MH	Aggregate	Aggregate	Gasoline	17272.37	161038.4	161038.4	0	1835.917	0.443586	0	0.406881	0.001467	0	0.000412	0.003	0.015247	0.001596	0	0.000448	0.012
Los Angeles	2026	MH	Aggregate	Aggregate	Diesel	6209.891	59826.16	59826.16	0	659.7984	3.05665	0	0	0.066977	0	0	0.004	0.01515	0.070005	0	0	0.016
Los Angeles	2026	MHDT	Aggregate	Aggregate	Gasoline	18454.61	868545	868545	0	369239.8	0.349322	0.089313	0.421403	0.001007	0	0.000504	0.003	0.015247	0.001096	0	0.000549	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Diesel	60382.95	2186752	2186752	0	752977.8	0.590508	7.875068	1.290271	0.004562	0.006321	0	0.003	0.015282	0.004769	0.006607	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Electricity	595.345	39779.81	0	39779.81	8687.796	0	0	0	0	0	0	0.003	0.007631	0	0	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Natural Ga	566.3628	23596.85	23596.85	0	5378.689	0.10918	6.480724	0	0.00088	0.017068	0	0.003	0.015236	0.000957	0.018564	0	0.012
Los Angeles	2026	MHDT	Aggregate	Aggregate	Fuel Cell El	1.439499	123.8574	0	123.8574	14.93387	0	0	0	0	0	0	0.003	0.007637	0	0	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Gasoline	3598.428	107134.8	107134.8	0	32038.82	0.488982	0.028881	0.386633	0.0008	0	0.000275	0.003	0.015433	0.00087	0	0.000299	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Diesel	1799.906	105496.8	105496.8	0	20972.6	1.614919	7.856951	1.523477	0.022379	0.009146	0	0.003	0.021509	0.023391	0.009559	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Electricity	192.3272	13143.52	0	13143.52	1711.738	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Natural Ga	452.0269	23309.53	23309.53	0	4023.039	0	1.540335	0	0	0.00383	0	0.003	0.015433	0	0.004165	0	0.012
Los Angeles	2026	OBUS	Aggregate	Aggregate	Fuel Cell El	0.395291	9.757475	0	9.757475	3.518088	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012
Los Angeles	2026	SBUS	Aggregate	Aggregate	Gasoline	1515.948	58236.18	58236.18	0	6063.791	0.387287	0.923902	0.673358	0.00134	0	0.000622	0.002	0.016396	0.001457	0	0.000676	0.008
Los Angeles	2026	SBUS	Aggregate	Aggregate	Diesel	1150.644	22216.1	22216.1	0	16661.32	7.343334	30.02655	0.293035	0.02367	0.018403	0	0.003	0.016396	0.024741	0.019235	0	0.012
Los Angeles	2026	SBUS	Aggregate	Aggregate	Electricity	63.71903	2113.92	0	2113.92	701.033	0	0	0	0	0	0	0.002617	0.008198	0	0	0	0.010467
Los Angeles	2026	SBUS	Aggregate	Aggregate	Natural Ga	1474.088	36187.69	36187.69	0	21344.8	0.491349	5.252678	0	0.004122	0.011792	0	0.003	0.016396	0.004483	0.012825	0	0.012
Los Angeles	2026	UBUS	Aggregate	Aggregate	Gasoline	401.0487	24243.83	24243.83	0	1604.195	0.234553	0	0.935865	0.002008	0	0.000994	0.002988	0.03842	0.002184	0	0.001081	0.011952
Los Angeles	2026	UBUS	Aggregate	Aggregate	Diesel	17.12539	1329.269	1329.269	0	68.50158	0.701843	0	0	0.005362	0	0	0.008044	0.0385	0.005604	0	0	0.032175
Los Angeles	2026	UBUS	Aggregate	Aggregate	Electricity	282.4009	23040.46	0	23040.46	1129.604	0	0	0	0	0	0	0.008143	0.01925	0	0	0	0.032572
Los Angeles	2026	UBUS	Aggregate	Aggregate	Natural Ga	3858.236	345206.1	345206.1	0	15432.94	0.526782	0	0	0.000425	0	0	0.008156	0.038441	0.000444	0	0	0.032622

PM10_PMB	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_DIURI	NH3_RUNE
0.097951	2162.807	0	55.88071	0.168666	0	1.15E-05	0.222171	0	0.011329	0.925321	0	4.89E-05	0.100768	0.87123	7.331791	1.350227	0	5.35E-05	0.100768	0.87123	7.331791	0.044725
0.0805	1507.638	14095.48	0	0.000574	0.292881	0	0.394263	0	0	0.01235	6.305654	0	0	0	0	0.01406	7.178507	0	0	0	0	0.216876
0.041356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.134358	1131.22	8670.325	0	2.628597	38.84821	0	0.37924	0	0	0.02051	0.370262	0	0	0	0	1.465016	26.44725	0	0	0	0	0.86316
0.041971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00756	321.1312	0	69.23122	0.007164	0	0.048484	0.006263	0	0.017124	0.033743	0	0.277192	0.213283	0.262627	2.125078	0.043829	0	0.303444	0.213283	0.262627	2.125078	0.030271
0.00781	301.7326	0	0	0.004871	0	0	0.047554	0	0	0.104865	0	0	0	0	0	0.119382	0	0	0	0	0	0.0031
0.002537	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003101	143.482	0	61.89034	0.000735	0	0.027362	0.000893	0	0.02071	0.001858	0	0.136932	0.036253	0.031104	0.381653	0.002712	0	0.149923	0.036253	0.031104	0.381653	0.014594
0.002521	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.009898	389.0428	0	89.33323	0.017277	0	0.094297	0.017518	0	0.028299	0.078796	0	0.610066	0.332575	0.650632	4.006795	0.110248	0	0.667903	0.332575	0.650632	4.006795	0.034616
0.011046	488.378	0	0	0.017828	0	0	0.076971	0	0	0.383822	0	0	0	0	0	0.436956	0	0	0	0	0	0.0031
0.002531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003106	154.3352	0	69.03189	0.00079	0	0.028873	0.00096	0	0.018366	0.001998	0	0.145521	0.024495	0.02237	0.282652	0.002915	0	0.159328	0.024495	0.02237	0.282652	0.015986
0.009201	382.839	0	83.72809	0.006316	0	0.052431	0.007136	0	0.019795	0.024515	0	0.304331	0.113825	0.23994	1.693575	0.034189	0	0.333188	0.113825	0.23994	1.693575	0.031472
0.009317	362.1532	0	0	0.001704	0	0	0.057077	0	0	0.036694	0	0	0	0	0	0.041774	0	0	0	0	0	0.0031
0.002531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003111	156.6586	0	73.28409	0.000802	0	0.029119	0.000975	0	0.020349	0.002028	0	0.14692	0.023494	0.023047	0.289325	0.00296	0	0.160859	0.023494	0.023047	0.289325	0.016228
0.078	611.1234	113.0655	24.63939	0.006873	0.051526	0.034213	0.014139	0.001849	0.040023	0.029776	0.389819	0.177733	0.050323	0.275574	3.009346	0.04345	0.568823	0.194595	0.050323	0.275574	3.009346	0.044936
0.078	488.5137	123.5434	0	0.004007	0.004913	0	0.076992	0	0	0.086261	0.105775	0	0	0	0	0.098203	0.120418	0	0	0	0	0.182847
0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.091	659.0819	145.6295	24.03839	0.005572	0.053499	0.036648	0.013644	0.001946	0.040553	0.022055	0.400787	0.191555	0.037578	0.234094	2.56318	0.032182	0.584827	0.209729	0.037578	0.234094	2.56318	0.044976
0.091	549.5594	209.9883	0	0.002974	0.005584	0	0.086613	0	0	0.064028	0.120222	0	0	0	0	0.072892	0.136864	0	0	0	0	0.206882
0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.012	209.6896	0	43.15191	0.197309	0	0.165751	0.038187	0	0.012025	1.263062	0	1.113718	3.765189	3.71632	3.857727	1.543606	0	1.211296	3.765189	3.71632	3.857727	0.008959
0.009439	469.299	0	103.3774	0.009173	0	0.069964	0.010114	0	0.024316	0.037049	0	0.438776	0.126593	0.309586	2.034369	0.052869	0	0.480393	0.126593	0.309586	2.034369	0.031586
0.008788	432.9896	0	0	0.000653	0	0	0.068241	0	0	0.014054	0	0	0	0	0	0.015999	0	0	0	0	0	0.0031
0.00253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003117	159.1852	0	90.62633	0.000816	0	0.028961	0.000991	0	0.021458	0.002061	0	0.146023	0.025962	0.025578	0.3136	0.003008	0	0.159877	0.025962	0.025578	0.3136	0.016494
0.043563	1775.166	0	31.19147	0.01523	0	0.028779	0.026313	0	0.03194	0.068938	0	0.146337	10.4032	0.260001	4.24601	0.100595	0	0.16022	10.4032	0.260001	4.24601	0.044791
0.043286	1020.972	0	0	0.002756	0	0	0.314661	0	0	0.059337	0	0	0	0	0	0.067551	0	0	0	0	0	0.173635
0.043563	1581.988	529.9764	44.62619	0.011059	0.124685	0.044766	0.021161	0.004198	0.032804	0.047989	1.003517	0.243299	0.034511	0.283184	2.937182	0.070025	1.46433	0.266381	0.034511	0.283184	2.937182	0.04498
0.043663	1083.529	2116.279	0	0.000453	0.008809	0	0.390986	0	0	0.009744	0.189651	0	0	0	0	0.011093	0.215903	0	0	0	0	0.215094
0.021803	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.043532	811.9706	4977.234	0	0.839945	32.04702	0	0.385721	0	0	0.007713	0.251901	0	0	0	0	0.55092	17.99296	0	0	0	0	1.06
0.021819	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.044095	1697.095	169.6894	31.46612	0.013131	0.042835	0.035898	0.026378	0.001495	0.030805	0.057741	0.331033	0.189881	0.099039	0.204812	3.902422	0.084255	0.483042	0.207896	0.099039	0.204812	3.902422	0.044983
0.061454	1330.93	2448.979	0	0.003649	0.039776	0	0.366939	0	0	0.078557	0.856356	0	0	0	0	0.089431	0.974896	0	0	0	0	0.202171
0.022048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.044095	0	1167.763	0	0	8.137128	0	0	0	0	0	0.061052	0	0	0	0	0	4.360874	0	0	0	0	1.06
0.022048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.046845	853.8927	2484.988	53.27733	0.015984	1.370976	0.062577	0.024068	0.047781	0.044973	0.078218	10.60186	0.373883	0.122013	0.3436	1.998864	0.114135	15.47021	0.409355	0.122013	0.3436	1.998864	0.044911
0.046845	1270.291	2318.716	0	0.006549	0.007525	0	0.18366	0	0	0.141001	0.162001	0	0	0	0	0.160519	0.184426	0	0	0	0	0.101709
0.023423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.046845	1661.998	4005.626	0	9.630085	30.64823	0	0.378585	0	0	0.066918	0.214774	0	0	0	0	4.779867	15.34098	0	0	0	0	1.06
0.109772	2285.715	0	119.853	0.007019	0	0.093344	0.021884	0	0.058129	0.021745	0	0.554673	0.034279	0.097509	0.447493	0.031731	0	0.607297	0.034279	0.097509	0.447493	0.045
0.11	1647.523	0	0	0.004306	0	0	0.4	0	0	0.092697	0	0	0	0	0	0.105529	0	0	0	0	0	0.22
0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.109832	2404.891	0	0	4.33257	0	0	0.4	0	0	0.04265	0	0	0	0	0	3.010776	0	0	0	0	0	0.97

CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
45.32907	0	5.033833	0.009285	0	0.00024
0.066011	92.34818	0	0.004951	0.046288	0
0	0	0	0	0	0
7.625932	77.79908	0	0	0	0
0	0	0	0	0	0
2.622063	0	3.10836	0.001379	0	0.000297
0.964314	0	0	0.000991	0	0
0	0	0	0	0	0
0.245154	0	1.158039	0.000616	0	0.000266
0	0	0	0	0	0
4.259692	0	6.26284	0.00167	0	0.000384
2.092186	0	0	0.001605	0	0
0	0	0	0	0	0
0.264003	0	1.23437	0.000663	0	0.000296
2.560096	0	3.210963	0.001644	0	0.000359
0.353646	0	0	0.00119	0	0
0	0	0	0	0	0
0.267892	0	1.246797	0.000673	0	0.000315
1.369877	3.621179	2.363879	0.002624	0.000485	0.000106
0.356622	0.876717	0	0.001605	0.000406	0
0	0	0	0	0	0
1.406553	4.121953	2.588957	0.00283	0.000625	0.000103
0.129381	0.996459	0	0.001806	0.00069	0
0	0	0	0	0	0
12.06887	0	7.175717	0.0009	0	0.000185
2.949988	0	3.680358	0.002015	0	0.000444
0.313634	0	0	0.001423	0	0
0	0	0	0	0	0
0.272086	0	1.238828	0.000683	0	0.000389
2.030341	0	3.277573	0.007621	0	0.000134
0.235727	0	0	0.003355	0	0
1.23943	14.36586	5.143353	0.006792	0.002275	0.000192
0.052833	7.189126	0	0.003558	0.00695	0
0	0	0	0	0	0
2.348652	32.39831	0	0	0	0
0	0	0	0	0	0
1.457154	2.563315	3.836167	0.007286	0.000729	0.000135
0.275405	13.19766	0	0.004371	0.008042	0
0	0	0	0	0	0
0	7.195949	0	0	0	0
0	0	0	0	0	0
1.536301	82.00277	8.521426	0.003666	0.010669	0.000229
0.344335	3.243177	0	0.004171	0.007614	0
0	0	0	0	0	0
16.18319	21.72664	0	0	0	0
0.340848	0	9.647941	0.022646	0	0.001187
0.117815	0	0	0.015616	0	0
0	0	0	0	0	0
40.39615	0	0	0	0	0

Source: EMFAC2025 (v2.1.0) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2045
Season: Summer
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	PM2.5_RUI	PM2.5_IDL	PM2.5_STR	PM2.5_PMT	PM2.5_PMI	PM10_RUN	PM10_IDLE	PM10_STRI	PM10_PMT	PM10_PMB	CO2_RUNE	CO2_IDLEX
Los Angeles	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.5124	694.5124	0	710.558	3.622601	0	0.012542	0.00069	0	0.000271	0.005	0.033368	0.00075	0	0.000295	0.02	0.095337	2055.133	0
Los Angeles	2045	HHDT	Aggregate	Aggregate	Diesel	64930.25	9302178	9302178	0	1149776	0.391269	10.64878	0.852804	0.011718	0.01453	0	0.008859	0.030096	0.012248	0.015187	0	0.035434	0.085988	1290.924	13331.97
Los Angeles	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164863	0	164863	19024.99	0	0	0	0	0	0	0.008994	0.015871	0	0	0	0.035977	0.045344	0	0
Los Angeles	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.631	392455.1	392455.1	0	40217.98	0.32655	10.0709	0	0.001494	0.038266	0	0.009	0.045532	0.001625	0.041617	0	0.036	0.13009	934.3374	9247.799
Los Angeles	2045	HHDT	Aggregate	Aggregate	Fuel Cell El	396.6577	35302.17	0	35302.17	4259.316	0	0	0	0	0	0	0.008997	0.01565	0	0	0	0.035988	0.044715	0	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	41775385	41775385	0	6815193	0.017544	0	0.048714	0.001219	0	0.000874	0.002	0.002646	0.001325	0	0.00095	0.008	0.00756	291.8574	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.817	5963.817	0	1179.636	0.214488	0	0	0.011963	0	0	0.002	0.002768	0.012504	0	0	0.008	0.007908	266.4442	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Electricity	894839.3	29528590	0	29528590	4428940	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Plug-in Hyb	432984.2	13305963	3052573	10253391	1107645	0.001469	0	0.040946	0.00024	0	0.00077	0.0023	0.001066	0.000261	0	0.000838	0.0092	0.003045	76.52085	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Fuel Cell El	5189.461	171366.5	0	171366.5	25726.06	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511	3312511	0	532890	0.031342	0	0.090553	0.001601	0	0.001153	0.002	0.003461	0.00174	0	0.001253	0.008	0.009889	348.0944	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Diesel	0.360451	7.653894	7.653894	0	1.033222	1.570022	0	0	0.062244	0	0	0.002	0.003866	0.065058	0	0	0.008	0.011046	615.1553	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880202	0	2880202	421540.5	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Plug-in Hyb	37496.06	1199845	342504	857341	104226	0.001828	0	0.051258	0.000304	0	0.000798	0.0023	0.001074	0.000331	0	0.000868	0.0092	0.003069	95.17076	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Fuel Cell El	948.8189	33819.89	0	33819.89	4870.62	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002545	0	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510	44059510	0	6499926	0.016952	0	0.062017	0.001124	0	0.000821	0.002	0.00328	0.001223	0	0.000893	0.008	0.009371	345.5576	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74048.47	74048.47	0	10796.89	0.038072	0	0	0.004638	0	0	0.002	0.003257	0.004847	0	0	0.008	0.009304	313.1617	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Electricity	128805.1	4669381	0	4669381	634707	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Plug-in Hyb	385281.9	13204349	3593086	9611263	1012671	0.001742	0	0.044616	0.000279	0	0.000759	0.0023	0.00107	0.000303	0	0.000826	0.0092	0.003058	90.80542	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Fuel Cell El	4763.076	173522.8	0	173522.8	23535.06	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002542	0	0
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479677	3479677	0	1633691	0.051692	0.024447	0.330972	0.000976	0	9.80E-05	0.002	0.0273	0.001061	0	0.000107	0.008	0.078	492.7867	102.5962
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Diesel	63325.98	2053719	2053719	0	791067.6	0.230451	1.181656	0	0.011182	0.026165	0	0.003	0.0273	0.011687	0.027348	0	0.012	0.078	446.8785	109.1258
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Electricity	9796.951	343816.6	0	343816.6	133279.2	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Fuel Cell El	1034.182	37109.68	0	37109.68	14069.18	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Gasoline	29684.31	983151.7	983151.7	0	432273.4	0.067198	0.019765	0.405138	0.00098	0	9.30E-05	0.002	0.03185	0.001065	0	0.000101	0.008	0.091	549.1354	114.9812
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Diesel	105621	3618522	3618522	0	1298603	0.15857	0.790368	0	0.011415	0.025812	0	0.003	0.03185	0.011932	0.026979	0	0.012	0.091	516.1092	170.3946
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Electricity	10150.75	364018.3	0	364018.3	135914	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Fuel Cell El	1069.616	39217.24	0	39217.24	14321.67	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0
Los Angeles	2045	MCY	Aggregate	Aggregate	Gasoline	195025.8	1014892	1014892	0	363996.6	0.421393	0	0.056377	0.002927	0	0.003447	0.001	0.0042	0.00314	0	0.003696	0.004	0.012	208.1867	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Gasoline	699870.1	21011790	21011790	0	3071588	0.027886	0	0.087193	0.001232	0	0.000896	0.002	0.003419	0.001339	0	0.000974	0.008	0.009768	421.0259	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Diesel	51681.67	1703682	1703682	0	239692.4	0.011977	0	0	0.000898	0	0	0.002	0.003293	0.000938	0	0	0.008	0.00941	398.6661	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Electricity	331156.1	11739124	0	11739124	1585277	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Plug-in Hyb	69222.53	2287142	645841.2	1641300	187241.3	0.001808	0	0.048521	0.000304	0	0.000802	0.0023	0.001074	0.000331	0	0.000873	0.0092	0.003069	94.16666	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Fuel Cell El	60195.19	2174156	0	2174156	290604	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002546	0	0
Los Angeles	2045	MH	Aggregate	Aggregate	Gasoline	19496.93	170484.6	170484.6	0	2158.489	0.150743	0	0.329634	0.00103	0	0.000344	0.003	0.015215	0.001121	0	0.000374	0.012	0.043471	1773.34	0
Los Angeles	2045	MH	Aggregate	Aggregate	Diesel	7643.898	66445.81	66445.81	0	845.9112	1.816161	0	0	0.018224	0	0	0.004	0.015123	0.019048	0	0	0.016	0.04321	1021.598	0
Los Angeles	2045	MHDT	Aggregate	Aggregate	Gasoline	10530.17	310212.8	310212.8	0	210687.7	0.08796	0.071572	0.324571	0.001019	0	0.000433	0.003	0.015215	0.001108	0	0.000471	0.012	0.043471	1402.455	496.6892
Los Angeles	2045	MHDT	Aggregate	Aggregate	Diesel	90359.22	3231921	3231921	0	1152183	0.083293	1.966639	0.416031	0.002605	0.001815	0	0.003	0.015248	0.002723	0.001897	0	0.012	0.043566	944.5634	1732.06
Los Angeles	2045	MHDT	Aggregate	Aggregate	Electricity	10685.52	617571.8	0	617571.8	196458.9	0	0	0	0	0	0	0.003	0.007606	0	0	0	0.012	0.021732	0	0
Los Angeles	2045	MHDT	Aggregate	Aggregate	Natural Ga	834.2593	32292.51	32292.51	0	10359.01	0.048429	5.247296	0	0.001211	0.019729	0	0.003	0.015251	0.001317	0.021457	0	0.012	0.043573	726.6491	4056.794
Los Angeles	2045	MHDT	Aggregate	Aggregate	Fuel Cell El	1173.685	68679.25	0	68679.25	21544.27	0	0	0	0	0	0	0.003	0.007606	0	0	0	0.012	0.021733	0	0
Los Angeles	2045	OBUS	Aggregate	Aggregate	Gasoline	1112.849	13519.08	13519.08	0	9908.315	0.250072	0.027346	0.351463	0.000862	0	0.00022	0.003	0.015434	0.000938	0	0.000239	0.012	0.044098	1563.284	163.6928
Los Angeles	2045	OBUS	Aggregate	Aggregate	Diesel	1767.728	108672.7	108672.7	0	23162.16	0.612093	3.289506	0.767309	0.009085	0.00379	0	0.003	0.025565	0.009495	0.003962	0	0.012	0.073044	1309.261	2931.935
Los Angeles	2045	OBUS	Aggregate	Aggregate	Electricity	1073.414	57112.04	0	57112.04	9554.384	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012	0.022049	0	0
Los Angeles	2045	OBUS	Aggregate	Aggregate	Natural Ga	438.1445	18324.45	18324.45	0	3899.486	0	1.507106	0	0	0.004622	0	0.003	0.015434	0	0.005027	0	0.012	0.044098	0	1149.473
Los Angeles	2045	OBUS	Aggregate	Aggregate	Fuel Cell El	108.1859	5895.114	0	5895.114	962.9641	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012	0.022049	0	0
Los Angeles	2045	SBUS	Aggregate	Aggregate	Gasoline	1078.714	38802.16	38802.16	0	4314.854	0.108369	0.718572	0.481671	0.001451	0	0.000743	0.002	0.016396	0.001578	0	0.000809	0.008	0.046845	760.5168	2238.703
Los Angeles	2045	SBUS	Aggregate	Aggregate	Diesel	505.165	12264.69	12264.69	0	7314.789	0.189426	2.805259	0.363704	0.002332	0.001449	0	0.003	0.016396	0.002437	0.001515	0	0.012	0.046845	1125.683	1839.562
Los Angeles	2045	SBUS	Aggregate	Aggregate	Electricity	1147.039	40336.74	0	40336.74	5522.311	0	0	0	0	0	0	0.002056	0.008198	0	0	0	0.008225	0.023423	0	0
Los Angeles	2045	SBUS	Aggregate	Aggregate	Natural Ga	1406.057	33993.7	33993.7	0	20359.7	0.219581	5.081325	0	0.004122	0.015879	0	0.003	0.016396	0.004483	0.01727	0	0.012	0.046845	1409.31	3961.289
Los Angeles	2045	SBUS	Aggregate	Aggregate	Fuel Cell El	120.9795	4310.893	0	4310.893	544.4584	0	0	0	0	0	0	0.002038	0.008198	0	0	0	0.008154	0.023423	0	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Gasoline	11.09202	342.2261	342.2261	0	44.36807	0.057659	0	0.34928	0.000983	0	0.000134	0.002	0.03185	0.001069	0	0.000145	0.008	0.091	536.0001	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Electricity	4779.181	414037.4	0	414037.4	19116.72	0	0	0	0	0	0	0.008092	0.01925	0	0	0	0.032367	0.055	0	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Natural Ga	49.80624	3606.596	3606.596	0	199.2249	0.111785	0	0	0.007997	0	0	0.003	0.03185	0.008359	0	0	0.012	0.091	522.514	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Fuel Cell El	531.0201	46004.15	0	46004.15	2124.08	0	0	0	0	0	0	0.008092	0.01925	0	0	0	0.032367	0.055	0	0

CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_DIURI	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
50.47294	0.124652	0	2.05E-06	0.14683	0	0.000568	0.627334	0	8.50E-06	0.051221	0.531325	6.343448	0.915405	0	9.30E-06	0.051221	0.531325	6.343448	0.045	34.52801	0	2.468058	0.008823	0	0.000217
0	0.000459	0.344329	0	0.399986	0	0	0.009884	7.413318	0	0	0	0	0.011252	8.439498	0	0	0	0	0.219992	0.045902	102.0215	0	0.004239	0.04378	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.680186	23.92008	0	0.399959	0	0	0.009586	0.340183	0	0	0	0	0.684701	24.29879	0	0	0	0	0.894794	4.356102	89.27726	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57.68237	0.002755	0	0.0163	0.002794	0	0.006776	0.010171	0	0.076955	0.111462	0.222752	2.041976	0.013719	0	0.084247	0.111462	0.222752	2.041976	0.032751	2.243963	0	1.917967	0.001253	0	0.000248
0	0.00173	0	0	0.041993	0	0	0.037239	0	0	0	0	0	0.042394	0	0	0	0	0	0.0031	0.686839	0	0	0.000876	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54.95507	0.000382	0	0.014812	0.000407	0	0.012093	0.00097	0	0.066446	0.060185	0.072701	0.772499	0.001415	0	0.07275	0.060185	0.072701	0.772499	0.007565	0.146322	0	0.508668	0.000329	0	0.000236
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69.80189	0.003877	0	0.024023	0.004	0	0.009875	0.014231	0	0.123069	0.158588	0.430823	3.216393	0.019646	0	0.134736	0.158588	0.430823	3.216393	0.03194	2.70187	0	2.249349	0.001494	0	0.0003
0	0.004948	0	0	0.096951	0	0	0.106527	0	0	0	0	0	0.121274	0	0	0	0	0	0.0031	1.234337	0	0	0.002021	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.17698	0.000476	0	0.016999	0.000506	0	0.013053	0.001207	0	0.0786	0.060631	0.109147	0.933165	0.001761	0	0.086057	0.060631	0.109147	0.933165	0.00942	0.181822	0	0.613332	0.000409	0	0.000276
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69.6625	0.002814	0	0.022617	0.002994	0	0.008094	0.008308	0	0.10938	0.058475	0.198859	1.405093	0.011927	0	0.119756	0.058475	0.198859	1.405093	0.032818	2.363781	0	1.985101	0.001484	0	0.000299
0	0.001389	0	0	0.049356	0	0	0.02991	0	0	0	0	0	0.03405	0	0	0	0	0	0.0031	0.312709	0	0	0.001029	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67.04552	0.000454	0	0.01559	0.000483	0	0.013808	0.00115	0	0.070771	0.055359	0.077055	0.720334	0.001678	0	0.077485	0.055359	0.077055	0.720334	0.00898	0.173794	0	0.545917	0.00039	0	0.000288
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.54603	0.002057	0.038984	0.029121	0.007521	0.001484	0.027689	0.005371	0.280786	0.146005	0.020669	0.179563	2.051659	0.007838	0.409722	0.159857	0.020669	0.179563	2.051659	0.045	0.954309	3.755318	1.627172	0.002116	0.00044	8.82E-05
0	0.001521	0.005063	0	0.07043	0	0	0.032743	0.109003	0	0	0	0	0.037275	0.124092	0	0	0	0	0.216246	0.242229	0.903471	0	0.001468	0.000359	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.87656	0.002677	0.032339	0.037295	0.009142	0.001271	0.032318	0.007276	0.227003	0.194288	0.018172	0.159657	1.806265	0.010618	0.331242	0.212721	0.018172	0.159657	1.806265	0.045	1.330425	3.696078	2.161652	0.002358	0.000494	8.96E-05
0	0.002342	0.004983	0	0.081341	0	0	0.050413	0.107283	0	0	0	0	0.057392	0.122135	0	0	0	0	0.219201	0.092174	0.889218	0	0.001696	0.00056	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.92531	0.181191	0	0.120718	0.033239	0	0.007848	1.103787	0	0.755381	3.933213	3.590977	3.614609	1.383223	0	0.82279	3.933213	3.590977	3.614609	0.009178	10.65279	0	6.266968	0.000894	0	0.000141
85.88922	0.003578	0	0.026411	0.003735	0	0.009486	0.011507	0	0.135737	0.073253	0.272077	1.820012	0.016591	0	0.148613	0.073253	0.272077	1.820012	0.032704	2.648015	0	2.164957	0.001808	0	0.000369
0	0.000457	0	0	0.062832	0	0	0.00985	0	0	0	0	0	0.011213	0	0	0	0	0	0.0031	0.325966	0	0	0.00131	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82.47886	0.000471	0	0.016419	0.000501	0	0.014529	0.001194	0	0.075374	0.061089	0.106556	0.901281	0.001742	0	0.082525	0.061089	0.106556	0.901281	0.009319	0.179986	0	0.585552	0.000404	0	0.000354
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.5427	0.003223	0	0.022671	0.015219	0	0.026887	0.008816	0	0.109242	2.701055	0.109773	2.020432	0.012864	0	0.119606	2.701055	0.109773	2.020432	0.045	0.157166	0	2.314714	0.007613	0	0.000127
0	0.001729	0	0	0.39314	0	0	0.037221	0	0	0	0	0	0.042373	0	0	0	0	0	0.216301	0.11078	0	0	0.003357	0	0
37.86244	0.004116	0.119513	0.036613	0.009281	0.003536	0.027135	0.013335	0.955405	0.189257	0.024775	0.333742	3.731294	0.019459	1.394125	0.207212	0.024775	0.333742	3.731294	0.045	0.307646	10.55057	3.346227	0.006021	0.002132	0.000163
0	0.000218	0.008532	0	0.399932	0	0	0.004703	0.183684	0	0	0	0	0.005354	0.20911	0	0	0	0	0.219963	0.035636	7.206229	0	0.003102	0.005688	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.605259	12.42435	0	0.399796	0	0	0.008555	0.173272	0	0	0	0	0.611095	12.3766	0	0	0	0	1.06	2.130229	39.3464	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28.9154	0.008045	0.043168	0.031709	0.017513	0.001432	0.029035	0.03218	0.333979	0.162399	0.108971	0.307246	6.249416	0.046957	0.487341	0.177806	0.108971	0.307246	6.249416	0.045	0.762463	2.58109	2.858181	0.006712	0.000703	0.000124
0	0.001154	0.060606	0	0.388615	0	0	0.024836	1.304833	0	0	0	0	0.028274	1.485453	0	0	0	0	0.213936	0.112256	18.77657	0	0.004299	0.009628	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.958652	0	0	0	0	0	0.05519	0	0	0	0	0	3.942159	0	0	0	0	1.06	0	8.98304	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44.98108	0.004677	1.375454	0.056598	0.011644	0.039432	0.034816	0.014631	10.64152	0.326035	0.121652	0.682216	3.91267	0.02135	15.52808	0.356967	0.121652	0.682216	3.91267	0.045	0.265344	82.24088	5.983831	0.003265	0.009611	0.000193
0	0.000502	0.00825	0	0.398681	0	0	0.010799	0.177611	0	0	0	0	0.012294	0.202196	0	0	0	0	0.219313	0.067662	6.935722	0	0.003697	0.006041	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	5.267377	19.41461	0	0.399312	0	0	0.051495	0.184545	0	0	0	0	3.678217	13.18182	0	0	0	0	1.06	10.91914	30.94204	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.54021	0.00253	0	0.048504	0.008291	0	0.029361	0.006822	0	0.268463	0.028175	0.108537	0.500067	0.009954	0	0.293933	0.028175	0.108537	0.500067	0.045	1.294494	0	3.213798	0.00531	0	0.000293
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.002442	0	0	0.4	0	0	0.052581	0	0	0	0	0	0.05986	0	0	0	0	0	0.97	0.071075	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: EMFAC2025 (v2.1.0) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2045
Season: Winter
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	PM2.5_RUI	PM2.5_IDL	PM2.5_STR	PM2.5_PMT	PM2.5_PMI	PM10_RUN	PM10_IDLE	PM10_STRI	PM10_PMT	PM10_PMB	CO2_RUNE	CO2_IDLEX
Los Angeles	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.5124	694.5124	0	710.558	4.038863	0	0.013249	0.00069	0	0.000271	0.005	0.033368	0.00075	0	0.000295	0.02	0.095337	2053.601	0
Los Angeles	2045	HHDT	Aggregate	Aggregate	Diesel	64930.25	9302178	9302178	0	1149776	0.40591	11.9745	0.852804	0.011718	0.01887	0	0.008859	0.030096	0.012248	0.019723	0	0.035434	0.085988	1290.924	13754.16
Los Angeles	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164863	0	164863	19024.99	0	0	0	0	0	0	0.008994	0.015871	0	0	0	0.035977	0.045344	0	0
Los Angeles	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.631	392455.1	392455.1	0	40217.98	0.349872	10.0709	0	0.001494	0.038266	0	0.009	0.045532	0.001625	0.041617	0	0.036	0.13009	934.3374	9247.799
Los Angeles	2045	HHDT	Aggregate	Aggregate	Fuel Cell El	396.6577	35302.17	0	35302.17	4259.316	0	0	0	0	0	0	0.008997	0.01565	0	0	0	0.035988	0.044715	0	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	41775385	41775385	0	6815193	0.020121	0	0.053505	0.001219	0	0.000874	0.002	0.002646	0.001325	0	0.00095	0.008	0.00756	274.4557	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.817	5963.817	0	1179.636	0.222663	0	0	0.011963	0	0	0.002	0.002768	0.012504	0	0	0.008	0.007908	266.4442	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Electricity	894839.3	29528590	0	29528590	4428940	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Plug-in Hyb	432984.2	13305963	3052573	10253391	1107645	0.001688	0	0.044889	0.00024	0	0.00077	0.0023	0.001066	0.000261	0	0.000838	0.0092	0.003045	71.69624	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Fuel Cell El	5189.461	171366.5	0	171366.5	25726.06	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511	3312511	0	532890	0.035971	0	0.099434	0.001601	0	0.001153	0.002	0.003461	0.00174	0	0.001253	0.008	0.009889	329.8701	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Diesel	0.360451	7.653894	7.653894	0	1.033222	1.629837	0	0	0.062244	0	0	0.002	0.003866	0.065058	0	0	0.008	0.011046	615.1553	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880202	0	2880202	421540.5	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Plug-in Hyb	37496.06	1199845	342504	857341	104226	0.0021	0	0.056284	0.000304	0	0.000798	0.0023	0.001074	0.000331	0	0.000868	0.0092	0.003069	89.20907	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Fuel Cell El	948.8189	33819.89	0	33819.89	4870.62	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002545	0	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510	44059510	0	6499926	0.01946	0	0.068128	0.001124	0	0.000821	0.002	0.00328	0.001223	0	0.000893	0.008	0.009371	328.878	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74048.47	74048.47	0	10796.89	0.039527	0	0	0.004638	0	0	0.002	0.003257	0.004847	0	0	0.008	0.009304	313.1617	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Electricity	128805.1	4669381	0	4669381	634707	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Plug-in Hyb	385281.9	13204349	3593086	9611263	1012671	0.002002	0	0.048944	0.000279	0	0.000759	0.0023	0.00107	0.000303	0	0.000826	0.0092	0.003058	85.04242	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Fuel Cell El	4763.076	173522.8	0	173522.8	23535.06	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002542	0	0
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479677	3479677	0	1633691	0.057223	0.024447	0.348754	0.000976	0	9.80E-05	0.002	0.0273	0.001061	0	0.000107	0.008	0.078	492.7504	102.5962
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Diesel	63325.98	2053719	2053719	0	791067.6	0.238684	1.181656	0	0.011182	0.026165	0	0.003	0.0273	0.011687	0.027348	0	0.012	0.078	446.8785	109.1258
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Electricity	9796.951	343816.6	0	343816.6	133279.2	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Fuel Cell El	1034.182	37109.68	0	37109.68	14069.18	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Gasoline	29684.31	983151.7	983151.7	0	432273.4	0.074383	0.019765	0.426908	0.00098	0	9.30E-05	0.002	0.03185	0.001065	0	0.000101	0.008	0.091	549.0848	114.9812
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Diesel	105621	3618522	3618522	0	1298603	0.164225	0.790368	0	0.011415	0.025812	0	0.003	0.03185	0.011932	0.026979	0	0.012	0.091	516.1092	170.3946
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Electricity	10150.75	364018.3	0	364018.3	135914	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Fuel Cell El	1069.616	39217.24	0	39217.24	14321.67	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0
Los Angeles	2045	MCY	Aggregate	Aggregate	Gasoline	195025.8	1014892	1014892	0	363996.6	0.467579	0	0.059901	0.002927	0	0.003447	0.001	0.0042	0.00314	0	0.003696	0.004	0.012	207.7226	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Gasoline	699870.1	21011790	21011790	0	3071588	0.032016	0	0.09577	0.001232	0	0.000896	0.002	0.003419	0.001339	0	0.000974	0.008	0.009768	404.0695	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Diesel	51681.67	1703682	1703682	0	239692.4	0.012435	0	0	0.000898	0	0	0.002	0.003293	0.000938	0	0	0.008	0.00941	398.6661	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Electricity	331156.1	11739124	0	11739124	1585277	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Plug-in Hyb	69222.53	2287142	645841.2	1641300	187241.3	0.002078	0	0.05326	0.000304	0	0.000802	0.0023	0.001074	0.000331	0	0.000873	0.0092	0.003069	88.24811	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Fuel Cell El	60195.19	2174156	0	2174156	290604	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002546	0	0
Los Angeles	2045	MH	Aggregate	Aggregate	Gasoline	19496.93	170484.6	170484.6	0	2158.489	0.168073	0	0.348316	0.00103	0	0.000344	0.003	0.015215	0.001121	0	0.000374	0.012	0.043471	1773.332	0
Los Angeles	2045	MH	Aggregate	Aggregate	Diesel	7643.898	66445.81	66445.81	0	845.9112	1.886882	0	0	0.018224	0	0	0.004	0.015123	0.019048	0	0	0.016	0.04321	1021.598	0
Los Angeles	2045	MHDT	Aggregate	Aggregate	Gasoline	10530.17	310212.8	310212.8	0	210687.7	0.098073	0.065712	0.342891	0.001019	0	0.000433	0.003	0.015215	0.001108	0	0.000471	0.012	0.043471	1402.441	450.7855
Los Angeles	2045	MHDT	Aggregate	Aggregate	Diesel	90359.22	3231921	3231921	0	1152183	0.086607	2.217318	0.416031	0.002605	0.002358	0	0.003	0.015248	0.002723	0.002465	0	0.012	0.043566	944.5634	1794.636
Los Angeles	2045	MHDT	Aggregate	Aggregate	Electricity	10685.52	617571.8	0	617571.8	196458.9	0	0	0	0	0	0	0.003	0.007606	0	0	0	0.012	0.021732	0	0
Los Angeles	2045	MHDT	Aggregate	Aggregate	Natural Ga	834.2593	32292.51	32292.51	0	10359.01	0.051849	5.247296	0	0.001211	0.019729	0	0.003	0.015251	0.001317	0.021457	0	0.012	0.043573	726.6491	4056.794
Los Angeles	2045	MHDT	Aggregate	Aggregate	Fuel Cell El	1173.685	68679.25	0	68679.25	21544.27	0	0	0	0	0	0	0.003	0.007606	0	0	0	0.012	0.021733	0	0
Los Angeles	2045	OBUS	Aggregate	Aggregate	Gasoline	1112.849	13519.08	13519.08	0	9908.315	0.276841	0.027346	0.371382	0.000862	0	0.00022	0.003	0.015434	0.000938	0	0.000239	0.012	0.044098	1563.253	163.6928
Los Angeles	2045	OBUS	Aggregate	Aggregate	Diesel	1767.728	108672.7	108672.7	0	23162.16	0.635603	3.582211	0.767309	0.009085	0.005036	0	0.003	0.025565	0.009495	0.005264	0	0.012	0.073044	1309.261	3019.444
Los Angeles	2045	OBUS	Aggregate	Aggregate	Electricity	1073.414	57112.04	0	57112.04	9554.384	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012	0.022049	0	0
Los Angeles	2045	OBUS	Aggregate	Aggregate	Natural Ga	438.1445	18324.45	18324.45	0	3899.486	0	1.507106	0	0	0.004622	0	0.003	0.015434	0	0.005027	0	0.012	0.044098	0	1149.473
Los Angeles	2045	OBUS	Aggregate	Aggregate	Fuel Cell El	108.1859	5895.114	0	5895.114	962.9641	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012	0.022049	0	0
Los Angeles	2045	SBUS	Aggregate	Aggregate	Gasoline	1078.714	38802.16	38802.16	0	4314.854	0.120398	0.718572	0.515801	0.001451	0	0.000743	0.002	0.016396	0.001578	0	0.000809	0.008	0.046845	760.5054	2238.703
Los Angeles	2045	SBUS	Aggregate	Aggregate	Diesel	505.165	12264.69	12264.69	0	7314.789	0.197108	3.144232	0.363704	0.002332	0.001883	0	0.003	0.016396	0.002437	0.001968	0	0.012	0.046845	1125.683	1903.973
Los Angeles	2045	SBUS	Aggregate	Aggregate	Electricity	1147.039	40336.74	0	40336.74	5522.311	0	0	0	0	0	0	0.002056	0.008198	0	0	0	0.008225	0.023423	0	0
Los Angeles	2045	SBUS	Aggregate	Aggregate	Natural Ga	1406.057	33993.7	33993.7	0	20359.7	0.235277	5.081325	0	0.004122	0.015879	0	0.003	0.016396	0.004483	0.01727	0	0.012	0.046845	1409.31	3961.289
Los Angeles	2045	SBUS	Aggregate	Aggregate	Fuel Cell El	120.9795	4310.893	0	4310.893	544.4584	0	0	0	0	0	0	0.002038	0.008198	0	0	0	0.008154	0.023423	0	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Gasoline	11.09202	342.2261	342.2261	0	44.36807	0.063958	0	0.369234	0.000983	0	0.000134	0.002	0.03185	0.001069	0	0.000145	0.008	0.091	535.95	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Electricity	4779.181	414037.4	0	414037.4	19116.72	0	0	0	0	0	0	0.008092	0.01925	0	0	0	0.032367	0.055	0	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Natural Ga	49.80624	3606.596	3606.596	0	199.2249	0.116121	0	0	0.007997	0	0	0.003	0.03185	0.008359	0	0	0.012	0.091	522.514	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Fuel Cell El	531.0201	46004.15	0	46004.15	2124.08	0	0	0	0	0	0	0.008092	0.01925	0	0	0	0.032367	0.055	0	0

CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
50.72031	0.121712	0	2.13E-06	0.158398	0	0.00059	0.610245	0	8.92E-06	0.049696	0.533318	6.260404	0.890468	0	9.77E-06	0.049696	0.533318	6.260404	0.045	33.60665	0	2.624305	0.008817	0	0.000218
0	0.000459	0.29809	0	0.399986	0	0	0.009884	6.41779	0	0	0	0	0.011252	7.306165	0	0	0	0	0.219992	0.045902	105.2045	0	0.004239	0.045167	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.680186	23.92008	0	0.399959	0	0	0.009586	0.340183	0	0	0	0	0.684701	24.29879	0	0	0	0	0.894794	4.356102	89.27726	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58.33526	0.002721	0	0.01831	0.003076	0	0.007234	0.010239	0	0.088204	0.10682	0.223463	1.864412	0.013719	0	0.096562	0.10682	0.223463	1.864412	0.032751	1.820966	0	2.306537	0.001178	0	0.00025
0	0.00173	0	0	0.041993	0	0	0.037239	0	0	0	0	0	0.042394	0	0	0	0	0	0.0031	0.686839	0	0	0.000876	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55.26119	0.000372	0	0.017604	0.000448	0	0.012911	0.000939	0	0.081292	0.057937	0.072774	0.728871	0.001371	0	0.089005	0.057937	0.072774	0.728871	0.007565	0.11661	0	0.670582	0.000308	0	0.000237
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70.59133	0.003814	0	0.026979	0.004404	0	0.010541	0.014176	0	0.140991	0.152723	0.432708	3.036876	0.019468	0	0.154356	0.152723	0.432708	3.036876	0.03194	2.195881	0	2.710034	0.001416	0	0.000303
0	0.004948	0	0	0.096951	0	0	0.106527	0	0	0	0	0	0.121274	0	0	0	0	0	0.0031	1.234337	0	0	0.002021	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.51411	0.000463	0	0.019979	0.000558	0	0.013942	0.001169	0	0.094863	0.058469	0.109285	0.89098	0.001706	0	0.103863	0.058469	0.109285	0.89098	0.00942	0.145088	0	0.791832	0.000383	0	0.000277
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70.36407	0.002747	0	0.025393	0.003296	0	0.008641	0.008121	0	0.125249	0.056331	0.1992	1.335636	0.011637	0	0.13713	0.056331	0.1992	1.335636	0.032818	1.913477	0	2.394631	0.001412	0	0.000302
0	0.001389	0	0	0.049356	0	0	0.02991	0	0	0	0	0	0.03405	0	0	0	0	0	0.0031	0.312709	0	0	0.001029	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67.36268	0.000441	0	0.018449	0.000532	0	0.014748	0.001114	0	0.086122	0.053245	0.07709	0.67668	0.001626	0	0.094293	0.053245	0.07709	0.67668	0.00898	0.138323	0	0.713734	0.000365	0	0.000289
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.7014	0.002013	0.038984	0.030193	0.008075	0.001484	0.028718	0.005238	0.280786	0.152597	0.020026	0.181532	2.002303	0.007643	0.409722	0.167074	0.020026	0.181532	2.002303	0.045	0.931738	3.755318	1.711351	0.002115	0.00044	8.89E-05
0	0.001521	0.005063	0	0.07043	0	0	0.032743	0.109003	0	0	0	0	0.037275	0.124092	0	0	0	0	0.216246	0.242229	0.903471	0	0.001468	0.000359	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21.08267	0.00262	0.032339	0.038667	0.009815	0.001271	0.03352	0.007096	0.227003	0.203052	0.017595	0.161622	1.760123	0.010354	0.331242	0.222317	0.017595	0.161622	1.760123	0.045	1.298965	3.696078	2.273274	0.002357	0.000494	9.05E-05
0	0.002342	0.004983	0	0.081341	0	0	0.050413	0.107283	0	0	0	0	0.057392	0.122135	0	0	0	0	0.219201	0.092174	0.889218	0	0.001696	0.00056	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34.68852	0.17754	0	0.131563	0.035734	0	0.008177	1.078816	0	0.836934	3.845235	4.041231	3.424008	1.35149	0	0.911584	3.845235	4.041231	3.424008	0.009178	10.41909	0	7.209467	0.000892	0	0.000149
86.66338	0.00349	0	0.029651	0.004113	0	0.010127	0.011222	0	0.155415	0.070765	0.272757	1.753722	0.016157	0	0.170158	0.070765	0.272757	1.753722	0.032704	2.146855	0	2.612267	0.001735	0	0.000372
0	0.000457	0	0	0.062832	0	0	0.00985	0	0	0	0	0	0.011213	0	0	0	0	0	0.0031	0.325966	0	0	0.00131	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82.80776	0.000458	0	0.019349	0.000552	0	0.01552	0.001156	0	0.091261	0.058883	0.106682	0.858462	0.001687	0	0.099919	0.058883	0.106682	0.858462	0.009319	0.143528	0	0.75965	0.000379	0	0.000356
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.81519	0.003146	0	0.023611	0.016418	0	0.027938	0.008574	0	0.114898	2.619049	0.111123	1.973233	0.012512	0	0.125799	2.619049	0.111123	1.973233	0.045	0.152972	0	2.474853	0.007613	0	0.000128
0	0.001729	0	0	0.39314	0	0	0.037221	0	0	0	0	0	0.042373	0	0	0	0	0	0.216301	0.11078	0	0	0.003357	0	0
38.22975	0.004019	0.135182	0.038151	0.010012	0.003332	0.028191	0.01297	1.101755	0.198775	0.024039	0.335742	3.686915	0.018926	1.607679	0.217634	0.024039	0.335742	3.686915	0.045	0.299436	20.0513	3.558067	0.006021	0.001935	0.000164
0	0.000218	0.007308	0	0.399932	0	0	0.004703	0.157335	0	0	0	0	0.005354	0.179114	0	0	0	0	0.219963	0.035636	7.44367	0	0.003102	0.005893	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.605259	12.42435	0	0.399796	0	0	0.008555	0.173272	0	0	0	0	0.611095	12.3766	0	0	0	0	1.06	2.130229	39.3464	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.25665	0.007878	0.043168	0.033023	0.018799	0.001432	0.03017	0.031405	0.333979	0.170807	0.105904	0.308347	6.201949	0.045826	0.487341	0.187012	0.105904	0.308347	6.201949	0.045	0.744676	2.58109	3.055919	0.006711	0.000703	0.000126
0	0.001154	0.05255	0	0.388615	0	0	0.024836	1.131388	0	0	0	0	0.028274	1.287999	0	0	0	0	0.213936	0.112256	19.41472	0	0.004299	0.009915	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.958652	0	0	0	0	0	0.05519	0	0	0	0	0	3.942159	0	0	0	0	1.06	0	8.98304	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.68596	0.004581	1.375454	0.063422	0.01253	0.039432	0.036512	0.014287	10.64152	0.374706	0.118176	0.687392	3.900485	0.020848	15.52808	0.410256	0.118176	0.687392	3.900485	0.045	0.259045	82.24088	7.589229	0.003265	0.009611	0.000205
0	0.000502	0.00708	0	0.398681	0	0	0.010799	0.152422	0	0	0	0	0.012294	0.173521	0	0	0	0	0.219313	0.067662	7.169518	0	0.003697	0.006252	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	5.267377	19.41461	0	0.399312	0	0	0.051495	0.184545	0	0	0	0	3.678217	13.18182	0	0	0	0	1.06	10.91914	30.94204	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30.3145	0.002475	0	0.051866	0.008914	0	0.030521	0.006649	0	0.292197	0.026965	0.113672	0.461731	0.009703	0	0.319919	0.026965	0.113672	0.461731	0.045	1.263344	0	3.652597	0.00531	0	0.0003
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.002442	0	0	0.4	0	0	0.052581	0	0	0	0	0	0.05986	0	0	0	0	0	0.97	0.071075	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: EMFAC2025 (v2.1.0) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2045
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	PM2.5_RUI	PM2.5_IDL	PM2.5_STR	PM2.5_PMT	PM2.5_PMI	PM10_RUN	PM10_IDLE	PM10_STRI	PM10_PMT	PM10_PMB	CO2_RUNE	CO2_IDLEX
Los Angeles	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.5124	694.5124	0	710.558	4.13756	0	0.013113	0.00069	0	0.000271	0.005	0.033368	0.00075	0	0.000295	0.02	0.095337	2053.942	0
Los Angeles	2045	HHDT	Aggregate	Aggregate	Diesel	64930.25	9302178	9302178	0	1149776	0.413145	11.20558	0.852804	0.011718	0.016353	0	0.008859	0.030096	0.012248	0.017092	0	0.035434	0.085988	1290.924	13509.29
Los Angeles	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164863	0	164863	19024.99	0	0	0	0	0	0	0.008994	0.015871	0	0	0	0.035977	0.045344	0	0
Los Angeles	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.631	392455.1	392455.1	0	40217.98	0.360581	10.0709	0	0.001494	0.038266	0	0.009	0.045532	0.001625	0.041617	0	0.036	0.13009	934.3374	9247.799
Los Angeles	2045	HHDT	Aggregate	Aggregate	Fuel Cell El	396.6577	35302.17	0	35302.17	4259.316	0	0	0	0	0	0	0.008997	0.01565	0	0	0	0.035988	0.044715	0	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	41775385	41775385	0	6815193	0.020533	0	0.052622	0.001219	0	0.000874	0.002	0.002646	0.001325	0	0.00095	0.008	0.00756	279.1402	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.817	5963.817	0	1179.636	0.226958	0	0	0.011963	0	0	0.002	0.002768	0.012504	0	0	0.008	0.007908	266.4442	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Electricity	894839.3	29528590	0	29528590	4428940	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Plug-in Hyb	432984.2	13305963	3052573	10253391	1107645	0.001722	0	0.04411	0.00024	0	0.00077	0.0023	0.001066	0.000261	0	0.000838	0.0092	0.003045	72.99519	0
Los Angeles	2045	LDA	Aggregate	Aggregate	Fuel Cell El	5189.461	171366.5	0	171366.5	25726.06	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511	3312511	0	532890	0.036705	0	0.097809	0.001601	0	0.001153	0.002	0.003461	0.00174	0	0.001253	0.008	0.009889	334.7757	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Diesel	0.360451	7.653894	7.653894	0	1.033222	1.661259	0	0	0.062244	0	0	0.002	0.003866	0.065058	0	0	0.008	0.011046	615.1553	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880202	0	2880202	421540.5	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Plug-in Hyb	37496.06	1199845	342504	857341	104226	0.002143	0	0.055288	0.000304	0	0.000798	0.0023	0.001074	0.000331	0	0.000868	0.0092	0.003069	90.81416	0
Los Angeles	2045	LDT1	Aggregate	Aggregate	Fuel Cell El	948.8189	33819.89	0	33819.89	4870.62	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002545	0	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510	44059510	0	6499926	0.019858	0	0.066999	0.001124	0	0.000821	0.002	0.00328	0.001223	0	0.000893	0.008	0.009371	333.3671	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74048.47	74048.47	0	10796.89	0.040292	0	0	0.004638	0	0	0.002	0.003257	0.004847	0	0	0.008	0.009304	313.1617	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Electricity	128805.1	4669381	0	4669381	634707	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002543	0	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Plug-in Hyb	385281.9	13204349	3593086	9611263	1012671	0.002042	0	0.048088	0.000279	0	0.000759	0.0023	0.00107	0.000303	0	0.000826	0.0092	0.003058	86.59402	0
Los Angeles	2045	LDT2	Aggregate	Aggregate	Fuel Cell El	4763.076	173522.8	0	173522.8	23535.06	0	0	0	0	0	0	0.0023	0.00089	0	0	0	0.0092	0.002542	0	0
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479677	3479677	0	1633691	0.058672	0.024447	0.345446	0.000976	0	9.80E-05	0.002	0.0273	0.001061	0	0.000107	0.008	0.078	492.7578	102.5962
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Diesel	63325.98	2053719	2053719	0	791067.6	0.242994	1.181656	0	0.011182	0.026165	0	0.003	0.0273	0.011687	0.027348	0	0.012	0.078	446.8785	109.1258
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Electricity	9796.951	343816.6	0	343816.6	133279.2	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0
Los Angeles	2045	LHDT1	Aggregate	Aggregate	Fuel Cell El	1034.182	37109.68	0	37109.68	14069.18	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Gasoline	29684.31	983151.7	983151.7	0	432273.4	0.076267	0.019765	0.422857	0.00098	0	9.30E-05	0.002	0.03185	0.001065	0	0.000101	0.008	0.091	549.0951	114.9812
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Diesel	105621	3618522	3618522	0	1298603	0.167187	0.790368	0	0.011415	0.025812	0	0.003	0.03185	0.011932	0.026979	0	0.012	0.091	516.1092	170.3946
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Electricity	10150.75	364018.3	0	364018.3	135914	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0
Los Angeles	2045	LHDT2	Aggregate	Aggregate	Fuel Cell El	1069.616	39217.24	0	39217.24	14321.67	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0
Los Angeles	2045	MCY	Aggregate	Aggregate	Gasoline	195025.8	1014892	1014892	0	363996.6	0.479486	0	0.059223	0.002927	0	0.003447	0.001	0.0042	0.00314	0	0.003696	0.004	0.012	207.8201	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Gasoline	699870.1	21011790	21011790	0	3071588	0.032669	0	0.094192	0.001232	0	0.000896	0.002	0.003419	0.001339	0	0.000974	0.008	0.009768	408.6329	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Diesel	51681.67	1703682	1703682	0	239692.4	0.012675	0	0	0.000898	0	0	0.002	0.003293	0.000938	0	0	0.008	0.00941	398.6661	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Electricity	331156.1	11739124	0	11739124	1585277	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002547	0	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Plug-in Hyb	69222.53	2287142	645841.2	1641300	187241.3	0.002119	0	0.052321	0.000304	0	0.000802	0.0023	0.001074	0.000331	0	0.000873	0.0092	0.003069	89.84159	0
Los Angeles	2045	MDV	Aggregate	Aggregate	Fuel Cell El	60195.19	2174156	0	2174156	290604	0	0	0	0	0	0	0.0023	0.000891	0	0	0	0.0092	0.002546	0	0
Los Angeles	2045	MH	Aggregate	Aggregate	Gasoline	19496.93	170484.6	170484.6	0	2158.489	0.172178	0	0.344695	0.00103	0	0.000344	0.003	0.015215	0.001121	0	0.000374	0.012	0.043471	1773.334	0
Los Angeles	2045	MH	Aggregate	Aggregate	Diesel	7643.898	66445.81	66445.81	0	845.9112	1.922858	0	0	0.018224	0	0	0.004	0.015123	0.019048	0	0	0.016	0.04321	1021.598	0
Los Angeles	2045	MHDT	Aggregate	Aggregate	Gasoline	10530.17	310212.8	310212.8	0	210687.7	0.100469	0.06913	0.339371	0.001019	0	0.000433	0.003	0.015215	0.001108	0	0.000471	0.012	0.043471	1402.444	477.5627
Los Angeles	2045	MHDT	Aggregate	Aggregate	Diesel	90359.22	3231921	3231921	0	1152183	0.088217	2.071924	0.416031	0.002605	0.002043	0	0.003	0.015248	0.002723	0.002135	0	0.012	0.043566	944.5634	1758.342
Los Angeles	2045	MHDT	Aggregate	Aggregate	Electricity	10685.52	617571.8	0	617571.8	196458.9	0	0	0	0	0	0	0.003	0.007606	0	0	0	0.012	0.021732	0	0
Los Angeles	2045	MHDT	Aggregate	Aggregate	Natural Ga	834.2593	32292.51	32292.51	0	10359.01	0.053512	5.247296	0	0.001211	0.019729	0	0.003	0.015251	0.001317	0.021457	0	0.012	0.043573	726.6491	4056.794
Los Angeles	2045	MHDT	Aggregate	Aggregate	Fuel Cell El	1173.685	68679.25	0	68679.25	21544.27	0	0	0	0	0	0	0.003	0.007606	0	0	0	0.012	0.021733	0	0
Los Angeles	2045	OBUS	Aggregate	Aggregate	Gasoline	1112.849	13519.08	13519.08	0	9908.315	0.284056	0.027346	0.367521	0.000862	0	0.00022	0.003	0.015434	0.000938	0	0.000239	0.012	0.044098	1563.259	163.6928
Los Angeles	2045	OBUS	Aggregate	Aggregate	Diesel	1767.728	108672.7	108672.7	0	23162.16	0.647348	3.412442	0.767309	0.009085	0.004314	0	0.003	0.025565	0.009495	0.004509	0	0.012	0.073044	1309.261	2968.689
Los Angeles	2045	OBUS	Aggregate	Aggregate	Electricity	1073.414	57112.04	0	57112.04	9554.384	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012	0.022049	0	0
Los Angeles	2045	OBUS	Aggregate	Aggregate	Natural Ga	438.1445	18324.45	18324.45	0	3899.486	0	1.507106	0	0	0.004622	0	0.003	0.015434	0	0.005027	0	0.012	0.044098	0	1149.473
Los Angeles	2045	OBUS	Aggregate	Aggregate	Fuel Cell El	108.1859	5895.114	0	5895.114	962.9641	0	0	0	0	0	0	0.003	0.007717	0	0	0	0.012	0.022049	0	0
Los Angeles	2045	SBUS	Aggregate	Aggregate	Gasoline	1078.714	38802.16	38802.16	0	4314.854	0.123274	0.718572	0.50808	0.001451	0	0.000743	0.002	0.016396	0.001578	0	0.000809	0.008	0.046845	760.5076	2238.703
Los Angeles	2045	SBUS	Aggregate	Aggregate	Diesel	505.165	12264.69	12264.69	0	7314.789	0.200619	2.947627	0.363704	0.002332	0.001631	0	0.003	0.016396	0.002437	0.001705	0	0.012	0.046845	1125.683	1866.615
Los Angeles	2045	SBUS	Aggregate	Aggregate	Electricity	1147.039	40336.74	0	40336.74	5522.311	0	0	0	0	0	0	0.002056	0.008198	0	0	0	0.008225	0.023423	0	0
Los Angeles	2045	SBUS	Aggregate	Aggregate	Natural Ga	1406.057	33993.7	33993.7	0	20359.7	0.242746	5.081325	0	0.004122	0.015879	0	0.003	0.016396	0.004483	0.01727	0	0.012	0.046845	1409.31	3961.289
Los Angeles	2045	SBUS	Aggregate	Aggregate	Fuel Cell El	120.9795	4310.893	0	4310.893	544.4584	0	0	0	0	0	0	0.002038	0.008198	0	0	0	0.008154	0.023423	0	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Gasoline	11.09202	342.2261	342.2261	0	44.36807	0.065542	0	0.365544	0.000983	0	0.000134	0.002	0.03185	0.001069	0	0.000145	0.008	0.091	535.96	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Electricity	4779.181	414037.4	0	414037.4	19116.72	0	0	0	0	0	0	0.008092	0.01925	0	0	0	0.032367	0.055	0	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Natural Ga	49.80624	3606.596	3606.596	0	199.2249	0.118294	0	0	0.007997	0	0	0.003	0.03185	0.008359	0	0	0.012	0.091	522.514	0
Los Angeles	2045	UBUS	Aggregate	Aggregate	Fuel Cell El	531.0201	46004.15	0	46004.15	2124.08	0	0	0	0	0	0	0.008092	0.01925	0	0	0	0.032367	0.055	0	0

CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_DIURI	NH3_RUNE	CO_RUNE	CO_IDLE	CO_STREA	SOx_RUNE	SOx_IDLE	SOx_STREA
50.67934	0.122363	0	2.12E-06	0.161093	0	0.000585	0.614023	0	8.84E-06	0.049854	0.530908	6.03433	0.895981	0	9.68E-06	0.049854	0.530908	6.03433	0.045	33.81171	0	2.598428	0.008818	0	0.000218
0	0.000459	0.324909	0	0.399986	0	0	0.009884	6.995196	0	0	0	0	0.011252	7.963498	0	0	0	0	0.219992	0.045902	103.3583	0	0.004239	0.044363	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.680186	23.92008	0	0.399959	0	0	0.009586	0.340183	0	0	0	0	0.684701	24.29879	0	0	0	0	0.894794	4.356102	89.27726	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58.21434	0.00273	0	0.017944	0.00312	0	0.007151	0.010237	0	0.086138	0.107474	0.222317	1.870053	0.013734	0	0.0943	0.107474	0.222317	1.870053	0.032751	1.933945	0	2.234535	0.001198	0	0.00025
0	0.00173	0	0	0.041993	0	0	0.037239	0	0	0	0	0	0.042394	0	0	0	0	0	0.0031	0.686839	0	0	0.000876	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55.20171	0.000374	0	0.01709	0.000455	0	0.012754	0.000946	0	0.078514	0.05823	0.072536	0.72369	0.001381	0	0.085963	0.05823	0.072536	0.72369	0.007565	0.124499	0	0.6389	0.000313	0	0.000237
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70.44454	0.003829	0	0.026441	0.004467	0	0.010421	0.014202	0	0.137698	0.153487	0.430505	3.016248	0.019524	0	0.150751	0.153487	0.430505	3.016248	0.03194	2.330991	0	2.624287	0.001437	0	0.000302
0	0.004948	0	0	0.096951	0	0	0.106527	0	0	0	0	0	0.121274	0	0	0	0	0	0.0031	1.234337	0	0	0.002021	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.44906	0.000466	0	0.01943	0.000566	0	0.013772	0.001177	0	0.091824	0.058742	0.10897	0.884128	0.001718	0	0.100536	0.058742	0.10897	0.884128	0.00942	0.154841	0	0.757183	0.00039	0	0.000277
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70.23314	0.002762	0	0.024887	0.003344	0	0.008542	0.008165	0	0.122331	0.056609	0.19839	1.326503	0.011704	0	0.133935	0.056609	0.19839	1.326503	0.032818	2.033322	0	2.318112	0.001431	0	0.000302
0	0.001389	0	0	0.049356	0	0	0.02991	0	0	0	0	0	0.03405	0	0	0	0	0	0.0031	0.312709	0	0	0.001029	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67.30122	0.000444	0	0.017923	0.000539	0	0.014568	0.001122	0	0.083251	0.053526	0.076854	0.673112	0.001638	0	0.09115	0.053526	0.076854	0.673112	0.00898	0.14774	0	0.680996	0.000372	0	0.000289
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.67619	0.002022	0.038984	0.029999	0.008217	0.001484	0.028528	0.005266	0.280786	0.1514	0.020098	0.179671	1.984343	0.007684	0.409722	0.165764	0.020098	0.179671	1.984343	0.045	0.936329	3.755318	1.697957	0.002116	0.00044	8.88E-05
0	0.001521	0.005063	0	0.07043	0	0	0.032743	0.109003	0	0	0	0	0.037275	0.124092	0	0	0	0	0.216246	0.242229	0.903471	0	0.001468	0.000359	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21.04918	0.002632	0.032339	0.038419	0.009988	0.001271	0.033298	0.007134	0.227003	0.20146	0.017661	0.15979	1.746454	0.010409	0.331242	0.220573	0.017661	0.15979	1.746454	0.045	1.305362	3.696078	2.255495	0.002357	0.000494	9.04E-05
0	0.002342	0.004983	0	0.081341	0	0	0.050413	0.107283	0	0	0	0	0.057392	0.122135	0	0	0	0	0.219201	0.092174	0.889218	0	0.001696	0.00056	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34.37929	0.178304	0	0.129548	0.036368	0	0.008114	1.084054	0	0.821672	3.851075	3.708418	3.085541	1.358139	0	0.894965	3.851075	3.708418	3.085541	0.009178	10.46821	0	7.046187	0.000892	0	0.000148
86.51882	0.00351	0	0.029061	0.004172	0	0.01001	0.011287	0	0.151795	0.071069	0.271662	1.736413	0.016255	0	0.166195	0.071069	0.271662	1.736413	0.032704	2.280231	0	2.528624	0.001754	0	0.000371
0	0.000457	0	0	0.062832	0	0	0.00985	0	0	0	0	0	0.011213	0	0	0	0	0	0.0031	0.325966	0	0	0.00131	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82.74419	0.000461	0	0.018809	0.00056	0	0.01533	0.001165	0	0.088292	0.059164	0.106373	0.852232	0.001699	0	0.096668	0.059164	0.106373	0.852232	0.009319	0.153208	0	0.725789	0.000386	0	0.000355
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.7678	0.003163	0	0.023429	0.016697	0	0.027736	0.008628	0	0.113801	2.627899	0.109941	1.95375	0.01259	0	0.124597	2.627899	0.109941	1.95375	0.045	0.153906	0	2.447245	0.007613	0	0.000128
0	0.001729	0	0	0.39314	0	0	0.037221	0	0	0	0	0	0.042373	0	0	0	0	0	0.216301	0.11078	0	0	0.003357	0	0
38.16823	0.00404	0.126079	0.037864	0.010182	0.003452	0.027989	0.013051	1.016384	0.196993	0.024115	0.333783	3.598021	0.019044	1.483105	0.215683	0.024115	0.333783	3.598021	0.045	0.301264	14.50921	3.522983	0.006021	0.00205	0.000164
0	0.000218	0.008018	0	0.399932	0	0	0.004703	0.172617	0	0	0	0	0.005354	0.196512	0	0	0	0	0.219963	0.035636	7.305954	0	0.003102	0.005774	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.605259	12.42435	0	0.399796	0	0	0.008555	0.173272	0	0	0	0	0.611095	12.3766	0	0	0	0	1.06	2.130229	39.3464	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29.19721	0.007911	0.043168	0.032769	0.01914	0.001432	0.029952	0.031559	0.333979	0.169175	0.106208	0.30709	5.965498	0.046051	0.487341	0.185226	0.106208	0.30709	5.965498	0.045	0.748186	2.58109	3.02183	0.006711	0.000703	0.000125
0	0.001154	0.057223	0	0.388615	0	0	0.024836	1.231986	0	0	0	0	0.028274	1.402522	0	0	0	0	0.213936	0.112256	19.0446	0	0.004299	0.009749	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.958652	0	0	0	0	0	0.05519	0	0	0	0	0	3.942159	0	0	0	0	1.06	0	8.98304	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.25055	0.004599	1.375454	0.062141	0.012738	0.039432	0.03613	0.014352	10.64152	0.365624	0.118591	0.684002	3.803408	0.020942	15.52808	0.400312	0.118591	0.684002	3.803408	0.045	0.260271	82.24088	7.333447	0.003265	0.009611	0.000203
0	0.000502	0.007758	0	0.398681	0	0	0.010799	0.167032	0	0	0	0	0.012294	0.190153	0	0	0	0	0.219313	0.067662	7.033916	0	0.003697	0.00613	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	5.267377	19.41461	0	0.399312	0	0	0.051495	0.184545	0	0	0	0	3.678217	13.18182	0	0	0	0	1.06	10.91914	30.94204	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30.17794	0.002486	0	0.051218	0.009067	0	0.030308	0.006685	0	0.287584	0.027139	0.109436	0.448319	0.009754	0	0.314868	0.027139	0.109436	0.448319	0.045	1.26957	0	3.576111	0.00531	0	0.000299
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.002442	0	0	0.4	0	0	0.052581	0	0	0	0	0	0.05986	0	0	0	0	0	0.97	0.071075	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Appendix D: Energy Consumption Information
Prepared by: MIG, Inc.
June 2026

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Appendix D: Energy Consumption Information

Sheet 1: Energy Consumption Comparison Tables

Table 1: Estimated Operational Change in Vehicle Fuel Consumption (2026 vs. 2045)					
Metric	**VMT and Vehicle Fuel Consumption**				
	2026	**2045 NP**		**2045 Project**	
		Metric	**Change**	**Metric**	**Change**
Total VMT (miles/yr)	1,512,525,184	1,422,453,819	*-90,071,365*	1,627,234,845	*114,709,661*
Total Gasoline VMT	*1,275,756,453*	*1,199,784,742*	*-75,971,711*	*915,917,182*	*-359,839,270*
Total Diesel VMT	*83,520,909*	*62,859,047*	*-20,661,862*	*149,273,892*	*65,752,983*
Total Electric VMT	*134,904,343*	*101,530,964*	*-33,373,379*	*541,407,727*	*406,503,385*
Total Fuel Cell VMT	*18,343,480*	*13,805,569*	*-4,537,911*	*20,636,043*	*2,292,563*
Gasoline Fuel Efficiency (miles/gal)	21.89	24.65	2.75	24.65	2.75
Diesel Fuel Efficiency (miles/gal)	9.10	10.32	1.22	10.32	1.22
Electric Fuel Efficiency (mile/kWh)	2.57	2.37	-0.21	2.37	-0.21
Hydrogen Fuel Efficiency (mile/kg)	0.05	0.05	0.00	0.05	0.00
Total Gasoline Consumption (Gallons/yr)	**58,271,470**	**48,680,850**	**-9,590,619**	**37,163,022**	**-21,108,447**
Total Diesel Consumption (Gallons/yr)	**9,174,815**	**6,088,735**	**-3,086,080**	**14,459,162**	**5,284,347**
Total Petrol Consumption (Gallons/yr)	**67,446,284**	**54,769,585**	**-12,676,700**	**51,622,184**	**-15,824,100**
Total Electricity Consumption (kWh/yr)	**52,400,316**	**42,928,274**	**-9,472,041**	**228,912,427**	**176,512,112**
Total Hydrogen Consumption (kg/yr)	**395,834,799**	**297,911,008**	**-97,923,791**	**445,306,126**	**49,471,328**
Service Population (SP)	167,487	169,083	1,596	200,136	32,649
Consumption Efficiency					
Gasoline Efficiency (gal / SP)	348	288	-60.01	186	-162.23
Diesel Efficiency (gal / SP)	55	36	-18.77	72	17.47
Total Petroleum Efficiency (gal/SP)	403	324	-79	258	-145
Electricity Efficiency (kWh / SP)	313	254	-58.97	1144	830.92
Hydrogen Efficiency (kg /SP)	2363	1762	-601.45	2225	-138.36

Table 2: Estimated Operational Change in Electricty Consumption (2026 vs. 2045)					
Metric	**Electricity Consumed (MWh/yr)**				
	2026	**2045 NP**		**2045 Project**	
		Metric	**Change**	**Metric**	**Change**
Building Electricity (MWh/yr)	635,845	635,845	0	717,322	81,477
Service Population (SP)	167,487	169,083	1,596	200,136	32,649
Electricitiy Consumption (MWh/yr/SP)	3.80	3.76	-0.04	3.58	-0.21

Table 3: Estimated Operational Change in Natural Gas Consumption (2026 vs. 2045)					
Metric	**Natural Gas Consumed (MMBtu/yr)**				
	2026	**2045 NP**		**2045 Project**	
		Metric	**Change**	**Metric**	**Change**
Total Natural Gas Consumption (MMB	1,654,189	1,654,189	0	1,900,391	246,202
Service Population (SP)	167,487	169,083	1,596	200,136	32,649
Electricitiy Consumption (MMBTU/yr/	9.88	9.78	-0.09	9.50	-0.38

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Sheet 2: Building Energy Summation

Table 1: 2026 / 2045 No Project Energy Consumption				
Land Use	2026 Existing Conditions		2045 No Project	
	Electricity (kWh)	Nautral Gas (kBTU)	Electricity (kWh)	Nautral Gas (kBTU)
Single Family Housing	160,015,632	889,648,379	160,015,632	889,648,379
Apartments Low Rise	--	--	--	--
Apartments Mid Rise	51,149,383	154,973,779	51,149,383	154,973,779
Regional Shopping Center	119,224,906	72,677,551	119,224,906	72,677,551
Hotel	13,349,489	27,542,563	13,349,489	27,542,563
General Office Building	57,497,154	81,780,377	57,497,154	81,780,377
Industrial Park	70,461,412	100,219,932	70,461,412	100,219,932
Government Office Building	22,567,611	32,098,766	22,567,611	32,098,766
Elementary School	29,863,876	100,176,881	29,863,876	100,176,881
Hospital	104,566,465	195,071,079	104,566,465	195,071,079
City Park	0	0	0	0
Golf Course	0	0	0	0
Parking Lot	7,149,117	0	7,149,117	0
TOTAL	635,845,044	1,654,189,308	635,845,044	1,654,189,308

Table 2: 2045 With Project Energy Consumption		
Land Use	Electricity (kWh)	Nautral Gas (kBTU)
Single Family Housing	172,040,765	956,505,222.54
Apartments Low Rise	11,957,672	50,841,096.15
Apartments Mid Rise	71,267,481	215,928,132.82
Regional Shopping Cent	117,992,413	71,926,243.11
Hotel	19,445,146	40,119,076.08
Government Office Buil	44,485,672	63,273,653.99
Elementary School	29,676,245	99,547,484.28
Hospital	107,381,840	200,323,223.84
City Park	0	0.00
Golf Course	0	0.00
Parking Lot	1,106,598	0.00
General Office Building	61,960,494	88,128,754.82
Industrial Park	80,007,739	113,798,034.87
TOTAL	717,322,064	1,900,390,922.49

Downey 2045 General Plan Update
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Appendix D: Energy Consumption Information

Sheet 3: Average Fuel Efficiency - Los Angeles (SC) Sub-Area

EMFAC2025 Los Angeles (SC) Sub-Area Fuel Efficiency Estimates for 2026 and 2045

Table 1: 2026 Los Angeles County Average Vehicle Fuel Efficiency (Gasoline)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Gallons Per Day	Miles Per Gallon
HHDT	85.84	4,046.70	1,030.72	3.93
LDA	3,106,628.37	89,781,362.47	3,465,809.67	25.90
LDT1	282,888.30	8,035,904.66	374,164.99	21.48
LDT2	1,660,595.77	56,569,198.35	2,582,669.43	21.90
LHDT1	115,818.12	3,885,776.44	282,923.75	13.73
LHDT2	22,369.44	837,974.92	65,737.94	12.75
MCY	147,185.65	881,925.54	22,960.99	38.41
MDV	960,494.42	32,781,324.23	1,835,158.33	17.86
MH	17,272.37	161,038.37	33,307.41	4.83
MHDT	18,454.61	868,545.05	163,118.14	5.32
OBUS	3,598.43	107,134.76	21,368.37	5.01
SBUS	1,515.95	58,236.18	6,269.17	9.29
UBUS	401.05	24,243.83	6,477.58	3.74
TOTAL	6,337,308.32	193,996,711.49	8,860,996.50	21.89

Table 2: 2026 Los Angeles County Average Vehicle Fuel Efficiency (Diesel)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Gallons Per Day	Miles Per Gallon
HHDT	43,166.22	5,635,385.49	896,826.55	6.28
LDA	6,241.25	146,250.65	4,346.80	33.65
LDT1	117.97	2,602.51	125.20	20.79
LDT2	2,703.52	92,706.60	3,307.14	28.03
LHDT1	46,075.94	1,646,116.37	79,771.88	20.64
LHDT2	39,609.47	1,823,720.23	99,543.12	18.32
MCY	0.00	0.00	0.00	0.00
MDV	23,829.25	978,126.40	41,717.81	23.45
MH	6,209.89	59,826.16	6,016.64	9.94
MHDT	60,382.95	2,186,752.30	245,981.25	8.89
OBUS	1,799.91	105,496.80	14,264.88	7.40
SBUS	1,150.64	22,216.10	3,042.65	7.30
UBUS	17.13	1,329.27	215.72	6.16
TOTAL	231,304.15	12,700,528.87	1,395,159.63	9.10

Table 3: 2026 Los Angeles County Average Vehicle Fuel Efficiency (Electricity)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Energy Consumption (kWh/Day)	Miles Per kWh
HHDT	477.15	47,414.86	83,888.29	0.57
LDA	451,633.16	14,636,770.85	4,994,278.30	2.93
LDT1	25,038.61	938,960.74	364,194.83	2.58
LDT2	108,206.58	2,725,266.30	1,305,003.97	2.09
LHDT1	856.81	47,356.84	26,498.74	1.79
LHDT2	918.36	53,156.89	29,744.18	1.79
MCY	0.00	0.00	0.00	0.00
MDV	55,008.97	1,987,098.47	1,047,352.86	1.90
MH	0.00	0.00	0.00	0.00
MHDT	595.35	39,779.81	49,445.03	0.80
OBUS	192.33	13,143.52	16,453.10	0.80
SBUS	63.72	2,113.92	2,905.10	0.73
UBUS	282.40	23,040.46	48,440.57	0.48
TOTAL	643,273.44	20,514,102.67	7,968,204.98	2.57

Table 3: 2026 Los Angeles County Average Vehicle Fuel Efficiency (Fuel Cell)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Hydrogen Consumption (kg/Day)	Miles Per kg
HHDT	64,930.25	35,302.17	4,305,115.77	0.01
LDA	5,189.46	171,366.47	2,623,090.04	0.07
LDT1	948.82	33,819.89	517,677.84	0.07
LDT2	4,763.08	173,522.83	2,656,097.21	0.07
LHDT1	1,034.18	37,109.68	1,445,242.56	0.03
LHDT2	1,069.62	39,217.24	1,527,321.81	0.03
MCY	0.00	0.00	0.00	0.00
MDV	60,195.19	2,174,156.43	33,279,602.51	0.07
MH	0.00	0.00	0.00	0.00
MHDT	1,173.69	68,679.25	5,990,788.27	0.01
OBUS	108.19	5,895.11	520,777.96	0.01
SBUS	120.98	4,310.89	429,186.27	0.01
UBUS	531.02	46,004.15	6,897,348.10	0.01
TOTAL	140,064.47	2,789,384.13	60,192,248.35	0.05

Table 5: 2045 Los Angeles County Average Vehicle Fuel Efficiency (Gasoline)				
Vehicle Class	Population	Vehicle Miles Travelled Per Day	Gallons Per Day	Miles Per Gallon
HHDT	35.51	694.51	170.37	4.08
LDA	1,963,036.36	44,827,958.08	1,524,883.22	29.40
LDT1	162,186.20	3,655,015.47	147,028.85	24.86
LDT2	1,797,852.53	47,652,595.93	1,905,305.33	25.01
LHDT1	110,416.15	3,479,676.70	204,991.18	16.97
LHDT2	29,684.31	983,151.68	64,343.47	15.28
MCY	195,025.84	1,014,891.87	26,027.04	38.99
MDV	769,092.59	21,657,631.42	1,056,886.60	20.49
MH	19,496.93	170,484.62	35,225.20	4.84
MHDT	10,530.17	310,212.78	52,201.87	5.94
OBUS	1,112.85	13,519.08	2,516.78	5.37
SBUS	1,078.71	38,802.16	3,742.58	10.37
UBUS	11.09	342.23	21.52	15.90
TOTAL	5,059,559.25	123,804,976.53	5,023,344.02	24.65

Table 6: 2045 Los Angeles County Average Vehicle Fuel Efficiency (Diesel)				
Vehicle Class	Population	Vehicle Miles Travelled Per Day	Gallons Per Day	Miles Per Gallon
HHDT	64,930.25	9,302,177.77	1,269,265.48	7.33
LDA	329.84	5,963.82	156.52	38.10
LDT1	0.36	7.65	0.46	16.50
LDT2	2,312.36	74,048.47	2,284.20	32.42
LHDT1	63,325.98	2,053,718.79	91,083.01	22.55
LHDT2	105,621.02	3,618,522.30	185,732.18	19.48
MCY	0.00	0.00	0.00	0.00
MDV	51,681.67	1,703,682.12	66,903.21	25.46
MH	7,643.90	66,445.81	6,686.47	9.94
MHDT	90,359.22	3,231,921.44	316,355.63	10.22
OBUS	1,767.73	108,672.66	14,532.01	7.48
SBUS	505.16	12,264.69	1,452.83	8.44
UBUS	0.00	0.00	0.00	0.00
TOTAL	388,477.49	20,177,425.52	1,954,452.01	10.32

Table 4: 2045 Los Angeles County Average Vehicle Fuel Efficiency (Electricity)				
Vehicle Class	Population	Vehicle Miles Travelled Per Day	Energy Consumption (kWh/Day)	Miles Per kWh
HHDT	2,388.06	164,863.05	293,013.64	0.56
LDA	1,327,823.45	39,781,980.65	13,578,353.88	2.93
LDT1	120,710.46	3,737,542.91	1,444,051.54	2.59
LDT2	514,087.00	14,280,644.92	6,639,037.08	2.15
LHDT1	9,796.95	343,816.64	193,051.09	1.78
LHDT2	10,150.75	364,018.31	204,394.22	1.78
MCY	0.00	0.00	0.00	0.00
MDV	400,378.61	13,380,424.63	6,822,808.85	1.96
MH	0.00	0.00	0.00	0.00
MHDT	10,685.52	617,571.84	770,472.69	0.80
OBUS	1,073.41	57,112.04	71,450.59	0.80
SBUS	1,147.04	40,336.74	55,433.63	0.73
UBUS	4,779.18	414,037.39	870,138.31	0.48
TOTAL	2,403,020.44	73,182,349.10	30,942,205.53	2.37

Table 6: 2045 Los Angeles County Average Vehicle Fuel Efficiency (Fuel Cell)				
Vehicle Class	Population	Vehicle Miles Travelled Per Day	Hydrogen Consumption (kg/Day)	Miles Per Gallon
HHDT	396.66	35,302.17	4,305,115.77	0.01
LDA	5,189.46	171,366.47	2,623,090.04	0.07
LDT1	948.82	33,819.89	517,677.84	0.07
LDT2	4,763.08	173,522.83	2,656,097.21	0.07
LHDT1	1,034.18	37,109.68	1,445,242.56	0.03
LHDT2	1,069.62	39,217.24	1,527,321.81	0.03
MCY	0.00	0.00	0.00	0.00
MDV	60,195.19	2,174,156.43	33,279,602.51	0.07
MH	0.00	0.00	0.00	0.00
MHDT	1,173.69	68,679.25	5,990,788.27	0.01
OBUS	108.19	5,895.11	520,777.96	0.01
SBUS	120.98	4,310.89	429,186.27	0.01
UBUS	531.02	46,004.15	6,897,348.10	0.01
TOTAL	75,530.87	2,789,384.13	60,192,248.35	0.05

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Sheet 4: Raw EMFAC Output - Los Angeles (SC) Sub-Area 2026

Source: EMFAC2025 (v2.1.0) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Gasoline and Diesel Fuel Consumption, 1000 diesel equivalent gallons/day for Natural Gas Fuel Consumption, kWh/day for Energy Consumption, kg/day for H

Region	Calendar Y	Vehicle C	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Cor	Hydrogen (	NOx_RUNE	NOx_IDLEX	NOx_STRE	NOx_TOTE	PM2.5_RUI	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PM
Los Angeles	2026	HHDT	Aggregate	Aggregate	Gasoline	85.84487598	4046.703	4046.703	0	1717.584	0	0	0.034759	0	0.000629	0.035388	7.74E-06	0	2.35E-06	1.01E-05	2.23E-05
Los Angeles	2026	HHDT	Aggregate	Aggregate	Diesel	43166.2196	5635385	5635385	0	712925	0	0	6.62723	1.80571239	1.771931	10.20487	0.084527	0.001044448	0	0.085571147	0.05491
Los Angeles	2026	HHDT	Aggregate	Aggregate	Electricity	477.1547593	47414.86	0	47414.86	5330.531	83888.29	0	0	0	0	0	0	0	0	0	0.00047
Los Angeles	2026	HHDT	Aggregate	Aggregate	Natural Gas	4726.781048	365382.5	365382.5	0	36077.09	0	0	0.286798	0.05629217	0	0.34309	0.000519	0.000135711	0	0.000654946	0.003625
Los Angeles	2026	HHDT	Aggregate	Aggregate	Fuel Cell Electric V	11.02775257	1334.67	0	1334.67	161.8647	0	162.7237	0	0	0	0	0	0	0	0	1.32E-05
Los Angeles	2026	LDA	Aggregate	Aggregate	Gasoline	2936460.224	86723722	86723722	0	12839242	0	0	6.175012	0	2.59849	8.773502	0.265263	0	0.028067507	0.293330956	0.191193
Los Angeles	2026	LDA	Aggregate	Aggregate	Diesel	6241.250656	146250.6	146250.6	0	24401.74	0	0	0.072324	0	0	0.072324	0.010693	0	0	0.010692626	0.000322
Los Angeles	2026	LDA	Aggregate	Aggregate	Electricity	281465.004	10908486	0	10908486	1380216	3625763	0	0	0	0	0	0	0	0	0	0.027656
Los Angeles	2026	LDA	Aggregate	Aggregate	Plug-in Hybrid	170168.1513	6785925	3057640	3728285	645954.6	1368515	0	0.025297	0	0.066341	0.091639	0.007214	0	0.001153947	0.008368021	0.017204
Los Angeles	2026	LDA	Aggregate	Aggregate	Fuel Cell Electric V	374.00382	17219.12	0	17219.12	1913.73	0	263.5715	0	0	0	0	0	0	0	0	4.37E-05
Los Angeles	2026	LDT1	Aggregate	Aggregate	Gasoline	272982.7292	7809301	7809301	0	1106898	0	0	2.322917	0	0.485823	2.80874	0.035033	0	0.003805223	0.03883805	0.017217
Los Angeles	2026	LDT1	Aggregate	Aggregate	Diesel	117.9734873	2602.513	2602.513	0	317.8184	0	0	0.004419	0	0	0.004419	0.000852	0	0	0.000852384	5.74E-06
Los Angeles	2026	LDT1	Aggregate	Aggregate	Electricity	15133.04293	697779.1	0	697779.1	75101.5	260821.3	0	0	0	0	0	0	0	0	0	0.001769
Los Angeles	2026	LDT1	Aggregate	Aggregate	Plug-in Hybrid	9905.566092	467784.8	226603.2	241181.6	40340.24	103373.6	0	0.001875	0	0.004464	0.006339	0.000433	0	5.70E-05	0.000490297	0.001186
Los Angeles	2026	LDT2	Aggregate	Aggregate	Gasoline	1560648.872	54295985	54295985	0	7511761	0	0	4.896654	0	2.087958	6.984612	0.14893	0	0.015109692	0.164039475	0.119702
Los Angeles	2026	LDT2	Aggregate	Aggregate	Diesel	2703.518811	92706.6	92706.6	0	13159.03	0	0	0.008048	0	0	0.008048	0.001001	0	0	0.001001345	0.000204
Los Angeles	2026	LDT2	Aggregate	Aggregate	Electricity	8259.684786	376058.4	0	376058.4	43687.23	156137.7	0	0	0	0	0	0	0	0	0	0.000953
Los Angeles	2026	LDT2	Aggregate	Aggregate	Plug-in Hybrid	99946.89798	4622422	2273214	2349208	425641.1	1148866	0	0.018808	0	0.04765	0.066457	0.00447	0	0.000620626	0.005091023	0.011719
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Gasoline	115818.1215	3885776	3885776	0	1662872	0	0	0.785312	0.00434306	1.051753	1.841408	0.004879	0	0.000513909	0.005392858	0.008567
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Diesel	46075.94409	1646116	1646116	0	558535.8	0	0	2.321766	0.09405046	0	2.415817	0.038185	0.001318559	0	0.039503941	0.005444
Los Angeles	2026	LHDT1	Aggregate	Aggregate	Electricity	856.8109666	47356.84	0	47356.84	11311.02	26498.74	0	0	0	0	0	0	0	0	0	0.000104
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Gasoline	22369.44283	837974.9	837974.9	0	365037.7	0	0	0.147999	0.00086209	0.231557	0.380418	0.000983	0	9.17E-05	0.00107469	0.001847
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Diesel	39609.4707	1823720	1823720	0	545727.6	0	0	1.026252	0.06142657	0	1.087679	0.024518	0.001272938	0	0.025791045	0.006031
Los Angeles	2026	LHDT2	Aggregate	Aggregate	Electricity	918.3643385	53156.89	0	53156.89	13779.45	29744.18	0	0	0	0	0	0	0	0	0	0.000117
Los Angeles	2026	MCY	Aggregate	Aggregate	Gasoline	147185.6482	881925.5	881925.5	0	282207.8	0	0	0.509436	0	0.034558	0.543994	0.002638	0	0.001030077	0.003667725	0.000972
Los Angeles	2026	MDV	Aggregate	Aggregate	Gasoline	936532.5778	32241999	32241999	0	4275682	0	0	4.822908	0	1.690598	6.513506	0.090206	0	0.009130571	0.099336443	0.071081
Los Angeles	2026	MDV	Aggregate	Aggregate	Diesel	23829.25464	978126.4	978126.4	0	116599.8	0	0	0.043457	0	0	0.043457	0.003814	0	0	0.003813583	0.002156
Los Angeles	2026	MDV	Aggregate	Aggregate	Electricity	31047.12476	1447378	0	1447378	158270.3	717569.8	0	0	0	0	0	0	0	0	0	0.00367
Los Angeles	2026	MDV	Aggregate	Aggregate	Plug-in Hybrid	23961.84506	1079046	539324.9	539720.8	99139.09	329783.1	0	0.004462	0	0.011016	0.015478	0.001148	0	0.000159041	0.001307287	0.002736
Los Angeles	2026	MH	Aggregate	Aggregate	Gasoline	17272.37138	161038.4	161038.4	0	1835.917	0	0	0.078743	0	0.000823	0.079566	0.00026	0	8.34E-07	0.000261302	0.000533
Los Angeles	2026	MH	Aggregate	Aggregate	Diesel	6209.890914	59826.16	59826.16	0	659.7984	0	0	0.201577	0	0	0.201577	0.004417	0	0	0.004416934	0.000264
Los Angeles	2026	MHDT	Aggregate	Aggregate	Gasoline	18454.6084	868545	868545	0	369239.8	0	0	0.334443	0.00181686	0.171518	0.507778	0.000965	0	0.000205289	0.00116984	0.002872
Los Angeles	2026	MHDT	Aggregate	Aggregate	Diesel	60382.94783	2186752	2186752	0	752977.8	0	0	1.423408	0.52417071	1.070945	3.018524	0.010997	0.000420729	0	0.011418123	0.007231
Los Angeles	2026	MHDT	Aggregate	Aggregate	Electricity	595.3450195	39779.81	0	39779.81	8687.796	49445.03	0	0	0	0	0	0	0	0	0	0.000132
Los Angeles	2026	MHDT	Aggregate	Aggregate	Natural Gas	566.3628051	23596.85	23596.85	0	5378.689	0	0	0.00284	0.00404597	0	0.006886	2.29E-05	1.07E-05	0	3.35E-05	7.80E-05
Los Angeles	2026	MHDT	Aggregate	Aggregate	Fuel Cell Electric V	1.439498772	123.8574	0	123.8574	14.93387	0	10.81185	0	0	0	0	0	0	0	0	4.10E-07
Los Angeles	2026	OBUS	Aggregate	Aggregate	Gasoline	3598.427887	107134.8	107134.8	0	32038.82	0	0	0.057747	0.00011456	0.013655	0.071516	9.44E-05	0	9.71E-06	0.000104144	0.000354
Los Angeles	2026	OBUS	Aggregate	Aggregate	Diesel	1799.906232	105496.8	105496.8	0	20972.6	0	0	0.187799	0.01558864	0.03522	0.238608	0.002602	1.81E-05	0	0.002620622	0.000349
Los Angeles	2026	OBUS	Aggregate	Aggregate	Electricity	192.3271878	13143.52	0	13143.52	1711.738	16453.1	0	0	0	0	0	0	0	0	0	4.35E-05
Los Angeles	2026	OBUS	Aggregate	Aggregate	Natural Gas	452.0268551	23309.53	23309.53	0	4023.039	0	0	0	0.00076751	0	0.000768	0	1.91E-06	0	1.91E-06	7.71E-05
Los Angeles	2026	OBUS	Aggregate	Aggregate	Fuel Cell Electric V	0.395290766	9.757475	0	9.757475	3.518088	0	0.86113	0	0	0	0	0	0	0	0	3.23E-08
Los Angeles	2026	SBUS	Aggregate	Aggregate	Gasoline	1515.94775	58236.18	58236.18	0	6063.791	0	0	0.024862	0.00154388	0.004501	0.030906	8.60E-05	0	4.16E-06	9.02E-05	0.000128
Los Angeles	2026	SBUS	Aggregate	Aggregate	Diesel	1150.643735	22216.1	22216.1	0	16661.32	0	0	0.179831	0.03808469	0.005382	0.223298	0.00058	2.33E-05	0	0.000603007	7.35E-05
Los Angeles	2026	SBUS	Aggregate	Aggregate	Electricity	63.71903267	2113.92	0	2113.92	701.033	2905.1	0	0	0	0	0	0	0	0	0	6.10E-06
Los Angeles	2026	SBUS	Aggregate	Aggregate	Natural Gas	1474.088405	36187.69	36187.69	0	21344.8	0	0	0.0196	0.0085351	0	0.028135	0.000164	1.92E-05	0	0.000183581	0.00012
Los Angeles	2026	UBUS	Aggregate	Aggregate	Gasoline	401.0487095	24243.83	24243.83	0	1604.195	0	0	0.006268	0	0.001655	0.007923	5.37E-05	0	1.76E-06	5.54E-05	7.99E-05
Los Angeles	2026	UBUS	Aggregate	Aggregate	Diesel	17.12539432	1329.269	1329.269	0	68.50158	0	0	0.001028	0	0	0.001028	7.86E-06	0	0	7.86E-06	1.18E-05
Los Angeles	2026	UBUS	Aggregate	Aggregate	Electricity	282.400917	23040.46	0	23040.46	1129.604	48440.57	0	0	0	0	0	0	0	0	0	0.000207
Los Angeles	2026	UBUS	Aggregate	Aggregate	Natural Gas	3858.236227	345206.1	345206.1	0	15432.94	0	0	0.200454	0	0	0.200454	0.000162	0	0	0.000161749	0.003103

lydrogen Consumption

PM2.5_PM	PM2.5_TO	PM10_RUN	PM10_IDLE	PM10_STR	PM10_TOT	PM10_PM	PM10_PME	PM10_TOT	CO2_RUNE	CO2_IDLEX	CO2_STRE	CO2_TOTE	CH4_RUNE	CH4_IDLEX	CH4_STRE	CH4_TOTE	N2O_RUNE	N2O_IDLEX	N2O_STRE	N2O_TOTE	ROG_RUNE	ROG_IDLEX	ROG_STRE
0.000153	0.000185	8.41E-06	0	2.55E-06	1.10E-05	8.92E-05	0.000437	0.000537	9.647687	0	0.1058	9.753486	0.000752	0	2.18E-08	0.000752	0.000991	0	2.14E-05	0.001012	0.004128	0	9.25E-08
0.175022	0.315504	0.088349	0.001092	0	0.08944	0.21964	0.500064	0.809144	9365.366	670.6994	0	10036.07	0.003563	0.013936	0	0.017499	2.449139	0	0	2.449139	0.076717	0.300039	0
0.000757	0.001227	0	0	0	0	0.001881	0.002161	0.004043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.01894	0.02322	0.000565	0.000148	0	0.000712	0.0145	0.054115	0.069327	455.6161	45.17571	0	500.7918	1.058707	0.202414	0	1.261121	0.152745	0	0	0.152745	0.008261	0.001929	0
2.16E-05	3.49E-05	0	0	0	0	5.30E-05	6.17E-05	0.000115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.252963	0.737487	0.287933	0	0.030497	0.31843	0.764772	0.722753	1.805955	30699.03	0	979.8182	31678.84	0.684877	0	0.686182	1.37106	0.598691	0	0.242349	0.84104	3.225681	0	3.923049
0.000441	0.011456	0.011176	0	0	0.011176	0.00129	0.001259	0.013725	48.64343	0	0	48.64343	0.000785	0	0	0.000785	0.007666	0	0	0.007666	0.016906	0	0
0.010675	0.038332	0	0	0	0	0.110626	0.0305	0.141126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.008118	0.03369	0.007846	0	0.001255	0.009101	0.068818	0.023193	0.101112	1073.274	0	44.06858	1117.343	0.005499	0	0.019483	0.024983	0.006681	0	0.014746	0.021427	0.0139	0	0.097501
1.68E-05	6.04E-05	0	0	0	0	0.000175	4.79E-05	0.000222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.029823	0.085877	0.038057	0	0.004136	0.042193	0.068866	0.085208	0.196267	3348.989	0	108.9996	3457.988	0.148727	0	0.115056	0.263783	0.150798	0	0.034529	0.185327	0.678301	0	0.744369
1.11E-05	0.000869	0.000891	0	0	0.000891	2.30E-05	3.17E-05	0.000946	1.401048	0	0	1.401048	5.11E-05	0	0	5.11E-05	0.000221	0	0	0.000221	0.001101	0	0
0.000681	0.00245	0	0	0	0	0.007076	0.001947	0.009023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000561	0.002237	0.000471	0	6.20E-05	0.000533	0.004744	0.001602	0.006879	79.58208	0	3.069675	82.65176	0.000408	0	0.001284	0.001691	0.000495	0	0.000817	0.001312	0.00103	0	0.006471
0.192739	0.476481	0.161871	0	0.016428	0.178298	0.478809	0.550684	1.207791	22913.32	0	693.2935	23606.61	0.377998	0	0.434141	0.81214	0.427106	0	0.16391	0.591016	1.46722	0	2.519949
0.000333	0.001539	0.001047	0	0	0.001047	0.000818	0.000952	0.002816	37.00898	0	0	37.00898	0.000174	0	0	0.000174	0.005833	0	0	0.005833	0.00375	0	0
0.000367	0.001321	0	0	0	0	0.003814	0.001049	0.004863	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.005548	0.022359	0.004862	0	0.000675	0.005537	0.046877	0.015852	0.068266	798.2297	0	34.38408	832.6138	0.004089	0	0.013662	0.017751	0.004967	0	0.009547	0.014514	0.010334	0	0.068933
0.116935	0.130895	0.005306	0	0.000559	0.005865	0.034267	0.3341	0.374232	2617.646	14.4348	45.16407	2677.245	0.029441	0.006578	0.062712	0.098731	0.06056	0.000236	0.073363	0.134159	0.127543	0.049767	0.325785
0.049537	0.094484	0.039912	0.001378	0	0.04129	0.021774	0.141534	0.204598	886.4238	6.274771	0	892.6986	0.00727	0.00025	0	0.00752	0.139705	0	0	0.139705	0.156524	0.005372	0
0.000713	0.000817	0	0	0	0	0.000418	0.002036	0.002453	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.02942	0.032342	0.001069	0	9.97E-05	0.001169	0.00739	0.084058	0.092616	608.7999	3.590943	9.672689	622.0635	0.005147	0.001319	0.014747	0.021213	0.012603	4.80E-05	0.016318	0.028969	0.020372	0.009883	0.077079
0.064028	0.09585	0.025627	0.00133	0	0.026957	0.024124	0.182938	0.234019	1104.783	9.1685	0	1113.951	0.005979	0.000244	0	0.006222	0.174119	0	0	0.174119	0.128717	0.005249	0
0.000933	0.00105	0	0	0	0	0.000469	0.002666	0.003135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.004083	0.008723	0.002825	0	0.001099	0.003924	0.003889	0.011666	0.019478	203.8511	0	13.42373	217.2748	0.191815	0	0.051562	0.243377	0.037124	0	0.003741	0.040865	1.227894	0	0.346456
0.11742	0.287838	0.09806	0	0.009928	0.107988	0.284326	0.335486	0.7278	16679.22	0	487.231	17166.45	0.326007	0	0.329748	0.655755	0.35947	0	0.114604	0.474074	1.316765	0	2.068008
0.003316	0.009286	0.003986	0	0	0.003986	0.008626	0.009475	0.022087	466.8491	0	0	466.8491	0.000704	0	0	0.000704	0.073578	0	0	0.073578	0.015153	0	0
0.001413	0.005082	0	0	0	0	0.014678	0.004036	0.018714	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001298	0.005341	0.001249	0	0.000173	0.001422	0.010943	0.003708	0.016073	189.3419	0	9.903837	199.2457	0.00097	0	0.003165	0.004135	0.001178	0	0.002345	0.003523	0.002452	0	0.015958
0.002707	0.0035	0.000283	0	9.07E-07	0.000284	0.00213	0.007733	0.010147	315.1175	0	0.063124	315.1806	0.002704	0	5.82E-05	0.002762	0.004671	0	6.46E-05	0.004736	0.012238	0	0.000296
0.000999	0.00568	0.004617	0	0	0.004617	0.001055	0.002855	0.008526	67.33009	0	0	67.33009	0.000182	0	0	0.000182	0.020751	0	0	0.020751	0.003913	0	0
0.014598	0.01864	0.001049	0	0.000223	0.001272	0.011489	0.041707	0.054469	1514.606	10.78116	18.16362	1543.551	0.010588	0.002536	0.018221	0.031345	0.02026	8.54E-05	0.013352	0.033697	0.045945	0.020414	0.099027
0.036837	0.055487	0.011495	0.00044	0	0.011934	0.028926	0.105249	0.146109	2611.827	140.8612	0	2752.688	0.001091	0.000586	0	0.001677	0.942465	0	0	0.942465	0.023488	0.012623	0
0.000335	0.000466	0	0	0	0	0.000526	0.000956	0.001482	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000396	0.000508	2.49E-05	1.16E-05	0	3.65E-05	0.000312	0.001132	0.001481	21.12022	3.107327	0	24.22755	0.021848	0.020007	0	0.041855	0.010033	0	0	0.010033	0.000201	0.000157	0
1.04E-06	1.45E-06	0	0	0	0	1.64E-06	2.98E-06	4.62E-06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001823	0.002281	0.000103	0	1.06E-05	0.000113	0.001417	0.005207	0.006738	200.4198	0.673088	1.111281	202.2041	0.001551	0.00017	0.001268	0.002988	0.003115	5.93E-06	0.001088	0.004209	0.006819	0.001313	0.006706
0.002501	0.005471	0.00272	1.90E-05	0	0.002739	0.001395	0.007147	0.011281	154.7743	4.858912	0	159.6332	0.000424	7.89E-05	0	0.000503	0.042671	0	0	0.042671	0.009135	0.001699	0
0.000112	0.000155	0	0	0	0	0.000174	0.000319	0.000493	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000397	0.000476	0	2.08E-06	0	2.08E-06	0.000308	0.001133	0.001443	0	0.581866	0	0.581866	0	0.004055	0	0.004055	0	0	0	0	0	3.04E-05	0
8.30E-08	1.15E-07	0	0	0	0	1.29E-07	2.37E-07	3.66E-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001053	0.001271	9.36E-05	0	4.52E-06	9.81E-05	0.000514	0.003007	0.003619	54.81511	4.15253	0.356115	59.32376	0.001026	0.002291	0.000418	0.003735	0.001545	7.98E-05	0.000301	0.001925	0.005021	0.017716	0.002499
0.000402	0.001078	0.000606	2.44E-05	0	0.00063	0.000294	0.001147	0.002071	31.10822	2.940983	0	34.0492	0.00016	9.54E-06	0	0.00017	0.004498	0	0	0.004498	0.003453	0.000205	0
1.91E-05	2.52E-05	0	0	0	0	2.44E-05	5.46E-05	7.90E-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000654	0.000957	0.000179	2.08E-05	0	0.0002	0.000479	0.001869	0.002547	66.29726	6.508756	0	72.80602	0.384145	0.0498	0	0.433945	0.015102	0	0	0.015102	0.002669	0.000349	0
0.001027	0.001162	5.84E-05	0	1.91E-06	6.03E-05	0.000319	0.002934	0.003313	61.084	0	0.211939	61.29594	0.000188	0	0.000165	0.000353	0.000585	0	0.000103	0.000688	0.000581	0	0.000981
5.64E-05	7.61E-05	8.21E-06	0	0	8.21E-06	4.71E-05	0.000161	0.000217	2.414061	0	0	2.414061	6.31E-06	0	0	6.31E-06	0.000586	0	0	0.000586	0.000136	0	0
0.000489	0.000696	0	0	0	0	0.000827	0.001397	0.002224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.014628	0.017893	0.000169	0	0	0.000169	0.012414	0.041794	0.054376	915.1199	0	0	915.1199	1.648649	0	0	1.648649	0.15221	0	0	0.15221	0.01623	0	0

ROG_TOTE	ROG_DIUR	ROG_HOTS	ROG_RUNL	ROG_TOTA	TOG_RUNE	TOG_IDLEX	TOG_STREX	TOG_TOTE	TOG_DIUR	TOG_HOTS	TOG_RUNL	TOG_TOTA	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNE	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNEX	Fuel Consumption
0.004128	0.000694	0.000191	0.00165	0.006662	0.006023	0	1.01E-07	0.006023	0.000694	0.000191	0.00165	0.008557	0.202201	0	0.009531	0.211731	4.14E-05	0	4.54E-07	4.19E-05	0.0001995	1.030721
0.376757	0	0	0	0.376757	0.087337	0.341572	0	0.428909	0	0	0	0.428909	0.410056	4.394166	0	4.804222	0.030755	0.002202	0	0.032957	1.3472211	896.8266
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.01019	0	0	0	0.01019	0.590058	0.1378	0	0.727858	0	0	0	0.727858	3.07146	0.405363	0	3.476823	0	0	0	0	0.3476509	59.8369
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.14873	6.87865	3.018559	3.716917	20.76286	4.189855	0	4.294588	8.484443	6.87865	3.018559	3.716917	22.09857	250.6601	0	43.99211	294.6522	0.131798	0	0.004207	0.136004	2.8938424	3347.732
0.016906	0	0	0	0.016906	0.019246	0	0	0.019246	0	0	0	0.019246	0.155461	0	0	0.155461	0.00016	0	0	0.00016	0.0004998	4.346795
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.111402	0.07159	0.025814	0.022147	0.230953	0.020283	0	0.106752	0.127035	0.07159	0.025814	0.022147	0.246586	1.833805	0	0.824573	2.658378	0.004608	0	0.000189	0.004797	0.109166	118.0777
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.42267	1.205692	0.40579	0.793866	3.828018	0.949049	0	0.814939	1.763987	1.205692	0.40579	0.793866	4.169335	36.66862	0	7.641577	44.3102	0.014378	0	0.000468	0.014846	0.2979832	365.4306
0.001101	0	0	0	0.001101	0.001254	0	0	0.001254	0	0	0	0.001254	0.006002	0	0	0.006002	4.60E-06	0	0	4.60E-06	8.89E-06	0.125198
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.007501	0.003086	0.001089	0.000995	0.012671	0.001503	0	0.007085	0.008588	0.003086	0.001089	0.000995	0.013758	0.136132	0	0.054889	0.191021	0.000342	0	1.32E-05	0.000355	0.008243	8.734408
3.987169	2.913492	0.942501	1.986777	9.82994	2.046274	0	2.758898	4.805172	2.913492	0.942501	1.986777	10.64794	153.2245	0	26.58772	179.8122	0.098372	0	0.002976	0.101348	1.8836154	2494.681
0.00375	0	0	0	0.00375	0.004269	0	0	0.004269	0	0	0	0.004269	0.03614	0	0	0.03614	0.000122	0	0	0.000122	0.0003168	3.307136
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.079267	0.031876	0.011023	0.010814	0.13298	0.01508	0	0.075473	0.090553	0.031876	0.011023	0.010814	0.144265	1.365005	0	0.584983	1.949988	0.003427	0	0.000148	0.003575	0.0826849	87.9883
0.503095	0.384196	0.092241	0.505127	1.48466	0.18611	0.07262	0.356694	0.615424	0.384196	0.092241	0.505127	1.596988	5.86764	0.462307	4.332997	10.66294	0.011238	6.20E-05	0.000194	0.011494	0.1924749	282.9238
0.161896	0	0	0	0.161896	0.178192	0.006116	0	0.184308	0	0	0	0.184308	0.647102	0.044528	0	0.691631	0.002913	2.06E-05	0	0.002933	0.3317821	79.77188
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.107334	0.063203	0.015121	0.094196	0.279854	0.029727	0.014421	0.084392	0.12854	0.063203	0.015121	0.094196	0.30106	1.299245	0.101639	1.041757	2.442642	0.002614	1.54E-05	4.15E-05	0.002671	0.0415444	65.73794
0.133966	0	0	0	0.133966	0.146535	0.005976	0	0.152511	0	0	0	0.152511	0.260096	0.043507	0	0.303603	0.00363	3.01E-05	0	0.00366	0.4158958	99.54312
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.57435	0.625894	1.171278	1.156076	4.527598	1.500626	0	0.376811	1.877437	0.625894	1.171278	1.156076	4.830685	11.73283	0	2.232228	13.96505	0.000875	0	5.76E-05	0.000933	0.0087096	22.96099
3.384773	2.100181	0.596648	1.459121	7.540723	1.879011	0	2.264155	4.143166	2.100181	0.596648	1.459121	8.299116	104.8447	0	17.34601	122.1907	0.071608	0	0.002092	0.073699	1.1226042	1814.103
0.015153	0	0	0	0.015153	0.01725	0	0	0.01725	0	0	0	0.01725	0.33816	0	0	0.33816	0.001534	0	0	0.001534	0.0033424	41.71781
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.01841	0.008283	0.002837	0.002795	0.032325	0.003578	0	0.017472	0.021049	0.008283	0.002837	0.002795	0.034965	0.323631	0	0.135382	0.459012	0.000813	0	4.25E-05	0.000855	0.0196186	21.05573
0.012534	0.080842	0.021053	0.000526	0.114955	0.017857	0	0.000324	0.018181	0.080842	0.021053	0.000526	0.120603	0.360415	0	0.006633	0.367048	0.001353	0	2.71E-07	0.001353	0.007951	33.30741
0.003913	0	0	0	0.003913	0.004455	0	0	0.004455	0	0	0	0.004455	0.015546	0	0	0.015546	0.000221	0	0	0.000221	0.0114507	6.016642
0.165386	0.05975	0.014046	0.115261	0.354443	0.067043	0.029788	0.108422	0.205253	0.05975	0.014046	0.115261	0.39431	1.186638	0.292241	2.093432	3.572312	0.006503	4.63E-05	7.80E-05	0.006627	0.0430645	163.1181
0.036111	0	0	0	0.036111	0.026739	0.014371	0	0.04111	0	0	0	0.04111	0.127352	0.478514	0	0.605866	0.008577	0.000463	0	0.009039	0.5184789	245.9813
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000358	0	0	0	0.000358	0.01433	0.011233	0	0.025563	0	0	0	0.025563	0.061091	0.020227	0	0.081317	0	0	0	0	0.0275717	2.894819
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.014838	0.015479	0.003498	0.007233	0.041048	0.00995	0.001916	0.007342	0.019208	0.015479	0.003498	0.007233	0.045419	0.172084	0.010168	0.135481	0.317732	0.00086	2.89E-06	4.77E-06	0.000868	0.0053123	21.36837
0.010834	0	0	0	0.010834	0.0104	0.001934	0	0.012334	0	0	0	0.012334	0.032027	0.026185	0	0.058212	0.000508	1.60E-05	0	0.000524	0.0235105	14.26488
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.04E-05	0	0	0	3.04E-05	0	0.002173	0	0.002173	0	0	0	0.002173	0	0.003586	0	0.003586	0	0	0	0	0.027236	0.069524
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.025236	0.00334	0.000816	0.002297	0.031689	0.007327	0.025851	0.002736	0.035914	0.00334	0.000816	0.002297	0.042367	0.098622	0.13703	0.056959	0.292611	0.000235	1.78E-05	1.53E-06	0.000255	0.0028831	6.26917
0.003658	0	0	0	0.003658	0.003931	0.000234	0	0.004165	0	0	0	0.004165	0.008432	0.004114	0	0.012546	0.000102	9.66E-06	0	0.000112	0.0024907	3.042649
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003018	0	0	0	0.003018	0.190669	0.024928	0	0.215597	0	0	0	0.215597	0.645549	0.035304	0	0.680853	0	0	0	0	0.0422835	8.699197
0.001562	0.000198	6.06E-05	0.000172	0.001993	0.000848	0	0.001074	0.001922	0.000198	6.06E-05	0.000172	0.002353	0.009109	0	0.017061	0.02617	0.000605	0	2.10E-06	0.000607	0.0012026	6.477584
0.000136	0	0	0	0.000136	0.000155	0	0	0.000155	0	0	0	0.000155	0.000173	0	0	0.000173	2.29E-05	0	0	2.29E-05	0.0003224	0.215721
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.01623	0	0	0	0.01623	1.145674	0	0	1.145674	0	0	0	1.145674	15.37173	0	0	15.37173	0	0	0	0	0.3691088	109.3427

Downey 2045 General Plan Update
City of Downey, California
Appendix D: Energy Consumption Information

Sheet 5: Raw EMFAC Output - Los Angeles (SC) Sub-Area 2045

Source: EMFAC2025 (v2.1.0) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2045
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Gasoline and Diesel Fuel Consumption, 1000 diesel equivalent gallons/day for Natural Gas Fuel Consumption, kWh/day for Energy Consumption, kg/day for Hydrogen Consumption

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consum	Hydrogen (	NOx_RUNE	NOx_IDLEX	NOx_STRE	NOx_TOTE	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_TO	PM2.5_PM	PM2.5_PM	PM2.5_TO	PM10_RUN	PM10_IDLE
Los Angele	2045	HHDT	Aggregate	Aggregate	Gasoline	35.5137	694.5124	694.5124	0	710.558	0	0	0.003168	0	1.03E-05	0.003178	5.28E-07	0	2.12E-07	7.41E-07	3.83E-06	2.55E-05	3.01E-05	5.74E-07	0
Los Angele	2045	HHDT	Aggregate	Aggregate	Diesel	64930.25	9302178	9302178	0	1149776	0	0	4.236345	0.802021	1.080853	6.119218	0.120159	0.00117	0	0.12133	0.090834	0.308599	0.520762	0.125592	0.001223
Los Angele	2045	HHDT	Aggregate	Aggregate	Electricity	2388.063	164863	0	164863.047	19024.99	293013.6376	0	0	0	0	0	0	0	0	0	0.001635	0.002884	0.004519	0	0
Los Angele	2045	HHDT	Aggregate	Aggregate	Natural Ga	4348.631	392455.1	392455.1	0	40217.98	0	0	0.15599	0.048275	0	0.204265	0.000646	0.000183	0	0.00083	0.003893	0.019697	0.02442	0.000703	0.000199
Los Angele	2045	HHDT	Aggregate	Aggregate	Fuel Cell El	396.6577	35302.17	0	35302.1697	4259.316	0	4305.116	0	0	0	0	0	0	0	0	0.00035	0.000609	0.000959	0	0
Los Angele	2045	LDA	Aggregate	Aggregate	Gasoline	1530052	41775385	41775385	0	6815193	0	0	0.945539	0	0.395318	1.340858	0.05615	0	0.006566	0.062716	0.092099	0.121843	0.276658	0.061008	0
Los Angele	2045	LDA	Aggregate	Aggregate	Diesel	329.8374	5963.817	5963.817	0	1179.636	0	0	0.001492	0	0	0.001492	7.86E-05	0	0	7.86E-05	1.31E-05	1.82E-05	0.00011	8.22E-05	0
Los Angele	2045	LDA	Aggregate	Aggregate	Electricity	894839.3	29528590	0	29528589.9	4428940	9814714.959	0	0	0	0	0	0	0	0	0	0.074864	0.028973	0.103837	0	0
Los Angele	2045	LDA	Aggregate	Aggregate	Plug-in Hyb	432984.2	13305963	3052573	10253390.7	1107645	3763638.924	0	0.025256	0	0.053857	0.079113	0.003521	0	0.000941	0.004462	0.033735	0.015632	0.053829	0.00383	0
Los Angele	2045	LDA	Aggregate	Aggregate	Fuel Cell El	5189.461	171366.5	0	171366.473	25726.06	0	2623.09	0	0	0	0	0	0	0	0	0.000434	0.000168	0.000603	0	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Gasoline	124690.1	3312511	3312511	0	532890	0	0	0.134025	0	0.057454	0.191479	0.005847	0	0.000677	0.006524	0.007303	0.012638	0.026466	0.006354	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Diesel	0.360451	7.653894	7.653894	0	1.033222	0	0	1.40E-05	0	0	1.40E-05	5.25E-07	0	0	5.25E-07	1.69E-08	3.26E-08	5.75E-07	5.49E-07	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Electricity	83214.41	2880202	0	2880201.86	421540.5	1076584.021	0	0	0	0	0	0	0	0	0	0.007302	0.00283	0.010133	0	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Plug-in Hyb	37496.06	1199845	342504	857341.047	104226	367467.5239	0	0.002834	0	0.006352	0.009186	0.000402	0	9.17E-05	0.000494	0.003042	0.001421	0.004957	0.000437	0
Los Angele	2045	LDT1	Aggregate	Aggregate	Fuel Cell El	948.8189	33819.89	0	33819.8934	4870.62	0	517.6778	0	0	0	0	0	0	0	0	8.57E-05	3.32E-05	0.000119	0	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Gasoline	1412571	44059510	44059510	0	6499926	0	0	0.964427	0	0.480047	1.444474	0.054607	0	0.005882	0.060489	0.097135	0.15929	0.316914	0.059379	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Diesel	2312.359	74048.47	74048.47	0	10796.89	0	0	0.003289	0	0	0.003289	0.000379	0	0	0.000379	0.000163	0.000266	0.000808	0.000396	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Electricity	128805.1	4669381	0	4669381.48	634707	1938705.326	0	0	0	0	0	0	0	0	0	0.011838	0.004581	0.016419	0	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Plug-in Hyb	385281.9	13204349	3593086	9611263.44	1012671	4700331.758	0	0.029728	0	0.05368	0.083408	0.004055	0	0.000847	0.004902	0.033477	0.015577	0.053957	0.00441	0
Los Angele	2045	LDT2	Aggregate	Aggregate	Fuel Cell El	4763.076	173522.8	0	173522.831	23535.06	0	2656.097	0	0	0	0	0	0	0	0	0.00044	0.00017	0.00061	0	0
Los Angele	2045	LHDT1	Aggregate	Aggregate	Gasoline	110416.1	3479677	3479677	0	1633691	0	0	0.225046	0.002976	0.622092	0.850113	0.003743	0	0.000176	0.003919	0.007671	0.104714	0.116305	0.004071	0
Los Angele	2045	LHDT1	Aggregate	Aggregate	Diesel	63325.98	2053719	2053719	0	791067.6	0	0	0.550098	0.082485	0	0.632583	0.025313	0.001826	0	0.02714	0.006792	0.061803	0.095734	0.026458	0.001909
Los Angele	2045	LHDT1	Aggregate	Aggregate	Electricity	9796.951	343816.6	0	343816.636	133279.2	193051.0931	0	0	0	0	0	0	0	0	0	0.000758	0.005173	0.005931	0	0
Los Angele	2045	LHDT1	Aggregate	Aggregate	Fuel Cell El	1034.182	37109.68	0	37109.6831	14069.18	0	1445.243	0	0	0	0	0	0	0	0	8.18E-05	0.000558	0.00064	0	0
Los Angele	2045	LHDT2	Aggregate	Aggregate	Gasoline	29684.31	983151.7	983151.7	0	432273.4	0	0	0.082653	0.000647	0.201491	0.284791	0.001062	0	4.43E-05	0.001106	0.002167	0.034517	0.03779	0.001155	0
Los Angele	2045	LHDT2	Aggregate	Aggregate	Diesel	105621	3618522	3618522	0	1298603	0	0	0.666866	0.09202	0	0.758886	0.045533	0.003005	0	0.048539	0.011966	0.127041	0.187546	0.047592	0.003141
Los Angele	2045	LHDT2	Aggregate	Aggregate	Electricity	10150.75	364018.3	0	364018.313	135914	204394.2204	0	0	0	0	0	0	0	0	0	0.000803	0.00639	0.007193	0	0
Los Angele	2045	LHDT2	Aggregate	Aggregate	Fuel Cell El	1069.616	39217.24	0	39217.2426	14321.67	0	1527.322	0	0	0	0	0	0	0	0	8.65E-05	0.000688	0.000775	0	0
Los Angele	2045	MCY	Aggregate	Aggregate	Gasoline	195025.8	1014892	1014892	0	363996.6	0	0	0.536413	0	0.023763	0.560176	0.003275	0	0.001383	0.004658	0.001119	0.004699	0.010475	0.003513	0
Los Angele	2045	MDV	Aggregate	Aggregate	Gasoline	699870.1	21011790	21011790	0	3071588	0	0	0.756671	0	0.318919	1.075591	0.028528	0	0.003033	0.031561	0.046323	0.079184	0.157068	0.031021	0
Los Angele	2045	MDV	Aggregate	Aggregate	Diesel	51681.67	1703682	1703682	0	239692.4	0	0	0.023804	0	0	0.023804	0.001686	0	0	0.001686	0.003756	0.006185	0.011627	0.001762	0
Los Angele	2045	MDV	Aggregate	Aggregate	Electricity	331156.1	11739124	0	11739124.2	1585277	5819932.635	0	0	0	0	0	0	0	0	0	0.029762	0.011535	0.041298	0	0
Los Angele	2045	MDV	Aggregate	Aggregate	Plug-in Hyb	69222.53	2287142	645841.2	1641300.48	187241.3	1002876.21	0	0.005343	0	0.010799	0.016142	0.000768	0	0.000166	0.000933	0.005799	0.002708	0.00944	0.000835	0
Los Angele	2045	MDV	Aggregate	Aggregate	Fuel Cell El	60195.19	2174156	0	2174156.43	290604	0	33279.6	0	0	0	0	0	0	0	0	0.005512	0.002135	0.007647	0	0
Los Angele	2045	MH	Aggregate	Aggregate	Gasoline	19496.93	170484.6	170484.6	0	2158.489	0	0	0.032357	0	0.00082	0.033177	0.000194	0	8.18E-07	0.000194	0.000564	0.002859	0.003618	0.000211	0
Los Angele	2045	MH	Aggregate	Aggregate	Diesel	7643.898	66445.81	66445.81	0	845.9112	0	0	0.140838	0	0	0.140838	0.001335	0	0	0.001335	0.000293	0.001108	0.002735	0.001395	0
Los Angele	2045	MHDT	Aggregate	Aggregate	Gasoline	10530.17	310212.8	310212.8	0	210687.7	0	0	0.034355	0.000802	0.078817	0.113974	0.000348	0	0.000101	0.000449	0.001026	0.005203	0.006678	0.000379	0
Los Angele	2045	MHDT	Aggregate	Aggregate	Diesel	90359.22	3231921	3231921	0	1152183	0	0	0.31428	0.206372	0.528386	1.049038	0.009281	0.000203	0	0.009484	0.010688	0.054322	0.074494	0.0097	0.000213
Los Angele	2045	MHDT	Aggregate	Aggregate	Electricity	10685.52	617571.8	0	617571.842	196458.9	770472.6869	0	0	0	0	0	0	0	0	0	0.002042	0.005178	0.00722	0	0
Los Angele	2045	MHDT	Aggregate	Aggregate	Natural Ga	834.2593	32292.51	32292.51	0	10359.01	0	0	0.001905	0.004825	0	0.00673	4.31E-05	1.81E-05	0	6.12E-05	0.000107	0.000543	0.000711	4.69E-05	1.97E-05
Los Angele	2045	MHDT	Aggregate	Aggregate	Fuel Cell El	1173.685	68679.25	0	68679.2493	21544.27	0	5990.788	0	0	0	0	0	0	0	0	0.000227	0.000576	0.000803	0	0
Los Angele	2045	OBUS	Aggregate	Aggregate	Gasoline	1112.849	13519.08	13519.08	0	9908.315	0	0	0.004233	3.35E-05	0.004014	0.008281	1.28E-05	0	2.40E-06	1.53E-05	4.47E-05	0.00023	0.00029	1.40E-05	0
Los Angele	2045	OBUS	Aggregate	Aggregate	Diesel	1767.728	108672.7	108672.7	0	23162.16	0	0	0.077546	0.006649	0.019591	0.103787	0.001088	8.41E-06	0	0.001097	0.000359	0.003063	0.004519	0.001137	8.79E-06
Los Angele	2045	OBUS	Aggregate	Aggregate	Electricity	1073.414	57112.04	0	57112.0351	9554.384	71450.59169	0	0	0	0	0	0	0	0	0	0.000189	0.000486	0.000675	0	0
Los Angele	2045	OBUS	Aggregate	Aggregate	Natural Ga	438.1445	18324.45	18324.45	0	3899.486	0	0	0	0.000728	0	0.000728	0	2.23E-06	0	2.23E-06	6.06E-05	0.000312	0.000375	0	2.43E-06
Los Angele	2045	OBUS	Aggregate	Aggregate	Fuel Cell El	108.1859	5895.114	0	5895.11396	962.9641	0	520.778	0	0	0	0	0	0	0	0	1.95E-05	5.01E-05	6.96E-05	0	0
Los Angele	2045	SBUS	Aggregate	Aggregate	Gasoline	1078.714	38802.16	38802.16	0	4314.854	0	0	0.005273	0.000854	0.002417	0.008544	6.20E-05	0	3.54E-06	6.56E-05	8.55E-05	0.000701	0.000852	6.75E-05	0
Los Angele	2045	SBUS	Aggregate	Aggregate	Diesel	505.165	12264.69	12264.69	0	7314.789	0	0	0.002712	0.001641	0.002933	0.007286	3.15E-05	9.08E-07	0	3.24E-05	4.06E-05	0.000222	0.000295	3.30E-05	9.49E-07
Los Angele	2045	SBUS	Aggregate	Aggregate	Electricity	1147.039	40336.74	0	40336.736	5522.311	55433.63192	0	0	0	0	0	0	0	0	0	9.14E-05	0.000365	0.000456	0	0
Los Angele	2045	SBUS	Aggregate	Aggregate	Natural Ga	1406.057	33993.7	33993.7	0	20359.7	0	0	0.009096	0.007876	0	0.016972	0.000154	2.46E-05	0	0.000179	0.000112	0.000614	0.000906	0.000168	2.68E-05
Los Angele	2045	SBUS	Aggregate	Aggregate	Fuel Cell El	120.9795	4310.893	0	4310.89307	544.4584	0	429.1863	0	0	0	0	0	0	0	0	9.69E-06	3.90E-05	4.86E-05	0	0
Los Angele	2045	UBUS	Aggregate	Aggregate	Gasoline	11.09202	342.2261	342.2261	0	44.36807	0	0	2.47E-05	0	1.79E-05	4.26E-05	3.71E-07	0	6.54E-09	3.77E-07	7.54E-07	1.20E-05	1.31E-05	4.03E-07	0
Los Angele	2045	UBUS	Aggregate	Aggregate	Electricity	4779.181	414037.4	0	414037.385	19116.72	870138.3061	0	0	0	0	0	0	0	0	0	0.003693	0.008786	0.012479	0	0
Los Angele	2045	UBUS	Aggregate	Aggregate	Natural Ga	49.80624	3606.596	3606.596	0	199.2249	0	0	0.00047	0	0	0.00047	3.18E-05	0	0	3.18E-05	1.19E-05	0.000127	0.00017	3.32E-05	0
Los Angele	2045	UBUS	Aggregate	Aggregate	Fuel Cell El	531.0201	46004.15	0	46004.1539	2124.08	0	6897.348	0	0	0	0	0	0	0	0	0.00041	0.000976	0.001387	0	0

PM10_STR	PM10_TOT	PM10_PM	PM10_PMI	PM10_TOT	CO2_RUNE	CO2_IDLEX	CO2_STRE	CO2_TOTE	CH4_RUNE	CH4_IDLEX	CH4_STRE	CH4_TOTE	N2O_RUNE	N2O_IDLE	N2O_STRE	N2O_TOTE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_TOTE	ROG_DIUR	ROG_HOTS	ROG_RUNI	ROG_TOTA	TOG_RUNE	TOG_IDLE
2.31E-07	8.05E-07	1.53E-05	7.30E-05	8.91E-05	1.572434	0	0.039695	1.612129	9.37E-05	0	1.66E-09	9.37E-05	0.000123	0	4.58E-07	0.000124	0.00047	0	6.93E-09	0.00047	0.000236	3.90E-05	0.000416	0.001161	0.000686	0
0	0.126816	0.363337	0.88171	1.371863	13236.99	966.9048	0	14203.9	0.004707	0.023255	0	0.027962	4.101412	0	0	4.101412	0.101347	0.500669	0	0.602017	0	0	0	0.602017	0.115376	0.569974
0	0	0.006538	0.00824	0.014779	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.000902	0.015574	0.056278	0.072754	404.2014	44.32973	0	448.5311	0.294254	0.114662	0	0.408916	0.173025	0	0	0.173025	0.004147	0.001631	0	0.005778	0	0	0	0.005778	0.296207	0.116477
0	0	0.0014	0.00174	0.00314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.007137	0.068145	0.368396	0.348123	0.784664	12854.26	0	437.333	13291.59	0.125713	0	0.134806	0.260519	0.143687	0	0.05372	0.197408	0.471408	0	0.64711	1.118518	3.154018	0.807395	1.670145	6.750077	0.632438	0
0	8.22E-05	5.26E-05	5.20E-05	0.000187	1.751599	0	0	1.751599	1.14E-05	0	0	1.14E-05	0.000276	0	0	0.000276	0.000245	0	0	0.000245	0	0	0	0.000245	0.000279	0
0	0	0.299457	0.08278	0.382237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001023	0.004853	0.134939	0.044664	0.184456	1070.643	0	67.39957	1138.043	0.00549	0	0.020866	0.026356	0.00667	0	0.015573	0.022242	0.013877	0	0.095863	0.109741	0.345405	0.071097	0.088564	0.614808	0.02025	0
0	0	0.001738	0.00048	0.002218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000736	0.007091	0.029211	0.03611	0.072412	1222.406	0	41.37986	1263.786	0.013982	0	0.015532	0.029514	0.016309	0	0.006121	0.022431	0.051858	0	0.080885	0.132743	0.414575	0.09016	0.252883	0.890362	0.07129	0
0	5.49E-07	6.75E-08	9.32E-08	7.10E-07	0.00519	0	0	0.00519	4.17E-08	0	0	4.17E-08	8.18E-07	0	0	8.18E-07	8.99E-07	0	0	8.99E-07	0	0	0	8.99E-07	1.02E-06	0
0	0	0.029209	0.008087	0.037295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.97E-05	0.000537	0.012168	0.004059	0.016764	120.111	0	7.40452	127.5156	0.000616	0	0.002232	0.002848	0.000748	0	0.001582	0.002331	0.001557	0	0.01055	0.012107	0.036543	0.006749	0.012519	0.067918	0.002272	0
0	0	0.000343	9.49E-05	0.000438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.006397	0.065776	0.388538	0.455114	0.909428	16190.74	0	503.2163	16693.95	0.134134	0	0.178316	0.31245	0.162385	0	0.061201	0.223586	0.396544	0	0.876492	1.273036	2.065487	0.405599	1.421455	5.165577	0.568413	0
0	0.000396	0.000653	0.000759	0.001808	25.56165	0	0	25.56165	0.000113	0	0	0.000113	0.004029	0	0	0.004029	0.002441	0	0	0.002441	0	0	0	0.002441	0.002779	0
0	0	0.047353	0.013087	0.060441	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000922	0.005332	0.133909	0.044506	0.183746	1260.402	0	75.12692	1335.529	0.006462	0	0.020007	0.026469	0.007851	0	0.016262	0.024113	0.016335	0	0.092932	0.109266	0.285871	0.05975	0.08579	0.540677	0.023835	0
0	0	0.00176	0.000486	0.002246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000192	0.004263	0.030685	0.299184	0.334132	1890.064	12.48729	37.23441	1939.786	0.007757	0.004745	0.054024	0.066526	0.031519	0.000181	0.051374	0.083074	0.020198	0.034175	0.272646	0.32702	0.24152	0.036192	0.323558	0.92829	0.029473	0.049868
0	0.028367	0.027166	0.176579	0.232112	1011.66	7.617517	0	1019.277	0.003443	0.000353	0	0.003796	0.159442	0	0	0.159442	0.074124	0.007609	0	0.081733	0	0	0	0.081733	0.084385	0.008662
0	0	0.003032	0.014781	0.017813	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.000327	0.001595	0.001923	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.82E-05	0.001203	0.00867	0.09862	0.108493	595.0757	3.762338	10.02993	608.868	0.002852	0.001058	0.018306	0.022217	0.010824	4.16E-05	0.015866	0.026732	0.007731	0.007428	0.095995	0.111154	0.057146	0.008416	0.07614	0.252856	0.011281	0.010839
0	0.050733	0.047865	0.362975	0.461573	2058.624	19.83857	0	2078.463	0.00934	0.00058	0	0.00992	0.324449	0	0	0.324449	0.201084	0.012491	0	0.213574	0	0	0	0.213574	0.22892	0.01422
0	0	0.00321	0.018257	0.021467	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.000346	0.001967	0.002313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001483	0.004996	0.004475	0.013425	0.022895	232.4938	0	13.79426	246.2881	0.199474	0	0.051979	0.251453	0.040686	0	0.003256	0.043942	1.21276	0	0.329685	1.542446	0.663327	1.545196	1.487956	5.238925	1.519386	0
0.003298	0.034319	0.185292	0.22624	0.445852	9464.562	0	292.9394	9757.501	0.081293	0	0.098396	0.17969	0.096618	0	0.033893	0.130512	0.261426	0	0.513956	0.775382	1.339598	0.240628	0.919806	3.275414	0.3765	0
0	0.001762	0.015024	0.017672	0.034458	748.6899	0	0	748.6899	0.000859	0	0	0.000859	0.117997	0	0	0.117997	0.018498	0	0	0.018498	0	0	0	0.018498	0.021058	0
0	0	0.11905	0.032958	0.152008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00018	0.001015	0.023195	0.007738	0.031947	226.5034	0	17.07825	243.5816	0.001162	0	0.003882	0.005044	0.001411	0	0.003164	0.004575	0.002936	0	0.018223	0.021159	0.065029	0.012211	0.021955	0.120355	0.004284	0
0	0	0.022049	0.006101	0.02815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.90E-07	0.000212	0.002255	0.008169	0.010636	333.2574	0	0.070827	333.3283	0.000594	0	5.57E-05	0.00065	0.003138	0	6.60E-05	0.003204	0.001621	0	0.000271	0.001892	0.041989	0.006253	0.000262	0.050396	0.002366	0
0	0.001395	0.001172	0.003165	0.005732	74.82589	0	0	74.82589	0.000127	0	0	0.000127	0.028795	0	0	0.028795	0.002726	0	0	0.002726	0	0	0	0.002726	0.003104	0
0.000109	0.000488	0.004103	0.014865	0.019457	479.5671	5.543322	8.864319	493.9747	0.001382	0.001463	0.008794	0.011639	0.003482	4.01E-05	0.0065	0.010022	0.004463	0.011798	0.04575	0.062011	0.041764	0.005601	0.077519	0.186895	0.006512	0.017215
0	0.009913	0.042751	0.155207	0.207871	3365.085	175.1378	0	3540.223	0.000778	0.000799	0	0.001577	1.424789	0	0	1.424789	0.016756	0.017193	0	0.03395	0	0	0	0.03395	0.019076	0.019573
0	0	0.008169	0.014795	0.022964	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	6.66E-05	0.000427	0.001551	0.002045	25.86608	3.730682	0	29.59676	0.021545	0.011426	0	0.032971	0.014231	0	0	0.014231	0.000305	0.000159	0	0.000464	0	0	0	0.000464	0.021753	0.011382
0	0	0.000908	0.001645	0.002554	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.61E-06	1.66E-05	0.000179	0.000657	0.000853	23.29605	0.200803	0.318893	23.81575	0.000118	5.30E-05	0.000358	0.000529	0.000285	1.76E-06	0.000327	0.000614	0.00047	0.00041	0.001848	0.002728	0.007318	0.00116	0.003354	0.01456	0.000686	0.000598
0	0.001146	0.001437	0.00875	0.011334	156.8378	5.784747	0	162.6225	0.000138	0.000112	0	0.00025	0.046553	0	0	0.046553	0.002975	0.002401	0	0.005376	0	0	0	0.005376	0.003387	0.002733
0	0	0.000755	0.001388	0.002144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2.43E-06	0.000242	0.000891	0.001136	0	0.555163	0	0.555163	0	0.002878	0	0.002878	0	0	0	0	0	2.67E-05	0	2.67E-05	0	0	0	2.67E-05	0	0.001904
0	0	7.80E-05	0.000143	0.000221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.85E-06	7.13E-05	0.000342	0.002004	0.002417	32.52847	2.661992	0.224738	35.4152	0.000197	0.001636	0.000296	0.002128	0.000545	4.69E-05	0.000172	0.000764	0.000614	0.012654	0.001739	0.015006	0.004523	0.000564	0.003253	0.023346	0.000896	0.018464
0	3.39E-05	0.000162	0.000633	0.000829	15.21868	1.039422	0	16.2581	6.78E-06	4.32E-06	0	1.11E-05	0.00539	0	0	0.00539	0.000146	9.30E-05	0	0.000239	0	0	0	0.000239	0.000166	0.000106
0	0	0.000366	0.001041	0.001407	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.000195	0.00045	0.001755	0.0024	52.80914	6.13965	0	58.94879	0.197377	0.030091	0	0.227468	0.014963	0	0	0.014963	0.00193	0.000286	0	0.002216	0	0	0	0.002216	0.137829	0.020431
0	0	3.87E-05	0.000111	0.00015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.11E-09	4.11E-07	3.02E-06	3.43E-05	3.78E-05	0.202185	0	0.001476	0.203661	9.38E-07	0	2.50E-06	3.44E-06	3.42E-06	0	1.48E-06	4.90E-06	2.52E-06	0	1.41E-05	1.66E-05	5.48E-06	1.33E-06	5.35E-06	2.87E-05	3.68E-06	0
0	0	0.014772	0.025102	0.039874	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3.32E-05	4.77E-05	0.000362	0.000443	2.077302	0	0	2.077302	9.71E-06	0	0	9.71E-06	0.00159	0	0	0.00159	0.000209	0	0	0.000209	0	0	0	0.000209	0.000238	0
0	0	0.001641	0.002789	0.00443	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TOG_STRE	TOG_TOTE	TOG_DIUR	TOG_HOTS	TOG_RUNL	TOG_TOTA	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNE	SOx_IDLEX	SOx_STREX	SOx_TOTE	NH3_RUNE	Fuel Consumption
7.59E-09	0.000686	0.000236	3.90E-05	0.000416	0.001377	0.025885	0	0.002035	0.02792	6.75E-06	0	1.70E-07	6.92E-06	3.45E-05	0.170365
0	0.68535	0	0	0	0.68535	0.470673	7.397701	0	7.868374	0.043468	0.003175	0	0.046644	2.255777	1269.265
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.412684	0	0	0	0.412684	1.884483	0.427954	0	2.312437	0	0	0	0	0.387095	53.59256
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.708424	1.340862	3.154018	0.807395	1.670145	6.97242	89.05716	0	16.78686	105.844	0.055186	0	0.001878	0.057064	1.508151	1404.618
0	0.000279	0	0	0	0.000279	0.004515	0	0	0.004515	5.76E-06	0	0	5.76E-06	2.04E-05	0.156524
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.104958	0.125208	0.345405	0.071097	0.088564	0.630275	1.826062	0	0.780077	2.606138	0.004597	0	0.000289	0.004886	0.110962	120.2652
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.088553	0.159842	0.414575	0.09016	0.252883	0.917461	8.511422	0	1.541534	10.05296	0.005248	0	0.000178	0.005426	0.116627	133.5534
0	1.02E-06	0	0	0	1.02E-06	1.04E-05	0	0	1.04E-05	1.71E-08	0	0	1.71E-08	2.62E-08	0.000464
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.011551	0.013823	0.036543	0.006749	0.012519	0.069634	0.204794	0	0.086992	0.291786	0.000516	0	3.18E-05	0.000547	0.012459	13.47549
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.959634	1.528047	2.065487	0.405599	1.421455	5.420588	98.75291	0	16.60913	115.362	0.06951	0	0.00216	0.071671	1.59388	1764.17
0	0.002779	0	0	0	0.002779	0.025525	0	0	0.025525	8.40E-05	0	0	8.40E-05	0.000253	2.284199
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.101748	0.125584	0.285871	0.05975	0.08579	0.556995	2.150404	0	0.760181	2.910585	0.005411	0	0.000323	0.005734	0.130703	141.135
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.298514	0.377855	0.24152	0.036192	0.323558	0.979125	3.591465	0.457071	3.057741	7.106276	0.008114	5.36E-05	0.00016	0.008328	0.172606	204.9912
0	0.093047	0	0	0	0.093047	0.548368	0.063067	0	0.611434	0.003324	2.50E-05	0	0.003349	0.489545	91.08301
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.105103	0.127223	0.057146	0.008416	0.07614	0.268924	1.414672	0.120941	1.074743	2.610355	0.002555	1.62E-05	4.31E-05	0.002614	0.048768	64.34347
0	0.24314	0	0	0	0.24314	0.367658	0.103529	0	0.471188	0.006765	6.52E-05	0	0.00683	0.874334	185.7322
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.359093	1.878479	0.663327	1.545196	1.487956	5.574958	11.71106	0	2.827194	14.53825	0.000998	0	5.92E-05	0.001057	0.010268	26.02704
0.56271	0.93921	1.339598	0.240628	0.919806	3.439242	52.81364	0	8.561532	61.37517	0.040633	0	0.001258	0.041891	0.757478	1031.146
0	0.021058	0	0	0	0.021058	0.612161	0	0	0.612161	0.00246	0	0	0.00246	0.005822	66.90321
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.019952	0.024236	0.065029	0.012211	0.021955	0.123432	0.386259	0	0.149801	0.53606	0.000972	0	7.33E-05	0.001046	0.023493	25.74103
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000296	0.002662	0.041989	0.006253	0.000262	0.051166	0.028923	0	0.005823	0.034746	0.001431	0	3.04E-07	0.001431	0.008457	35.2252
0	0.003104	0	0	0	0.003104	0.008114	0	0	0.008114	0.000246	0	0	0.000246	0.015843	6.686469
0.050091	0.073818	0.041764	0.005601	0.077519	0.198702	0.103018	0.168416	0.81819	1.089623	0.002059	2.38E-05	3.81E-05	0.002121	0.015388	52.20187
0	0.038649	0	0	0	0.038649	0.126957	0.727702	0	0.854659	0.01105	0.000575	0	0.011626	0.783637	316.3556
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.033134	0	0	0	0.033134	0.075828	0.036183	0	0.112012	0	0	0	0	0.037732	3.536357
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.002023	0.003307	0.007318	0.00116	0.003354	0.015139	0.01115	0.003166	0.033005	0.04732	0.0001	8.62E-07	1.37E-06	0.000102	0.000671	2.516782
0	0.00612	0	0	0	0.00612	0.013447	0.03711	0	0.050557	0.000515	1.90E-05	0	0.000534	0.025628	14.53201
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.001904	0	0	0	0.001904	0	0.004339	0	0.004339	0	0	0	0	0.021411	0.066333
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001904	0.021264	0.004523	0.000564	0.003253	0.029604	0.011132	0.097791	0.03488	0.143803	0.00014	1.14E-05	9.65E-07	0.000152	0.001925	3.74258
0	0.000272	0	0	0	0.000272	0.000915	0.003917	0	0.004832	5.00E-05	3.41E-06	0	5.34E-05	0.002965	1.45283
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.158259	0	0	0	0.158259	0.409158	0.047957	0	0.457115	0	0	0	0	0.03972	7.043472
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.54E-05	1.91E-05	5.48E-06	1.33E-06	5.35E-06	3.12E-05	0.000479	0	0.000175	0.000654	2.00E-06	0	1.46E-08	2.02E-06	1.70E-05	0.021522
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.000238	0	0	0	0.000238	0.000283	0	0	0.000283	0	0	0	0	0.003856	0.248206
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Downey General Plan Update
Downey, CA
Appendix E: Ambient Noise Monitoring
Data Prepared by MIG, May 2026

TABLE 1: SUMMARY OF SITE LT1 NOISE MONITORING DATA												
Date	**Time**	**Duration**	**Leq**	**CNEL**	**Lmin**	**Lmax**	**LAS1.70**	**LAS8.30**	**LAS16.70**	**LAS25.00**	**LAS50.00**	**LAS90.00**
5/6/2026	6:16 PM	44 minutes	52.1	52.1	38.0	70.0	59.0	56.7	54.3	53.2	49.4	44.4
5/6/2026	7:00 PM	1 hour	56.3	61.3	36.3	79.7	65.1	62.3	58.8	55.6	50.7	44.5
5/6/2026	8:00 PM	1 hour	56.1	61.1	35.4	85.1	66.8	60.2	56.7	54.7	50.0	42.7
5/6/2026	9:00 PM	1 hour	52.9	57.9	36.0	71.7	58.6	57.4	56.1	54.8	50.5	43.7
5/6/2026	10:00 PM	1 hour	53.4	63.4	35.0	68.9	59.7	58.2	56.7	54.9	50.0	42.8
5/6/2026	11:00 PM	1 hour	53.8	63.8	35.6	73.7	60.0	58.6	57.1	55.5	50.2	45.0
5/7/2026	12:00 AM	1 hour	50.8	60.8	34.3	66.3	55.8	54.8	53.9	52.9	49.0	43.3
5/7/2026	1:00 AM	1 hour	51.3	61.3	34.4	72.6	57.5	56.5	54.6	53.0	47.5	41.5
5/7/2026	2:00 AM	1 hour	48.6	58.6	36.5	67.5	53.5	51.5	50.6	49.8	47.8	44.1
5/7/2026	3:00 AM	1 hour	49.3	59.3	38.0	69.5	54.4	53.5	52.2	50.8	47.3	43.1
5/7/2026	4:00 AM	1 hour	47.7	57.7	37.3	63.2	52.2	51.5	50.5	49.1	46.3	42.2
5/7/2026	5:00 AM	1 hour	51.3	61.3	40.6	63.1	55.1	54.1	53.2	52.2	50.3	48.5
5/7/2026	6:00 AM	1 hour	52.3	62.3	39.8	70.3	57.7	56.3	54.8	53.5	50.5	46.3
5/7/2026	7:00 AM	1 hour	54.7	54.7	38.2	72.0	60.3	58.7	57.4	56.2	52.9	48.2
5/7/2026	8:00 AM	1 hour	53.7	53.7	38.8	67.6	59.1	57.9	56.8	55.4	51.4	47.1
5/7/2026	9:00 AM	1 hour	54.4	54.4	38.5	68.9	60.2	58.8	57.6	56.1	52.1	46.6
5/7/2026	10:00 AM	1 hour	54.3	54.3	39.5	67.2	60.7	58.7	57.2	55.8	52.0	46.2
5/7/2026	11:00 AM	1 hour	52.2	52.2	38.0	65.8	57.9	56.3	55.0	53.8	49.8	45.8
5/7/2026	12:00 PM	1 hour	51.2	51.2	38.4	66.9	57.1	55.4	53.9	52.5	49.0	44.9
5/7/2026	1:00 PM	1 hour	51.8	51.8	39.3	65.7	57.5	56.0	54.7	53.5	49.8	44.7
5/7/2026	2:00 PM	1 hour	51.7	51.7	38.1	66.9	58.1	56.3	54.5	52.9	49.1	45.1
5/7/2026	3:00 PM	1 hour	50.8	50.8	38.6	64.1	56.6	55.2	53.9	52.4	48.2	44.1
5/7/2026	4:00 PM	1 hour	51.1	51.1	37.6	65.6	56.4	55.1	53.9	52.8	49.2	44.4
5/7/2026	5:00 PM	1 hour	53.8	53.8	36.7	67.2	59.2	57.9	56.8	55.6	51.6	46.3
5/7/2026	6:00 PM	16 minutes	52.7	52.7	38.8	69.3	59.3	56.9	55.6	54.7	49.8	43.6
	Daytime (7 AM to 7 PM)		*53.2*	--	*34.3*	*85.1*	*60.8*	*57.9*	*55.7*	*54.0*	*49.7*	*44.1*
	Evening (7 PM to 10 PM)		*55.4*	--	*37.3*	*69.5*	*54.0*	*53.2*	*52.1*	*50.9*	*48.3*	*45.5*
	Nightime (10 PM to 7 AM)		*51.4*	--	*38.0*	*72.0*	*58.9*	*57.3*	*56.0*	*54.6*	*50.9*	*46.2*
		24-hour CNEL	--	***58.6***				-	-	-	-	-

Table 2: Summary of Short-Term Monitoring															
Site	**Start Date**	**Start Time**	**LAeq**	**LASmax**	**LASmin**	**LAS1%**	**LAS2%**	**LAS5%**	**LAS8%**	**LAS10%**	**LAS25%**	**LAS50%**	LAS90%	LAS95%	LAS99%
ST-1	2026-05-07	3:39 PM	71.3	87.5	51.7	76.8	76.7	76.3	75.7	75.3	72.6	69.2	65.4	65.0	64.6
ST-2A	2026-05-07	4:21 PM	73.4	89.5	64.8	75.8	75.8	75.6	75.4	75.2	74.2	73.1	71.6	71.4	71.3
ST-2B	2026-05-07	4:56 PM	62.5	76.2	56.8	65.7	65.6	65.3	65.0	64.7	63.4	62.1	60.1	59.9	59.8
ST-3	2026-05-07	5:20 PM	68.6	79.5	49.5	71.4	71.4	71.2	71.0	70.9	69.8	68.2	65.8	65.5	65.3
ST-4	2026-05-07	6:11 PM	70.4	88.1	56.0	74.2	74.1	73.8	73.5	73.3	71.7	69.3	66.8	66.6	66.4
ST-5	2026-05-07	7:04 PM	71.5	89.5	60.7	74.8	74.7	74.3	74.0	73.8	72.7	70.9	68.5	68.2	68.0

Table 3: Summary of Long-Term Noise Monitoring for Comparison to Short-Term Noise Monitoring												
Comparison Site	**Date**	**Time**	**LASeq**	**LASmin**	**LASmin Tim**	**LASmax**	**LASmax Tim**	**LAS1.67**	**LAS8.34**	**LAS16.70**	**LAS25.00**	**LAS50.00**	**LAS90.00**
ST-1	2026-05-07	3:39 PM	49.4	38.8	3:57 PM	62.4	4:01 PM	54.7	53.3	52.1	51.0	47.2	43.6
ST-2 A	2026-05-07	4:21 PM	51.7	38.3	4:21 PM	65.6	4:47 PM	57.2	55.8	54.7	53.5	49.7	44.1
ST-2B	2026-05-07	4:57 PM	54.4	42.2	4:58 PM	62.2	5:00 PM	59.0	58.2	57.2	56.2	53.4	47.8
ST-3	2026-05-07	5:20 PM	53.6	36.7	5:32 PM	65.9	5:22 PM	59.0	57.7	56.6	55.4	51.3	46.2
ST-4	2026-05-07	6:11 PM	54.2	37.4	6:33 PM	69.6	6:23 PM	60.2	58.7	57.0	55.9	51.3	45.1
ST-5	2026-05-07	7:04 PM	54.4	38.9	7:32 PM	67.2	7:17 PM	60.5	58.8	57.6	56.1	51.1	45.4

Summary

File Name on Mete	DowneyLT.002.s
File Name on PC	LxT_0005064-20260506 180000-DowneyLT.002.ldbin
Serial Number	0005064
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	LT Downey GPU May 6-7, 2026, Meter L1
Start	2026-05-06 18:00:00
Stop	2026-05-07 19:52:35
Duration	25:52:35.0
Run Time	25:52:35.0
Pause	00:00:00.0
Pre-Calibration	2026-05-06 17:57:32
Post-Calibration	2026-05-07 19:53:37
Calibration Deviatic	0.01 dB

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correc	Off
Integration Methoc	Exponential
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency We	A Weighting
OBA Max Spectrum	Bin Max
Overload	122.4 dB

	A	C	Z	
Under Range Peak	**79.0**	76.0	81.0	dB
Under Range Limit	**24.2**	25.2	31.3	dB
Noise Floor	15.1	16.1	22.2	dB

	First	Second	Third
Instrument Identifi	L01	MIG INC	6-3802

Results

LA_{Seq}	55.9	dB
LASE	105.6	dB
EAS	4.027	mPa^2h

EAS8	1.245	mPa²h	
EAS40	6.225	mPa²h	
LApk (max)	2026-05-07 18:20:12	118.5	dB
LASmax	2026-05-07 18:20:13	99.8	dB
LASmin	2026-05-07 00:58:51	34.3	dB
SEA	-99.9	dB	

	Exceedance Counts	Duration	
LAS > 70.0 dB	33	183.4	s
LAS > 80.0 dB	6	27.1	s
LApk > 115.0 dB	2	2.1	s
LApk > 135.0 dB	0	0.0	s
LApk > 140.0 dB	0	0.0	s

Community Noise	LDN	LDay 07:00-22:00	LNight 22:00-07:00	LDEN	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	59.2	57.2	51.4	59.7	57.6	55.3	51.4

LCSeq	63.4	dB
LASeq	55.9	dB
LCSeq - LASeq	7.5	dB
LAIeq	64.3	dB
LAeq	55.9	dB
LAIeq - LAeq	8.4	dB

	A		C		Z	
	dB	Time St	dB	Time S	dB	Time Stamp
Leq	55.9					
LS(max)	99.8	2026/05/07 18:20:13				
LS(min)	34.3	2026/05/07 0:58:51				
Lpk(max)	118.5	2026/05/07 18:20:12				

Overload Count	1	
Overload Duration	2.0	s
OBA Overload Cour	1	
OBA Overload Dura	2.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	0.02	0.05	%
Projected Dose	0.01	0.02	%
TWA (Projected)	19.7	26.9	dB

TWA (t)	28.2	35.4 dB
Lep (t)	61.0	61.0 dB

Ln Percentiles	
LAS 1.67	62.2 dB
LAS 8.34	57.0 dB
LAS 16.70	53.6 dB
LAS 25.00	51.3 dB
LAS 50.00	47.2 dB
LAS 90.00	41.1 dB

Calibration History

Preamp	**Date**	**re 1V/Pa**	**mV/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**
Direct	2020-01-28 05:43:54	-28.63	37.04	6.77	6.71	5.08	8.15	1.14	-0.37
PRMLxT1L	2026-05-07 19:53:35	-28.68	36.81	50.23	51.84	47.64	49.84	55.22	61.40
PRMLxT1L	2026-05-06 17:57:30	-28.69	36.77	72.78	76.15	60.17	59.42	54.26	60.86
PRMLxT1L	2026-05-06 17:57:10	-28.66	36.91	50.97	53.23	57.36	55.33	52.53	53.00
PRMLxT1L	2026-02-26 15:15:10	-28.75	36.52	60.11	62.25	70.88	63.78	66.18	66.53
PRMLxT1L	2026-02-25 13:21:05	-28.62	37.05	54.64	58.98	52.07	56.40	54.10	56.67
PRMLxT1L	2025-07-15 19:01:07	-28.66	36.91	76.49	72.61	72.49	64.55	76.04	70.62
PRMLxT1L	2025-07-15 15:43:14	-28.57	37.29	78.64	75.69	74.13	68.10	72.78	63.64
PRMLxT1L	2025-05-14 09:24:49	-28.61	37.13	87.41	67.48	63.01	65.25	58.74	63.47
PRMLxT1L	2025-05-14 09:23:59	-28.65	36.95	69.00	67.83	60.76	68.79	61.05	67.37
PRMLxT1L	2025-05-11 08:25:08	-28.56	37.32	90.89	78.58	46.75	50.27	60.13	57.26
PRMLxT1L	2025-01-30 19:43:38	-28.59	37.19	56.21	67.20	89.11	81.12	68.79	55.63

25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630
6.76	-3.04	4.93	7.84	-0.65	-0.13	5.92	14.82	2.94	5.36	13.01	6.87	3.83	5.98	7.01
55.22	56.90	56.18	57.52	55.63	55.70	52.30	51.87	51.39	51.24	51.05	47.58	37.58	38.43	34.59
60.04	61.35	54.88	56.58	54.67	50.18	51.96	49.78	48.05	48.33	42.27	42.70	39.60	34.88	31.93
53.70	57.54	54.55	53.24	52.56	53.45	57.55	49.21	43.34	41.62	39.99	36.03	31.99	29.24	25.63
66.21	63.38	62.57	72.82	69.65	64.66	66.95	60.65	57.60	53.26	52.94	55.14	49.07	46.65	44.20
55.17	60.36	55.67	59.74	56.28	55.56	51.44	50.63	44.81	45.70	44.60	44.16	43.06	39.91	35.16
69.38	75.69	77.72	76.44	72.31	70.60	69.49	66.38	67.36	61.75	61.37	55.26	53.23	46.97	37.56
64.64	63.01	64.07	62.10	60.91	63.22	60.51	59.70	58.79	53.27	50.35	43.96	38.66	32.83	27.77
59.74	62.13	60.14	62.19	61.97	54.10	59.83	53.08	49.95	50.32	48.39	46.55	41.46	40.20	33.95
64.72	66.83	65.66	63.78	61.58	62.47	61.22	60.38	70.14	80.96	83.06	81.28	82.10	79.72	70.38
59.34	62.47	59.18	58.82	61.78	56.60	57.61	53.93	53.95	51.20	53.94	48.02	38.75	37.35	29.65
52.54	54.76	52.57	49.98	47.33	44.34	45.79	44.60	42.83	40.51	39.90	32.53	34.00	28.98	23.56

800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
7.32	6.53	8.42	9.38	11.06	10.25	13.19	12.14	40.31	23.44	15.99	16.70	20.07	19.16	19.86
30.60	113.99	49.05	19.65	63.85	21.11	61.05	21.85	30.87	21.66	22.74	24.27	26.23	28.26	31.03
29.66	113.95	49.00	19.06	63.79	21.16	60.97	19.80	30.94	21.67	23.10	24.50	26.14	28.68	30.93
28.75	114.07	49.08	19.28	63.92	20.64	61.09	19.91	30.97	21.85	22.82	24.22	26.19	28.64	31.12
36.30	113.86	48.91	19.95	63.80	20.23	61.17	19.97	30.78	21.14	22.57	24.39	26.16	28.35	30.97
30.22	114.02	49.06	19.20	63.84	21.10	61.06	19.96	31.08	21.46	22.72	24.21	26.23	28.37	31.01
30.35	113.89	49.02	19.91	64.22	19.91	60.68	20.54	30.03	21.20	22.71	24.24	26.19	28.57	30.86
28.81	114.02	49.16	19.90	64.37	20.91	60.72	19.24	30.49	21.63	22.81	23.97	26.16	28.63	31.11
30.45	114.02	49.04	19.53	63.83	20.58	61.07	19.66	31.20	22.12	23.05	24.20	25.93	28.22	31.20
68.78	113.89	58.74	52.88	63.81	31.86	60.98	25.26	31.74	27.09	26.54	25.76	27.88	28.90	34.49
29.42	114.01	49.07	19.01	63.96	21.10	61.05	20.09	30.73	21.66	22.93	24.31	26.55	28.56	30.88
28.24	113.92	48.60	18.99	63.21	21.26	60.97	19.29	31.49	21.34	22.63	23.65	25.81	28.21	31.00

Downey General Plan Update
City of Downey, California

Appendix F: Transportation Noise Data
Prepared by: MIG, Inc.
May 2026

Appendix Contents

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Ganddini Vehicle Mix Data

TNM Modeling Results
Existing Conditions
2045 No Project Conditions
2045 GPU Conditions

Sheet 1: TNM Roadway Geometry Information

TNM Roadway Geometry Information						
Road / Segment	**Road Travel Lanes[A]**		**Road Width in Feet[B]**			**Speed[C]**
	Total	**Directional**	**Total**	**Direction 1**	**Direction 2**	**MPH**
Paramount Blvd						
Telegraph Rd to I-5 Freeway	4	2	80	40	40	40
I-5 Freeway to Gallatin Rd	6	3	74	37	37	40
Gallatin Rd to Florence Ave	4	2	76	38	38	40
Florence Ave to Firestone Blvd	4	2	78	39	39	40
Firestone Blvd to Stewart & Gray Rd	4	2	80	40	40	40
Stewart & Gray Rd to Imperial Hwy	4	2	76	38	38	40
Imperial Hwy to Gardendale St	4	2	78	39	39	40
Lakewood Blvd						
Telegraph Rd to I-5 Freeway	5	3	84	42	42	40
I-5 Freeway to Gallatin Rd	6	3	88	44	44	40
Gallatin Rd to Florence Ave	6	3	82	41	41	40
Florence Ave to Firestone Blvd	6	3	84	42	42	40
Firestone Blvd to Stewart & Gray Rd	6	3	88	44	44	40
Stewart & Gray Rd to Imperial Hwy	6	3	86	43	43	40
Imperial Hwy to I-105 Freeway	6	3	84	42	42	40
Foster Rd to Rosecrans Ave	4	2	90	45	45	40
Telegraph Rd						
City Limits to Paramount Blvd	6	3	76	38	38	45
Paramount Blvd to Lakewood Blvd	6	3	76	38	38	45
Lakewood Blvd to City Limits	6	3	76	38	38	40
Florence Ave						
City Limits to Old River School Rd	6	3	76	38	38	40
Old River School Rd to Paramount Blvd	6	3	74	37	37	40
Paramount Blvd to Lakewood Blvd	6	3	74	37	37	40
Lakewood Blvd to I-605 Freeway	6	3	76	38	38	45
Firestone Blvd						
City Limits to Old River School Rd	6	3	80	40	40	35
Old River School Rd to Paramount Blvd	6	3	74	37	37	35
Paramount Blvd to Lakewood Blvd	6	3	76	38	38	35
Lakewood Blvd to Woodruff Ave	6	3	90	45	45	35
Stewart & Gray Rd to City Limits	6	3	94	47	47	40
Stewart & Gray Rd						
Old River School Rd to Paramount Blvd	4	2	62	31	31	35
Paramount Blvd to Lakewood Blvd	4	2	56	28	28	35
Lakewood Blvd to Woodruff Ave	4	2	62	31	31	40
Imperial Hwy						
Old River School Rd to Paramount Blvd	6	3	76	38	38	40
Paramount Blvd to Lakewood Blvd	6	3	76	38	38	40
Lakewood Blvd to Woodruff Ave	6	3	80	40	40	40
Woodruff Ave						
Firestone Blvd to Imperial Hwy	4	2	80	40	40	40
Old River School Rd						
Florence Ave to Firestone Blvd	4	2	60	30	30	40

Sheet 1: TNM Roadway Geometry Information

TNM Roadway Geometry Information						
Road / Segment	**Road Travel Lanes[A]**		**Road Width in Feet[B]**			**Speed[C]**
	Total	**Directional**	**Total**	**Direction 1**	**Direction 2**	**MPH**
Stewart & Gray Rd to Imperial Hwy	2	1	66	33	33	40
Downey Ave						
Florence Ave to Firestone Blvd	2	1	52	26	26	35
Stewart & Gray Rd to Imperial Hwy	4	2	56	28	28	40
Brookshire Ave						
Florence Ave to Firestone Blvd	2	1	40	20	20	35
Stewart & Gray Rd to Imperial Hwy	4	2	54	27	27	40
Gallatin Rd						
Paramount Blvd to Lakewood Blvd	4	2	64	32	32	35
Gardendale St						
Garfield Ave to Paramount Blvd	2	1	58	29	29	35
Paramount Blvd to Lakewood Blvd	2	1	62	31	31	35
Foster Rd						
Lakewood Blvd to Woodruff Ave	4	2	56	28	28	35
Bellflower Ave						
Stewart & Gray Rd to Imperial Hwy	4	2	70	35	35	40
Table Notes:						

A - Total travel lanes includes north and southbound or east and westbound travel lanes. All roads were modeled as a single lane in each direction.

B - Total road width is measured from curb to curb or edge of pavement. Width does not include any unpaved part of the right of way. Direction 1 refers to one travel direction (e.g., northbound) and direction 2 refers to the opposite travel direction (e.g., southbound). Road direction widths

(C)Source: City of Downey. Citywide Streets Speed Limits.
<https://downeyca.maps.arcgis.com/apps/webappviewer/index.html?id=cfdc362a232d44b295c434112052897b>

Sheet 2: Existing Traffic Noise Contours

Road / Segment	Estimated CNEL 50 Feet from Road Center Line	Estimated Distance from Modeled Road Center to Noise Contour (in Feet)			
		75 DNL	70 DNL	65 DNL	60 DNL
Paramount Blvd					
Telegraph Rd to I-5 Freeway	71.1	20	64	204	644
I-5 Freeway to Gallatin Rd	72.3	27	85	269	849
Gallatin Rd to Florence Ave	71.7	23	74	234	740
Florence Ave to Firestone Blvd	70.9	19	62	195	615
Firestone Blvd to Stewart & Gray Rd	70.3	17	54	169	536
Stewart & Gray Rd to Imperial Hwy	70.0	16	50	158	500
Imperial Hwy to Gardendale St	69.9	15	49	155	489
Lakewood Blvd					
Telegraph Rd to I-5 Freeway	72.7	29	93	294	931
I-5 Freeway to Gallatin Rd	71.9	24	77	245	774
Gallatin Rd to Florence Ave	71.3	21	67	213	674
Florence Ave to Firestone Blvd	70.8	19	60	190	601
Firestone Blvd to Stewart & Gray Rd	69.3	13	43	135	426
Stewart & Gray Rd to Imperial Hwy	70.6	18	57	182	574
Imperial Hwy to I-105 Freeway	70.8	19	60	190	601
Foster Rd to Rosecrans Ave	70.8	19	60	190	601
Telegraph Rd					
City Limits to Paramount Blvd	70.9	19	62	195	615
Paramount Blvd to Lakewood Blvd	72.3	27	85	269	849
Lakewood Blvd to City Limits	70.7	19	59	186	587
Florence Ave					
City Limits to Old River School Rd	71.6	23	72	229	723
Old River School Rd to Paramount Blvd	72.2	26	83	262	830
Paramount Blvd to Lakewood Blvd	71.7	23	74	234	740
Lakewood Blvd to I-605 Freeway	72.7	29	93	294	931
Firestone Blvd					
City Limits to Old River School Rd	71.7	23	74	234	740
Old River School Rd to Paramount Blvd	69.1	13	41	129	406
Paramount Blvd to Lakewood Blvd	69.3	13	43	135	426
Lakewood Blvd to Woodruff Ave	67.5	9	28	89	281
Stewart & Gray Rd to City Limits	72.8	30	95	301	953
Stewart & Gray Rd					
Old River School Rd to Paramount Blvd	67.0	8	25	79	251
Paramount Blvd to Lakewood Blvd	68.3	11	34	107	338
Lakewood Blvd to Woodruff Ave	70.2	17	52	166	524
Imperial Hwy					
Old River School Rd to Paramount Blvd	72.0	25	79	251	792
Paramount Blvd to Lakewood Blvd	70.9	19	62	195	615

Lakewood Blvd to Woodruff Ave	71.9	24	77	245	774
Woodruff Ave					
Firestone Blvd to Imperial Hwy	69.1	13	41	129	406
Old River School Rd					
Florence Ave to Firestone Blvd	67.9	10	31	97	308
Stewart & Gray Rd to Imperial Hwy	66.2	7	21	66	208
Downey Ave					
Florence Ave to Firestone Blvd	63.3	3	11	34	107
Stewart & Gray Rd to Imperial Hwy	66.1	6	20	64	204
Brookshire Ave					
Florence Ave to Firestone Blvd	65.2	5	17	52	166
Stewart & Gray Rd to Imperial Hwy	65.8	6	19	60	190
Gallatin Rd					
Paramount Blvd to Lakewood Blvd	64.8	5	15	48	151
Gardendale St					
Garfield Ave to Paramount Blvd	64.3	4	13	43	135
Paramount Blvd to Lakewood Blvd	67.0	8	25	79	251
Foster Rd					
Lakewood Blvd to Woodruff Ave	70.9	19	62	195	615
Bellflower Ave					
Stewart & Gray Rd to Imperial Hwy	70.0	16	50	158	500

Sheet 3: 2026 Road Traffic Volume Information (Percentages)

2026 TRAFFIC VOLUME PERCENTAGE OF ADT													
Road / Segment	ADT	TIME OF DAY SPLIT			DAY FLEET MIX (7 AM to 7 PM)			Evening Fleet Mix (7 PM to 10 PM)			NIGHT FLEET MIX (10PM to 7 AM)		
		% Day	% Evening	% Night	% Auto	% MDT	% HDT	% Auto	% MDT	% HDT	% Auto	% MDT	% HDT
Paramount Blvd													
Telegraph Rd to I-5 Freeway	32,900	77.17%	10.73%	12.10%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%
I-5 Freeway to Gallatin Rd	42,500	72.50%	14.02%	13.48%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%
Gallatin Rd to Florence Ave	34,600	73.38%	13.68%	12.94%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%
Florence Ave to Firestone Blvd	30,900	75.46%	13.74%	10.80%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%
Firestone Blvd to Stewart & Gray Rd	27,300	77.11%	12.95%	9.94%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%	91.40%	6.50%	2.10%
Stewart & Gray Rd to Imperial Hwy	27,700	74.23%	14.54%	11.23%	92.70%	4.80%	2.50%	92.70%	4.80%	2.50%	92.70%	4.80%	2.50%
Imperial Hwy to Gardendale St	25,400	74.71%	14.23%	11.06%	92.70%	4.80%	2.50%	92.70%	4.80%	2.50%	92.70%	4.80%	2.50%
Lakewood Blvd													
Telegraph Rd to I-5 Freeway	46,600	75.66%	12.10%	12.24%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%
I-5 Freeway to Gallatin Rd	39,400	75.22%	13.00%	11.78%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%
Gallatin Rd to Florence Ave	32,300	75.03%	13.13%	11.84%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%
Florence Ave to Firestone Blvd	29,600	74.48%	13.56%	11.95%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%
Firestone Blvd to Stewart & Gray Rd	19,700	72.77%	15.22%	12.02%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%	92.20%	4.70%	3.10%
Stewart & Gray Rd to Imperial Hwy	31,700	74.48%	16.01%	9.50%	93.90%	4.40%	1.80%	93.90%	4.40%	1.80%	93.90%	4.40%	1.80%
Imperial Hwy to I-105 Freeway	31,600	70.88%	17.44%	11.68%	93.90%	4.40%	1.80%	93.90%	4.40%	1.80%	93.90%	4.40%	1.80%
Foster Rd to Rosecrans Ave	30,800	72.60%	14.94%	12.47%	93.90%	4.40%	1.80%	93.90%	4.40%	1.80%	93.90%	4.40%	1.80%
Telegraph Rd													
City Limits to Paramount Blvd	23,900	80.42%	8.17%	11.41%	92.50%	4.60%	2.90%	92.50%	4.60%	2.90%	92.50%	4.60%	2.90%
Paramount Blvd to Lakewood Blvd	31,200	79.89%	8.73%	11.39%	92.50%	4.60%	2.90%	92.50%	4.60%	2.90%	92.50%	4.60%	2.90%
Lakewood Blvd to City Limits	27,700	75.46%	11.42%	13.12%	92.50%	4.60%	2.90%	92.50%	4.60%	2.90%	92.50%	4.60%	2.90%
Florence Ave													
City Limits to Old River School Rd	37,800	75.30%	12.84%	11.87%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%
Old River School Rd to Paramount Blvd	42,300	75.54%	12.94%	11.51%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%
Paramount Blvd to Lakewood Blvd	38,200	76.97%	12.16%	10.86%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%
Lakewood Blvd to I-605 Freeway	35,400	76.10%	11.73%	12.17%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%	93.60%	4.10%	2.30%
Firestone Blvd													
City Limits to Old River School Rd	46,800	77.04%	12.90%	10.07%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%
Old River School Rd to Paramount Blvd	29,900	78.28%	13.13%	8.59%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%
Paramount Blvd to Lakewood Blvd	30,000	77.08%	14.25%	8.67%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%
Lakewood Blvd to Woodruff Ave	17,900	75.81%	12.98%	11.21%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%
Stewart & Gray Rd to City Limits	46,400	75.54%	13.30%	11.16%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%	90.90%	5.40%	3.70%
Imperial Hwy													
Old River School Rd to Paramount Blvd	37,700	77.87%	12.69%	9.44%	90.50%	5.50%	4.00%	90.50%	5.50%	4.00%	90.50%	5.50%	4.00%
Paramount Blvd to Lakewood Blvd	31,900	78.19%	12.60%	9.21%	90.50%	5.50%	4.00%	90.50%	5.50%	4.00%	90.50%	5.50%	4.00%
Lakewood Blvd to Woodruff Ave	36,200	78.89%	11.42%	9.69%	90.50%	5.50%	4.00%	90.50%	5.50%	4.00%	90.50%	5.50%	4.00%
Woodruff Ave													
Firestone Blvd to Imperial Hwy	17,700	80.99%	10.91%	8.10%	85.70%	7.90%	6.40%	85.70%	7.90%	6.40%	85.70%	7.90%	6.40%
Old River School Rd													
Florence Ave to Firestone Blvd	18,300	78.62%	12.30%	9.08%	92.80%	4.90%	2.30%	92.80%	4.90%	2.30%	92.80%	4.90%	2.30%
Stewart & Gray Rd to Imperial Hwy	12,400	79.58%	11.47%	8.95%	92.80%	4.90%	2.30%	92.80%	4.90%	2.30%	92.80%	4.90%	2.30%

Downey Ave													
Florence Ave to Firestone Blvd	11,100	86.08%	9.23%	4.69%	93.70%	4.30%	1.90%	93.70%	4.30%	1.90%	93.70%	4.30%	1.90%
Stewart & Gray Rd to Imperial Hwy	14,100	81.95%	11.26%	6.80%	93.70%	4.30%	1.90%	93.70%	4.30%	1.90%	93.70%	4.30%	1.90%
Brookshire Ave													
Florence Ave to Firestone Blvd	14,700	82.82%	11.07%	6.11%	91.80%	5.00%	3.10%	91.80%	5.00%	3.10%	91.80%	5.00%	3.10%
Stewart & Gray Rd to Imperial Hwy	13,400	83.71%	10.76%	5.53%	91.80%	5.00%	3.10%	91.80%	5.00%	3.10%	91.80%	5.00%	3.10%
Gallatin Rd													
Paramount Blvd to Lakewood Blvd	10,500	80.64%	12.58%	6.78%	89.20%	6.50%	4.30%	89.20%	6.50%	4.30%	89.20%	6.50%	4.30%
Stewart & Gray Rd													
Old River School Rd to Paramount Blvd	16,700	77.38%	12.45%	10.17%	90.40%	5.90%	3.80%	90.40%	5.90%	3.80%	90.40%	5.90%	3.80%
Paramount Blvd to Lakewood Blvd	23,200	78.04%	13.47%	8.48%	90.40%	5.90%	3.80%	90.40%	5.90%	3.80%	90.40%	5.90%	3.80%
Lakewood Blvd to Woodruff Ave	27,100	79.49%	12.50%	8.01%	90.40%	5.90%	3.80%	90.40%	5.90%	3.80%	90.40%	5.90%	3.80%
Gardendale St													
Garfield Ave to Paramount Blvd	11,300	80.43%	12.14%	7.43%	92.40%	5.20%	2.30%	92.40%	5.20%	2.30%	92.40%	5.20%	2.30%
Paramount Blvd to Lakewood Blvd	21,600	82.11%	11.24%	6.65%	92.40%	5.20%	2.30%	92.40%	5.20%	2.30%	92.40%	5.20%	2.30%
Foster Rd													
Lakewood Blvd to Woodruff Ave	33,300	66.05%	16.56%	17.38%	92.40%	4.90%	2.60%	92.40%	4.90%	2.60%	92.40%	4.90%	2.60%
Bellflower Ave													
Stewart & Gray Rd to Imperial Hwy	22,000	75.74%	15.42%	8.84%	87.90%	7.00%	5.10%	87.90%	7.00%	5.10%	87.90%	7.00%	5.10%

Table Notes:

A - City traffic volume informaton based on modeling from the Traffic Impact Analysis for the Downey GPU (Ganddini 2026).

B - ADT represents average daily traffic along all segments of the listed road segment. Actual traffic volumes may vary slightly along different indivual segments within the modeled segment start and end point.

C - Time of day split refers to what percentage of the listed ADT occurs during the daytime (7 AM to 7 PM), evening (7 PM to 7 AM) and nighttime (10 PM to 7 AM) time periods.

D - Fleet mix by time of day refers to the percentage of autos, trucks, etc. that make up total day, evening, and nighttime traffic.

E- Fleet mix information is from the Traffic Impact Analysis for the Downey GPU (Ganddini 2026). Differences in Existing fleet mix data between the Traffic Impact Analysis and Table A: Vehicle Fleet Mix Per SCAG RTM Model in the Ganddini Fleet Mix Data attachment in this appendix are due to the data in the Traffic Impact Analysis being based on new counts conducted for the Downey GPU, while Table A in the fleet mix attachment used a regional model.

F- Percent day fleet mix adjusted by 0.1% in the model when percentages did not equal due to rounding.

Sheet 4: 2045 No Project Traffic Noise Contours

Road / Segment	Estimated DNL 50 Feet from Road Center Line	Estimated Distance from Modeled Road Center to Noise Contour (in Feet)			
		75 DNL	70 DNL	65 DNL	60 DNL
Paramount Blvd					
Telegraph Rd to I-5 Freeway	70.5	18	56	177	561
I-5 Freeway to Gallatin Rd	71.5	22	71	223	706
Gallatin Rd to Florence Ave	71.1	20	64	204	644
Florence Ave to Firestone Blvd	70.4	17	55	173	548
Firestone Blvd to Stewart & Gray Rd	69.5	14	45	141	446
Stewart & Gray Rd to Imperial Hwy	69.5	14	45	141	446
Imperial Hwy to Gardendale St	69.4	14	44	138	435
Lakewood Blvd					
Telegraph Rd to I-5 Freeway	71.3	21	67	213	674
I-5 Freeway to Gallatin Rd	70.6	18	57	182	574
Gallatin Rd to Florence Ave	69.9	15	49	155	489
Florence Ave to Firestone Blvd	69.4	14	44	138	435
Firestone Blvd to Stewart & Gray Rd	67.9	10	31	97	308
Stewart & Gray Rd to Imperial Hwy	69.6	14	46	144	456
Imperial Hwy to I-105 Freeway	69.9	15	49	155	489
Foster Rd to Rosecrans Ave	69.9	15	49	155	489
Telegraph Rd					
City Limits to Paramount Blvd	70.6	18	57	182	574
Paramount Blvd to Lakewood Blvd	72	25	79	251	792
Lakewood Blvd to City Limits	70.3	17	54	169	536
Florence Ave					
City Limits to Old River School Rd	71.3	21	67	213	674
Old River School Rd to Paramount Blvd	71.8	24	76	239	757
Paramount Blvd to Lakewood Blvd	71.3	21	67	213	674
Lakewood Blvd to I-605 Freeway	72.4	27	87	275	869
Firestone Blvd					
City Limits to Old River School Rd	69.8	15	48	151	477
Old River School Rd to Paramount Blvd	67.4	9	27	87	275
Paramount Blvd to Lakewood Blvd	67.4	9	27	87	275
Lakewood Blvd to Woodruff Ave	65.7	6	19	59	186
Stewart & Gray Rd to City Limits	71	20	63	199	629
Stewart & Gray Rd					
Old River School Rd to Paramount Blvd	65.3	5	17	54	169
Paramount Blvd to Lakewood Blvd	66.6	7	23	72	229
Lakewood Blvd to Woodruff Ave	68.7	12	37	117	371
Imperial Hwy					
Old River School Rd to Paramount Blvd	70.3	17	54	169	536
Paramount Blvd to Lakewood Blvd	69.2	13	42	132	416

Lakewood Blvd to Woodruff Ave	70.3	17	54	169	536
Woodruff Ave					
Firestone Blvd to Imperial Hwy	66.3	7	21	67	213
Old River School Rd					
Florence Ave to Firestone Blvd	66.9	8	24	77	245
Stewart & Gray Rd to Imperial Hwy	65.2	5	17	52	166
Downey Ave					
Florence Ave to Firestone Blvd	61.8	2	8	24	76
Stewart & Gray Rd to Imperial Hwy	64.9	5	15	49	155
Brookshire Ave					
Florence Ave to Firestone Blvd	63.0	3	10	32	100
Stewart & Gray Rd to Imperial Hwy	64.0	4	13	40	126
Gallatin Rd					
Paramount Blvd to Lakewood Blvd	63.2	3	10	33	104
Gardendale St					
Garfield Ave to Paramount Blvd	62.6	3	9	29	91
Paramount Blvd to Lakewood Blvd	65.2	5	17	52	166
Foster Rd					
Lakewood Blvd to Woodruff Ave	69.4	14	44	138	435
Bellflower Ave					
Stewart & Gray Rd to Imperial Hwy	67.6	9	29	91	288

Sheet 5: 2045 No Project Road Traffic Volume Information (Percentages)

FUTURE (2045) NO PROJECT TRAFFIC VOLUME PERCENTAGE OF ADT													
Road / Segment	ADT	TIME OF DAY SPLIT			DAY FLEET MIX (7 AM to 7 PM)			Evening Fleet Mix (7 PM to 10 PM)			NIGHT FLEET MIX (10PM to 7 AM)		
		% Day	%Evening	% Night	% Auto	% MDT	% HDT	% Auto	% MDT	% HDT	% Auto	% MDT	% HDT
Paramount Blvd													
Telegraph Rd to I-5 Freeway	35,400	77.2%	10.7%	12.1%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
I-5 Freeway to Gallatin Rd	43,600	72.5%	14.0%	13.5%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
Gallatin Rd to Florence Ave	36,900	73.4%	13.7%	12.9%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
Florence Ave to Firestone Blvd	33,700	75.5%	13.7%	10.8%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
Firestone Blvd to Stewart & Gray Rd	28,200	77.1%	12.9%	9.9%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
Stewart & Gray Rd to Imperial Hwy	29,900	74.2%	14.5%	11.2%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
Imperial Hwy to Gardendale St	26,800	74.7%	14.2%	11.1%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%	96.3%	2.1%	1.6%
Lakewood Blvd													
Telegraph Rd to I-5 Freeway	47,900	75.7%	12.1%	12.2%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
I-5 Freeway to Gallatin Rd	41,100	75.2%	13.0%	11.8%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Gallatin Rd to Florence Ave	32,300	75.0%	13.1%	11.8%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Florence Ave to Firestone Blvd	29,600	74.5%	13.6%	12.0%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Firestone Blvd to Stewart & Gray Rd	19,700	72.8%	15.2%	12.0%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Stewart & Gray Rd to Imperial Hwy	31,700	74.5%	16.0%	9.5%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Imperial Hwy to I-105 Freeway	31,600	70.9%	17.4%	11.7%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Foster Rd to Rosecrans Ave	30,800	72.6%	14.9%	12.5%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Telegraph Rd													
City Limits to Paramount Blvd	23,900	80.4%	8.2%	11.4%	94.2%	3.3%	2.5%	94.2%	3.3%	2.5%	94.2%	3.3%	2.5%
Paramount Blvd to Lakewood Blvd	31,200	79.9%	8.7%	11.4%	94.2%	3.3%	2.5%	94.2%	3.3%	2.5%	94.2%	3.3%	2.5%
Lakewood Blvd to City Limits	27,700	75.5%	11.4%	13.1%	94.2%	3.3%	2.5%	94.2%	3.3%	2.5%	94.2%	3.3%	2.5%
Florence Ave													
City Limits to Old River School Rd	42,400	75.3%	12.8%	11.9%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%
Old River School Rd to Paramount Blvd	45,200	75.5%	12.9%	11.5%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%
Paramount Blvd to Lakewood Blvd	41,700	77.0%	12.2%	10.9%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%
Lakewood Blvd to I-605 Freeway	38,700	76.1%	11.7%	12.2%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%	96.2%	2.9%	0.9%
Firestone Blvd													
City Limits to Old River School Rd	49,200	77.04%	12.90%	10.07%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%
Old River School Rd to Paramount Blvd	33,200	78.28%	13.13%	8.59%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%
Paramount Blvd to Lakewood Blvd	31,400	77.08%	14.25%	8.67%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%
Lakewood Blvd to Woodruff Ave	19,300	75.81%	12.98%	11.21%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%
Stewart & Gray Rd to City Limits	46,400	75.54%	13.30%	11.16%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%	97.8%	1.5%	0.6%
Imperial Hwy													
Old River School Rd to Paramount Blvd	37,700	77.87%	12.69%	9.44%	96.9%	2.2%	0.9%	96.9%	2.2%	0.9%	96.9%	2.2%	0.9%
Paramount Blvd to Lakewood Blvd	31,900	78.19%	12.60%	9.21%	96.9%	2.2%	0.9%	96.9%	2.2%	0.9%	96.9%	2.2%	0.9%
Lakewood Blvd to Woodruff Ave	36,200	78.89%	11.42%	9.69%	96.9%	2.2%	0.9%	96.9%	2.2%	0.9%	96.9%	2.2%	0.9%
Woodruff Ave													

Firestone Blvd to Imperial Hwy	17,700	80.99%	10.91%	8.10%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%	97.6%	1.8%	0.6%
Old River School Rd													
Florence Ave to Firestone Blvd	18,300	78.62%	12.30%	9.08%	96.6%	2.8%	0.7%	96.6%	2.8%	0.7%	96.6%	2.8%	0.7%
Stewart & Gray Rd to Imperial Hwy	12,400	79.58%	11.47%	8.95%	96.6%	2.8%	0.7%	96.6%	2.8%	0.7%	96.6%	2.8%	0.7%
Downey Ave													
Florence Ave to Firestone Blvd	11,100	86.08%	9.23%	4.69%	98.1%	1.6%	0.3%	98.1%	1.6%	0.3%	98.1%	1.6%	0.3%
Stewart & Gray Rd to Imperial Hwy	14,100	81.95%	11.26%	6.80%	98.1%	1.6%	0.3%	98.1%	1.6%	0.3%	98.1%	1.6%	0.3%
Brookshire Ave													
Florence Ave to Firestone Blvd	14,700	82.82%	11.07%	6.11%	98.9%	1.0%	0.2%	98.9%	1.0%	0.2%	98.9%	1.0%	0.2%
Stewart & Gray Rd to Imperial Hwy	13,400	83.71%	10.76%	5.53%	98.9%	1.0%	0.2%	98.9%	1.0%	0.2%	98.9%	1.0%	0.2%
Gallatin Rd													
Paramount Blvd to Lakewood Blvd	10,500	80.64%	12.58%	6.78%	94.4%	4.7%	0.9%	94.4%	4.7%	0.9%	94.4%	4.7%	0.9%
Stewart & Gray Rd													
Old River School Rd to Paramount Blvd	16,700	77.38%	12.45%	10.17%	96.2%	2.6%	1.1%	96.2%	2.6%	1.1%	96.2%	2.6%	1.1%
Paramount Blvd to Lakewood Blvd	23,200	78.04%	13.47%	8.48%	96.2%	2.6%	1.1%	96.2%	2.6%	1.1%	96.2%	2.6%	1.1%
Lakewood Blvd to Woodruff Ave	27,100	79.49%	12.50%	8.01%	96.2%	2.6%	1.1%	96.2%	2.6%	1.1%	96.2%	2.6%	1.1%
Gardendale St													
Garfield Ave to Paramount Blvd	11,300	80.43%	12.14%	7.43%	98.2%	1.5%	0.3%	98.2%	1.5%	0.3%	98.2%	1.5%	0.3%
Paramount Blvd to Lakewood Blvd	21,600	82.11%	11.24%	6.65%	98.2%	1.5%	0.3%	98.2%	1.5%	0.3%	98.2%	1.5%	0.3%
Foster Rd													
Lakewood Blvd to Woodruff Ave	33,300	66.05%	16.56%	17.38%	97.4%	2.0%	0.6%	97.4%	2.0%	0.6%	97.4%	2.0%	0.6%
Bellflower Ave													
Stewart & Gray Rd to Imperial Hwy	22,000	75.74%	15.42%	8.84%	97.5%	2.0%	0.5%	97.5%	2.0%	0.5%	97.5%	2.0%	0.5%

Table Notes:

A - City traffic volume informaton based on modeling from the Traffic Impact Analysis for the Clayton Housing Element (Fehr and Peers, 2022).

B - ADT represents average daily traffic along all segments of the listed road segment. Actual traffic volumes may vary slightly along different indivual segments within the modeled segment start and end point.

C - Time of day split refers to what percentage of the listed ADT occurs during the daytime (7 AM to 10 PM) and nighttime (10 PM to 7 AM) time periods

D - Fleet mix by time of day refers to the percentage of autos, trucks, etc. that make up total day and nighttime traffic.

Sheet 6: 2045 GPU Traffic Noise Contours

Road / Segment	Estimated DNL 50 Feet from Road Center Line	Estimated Distance from Modeled Road Center to Noise Contour (in Feet)			
		75 DNL	70 DNL	65 DNL	60 DNL
Paramount Blvd					
Telegraph Rd to I-5 Freeway	70.6	18	57	182	574
I-5 Freeway to Gallatin Rd	71.6	23	72	229	723
Gallatin Rd to Florence Ave	71.1	20	64	204	644
Florence Ave to Firestone Blvd	70.3	17	54	169	536
Firestone Blvd to Stewart & Gray Rd	69.6	14	46	144	456
Stewart & Gray Rd to Imperial Hwy	69.7	15	47	148	467
Imperial Hwy to Gardendale St	69.5	14	45	141	446
Lakewood Blvd					
Telegraph Rd to I-5 Freeway	71.4	22	69	218	690
I-5 Freeway to Gallatin Rd	70.5	18	56	177	561
Gallatin Rd to Florence Ave	69.8	15	48	151	477
Florence Ave to Firestone Blvd	69.3	13	43	135	426
Firestone Blvd to Stewart & Gray Rd	68.2	10	33	104	330
Stewart & Gray Rd to Imperial Hwy	69.8	15	48	151	477
Imperial Hwy to I-105 Freeway	70.1	16	51	162	512
Foster Rd to Rosecrans Ave	69.8	15	48	151	477
Telegraph Rd					
City Limits to Paramount Blvd	70.6	18	57	182	574
Paramount Blvd to Lakewood Blvd	72	25	79	251	792
Lakewood Blvd to City Limits	70.3	17	54	169	536
Florence Ave					
City Limits to Old River School Rd	71.4	22	69	218	690
Old River School Rd to Paramount Blvd	71.8	24	76	239	757
Paramount Blvd to Lakewood Blvd	71.4	22	69	218	690
Lakewood Blvd to I-605 Freeway	72.7	29	93	294	931
Firestone Blvd					
City Limits to Old River School Rd	69.9	15	49	155	489
Old River School Rd to Paramount Blvd	67.6	9	29	91	288
Paramount Blvd to Lakewood Blvd	67.5	9	28	89	281
Lakewood Blvd to Woodruff Ave	66.1	6	20	64	204
Stewart & Gray Rd to City Limits	71.2	21	66	208	659
Stewart & Gray Rd					
Old River School Rd to Paramount Blvd	65.3	5	17	54	169
Paramount Blvd to Lakewood Blvd	66.6	7	23	72	229
Lakewood Blvd to Woodruff Ave	68.7	12	37	117	371
Imperial Hwy					
Old River School Rd to Paramount Blvd	70.4	17	55	173	548
Paramount Blvd to Lakewood Blvd	69.3	13	43	135	426

Lakewood Blvd to Woodruff Ave	70.3	17	54	169	536
Woodruff Ave					
Firestone Blvd to Imperial Hwy	66.6	7	23	72	229
Old River School Rd					
Florence Ave to Firestone Blvd	66.9	8	24	77	245
Stewart & Gray Rd to Imperial Hwy	65.2	5	17	52	166
Downey Ave					
Florence Ave to Firestone Blvd	61.8	2	8	24	76
Stewart & Gray Rd to Imperial Hwy	64.9	5	15	49	155
Brookshire Ave					
Florence Ave to Firestone Blvd	63	3	10	32	100
Stewart & Gray Rd to Imperial Hwy	64	4	13	40	126
Gallatin Rd					
Paramount Blvd to Lakewood Blvd	63.1	3	10	32	102
Gardendale St					
Garfield Ave to Paramount Blvd	62.6	3	9	29	91
Paramount Blvd to Lakewood Blvd	65.3	5	17	54	169
Foster Rd					
Lakewood Blvd to Woodruff Ave	69.4	14	44	138	435
Bellflower Ave					
Stewart & Gray Rd to Imperial Hwy	67.6	9	29	91	288

Sheet 7: 2045 GPU Road Traffic Volume Information (Percentages)

FUTURE (2045) GPU TRAFFIC VOLUME PERCENTAGE OF ADT													
Road / Segment	ADT	TIME OF DAY SPLIT			DAY FLEET MIX (7 AM to 7 PM)			Evening Fleet Mix (7 PM to 10 PM)			NIGHT FLEET MIX (10PM to 7 AM)		
		% Day	%Eve	% Night	% Auto	% MDT	% HDT	% Auto	% MDT	% HDT	% Auto	% MDT	% HDT
Paramount Blvd													
Telegraph Rd to I-5 Freeway	36,200	77.2%	10.7%	12.1%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
I-5 Freeway to Gallatin Rd	44,800	72.5%	14.0%	13.5%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
Gallatin Rd to Florence Ave	37,200	73.4%	13.7%	12.9%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
Florence Ave to Firestone Blvd	34,000	75.5%	13.7%	10.8%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
Firestone Blvd to Stewart & Gray Rd	29,500	77.1%	12.9%	9.9%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
Stewart & Gray Rd to Imperial Hwy	31,300	74.2%	14.5%	11.2%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
Imperial Hwy to Gardendale St	28,000	74.7%	14.2%	11.1%	96.4	2.2	1.4	96.4	2.2	1.4	96.4	2.2	1.4
Lakewood Blvd													
Telegraph Rd to I-5 Freeway	49,100	75.7%	12.1%	12.2%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
I-5 Freeway to Gallatin Rd	40,300	75.2%	13.0%	11.8%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Gallatin Rd to Florence Ave	32,300	75.0%	13.1%	11.8%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Florence Ave to Firestone Blvd	29,600	74.5%	13.6%	12.0%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Firestone Blvd to Stewart & Gray Rd	21,400	72.8%	15.2%	12.0%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Stewart & Gray Rd to Imperial Hwy	34,100	74.5%	16.0%	9.5%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Imperial Hwy to I-105 Freeway	33,900	70.9%	17.4%	11.7%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Foster Rd to Rosecrans Ave	30,800	72.6%	14.9%	12.5%	97.7	1.7	0.5	97.7	1.7	0.5	97.7	1.7	0.5
Telegraph Rd													
City Limits to Paramount Blvd	23,900	80.4%	8.2%	11.4%	94.2	3.3	2.4	94.2	3.3	2.4	94.2	3.3	2.4
Paramount Blvd to Lakewood Blvd	31,200	79.9%	8.7%	11.4%	94.2	3.3	2.4	94.2	3.3	2.4	94.2	3.3	2.4
Lakewood Blvd to City Limits	27,700	75.5%	11.4%	13.1%	94.2	3.3	2.4	94.2	3.3	2.4	94.2	3.3	2.4
Florence Ave													
City Limits to Old River School Rd	42,900	75.3%	12.8%	11.9%	96.3	2.9	0.9	96.3	2.9	0.9	96.3	2.9	0.9
Old River School Rd to Paramount Blvd	45,900	75.5%	12.9%	11.5%	96.3	2.9	0.9	96.3	2.9	0.9	96.3	2.9	0.9
Paramount Blvd to Lakewood Blvd	42,800	77.0%	12.2%	10.9%	96.3	2.9	0.9	96.3	2.9	0.9	96.3	2.9	0.9
Lakewood Blvd to I-605 Freeway	41,200	76.1%	11.7%	12.2%	96.3	2.9	0.9	96.3	2.9	0.9	96.3	2.9	0.9
Firestone Blvd													
City Limits to Old River School Rd	49,800	77.0%	12.9%	10.1%	97.7	1.7	0.6	97.7	1.7	0.6	97.7	1.7	0.6
Old River School Rd to Paramount Blvd	34,300	78.3%	13.1%	8.6%	97.7	1.7	0.6	97.7	1.7	0.6	97.7	1.7	0.6
Paramount Blvd to Lakewood Blvd	31,900	77.1%	14.3%	8.7%	97.7	1.7	0.6	97.7	1.7	0.6	97.7	1.7	0.6
Lakewood Blvd to Woodruff Ave	21,200	75.8%	13.0%	11.2%	97.7	1.7	0.6	97.7	1.7	0.6	97.7	1.7	0.6
Stewart & Gray Rd to City Limits	47,600	75.5%	13.3%	11.2%	97.7	1.7	0.6	97.7	1.7	0.6	97.7	1.7	0.6

Imperial Hwy													
Old River School Rd to Paramount Blvd	37,700	77.9%	12.7%	9.4%	96.8	2.3	0.9	96.8	2.3	0.9	96.8	2.3	0.9
Paramount Blvd to Lakewood Blvd	31,900	78.2%	12.6%	9.2%	96.8	2.3	0.9	96.8	2.3	0.9	96.8	2.3	0.9
Lakewood Blvd to Woodruff Ave	36,200	78.9%	11.4%	9.7%	96.8	2.3	0.9	96.8	2.3	0.9	96.8	2.3	0.9
Woodruff Ave													
Firestone Blvd to Imperial Hwy	18,800	81.0%	10.9%	8.1%	97.4	1.9	0.7	97.4	1.9	0.7	97.4	1.9	0.7
Old River School Rd													
Florence Ave to Firestone Blvd	18,300	78.6%	12.3%	9.1%	96.5	2.8	0.7	96.5	2.8	0.7	96.5	2.8	0.7
Stewart & Gray Rd to Imperial Hwy	12,400	79.6%	11.5%	8.9%	96.5	2.8	0.7	96.5	2.8	0.7	96.5	2.8	0.7
Downey Ave													
Florence Ave to Firestone Blvd	11,100	86.1%	9.2%	4.7%	98.1	1.7	0.3	98.1	1.7	0.3	98.1	1.7	0.3
Stewart & Gray Rd to Imperial Hwy	14,100	81.9%	11.3%	6.8%	98.1	1.7	0.3	98.1	1.7	0.3	98.1	1.7	0.3
Brookshire Ave													
Florence Ave to Firestone Blvd	14,700	82.8%	11.1%	6.1%	98.8	1.1	0.2	98.8	1.1	0.2	98.8	1.1	0.2
Stewart & Gray Rd to Imperial Hwy	13,400	83.7%	10.8%	5.5%	98.8	1.1	0.2	98.8	1.1	0.2	98.8	1.1	0.2
Gallatin Rd													
Paramount Blvd to Lakewood Blvd	10,500	80.6%	12.6%	6.8%	94.4	5	0.6	94.4	5	0.6	94.4	5	0.6
Stewart & Gray Rd													
Old River School Rd to Paramount Blvd	16,700	77.4%	12.5%	10.2%	96.3	2.6	1.0	96.3	2.6	1.0	96.3	2.6	1.0
Paramount Blvd to Lakewood Blvd	23,200	78.0%	13.5%	8.5%	96.3	2.6	1.0	96.3	2.6	1.0	96.3	2.6	1.0
Lakewood Blvd to Woodruff Ave	27,600	79.5%	12.5%	8.0%	96.3	2.6	1.0	96.3	2.6	1.0	96.3	2.6	1.0
Gardendale St													
Garfield Ave to Paramount Blvd	11,300	80.4%	12.1%	7.4%	98	1.7	0.3	98	1.7	0.3	98	1.7	0.3
Paramount Blvd to Lakewood Blvd	21,600	82.1%	11.2%	6.7%	98	1.7	0.3	98	1.7	0.3	98	1.7	0.3
Foster Rd													
Lakewood Blvd to Woodruff Ave	33,400	66.1%	16.6%	17.4%	97.2	2.1	0.7	97.2	2.1	0.7	97.2	2.1	0.7
Bellflower Ave													
Stewart & Gray Rd to Imperial Hwy	22,000	75.7%	15.4%	8.8%	97.5	2	0.4	97.5	2	0.4	97.5	2	0.4

Table Notes:

A - City traffic volume informaton based on modeling from the Traffic Impact Analysis for the GPU (Ganddini 2026).

B - ADT represents average daily traffic along all segments of the listed road segment. Actual traffic volumes may vary slightly along different indivual segments within the modeled segment start and end point.

C - Time of day split refers to what percentage of the listed ADT occurs during the daytime (7 AM to 7 PM), evening (7 PM to 7 AM) and nighttime (10 PM to 7 AM) time periods.

D - Fleet mix by time of day refers to the percentage of autos, trucks, etc. that make up total day, evening, and nighttime traffic.

E- Percent day fleet mix adjusted by 0.1% in the model when percentages did not equal due to rounding.

Table A
Vehicle Fleet Mix Per SCAG RTM Model

Roadway	Vehicle Mix[1]														
	BY 2019			FY 2050			FY 2050 Net Change			FY 2050 With Project			FY 2050 With Project Net Change		
	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy
Paramount Blvd	97.1%	2.0%	0.8%	96.3%	2.1%	1.6%	-0.9%	+0.1%	+0.8%	96.4%	2.2%	1.4%	-0.8%	+0.2%	+0.6%
Lakewood Blvd	97.9%	1.7%	0.4%	97.6%	1.8%	0.6%	-0.2%	+0.1%	+0.2%	97.7%	1.7%	0.5%	-0.2%	+0.0%	+0.1%
Telegraph Rd	94.6%	3.5%	1.9%	94.2%	3.3%	2.5%	-0.4%	-0.2%	+0.6%	94.2%	3.3%	2.4%	-0.4%	-0.2%	+0.5%
Florence Ave	97.4%	2.1%	0.5%	96.2%	2.9%	0.9%	-1.3%	+0.8%	+0.4%	96.3%	2.9%	0.9%	-1.1%	+0.8%	+0.3%
Firestone Blvd	97.6%	1.9%	0.6%	97.8%	1.5%	0.6%	+0.2%	-0.3%	+0.1%	97.7%	1.7%	0.6%	+0.1%	-0.2%	+0.1%
Imperial Hwy	97.4%	1.9%	0.7%	96.9%	2.2%	0.9%	-0.6%	+0.3%	+0.3%	96.8%	2.3%	0.9%	-0.6%	+0.4%	+0.2%
Woodruff Ave	97.7%	1.8%	0.5%	97.6%	1.8%	0.6%	-0.1%	+0.0%	+0.1%	97.4%	1.9%	0.7%	-0.3%	+0.1%	+0.2%
Old River School Rd	93.8%	4.1%	2.2%	96.6%	2.8%	0.7%	+2.8%	-1.3%	-1.5%	96.5%	2.8%	0.7%	+2.8%	-1.3%	-1.5%
Downey Ave	98.3%	1.5%	0.2%	98.1%	1.6%	0.3%	-0.2%	+0.1%	+0.1%	98.1%	1.7%	0.3%	-0.2%	+0.2%	+0.0%
Brookshire Ave	98.9%	1.0%	0.1%	98.9%	1.0%	0.2%	+0.0%	-0.0%	+0.0%	98.8%	1.1%	0.2%	-0.1%	+0.1%	+0.1%
Gallatin Rd	96.0%	3.6%	0.4%	94.4%	4.7%	0.9%	-1.6%	+1.1%	+0.5%	94.4%	5.0%	0.6%	-1.6%	+1.4%	+0.2%
Stewart & Gray Rd	97.0%	2.3%	0.8%	96.2%	2.6%	1.1%	-0.8%	+0.4%	+0.4%	96.3%	2.6%	1.0%	-0.7%	+0.4%	+0.3%
Gardendale St	98.4%	1.4%	0.2%	98.2%	1.5%	0.3%	-0.2%	+0.2%	+0.1%	98.0%	1.7%	0.3%	-0.5%	+0.4%	+0.1%
Foster Rd	97.6%	1.9%	0.5%	97.4%	2.0%	0.6%	-0.2%	+0.1%	+0.2%	97.2%	2.1%	0.7%	-0.4%	+0.2%	+0.2%
Bellflower Ave	97.8%	1.8%	0.4%	97.5%	2.0%	0.5%	+0.3%	-0.2%	-0.0%	97.5%	2.0%	0.4%	-0.3%	+0.3%	+0.0%

Notes:
1. Vehicle mix based on SCAG RTM average of all segments within City limits for each roadway.

Table B (1 of 2)
Calibrated Vehicle Mix for General Plan Buildout Conditions

Roadway	Segment	Year 2045 No Project				Year 2045 With Project			
		Daily Traffic Volume[1]	Vehicle Mix[2]			Daily Traffic Volume[1]	Vehicle Mix[2]		
			Light Duty	Medium Duty	Heavy Duty		Light Duty	Medium Duty	Heavy Duty
1. Paramount Blvd	Telegraph Rd to I-5 Freeway	35,400	92.9%	5.5%	1.5%	36,200	92.8%	5.5%	1.7%
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	44,600				44,800			
3. Paramount Blvd	Gallatin Rd to Florence Ave	36,900				37,200			
4. Paramount Blvd	Florence Ave to Firestone Blvd	33,700				34,000			
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	28,700				29,500			
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	29,900				31,300			
7. Paramount Blvd	Imperial Hwy to Gardendale St	26,800				28,000			
8. Lakewood Blvd	Telegraph Rd to I-5 Freeway	48,900	93.3%	4.4%	2.3%	49,100	93.2%	4.5%	2.3%
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	41,400				41,400			
10. Lakewood Blvd	Gallatin Rd to Florence Ave	33,900				33,900			
11. Lakewood Blvd	Florence Ave to Firestone Blvd	31,100				31,100			
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	20,700				21,400			
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	33,300				34,100			
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	33,200				33,900			
15. Lakewood Blvd	Foster Rd to Rosecrans Ave	32,300				32,300			
16. Telegraph Rd	City Limits to Paramount Blvd	25,100	92.9%	4.8%	2.3%	25,100	92.9%	4.8%	2.4%
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd	32,800				32,800			
18. Telegraph Rd	Lakewood Blvd to City Limits	29,100				29,100			
19. Florence Ave	City Limits to Old River School Rd	42,400	94.9%	3.2%	1.9%	42,900	94.7%	3.3%	2.0%
20. Florence Ave	Old River School Rd to Paramount Blvd	45,200				45,900			
21. Florence Ave	Paramount Blvd to Lakewood Blvd	41,700				42,800			
22. Florence Ave	Lakewood Blvd to I-605 Freeway	38,700				41,200			
23. Firestone Blvd	City Limits to Old River School Rd	49,200	90.7%	5.7%	3.7%	49,800	90.8%	5.5%	3.6%
24. Firestone Blvd	Old River School Rd to Paramount Blvd	33,200				34,300			
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	31,500				31,900			
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	44,600				45,800			
27. Firestone Blvd	Stewart & Gray Rd to City Limits	48,700				48,700			
28. Imperial Hwy	Old River School Rd to Paramount Blvd	39,600	91.1%	5.2%	3.8%	39,600	91.2%	5.1%	3.8%

Table B (2 of 2)
Calibrated Vehicle Mix for General Plan Buildout Conditions

Roadway	Segment	Year 2045 No Project				Year 2045 With Project			
		Daily Traffic Volume[1]	Vehicle Mix[2]			Daily Traffic Volume[1]	Vehicle Mix[2]		
			Light Duty	Medium Duty	Heavy Duty		Light Duty	Medium Duty	Heavy Duty
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	33,500				33,500			
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	38,000				38,000			
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	18,600	85.8%	7.9%	6.3%	18,800	85.9%	7.8%	6.3%
32. Old River School Rd	Florence Ave to Firestone Blvd	19,200	90.0%	6.2%	3.8%	19,200	90.0%	6.2%	3.8%
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	13,000				13,000			
34. Downey Ave	Florence Ave to Firestone Blvd	11,700	93.9%	4.3%	1.9%	11,700	94.0%	4.2%	1.9%
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	14,800				14,800			
36. Brookshire Ave	Florence Ave to Firestone Blvd	15,400	91.8%	5.0%	3.1%	15,400	91.9%	4.9%	3.1%
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	14,100				14,100			
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	11,000	90.9%	5.3%	3.8%	11,000	90.8%	5.1%	4.1%
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	17,500	91.1%	5.5%	3.4%	17,500	91.0%	5.5%	3.5%
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	24,400				24,400			
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	28,500				28,500			
42. Gardendale St	Garfield Ave to Paramount Blvd	11,900	92.6%	5.1%	2.3%	11,900	92.9%	4.9%	2.2%
43. Gardendale St	Paramount Blvd to Lakewood Blvd	12,600				12,600			
44. Foster Rd	Lakewood Blvd to Woodruff Ave	10,000	92.6%	4.8%	2.5%	10,000	92.8%	4.7%	2.4%
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	23,100	87.6%	7.2%	5.2%	23,100	88.1%	6.8%	5.1%

Notes:

(1) Daily traffic volume based on existing measured volumes with growth derived from post-processed SCAG Regional Transportation Model (RTM) data; see Tables 7/8 from *Downey General Plan Update Transportation Analysis*.

(2) Calibrated vehicle mix based on existing vehicle mix +/- the net change in SCAG RTM between BY 2019 and FY 2050 models.

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	15 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/15/2026 6:27:55 PM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Paramount1	1	1	---	71.1	0.0	---	---	Sound Level
Paramount2	2	1	---	72.3	0.0	---	---	Sound Level
Paramount3	3	1	---	71.7	0.0	---	---	Sound Level
Paramount4	4	1	---	70.9	0.0	---	---	Sound Level
Paramount5	5	1	---	70.3	0.0	---	---	Sound Level
Paramount6	6	1	---	70.0	0.0	---	---	Sound Level
Paramount7	7	1	---	69.9	0.0	---	---	Sound Level
Lakewood1	8	1	---	72.7	0.0	---	---	Sound Level
Lakewood2	9	1	---	71.9	0.0	---	---	Sound Level
Lakewood3	10	1	---	71.3	0.0	---	---	Sound Level
Lakewood4	11	1	---	70.8	0.0	---	---	Sound Level
Lakewood5	12	1	---	69.3	0.0	---	---	Sound Level
Lakewood6	13	1	---	70.6	0.0	---	---	Sound Level
Lakewood7	14	1	---	70.8	0.0	---	---	Sound Level
Lakewood8	15	1	---	70.8	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	15 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/15/2026 6:27:55 PM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Telegraph1	16	1	---	70.9	0.0	---	---	Sound Level
Telegraph2	17	1	---	72.3	0.0	---	---	Sound Level
Telegraph3	18	1	---	70.7	0.0	---	---	Sound Level
Florence1	19	1	---	71.6	0.0	---	---	Sound Level
Florence2	20	1	---	72.2	0.0	---	---	Sound Level
Florence3	21	1	---	71.7	0.0	---	---	Sound Level
Florence4	22	1	---	72.7	0.0	---	---	Sound Level
Firestone1	23	1	---	71.7	0.0	---	---	Sound Level
Firestone2	24	1	---	69.1	0.0	---	---	Sound Level
Firestone3	25	1	---	69.3	0.0	---	---	Sound Level
Firestone4	26	1	---	67.5	0.0	---	---	Sound Level
Firestone5	27	1	---	72.8	0.0	---	---	Sound Level
StewartandGray1	28	1	---	67.0	0.0	---	---	Sound Level
StewartandGray2	29	1	---	68.3	0.0	---	---	Sound Level
StewartandGray3	30	1	---	70.2	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	15 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/15/2026 6:27:55 PM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
ImperialHwy1	31	1	---	72.0	0.0	---	---	Sound Level
ImperialHwy2	32	1	---	70.9	0.0	---	---	Sound Level
ImperialHwy3	33	1	---	71.9	0.0	---	---	Sound Level
Woodruff1	34	1	---	69.1	0.0	---	---	Sound Level
OldRiverSchool1	35	1	---	67.9	0.0	---	---	Sound Level
OldRiverSchool2	36	1	---	66.2	0.0	---	---	Sound Level
Downey1	37	1	---	63.3	0.0	---	---	Sound Level
Downey2	38	1	---	66.1	0.0	---	---	Sound Level
Brookshire1	39	1	---	65.2	0.0	---	---	Sound Level
Brookshire2	40	1	---	65.8	0.0	---	---	Sound Level
Gallatin1	41	1	---	64.8	0.0	---	---	Sound Level
Gardendale1	42	1	---	64.3	0.0	---	---	Sound Level
Gardendale2	43	1	---	67.0	0.0	---	---	Sound Level
Foster1	44	1	---	70.9	0.0	---	---	Sound Level
Bellflower1	45	1	---	70.0	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	17 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/17/2026 11:24:22 AM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Paramount1	1	1	---	70.5	0.0	---	---	Sound Level
Paramount2	2	1	---	71.5	0.0	---	---	Sound Level
Paramount3	3	1	---	71.1	0.0	---	---	Sound Level
Paramount4	4	1	---	70.4	0.0	---	---	Sound Level
Paramount5	5	1	---	69.5	0.0	---	---	Sound Level
Paramount6	6	1	---	69.5	0.0	---	---	Sound Level
Paramount7	7	1	---	69.4	0.0	---	---	Sound Level
Lakewood1	8	1	---	71.3	0.0	---	---	Sound Level
Lakewood2	9	1	---	70.6	0.0	---	---	Sound Level
Lakewood3	10	1	---	69.9	0.0	---	---	Sound Level
Lakewood4	11	1	---	69.4	0.0	---	---	Sound Level
Lakewood5	12	1	---	67.9	0.0	---	---	Sound Level
Lakewood6	13	1	---	69.6	0.0	---	---	Sound Level
Lakewood7	14	1	---	69.9	0.0	---	---	Sound Level
Lakewood8	15	1	---	69.9	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	17 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/17/2026 11:24:22 AM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Telegraph1	16	1	---	70.6	0.0	---	---	Sound Level
Telegraph2	17	1	---	72.0	0.0	---	---	Sound Level
Telegraph3	18	1	---	70.3	0.0	---	---	Sound Level
Florence1	19	1	---	71.3	0.0	---	---	Sound Level
Florence2	20	1	---	71.8	0.0	---	---	Sound Level
Florence3	21	1	---	71.3	0.0	---	---	Sound Level
Florence4	22	1	---	72.4	0.0	---	---	Sound Level
Firestone1	23	1	---	69.8	0.0	---	---	Sound Level
Firestone2	24	1	---	67.4	0.0	---	---	Sound Level
Firestone3	25	1	---	67.4	0.0	---	---	Sound Level
Firestone4	26	1	---	65.7	0.0	---	---	Sound Level
Firestone5	27	1	---	71.0	0.0	---	---	Sound Level
StewartandGray1	28	1	---	65.3	0.0	---	---	Sound Level
StewartandGray2	29	1	---	66.6	0.0	---	---	Sound Level
StewartandGray3	30	1	---	68.7	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	17 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/17/2026 11:24:22 AM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
ImperialHwy1	31	1	---	70.3	0.0	---	---	Sound Level
ImperialHwy2	32	1	---	69.2	0.0	---	---	Sound Level
ImperialHwy3	33	1	---	70.3	0.0	---	---	Sound Level
Woodruff1	34	1	---	66.3	0.0	---	---	Sound Level
OldRiverSchool1	35	1	---	66.9	0.0	---	---	Sound Level
OldRiverSchool2	36	1	---	65.2	0.0	---	---	Sound Level
Downey1	37	1	---	61.8	0.0	---	---	Sound Level
Downey2	38	1	---	64.9	0.0	---	---	Sound Level
Brookshire1	39	1	---	63.0	0.0	---	---	Sound Level
Brookshire2	40	1	---	64.0	0.0	---	---	Sound Level
Gallatin1	41	1	---	63.2	0.0	---	---	Sound Level
Gardendale1	42	1	---	62.6	0.0	---	---	Sound Level
Gardendale2	43	1	---	65.2	0.0	---	---	Sound Level
Foster1	44	1	---	69.4	0.0	---	---	Sound Level
Bellflower1	45	1	---	67.6	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	17 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/17/2026 12:47:31 PM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Paramount1	1	1	---	70.6	0.0	---	---	Sound Level
Paramount2	2	1	---	71.6	0.0	---	---	Sound Level
Paramount3	3	1	---	71.1	0.0	---	---	Sound Level
Paramount4	4	1	---	60.8	0.0	---	---	Sound Level
Paramount5	5	1	---	69.6	0.0	---	---	Sound Level
Paramount6	6	1	---	69.7	0.0	---	---	Sound Level
Paramount7	7	1	---	69.5	0.0	---	---	Sound Level
Lakewood1	8	1	---	71.4	0.0	---	---	Sound Level
Lakewood2	9	1	---	70.5	0.0	---	---	Sound Level
Lakewood3	10	1	---	69.8	0.0	---	---	Sound Level
Lakewood4	11	1	---	69.3	0.0	---	---	Sound Level
Lakewood5	12	1	---	68.2	0.0	---	---	Sound Level
Lakewood6	13	1	---	69.8	0.0	---	---	Sound Level
Lakewood7	14	1	---	70.1	0.0	---	---	Sound Level
Lakewood8	15	1	---	69.8	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	17 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/17/2026 12:47:31 PM
CASE:	Downey General Plan Update	ORGANIZATION:	MIG
UNITS:	English	ANALYSIS BY:	kkitowski
DEFAULT GROUND TYPE:	HardSoil	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Telegraph1	16	1	---	70.6	0.0	---	---	Sound Level
Telegraph2	17	1	---	72.0	0.0	---	---	Sound Level
Telegraph3	18	1	---	70.3	0.0	---	---	Sound Level
Florence1	19	1	---	71.4	0.0	---	---	Sound Level
Florence2	20	1	---	71.8	0.0	---	---	Sound Level
Florence3	21	1	---	71.4	0.0	---	---	Sound Level
Florence4	22	1	---	72.7	0.0	---	---	Sound Level
Firestone1	23	1	---	69.9	0.0	---	---	Sound Level
Firestone2	24	1	---	67.6	0.0	---	---	Sound Level
Firestone3	25	1	---	67.5	0.0	---	---	Sound Level
Firestone4	26	1	---	66.1	0.0	---	---	Sound Level
Firestone5	27	1	---	71.2	0.0	---	---	Sound Level
StewartandGray1	28	1	---	65.3	0.0	---	---	Sound Level
StewartandGray2	29	1	---	66.6	0.0	---	---	Sound Level
StewartandGray3	30	1	---	68.7	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	17 May 2026
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	5/17/2026 12:47:31 PM
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PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				Lden		Increase over Existing		
Name	No.	Nb. R.R.	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
ImperialHwy1	31	1	---	70.4	0.0	---	---	Sound Level
ImperialHwy2	32	1	---	69.3	0.0	---	---	Sound Level
ImperialHwy3	33	1	---	70.3	0.0	---	---	Sound Level
Woodruff1	34	1	---	66.6	0.0	---	---	Sound Level
OldRiverSchool1	35	1	---	66.9	0.0	---	---	Sound Level
OldRiverSchool2	36	1	---	65.2	0.0	---	---	Sound Level
Downey1	37	1	---	61.8	0.0	---	---	Sound Level
Downey2	38	1	---	64.9	0.0	---	---	Sound Level
Brookshire1	39	1	---	63.0	0.0	---	---	Sound Level
Brookshire2	40	1	---	64.0	0.0	---	---	Sound Level
Gallatin1	41	1	---	63.1	0.0	---	---	Sound Level
Gardendale1	42	1	---	62.6	0.0	---	---	Sound Level
Gardendale2	43	1	---	65.3	0.0	---	---	Sound Level
Foster1	44	1	---	69.4	0.0	---	---	Sound Level
Bellflower1	45	1	---	67.6	0.0	---	---	Sound Level

DOWNEY GENERAL PLAN UPDATE TRANSPORTATION ANALYSIS

City of Downey

June 26, 2026

gandhi

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

DOWNEY GENERAL PLAN UPDATE
TRANSPORTATION ANALYSIS

City of Downey

June 26, 2026

GANDDINI GROUP, INC.
555 Parkcenter Drive, Suite 225
Santa Ana, California 92705
(714) 795-3100 | ganddini.com

Project No. 19781

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1. INTRODUCTION

This section describes the purpose of this study, the proposed project, and the general scope of the analysis.

PURPOSE AND OBJECTIVES

The purpose of this study is to evaluate the potential for transportation impacts resulting from implementation of the proposed General Plan Update in the context of the California Environmental Quality Act (CEQA). This study evaluates the significance of project-related transportation impacts with respect to the thresholds established by the City of Downey, as the lead agency, and identifies measures to mitigate such impacts, if any.

PROJECT LOCATION

The City of Downey is located in within the Gateway Cities region of southeastern Los Angeles County, California, approximately 10 miles southeast of Downtown Los Angeles and approximately 12 miles northeast of Downtown Long Beach. The City is a subregional agency of the Southern California Association of Governments (SCAG). Figure 1 shows the regional location map.

PROJECT DESCRIPTION

The City of Downey proposes a General Plan Update that would incorporate changes to the City's Land Use Element. The revised Land Use Element would allow for the following approximate land use buildout totals within the City of Downey:

Residential Uses

- 22,572 single-family housing units
- 2,888 accessory dwelling units
- 22,050 multifamily housing units

Non-Residential Uses

- 14,265,913 square feet of commercial buildings
- 3,692,564 square feet of office buildings
- 4,489,700 square feet of industrial buildings
- 7,241,250 square feet of public facility buildings
- 3,673,000 square feet of hospital buildings
- 957 hotel rooms

Table 1 shows a summary of buildout potential associated with the proposed General Plan Update.

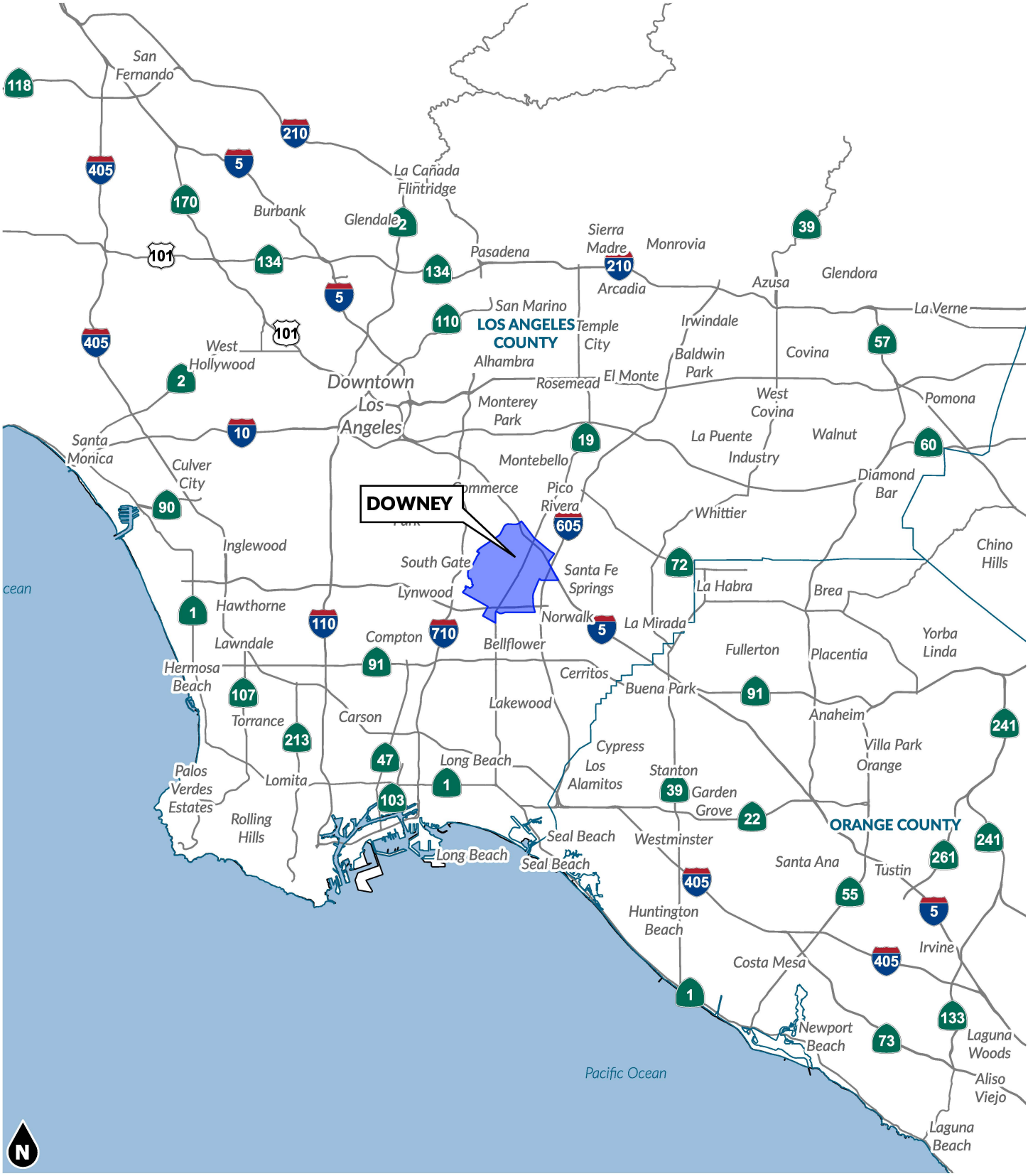


Figure 1
Regional Location Map

Table 1
Proposed General Plan Update Buildout Potential

Land Use	Existing	Proposed General Plan Buildout	Net Increase
Residential			
Single-Family	22,500 DU	22,572 DU	72 DU
Multi-Family	13,847 DU	22,050 DU	8,203 DU
ADU	813 DU	2,888 DU	2,075 DU
TOTAL RESIDENTIAL	**37,160 DU**	**47,510 DU**	**10,350 DU**
Non-Residential			
Commercial	13,093,300 SF	14,265,913 SF	1,172,613 SF
Office	3,226,500 SF	3,692,564 SF	466,064 SF
Industrial	3,954,000 SF	4,489,700 SF	535,700 SF
Public Facility	6,817,000 SF	7,241,250 SF	424,250 SF
Hospital	3,576,700 SF	3,673,000 SF	96,300 SF
Hotel	657 RM	957 RM	300 RM
TOTAL NON-RESIDENTIAL*	**30,667,500 SF**	**33,362,427 SF**	**2,694,927 SF**

Notes:

DU = Dwelling Units; SF = Square Feet; RM = Rooms

* Excludes hotel

2. EXISTING TRANSPORTATION SETTING

This section describes the existing transportation setting in the City of Downey.

EXISTING ROADWAY NETWORK

The City of Downey roadway network and functional classifications are described in the City's existing General Plan Circulation Element as adopted in 2005. The City's roadway network is currently classified into six basic classifications: Freeway, Major Arterial, Primary Arterial, Secondary Arterial, Collector and Local. Figure 2 shows the existing General Plan roadway network in the City of Downey. Existing General Plan roadway cross-sections are provided in Appendix A.

Freeway: Freeways form the basis of the regional transportation network and are therefore administered by Federal and State transportation agencies. The main difference between freeways and other roadways is that there is no direct access to properties abutting freeways and access from cross-streets is restricted at specific points (on-ramps and off-ramps). Freeway capacity is important to local communities since traffic congestion is worsened on arterial roads and other local streets when used as alternatives where freeways are not available. The following freeways travel through or near Downey:

- Santa Ana Freeway / Interstate 5 (I-5)
- Glenn Anderson Freeway / Interstate 105 (I-105)
- San Gabriel River Freeway / Interstate 605 (I-605)
- Long Beach Freeway / Interstate 710 (I-710), located one mile west of Downey western city limits

Major Arterial: Major arterials are designed to provide access to the freeway system. When freeways are not available, major arterials also serve as through routes for traffic crossing the City. In contrast to a freeway, adjacent properties may have driveway access onto the roadway. Access to adjacent properties should be limited wherever possible to minimize cross-traffic, which influences congestion and accidents. Major arterials provide six travel lanes and a median divider. On-street parking should be prohibited to maximize roadway capacity. Single or double-left turn lanes should be provided at intersections.

Primary Arterial: Primary arterials are designed to provide access through parts of the City to major arterials. Access to adjacent properties is restricted to reduce congestion and accidents. Primary arterials provide four travel lanes, two in each direction, and a median, in addition to on-street parking lanes. Single or double-left turn lanes should be provided at intersections.

Secondary Arterial: Secondary arterials are designed to provide access through parts of the City, but generally do not have the same capacity as major and primary arterials. Secondary arterials generally provide four travel lanes, two in each direction, in addition to parking lanes.

Collector: Collector streets are designed to provide access to arterial roads and the regional roadway network from local streets. Collector streets are not intended to be used as through routes to travel through the City, but rather, intended to collect traffic from local streets to be distributed at arterial roads. Typically, collectors provide, at most, one travel lane in each direction and curbside parking on both sides.

Local: Local streets are designed to provide access to properties that front upon the street and for access to the adjacent neighborhood. Local streets are not intended to be used as through routes from one neighborhood to another neighborhood, and so are typically designed with narrow widths intended to slow traffic speeds. Most local streets provide, at most, one travel lane in each direction and curbside parking on both sides. The majority of streets in Downey are classified as local streets.

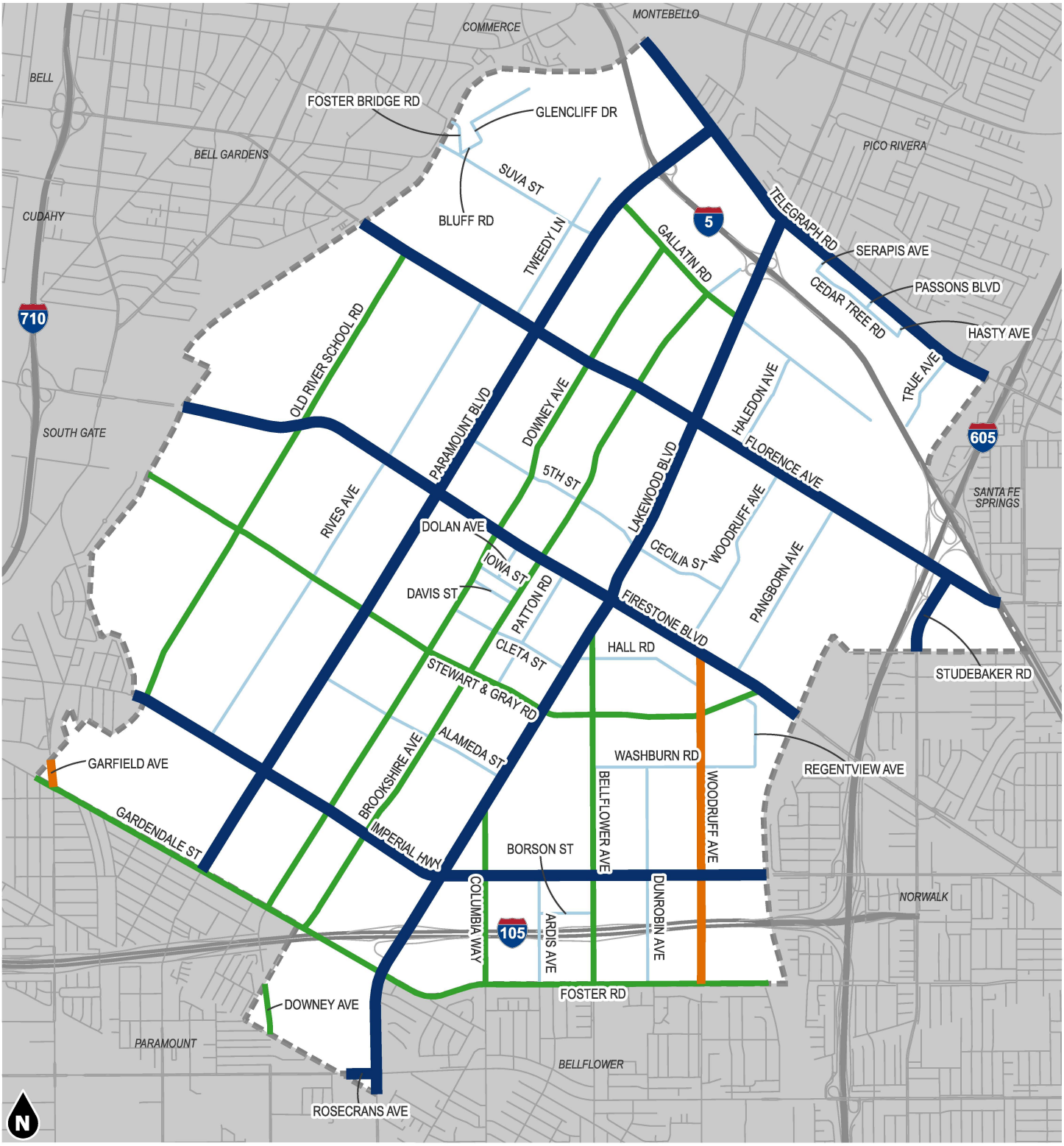


Figure 2
Existing General Plan Roadway Classifications

EXISTING TRANSIT NETWORK

The City of Downey is currently served by the Los Angeles County Metropolitan Transportation Authority (Metro) transit system, the City of Downey's public transit system, "Downey LINK," and Long Beach Transit.

Metro

Figure 3 shows the existing Metro transit system map within the City of Downey. As shown on Figure 3, the City of Downey is currently served the following Metro lines providing regional circulation:

- Metro Bus Line 62 (Telegraph Rd)
- Metro Bus Line 111 (Florence Avenue)
- Metro Bus Line 115 (Firestone Boulevard)
- Metro Bus Line 117 (Imperial Highway)
- Metro Bus Line 120 (Imperial Highway)
- Metro Bus Line 125 (Imperial Highway/Woodruff Avenue)
- Metro Bus Line 127 (Bellflower Avenue)
- Metro Bus Line 265 (Paramount Boulevard)
- Metro Bus Line 266 (Lakewood Boulevard)
- Metro Bus Line 460 (I-105)
- Metro Bus Line 577 (I-605)
- Metro Rail – C Line (I-105)

Downey LINK

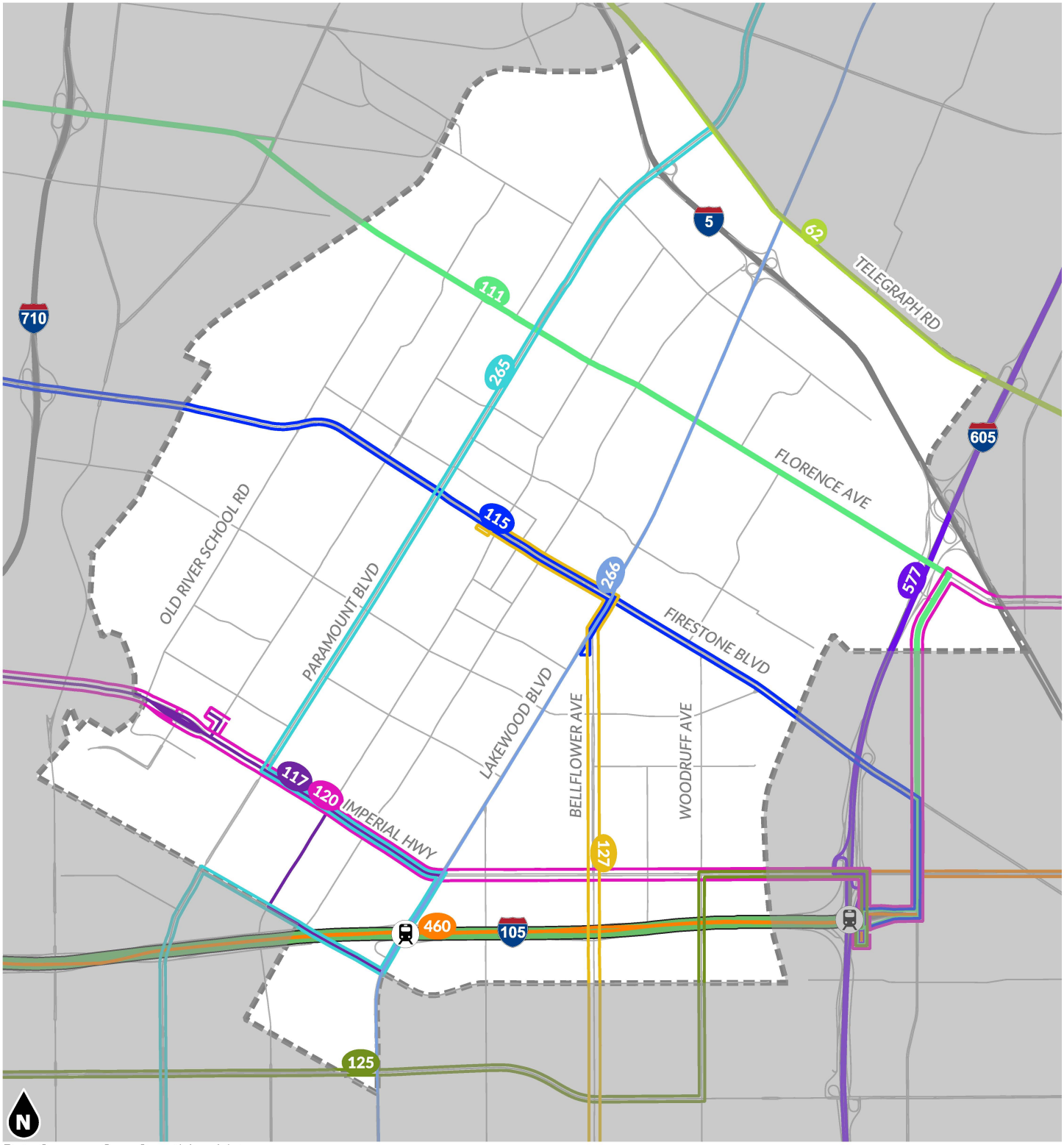
The City of Downey's public transit system, Downey LINK, operates Monday through Friday from 6:30 AM to 6:30 PM with four circulating routes during peak times providing local circulation within the City:

- Northwest Route
- Northeast Route
- Southeast Route
- Southwest Route

Figure 4 shows the City of Downey LINK Transit system map during peak times. All routes begin and end at the Downey Depot Transportation Center located at 8150 Nance Street (one block south of Firestone Boulevard off Downey Avenue). During mid-day times (9:00 AM – 2:00 PM, the Northwest and Northeast Routes are combined into a single North Route, and the Southeast and Southwest Routes are combined into a single South Route.

Long Beach Transit

Long Beach Transit Route 22 provides service between Downtown Long Beach and the Lakewood Green Line Station in the City of Downey.



Data Sources: OpenStreetMap, Metro

Legend

- 111 Metro Bus Line
- Metro Rail Station
- Metro Rail C Line

Figure 3
Existing Transit Map - Metro



Source: City of Downey

Figure 4
Existing Transit - Downey LINK

EXISTING BICYCLE NETWORK

The City of Downey's Active Transportation Plan, "WalkDowney", was adopted in 2021 and incorporates the City's Bicycle Master Plan that was adopted in 2015. Figure 5 shows the existing and proposed bicycle facilities map as established in the WalkDowney Active Transportation Plan. As shown on Figure 5, the City's bicycle network is comprised of the following types of bikeways:[1]

- **Bike Path (Class I):** Currently, there are two Class I bike paths in the City of Downey. Class I bike paths, or shared use paths, are those that provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized. The Rio Hondo Bike Path and the San Gabriel River Path run along the west and east sides of the City, respectively. These bicycle paths are popular recreational destinations as well as important regional connectors between Downey, the Gateways Cities region, and other parts of Los Angeles County.

- **Bike Lane (Class II):** The WalkDowney Active Transportation Plan identifies Class II bike lanes that can be installed without any other change to the existing cross-section of the street. Class II bike lanes consist of pavement markings to provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted. Class II bike lanes are currently provided on Gardendale Street west of Lakewood Boulevard to Garfield Avenue, Brookshire Avenue between Gardendale Street and Imperial Highway, and Woodruff Avenue between Foster Road and Firestone Boulevard.

- **Bike Lane with Road Diet (Class II):** The City's Bicycle Master Plan identifies future installation of Class II bike lanes on the following roadways that would require a reduction from two vehicle travel lanes in each direction to one vehicle travel lane in each direction with a center turn lane:
  - Gallatin Road (between Tweedy Lane – Lakewood Boulevard)
  - Stewart and Gray Road (between Rives Avenue – Lakewood Boulevard)
  - Foster Road (between Lakewood Boulevard and eastern City boundary at San Gabriel River)
  - Old River School Road (between Florence Avenue – Firestone Boulevard)
  - Brookshire Avenue (between Cherokee Drive – Imperial Highway)
  - Columbia Way (between Imperial Highway – Foster Road)

  Bike lane with road diet improvements are currently installed on the following roadways:
  - Gardendale Street (between Garfield Avenue – Lakewood Boulevard)
  - Old River School Road south of Firestone Boulevard
  - Downey Avenue (between Gallatin Road – 5th Street and Firestone Boulevard - Gardendale Street)
  - Brookshire Avenue (Imperial Highway – Gardendale Street)

  Additionally, it is noted that lane striping on these streets transitions back to two travel lanes at intersections with arterials to minimize delay and extensive queuing during peak periods (i.e., Gardendale Street at Paramount Boulevard, Old River School Road at Stewart & Gray Road, etc.).

- **Buffered Bike Lane (Class II):** Buffered bike lanes are a type of Class II bikeway that include additional pavement markings, typically three to six feet wide, to further separate bicycle lanes from vehicular traffic. Buffered bike lanes are currently planned along sections of Stewart and Gray Road. Portions of the existing Class II bike lanes currently provided on Woodruff Avenue include painted lane buffers.

- **Bike Route (Class III):** Bike routes are Class III bikeway facilities for secondary arterials, collectors and local residential streets that experience less vehicular traffic. Class III bikeways provide a right-of-way on-

[1] Bikeway class definitions are based on the California Streets and Highway Code (Section 890.4).

street or off-street, designated by signs or permanent markings and shared with pedestrians and motorists. These bikeways would include signage and wayfinding, on-street sharrows, and could include additional traffic calming elements. A Class III bike route is currently provided on Brookshire Avenue between Imperial Highway and Florence Avenue. In addition, Class III bike routes are currently in-place on portions of Old River School Road and Downey Avenue.

The California Streets and Highway Code also defines a Class IV bikeway; however, none are currently included in the City's existing or proposed bicycle network. Class IV bikeways, often referred to as cycle tracks or separated bikeways, promote active transportation and provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and which are separated from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

The WalkDowney Active Transportation Plan includes additional bicycle information, such as bicycle volume data, bicycle collision data, vehicular volumes and speeds, and bicycle parking.



Note:
Some of the "proposed" bike lanes have been installed since publication of the WalkDowney ATP. Class II bike lanes with lane reductions are already in-place at: 1) Old River School Rd. (Imperial Hwy.-Arnett St.), 2) Gardendale St. (Lakewood Blvd.-Garfield Ave.) and 3) Downey Ave. (Gallatin Rd.-5th St. & Firestone Blvd.-Gardendale St.). Class II bike lanes are currently in-place along Woodruff Ave. between Firestone Blvd. and Foster Rd.

Source: City of Downey/Fehr & Peers

Figure 5
Existing and Proposed Bicycle Facilities

EXISTING PEDESTRIAN NETWORK

The City of Downey is a developed urban/suburban municipality with an extensive network of pedestrian walkways built within the parkways of its arterial and local roadway network. Additionally, as noted in the WalkDowney Active Transportation Plan:

> "There are a number of enhanced pedestrian safety features throughout the City. High visibility crosswalks are present at intersections near schools, a pedestrian hybrid flashing beacon is present at Woodruff Avenue & Via Amorita by Doty Middle School, and a crosswalk with a rectangular rapid flashing pedestrian beacon is present at Brookshire Avenue & Everest Street by the Brookshire Children's Park. Curb extensions exist along Downey Avenue in the downtown area, between Firestone Boulevard and 5th Street. Most bus stops in Downey have benches and a trash can; there are a few locations with a bus shelter."

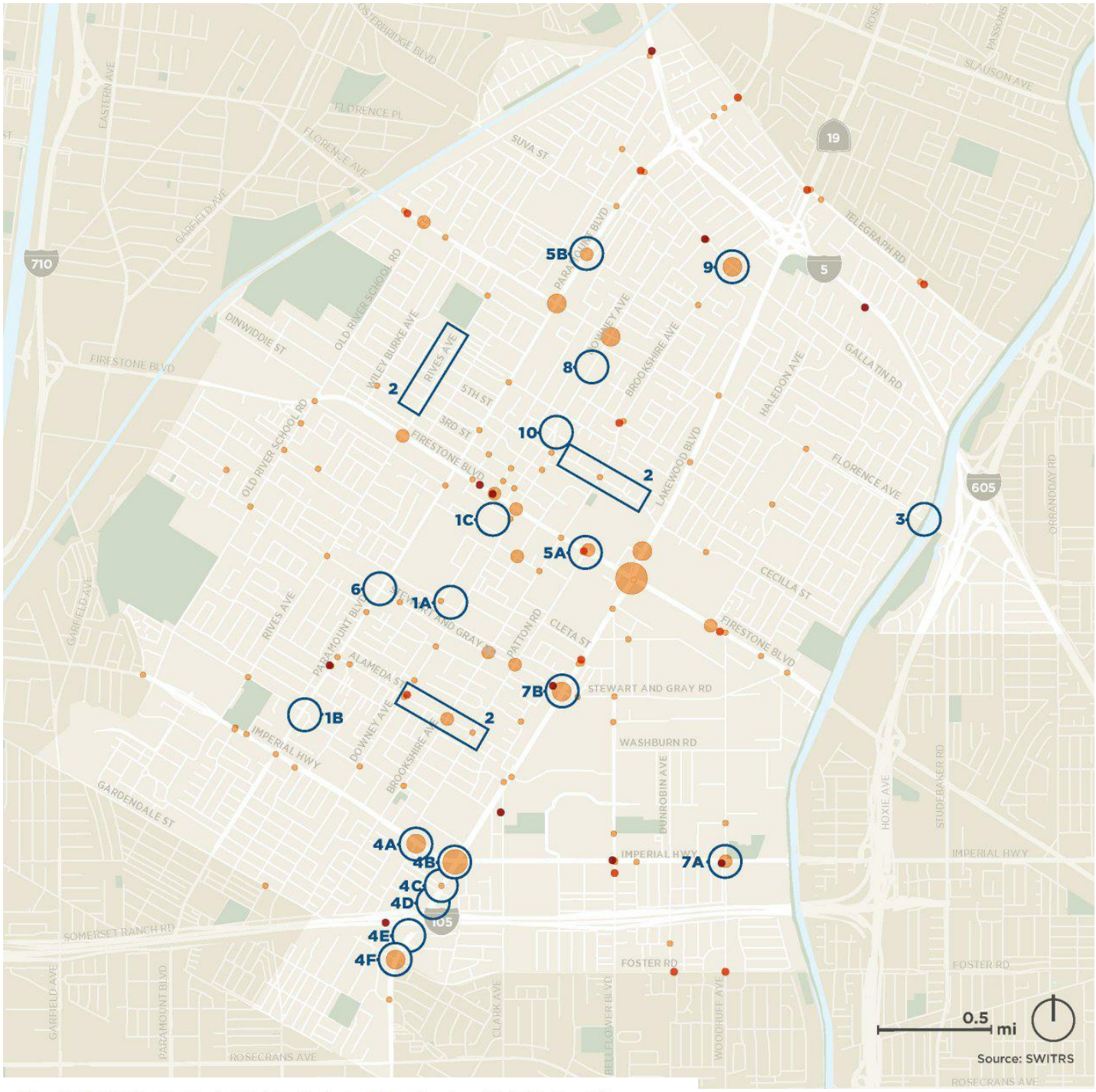
The existing Rio Hondo Bike Path and the San Gabriel River Path are shared-use paths accessible to pedestrians. The City's pedestrian infrastructure also includes walking tracks at Furman and Apollo Parks.

The WalkDowney Active Transportation Plan includes detailed pedestrian activity data, pedestrian collision data, and pedestrian safety countermeasures. Notable findings include the following three locations with the highest pedestrian activity:

- Downey Avenue in downtown Downey,
- Furman Park walking trails,
- Lakewood Boulevard East on-ramp that connects to the Lakewood Boulevard Green Line Station

The WalkDowney Active Transportation Plan also includes detailed concepts for priority pedestrian improvements based on existing conditions/collision review, input from local stakeholders, and variety of other considerations. Figure 6 shows the location of the following 19 priority pedestrian improvement projects identified in the WalkDowney Active Transportation Plan:

1A	De Palma St - Gurley Ave to Downey Ave
1B	Paramount Blvd & Quoit St & Parrot Ave
1C	Downey Ave & Nance St + Bus Depot
2	Greenway Traffic Circle Improvements
3	Wilderness Park & Florence Ave Access
4A	Imperial Hwy & Barlin Ave
4B	Imperial Hwy & Lakewood Blvd
4C	Lakewood Blvd & Dalen St
4D	Lakewood Blvd & 105 WB Ramps
4E	Lakewood Blvd & 105 EB Ramps
4F	Lakewood Blvd & Gardendale St
5A	Firestone Blvd & Patton Rd
5B	Paramount Blvd & Lubec St
6	Paramount Blvd & Stewart & Gray Rd
7A	Imperial Hwy & Woodruff Ave
7B	Lakewood Blvd & Stewart & Gray Rd
8	Downey Ave & OLPH
9	Brookshire Ave & Gallatin Rd
10	Downey Ave/New St & 6th St



1A	De Palma St - Gurley Ave to Downey Ave	5A	Firestone Blvd & Patton Rd
1B	Paramount Blvd & Quoit St & Parrot Ave	5B	Paramount Blvd & Lubec St
1C	Downey Ave & Nance St + Bus Depot	6	Paramount Blvd & Stewart & Gray Rd
2	Greenway Traffic Circle Improvements	7A	Imperial Hwy & Woodruff Ave
3	Wilderness Park & Florence Ave Access	7B	Lakewood Blvd & Stewart & Gray Rd
4A	Imperial Hwy & Barlin Ave	8	Downey Ave & OLPH
4B	Imperial Hwy & Lakewood Blvd	9	Brookshire Ave & Gallatin Rd
4C	Lakewood Blvd & Dalen St	10	Downey Ave/New St & 6th St
4D	Lakewood Blvd & 105 WB Ramps		
4E	Lakewood Blvd & 105 EB Ramps		
4F	Lakewood Blvd & Gardendale St		

Source: City of Downey

Figure 6
Priority Pedestrian Improvement Locations

EXISTING TRUCK ROUTES

Truck routes within the City of Downey are established in the City's Municipal Code, Section 3199.8(h). The following streets are established as truck routes within the City of Downey:

1) Bellflower Boulevard from Lakewood Boulevard to the southerly City limits;
2) Columbia Way from Lakewood Boulevard to Imperial Highway;
3) Cleta Street from Lakewood Boulevard to Patton Road;
4) Firestone Boulevard from the easterly City limits to the westerly City limits;
5) Florence Avenue;
6) Garfield Avenue;
7) Imperial Highway;
8) Lakewood Boulevard;
9) Old River School Road;
10) Patton Road from Firestone Boulevard to Cleta Street;
11) Paramount Boulevard;
12) Regentview Avenue;
13) Rosecrans Avenue;
14) Stewart and Gray Road from Lakewood Boulevard to Firestone Boulevard;
15) Studebaker Road from Florence Avenue to Route 605/5 freeway ramp intersection;
16) Telegraph Road;
17) Washburn Road from Regentview Avenue to Woodruff Avenue;
18) Woodruff Avenue from Firestone Boulevard to the southerly City limits;
19) Phlox Street between Paramount Boulevard and Downey Avenue; and
20) Downey Avenue between Firestone Boulevard and Phlox Street.

Figure 7 illustrates existing truck routes within the City of Downey.

EXISTING DAILY TRAFFIC VOLUMES

Figure 8 shows existing daily traffic volumes at 45 key roadway segments based on 24-hour bi-directional counts conducted on a typical weekday in February 2026. Vehicle classification counts were included at 17 sample locations. The traffic count worksheets are provided in Appendix B.

Table 2 shows the existing daily traffic volumes and vehicle mix in a tabular format. For planning purposes, the daily traffic volumes shown on Figure 8 and in Table 2 are rounded to the nearest hundred.

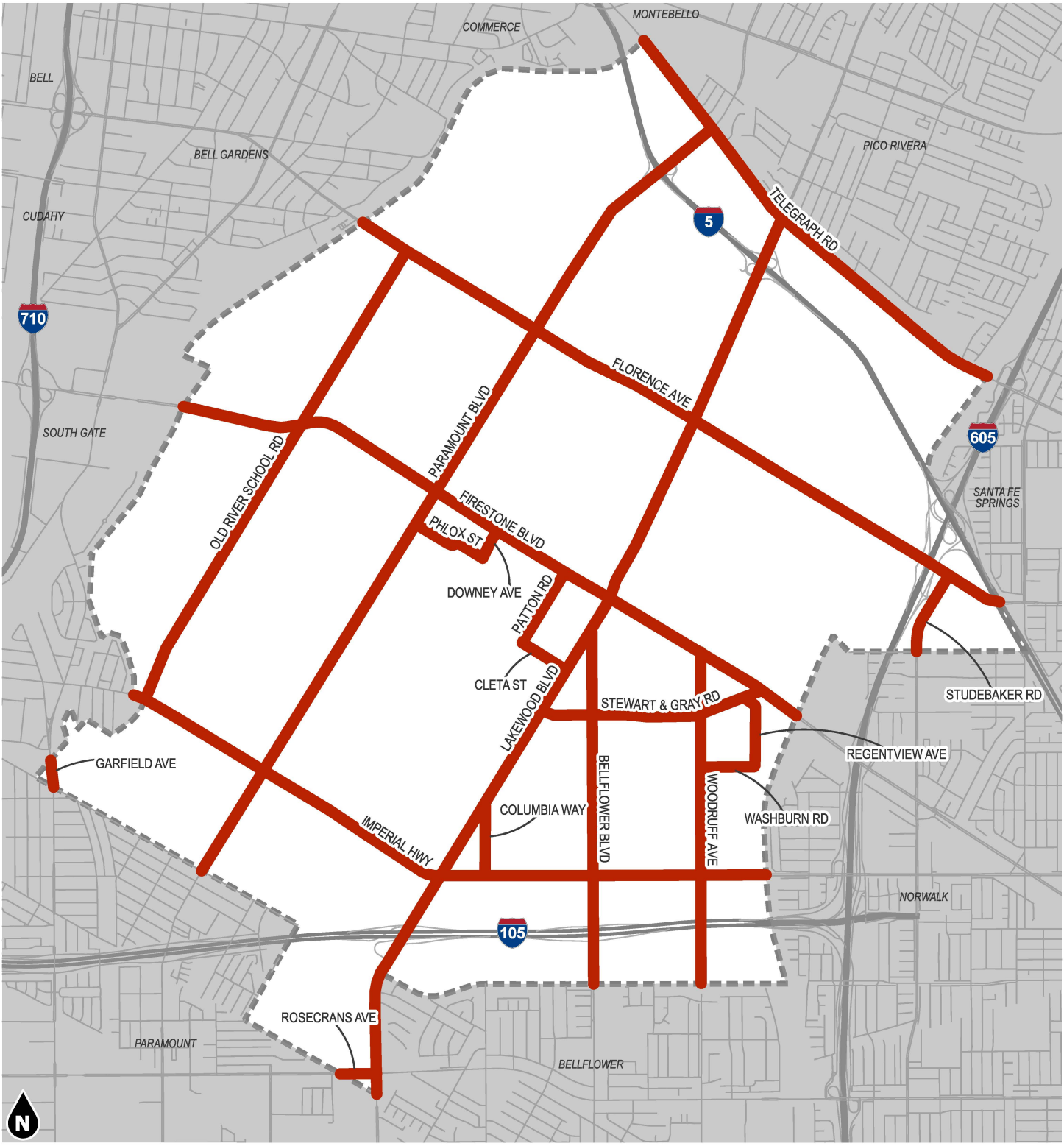
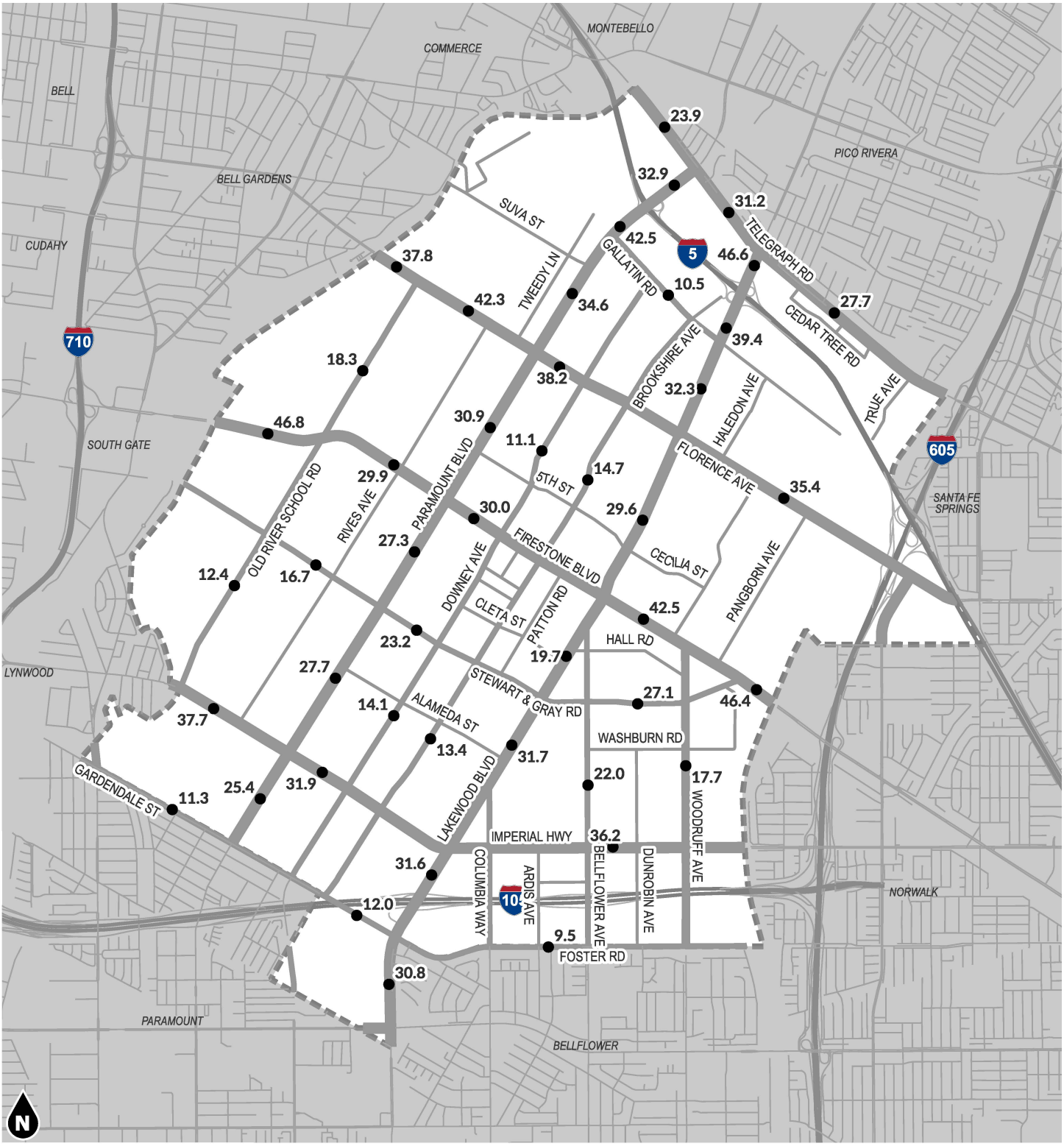


Figure 7
Existing Truck Routes



Legend

City of Downey Boundary

Daily Traffic Volume (1,000s)

Figure 8
Existing Daily Traffic Volumes

Table 2 (1 of 2)
Existing Daily Traffic Volumes Truck Mix

Roadway	Segment	Existing Daily Traffic Volume	Vehicle Mix		
			Light Duty	Medium Duty	Heavy Duty
1. Paramount Blvd	Telegraph Rd to I-5 Freeway	32,900	-	-	-
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	42,500	91.4%	6.5%	2.1%
3. Paramount Blvd	Gallatin Rd to Florence Ave	34,600	-	-	-
4. Paramount Blvd	Florence Ave to Firestone Blvd	30,900	-	-	-
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	27,300	-	-	-
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	27,700	92.7%	4.8%	2.5%
7. Paramount Blvd	Imperial Hwy to Gardendale St	25,400	-	-	-
8. Lakewood Blvd	Telegraph Rd to I-5 Freeway	46,600	-	-	-
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	39,400	92.2%	4.7%	3.1%
10. Lakewood Blvd	Gallatin Rd to Florence Ave	32,300	-	-	-
11. Lakewood Blvd	Florence Ave to Firestone Blvd	29,600	-	-	-
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	19,700	-	-	-
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	31,700	93.9%	4.4%	1.8%
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	31,600	-	-	-
15. Lakewood Blvd	Gardendale St to Rosecrans Ave	30,800	-	-	-
16. Telegraph Rd	City Limits to Paramount Blvd	23,900	-	-	-
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd	31,200	92.5%	4.6%	2.9%
18. Telegraph Rd	Lakewood Blvd to City Limits	27,700	-	-	-
19. Florence Ave	City Limits to Old River School Rd	37,800	-	-	-
20. Florence Ave	Old River School Rd to Paramount Blvd	42,300	-	-	-
21. Florence Ave	Paramount Blvd to Lakewood Blvd	38,200	93.6%	4.1%	2.3%
22. Florence Ave	Lakewood Blvd to I-605 Freeway	35,400	-	-	-
23. Firestone Blvd	City Limits to Old River School Rd	46,800	-	-	-
24. Firestone Blvd	Old River School Rd to Paramount Blvd	29,900	-	-	-
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	30,000	90.9%	5.4%	3.7%
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave[3]	42,500	-	-	-
27. Firestone Blvd	Stewart & Gray Rd to City Limits	46,400	-	-	-
28. Imperial Hwy	Old River School Rd to Paramount Blvd	37,700	-	-	-
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	31,900	90.5%	5.5%	4.0%
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	36,200	-	-	-
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	17,700	85.7%	7.9%	6.4%
32. Old River School Rd	Florence Ave to Firestone Blvd	18,300	92.8%	4.9%	2.3%
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	12,400	-	-	-
34. Downey Ave	Florence Ave to Firestone Blvd	11,100	93.7%	4.3%	1.9%
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	14,100	-	-	-
36. Brookshire Ave	Florence Ave to Firestone Blvd	14,700	91.8%	5.0%	3.1%
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	13,400	-	-	-
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	10,500	89.2%	6.5%	4.3%
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	16,700	-	-	-
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	23,200	90.4%	5.9%	3.8%

Table 2 (2 of 2)
Existing Daily Traffic Volumes Truck Mix

Roadway	Segment	Existing Daily Traffic Volume	Vehicle Mix		
			Light Duty	Medium Duty	Heavy Duty
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	27,100	-	-	-
42. Gardendale St	Garfield Ave to Paramount Blvd	11,300	-	-	-
43. Gardendale St	Paramount Blvd to Lakewood Blvd[4]	12,000	92.4%	5.2%	2.3%
44. Foster Rd	Lakewood Blvd to Woodruff Ave[4]	9,500	92.4%	4.9%	2.6%
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	22,000	87.9%	7.0%	5.1%

Notes:

(1) Daily traffic volume based on counts conducted in February 2026; see Appendix A. For planning purposes, daily traffic volume is rounded to the nearest hundred.

(2) Vehicle mix based on truck axle classification counts at sample locations. Per count worksheets:
Light Duty = Passenger Cars; Medium Duty = 2-axle Trucks, Buses, and RVs; Heavy Duty = 3-Axle and 4+ Axle Trucks

(3) Due to construction during traffic data collection at this location, the existing daily traffic volume on roadway segment #26 is based on a previous count conducted in 2024.

(4) The daily traffic volume counts at these locations does not appear to represent typical conditions. Existing daily traffic volumes shown at these locations are based on historical data from the City of Downey.

3. ROADWAY CAPACITY ANALYSIS

This section describes the roadway capacity analysis for existing conditions and forecast year 2045 conditions for both the current General Plan and the proposed General Plan Update.

ROADWAY CAPACITY ANALYTICAL METHODOLOGY

Roadway segment daily capacity analysis is generally performed as a high-level planning analysis to determine where potential capacity issues may occur during peak hours. Daily roadway capacity is evaluated based on the Volume-to-Capacity (V/C) methodology. A V/C ratio is determined for each roadway segment based on the daily traffic volume divided by the theoretical capacity of the roadway based on the number of lanes and type of roadway classification. The V/C ratio can be correlated to a Level of Service, which is used to qualitatively describe the performance of a roadway facility ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). Table 3 shows the V/C ratio thresholds and a qualitative description for each Level of Service. The existing City of Downey General Plan includes goals, policies, and programs aimed at achieving Level of Service D or better.

Table 4 shows the current roadway classifications and the corresponding daily capacities based on number of lanes. The roadway capacities shown in Table 4 are based on the *Programmatic Traffic Impact Study County of Los Angeles General Plan Update*.[2] The roadway segment capacity thresholds represent the theoretical maximum two-way average daily traffic volume that a roadway can accommodate within one day given typical peak hour characteristics and other factors such as the number of intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignments), sight distance, vehicle mix (truck and bus traffic), and bicycle/pedestrian traffic.

[2] *Programmatic Traffic Impact Study County of Los Angeles General Plan Update* (Iteris, June 10, 2014)

Table 3
Level of Service and Volume-to-Capacity Descriptions

LOS	V/C Ratio	Description
A	≤ 0.60	Acceptable Capacity: This represents a range of free flow to stable flow, where the unrestricted speed and freedom to maneuver begins to become more limited by the increase in traffic. In general, the driver experiences only minor inconvenience, and traffic flow is quick but light during off-peak hours.
B	> 0.60 to ≤ 0.70	
C	> 0.70 to ≤ 0.80	
D	> 0.80 to ≤ 0.90	Approaching Capacity: This represents high-density but stable flow, where speed and freedom to maneuver are restricted. In general, the driver experiences a degree of inconvenience during peak hours, and traffic flow is slow but steady during peak hours.
E	> 0.90 to ≤ 1.00	
F	> 1.00	Potentially Exceeds Capacity: This is used to define forced or breakdown flow during peak hours. This condition exists wherever the amount of traffic exceeds the amount which can reasonably be handled by the roadway. In general, the driver experiences a high degree of inconvenience, and traffic flow is extremely slow with stop-and-go flow and traffic queues begin to form. This condition is typical of the breakdown in flow which occurs when an accident is present on the roadway.

Notes:

Source: Transportation Research Board, Interim Materials on Highway Capacity, Transportation Research Circular No. 212, January 1980.

LOS = Level of Service; V/C = Volume-to-Capacity

Table 4
Current Roadway Classifications and Daily Capacities

Roadway Classification	Number of Lanes[1]	Maximum ADT[2,3]
Major Arterial	6D	54,000
	4D	36,000
Primary Arterial	4D	36,000
Secondary Arterial	4U	36,000
	2D	18,000
Collector	2U	15,000

Notes:

(1) D = Divided (i.e., with raised median or center turn lane); U = Undivided (i.e., without median)

(2) ADT = Average Daily Traffic

(3) Roadway capacities based on *Programmatic Traffic Impact Study County of Los Angeles General Plan Update* (Iteris, June 10, 2014). Major Arterial based on 6-Lane Major Highway; Primary Arterial based on 4-lane Secondary Highway (with median); Secondary Arterial based on 4-lane Limited Secondary Highway (without median); Collector based on 2-lane Collector Street. Maximum ADT is based on Level of Service E conditions.

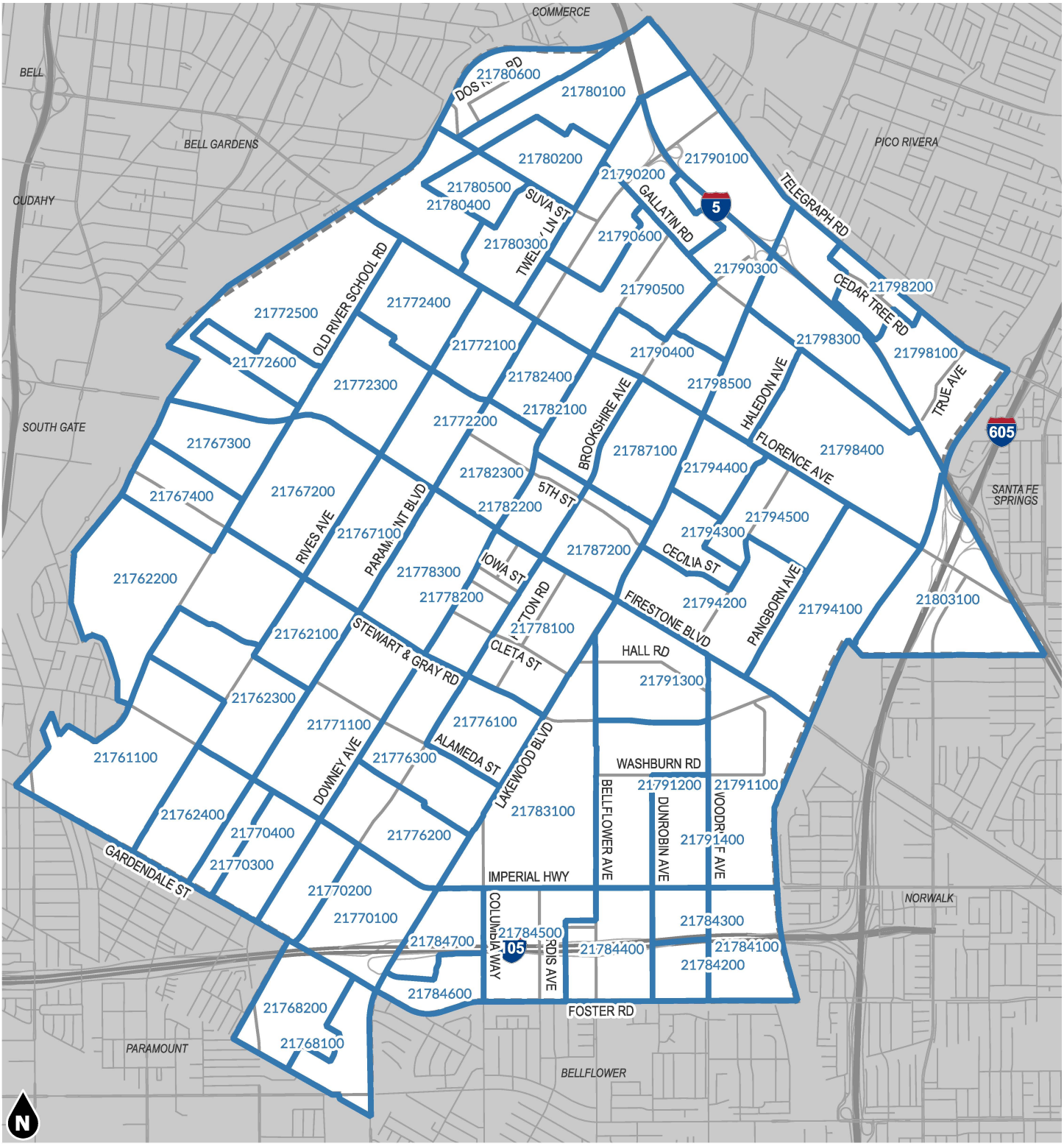
FORECASTING METHODOLOGY

Year 2045 forecasts were developed using the Southern California Association of Governments (SCAG) Regional Transportation Model (RTM). The current SCAG RTM is an activity-based travel demand model most recently updated for the development and evaluation of the SCAG 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region grows and changes. The current SCAG RTM has base year 2019 and future year 2050 scenarios. Travel demand model plots are provided in Appendix C.

To determine horizon year 2045 forecasts, a growth increment approach was used based on the difference in traffic volumes obtained from the SCAG RTM base year 2019 and future year 2050 models. This difference defines the incremental growth in forecast volumes over the 31-year period between 2019 and 2050. The incremental growth in average daily traffic volume was factored to reflect the forecast growth between the existing year (2026) and the horizon year 2045. For this purpose, linear growth between the year 2019 base model and the year 2050 future model was assumed. Since the increment between the existing year 2026 and the horizon year 2045 is 19 years of the 31-year time frame, the incremental traffic volume growth observed within the SCAG RTM model was factored by 0.61 (i.e., 19/31). To provide a conservative analysis, the incremental growth forecasts from the SCAG RTM model were reviewed and adjusted as necessary to ensure future traffic volumes would not be less than the existing measured traffic volumes shown in the previous section. Finally, these post-processed incremental growth forecasts were added to the existing (2026) traffic volumes. Post-processing worksheets are provided in Appendix D.

For reference, traffic volume forecasts for the current General Plan buildout were estimated based on the post-processing procedure described above using the SCAG RTM base year 2019 and unmodified future year 2050 model.

Traffic volume forecasts for the proposed General Plan buildout were estimated based on the post-processing procedure described above using the SCAG RTM base year 2019 and a revised future year 2050 model with updated SED inputs to reflect the proposed land use changes. Figure 9 shows the traffic analysis zone map.



Legend

City of Downey Boundary

SCAG TAZ (Tier 2)

Figure 9
Traffic Analysis Zone Map

Table 5 (1 of 2)
Proposed General Plan Net Bulidout Socio-Economic Data

Traffic Analysis Zone (Tier 2)	Net Buildout Over Existing										
	Residential Dwelling Units				Employment						
	Single Family	Accessory Dwelling	Multi Family	TOTAL	Commercial	Office	Industrial	Hotel	Public Facility	Hospital	TOTAL
21761100	0	7	700	707	317	293	267	0	572	53	1,502
21762100	1	86	202	289	0	0	0	0	0	0	0
21762200	3	51	251	305	0	0	0	0	0	0	0
21762300	0	15	89	104	0	0	0	0	0	0	0
21762400	0	6	42	48	45	-20	0	0	0	0	25
21767100	1	35	134	170	0	203	0	0	0	0	203
21767200	1	37	0	38	0	0	0	0	0	0	0
21767300	0	85	0	85	0	-20	0	0	0	0	-20
21767400	0	26	-20	6	0	0	0	0	0	0	0
21768100	0	14	31	45	58	-10	0	0	0	0	48
21768200	1	79	0	80	0	0	20	0	0	0	20
21770100	2	20	288	310	396	-20	0	0	0	0	376
21770200	0	9	65	74	0	0	0	0	0	0	0
21770300	0	0	0	0	0	0	0	0	0	0	0
21770400	1	1	93	95	100	-10	0	0	0	0	90
21771100	2	55	189	246	74	-40	0	0	0	0	34
21772100	1	67	15	83	49	-30	0	0	0	0	19
21772200	0	26	86	112	0	9	0	0	0	0	9
21772300	1	71	38	110	40	0	0	0	0	0	40
21772400	0	12	0	12	0	0	0	0	0	0	0
21772500	11	88	130	229	0	-10	0	0	0	0	-10
21772600	10	54	36	100	0	0	0	0	0	0	0
21776100	2	17	0	19	0	239	0	0	0	0	239
21776200	1	69	139	209	180	41	0	0	0	0	221
21776300	0	87	23	110	0	0	0	0	0	0	0
21778100	0	6	-10	-4	0	-151	46	0	0	56	-49
21778200	0	7	271	278	0	216	0	0	0	0	216
21778300	0	6	192	198	0	56	0	0	0	0	56
21780100	0	10	0	10	0	0	0	0	0	0	0
21780200	1	17	0	18	0	0	0	0	0	0	0
21780300	0	52	0	52	0	-20	0	0	0	0	-20
21780400	1	74	54	129	77	-10	25	0	0	0	92
21780500	0	3	0	3	0	0	0	0	0	0	0
21780600	1	20	0	21	0	0	0	0	0	0	0
21782100	3	28	234	265	0	-53	0	0	0	0	-53
21782200	0	2	310	312	0	-20	0	0	0	0	-20
21782300	0	7	734	741	0	-90	0	0	0	0	-90
21782400	0	6	413	419	128	6	0	0	0	0	134

Table 5 (2 of 2)
Proposed General Plan Net Bulidout Socio-Economic Data

Traffic Analysis Zone (Tier 2)	Net Buildout Over Existing										
	Residential Dwelling Units				Employment						
	Single Family	Accessory Dwelling	Multi Family	TOTAL	Commercial	Office	Industrial	Hotel	Public Facility	Hospital	TOTAL
21783100	0	1	1,060	1,061	240	636	0	450	0	114	1,440
21784100	0	0	-17	-17	0	0	0	0	0	0	0
21784200	0	3	0	3	0	0	0	0	0	0	0
21784300	0	2	0	2	0	0	0	0	0	0	0
21784400	1	11	144	156	152	0	0	0	0	0	152
21784500	1	15	116	132	138	-10	0	0	0	0	128
21784600	0	14	0	14	0	0	0	0	0	0	0
21784700	2	9	-30	-19	0	0	0	0	0	0	0
21787100	1	92	0	93	0	-20	0	0	0	0	-20
21787200	0	31	0	31	0	-20	0	0	0	0	-20
21790100	0	8	97	105	35	-20	0	0	0	0	15
21790200	1	31	0	32	0	0	0	0	0	0	0
21790300	3	34	-30	7	0	0	0	0	0	0	0
21790400	0	74	0	74	0	69	0	0	0	0	69
21790500	4	61	410	475	435	69	0	0	0	0	504
21790600	0	22	0	22	0	0	0	0	0	0	0
21791100	0	0	63	63	0	-20	25	0	0	0	5
21791200	0	2	357	359	248	-45	109	0	0	0	312
21791300	0	22	240	262	0	-20	654	0	0	0	634
21791400	0	0	28	28	0	0	165	0	0	0	165
21794100	3	50	0	53	0	0	0	0	0	0	0
21794200	1	23	874	898	0	-20	0	0	0	0	-20
21794300	1	5	-20	-14	0	0	0	0	0	0	0
21794400	1	12	-30	-17	0	-10	0	0	0	0	-10
21794500	0	60	0	60	0	0	0	0	0	0	0
21798100	2	12	206	220	267	-30	0	0	0	0	237
21798200	0	1	16	17	36	0	0	0	0	0	36
21798300	0	69	0	69	0	0	0	0	0	0	0
21798400	4	110	0	114	0	0	0	0	0	0	0
21798500	3	31	-10	24	0	-40	0	0	0	0	-40
21803100	0	15	0	15	0	0	0	0	0	0	0
TOTAL	**72**	**2,075**	**8,203**	**10,350**	**3,015**	**1,078**	**1,311**	**450**	**572**	**223**	**6,649**

EXISTING ROADWAY CAPACITY ANALYSIS

Table 6 shows the roadway capacity analysis for existing conditions based on the existing daily traffic volumes presented in the Existing Transportation Setting section. As shown in Table 6, the study roadway segments currently operate within acceptable Levels of Service (D or better) for Existing conditions, except for the following roadway segments that are currently approaching or potentially exceeding the theoretical daily capacity:

- Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] (LOS E)
- Paramount Boulevard between Gallatin Road and Florence Avenue [#3] (LOS E)
- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8] (LOS F)

CURRENT GENERAL PLAN (2045) ROADWAY CAPACITY ANALYSIS

The Current General Plan scenario reflects year 2045 conditions assuming future land development/traffic growth occurs in accordance with the currently adopted General Plan. Traffic volume forecasts for the Current General Plan scenario were developed based on the incremental growth forecasting methodology described above assuming the SCAG RTM future year model is generally consistent with the existing City of Downey General Plan land uses and no changes were made to the SED inputs.

Figure 10 shows the Current General Plan (2045) daily traffic volume forecasts. Table 7 shows the roadway capacity analysis for Current General Plan (2045) conditions. As shown in Table 7, the study roadway segments are forecast to operate within acceptable Levels of Service (D or better) for Current General Plan (2045) conditions, except for the following roadway segments that are forecast to be approaching or potentially exceeding the theoretical daily capacity:

- Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] (LOS E)
- Paramount Boulevard between Gallatin Road and Florence Avenue [#3] (LOS F)
- Paramount Boulevard between Florence Avenue and Firestone Boulevard [#4] (LOS E)
- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8] (LOS F)
- Firestone Boulevard between West City Limits and Old River School Road [#23] (LOS E)
- Firestone Boulevard between Stewart & Gray Road to East City Limits [#27] (LOS E)

Table 6 (1 of 2)
Existing Roadway Segment Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*4D*	*36,000*	*32,900*	*0.91*	*E*
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	42,500	0.79	C
3. Paramount Blvd	*Gallatin Rd to Florence Ave*	*Major Arterial*	*4D*	*36,000*	*34,600*	*0.96*	*E*
4. Paramount Blvd	Florence Ave to Firestone Blvd	Major Arterial	4D	36,000	30,900	0.86	D
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	27,300	0.76	C
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	27,700	0.77	C
7. Paramount Blvd	Imperial Hwy to Gardendale St	Major Arterial	4D	36,000	25,400	0.71	C
8. Lakewood Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*5D*	*36,000*	*46,600*	*1.29*	*F*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	39,400	0.73	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	32,300	0.60	A
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	29,600	0.55	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	19,700	0.36	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	31,700	0.59	A
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	Major Arterial	6D	54,000	31,600	0.59	A
15. Lakewood Blvd	Gardendale St to Rosecrans Ave	Major Arterial	4D	36,000	30,800	0.86	D
16. Telegraph Rd	West City Limits to Paramount Blvd[4]	Major Arterial	6D	54,000	23,900	0.44	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd[4]	Major Arterial	6D	54,000	31,200	0.58	A
18. Telegraph Rd	Lakewood Blvd to East City Limits[4]	Major Arterial	6D	54,000	27,700	0.51	A
19. Florence Ave	West City Limits to Old River School Rd[5]	Major Arterial	6D	54,000	37,800	0.70	B
20. Florence Ave	Old River School Rd to Paramount Blvd[5]	Major Arterial	6D	54,000	42,300	0.78	C
21. Florence Ave	Paramount Blvd to Lakewood Blvd[5]	Major Arterial	6D	54,000	38,200	0.71	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway[5]	Major Arterial	6D	54,000	35,400	0.66	B
23. Firestone Blvd	West City Limits to Old River School Rd	Major Arterial	6D	54,000	46,800	0.87	D
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	29,900	0.55	A
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	30,000	0.56	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	42,500	0.79	C
27. Firestone Blvd	Stewart & Gray Rd to East City Limits	Major Arterial	6D	54,000	46,400	0.86	D
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	37,700	0.70	B
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,900	0.59	A
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	36,200	0.67	B
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	17,700	0.49	A
32. Old River School Rd	Florence Ave to Firestone Blvd	Secondary Arterial	4U	36,000	18,300	0.51	A
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	2D	18,000	12,400	0.69	B
34. Downey Ave	Florence Ave to Firestone Blvd[6]	Secondary Arterial	4U	36,000	11,100	0.31	A
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	2D	18,000	14,100	0.78	C
36. Brookshire Ave	Florence Ave to Firestone Blvd[7]	Secondary Arterial	4U	36,000	14,700	0.41	A
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4U	36,000	13,400	0.37	A
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	10,500	0.29	A
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Arterial	4U	36,000	16,700	0.46	A

Table 6 (2 of 2)
Existing Roadway Segment Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	23,200	0.64	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4D	36,000	27,100	0.75	C
42. Gardendale St	Garfield Ave to Paramount Blvd	Secondary Arterial	2D	18,000	11,300	0.63	B
43. Gardendale St	Paramount Blvd to Lakewood Blvd	Secondary Arterial	2D	18,000	12,000	0.67	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4U	36,000	9,500	0.26	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4D	36,000	22,000	0.61	B

Notes:

(1) D = Divided; U = Undivided

(2) Capacity based on existing number of lanes; see Table 4.

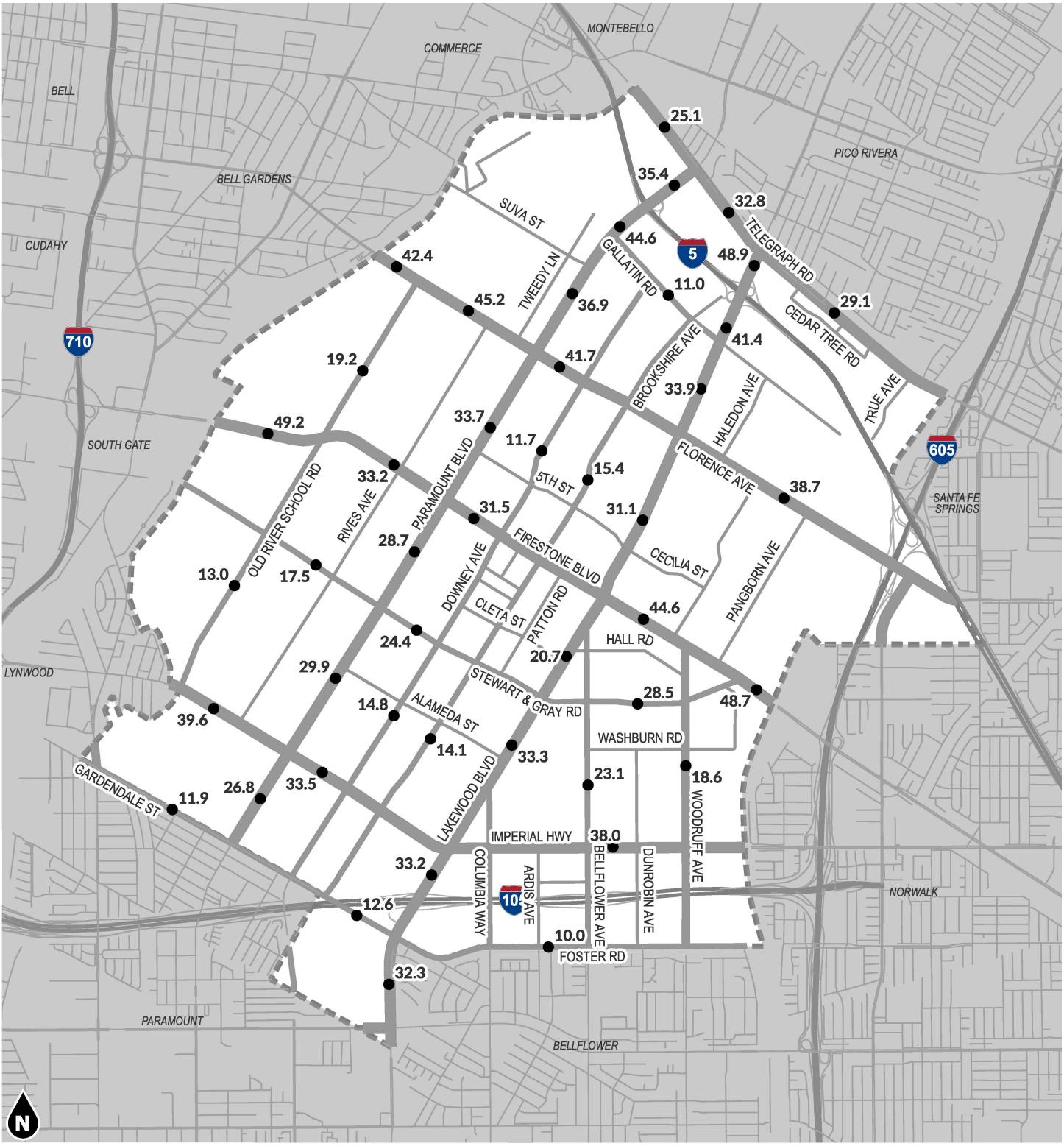
(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) The eastbound direction of Telegraph Road has three continuous travel lanes between 4-6 PM on weekdays only and four lanes at all other times. The westbound direction (in Pico Rivera) has three continuous travel lanes between 10 PM - 9 AM and only four continuous lanes with a one-hour parking restriction at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(5) Florence Avenue has three continuous travel lanes in the eastbound direction between 3-7 PM only and three continuous lanes in the westbound direction between 6-9 AM only on weekdays; four continuous travel lanes are provided at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(6) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(7) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivded from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.



Legend

City of Downey Boundary

Daily Traffic Volume (1,000s)

Figure 10
Current General Plan (2045) Daily Traffic Volumes

Table 7 (1 of 2)
Current General Plan (2045) Roadway Segment Daily Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*4D*	*36,000*	*35,400*	*0.98*	*E*
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	44,600	0.83	D
3. Paramount Blvd	*Gallatin Rd to Florence Ave*	*Major Arterial*	*4D*	*36,000*	*36,900*	*1.03*	*F*
4. Paramount Blvd	*Florence Ave to Firestone Blvd*	*Major Arterial*	*4D*	*36,000*	*33,700*	*0.94*	*E*
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	28,700	0.80	C
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	29,900	0.83	D
7. Paramount Blvd	Imperial Hwy to Gardendale St	Major Arterial	4D	36,000	26,800	0.74	C
8. Lakewood Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*5D*	*36,000*	*48,900*	*1.36*	*F*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	41,400	0.77	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	33,900	0.63	B
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	31,100	0.58	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	20,700	0.38	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	33,300	0.62	B
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	Major Arterial	6D	54,000	33,200	0.61	B
15. Lakewood Blvd	Gardendale St to Rosecrans Ave	Major Arterial	4D	36,000	32,300	0.90	D
16. Telegraph Rd	West City Limits to Paramount Blvd[4]	Major Arterial	6D	54,000	25,100	0.46	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd[4]	Major Arterial	6D	54,000	32,800	0.61	B
18. Telegraph Rd	Lakewood Blvd to East City Limits[4]	Major Arterial	6D	54,000	29,100	0.54	A
19. Florence Ave	West City Limits to Old River School Rd[5]	Major Arterial	6D	54,000	42,400	0.79	C
20. Florence Ave	Old River School Rd to Paramount Blvd[5]	Major Arterial	6D	54,000	45,200	0.84	D
21. Florence Ave	Paramount Blvd to Lakewood Blvd[5]	Major Arterial	6D	54,000	41,700	0.77	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway[5]	Major Arterial	6D	54,000	38,700	0.72	C
23. Firestone Blvd	*West City Limits to Old River School Rd*	*Major Arterial*	*6D*	*54,000*	*49,200*	*0.91*	*E*
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	33,200	0.61	B
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,500	0.58	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	44,600	0.83	D
27. Firestone Blvd	*Stewart & Gray Rd to East City Limits*	*Major Arterial*	*6D*	*54,000*	*48,700*	*0.90*	*E*
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	39,600	0.73	C
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	33,500	0.62	B
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	38,000	0.70	C
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	18,600	0.52	A
32. Old River School Rd	Florence Ave to Firestone Blvd	Secondary Arterial	4U	36,000	19,200	0.53	A
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	2D	18,000	13,000	0.72	C
34. Downey Ave	Florence Ave to Firestone Blvd[6]	Secondary Arterial	4U	36,000	11,700	0.33	A
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	2D	18,000	14,800	0.82	D
36. Brookshire Ave	Florence Ave to Firestone Blvd[7]	Secondary Arterial	4U	36,000	15,400	0.43	A
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4U	36,000	14,100	0.39	A
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	11,000	0.31	A
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Arterial	4U	36,000	17,500	0.49	A

Table 7 (2 of 2)
Current General Plan (2045) Roadway Segment Daily Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	24,400	0.68	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4D	36,000	28,500	0.79	C
42. Gardendale St	Garfield Ave to Paramount Blvd	Secondary Arterial	2D	18,000	11,900	0.66	B
43. Gardendale St	Paramount Blvd to Lakewood Blvd	Secondary Arterial	2D	18,000	12,600	0.70	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4U	36,000	10,000	0.28	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4D	36,000	23,100	0.64	B

Notes:

(1) D = Divided; U = Undivided

(2) Capacity based on existing number of lanes; see Table 4.

(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) The eastbound direction of Telegraph Road has three continuous travel lanes between 4-6 PM on weekdays only and four lanes at all other times. The westbound direction (in Pico Rivera) has three continuous travel lanes between 10 PM - 9 AM and only four continuous lanes with a one-hour parking restriction at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(5) Florence Avenue has three continuous travel lanes in the eastbound direction between 3-7 PM only and three continuous lanes in the westbound direction between 6-9 AM only on weekdays; four continuous travel lanes are provided at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(6) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(7) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivded from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

PROPOSED GENERAL PLAN UPDATE (2045) ROADWAY CAPACITY ANALYSIS

The Proposed General Plan Update scenario reflects year 2045 conditions assuming future land development/traffic growth occurs in accordance with the proposed General Plan Update. Traffic volume forecasts for the Proposed General Plan Update scenario were developed based on the incremental growth forecasting methodology for a new SCAG RTM future year model run with updated SED inputs applied to account for land use changes per the proposed General Plan Update. Additional information regarding SED and the modeling process is provided in the following Vehicle Miles Traveled Analysis section of this report.

Figure 11 shows the Proposed General Plan Update (2045) daily traffic volume forecasts. Table 8 shows the roadway capacity analysis for Proposed General Plan Update (2045) conditions. As shown in Table 8, the study roadway segments are forecast to operate within acceptable Levels of Service (D or better) for Proposed General Plan Update (2045) conditions, except for the following roadway segments that are forecast to be approaching or potentially exceeding the theoretical daily capacity:

- Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] (LOS F)
- Paramount Boulevard between Gallatin Road and Florence Avenue [#3] (LOS F)
- Paramount Boulevard between Florence Avenue and Firestone Boulevard [#4] (LOS E)
- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8] (LOS F)
- Firestone Boulevard between West City Limits and Old River School Road [#23] (LOS E)
- Firestone Boulevard between Stewart & Gray Road to East City Limits [#27] (LOS E)

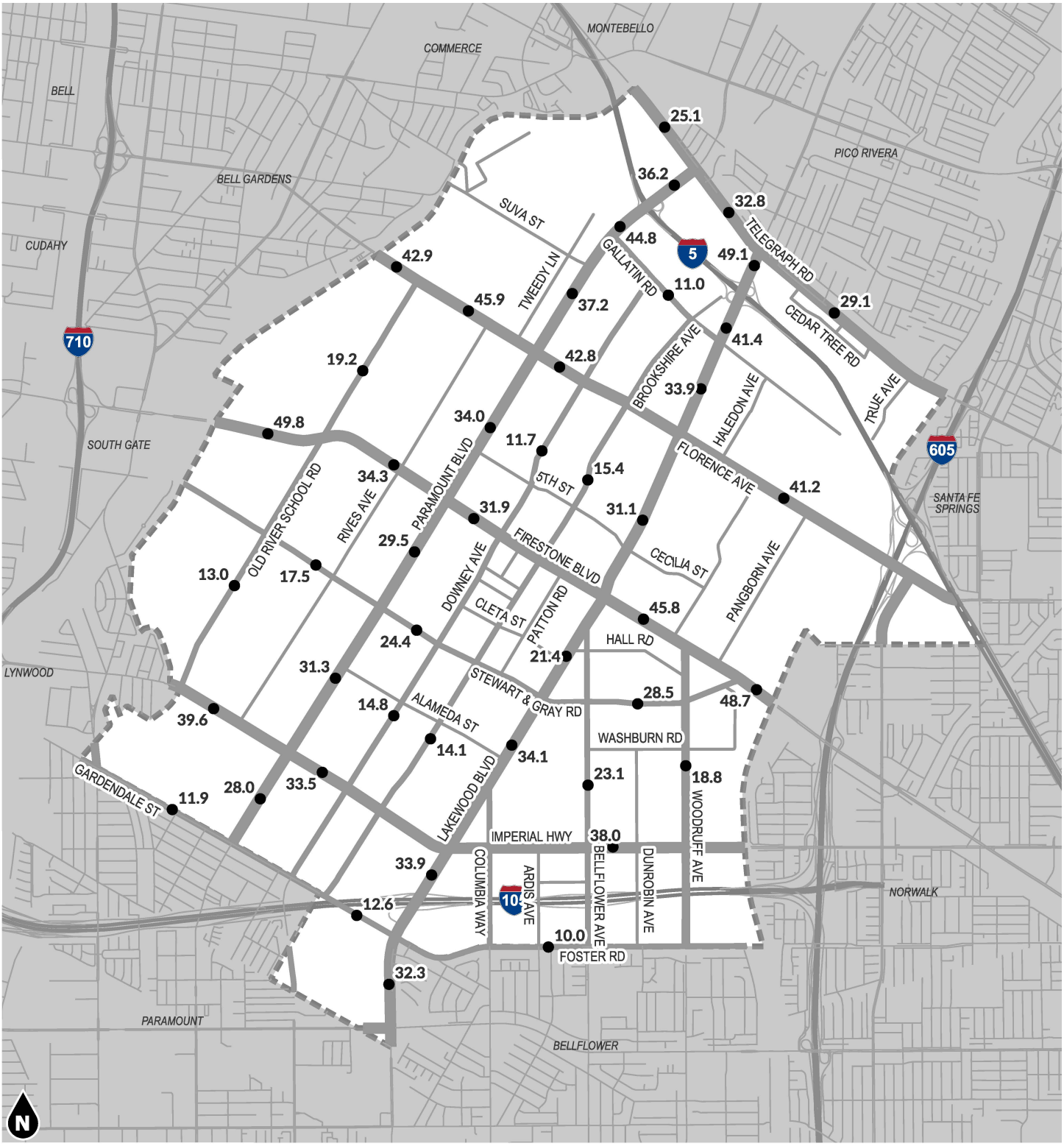


Figure 11
Proposed General Plan (2045) Daily Traffic Volumes

Table 8 (1 of 2)
Proposed General Plan Update (2045) Roadway Segment Daily Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*4D*	*36,000*	*36,200*	*1.01*	*F*
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	44,800	0.83	D
3. Paramount Blvd	*Gallatin Rd to Florence Ave*	*Major Arterial*	*4D*	*36,000*	*37,200*	*1.03*	*F*
4. Paramount Blvd	*Florence Ave to Firestone Blvd*	*Major Arterial*	*4D*	*36,000*	*34,000*	*0.94*	*E*
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	29,500	0.82	D
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	31,300	0.87	D
7. Paramount Blvd	Imperial Hwy to Gardendale St	Major Arterial	4D	36,000	28,000	0.78	C
8. Lakewood Blvd	*Telegraph Rd to I-5 Freeway*	*Major Arterial*	*5D*	*36,000*	*49,100*	*1.36*	*F*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	41,400	0.77	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	33,900	0.63	B
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	31,100	0.58	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	21,400	0.40	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	34,100	0.63	B
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	Major Arterial	6D	54,000	33,900	0.63	B
15. Lakewood Blvd	Gardendale St to Rosecrans Ave	Major Arterial	4D	36,000	32,300	0.90	D
16. Telegraph Rd	West City Limits to Paramount Blvd[4]	Major Arterial	6D	54,000	25,100	0.46	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd[4]	Major Arterial	6D	54,000	32,800	0.61	B
18. Telegraph Rd	Lakewood Blvd to East City Limits[4]	Major Arterial	6D	54,000	29,100	0.54	A
19. Florence Ave	West City Limits to Old River School Rd[5]	Major Arterial	6D	54,000	42,900	0.79	C
20. Florence Ave	Old River School Rd to Paramount Blvd[5]	Major Arterial	6D	54,000	45,900	0.85	D
21. Florence Ave	Paramount Blvd to Lakewood Blvd[5]	Major Arterial	6D	54,000	42,800	0.79	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway[5]	Major Arterial	6D	54,000	41,200	0.76	C
23. Firestone Blvd	*West City Limits to Old River School Rd*	*Major Arterial*	*6D*	*54,000*	*49,800*	*0.92*	*E*
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	34,300	0.64	B
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,900	0.59	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	45,800	0.85	D
27. Firestone Blvd	*Stewart & Gray Rd to East City Limits*	*Major Arterial*	*6D*	*54,000*	*48,700*	*0.90*	*E*
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	39,600	0.73	C
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	33,500	0.62	B
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	38,000	0.70	C
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	18,800	0.52	A
32. Old River School Rd	Florence Ave to Firestone Blvd	Secondary Arterial	4U	36,000	19,200	0.53	A
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	2D	18,000	13,000	0.72	C
34. Downey Ave	Florence Ave to Firestone Blvd[6]	Secondary Arterial	4U	36,000	11,700	0.33	A
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	2D	18,000	14,800	0.82	D
36. Brookshire Ave	Florence Ave to Firestone Blvd[7]	Secondary Arterial	4U	36,000	15,400	0.43	A
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4U	36,000	14,100	0.39	A
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	11,000	0.31	A
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Arterial	4U	36,000	17,500	0.49	A

Table 8 (2 of 2)
Proposed General Plan Update (2045) Roadway Segment Daily Capacity Analysis

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	24,400	0.68	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4D	36,000	28,500	0.79	C
42. Gardendale St	Garfield Ave to Paramount Blvd	Secondary Arterial	2D	18,000	11,900	0.66	B
43. Gardendale St	Paramount Blvd to Lakewood Blvd	Secondary Arterial	2D	18,000	12,600	0.70	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4U	36,000	10,000	0.28	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4D	36,000	23,100	0.64	B

Notes:

(1) D = Divided; U = Undivided

(2) Capacity based on existing number of lanes; see Table 4.

(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) The eastbound direction of Telegraph Road has three continuous travel lanes between 4-6 PM on weekdays only and four lanes at all other times. The westbound direction (in Pico Rivera) has three continuous travel lanes between 10 PM - 9 AM and only four continuous lanes with a one-hour parking restriction at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(5) Florence Avenue has three continuous travel lanes in the eastbound direction between 3-7 PM only and three continuous lanes in the westbound direction between 6-9 AM only on weekdays; four continuous travel lanes are provided at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(6) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

(7) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivded from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.

PROPOSED GENERAL PLAN CIRCULATION NETWORK RECOMMENDATIONS

Based on the roadway capacity analysis for the Proposed General Plan Update (2045) conditions, the improvements/modifications are recommended:

- In conformance with the current General Plan roadway classification as a 6-Lane Major Arterial, add a third lane in each direction at the following roadway segments:
  - Paramount Boulevard between Telegraph Road and I-5 Freeway [#1] [3]
  - Paramount Boulevard between Gallatin Road and Florence Avenue [#3] [3]
  - Paramount Boulevard between Florence Avenue and Firestone Boulevard [#4]

- In conformance with the current General Plan roadway classification as a 6-Lane Major Arterial, add a third lane in the southbound direction at the following roadway segments (requires widening):
  - Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8]

- In conformance with the WalkDowney Active Transportation Plan, the following roadways are forecast to have unused capacity and may be modified to accommodate one vehicle travel lane in each direction (currently two lanes in each direction) with center turn lane, on-street parking, and a Class II bike lane:
  - Remaining sections of Downey Avenue between Florence Avenue and Firestone Boulevard
  - Brookshire Avenue between Cherokee Drive and Gardendale Street
  - Gallatin Road between Tweedy Lane and Lakewood Boulevard
  - Old River School Road between Florence Avenue and Firestone Boulevard

  To distinguish the "Secondary Arterial" roadway classification with vehicle lane reduction and bike lane improvements, it is recommended that a new classification, "Bicycle Enhanced Secondary Arterial," be assigned to these roadways. Consistent with other existing facilities, lane striping should transition back to two travel lanes at key arterial intersections to minimize delay and extensive queuing during peak periods.

- Gardendale Street between Paramount Boulevard and Lakewood Boulevard [#43]
  - This roadway segment was recently modified to provide a "Bike Lane with Road Diet" and should be re-classified from Secondary Arterial to Bicycle Enhanced Secondary Arterial.

- Foster Road between Lakewood Boulevard and Woodruff Avenue [#44]
  - This roadway segment is recommended to be re-classified as a "Bicycle Enhanced Secondary Arterial" to bring the General Plan and WalkDowney Active Transportation Plan into better alignment with each other. Lane striping should transition back to two travel lanes at the arterial intersections to minimize delay and extensive queuing during peak periods.

Table 9 shows the roadway capacity analysis for Proposed General Plan Update (2045) conditions with the recommendations described above. As shown in Table 9, the study roadway segments are forecast to operate within acceptable Levels of Service (D or better) for Proposed General Plan Update (2045) conditions with recommendations, except for the following roadway segments that are forecast to be approaching or potentially exceeding the theoretical daily capacity:

- Lakewood Boulevard between Telegraph Road and I-5 Freeway [#8]
  - This roadway segment currently provides two southbound lanes and currently exceeds the theoretical daily capacity. With construction of a third southbound lane, this segment is forecast to operate within but approaching capacity; peak hour intersection operations are likely transitioning to

[3] Paramount Boulevard between Firestone Boulevard and Telegraph Road lacks the right-of-way necessary for widening the street. Providing a third travel lane within the existing right-of-way would require on-street parking to be removed, which may have parking impacts on the adjacent community.

Level of Service E. Freeway interchanges are typically the most heavily traveled segments of local roadway networks and Level of Service E is often considered acceptable subject to City approval. The City should consider allowing Level of Service E operations at or adjacent to freeway interchanges. No change in roadway classification is recommended.

- Firestone Boulevard between West City Limits and Old River School Road [#23]
  - This roadway segment is generally constructed at its ultimate cross-section as a 6-lane Major Arterial, except at the intersection of Old River School Road where existing railroad curvature precludes widening. This intersection is a significant bottleneck and constrains Firestone Boulevard from its full capacity. The segment is forecast to operate within but approaching capacity for both the Current and Proposed General Plan conditions; peak hour intersection operations are likely transitioning to Level of Service E. No change in roadway classification is recommended; however, additional improvements at known intersection constraints are discussed below.

- Firestone Boulevard between Stewart & Gray Road and East City Limits [#27]
  - This roadway segment is currently constructed at its ultimate cross-section as a 6-lane Major Arterial and is forecast to operate within but approaching capacity for both the Current and Proposed General Plan conditions; peak hour intersection operations are likely transitioning to Level of Service E. No change in roadway classification is recommended; however, additional improvements at known intersection constraints are discussed below.

- Old River School Road between Florence Avenue and Firestone Boulevard [#32]
  - This section of Old River School Road has an existing daily traffic volume of approximately 18,300 vehicles, which marginally exceeds the theoretical capacity of a two-lane divided roadway. It is noted that the WalkDowney Active Transportation Plan calls for a proposed "Bike Lane With Road Diet" on Old River School Road between Florence Avenue and Firestone Boulevard. Therefore, this roadway segment is recommended to be re-classified as a "Bicycle Enhanced Secondary Arterial" to bring the General Plan and WalkDowney Active Transportation Plan into better alignment with each other. Lane striping should transition back to two travel lanes at the arterial intersections to minimize delay and extensive queuing during peak periods.

Figure 12 shows the proposed General Plan roadway classifications. Figure 13 shows the proposed General Plan roadway cross-sections.

Table 9 (1 of 2)
Proposed General Plan Update (2045) Roadway Segment Daily Capacity Analysis With Recommendations

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
1. Paramount Blvd	Telegraph Rd to I-5 Freeway	Major Arterial	**6D**	54,000	36,200	0.67	B
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	44,800	0.83	D
3. Paramount Blvd	Gallatin Rd to Florence Ave	Major Arterial	**6D**	54,000	37,200	0.69	B
4. Paramount Blvd	Florence Ave to Firestone Blvd	Major Arterial	**6D**	54,000	34,000	0.63	B
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	4D	36,000	29,500	0.82	D
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	4D	36,000	31,300	0.87	D
7. Paramount Blvd	Imperial Hwy to Gardendale St	Major Arterial	4D	36,000	28,000	0.78	C
8. Lakewood Blvd	Telegraph Rd to I-5 Freeway	Major Arterial	**6D**	*54,000*	*49,100*	*0.91*	*E*
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	Major Arterial	6D	54,000	41,400	0.77	C
10. Lakewood Blvd	Gallatin Rd to Florence Ave	Major Arterial	6D	54,000	33,900	0.63	B
11. Lakewood Blvd	Florence Ave to Firestone Blvd	Major Arterial	6D	54,000	31,100	0.58	A
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	Major Arterial	6D	54,000	21,400	0.40	A
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	Major Arterial	6D	54,000	34,100	0.63	B
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	Major Arterial	6D	54,000	33,900	0.63	B
15. Lakewood Blvd	Gardendale St to Rosecrans Ave	Major Arterial	4D	36,000	32,300	0.90	D
16. Telegraph Rd	West City Limits to Paramount Blvd[4]	Major Arterial	6D	54,000	25,100	0.46	A
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd[4]	Major Arterial	6D	54,000	32,800	0.61	B
18. Telegraph Rd	Lakewood Blvd to East City Limits[4]	Major Arterial	6D	54,000	29,100	0.54	A
19. Florence Ave	West City Limits to Old River School Rd[5]	Major Arterial	6D	54,000	42,900	0.79	C
20. Florence Ave	Old River School Rd to Paramount Blvd[5]	Major Arterial	6D	54,000	45,900	0.85	D
21. Florence Ave	Paramount Blvd to Lakewood Blvd[5]	Major Arterial	6D	54,000	42,800	0.79	C
22. Florence Ave	Lakewood Blvd to I-605 Freeway[5]	Major Arterial	6D	54,000	41,200	0.76	C
23. Firestone Blvd	West City Limits to Old River School Rd	Major Arterial	6D	*54,000*	*49,800*	*0.92*	*E*
24. Firestone Blvd	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	34,300	0.64	B
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	31,900	0.59	A
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	45,800	0.85	D
27. Firestone Blvd	Stewart & Gray Rd to East City Limits	Major Arterial	6D	*54,000*	*48,700*	*0.90*	*E*
28. Imperial Hwy	Old River School Rd to Paramount Blvd	Major Arterial	6D	54,000	39,600	0.73	C
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	Major Arterial	6D	54,000	33,500	0.62	B
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	Major Arterial	6D	54,000	38,000	0.70	C
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	Primary Arterial	4D	36,000	18,800	0.52	A
32. Old River School Rd	Florence Ave to Firestone Blvd	**Bicycle Enhanced Secondary Arterial**	**2D**	*18,000*	*19,200*	*1.07*	*F*
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	**Bicycle Enhanced Secondary Arterial**	2D	18,000	13,000	0.72	C
34. Downey Ave	Florence Ave to Firestone Blvd[6]	**Bicycle Enhanced Secondary Arterial**	**2D**	18,000	11,700	0.65	B
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	**Bicycle Enhanced Secondary Arterial**	2D	18,000	14,800	0.82	D
36. Brookshire Ave	Florence Ave to Firestone Blvd[7]	**Bicycle Enhanced Secondary Arterial**	**2D**	18,000	15,400	0.86	D

Table 9 (2 of 2)
Proposed General Plan Update (2045) Roadway Segment Daily Capacity Analysis With Recommendations

Roadway	Segment	Roadway Segment Standards			Daily Traffic Volume	V/C[3]	LOS[3]
		Classification	No. of Lanes[1]	Capacity[2]			
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	**Bicycle Enhanced Secondary Arterial**	**2D**	18,000	14,100	0.78	C
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	**Bicycle Enhanced Secondary Arterial**	**2D**	18,000	11,000	0.61	B
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	Secondary Arterial	4U	36,000	17,500	0.49	A
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	Secondary Arterial	4U	36,000	24,400	0.68	B
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	Secondary Arterial	4D	36,000	28,500	0.79	C
42. Gardendale St	Garfield Ave to Paramount Blvd	**Bicycle Enhanced Secondary Arterial**	2D	18,000	11,900	0.66	B
43. Gardendale St	Paramount Blvd to Lakewood Blvd	**Bicycle Enhanced Secondary Arterial**	2D	18,000	12,600	0.70	B
44. Foster Rd	Lakewood Blvd to Woodruff Ave	**Bicycle Enhanced Secondary Arterial**	2D	18,000	10,000	0.56	A
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	Secondary Arterial	4D	36,000	23,100	0.64	B

Notes:

(1) D = Divided; U = Undivided

(2) Unless modifications are otherwise indicated in bold, capacity is based on existing number of lanes; see Table 4.

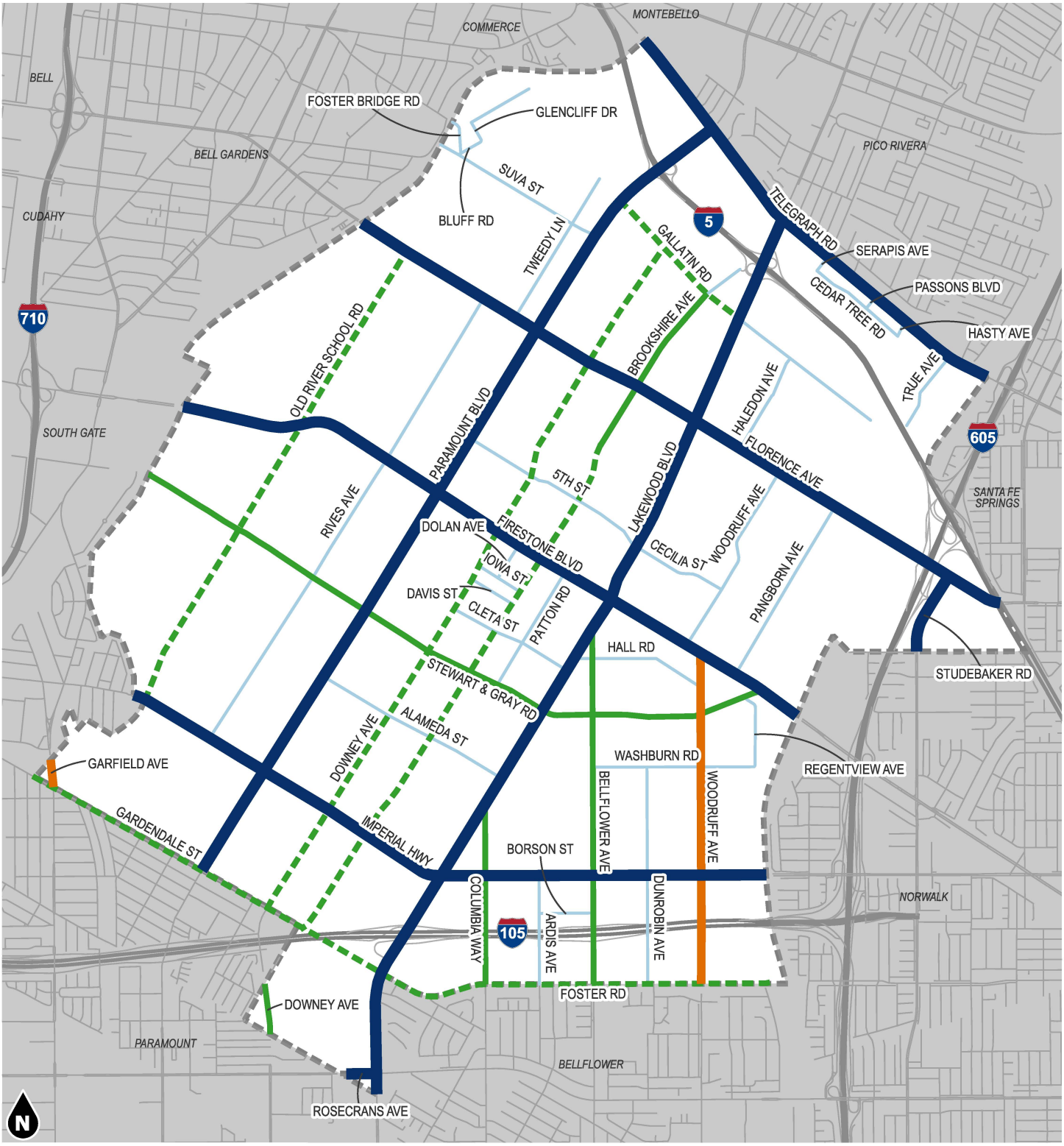
(3) V/C = Volume to Capacity Ratio; LOS = Level of Service

(4) The eastbound direction of Telegraph Road has three continuous travel lanes between 4-6 PM on weekdays only and four lanes at all other times. The westbound direction (in Pico Rivera) has three continuous travel lanes between 10 PM - 9 AM and only four continuous lanes with a one-hour parking restriction at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(5) Florence Avenue has three continuous travel lanes in the eastbound direction between 3-7 PM only and three continuous lanes in the westbound direction between 6-9 AM only on weekdays; four continuous travel lanes are provided at all other times. Based on these conditions, the roadway provides three lanes for the peak directional flow during the weekday peak hours (i.e., three westbound lanes during the AM peak hour and three eastbound lanes during the weekday PM peak hour). Therefore, the effective roadway capacity is that of a six-lane roadway.

(6) This section of Downey Avenue is 2-lanes divided north of 7th Street, and 2-lanes undivided to 4-lanes undivided south of 7th Street.

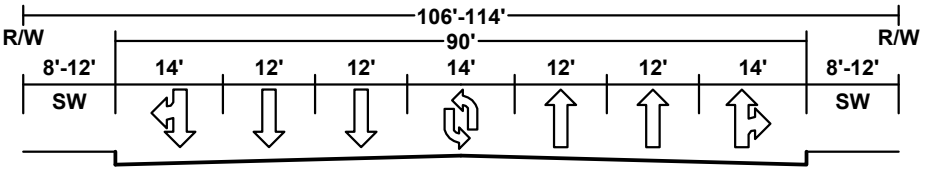
(7) This section of Brookshire Avenue is currently 4-lanes divided south of 5th Street (approximate count location), 4-lanes undivded from 5th Street to Cherokee Drive, and 2-lanes undivided north of Cherokee Drive to Florence Avenue.



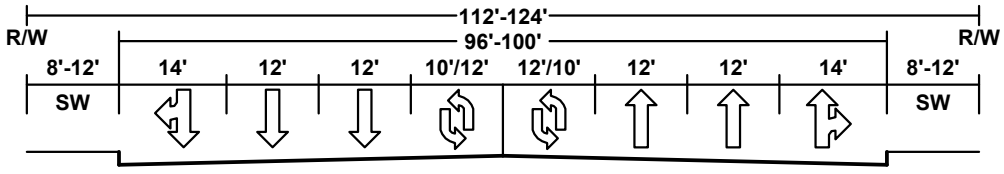
Legend

- City of Downey Boundary
- Major Arterial
- Primary Arterial
- Secondary Arterial
- Bicycle Enhanced Secondary Arterial
- Collector

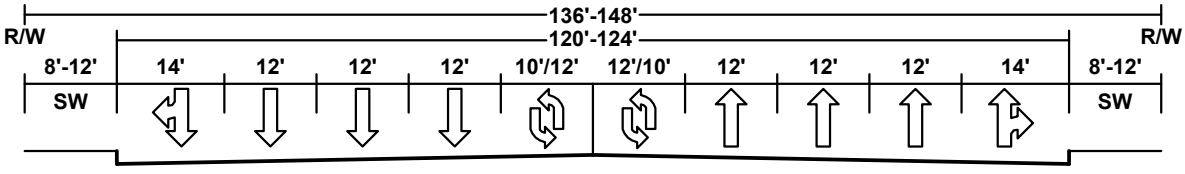
Figure 12
Proposed General Plan Roadway Classifications



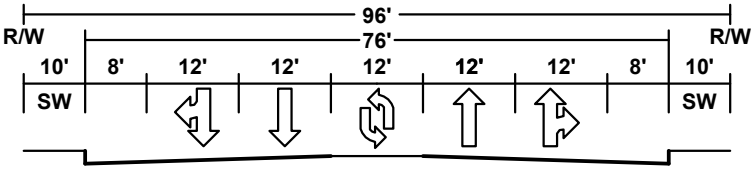
Major Arterial - Mid-Block



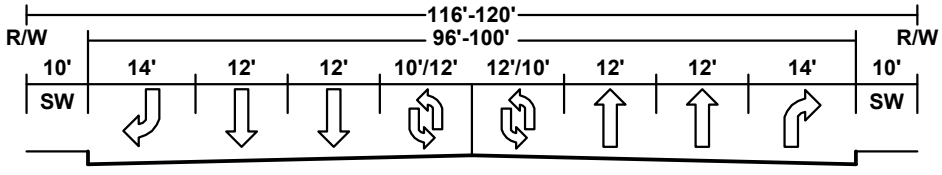
Major Arterial - Intersection



Major Arterial - Intersection (Augmented Approach)



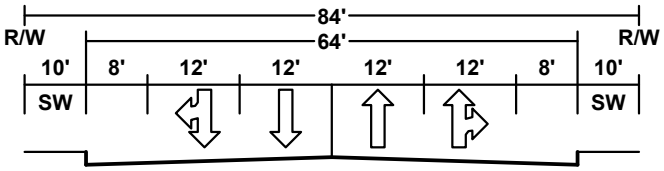
Primary Arterial - Mid-Block



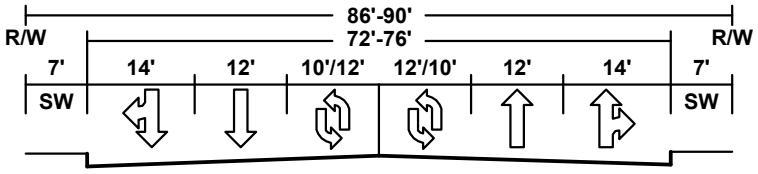
Primary Arterial - Intersection (Approach)

General note: Cross-sections indicate minimum desireable section; additional lanes/width may be required per detailed analysis results, particularly at the arterial-to-arterial intersections. Median width may also vary depending on the available right-of-way.

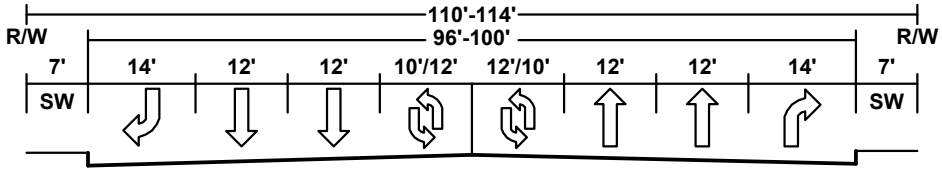
Figure 13 (1 of 2)
Proposed Typical General Plan Roadway Cross-Sections



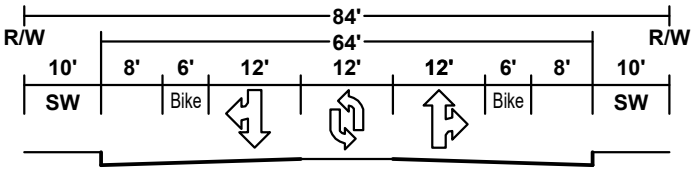
Secondary Arterial - Mid-Block



Secondary Arterial - Intersection (Approach)

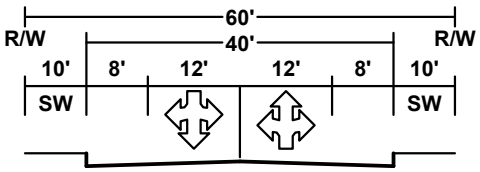


Secondary Arterial - Intersection (Approach)



Bicycle Enhanced Secondary Arterial - Mid-Block*

*Note: At signalized intersections, bike lanes may transition to a shared through lane, as necessary, to minimize delay and queuing.



Collector

General note: Cross-sections indicate minimum desireable section; additional lanes/width may be required per detailed analysis results, particularly at the arterial-to-arterial intersections. Median width may also vary depending on the available right-of-way.

Figure 13 (2 of 2)
Proposed Typical General Plan Roadway Cross-Sections

KNOWN INTERSECTION CONSTRAINTS

The roadway capacity analysis included above provides a planning-level evaluation of roadway operations based on the number of travel lanes for each segment, which can provide a general estimate of anticipated peak hour intersection operations assuming the number of mid-block travel lanes continue through the intersections; however, peak hour operations at individual intersections may vary based on intersection-specific constraints that are not necessarily reflected in the roadway segment analysis. The following is a summary of known intersection constraints and recommendations.

Although Firestone Boulevard generally provides three travel lanes in each direction, the roadway currently narrows down to two travel lanes at the intersection of Old River Road due to the existing railroad curvature that precludes widening/restriping at this location. Firestone Boulevard is classified as a 6-lane Major Arterial and should provide three through lanes in each direction to accommodate existing and future traffic volumes.

Recommendation:

- Old River Road (NS) at Firestone Boulevard (EW):[4]
  - Provide a third travel lane on Firestone Boulevard in the eastbound and westbound directions through the intersection of Old River Road.

In addition to maintaining the number of through travel lanes, the intersection of Major Arterial to Major Arterial roadways often require augmented approaches as noted in the roadway cross-sections (see Figure 13). The need for augmented approaches at Major Arterial intersections includes, but is not limited to, the following locations:

Recommendations:

- Paramount Boulevard (NS) at Imperial Highway (EW):
  - Construct a second left turn lane on the southbound and westbound approaches.

- Imperial Highway (NS) at Lakewood Boulevard (EW):
  - Construct a second left turn lane on the eastbound and westbound approaches.

- Florence Avenue (NS) at Lakewood Boulevard (EW):
  - Construct a second left turn lane on the northbound and southbound approaches.
  - Construct a dedicated right turn lane on the westbound approach.

[4] (NS) = North-South roadway; (EW) = East-West roadway

4. VEHICLE MILES TRAVELED ANALYSIS

This section documents the vehicle miles traveled (VMT) impacts for the proposed General Plan Update. In the absence of City-adopted guidelines, the City of Downey generally follows guidelines published by the County of Los Angeles. Accordingly, this analysis has been performed based on the VMT methodologies and thresholds outlined in the Los Angeles County Public Works *Transportation Impact Analysis Guidelines* (July 23, 2020) ["TIA Guidelines"].

SENATE BILL 743 BACKGROUND

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the CEQA Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of VMT as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

VMT SCREENING CRITERIA

The TIA Guidelines establish screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory. In response to determining a project's potential to cause VMT impacts, the County TIA Guidelines establish the following four screening steps:

1) Non-Retail Project Trip Generation: Projects generating less than 110 net daily vehicle trips.
2) Retail Project Site Plan: Retail uses less than 50,000 square feet of gross floor area.
3) Proximity to Transit: Projects located within one-half mile radius of a major transit stop[5] or an existing stop along a high-quality transit corridor,[6] and:
    - Do not have Floor Area Ratio (FAR) of less than 0.75; or
    - Do not provide more parking than required per code; or
    - Are not inconsistent with the Southern Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); or
    - Do not replace existing residential units with affordable housing units.

[5] A major transit stop is defined as an existing rail transit station, ferry terminal with bus or rail service, or the intersection of two or more major bus routes with 20-minute or less headways during the peak commute hours (Pub. Resources Code, § 21064.3 and AB 2553).

[6] Fixed route bus service with less than 15-minute headways during the peak commute hours (Pub. Resources Code, § 21155).

4) Low Income Residential Land Use: Project consisting of 100 percent affordable housing units.

The VMT screening criteria generally require specific development information that can only be evaluated at the project level; therefore, the proposed General Plan Update cannot be presumed to result in a less than significant impact and further VMT forecasting was performed.

VMT Forecasting Methodology for Non-Screening Development

Projects that do not satisfy any of the screening criteria must conduct more detailed VMT forecasting to determine the project's impact. For land use plans, the TIA Guidelines state that VMT forecasting should be performed using the Southern California Association of Governments (SCAG) Regional Transportation Model (RTM). The current SCAG RTM is an activity-based travel demand model most recently updated for the development and evaluation of the SCAG 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region grows and changes.

In accordance with the County TIA Guidelines, potential project VMT impacts were evaluated using the SCAG RTM for the following scenarios:

- Base Year Conditions: This scenario reflects the SCAG RTM base year 2019 model.
- Cumulative No Project: This scenario reflects the SCAG RTM future year 2050 model and is used as the reference point for buildout per the current General Plan.
- Cumulative Plus Project: This scenario reflects a revised future year 2050 model run with modifications to reflect SED growth associated with the proposed General Plan Update.

VMT Thresholds of Significance

The TIA Guidelines establish thresholds of significance for residential, office, regional serving retail, and land use plans. Based on threshold of significance established in the County TIA Guidelines, the City of Downey considers the following thresholds of significance:

Plan-Level Impacts: A land use plan would result in a significant plan-level VMT impact if the following condition is satisfied:

- The plan total VMT per service population (residents and employees) exceeds 16.8 percent below the existing employment VMT per employee for the Baseline Area in which the project is located.[7]

Cumulative Impacts: A project would result in a significant cumulative impact on VMT if all of the following conditions are satisfied:

- The project results in a project impact after applying an efficiency based VMT threshold; and
- The project is not deemed to be consistent with the SCAG RTP/SCS; and
- The project results in a net increase in VMT above that which was forecasted in the SCAG RTP/SCS.

[7] The Baseline VMT refers the year that the transportation study begins.

VMT Impact Analysis

SED for existing conditions and the proposed General Plan Update were provided by MIG, Inc. The following steps were performed to calibrate the proposed General Plan Update with the SCAG RTM SED inputs:

1. Determine the net SED growth between existing (2026) and buildout conditions per the proposed General Plan Update.
2. Determine the net SED growth between the base year (2019) and future year (2050) SCAG RTM model.
3. Determine the differential in SED growth forecasts between the SCAG RTM model and the proposed General Plan Update.
4. Revise the SCAG future year 2050 SED inputs by adding the differential in SED growth associated with the proposed General Plan Update.

For example, if the SCAG SED showed 100 additional housing units between 2019 and 2050, but the proposed General Plan Update is expected to result in up to 150 additional housing units, the SCAG SED inputs were increased by 50 housing units. The proposed General Plan Update buildout SED and final/ calibrated SED inputs are provided in Appendix E.

Table 10 shows the daily VMT estimates for existing conditions, the Current General Plan, and the proposed General Plan Update. As shown in Table 10, the proposed General Plan Update is estimated to generate approximately 4,421,345 total origin-destination VMT at a rate of approximately 22.1 VMT per service population. In comparison to the current General Plan, the proposed General Plan Update is forecast to increase total VMT generated but reduce/improve the efficiency rate by 0.7 VMT per service population.

Table 11 shows the South Los Angeles County ("South County") daily VMT estimates used to determine the current numerical threshold of significance (i.e., 16.8 percent below the Baseline Area). As shown in Table 11, the existing South County regional average VMT is approximately 22.9 VMT per service population, thus resulting in a threshold of 19.1 VMT per service population based on the County-established guidance used by the City of Downey.

Table 12 shows the project-level VMT impact evaluation. As shown in Table 12, the proposed General Plan Update is estimated to generate 22.1 VMT per service population, which exceeds the threshold of 19.1 VMT per service population based on County-established guidelines used by the City of Downey; therefore, the proposed General Plan Update would result in a significant VMT impact.

Additionally, the proposed General Plan Update would also increase VMT above that which was forecasted in the SCAG RTP/SCS; therefore, the proposed General Plan Update would result in a significant VMT impact.

Table 10
City of Downey Daily VMT Estimates

Scenario	OD VMT	POP	EMP	SP	VMT per SP
Existing (2026)	4,259,481	116,962	50,525	167,487	25.4
Current General Plan	3,859,959	117,222	51,861	169,083	22.8
Proposed General Plan Update	4,421,345	143,354	56,782	200,136	22.1
Net Change Between Current and Proposed General Plan	561,386	26,132	4,921	31,053	-0.7

Notes:

1. Source: SCAG RTM. Origin-Destination VMT for all traffic analysis zones within Downey City Limits. Existing year 2026 data based on linear interpolation between 2019 and 2050 models.
2. OD VMT = Origin-Destination Vehicle Miles Traveled; POP = Population; EMP = Employees; SP = Service Population (Population + Employees)

Table 11
South Los Angeles County Daily VMT Estimates

Scenario	OD VMT	POP	EMP	SP	VMT per SP
SCAG RTM Base Year (2019)	334,218,427	9,249,006	4,704,723	13,953,729	24.0
Existing (2026)	325,280,867	9,392,733	4,785,330	14,178,063	22.9
SCAG RTM Future Year (2050)	294,637,805	9,885,512	5,061,695	14,947,207	19.7

Notes:

1. Source: SCAG RTM. Origin-Destination VMT for all traffic analysis zones within South Los Angeles County Planning Areas. Existing year 2026 data based on linear interpolation between 2019 and 2050 models.
2. OD VMT = Origin-Destination Vehicle Miles Traveled; POP = Population; EMP = Employees; SP = Service Population (Population + Employees)

Table 12
VMT Impact Evaluation

Scenario	Total VMT	SP	VMT per SP	Threshold	Above/Below Threshold	Exceeds Threshold?
Current General Plan	3,859,959	169,083	22.8	19.1	+3.7	Yes
Proposed General Plan Update	4,421,345	200,136	22.1	19.1	+3.0	Yes

MITIGATION MEASURES

Citywide VMT would need to be reduced by approximately 13.6 percent to achieve a less than significant VMT impact (22.1 – (22.1 x 13.6% = 19.1).

Potential mitigation measures were evaluated using the TDM+ tool published by Caltrans. TDM+ is an Excel-based tool to assist in calculating VMT reductions from the strategies presented in the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. TDM+ worksheets are provided in Appendix F.

Based on review of the strategies applicable at the plan/community level, the following transportation demand management (TDM) measures were identified:

- Neighborhood Design (Maximum VMT Reduction = 6.4% of household trips)
  - T-18: Provide Pedestrian Network Improvements
- Trip Reduction Programs (Maximum VMT Reduction = 2.3% of household trips)
  - T-23: Provide Community-Based Travel Planning
- Parking Pricing/Management (Maximum VMT Reduction = 2.0% all trips)
  - T-24: Implement Market Price Public Parking
- Transit (Maximum VMT Reduction = 4.6% all trips)
  - T-25: Extend Transit Network Coverage or Hours
  - T-26: Increase Transit Service Frequency

Other measures are either applicable at the project site level or were estimated to generate nominal VMT reduction (less than 1%). While the City of Downey can coordinate with Metro regarding improvements to transit service, the City only has control over the City's public transit, Downey LINK. The maximum VMT reductions shown above are based on aggressive assumptions that are unlikely to be achieved, such as tripling the mileage of pedestrian sidewalks, targeting all residences in the City for community-based travel planning, implementing market price public parking in areas accounting for 10% of Citywide VMT, and doubling existing transit network coverage and frequency. Even if the maximum VMT reduction is achieved, the total VMT reduction would not be reduced by the 13.6 percent required to result in a less than significant impact due to multiplicative dampening between TDM categories and because the Neighborhood Design and Trip Reduction Programs only apply to household trips.

Therefore, it is recommended that the City adopt policies that would encourage implementation of the TDM measures noted above to the extent feasible; however, the VMT impact would remain significant and unavoidable.

Additional Considerations

It is noted that the Southeast Gateway Line is a planned 14.5-mile light rail transit project designed to connect Southeast Los Angeles County with Downtown Los Angeles. Current plans include a transit station in the City of Downey at Gardendale Street near Garfield Avenue. This is a major transit improvement that is expected to reduce vehicle miles traveled in the region and is included the SCAG RTM and regional transportation plans. As this major transit project is already integrated into the SCAG RTM, it was not considered as mitigation for the proposed Downey General Plan project.

Additionally, the City of Downey recently implemented bus signal priority along Downey LINK transit routes throughout the City. While this feature improves bus service, the VMT reduction is not quantifiable per CAPCOA guidance.

APPENDICES

Appendix A Existing General Plan Roadway Cross-Sections

Appendix B Existing Daily Traffic Volume Count Data

Appendix C Travel Demand Model Plots

Appendix D Post-Processing Worksheets

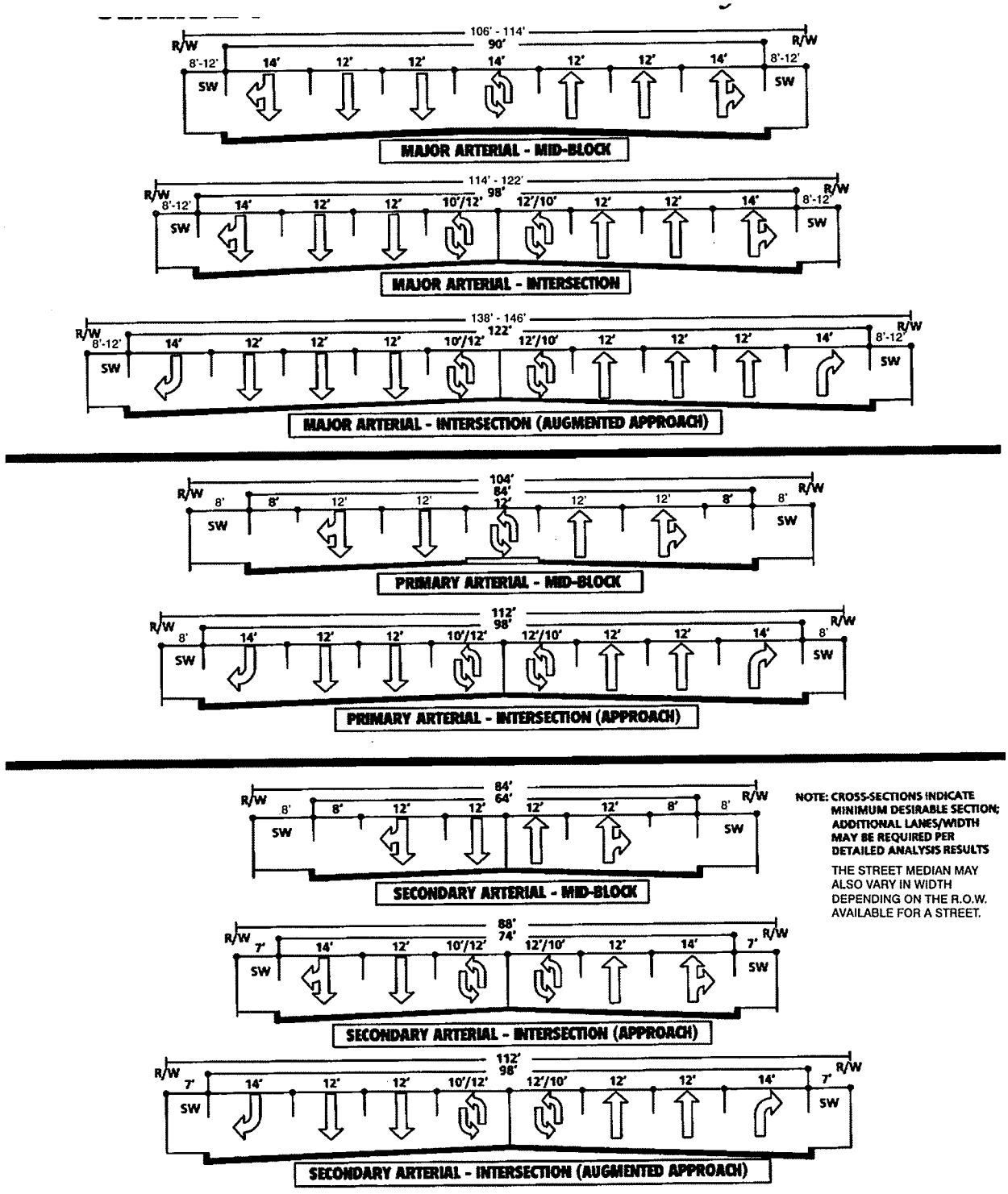
Appendix E SED Worksheets

Appendix F TDM+ Worksheets

APPENDIX A

EXISTING GENERAL PLAN ROADWAY CROSS-SECTIONS

FIGURE 2-1.6
TYPICAL ROADWAY RIGHT-OF-WAY CROSS SECTIONS



NOTE: CROSS-SECTIONS INDICATE MINIMUM DESIRABLE SECTION; ADDITIONAL LANES/WIDTH MAY BE REQUIRED PER DETAILED ANALYSIS RESULTS

THE STREET MEDIAN MAY ALSO VARY IN WIDTH DEPENDING ON THE R.O.W. AVAILABLE FOR A STREET.

APPENDIX B

EXISTING DAILY TRAFFIC VOLUME COUNT DATA

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT1 Paramount Blvd from Telegraph Rd to I-5 Freeway.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	26		18			12:00	205		194		
0:15	23		16			12:15	187		237		
0:30	19		24			12:30	210		221		
0:45	22	90	20	78	168	12:45	161	763	212	864	1627
1:00	22		27			13:00	184		219		
1:15	24		19			13:15	196		240		
1:30	18		15			13:30	218		258		
1:45	19	83	21	82	165	13:45	205	803	284	1001	1804
2:00	17		19			14:00	245		306		
2:15	13		16			14:15	239		280		
2:30	24		20			14:30	227		359		
2:45	21	75	18	73	148	14:45	240	951	370	1315	2266
3:00	14		17			15:00	272		317		
3:15	25		14			15:15	261		373		
3:30	20		30			15:30	263		376		
3:45	35	94	27	88	182	15:45	311	1107	406	1472	2579
4:00	26		37			16:00	275		378		
4:15	51		37			16:15	310		397		
4:30	63		56			16:30	286		369		
4:45	89	229	67	197	426	16:45	308	1179	348	1492	2671
5:00	68		113			17:00	271		394		
5:15	73		129			17:15	315		418		
5:30	81		163			17:30	265		364		
5:45	123	345	191	596	941	17:45	239	1090	333	1509	2599
6:00	96		216			18:00	228		317		
6:15	98		272			18:15	252		384		
6:30	131		342			18:30	224		325		
6:45	179	504	381	1211	1715	18:45	225	929	244	1270	2199
7:00	142		345			19:00	222		211		
7:15	193		389			19:15	163		153		
7:30	190		500			19:30	160		141		
7:45	203	728	448	1682	2410	19:45	162	707	160	665	1372
8:00	219		388			20:00	140		114		
8:15	194		318			20:15	120		125		
8:30	177		368			20:30	128		121		
8:45	181	771	348	1422	2193	20:45	107	495	120	480	975
9:00	199		333			21:00	108		107		
9:15	168		295			21:15	84		99		
9:30	146		291			21:30	95		92		
9:45	190	703	292	1211	1914	21:45	68	355	65	363	718
10:00	152		236			22:00	62		80		
10:15	153		208			22:15	71		57		
10:30	177		198			22:30	47		68		
10:45	190	672	232	874	1546	22:45	33	213	51	256	469
11:00	162		209			23:00	33		45		
11:15	188		201			23:15	29		36		
11:30	163		251			23:30	25		27		
11:45	184	697	253	914	1611	23:45	24	111	21	129	240
Total Vol.		4991		8428	**13419**			8703		10816	**19519**

Daily Totals

EB	WB	Combined
13694	19244	**32938**

	AM			PM		
Split %	37.2%	62.8%	**40.7%**	44.6%	55.4%	**59.3%**
Peak Hour	7:30	7:15	**7:15**	15:45	15:30	**15:45**
Volume	806	1725	**2530**	1182	1557	**2732**
P.H.F.	0.92	0.86	**0.92**	0.95	0.96	**0.95**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS2 Paramount Blvd from I-5 Freeway to Gallatin Rd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	42	0	1	1	0	1	45	**12:00**	292	26	2	5	0	0	325
0:15	30	0	0	0	0	0	30	**12:15**	261	16	1	5	0	0	283
0:30	17	0	0	1	0	0	18	**12:30**	296	15	2	6	0	1	320
0:45	25	0	0	1	0	0	26	**12:45**	253	10	2	6	0	0	271
1:00	29	0	0	1	0	1	31	**13:00**	298	24	2	5	0	0	329
1:15	27	0	0	0	0	0	27	**13:15**	308	30	1	5	0	1	345
1:30	31	0	0	1	0	0	32	**13:30**	244	25	2	5	0	0	276
1:45	16	0	0	1	0	0	17	**13:45**	303	30	0	5	0	1	339
2:00	29	0	0	4	0	2	35	**14:00**	289	24	1	8	0	0	322
2:15	14	0	0	0	0	0	14	**14:15**	326	8	3	4	0	1	342
2:30	33	0	0	2	0	2	37	**14:30**	285	28	2	5	0	0	320
2:45	31	0	0	1	0	2	34	**14:45**	348	36	4	11	0	2	401
3:00	26	1	0	1	0	0	28	**15:00**	317	38	5	8	0	0	368
3:15	45	2	0	0	0	0	47	**15:15**	344	26	3	5	0	0	378
3:30	40	4	0	1	0	0	45	**15:30**	327	28	0	5	0	1	361
3:45	50	2	0	0	0	0	52	**15:45**	335	28	2	3	0	0	368
4:00	56	4	0	1	0	0	61	**16:00**	317	26	0	5	0	2	350
4:15	109	4	1	2	0	0	116	**16:15**	361	33	2	7	0	1	404
4:30	117	8	0	2	0	0	127	**16:30**	338	27	1	6	0	2	374
4:45	147	7	3	2	0	0	159	**16:45**	354	32	0	4	0	1	391
5:00	149	17	1	5	0	0	172	**17:00**	356	33	1	3	0	2	395
5:15	185	14	1	2	0	0	202	**17:15**	368	26	2	5	0	0	401
5:30	229	17	3	2	0	0	251	**17:30**	310	37	2	5	0	0	354
5:45	218	24	4	3	0	0	249	**17:45**	348	32	0	8	0	2	390
6:00	241	15	0	3	0	1	260	**18:00**	309	26	1	6	0	0	342
6:15	234	17	4	5	0	3	263	**18:15**	301	30	1	8	0	1	341
6:30	327	30	3	8	0	1	369	**18:30**	310	19	0	4	0	0	333
6:45	398	32	2	6	0	3	441	**18:45**	289	22	2	3	0	0	316
7:00	380	42	4	16	0	1	443	**19:00**	291	18	1	4	0	0	314
7:15	333	35	1	13	0	2	384	**19:15**	244	17	2	6	0	1	270
7:30	284	30	0	2	0	1	317	**19:30**	232	7	2	2	0	0	243
7:45	322	34	1	4	0	0	361	**19:45**	228	14	1	4	0	0	247
8:00	322	39	2	14	0	1	378	**20:00**	202	12	3	2	0	0	219
8:15	361	40	2	9	0	0	412	**20:15**	173	7	3	1	0	0	184
8:30	351	26	2	3	0	1	383	**20:30**	191	7	2	2	0	0	202
8:45	382	43	1	7	0	0	433	**20:45**	161	6	0	2	0	1	170
9:00	354	41	3	6	0	3	407	**21:00**	167	13	1	3	0	0	184
9:15	335	29	2	3	0	1	370	**21:15**	149	4	1	0	0	0	154
9:30	220	22	2	3	0	0	247	**21:30**	134	8	0	4	0	0	146
9:45	274	25	2	3	0	1	305	**21:45**	112	3	1	1	0	0	117
10:00	285	22	0	2	0	0	309	**22:00**	98	3	2	0	0	0	103
10:15	296	27	5	1	0	2	331	**22:15**	78	2	0	0	0	0	80
10:30	305	32	3	3	0	0	343	**22:30**	71	1	1	0	0	0	73
10:45	265	24	1	4	0	0	294	**22:45**	83	1	2	1	0	0	87
11:00	259	22	5	2	0	0	288	**23:00**	57	0	1	0	0	0	58
11:15	293	20	6	9	0	2	330	**23:15**	65	1	0	0	0	0	66
11:30	280	28	2	6	0	0	316	**23:30**	50	0	1	0	0	0	51
11:45	216	19	1	2	0	1	239	**23:45**	51	3	0	0	0	0	54
TOTAL	9,012	798	68	168	0	32	10,078	**TOTAL**	11,624	862	68	187	0	20	12,761

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	1,637

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	1,564

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	20,636	1,660	136	355	0	52	22,839
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	90.4%	7.3%	0.6%	1.6%	0.0%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	38,851	2,674	258	639	1	82	42,505
CLASS 6	Buses	**% OF TOTAL**	91.4%	6.3%	0.6%	1.5%	0.0%	0.2%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS2 Paramount Blvd from I-5 Freeway to Gallatin Rd

AM TIME	WESTBOUND 1	2	3	4	5	6	TOTAL	PM Time	WESTBOUND 1	2	3	4	5	6	TOTAL
0:00	43	1	0	0	0	0	44	**12:00**	180	16	3	3	0	0	202
0:15	36	1	0	0	0	0	37	**12:15**	233	15	2	3	0	0	253
0:30	42	0	0	0	0	0	42	**12:30**	251	18	3	4	0	0	276
0:45	50	0	0	0	0	0	50	**12:45**	266	12	4	2	0	0	284
1:00	33	1	0	0	0	0	34	**13:00**	238	18	1	2	0	1	260
1:15	30	0	0	0	0	0	30	**13:15**	198	17	2	6	0	1	224
1:30	36	2	0	1	0	0	39	**13:30**	250	14	1	6	0	0	271
1:45	38	1	0	0	0	0	39	**13:45**	307	15	0	4	0	0	326
2:00	39	1	0	0	0	0	40	**14:00**	305	19	0	3	0	1	328
2:15	32	2	0	0	0	0	34	**14:15**	264	22	2	8	0	0	296
2:30	30	0	0	0	0	0	30	**14:30**	356	19	1	6	0	0	382
2:45	26	0	1	0	0	0	27	**14:45**	355	20	2	5	0	0	382
3:00	21	0	0	0	0	0	21	**15:00**	293	16	2	3	0	1	315
3:15	19	2	0	0	0	0	21	**15:15**	324	25	1	4	0	2	356
3:30	29	1	1	0	0	0	31	**15:30**	347	23	0	6	0	0	376
3:45	33	2	1	0	0	0	36	**15:45**	335	21	1	6	0	1	364
4:00	34	2	0	0	0	0	36	**16:00**	341	17	1	5	0	0	364
4:15	31	1	0	2	0	0	34	**16:15**	360	22	3	7	0	1	393
4:30	57	2	0	0	0	0	59	**16:30**	343	24	0	8	0	0	375
4:45	73	3	2	1	0	0	79	**16:45**	333	18	2	3	0	2	358
5:00	60	4	3	1	0	0	68	**17:00**	428	10	0	5	0	1	444
5:15	76	7	1	3	0	0	87	**17:15**	373	12	1	6	0	0	392
5:30	107	2	2	0	0	0	111	**17:30**	352	17	2	7	0	1	379
5:45	121	6	1	3	0	0	131	**17:45**	351	11	1	2	0	1	366
6:00	136	9	2	3	0	2	152	**18:00**	325	12	2	3	0	0	342
6:15	140	13	4	7	0	0	164	**18:15**	385	8	1	5	1	0	400
6:30	197	19	2	7	0	1	226	**18:30**	315	9	0	4	0	1	329
6:45	236	17	4	5	0	2	264	**18:45**	250	8	1	3	0	0	262
7:00	210	21	1	10	0	0	242	**19:00**	233	7	0	1	0	1	242
7:15	238	23	2	11	0	0	274	**19:15**	204	13	1	3	0	1	222
7:30	303	20	1	8	0	1	333	**19:30**	239	8	1	1	0	0	249
7:45	294	24	5	7	0	0	330	**19:45**	233	9	0	0	0	0	242
8:00	264	18	2	6	0	0	290	**20:00**	211	5	0	1	0	0	217
8:15	222	17	2	5	0	0	246	**20:15**	228	3	0	2	0	1	234
8:30	237	21	1	6	0	1	266	**20:30**	204	5	0	3	0	0	212
8:45	221	20	4	6	0	1	252	**20:45**	210	1	0	0	0	0	211
9:00	211	23	1	7	0	2	244	**21:00**	215	2	1	1	0	0	219
9:15	176	17	2	4	0	0	199	**21:15**	184	5	1	0	0	0	190
9:30	210	20	2	6	0	0	238	**21:30**	188	1	0	0	0	0	189
9:45	227	14	6	5	0	0	252	**21:45**	143	3	0	1	0	0	147
10:00	191	14	5	4	0	0	214	**22:00**	163	2	0	1	0	0	166
10:15	188	18	5	5	0	0	216	**22:15**	162	1	1	0	0	0	164
10:30	169	18	4	3	0	1	195	**22:30**	126	1	0	0	0	0	127
10:45	201	15	1	2	0	0	219	**22:45**	130	3	0	1	0	0	134
11:00	201	18	1	4	0	0	224	**23:00**	93	0	0	0	0	0	93
11:15	170	21	1	1	0	1	194	**23:15**	84	1	1	0	0	0	86
11:30	215	20	4	2	0	0	241	**23:30**	106	1	0	0	0	0	107
11:45	188	23	3	5	0	1	220	**23:45**	60	1	0	0	0	0	61
TOTAL	6,141	484	77	140	0	13	6,855	**TOTAL**	12,074	530	45	144	1	17	12,811

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,227

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	1,581

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	18,215	1,014	122	284	1	30	19,666
% OF TOTAL	92.6%	5.2%	0.6%	1.4%	0.0%	0.2%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS2 Paramount Blvd from I-5 Freeway to Gallatin Rd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	85	1	1	1	0	1	89	12:00	472	42	5	8	0	0	527
0:15	66	1	0	0	0	0	67	12:15	494	31	3	8	0	0	536
0:30	59	0	0	1	0	0	60	12:30	547	33	5	10	0	1	596
0:45	75	0	0	1	0	0	76	12:45	519	22	6	8	0	0	555
1:00	62	1	0	1	0	1	65	13:00	536	42	3	7	0	1	589
1:15	57	0	0	0	0	0	57	13:15	506	47	3	11	0	2	569
1:30	67	2	0	2	0	0	71	13:30	494	39	3	11	0	0	547
1:45	54	1	0	1	0	0	56	13:45	610	45	0	9	0	1	665
2:00	68	1	0	4	0	2	75	14:00	594	43	1	11	0	1	650
2:15	46	2	0	0	0	0	48	14:15	590	30	5	12	0	1	638
2:30	63	0	0	2	0	2	67	14:30	641	47	3	11	0	0	702
2:45	57	0	1	1	0	2	61	14:45	703	56	6	16	0	2	783
3:00	47	1	0	1	0	0	49	15:00	610	54	7	11	0	1	683
3:15	64	4	0	0	0	0	68	15:15	668	51	4	9	0	2	734
3:30	69	5	1	1	0	0	76	15:30	674	51	0	11	0	1	737
3:45	83	4	1	0	0	0	88	15:45	670	49	3	9	0	1	732
4:00	90	6	0	1	0	0	97	16:00	658	43	1	10	0	2	714
4:15	140	5	1	4	0	0	150	16:15	721	55	5	14	0	2	797
4:30	174	10	0	2	0	0	186	16:30	681	51	1	14	0	2	749
4:45	220	10	5	3	0	0	238	16:45	687	50	2	7	0	3	749
5:00	209	21	4	6	0	0	240	17:00	784	43	1	8	0	3	839
5:15	261	21	2	5	0	0	289	17:15	741	38	3	11	0	0	793
5:30	336	19	5	2	0	0	362	17:30	662	54	4	12	0	1	733
5:45	339	30	5	6	0	0	380	17:45	699	43	1	10	0	3	756
6:00	377	24	2	6	0	3	412	18:00	634	38	3	9	0	0	684
6:15	374	30	8	12	0	3	427	18:15	686	38	2	13	1	1	741
6:30	524	49	5	15	0	2	595	18:30	625	28	0	8	0	1	662
6:45	634	49	6	11	0	5	705	18:45	539	30	3	6	0	0	578
7:00	590	63	5	26	0	1	685	19:00	524	25	1	5	0	1	556
7:15	571	58	3	24	0	2	658	19:15	448	30	3	9	0	2	492
7:30	587	50	1	10	0	2	650	19:30	471	15	3	3	0	0	492
7:45	616	58	6	11	0	0	691	19:45	461	23	1	4	0	0	489
8:00	586	57	4	20	0	1	668	20:00	413	17	3	3	0	0	436
8:15	583	57	4	14	0	0	658	20:15	401	10	3	3	0	1	418
8:30	588	47	3	9	0	2	649	20:30	395	12	2	5	0	0	414
8:45	603	63	5	13	0	1	685	20:45	371	7	0	2	0	1	381
9:00	565	64	4	13	0	5	651	21:00	382	15	2	4	0	0	403
9:15	511	46	4	7	0	1	569	21:15	333	9	2	0	0	0	344
9:30	430	42	4	9	0	0	485	21:30	322	9	0	4	0	0	335
9:45	501	39	8	8	0	1	557	21:45	255	6	1	2	0	0	264
10:00	476	36	5	6	0	0	523	22:00	261	5	2	1	0	0	269
10:15	484	45	10	6	0	2	547	22:15	240	3	1	0	0	0	244
10:30	474	50	7	6	0	1	538	22:30	197	2	1	0	0	0	200
10:45	466	39	2	6	0	0	513	22:45	213	4	2	2	0	0	221
11:00	460	40	6	6	0	0	512	23:00	150	0	1	0	0	0	151
11:15	463	41	7	10	0	3	524	23:15	149	2	1	0	0	0	152
11:30	495	48	6	8	0	0	557	23:30	156	1	1	0	0	0	158
11:45	404	42	4	7	0	2	459	23:45	111	4	0	0	0	0	115
TOTAL	15,153	1,282	145	308	0	45	16,933	TOTAL	23,698	1,392	113	331	1	37	25,572

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	2,698

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	3,134

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	38,851	2,674	258	639	1	82	42,505
% OF TOTAL	91.4%	6.3%	0.6%	1.5%	0.0%	0.2%	100.0%

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT3 Paramount Blvd from Gallatin Rd to Florence Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	31		44			12:00	271		212		
0:15	26		33			12:15	265		207		
0:30	15		28			12:30	297		224		
0:45	27	99	32	137	236	12:45	253	1086	253	896	1982
1:00	22		29			13:00	252		223		
1:15	18		24			13:15	292		185		
1:30	16		28			13:30	273		230		
1:45	16	72	31	112	184	13:45	291	1108	277	915	2023
2:00	18		24			14:00	283		275		
2:15	19		22			14:15	295		236		
2:30	25		25			14:30	317		302		
2:45	28	90	20	91	181	14:45	333	1228	261	1074	2302
3:00	29		16			15:00	351		251		
3:15	33		21			15:15	321		260		
3:30	38		23			15:30	352		277		
3:45	45	145	24	84	229	15:45	288	1312	270	1058	2370
4:00	57		32			16:00	331		298		
4:15	83		30			16:15	335		271		
4:30	97		49			16:30	323		266		
4:45	123	360	64	175	535	16:45	312	1301	273	1108	2409
5:00	149		58			17:00	325		319		
5:15	132		62			17:15	260		276		
5:30	179		91			17:30	314		272		
5:45	163	623	113	324	947	17:45	325	1224	242	1109	2333
6:00	174		128			18:00	242		247		
6:15	214		157			18:15	258		330		
6:30	282		187			18:30	262		222		
6:45	347	1017	228	700	1717	18:45	283	1045	196	995	2040
7:00	370		187			19:00	303		194		
7:15	307		256			19:15	238		172		
7:30	301		283			19:30	208		161		
7:45	289	1267	304	1030	2297	19:45	207	956	178	705	1661
8:00	301		292			20:00	180		165		
8:15	239		237			20:15	153		159		
8:30	296		242			20:30	162		163		
8:45	308	1144	243	1014	2158	20:45	143	638	151	638	1276
9:00	320		229			21:00	167		160		
9:15	251		199			21:15	127		145		
9:30	244		203			21:30	135		132		
9:45	249	1064	204	835	1899	21:45	91	520	118	555	1075
10:00	285		193			22:00	80		115		
10:15	244		188			22:15	87		119		
10:30	269		195			22:30	65		105		
10:45	271	1069	186	762	1831	22:45	58	290	97	436	726
11:00	248		184			23:00	47		74		
11:15	285		158			23:15	64		67		
11:30	279		204			23:30	50		67		
11:45	243	1055	174	720	1775	23:45	34	195	52	260	455
Total Vol.		8005		5984	**13989**			10903		9749	**20652**

Daily Totals

NB	SB	**Combined**
18908	###	**34641**

	AM			**PM**		
Split %	57.2%	42.8%	**40.4%**	52.8%	47.2%	**59.6%**
Peak Hour	6:45	7:15	**7:15**	14:45	16:45	**16:15**
Volume	1325	1135	**2333**	1357	1140	**2424**
P.H.F.	0.90	0.93	**0.98**	0.96	0.89	**0.94**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT4 Paramount Blvd from Florence Ave to Firestone Blvd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	34		25			12:00	258		221		
0:15	25		22			12:15	223		193		
0:30	17		19			12:30	258		203		
0:45	31	107	25	91	198	12:45	226	965	216	833	1798
1:00	19		20			13:00	254		173		
1:15	23		11			13:15	295		175		
1:30	10		18			13:30	277		196		
1:45	9	61	20	69	130	13:45	260	1086	254	798	1884
2:00	15		20			14:00	292		245		
2:15	7		17			14:15	283		209		
2:30	11		20			14:30	294		239		
2:45	15	48	19	76	124	14:45	289	1158	233	926	2084
3:00	12		13			15:00	264		235		
3:15	21		14			15:15	301		241		
3:30	23		23			15:30	244		218		
3:45	17	73	16	66	139	15:45	306	1115	219	913	2028
4:00	25		28			16:00	329		220		
4:15	45		30			16:15	268		229		
4:30	54		39			16:30	247		199		
4:45	69	193	48	145	338	16:45	255	1099	228	876	1975
5:00	62		41			17:00	249		245		
5:15	76		67			17:15	275		273		
5:30	106		86			17:30	326		230		
5:45	96	340	119	313	653	17:45	248	1098	209	957	2055
6:00	100		131			18:00	254		219		
6:15	122		168			18:15	242		228		
6:30	207		213			18:30	307		224		
6:45	262	691	222	734	1425	18:45	273	1076	230	901	1977
7:00	270		239			19:00	236		199		
7:15	244		230			19:15	224		180		
7:30	238		260			19:30	236		152		
7:45	246	998	294	1023	2021	19:45	187	883	155	686	1569
8:00	265		263			20:00	169		146		
8:15	253		235			20:15	194		137		
8:30	294		209			20:30	162		115		
8:45	249	1061	247	954	2015	20:45	152	677	132	530	1207
9:00	220		217			21:00	138		145		
9:15	237		206			21:15	108		119		
9:30	241		212			21:30	111		113		
9:45	258	956	229	864	1820	21:45	85	442	100	477	919
10:00	283		221			22:00	81		80		
10:15	255		205			22:15	75		86		
10:30	242		202			22:30	55		56		
10:45	271	1051	193	821	1872	22:45	59	270	63	285	555
11:00	254		181			23:00	53		45		
11:15	272		178			23:15	47		31		
11:30	267		225			23:30	36		45		
11:45	234	1027	207	791	1818	23:45	37	173	40	161	334
Total Vol.		6606		5947	**12553**			10042		8343	**18385**

Daily Totals

NB	SB	**Combined**
16648	###	**30938**

	AM			**PM**		
Split %	52.6%	47.4%	**40.6%**	54.6%	45.4%	**59.4%**
Peak Hour	10:45	7:30	**7:45**	15:15	16:45	**14:30**
Volume	1064	1052	**2059**	1180	976	**2096**
P.H.F.	0.98	0.89	**0.95**	0.90	0.89	**0.97**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT5 Paramount Blvd from Firestone Blvd to Stewart and Gray Rd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	19		23			12:00	222		169		
0:15	24		18			12:15	238		152		
0:30	17		24			12:30	225		148		
0:45	18	78	17	82	160	12:45	187	872	157	626	1498
1:00	16		15			13:00	256		153		
1:15	15		12			13:15	171		185		
1:30	8		16			13:30	220		170		
1:45	7	46	17	60	106	13:45	273	920	195	703	1623
2:00	8		14			14:00	284		211		
2:15	5		18			14:15	204		183		
2:30	11		10			14:30	277		184		
2:45	8	32	14	56	88	14:45	228	993	216	794	1787
3:00	9		11			15:00	257		243		
3:15	14		14			15:15	228		215		
3:30	17		12			15:30	318		226		
3:45	13	53	18	55	108	15:45	354	1157	228	912	2069
4:00	20		22			16:00	340		196		
4:15	34		29			16:15	280		233		
4:30	44		33			16:30	290		256		
4:45	49	147	30	114	261	16:45	219	1129	225	910	2039
5:00	51		38			17:00	235		230		
5:15	53		63			17:15	252		266		
5:30	79		71			17:30	253		209		
5:45	60	243	92	264	507	17:45	218	958	214	919	1877
6:00	75		118			18:00	248		196		
6:15	103		135			18:15	229		205		
6:30	166		174			18:30	256		179		
6:45	224	568	227	654	1222	18:45	239	972	197	777	1749
7:00	250		179			19:00	207		178		
7:15	237		200			19:15	204		173		
7:30	264		234			19:30	185		115		
7:45	271	1022	237	850	1872	19:45	152	748	142	608	1356
8:00	299		247			20:00	138		148		
8:15	265		272			20:15	164		151		
8:30	263		180			20:30	127		105		
8:45	200	1027	158	857	1884	20:45	103	532	112	516	1048
9:00	216		175			21:00	117		109		
9:15	235		177			21:15	90		101		
9:30	235		170			21:30	79		84		
9:45	268	954	196	718	1672	21:45	65	351	69	363	714
10:00	258		178			22:00	60		68		
10:15	243		155			22:15	57		61		
10:30	217		173			22:30	41		54		
10:45	221	939	106	612	1551	22:45	38	196	41	224	420
11:00	215		142			23:00	36		47		
11:15	246		116			23:15	25		40		
11:30	211		170			23:30	27		38		
11:45	185	857	168	596	1453	23:45	23	111	29	154	265
Total Vol.		5966		4918	**10884**			8939		7506	**16445**

Daily Totals

NB	SB	**Combined**
14905	###	**27329**

	AM			**PM**		
Split %	54.8%	45.2%	**39.8%**	54.4%	45.6%	**60.2%**
Peak Hour	7:30	7:30	**7:30**	15:30	16:30	**15:45**
Volume	1099	990	**2089**	1292	977	**2177**
P.H.F.	0.92	0.91	**0.96**	0.91	0.92	**0.94**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS6 Paramount Blvd from Stewart and Gray Rd to Imperial Hwy

AM TIME	NORTHBOUND 1	2	3	4	5	6	TOTAL	PM Time	NORTHBOUND 1	2	3	4	5	6	TOTAL
0:00	25	1	0	0	0	0	26	12:00	199	12	2	4	0	0	217
0:15	25	0	0	0	0	0	25	12:15	205	11	0	7	0	1	224
0:30	20	0	0	1	0	0	21	12:30	195	10	1	8	0	2	216
0:45	14	0	0	0	0	0	14	12:45	208	9	1	9	0	1	228
1:00	16	1	0	0	0	0	17	13:00	221	12	0	6	0	0	239
1:15	16	0	0	0	0	0	16	13:15	196	13	1	5	0	1	216
1:30	14	0	0	0	0	0	14	13:30	245	9	1	7	0	1	263
1:45	15	0	1	0	0	0	16	13:45	261	10	1	9	0	2	283
2:00	15	0	0	0	0	0	15	14:00	228	14	0	5	0	0	247
2:15	10	0	0	0	0	0	10	14:15	234	11	1	7	0	1	254
2:30	10	1	0	0	0	0	11	14:30	240	13	2	5	0	1	261
2:45	14	0	0	1	0	0	15	14:45	271	9	0	6	0	1	287
3:00	10	0	0	0	0	0	10	15:00	295	8	0	4	0	0	307
3:15	18	0	0	0	0	0	18	15:15	249	13	1	5	0	2	270
3:30	16	1	0	0	0	0	17	15:30	221	14	2	6	0	1	244
3:45	12	0	0	0	0	0	12	15:45	218	12	1	7	0	0	238
4:00	17	1	0	1	0	0	19	16:00	205	10	1	6	1	1	224
4:15	27	0	1	1	0	0	29	16:15	250	9	1	1	0	0	261
4:30	36	0	0	0	0	0	36	16:30	241	11	2	3	0	0	257
4:45	38	1	0	1	0	0	40	16:45	262	13	0	1	0	0	276
5:00	35	2	1	0	0	1	39	17:00	208	10	1	2	0	2	223
5:15	40	2	1	1	0	0	44	17:15	222	12	1	2	0	2	239
5:30	63	3	0	2	0	0	68	17:30	233	9	2	2	0	0	246
5:45	61	4	0	0	0	0	65	17:45	244	8	3	1	0	1	257
6:00	82	5	2	4	0	0	93	18:00	227	9	1	3	0	1	241
6:15	112	7	1	1	0	1	122	18:15	211	7	1	1	0	0	220
6:30	148	12	0	2	0	0	162	18:30	217	6	0	3	0	0	226
6:45	190	13	0	7	0	0	210	18:45	257	5	2	4	0	0	268
7:00	196	14	2	4	0	1	217	19:00	246	5	0	3	0	0	254
7:15	222	11	0	4	0	1	238	19:15	230	4	0	2	0	0	236
7:30	223	15	1	5	0	2	246	19:30	212	2	0	2	0	1	217
7:45	290	12	2	4	0	3	311	19:45	177	3	0	2	0	0	182
8:00	258	10	0	3	0	3	274	20:00	143	1	0	3	0	0	147
8:15	232	9	1	5	0	2	249	20:15	159	1	0	2	0	0	162
8:30	209	11	1	2	0	2	225	20:30	149	0	3	1	0	0	153
8:45	210	13	2	5	0	1	231	20:45	136	2	0	0	0	0	138
9:00	236	11	1	4	0	1	253	21:00	110	1	0	1	0	0	112
9:15	213	9	0	2	0	1	225	21:15	106	2	0	1	0	0	109
9:30	216	12	1	5	0	1	235	21:30	91	1	0	2	0	0	94
9:45	249	13	3	4	0	1	270	21:45	76	2	1	1	0	0	80
10:00	224	9	1	3	0	0	237	22:00	80	1	0	0	0	0	81
10:15	206	8	2	4	0	1	221	22:15	76	0	0	1	0	0	77
10:30	205	10	3	1	0	1	220	22:30	62	1	2	1	0	0	66
10:45	214	9	2	3	0	0	228	22:45	49	2	0	0	0	0	51
11:00	216	12	1	4	0	2	235	23:00	40	2	0	0	0	0	42
11:15	206	9	1	2	0	1	219	23:15	38	1	0	0	0	0	39
11:30	200	11	0	5	0	0	216	23:30	41	0	0	0	0	0	41
11:45	198	7	1	3	0	0	209	23:45	27	0	0	0	0	0	27
TOTAL	5,522	269	32	94	0	26	5,943	TOTAL	8,711	320	35	151	1	22	9,240

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,080

PM PEAK HOUR	2:30 PM
PM PEAK VOLUME	1,125

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	14,233	589	67	245	1	48	15,183
% OF TOTAL	93.7%	3.9%	0.4%	1.6%	0.0%	0.3%	100.0%
TOTAL: ALL	25,632	1,226	141	559	2	103	27,663
% OF TOTAL	92.7%	4.4%	0.5%	2.0%	0.0%	0.4%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS6 Paramount Blvd from Stewart and Gray Rd to Imperial Hwy

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	22	0	0	0	0	0	22	12:00	156	9	0	2	0	0	167
0:15	21	0	1	1	0	0	23	12:15	131	10	0	3	0	1	145
0:30	18	0	0	0	0	0	18	12:30	130	11	1	5	0	0	147
0:45	19	1	0	1	0	0	21	12:45	125	8	0	7	0	1	141
1:00	20	0	0	0	0	0	20	13:00	152	9	2	5	0	2	170
1:15	12	1	0	0	0	0	13	13:15	134	12	1	4	0	1	152
1:30	11	1	0	0	0	0	12	13:30	111	10	1	7	0	1	130
1:45	16	0	0	1	0	0	17	13:45	152	13	0	5	0	3	173
2:00	17	1	0	1	0	0	19	14:00	180	15	0	6	0	1	202
2:15	15	0	0	0	0	0	15	14:15	147	10	1	7	1	2	168
2:30	14	0	0	0	0	0	14	14:30	153	13	2	5	0	1	174
2:45	24	1	0	0	0	0	25	14:45	144	14	1	9	0	1	169
3:00	18	1	0	0	0	0	19	15:00	155	16	1	8	0	1	181
3:15	19	0	0	1	0	0	20	15:15	150	10	1	7	0	2	170
3:30	17	1	0	0	0	0	18	15:30	170	9	3	5	0	2	189
3:45	26	2	0	1	0	0	29	15:45	233	12	2	6	0	1	254
4:00	28	3	0	0	0	0	31	16:00	198	9	1	7	0	0	215
4:15	34	2	1	0	0	0	37	16:15	199	15	0	8	0	2	224
4:30	65	3	0	1	0	0	69	16:30	190	14	1	9	0	1	215
4:45	48	2	2	1	0	0	53	16:45	206	13	0	7	0	0	226
5:00	64	3	1	1	0	0	69	17:00	189	10	1	6	0	1	207
5:15	79	3	2	2	0	0	86	17:15	214	12	2	5	0	0	233
5:30	87	6	1	2	0	0	96	17:30	188	9	1	6	0	0	204
5:45	105	7	1	2	0	0	115	17:45	184	10	0	5	0	1	200
6:00	151	6	1	1	0	0	159	18:00	183	8	2	5	0	0	198
6:15	165	8	2	3	0	0	178	18:15	146	7	1	8	0	1	163
6:30	201	7	1	4	0	1	214	18:30	159	9	0	4	0	0	172
6:45	202	10	1	4	0	2	219	18:45	207	8	1	2	0	1	219
7:00	200	9	0	6	0	0	215	19:00	171	7	1	3	0	0	182
7:15	188	11	2	5	0	1	207	19:15	150	6	2	2	0	1	161
7:30	244	12	1	4	0	1	262	19:30	135	7	0	4	0	0	146
7:45	215	8	0	7	0	3	233	19:45	138	5	1	3	0	0	147
8:00	220	12	1	4	0	1	238	20:00	150	3	1	1	0	0	155
8:15	210	11	2	5	0	2	230	20:15	129	4	0	2	0	0	135
8:30	206	15	1	4	0	1	227	20:30	122	3	2	2	0	0	129
8:45	189	12	0	5	0	2	208	20:45	115	3	0	2	0	0	120
9:00	137	9	1	5	0	1	153	21:00	121	2	1	1	0	0	125
9:15	158	10	2	4	0	0	174	21:15	101	1	2	3	0	0	107
9:30	129	13	1	7	0	1	151	21:30	93	3	1	2	0	0	99
9:45	131	9	0	5	0	2	147	21:45	78	1	0	1	0	0	80
10:00	140	11	1	4	0	0	156	22:00	83	1	2	0	0	0	86
10:15	149	10	1	5	0	2	167	22:15	68	1	0	1	0	0	70
10:30	147	8	2	5	0	1	163	22:30	62	0	1	0	0	0	63
10:45	108	9	1	6	0	0	124	22:45	56	2	0	1	0	0	59
11:00	132	11	3	2	0	1	149	23:00	45	2	0	0	0	0	47
11:15	116	13	0	5	0	2	136	23:15	36	1	0	0	0	0	37
11:30	145	9	1	5	0	3	163	23:30	33	0	0	1	0	0	34
11:45	121	8	0	2	0	0	131	23:45	24	1	0	0	0	0	25
TOTAL	4,803	279	34	122	0	27	5,265	TOTAL	6,596	358	40	192	1	28	7,215

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	963

PM PEAK HOUR	3:45 PM
PM PEAK VOLUME	908

TOTAL: AM+PM	11,399	637	74	314	1	55	12,480
% OF TOTAL	91.3%	5.1%	0.6%	2.5%	0.0%	0.4%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS6 Paramount Blvd from Stewart and Gray Rd to Imperial Hwy

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	47	1	0	0	0	0	48	12:00	355	21	2	6	0	0	384
0:15	46	0	1	1	0	0	48	12:15	336	21	0	10	0	2	369
0:30	38	0	0	1	0	0	39	12:30	325	21	2	13	0	2	363
0:45	33	1	0	1	0	0	35	12:45	333	17	1	16	0	2	369
1:00	36	1	0	0	0	0	37	13:00	373	21	2	11	0	2	409
1:15	28	1	0	0	0	0	29	13:15	330	25	2	9	0	2	368
1:30	25	1	0	0	0	0	26	13:30	356	19	2	14	0	2	393
1:45	31	0	1	1	0	0	33	13:45	413	23	1	14	0	5	456
2:00	32	1	0	1	0	0	34	14:00	408	29	0	11	0	1	449
2:15	25	0	0	0	0	0	25	14:15	381	21	2	14	1	3	422
2:30	24	1	0	0	0	0	25	14:30	393	26	4	10	0	2	435
2:45	38	1	0	1	0	0	40	14:45	415	23	1	15	0	2	456
3:00	28	1	0	0	0	0	29	15:00	450	24	1	12	0	1	488
3:15	37	0	0	1	0	0	38	15:15	399	23	2	12	0	4	440
3:30	33	2	0	0	0	0	35	15:30	391	23	5	11	0	3	433
3:45	38	2	0	1	0	0	41	15:45	451	24	3	13	0	1	492
4:00	45	4	0	1	0	0	50	16:00	403	19	2	13	1	1	439
4:15	61	2	2	1	0	0	66	16:15	449	24	1	9	0	2	485
4:30	101	3	0	1	0	0	105	16:30	431	25	3	12	0	1	472
4:45	86	3	2	2	0	0	93	16:45	468	26	0	8	0	0	502
5:00	99	5	2	1	0	1	108	17:00	397	20	2	8	0	3	430
5:15	119	5	3	3	0	0	130	17:15	436	24	3	7	0	2	472
5:30	150	9	1	4	0	0	164	17:30	421	18	3	8	0	0	450
5:45	166	11	1	2	0	0	180	17:45	428	18	3	6	0	2	457
6:00	233	11	3	5	0	0	252	18:00	410	17	3	8	0	1	439
6:15	277	15	3	4	0	1	300	18:15	357	14	2	9	0	1	383
6:30	349	19	1	6	0	1	376	18:30	376	15	0	7	0	0	398
6:45	392	23	1	11	0	2	429	18:45	464	13	3	6	0	1	487
7:00	396	23	2	10	0	1	432	19:00	417	12	1	6	0	0	436
7:15	410	22	2	9	0	2	445	19:15	380	10	2	4	0	1	397
7:30	467	27	2	9	0	3	508	19:30	347	9	0	6	0	1	363
7:45	505	20	2	11	0	6	544	19:45	315	8	1	5	0	0	329
8:00	478	22	1	7	0	4	512	20:00	293	4	1	4	0	0	302
8:15	442	20	3	10	0	4	479	20:15	288	5	0	4	0	0	297
8:30	415	26	2	6	0	3	452	20:30	271	3	5	3	0	0	282
8:45	399	25	2	10	0	3	439	20:45	251	5	0	2	0	0	258
9:00	373	20	2	9	0	2	406	21:00	231	3	1	2	0	0	237
9:15	371	19	2	6	0	1	399	21:15	207	3	2	4	0	0	216
9:30	345	25	2	12	0	2	386	21:30	184	4	1	4	0	0	193
9:45	380	22	3	9	0	3	417	21:45	154	3	1	2	0	0	160
10:00	364	20	2	7	0	0	393	22:00	163	2	2	0	0	0	167
10:15	355	18	3	9	0	3	388	22:15	144	1	0	2	0	0	147
10:30	352	18	5	6	0	2	383	22:30	124	1	3	1	0	0	129
10:45	322	18	3	9	0	0	352	22:45	105	4	0	1	0	0	110
11:00	348	23	4	6	0	3	384	23:00	85	4	0	0	0	0	89
11:15	322	22	1	7	0	3	355	23:15	74	2	0	0	0	0	76
11:30	345	20	1	10	0	3	379	23:30	74	0	0	1	0	0	75
11:45	319	15	1	5	0	0	340	23:45	51	1	0	0	0	0	52
TOTAL	10,325	548	66	216	0	53	11,208	TOTAL	15,307	678	75	343	2	50	16,455

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,043

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	1,898

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	25,632	1,226	141	559	2	103	27,663
% OF TOTAL	92.7%	4.4%	0.5%	2.0%	0.0%	0.4%	100.0%

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT7 Paramount Blvd from Imperial Hwy to Gardendale St.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	21		21			12:00	189		182		
0:15	18		16			12:15	179		161		
0:30	16		14			12:30	176		151		
0:45	12	67	17	68	135	12:45	211	755	150	644	1399
1:00	17		15			13:00	190		151		
1:15	13		11			13:15	201		157		
1:30	16		12			13:30	230		146		
1:45	15	61	16	54	115	13:45	244	865	139	593	1458
2:00	10		14			14:00	248		147		
2:15	12		16			14:15	211		159		
2:30	16		17			14:30	232		168		
2:45	10	48	21	68	116	14:45	213	904	176	650	1554
3:00	9		18			15:00	254		168		
3:15	14		25			15:15	247		221		
3:30	17		19			15:30	216		216		
3:45	12	52	27	89	141	15:45	214	931	235	840	1771
4:00	23		35			16:00	223		219		
4:15	38		59			16:15	229		226		
4:30	29		70			16:30	216		213		
4:45	24	114	63	227	341	16:45	250	918	231	889	1807
5:00	36		78			17:00	225		186		
5:15	43		100			17:15	235		199		
5:30	69		106			17:30	249		211		
5:45	62	210	89	373	583	17:45	209	918	186	782	1700
6:00	86		154			18:00	214		204		
6:15	117		131			18:15	243		170		
6:30	144		180			18:30	237		183		
6:45	175	522	179	644	1166	18:45	210	904	180	737	1641
7:00	179		219			19:00	217		176		
7:15	220		188			19:15	177		165		
7:30	256		213			19:30	172		150		
7:45	245	900	221	841	1741	19:45	135	701	129	620	1321
8:00	233		237			20:00	161		133		
8:15	241		213			20:15	145		142		
8:30	191		229			20:30	109		127		
8:45	173	838	184	863	1701	20:45	115	530	120	522	1052
9:00	219		158			21:00	109		118		
9:15	177		151			21:15	103		101		
9:30	212		149			21:30	94		101		
9:45	224	832	144	602	1434	21:45	81	387	87	407	794
10:00	199		156			22:00	72		76		
10:15	188		155			22:15	60		69		
10:30	193		159			22:30	43		46		
10:45	194	774	132	602	1376	22:45	38	213	39	230	443
11:00	195		149			23:00	35		33		
11:15	191		147			23:15	30		23		
11:30	190		151			23:30	26		20		
11:45	186	762	162	609	1371	23:45	24	115	19	95	210
Total Vol.		5180		5040	**10220**			8141		7009	**15150**

Daily Totals

NB	SB	Combined
13321	###	**25370**

	AM			PM		
Split %	50.7%	49.3%	**40.3%**	53.7%	46.3%	**59.7%**
Peak Hour	7:30	7:45	**7:30**	16:45	15:30	**16:00**
Volume	975	900	**1859**	959	896	**1807**
P.H.F.	0.95	0.95	**0.99**	0.96	0.95	**0.94**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 CITY: Downey PROJECT: SC5913

ADT8 Lakewood Blvd from Telegraph Rd to I-5 Freeway. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	45		40			12:00	241		375		
0:15	40		32			12:15	272		361		
0:30	38		35			12:30	282		338		
0:45	37	160	31	138	298	12:45	244	1039	407	1481	2520
1:00	32		33			13:00	250		358		
1:15	36		27			13:15	262		346		
1:30	31		24			13:30	267		384		
1:45	28	127	32	116	243	13:45	289	1068	382	1470	2538
2:00	32		21			14:00	291		358		
2:15	31		29			14:15	333		399		
2:30	21		21			14:30	342		463		
2:45	16	100	28	99	199	14:45	356	1322	349	1569	2891
3:00	32		27			15:00	442		476		
3:15	35		50			15:15	379		427		
3:30	43		62			15:30	399		444		
3:45	48	158	63	202	360	15:45	377	1597	458	1805	3402
4:00	51		70			16:00	457		481		
4:15	56		87			16:15	418		383		
4:30	65		122			16:30	482		415		
4:45	77	249	187	466	715	16:45	454	1811	368	1647	3458
5:00	83		172			17:00	451		436		
5:15	98		209			17:15	505		445		
5:30	101		235			17:30	421		352		
5:45	134	416	293	909	1325	17:45	462	1839	408	1641	3480
6:00	117		297			18:00	408		415		
6:15	129		385			18:15	359		439		
6:30	160		431			18:30	316		428		
6:45	201	607	482	1595	2202	18:45	257	1340	353	1635	2975
7:00	222		468			19:00	251		344		
7:15	271		540			19:15	302		351		
7:30	309		526			19:30	269		237		
7:45	344	1146	489	2023	3169	19:45	267	1089	207	1139	2228
8:00	359		475			20:00	204		213		
8:15	331		480			20:15	214		220		
8:30	298		515			20:30	183		206		
8:45	257	1245	470	1940	3185	20:45	190	791	171	810	1601
9:00	254		422			21:00	149		152		
9:15	234		455			21:15	150		155		
9:30	250		404			21:30	133		142		
9:45	183	921	410	1691	2612	21:45	142	574	131	580	1154
10:00	195		397			22:00	105		125		
10:15	187		431			22:15	86		79		
10:30	235		450			22:30	67		62		
10:45	221	838	392	1670	2508	22:45	68	326	59	325	651
11:00	242		419			23:00	60		42		
11:15	228		348			23:15	54		37		
11:30	235		370			23:30	44		33		
11:45	282	987	358	1495	2482	23:45	49	207	35	147	354
Total Vol.		6954		12344	**19298**			13003		14249	**27252**

Daily Totals

NB	SB	**Combined**
19957	###	**46550**

	AM			**PM**		
Split %	36.0%	64.0%	**41.5%**	47.7%	52.3%	**58.5%**
Peak Hour	7:30	7:15	**7:15**	16:30	15:15	**16:30**
Volume	1343	2030	**3313**	1892	1810	**3556**
P.H.F.	0.94	0.94	**0.99**	0.94	0.94	**0.94**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS9 Lakewood Blvd from I-5 Freeway to Gallatin Rd

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	34	2	0	2	0	0	38	**12:00**	207	12	3	5	0	0	227
0:15	39	3	0	1	0	0	43	**12:15**	211	11	2	9	0	2	235
0:30	35	2	0	0	0	0	37	**12:30**	239	13	3	8	0	1	264
0:45	33	2	0	0	0	0	35	**12:45**	210	16	3	6	0	0	235
1:00	32	1	0	1	0	0	34	**13:00**	198	19	3	7	0	2	229
1:15	22	1	0	2	0	0	25	**13:15**	217	17	2	8	0	0	244
1:30	27	0	0	0	0	0	27	**13:30**	233	14	1	9	1	2	260
1:45	33	0	0	0	0	0	33	**13:45**	231	13	2	10	0	1	257
2:00	31	2	0	1	0	0	34	**14:00**	211	11	2	8	0	2	234
2:15	30	1	1	0	0	0	32	**14:15**	245	15	1	7	0	2	270
2:30	19	1	0	0	0	0	20	**14:30**	251	9	1	6	0	1	268
2:45	35	1	0	1	0	0	37	**14:45**	350	12	0	9	0	1	372
3:00	24	1	0	1	0	0	26	**15:00**	359	15	2	5	1	0	382
3:15	18	0	1	1	0	0	20	**15:15**	319	16	2	8	0	1	346
3:30	38	1	0	2	0	0	41	**15:30**	302	14	1	6	0	2	325
3:45	44	0	1	0	0	0	45	**15:45**	324	13	2	8	0	0	347
4:00	45	2	0	0	0	0	47	**16:00**	350	10	2	5	0	1	368
4:15	50	2	0	1	0	0	53	**16:15**	341	9	1	8	0	2	361
4:30	81	3	0	2	0	0	86	**16:30**	300	10	1	7	0	0	318
4:45	83	4	1	1	0	0	89	**16:45**	374	8	1	10	0	0	393
5:00	82	5	2	3	0	0	92	**17:00**	352	13	0	9	0	1	375
5:15	109	7	0	3	0	0	119	**17:15**	338	12	1	9	0	2	362
5:30	110	10	1	4	0	0	125	**17:30**	329	14	1	11	0	0	355
5:45	134	8	0	3	0	0	145	**17:45**	308	12	2	8	0	1	331
6:00	168	12	0	5	0	0	185	**18:00**	254	9	1	9	0	2	275
6:15	158	15	1	4	0	0	178	**18:15**	283	13	0	7	0	1	304
6:30	243	15	2	7	0	2	269	**18:30**	261	10	1	6	0	0	278
6:45	293	13	1	9	0	1	317	**18:45**	241	8	2	8	0	0	259
7:00	320	17	0	10	1	0	348	**19:00**	252	13	0	4	0	0	269
7:15	365	12	2	9	0	1	389	**19:15**	286	15	0	3	0	0	304
7:30	358	11	2	8	0	2	381	**19:30**	224	12	2	2	1	0	241
7:45	364	17	1	7	0	3	392	**19:45**	186	13	0	3	0	0	202
8:00	382	16	2	8	0	2	410	**20:00**	177	10	1	4	0	0	192
8:15	337	14	3	9	0	1	364	**20:15**	161	12	1	2	0	1	177
8:30	325	15	2	4	0	1	347	**20:30**	170	9	0	1	0	0	180
8:45	300	18	2	10	1	2	333	**20:45**	173	8	1	2	0	0	184
9:00	270	17	4	9	0	2	302	**21:00**	138	8	0	1	0	0	147
9:15	265	18	2	12	0	1	298	**21:15**	112	5	0	2	0	0	119
9:30	250	19	1	5	0	1	276	**21:30**	103	4	1	1	0	0	109
9:45	236	13	1	9	0	0	259	**21:45**	71	6	0	1	0	0	78
10:00	221	14	2	9	0	2	248	**22:00**	62	4	1	0	0	0	67
10:15	211	10	1	8	0	1	231	**22:15**	60	2	0	1	0	0	63
10:30	224	14	3	5	0	3	249	**22:30**	52	3	0	2	0	0	57
10:45	212	15	1	7	0	0	235	**22:45**	47	4	0	1	0	1	53
11:00	212	17	2	6	0	2	239	**23:00**	42	2	1	0	0	0	45
11:15	210	10	1	5	0	1	227	**23:15**	38	1	0	0	0	0	39
11:30	203	11	2	7	0	0	223	**23:30**	38	2	0	1	0	0	41
11:45	214	10	1	4	0	2	231	**23:45**	34	1	0	0	0	0	35
TOTAL	7,529	402	46	205	2	30	8,214	**TOTAL**	10,264	482	51	247	3	29	11,076

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,572

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	1,485

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	17,793	884	97	452	5	59	19,290
% OF TOTAL	92.2%	4.6%	0.5%	2.3%	0.0%	0.3%	100.0%
TOTAL: ALL	36,345	1,710	211	1,003	9	128	39,406
% OF TOTAL	92.2%	4.3%	0.5%	2.5%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS9 Lakewood Blvd from I-5 Freeway to Gallatin Rd

AM TIME	SOUTHBOUND 1	2	3	4	5	6	TOTAL	PM Time	SOUTHBOUND 1	2	3	4	5	6	TOTAL
0:00	63	1	1	1	0	0	66	**12:00**	242	14	1	6	0	0	263
0:15	55	0	0	2	0	0	57	**12:15**	260	12	1	5	0	1	279
0:30	52	1	1	1	0	0	55	**12:30**	256	16	2	7	0	2	283
0:45	36	2	0	1	0	0	39	**12:45**	272	10	3	6	0	1	292
1:00	40	0	1	1	0	0	42	**13:00**	276	16	0	5	0	2	299
1:15	33	1	1	0	0	0	35	**13:15**	259	9	2	5	0	1	276
1:30	22	1	0	1	0	0	24	**13:30**	274	11	3	8	0	1	297
1:45	25	1	2	1	0	0	29	**13:45**	262	13	3	9	0	1	288
2:00	33	1	1	1	0	0	36	**14:00**	271	12	1	11	1	3	299
2:15	24	0	1	2	0	0	27	**14:15**	318	10	1	10	0	1	340
2:30	24	0	0	1	0	0	25	**14:30**	318	15	2	9	0	3	347
2:45	31	1	1	0	0	0	33	**14:45**	302	12	1	13	0	2	330
3:00	20	1	0	0	0	0	21	**15:00**	335	14	2	9	0	3	363
3:15	34	1	0	1	0	0	36	**15:15**	331	13	0	14	0	2	360
3:30	41	2	0	2	0	0	45	**15:30**	373	17	1	15	1	2	409
3:45	42	3	1	1	0	0	47	**15:45**	424	19	3	13	0	0	459
4:00	37	2	2	3	0	0	44	**16:00**	295	12	1	12	0	1	321
4:15	50	4	0	2	0	0	56	**16:15**	361	17	2	14	0	2	396
4:30	61	3	1	3	0	0	68	**16:30**	287	19	1	16	1	1	325
4:45	71	5	1	2	0	0	79	**16:45**	355	20	3	9	0	0	387
5:00	70	4	1	2	0	0	77	**17:00**	400	17	1	10	0	0	428
5:15	79	5	0	4	0	0	88	**17:15**	360	14	2	13	0	2	391
5:30	90	7	1	5	0	0	103	**17:30**	339	19	1	8	0	3	370
5:45	114	6	0	4	0	0	124	**17:45**	406	14	3	12	0	1	436
6:00	116	8	1	6	0	0	131	**18:00**	340	15	1	9	0	0	365
6:15	157	7	0	8	0	0	172	**18:15**	352	13	1	10	0	1	377
6:30	152	11	1	7	0	2	173	**18:30**	361	10	0	9	0	1	381
6:45	213	12	1	8	0	2	236	**18:45**	240	9	1	8	0	0	258
7:00	229	13	2	10	0	1	255	**19:00**	237	8	2	7	0	0	254
7:15	264	10	2	8	0	2	286	**19:15**	212	9	1	8	0	1	231
7:30	307	12	1	9	0	0	329	**19:30**	217	6	1	5	0	0	229
7:45	312	13	1	8	0	2	336	**19:45**	202	9	0	4	0	0	215
8:00	320	11	1	9	0	1	342	**20:00**	208	8	2	3	0	0	221
8:15	292	14	4	8	0	2	320	**20:15**	218	3	1	2	0	0	224
8:30	280	16	3	7	0	1	307	**20:30**	202	5	1	2	0	0	210
8:45	282	13	2	6	0	1	304	**20:45**	162	4	3	3	0	0	172
9:00	235	12	2	10	0	2	261	**21:00**	151	5	1	3	0	0	160
9:15	198	15	1	9	0	1	224	**21:15**	140	3	1	1	0	0	145
9:30	217	17	2	9	0	2	247	**21:30**	125	3	0	0	0	0	128
9:45	243	11	1	6	0	0	261	**21:45**	101	10	2	1	0	0	114
10:00	232	12	1	8	0	2	255	**22:00**	103	4	1	0	0	0	108
10:15	221	13	2	6	1	1	244	**22:15**	86	5	0	3	0	0	94
10:30	237	9	1	10	0	0	257	**22:30**	91	2	0	2	0	0	95
10:45	212	14	2	8	0	3	239	**22:45**	74	3	2	3	0	0	82
11:00	252	12	2	7	0	2	275	**23:00**	70	3	0	2	0	0	75
11:15	218	10	1	5	0	1	235	**23:15**	69	1	0	3	0	0	73
11:30	271	11	2	7	0	2	293	**23:30**	62	1	0	2	0	0	65
11:45	279	13	1	2	0	1	296	**23:45**	67	1	0	0	0	0	68
TOTAL	6,886	341	53	222	1	31	7,534	**TOTAL**	11,666	485	61	329	3	38	12,582

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,327

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	1,625

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	18,552	826	114	551	4	69	20,116
% OF TOTAL	92.2%	4.1%	0.6%	2.7%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS9 Lakewood Blvd from I-5 Freeway to Gallatin Rd

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	97	3	1	3	0	0	104	**12:00**	449	26	4	11	0	0	490
0:15	94	3	0	3	0	0	100	**12:15**	471	23	3	14	0	3	514
0:30	87	3	1	1	0	0	92	**12:30**	495	29	5	15	0	3	547
0:45	69	4	0	1	0	0	74	**12:45**	482	26	6	12	0	1	527
1:00	72	1	1	2	0	0	76	**13:00**	474	35	3	12	0	4	528
1:15	55	2	1	2	0	0	60	**13:15**	476	26	4	13	0	1	520
1:30	49	1	0	1	0	0	51	**13:30**	507	25	4	17	1	3	557
1:45	58	1	2	1	0	0	62	**13:45**	493	26	5	19	0	2	545
2:00	64	3	1	2	0	0	70	**14:00**	482	23	3	19	1	5	533
2:15	54	1	2	2	0	0	59	**14:15**	563	25	2	17	0	3	610
2:30	43	1	0	1	0	0	45	**14:30**	569	24	3	15	0	4	615
2:45	66	2	1	1	0	0	70	**14:45**	652	24	1	22	0	3	702
3:00	44	2	0	1	0	0	47	**15:00**	694	29	4	14	1	3	745
3:15	52	1	1	2	0	0	56	**15:15**	650	29	2	22	0	3	706
3:30	79	3	0	4	0	0	86	**15:30**	675	31	2	21	1	4	734
3:45	86	3	2	1	0	0	92	**15:45**	748	32	5	21	0	0	806
4:00	82	4	2	3	0	0	91	**16:00**	645	22	3	17	0	2	689
4:15	100	6	0	3	0	0	109	**16:15**	702	26	3	22	0	4	757
4:30	142	6	1	5	0	0	154	**16:30**	587	29	2	23	1	1	643
4:45	154	9	2	3	0	0	168	**16:45**	729	28	4	19	0	0	780
5:00	152	9	3	5	0	0	169	**17:00**	752	30	1	19	0	1	803
5:15	188	12	0	7	0	0	207	**17:15**	698	26	3	22	0	4	753
5:30	200	17	2	9	0	0	228	**17:30**	668	33	2	19	0	3	725
5:45	248	14	0	7	0	0	269	**17:45**	714	26	5	20	0	2	767
6:00	284	20	1	11	0	0	316	**18:00**	594	24	2	18	0	2	640
6:15	315	22	1	12	0	0	350	**18:15**	635	26	1	17	0	2	681
6:30	395	26	3	14	0	4	442	**18:30**	622	20	1	15	0	1	659
6:45	506	25	2	17	0	3	553	**18:45**	481	17	3	16	0	0	517
7:00	549	30	2	20	1	1	603	**19:00**	489	21	2	11	0	0	523
7:15	629	22	4	17	0	3	675	**19:15**	498	24	1	11	0	1	535
7:30	665	23	3	17	0	2	710	**19:30**	441	18	3	7	1	0	470
7:45	676	30	2	15	0	5	728	**19:45**	388	22	0	7	0	0	417
8:00	702	27	3	17	0	3	752	**20:00**	385	18	3	7	0	0	413
8:15	629	28	7	17	0	3	684	**20:15**	379	15	2	4	0	1	401
8:30	605	31	5	11	0	2	654	**20:30**	372	14	1	3	0	0	390
8:45	582	31	4	16	1	3	637	**20:45**	335	12	4	5	0	0	356
9:00	505	29	6	19	0	4	563	**21:00**	289	13	1	4	0	0	307
9:15	463	33	3	21	0	2	522	**21:15**	252	8	1	3	0	0	264
9:30	467	36	3	14	0	3	523	**21:30**	228	7	1	1	0	0	237
9:45	479	24	2	15	0	0	520	**21:45**	172	16	2	2	0	0	192
10:00	453	26	3	17	0	4	503	**22:00**	165	8	2	0	0	0	175
10:15	432	23	3	14	1	2	475	**22:15**	146	7	0	4	0	0	157
10:30	461	23	4	15	0	3	506	**22:30**	143	5	0	4	0	0	152
10:45	424	29	3	15	0	3	474	**22:45**	121	7	2	4	0	1	135
11:00	464	29	4	13	0	4	514	**23:00**	112	5	1	2	0	0	120
11:15	428	20	2	10	0	2	462	**23:15**	107	2	0	3	0	0	112
11:30	474	22	4	14	0	2	516	**23:30**	100	3	0	3	0	0	106
11:45	493	23	2	6	0	3	527	**23:45**	101	2	0	0	0	0	103
TOTAL	14,415	743	99	427	3	61	15,748	**TOTAL**	21,930	967	112	576	6	67	23,658

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,874

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	3,061

TOTAL: AM+PM	36,345	1,710	211	1,003	9	128	39,406
% OF TOTAL	92.2%	4.3%	0.5%	2.5%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Tuesday, February 24, 2026 CITY: Downey PROJECT: SC5913

ADT10 Lakewood Blvd from Gallatin Rd to Florence Ave. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	33		52			12:00	232		210		
0:15	29		47			12:15	211		194		
0:30	27		40			12:30	237		200		
0:45	30	119	43	182	301	12:45	192	872	225	829	1701
1:00	26		35			13:00	222		205		
1:15	24		32			13:15	229		211		
1:30	19		23			13:30	237		234		
1:45	21	90	18	108	198	13:45	238	926	215	865	1791
2:00	19		16			14:00	237		230		
2:15	26		24			14:15	244		222		
2:30	15		19			14:30	286		230		
2:45	20	80	17	76	156	14:45	341	1108	257	939	2047
3:00	23		22			15:00	316		235		
3:15	21		37			15:15	339		233		
3:30	42		38			15:30	311		256		
3:45	36	122	47	144	266	15:45	343	1309	238	962	2271
4:00	32		32			16:00	355		227		
4:15	40		26			16:15	320		210		
4:30	53		54			16:30	345		226		
4:45	72	197	55	167	364	16:45	383	1403	238	901	2304
5:00	97		43			17:00	313		249		
5:15	102		54			17:15	332		227		
5:30	110		76			17:30	287		231		
5:45	127	436	96	269	705	17:45	320	1252	280	987	2239
6:00	179		107			18:00	299		232		
6:15	205		125			18:15	276		245		
6:30	232		149			18:30	252		246		
6:45	303	919	170	551	1470	18:45	255	1082	173	896	1978
7:00	328		178			19:00	248		168		
7:15	345		194			19:15	281		142		
7:30	356		231			19:30	223		165		
7:45	399	1428	249	852	2280	19:45	200	952	147	622	1574
8:00	366		251			20:00	187		151		
8:15	337		253			20:15	183		139		
8:30	349		230			20:30	147		138		
8:45	335	1387	207	941	2328	20:45	159	676	109	537	1213
9:00	288		188			21:00	136		116		
9:15	291		173			21:15	110		103		
9:30	253		212			21:30	100		111		
9:45	229	1061	134	707	1768	21:45	96	442	89	419	861
10:00	255		191			22:00	91		85		
10:15	235		187			22:15	79		78		
10:30	231		178			22:30	67		73		
10:45	226	947	195	751	1698	22:45	54	291	64	300	591
11:00	247		178			23:00	49		61		
11:15	257		189			23:15	44		48		
11:30	240		231			23:30	33		53		
11:45	261	1005	224	822	1827	23:45	31	157	46	208	365
Total Vol.		7791		5570	**13361**			10470		8465	**18935**

Daily Totals

NB	SB	**Combined**
18261	###	**32296**

	AM			**PM**		
Split %	58.3%	41.7%	**41.4%**	55.3%	44.7%	**58.6%**
Peak Hour	7:15	7:30	**7:30**	16:00	17:45	**16:30**
Volume	1466	984	**2442**	1403	1003	**2313**
P.H.F.	0.92	0.97	**0.94**	0.92	0.90	**0.93**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT11 Lakewood Blvd from Florence Ave to Firestone Blvd. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	32		37			12:00	214		186		
0:15	30		36			12:15	216		189		
0:30	41		31			12:30	218		205		
0:45	32	135	34	138	273	12:45	195	843	191	771	1614
1:00	33		17			13:00	215		210		
1:15	23		25			13:15	223		195		
1:30	17		18			13:30	247		167		
1:45	21	94	20	80	174	13:45	237	922	221	793	1715
2:00	26		13			14:00	218		177		
2:15	21		17			14:15	247		202		
2:30	13		19			14:30	285		204		
2:45	24	84	16	65	149	14:45	287	1037	182	765	1802
3:00	18		18			15:00	323		200		
3:15	19		22			15:15	294		223		
3:30	25		28			15:30	225		244		
3:45	29	91	30	98	189	15:45	302	1144	207	874	2018
4:00	24		29			16:00	294		208		
4:15	37		35			16:15	270		193		
4:30	57		56			16:30	313		193		
4:45	73	191	61	181	372	16:45	337	1214	202	796	2010
5:00	82		55			17:00	291		182		
5:15	81		58			17:15	314		203		
5:30	91		70			17:30	310		161		
5:45	118	372	93	276	648	17:45	264	1179	192	738	1917
6:00	135		105			18:00	274		202		
6:15	151		114			18:15	279		177		
6:30	230		138			18:30	225		191		
6:45	351	867	140	497	1364	18:45	231	1009	173	743	1752
7:00	315		131			19:00	258		138		
7:15	311		162			19:15	256		125		
7:30	391		184			19:30	221		141		
7:45	351	1368	208	685	2053	19:45	183	918	134	538	1456
8:00	318		215			20:00	149		107		
8:15	291		203			20:15	179		122		
8:30	350		199			20:30	145		114		
8:45	342	1301	169	786	2087	20:45	162	635	107	450	1085
9:00	311		166			21:00	146		94		
9:15	262		158			21:15	122		86		
9:30	242		191			21:30	114		91		
9:45	254	1069	197	712	1781	21:45	91	473	88	359	832
10:00	265		190			22:00	109		77		
10:15	193		195			22:15	102		74		
10:30	205		173			22:30	91		63		
10:45	233	896	191	749	1645	22:45	74	376	55	269	645
11:00	241		156			23:00	66		54		
11:15	220		175			23:15	58		43		
11:30	247		211			23:30	43		37		
11:45	221	929	197	739	1668	23:45	37	204	34	168	372
Total Vol.		7397		5006	**12403**			9954		7264	**17218**

Daily Totals

NB	SB	Combined
17351	###	**29621**

	AM			PM		
Split %	59.6%	40.4%	**41.9%**	57.8%	42.2%	**58.1%**
Peak Hour	7:15	7:45	**7:30**	16:30	15:15	**16:30**
Volume	1371	825	**2161**	1255	882	**2035**
P.H.F.	0.88	0.96	**0.94**	0.93	0.90	**0.94**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT12 Lakewood Blvd from Firestone Blvd to Stewart and Gray Rd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	31		29			12:00	151		114		
0:15	27		22			12:15	149		129		
0:30	21		21			12:30	160		138		
0:45	19	98	27	99	197	12:45	178	638	129	510	1148
1:00	13		19			13:00	144		115		
1:15	11		17			13:15	131		138		
1:30	17		10			13:30	138		145		
1:45	20	61	21	67	128	13:45	186	599	150	548	1147
2:00	14		13			14:00	178		149		
2:15	12		13			14:15	169		135		
2:30	11		13			14:30	187		137		
2:45	13	50	11	50	100	14:45	171	705	136	557	1262
3:00	14		19			15:00	204		156		
3:15	15		14			15:15	222		152		
3:30	24		21			15:30	191		148		
3:45	31	84	26	80	164	15:45	156	773	183	639	1412
4:00	27		12			16:00	178		189		
4:15	33		22			16:15	176		153		
4:30	50		19			16:30	159		164		
4:45	63	173	50	103	276	16:45	162	675	164	670	1345
5:00	47		62			17:00	152		167		
5:15	55		44			17:15	165		139		
5:30	61		74			17:30	137		142		
5:45	70	233	58	238	471	17:45	149	603	138	586	1189
6:00	68		78			18:00	183		130		
6:15	74		74			18:15	156		143		
6:30	105		76			18:30	141		147		
6:45	161	408	75	303	711	18:45	149	629	126	546	1175
7:00	136		89			19:00	166		105		
7:15	156		94			19:15	141		120		
7:30	215		135			19:30	112		102		
7:45	220	727	178	496	1223	19:45	137	556	110	437	993
8:00	231		174			20:00	121		91		
8:15	221		160			20:15	144		89		
8:30	155		127			20:30	108		93		
8:45	144	751	106	567	1318	20:45	114	487	90	363	850
9:00	147		115			21:00	98		78		
9:15	135		102			21:15	85		77		
9:30	149		104			21:30	87		95		
9:45	145	576	112	433	1009	21:45	73	343	63	313	656
10:00	105		109			22:00	91		49		
10:15	132		117			22:15	83		58		
10:30	141		118			22:30	74		47		
10:45	144	522	116	460	982	22:45	63	311	37	191	502
11:00	149		131			23:00	54		49		
11:15	175		105			23:15	47		33		
11:30	157		141			23:30	44		31		
11:45	152	633	131	508	1141	23:45	38	183	27	140	323
Total Vol.		4316		3404	**7720**			6502		5500	**12002**

Daily Totals

NB	SB	**Combined**
10818	8904	**19722**

	AM			**PM**		
Split %	55.9%	44.1%	**39.1%**	54.2%	45.8%	**60.9%**
Peak Hour	7:30	7:30	**7:30**	14:45	15:45	**15:15**
Volume	887	647	**1534**	788	689	**1419**
P.H.F.	0.96	0.91	**0.95**	0.89	0.91	**0.95**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS13 Lakewood Blvd from Stewart and Gray Rd to Imperial Hwy

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	49	0	0	0	0	0	49	12:00	227	11	0	4	0	1	243
0:15	38	0	0	0	0	0	38	12:15	221	15	1	5	0	0	242
0:30	36	2	0	0	0	0	38	12:30	244	14	2	6	0	0	266
0:45	34	3	0	0	0	0	37	12:45	249	16	0	3	0	0	268
1:00	29	1	1	1	0	0	32	13:00	239	12	0	4	0	1	256
1:15	16	0	0	0	0	0	16	13:15	209	10	2	5	0	0	226
1:30	21	1	0	0	0	0	22	13:30	254	12	1	3	0	0	270
1:45	19	0	0	0	0	0	19	13:45	280	13	1	2	0	0	296
2:00	16	0	0	1	0	0	17	14:00	243	9	1	3	0	0	256
2:15	15	0	0	0	0	0	15	14:15	268	10	2	4	0	0	284
2:30	12	0	0	0	0	0	12	14:30	281	9	0	3	0	1	294
2:45	18	1	0	0	0	0	19	14:45	280	12	1	4	0	0	297
3:00	14	2	0	1	0	0	17	15:00	254	7	0	5	0	0	266
3:15	19	0	0	0	0	0	19	15:15	236	11	1	4	0	2	254
3:30	17	0	0	0	0	0	17	15:30	311	9	0	3	0	0	323
3:45	25	0	0	0	0	0	25	15:45	298	10	2	2	0	2	314
4:00	17	1	0	0	0	0	18	16:00	319	7	2	1	0	1	330
4:15	34	3	0	1	0	0	38	16:15	292	8	0	2	0	0	302
4:30	48	2	0	1	0	0	51	16:30	290	11	1	1	0	1	304
4:45	57	2	0	0	0	0	59	16:45	251	12	1	3	0	1	268
5:00	44	1	0	0	0	0	45	17:00	288	7	0	3	0	0	298
5:15	53	4	0	0	0	0	57	17:15	301	9	2	2	0	0	314
5:30	56	4	0	2	0	0	62	17:30	266	6	0	3	0	1	276
5:45	102	3	2	1	0	0	108	17:45	260	7	1	4	0	2	274
6:00	89	5	0	0	0	0	94	18:00	314	5	2	4	0	1	326
6:15	94	6	1	2	0	0	103	18:15	264	7	0	2	0	0	273
6:30	130	12	0	3	0	0	145	18:30	218	10	2	3	0	0	233
6:45	188	13	1	2	0	1	205	18:45	248	8	1	2	0	1	260
7:00	177	11	1	4	0	0	193	19:00	258	6	1	0	0	0	265
7:15	194	9	0	1	0	1	205	19:15	261	3	0	1	0	0	265
7:30	280	10	0	3	0	2	295	19:30	208	2	0	0	0	0	210
7:45	270	12	0	4	0	0	286	19:45	217	3	0	2	0	0	222
8:00	312	10	1	4	0	0	327	20:00	196	2	1	2	0	0	201
8:15	267	9	1	2	0	0	279	20:15	220	3	0	1	0	1	225
8:30	187	11	2	3	0	2	205	20:30	187	2	0	2	0	0	191
8:45	200	12	1	3	0	0	216	20:45	163	1	0	2	0	0	166
9:00	226	11	1	1	0	0	239	21:00	151	2	1	2	0	0	156
9:15	169	13	2	2	0	0	186	21:15	158	1	0	1	0	0	160
9:30	206	14	2	4	0	1	227	21:30	122	0	1	1	0	0	124
9:45	229	16	3	1	0	0	249	21:45	115	0	0	0	0	0	115
10:00	173	12	1	2	0	2	190	22:00	153	1	0	1	0	0	155
10:15	192	14	2	3	0	0	211	22:15	134	0	1	0	0	0	135
10:30	222	16	1	3	0	1	243	22:30	103	1	0	0	0	0	104
10:45	233	10	0	2	0	0	245	22:45	89	0	1	0	0	0	90
11:00	254	17	1	3	0	0	275	23:00	58	0	0	0	0	0	58
11:15	282	15	0	3	0	2	302	23:15	51	1	0	1	0	0	53
11:30	233	16	0	5	0	1	255	23:30	47	0	0	0	0	0	47
11:45	257	18	1	1	0	0	277	23:45	40	0	1	0	0	0	41
TOTAL	5,853	322	25	69	0	13	6,282	TOTAL	10,336	305	33	106	0	16	10,796

AM PEAK HOUR	7:30 AM	PM PEAK HOUR	3:30 PM
AM PEAK VOLUME	1,187	PM PEAK VOLUME	1,269

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	16,189	627	58	175	0	29	17,078
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.8%	3.7%	0.3%	1.0%	0.0%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	29,791	1,315	132	429	2	67	31,736
CLASS 6	Buses	% OF TOTAL	93.9%	4.1%	0.4%	1.4%	0.0%	0.2%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS13 Lakewood Blvd from Stewart and Gray Rd to Imperial Hwy

AM TIME	SOUTHBOUND 1	2	3	4	5	6	TOTAL	PM Time	SOUTHBOUND 1	2	3	4	5	6	TOTAL
0:00	35	3	0	0	0	0	38	**12:00**	203	11	2	3	0	1	220
0:15	20	1	0	0	0	0	21	**12:15**	230	13	1	5	0	0	249
0:30	22	1	0	1	0	0	24	**12:30**	171	16	0	5	0	0	192
0:45	27	1	0	0	0	0	28	**12:45**	235	10	1	4	0	2	252
1:00	31	3	0	0	0	0	34	**13:00**	234	12	1	3	0	1	251
1:15	11	2	1	0	0	0	14	**13:15**	231	10	2	2	0	0	245
1:30	15	1	0	0	0	0	16	**13:30**	232	8	0	3	0	0	243
1:45	22	0	0	1	0	0	23	**13:45**	235	11	0	4	0	0	250
2:00	15	0	0	1	0	0	16	**14:00**	255	7	1	4	0	2	269
2:15	10	0	0	0	0	0	10	**14:15**	219	12	2	3	0	0	236
2:30	17	0	0	0	0	0	17	**14:30**	225	9	2	3	0	0	239
2:45	9	1	0	1	0	0	11	**14:45**	228	8	1	2	1	1	241
3:00	28	3	0	0	0	0	31	**15:00**	228	11	0	6	0	0	245
3:15	29	2	0	2	0	0	33	**15:15**	232	14	2	4	0	0	252
3:30	30	2	0	1	0	0	33	**15:30**	243	12	1	3	0	1	260
3:45	27	1	0	0	0	0	28	**15:45**	271	8	0	2	0	2	283
4:00	21	1	0	1	0	0	23	**16:00**	290	7	2	4	0	0	303
4:15	24	2	2	2	0	0	30	**16:15**	216	12	1	4	0	0	233
4:30	22	1	0	0	0	0	23	**16:30**	255	8	1	3	0	1	268
4:45	55	9	1	2	0	0	67	**16:45**	269	11	0	5	0	2	287
5:00	53	12	2	3	0	0	70	**17:00**	258	12	2	5	0	0	277
5:15	59	16	0	3	0	0	78	**17:15**	253	8	1	4	0	0	266
5:30	76	11	1	2	0	0	90	**17:30**	239	6	0	4	0	0	249
5:45	58	13	2	2	1	0	76	**17:45**	208	9	0	5	0	1	223
6:00	87	18	1	5	0	1	112	**18:00**	231	9	2	6	0	0	248
6:15	116	9	1	2	0	1	129	**18:15**	223	10	0	2	0	1	236
6:30	90	11	3	4	0	1	109	**18:30**	233	6	1	4	0	1	245
6:45	95	13	1	3	0	0	112	**18:45**	188	4	1	3	0	0	196
7:00	126	10	0	3	0	1	140	**19:00**	196	6	0	4	0	0	206
7:15	134	14	0	5	0	0	153	**19:15**	187	9	2	3	0	0	201
7:30	191	21	1	7	0	2	222	**19:30**	214	5	1	5	0	0	225
7:45	239	20	1	6	0	2	268	**19:45**	162	4	1	3	0	1	171
8:00	215	17	2	4	0	0	238	**20:00**	165	3	0	3	0	0	171
8:15	189	11	1	3	0	1	205	**20:15**	162	2	0	2	0	0	166
8:30	204	14	0	2	0	0	220	**20:30**	173	2	0	1	0	0	176
8:45	145	12	0	5	0	2	164	**20:45**	138	2	1	0	0	0	141
9:00	143	10	1	3	0	1	158	**21:00**	134	3	0	1	0	1	139
9:15	168	13	1	4	0	1	187	**21:15**	125	1	0	0	0	0	126
9:30	162	10	2	3	0	1	178	**21:30**	153	3	0	1	0	0	157
9:45	157	9	1	1	0	1	169	**21:45**	94	0	0	2	0	0	96
10:00	160	9	0	5	0	0	174	**22:00**	86	0	0	1	0	0	87
10:15	175	11	1	4	0	1	192	**22:15**	94	1	2	0	0	0	97
10:30	165	10	2	5	0	1	183	**22:30**	70	1	0	2	0	0	73
10:45	184	6	0	6	0	0	196	**22:45**	65	0	0	1	0	0	66
11:00	189	9	2	5	0	0	205	**23:00**	39	2	1	0	0	0	42
11:15	224	7	1	4	0	2	238	**23:15**	37	0	1	0	0	0	38
11:30	226	10	3	5	0	0	244	**23:30**	32	0	3	1	0	0	36
11:45	214	9	1	3	0	1	228	**23:45**	27	1	0	0	0	0	28
TOTAL	4,714	369	35	119	1	20	5,258	**TOTAL**	8,888	319	39	135	1	18	9,400

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	933

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,098

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	13,602	688	74	254	2	38	14,658
% OF TOTAL	92.8%	4.7%	0.5%	1.7%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS13 Lakewood Blvd from Stewart and Gray Rd to Imperial Hwy

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	84	3	0	0	0	0	87	12:00	430	22	2	7	0	2	463
0:15	58	1	0	0	0	0	59	12:15	451	28	2	10	0	0	491
0:30	58	3	0	1	0	0	62	12:30	415	30	2	11	0	0	458
0:45	61	4	0	0	0	0	65	12:45	484	26	1	7	0	2	520
1:00	60	4	1	1	0	0	66	13:00	473	24	1	7	0	2	507
1:15	27	2	1	0	0	0	30	13:15	440	20	4	7	0	0	471
1:30	36	2	0	0	0	0	38	13:30	486	20	1	6	0	0	513
1:45	41	0	0	1	0	0	42	13:45	515	24	1	6	0	0	546
2:00	31	0	0	2	0	0	33	14:00	498	16	2	7	0	2	525
2:15	25	0	0	0	0	0	25	14:15	487	22	4	7	0	0	520
2:30	29	0	0	0	0	0	29	14:30	506	18	2	6	0	1	533
2:45	27	2	0	1	0	0	30	14:45	508	20	2	6	1	1	538
3:00	42	5	0	1	0	0	48	15:00	482	18	0	11	0	0	511
3:15	48	2	0	2	0	0	52	15:15	468	25	3	8	0	2	506
3:30	47	2	0	1	0	0	50	15:30	554	21	1	6	0	1	583
3:45	52	1	0	0	0	0	53	15:45	569	18	2	4	0	4	597
4:00	38	2	0	1	0	0	41	16:00	609	14	4	5	0	1	633
4:15	58	5	2	3	0	0	68	16:15	508	20	1	6	0	0	535
4:30	70	3	0	1	0	0	74	16:30	545	19	2	4	0	2	572
4:45	112	11	1	2	0	0	126	16:45	520	23	1	8	0	3	555
5:00	97	13	2	3	0	0	115	17:00	546	19	2	8	0	0	575
5:15	112	20	0	3	0	0	135	17:15	554	17	3	6	0	0	580
5:30	132	15	1	4	0	0	152	17:30	505	12	0	7	0	1	525
5:45	160	16	4	3	1	0	184	17:45	468	16	1	9	0	3	497
6:00	176	23	1	5	0	1	206	18:00	545	14	4	10	0	1	574
6:15	210	15	2	4	0	1	232	18:15	487	17	0	4	0	1	509
6:30	220	23	3	7	0	1	254	18:30	451	16	3	7	0	1	478
6:45	283	26	2	5	0	1	317	18:45	436	12	2	5	0	1	456
7:00	303	21	1	7	0	1	333	19:00	454	12	1	4	0	0	471
7:15	328	23	0	6	0	1	358	19:15	448	12	2	4	0	0	466
7:30	471	31	1	10	0	4	517	19:30	422	7	1	5	0	0	435
7:45	509	32	1	10	0	2	554	19:45	379	7	1	5	0	1	393
8:00	527	27	3	8	0	0	565	20:00	361	5	1	5	0	0	372
8:15	456	20	2	5	0	1	484	20:15	382	5	0	3	0	1	391
8:30	391	25	2	5	0	2	425	20:30	360	4	0	3	0	0	367
8:45	345	24	1	8	0	2	380	20:45	301	3	1	2	0	0	307
9:00	369	21	2	4	0	1	397	21:00	285	5	1	3	0	1	295
9:15	337	26	3	6	0	1	373	21:15	283	2	0	1	0	0	286
9:30	368	24	4	7	0	2	405	21:30	275	3	1	2	0	0	281
9:45	386	25	4	2	0	1	418	21:45	209	0	0	2	0	0	211
10:00	333	21	1	7	0	2	364	22:00	239	1	0	2	0	0	242
10:15	367	25	3	7	0	1	403	22:15	228	1	3	0	0	0	232
10:30	387	26	3	8	0	2	426	22:30	173	2	0	2	0	0	177
10:45	417	16	0	8	0	0	441	22:45	154	0	1	1	0	0	156
11:00	443	26	3	8	0	0	480	23:00	97	2	1	0	0	0	100
11:15	506	22	1	7	0	4	540	23:15	88	1	1	1	0	0	91
11:30	459	26	3	10	0	1	499	23:30	79	0	3	1	0	0	83
11:45	471	27	2	4	0	1	505	23:45	67	1	1	0	0	0	69
TOTAL	10,567	691	60	188	1	33	11,540	TOTAL	19,224	624	72	241	1	34	20,196

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,120

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	2,348

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	29,791	1,315	132	429	2	67	31,736
% OF TOTAL	93.9%	4.1%	0.4%	1.4%	0.0%	0.2%	100.0%

Tuesday, February 24, 2026 CITY: Downey PROJECT: SC5913

ADT14 Lakewood Blvd from Imperial Hwy to I-105 Freeway. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB			
0:00	52		51			12:00	192		203			
0:15	45		49			12:15	186		252			
0:30	34		45			12:30	237		190			
0:45	30	161	46	191	352	12:45	207	822	226	871		1693
1:00	22		42			13:00	201		219			
1:15	14		26			13:15	210		205			
1:30	23		22			13:30	239		237			
1:45	25	84	24	114	198	13:45	249	899	244	905		1804
2:00	22		17			14:00	222		216			
2:15	16		25			14:15	252		241			
2:30	11		20			14:30	268		226			
2:45	14	63	21	83	146	14:45	216	958	253	936		1894
3:00	17		23			15:00	244		322			
3:15	16		27			15:15	249		285			
3:30	23		31			15:30	225		273			
3:45	29	85	44	125	210	15:45	295	1013	184	1064		2077
4:00	32		32			16:00	252		303			
4:15	45		40			16:15	271		330			
4:30	55		56			16:30	211		333			
4:45	70	202	59	187	389	16:45	240	974	281	1247		2221
5:00	58		80			17:00	209		270			
5:15	71		87			17:15	259		297			
5:30	89		109			17:30	242		294			
5:45	121	339	92	368	707	17:45	260	970	263	1124		2094
6:00	102		118			18:00	271		250			
6:15	125		134			18:15	219		259			
6:30	152		176			18:30	244		243			
6:45	193	572	143	571	1143	18:45	242	976	252	1004		1980
7:00	203		155			19:00	249		223			
7:15	255		173			19:15	265		239			
7:30	273		222			19:30	211		261			
7:45	281	1012	268	818	1830	19:45	187	912	267	990		1902
8:00	246		221			20:00	177		248			
8:15	243		209			20:15	166		237			
8:30	208		206			20:30	172		199			
8:45	228	925	193	829	1754	20:45	154	669	209	893		1562
9:00	252		175			21:00	136		178			
9:15	289		156			21:15	142		201			
9:30	202		168			21:30	129		160			
9:45	205	948	183	682	1630	21:45	120	527	132	671		1198
10:00	164		194			22:00	116		134			
10:15	186		180			22:15	102		113			
10:30	264		197			22:30	93		104			
10:45	216	830	180	751	1581	22:45	85	396	105	456		852
11:00	255		187			23:00	81		87			
11:15	272		232			23:15	75		66			
11:30	197		230			23:30	66		61			
11:45	240	964	240	889	1853	23:45	58	280	55	269		549
Total Vol.		6185		5608	**11793**			9396		10430		**19826**

Daily Totals

NB	SB	**Combined**
15581	###	**31619**

	AM			**PM**		
Split %	52.4%	47.6%	**37.3%**	47.4%	52.6%	**62.7%**
Peak Hour	7:15	11:30	**7:30**	15:30	16:00	**16:00**
Volume	1055	925	**1963**	1043	1247	**2221**
P.H.F.	0.94	0.92	**0.89**	0.88	0.94	**0.92**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT15 Lakewood Blvd from Foster Rd to Rosecrans Ave. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
0:00	30		41			12:00	194		208		
0:15	26		39			12:15	197		270		
0:30	34		37			12:30	213		228		
0:45	35	125	41	158	283	12:45	224	828	234	940	1768
1:00	30		31			13:00	203		246		
1:15	25		27			13:15	229		217		
1:30	34		22			13:30	219		257		
1:45	22	111	25	105	216	13:45	204	855	269	989	1844
2:00	18		26			14:00	240		274		
2:15	12		19			14:15	255		258		
2:30	25		20			14:30	266		281		
2:45	27	82	21	86	168	14:45	257	1018	274	1087	2105
3:00	29		18			15:00	223		253		
3:15	34		13			15:15	219		296		
3:30	45		17			15:30	217		248		
3:45	47	155	23	71	226	15:45	225	884	247	1044	1928
4:00	54		34			16:00	248		268		
4:15	69		38			16:15	245		294		
4:30	77		56			16:30	205		280		
4:45	82	282	66	194	476	16:45	248	946	249	1091	2037
5:00	96		77			17:00	262		225		
5:15	129		83			17:15	243		270		
5:30	116		108			17:30	249		296		
5:45	124	465	143	411	876	17:45	258	1012	274	1065	2077
6:00	118		123			18:00	304		225		
6:15	154		132			18:15	215		232		
6:30	196		161			18:30	207		241		
6:45	160	628	172	588	1216	18:45	192	918	253	951	1869
7:00	184		148			19:00	183		206		
7:15	205		197			19:15	200		240		
7:30	196		234			19:30	186		189		
7:45	251	836	311	890	1726	19:45	144	713	167	802	1515
8:00	201		308			20:00	142		188		
8:15	225		301			20:15	138		206		
8:30	213		278			20:30	154		161		
8:45	203	842	230	1117	1959	20:45	142	576	162	717	1293
9:00	172		221			21:00	133		159		
9:15	205		215			21:15	135		156		
9:30	161		206			21:30	126		133		
9:45	141	679	253	895	1574	21:45	108	502	128	576	1078
10:00	156		259			22:00	91		120		
10:15	163		266			22:15	85		99		
10:30	181		242			22:30	77		91		
10:45	174	674	246	1013	1687	22:45	68	321	83	393	714
11:00	232		220			23:00	54		68		
11:15	162		241			23:15	42		54		
11:30	247		206			23:30	38		47		
11:45	203	844	273	940	1784	23:45	33	167	42	211	378
Total Vol.		5723		6468	**12191**			8740		9866	**18606**

Daily Totals

NB	SB	**Combined**
14463	###	**30797**

	AM			**PM**		
Split %	46.9%	53.1%	**39.6%**	47.0%	53.0%	**60.4%**
Peak Hour	7:45	7:45	**7:45**	17:15	14:30	**17:15**
Volume	890	1198	**2088**	1054	1104	**2119**
P.H.F.	0.89	0.96	**0.93**	0.87	0.93	**0.97**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT16 Telegraph Rd from City Limits to Paramount Blvd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB			
0:00	14		16			12:00	135		144			
0:15	10		17			12:15	137		172			
0:30	11		13			12:30	123		212			
0:45	15	50	11	57	107	12:45	108	503	185	713		1216
1:00	12		10			13:00	112		159			
1:15	13		7			13:15	136		191			
1:30	9		12			13:30	140		199			
1:45	14	48	11	40	88	13:45	145	533	235	784		1317
2:00	11		18			14:00	141		267			
2:15	9		10			14:15	123		255			
2:30	10		12			14:30	135		319			
2:45	15	45	9	49	94	14:45	128	527	285	1126		1653
3:00	13		14			15:00	141		292			
3:15	17		18			15:15	153		308			
3:30	21		11			15:30	169		330			
3:45	16	67	24	67	134	15:45	174	637	342	1272		1909
4:00	17		18			16:00	183		330			
4:15	29		20			16:15	200		307			
4:30	43		26			16:30	178		302			
4:45	49	138	32	96	234	16:45	157	718	367	1306		2024
5:00	58		39			17:00	153		290			
5:15	71		53			17:15	146		330			
5:30	111		58			17:30	125		309			
5:45	151	391	70	220	611	17:45	112	536	323	1252		1788
6:00	135		62			18:00	106		365			
6:15	157		119			18:15	95		308			
6:30	225		126			18:30	103		289			
6:45	268	785	155	462	1247	18:45	96	400	250	1212		1612
7:00	283		164			19:00	86		221			
7:15	327		193			19:15	95		166			
7:30	303		234			19:30	77		119			
7:45	297	1210	224	815	2025	19:45	59	317	87	593		910
8:00	287		190			20:00	57		72			
8:15	291		189			20:15	54		68			
8:30	295		172			20:30	43		62			
8:45	270	1143	165	716	1859	20:45	55	209	51	253		462
9:00	226		156			21:00	40		49			
9:15	246		130			21:15	32		43			
9:30	216		176			21:30	43		44			
9:45	188	876	193	655	1531	21:45	33	148	51	187		335
10:00	199		149			22:00	26		35			
10:15	166		125			22:15	24		36			
10:30	181		109			22:30	27		31			
10:45	132	678	136	519	1197	22:45	31	108	36	138		246
11:00	145		110			23:00	28		34			
11:15	114		147			23:15	29		33			
11:30	132		153			23:30	23		28			
11:45	147	538	149	559	1097	23:45	19	99	20	115		214
Total Vol.		5969		4255	**10224**			4735		8951		**13686**

Daily Totals

NB	SB	**Combined**
10704	###	**23910**

	AM			**PM**		
Split %	58.4%	41.6%	**42.8%**	34.6%	65.4%	**57.2%**
Peak Hour	7:15	7:15	**7:15**	15:45	17:15	**15:30**
Volume	1214	841	**2055**	735	1327	**2035**
P.H.F.	0.93	0.90	**0.96**	0.92	0.91	**0.99**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS17 Telegraph Rd from Paramount Blvd to Lakewood Blvd

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	23	0	1	0	0	0	24	12:00	139	10	4	9	0	0	162
0:15	17	0	0	0	0	0	17	12:15	106	16	2	7	0	1	132
0:30	20	1	0	0	0	0	21	12:30	84	13	2	7	0	1	107
0:45	14	0	3	1	0	0	18	12:45	104	10	1	5	0	0	120
1:00	14	0	0	0	0	0	14	13:00	125	14	2	4	0	0	145
1:15	9	0	1	1	0	0	11	13:15	126	12	2	7	0	0	147
1:30	14	0	0	0	0	0	14	13:30	140	16	3	9	0	2	170
1:45	18	1	0	0	0	0	19	13:45	172	12	1	5	0	1	191
2:00	16	0	1	1	0	0	18	14:00	156	8	2	6	0	1	173
2:15	10	0	0	2	0	0	12	14:15	164	9	1	4	0	1	179
2:30	11	0	0	0	0	0	11	14:30	184	11	3	7	0	0	205
2:45	12	0	0	1	0	0	13	14:45	179	8	2	7	0	0	196
3:00	17	1	0	0	0	0	18	15:00	182	15	0	6	0	2	205
3:15	14	0	0	1	0	0	15	15:15	177	10	2	6	0	0	195
3:30	19	0	0	2	0	0	21	15:30	206	14	0	6	0	1	227
3:45	20	2	0	2	0	0	24	15:45	203	17	1	5	0	2	228
4:00	27	1	0	2	0	0	30	16:00	164	12	1	4	0	1	182
4:15	31	0	1	3	0	0	35	16:15	229	10	2	6	0	1	248
4:30	49	2	1	2	0	0	54	16:30	196	16	1	5	0	1	219
4:45	58	3	0	3	0	0	64	16:45	173	15	0	4	0	3	195
5:00	51	4	1	3	0	0	59	17:00	188	14	2	5	0	0	209
5:15	68	2	0	4	0	0	74	17:15	221	13	3	3	0	0	240
5:30	113	3	1	2	0	0	119	17:30	181	10	1	5	0	0	197
5:45	142	5	0	4	0	0	151	17:45	157	9	0	4	0	1	171
6:00	140	7	2	4	0	1	154	18:00	133	7	2	5	0	0	147
6:15	210	6	2	5	0	2	225	18:15	155	6	0	3	0	0	164
6:30	263	8	1	6	0	0	278	18:30	131	8	2	2	0	1	144
6:45	315	12	3	5	0	1	336	18:45	147	9	0	0	0	0	156
7:00	298	10	1	3	0	1	313	19:00	136	5	1	1	0	0	143
7:15	361	7	2	6	0	2	378	19:15	128	3	0	2	0	0	133
7:30	378	12	0	7	0	0	397	19:30	106	4	1	4	0	0	115
7:45	356	13	1	4	0	2	376	19:45	97	3	0	1	0	0	101
8:00	340	15	2	7	0	0	364	20:00	87	3	0	1	0	0	91
8:15	367	8	1	8	0	1	385	20:15	71	5	0	4	0	0	80
8:30	341	11	1	5	0	2	360	20:30	74	4	0	1	0	0	79
8:45	377	12	3	6	0	1	399	20:45	57	1	1	0	0	0	59
9:00	274	6	0	7	0	0	287	21:00	51	2	0	0	0	0	53
9:15	264	7	0	8	0	0	279	21:15	41	1	1	1	0	0	44
9:30	291	6	1	7	0	1	306	21:30	60	1	0	0	0	0	61
9:45	207	11	0	9	0	0	227	21:45	52	0	0	0	0	0	52
10:00	225	8	2	5	0	0	240	22:00	46	1	0	1	0	0	48
10:15	166	12	3	5	0	1	187	22:15	34	0	1	0	0	0	35
10:30	196	11	1	6	0	1	215	22:30	32	1	0	0	0	0	33
10:45	178	9	0	4	0	0	191	22:45	22	0	0	1	0	0	23
11:00	157	14	2	5	0	0	178	23:00	23	1	3	0	0	0	27
11:15	142	16	2	6	0	1	167	23:15	17	0	0	0	0	0	17
11:30	154	10	1	5	0	0	170	23:30	15	0	1	0	0	0	16
11:45	150	8	0	3	0	3	164	23:45	14	1	0	0	0	0	15
TOTAL	6,937	264	41	170	0	20	7,432	TOTAL	5,685	360	51	163	0	20	6,279

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,522

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	885

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	12,622	624	92	333	0	40	13,711
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	92.1%	4.6%	0.7%	2.4%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	28,834	1,347	209	696	0	88	31,174
CLASS 6	Buses	% OF TOTAL	92.5%	4.3%	0.7%	2.2%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS17 Telegraph Rd from Paramount Blvd to Lakewood Blvd

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	29	1	0	1	0	0	31	12:00	176	14	4	5	0	2	201
0:15	14	0	0	0	0	0	14	12:15	187	11	3	5	0	0	206
0:30	20	0	0	0	0	0	20	12:30	253	12	2	8	0	1	276
0:45	9	1	0	0	0	0	10	12:45	198	10	1	4	0	1	214
1:00	11	0	0	0	0	0	11	13:00	225	11	2	4	0	2	244
1:15	10	0	0	0	0	0	10	13:15	193	10	1	7	0	1	212
1:30	15	1	1	0	0	0	17	13:30	250	9	3	4	0	1	267
1:45	30	0	0	0	0	0	30	13:45	269	8	0	8	0	1	286
2:00	22	0	0	0	0	0	22	14:00	279	14	4	12	0	0	309
2:15	12	0	0	0	0	0	12	14:15	287	15	2	13	0	0	317
2:30	23	1	1	0	0	0	25	14:30	334	12	6	8	0	3	363
2:45	10	0	0	0	0	0	10	14:45	351	9	1	9	0	0	370
3:00	23	0	0	0	0	0	23	15:00	356	8	1	7	0	1	373
3:15	27	1	0	0	0	0	28	15:15	375	10	0	9	0	2	396
3:30	22	0	0	0	0	0	22	15:30	391	12	4	6	0	0	413
3:45	26	0	0	0	0	0	26	15:45	362	15	5	7	0	0	389
4:00	27	0	0	0	0	0	27	16:00	432	14	2	5	0	1	454
4:15	40	2	0	0	0	0	42	16:15	366	12	4	8	0	0	390
4:30	55	1	0	0	0	0	56	16:30	341	11	2	6	0	2	362
4:45	54	1	3	2	0	0	60	16:45	439	10	0	4	0	0	453
5:00	52	0	3	2	0	0	57	17:00	400	9	0	7	0	0	416
5:15	67	0	0	0	0	0	67	17:15	349	11	3	4	0	0	367
5:30	92	3	2	3	0	0	100	17:30	421	13	2	6	0	1	443
5:45	122	4	0	2	0	0	128	17:45	356	12	1	9	0	0	378
6:00	103	8	0	5	0	1	117	18:00	380	21	3	5	0	2	411
6:15	137	6	0	4	0	1	148	18:15	366	18	0	5	0	0	389
6:30	162	7	1	3	0	0	173	18:30	332	12	0	3	0	0	347
6:45	203	9	1	3	0	0	216	18:45	325	9	0	3	0	1	338
7:00	198	10	2	6	0	0	216	19:00	265	7	1	4	0	0	277
7:15	250	18	7	5	0	2	282	19:15	223	6	1	1	0	0	231
7:30	288	15	0	4	0	1	308	19:30	139	8	0	1	0	0	148
7:45	332	13	0	5	0	2	352	19:45	113	5	1	3	0	0	122
8:00	261	19	3	9	0	3	295	20:00	104	3	0	0	0	0	107
8:15	279	14	3	9	0	1	306	20:15	75	5	0	0	0	0	80
8:30	203	18	2	6	0	2	231	20:30	80	4	1	1	0	0	86
8:45	216	16	0	6	0	1	239	20:45	69	3	0	0	0	0	72
9:00	161	22	3	7	0	1	194	21:00	58	4	2	0	0	0	64
9:15	175	21	2	8	0	1	207	21:15	70	2	0	1	0	0	73
9:30	230	17	0	4	0	1	252	21:30	57	3	0	0	0	0	60
9:45	244	10	1	8	0	1	264	21:45	52	2	2	0	0	0	56
10:00	172	14	2	6	0	1	195	22:00	53	1	1	0	0	0	55
10:15	176	10	0	8	0	0	194	22:15	47	2	0	1	0	0	50
10:30	179	13	2	10	0	0	204	22:30	44	0	1	2	0	0	47
10:45	143	10	3	5	0	2	163	22:45	41	1	0	0	0	0	42
11:00	141	11	4	12	0	1	169	23:00	38	0	0	0	0	0	38
11:15	159	15	0	8	0	2	184	23:15	32	1	0	0	0	0	33
11:30	220	10	3	9	0	0	242	23:30	28	0	0	0	0	0	28
11:45	163	12	2	7	0	2	186	23:45	24	0	0	1	0	0	25
TOTAL	5,607	334	51	167	0	26	6,185	TOTAL	10,605	389	66	196	0	22	11,278

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,261

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	1,679

TOTAL: AM+PM	16,212	723	117	363	0	48	17,463
% OF TOTAL	92.8%	4.1%	0.7%	2.1%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS17 Telegraph Rd from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	52	1	1	1	0	0	55	12:00	315	24	8	14	0	2	363
0:15	31	0	0	0	0	0	31	12:15	293	27	5	12	0	1	338
0:30	40	1	0	0	0	0	41	12:30	337	25	4	15	0	2	383
0:45	23	1	3	1	0	0	28	12:45	302	20	2	9	0	1	334
1:00	25	0	0	0	0	0	25	13:00	350	25	4	8	0	2	389
1:15	19	0	1	1	0	0	21	13:15	319	22	3	14	0	1	359
1:30	29	1	1	0	0	0	31	13:30	390	25	6	13	0	3	437
1:45	48	1	0	0	0	0	49	13:45	441	20	1	13	0	2	477
2:00	38	0	1	1	0	0	40	14:00	435	22	6	18	0	1	482
2:15	22	0	0	2	0	0	24	14:15	451	24	3	17	0	1	496
2:30	34	1	1	0	0	0	36	14:30	518	23	9	15	0	3	568
2:45	22	0	0	1	0	0	23	14:45	530	17	3	16	0	0	566
3:00	40	1	0	0	0	0	41	15:00	538	23	1	13	0	3	578
3:15	41	1	0	1	0	0	43	15:15	552	20	2	15	0	2	591
3:30	41	0	0	2	0	0	43	15:30	597	26	4	12	0	1	640
3:45	46	2	0	2	0	0	50	15:45	565	32	6	12	0	2	617
4:00	54	1	0	2	0	0	57	16:00	596	26	3	9	0	2	636
4:15	71	2	1	3	0	0	77	16:15	595	22	6	14	0	1	638
4:30	104	3	1	2	0	0	110	16:30	537	27	3	11	0	3	581
4:45	112	4	3	5	0	0	124	16:45	612	25	0	8	0	3	648
5:00	103	4	4	5	0	0	116	17:00	588	23	2	12	0	0	625
5:15	135	2	0	4	0	0	141	17:15	570	24	6	7	0	0	607
5:30	205	6	3	5	0	0	219	17:30	602	23	3	11	0	1	640
5:45	264	9	0	6	0	0	279	17:45	513	21	1	13	0	1	549
6:00	243	15	2	9	0	2	271	18:00	513	28	5	10	0	2	558
6:15	347	12	2	9	0	3	373	18:15	521	24	0	8	0	0	553
6:30	425	15	2	9	0	0	451	18:30	463	20	2	5	0	1	491
6:45	518	21	4	8	0	1	552	18:45	472	18	0	3	0	1	494
7:00	496	20	3	9	0	1	529	19:00	401	12	2	5	0	0	420
7:15	611	25	9	11	0	4	660	19:15	351	9	1	3	0	0	364
7:30	666	27	0	11	0	1	705	19:30	245	12	1	5	0	0	263
7:45	688	26	1	9	0	4	728	19:45	210	8	1	4	0	0	223
8:00	601	34	5	16	0	3	659	20:00	191	6	0	1	0	0	198
8:15	646	22	4	17	0	2	691	20:15	146	10	0	4	0	0	160
8:30	544	29	3	11	0	4	591	20:30	154	8	1	2	0	0	165
8:45	593	28	3	12	0	2	638	20:45	126	4	1	0	0	0	131
9:00	435	28	3	14	0	1	481	21:00	109	6	2	0	0	0	117
9:15	439	28	2	16	0	1	486	21:15	111	3	1	2	0	0	117
9:30	521	23	1	11	0	2	558	21:30	117	4	0	0	0	0	121
9:45	451	21	1	17	0	1	491	21:45	104	2	2	0	0	0	108
10:00	397	22	4	11	0	1	435	22:00	99	2	1	1	0	0	103
10:15	342	22	3	13	0	1	381	22:15	81	2	1	1	0	0	85
10:30	375	24	3	16	0	1	419	22:30	76	1	1	2	0	0	80
10:45	321	19	3	9	0	2	354	22:45	63	1	0	1	0	0	65
11:00	298	25	6	17	0	1	347	23:00	61	1	3	0	0	0	65
11:15	301	31	2	14	0	3	351	23:15	49	1	0	0	0	0	50
11:30	374	20	4	14	0	0	412	23:30	43	0	1	0	0	0	44
11:45	313	20	2	10	0	5	350	23:45	38	1	0	1	0	0	40
TOTAL	12,544	598	92	337	0	46	13,617	TOTAL	16,290	749	117	359	0	42	17,557

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,783

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	2,531

TOTAL: AM+PM	28,834	1,347	209	696	0	88	31,174
% OF TOTAL	92.5%	4.3%	0.7%	2.2%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT18 Telegraph Rd from Lakewood Blvd to City Limits.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB			
0:00	31		18			12:00	170		185			
0:15	26		19			12:15	177		201			
0:30	29		25			12:30	189		180			
0:45	24	110	18	80	190	12:45	186	722	173	739		1461
1:00	19		21			13:00	185		144			
1:15	21		13			13:15	182		178			
1:30	17		14			13:30	215		156			
1:45	23	80	20	68	148	13:45	196	778	169	647		1425
2:00	26		16			14:00	241		176			
2:15	33		10			14:15	229		187			
2:30	21		15			14:30	223		196			
2:45	22	102	17	58	160	14:45	287	980	211	770		1750
3:00	26		14			15:00	281		168			
3:15	28		21			15:15	245		236			
3:30	34		22			15:30	250		187			
3:45	39	127	26	83	210	15:45	261	1037	239	830		1867
4:00	35		24			16:00	266		213			
4:15	46		31			16:15	329		225			
4:30	51		46			16:30	270		180			
4:45	52	184	71	172	356	16:45	301	1166	205	823		1989
5:00	56		82			17:00	281		195			
5:15	63		86			17:15	310		215			
5:30	80		136			17:30	293		208			
5:45	93	292	195	499	791	17:45	235	1119	202	820		1939
6:00	87		186			18:00	270		147			
6:15	106		240			18:15	269		150			
6:30	128		295			18:30	263		154			
6:45	169	490	309	1030	1520	18:45	189	991	184	635		1626
7:00	172		332			19:00	204		196			
7:15	210		352			19:15	198		178			
7:30	182		325			19:30	167		139			
7:45	228	792	328	1337	2129	19:45	146	715	112	625		1340
8:00	202		333			20:00	126		89			
8:15	242		327			20:15	106		106			
8:30	210		311			20:30	91		97			
8:45	204	858	283	1254	2112	20:45	97	420	89	381		801
9:00	179		279			21:00	89		70			
9:15	162		275			21:15	84		64			
9:30	168		266			21:30	75		78			
9:45	145	654	240	1060	1714	21:45	79	327	62	274		601
10:00	164		233			22:00	63		59			
10:15	136		261			22:15	54		56			
10:30	126		259			22:30	57		47			
10:45	139	565	214	967	1532	22:45	52	226	36	198		424
11:00	135		193			23:00	48		34			
11:15	143		188			23:15	39		29			
11:30	168		189			23:30	35		25			
11:45	166	612	191	761	1373	23:45	32	154	21	109		263
Total Vol.		4866		7369	**12235**			8635		6851		**15486**

Daily Totals

EB	WB	Combined
13501	14220	**27721**

	AM			PM		
Split %	39.8%	60.2%	**44.1%**	55.8%	44.2%	**55.9%**
Peak Hour	7:45	7:15	**7:45**	16:45	15:15	**16:45**
Volume	882	1338	**2181**	1185	875	**2008**
P.H.F.	0.91	0.95	**0.96**	0.96	0.92	**0.96**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT19 Florence Ave from City Limits to Old River School Rd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	31		47			12:00	240		247		
0:15	25		36			12:15	262		259		
0:30	21		28			12:30	255		260		
0:45	26	103	25	136	239	12:45	273	1030	264	1030	2060
1:00	18		30			13:00	301		268		
1:15	19		28			13:15	274		223		
1:30	23		26			13:30	281		236		
1:45	27	87	22	106	193	13:45	318	1174	270	997	2171
2:00	26		21			14:00	291		276		
2:15	32		28			14:15	335		266		
2:30	30		30			14:30	354		274		
2:45	24	112	29	108	220	14:45	341	1321	296	1112	2433
3:00	28		32			15:00	330		358		
3:15	37		24			15:15	325		307		
3:30	41		22			15:30	363		282		
3:45	52	158	35	113	271	15:45	388	1406	320	1267	2673
4:00	69		32			16:00	395		348		
4:15	77		48			16:15	321		334		
4:30	86		51			16:30	326		303		
4:45	81	313	72	203	516	16:45	357	1399	326	1311	2710
5:00	94		87			17:00	363		307		
5:15	103		91			17:15	343		324		
5:30	118		119			17:30	369		305		
5:45	122	437	150	447	884	17:45	376	1451	341	1277	2728
6:00	151		142			18:00	400		274		
6:15	167		189			18:15	362		312		
6:30	260		259			18:30	356		265		
6:45	248	826	310	900	1726	18:45	300	1418	269	1120	2538
7:00	275		350			19:00	268		253		
7:15	291		375			19:15	240		244		
7:30	242		376			19:30	212		221		
7:45	285	1093	401	1502	2595	19:45	162	882	206	924	1806
8:00	287		414			20:00	137		190		
8:15	279		387			20:15	146		180		
8:30	249		358			20:30	132		163		
8:45	278	1093	304	1463	2556	20:45	143	558	140	673	1231
9:00	244		282			21:00	147		162		
9:15	284		272			21:15	102		176		
9:30	281		254			21:30	97		145		
9:45	267	1076	225	1033	2109	21:45	94	440	141	624	1064
10:00	219		244			22:00	80		132		
10:15	226		238			22:15	83		124		
10:30	254		255			22:30	72		102		
10:45	265	964	238	975	1939	22:45	64	299	99	457	756
11:00	235		250			23:00	55		78		
11:15	242		241			23:15	48		69		
11:30	262		248			23:30	39		64		
11:45	268	1007	235	974	1981	23:45	37	179	52	263	442
Total Vol.		7269		7960	**15229**			11557		11055	**22612**

Daily Totals

EB	WB	Combined
18826	19015	**37841**

	AM			**PM**		
Split %	47.7%	52.3%	**40.2%**	51.1%	48.9%	**59.8%**
Peak Hour	7:15	7:30	**7:15**	17:30	16:00	**15:30**
Volume	1105	1578	**2671**	1507	1311	**2751**
P.H.F.	0.95	0.95	**0.95**	0.94	0.94	**0.93**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT20 Florence Ave from Old River School Rd to Paramount Blvd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	32		53			12:00	287		271		
0:15	29		47			12:15	302		280		
0:30	24		32			12:30	272		258		
0:45	20	105	31	163	268	12:45	289	1150	282	1091	2241
1:00	16		28			13:00	305		300		
1:15	14		23			13:15	307		248		
1:30	19		27			13:30	313		287		
1:45	25	74	22	100	174	13:45	349	1274	335	1170	2444
2:00	28		24			14:00	357		297		
2:15	36		29			14:15	375		294		
2:30	33		25			14:30	427		324		
2:45	30	127	32	110	237	14:45	372	1531	293	1208	2739
3:00	35		26			15:00	361		358		
3:15	41		30			15:15	357		379		
3:30	39		25			15:30	408		342		
3:45	59	174	38	119	293	15:45	411	1537	322	1401	2938
4:00	67		36			16:00	401		397		
4:15	76		41			16:15	392		339		
4:30	95		59			16:30	434		369		
4:45	101	339	66	202	541	16:45	401	1628	426	1531	3159
5:00	110		75			17:00	408		415		
5:15	133		94			17:15	380		401		
5:30	143		152			17:30	385		388		
5:45	156	542	168	489	1031	17:45	435	1608	402	1606	3214
6:00	174		138			18:00	398		375		
6:15	211		194			18:15	357		315		
6:30	284		279			18:30	348		322		
6:45	269	938	314	925	1863	18:45	331	1434	318	1330	2764
7:00	308		356			19:00	285		299		
7:15	351		375			19:15	260		278		
7:30	375		389			19:30	238		253		
7:45	360	1394	365	1485	2879	19:45	183	966	249	1079	2045
8:00	318		346			20:00	177		216		
8:15	352		383			20:15	157		209		
8:30	303		394			20:30	144		199		
8:45	319	1292	331	1454	2746	20:45	153	631	178	802	1433
9:00	303		291			21:00	141		183		
9:15	274		314			21:15	133		180		
9:30	302		320			21:30	126		166		
9:45	295	1174	264	1189	2363	21:45	111	511	120	649	1160
10:00	269		282			22:00	104		144		
10:15	258		285			22:15	85		133		
10:30	304		278			22:30	74		120		
10:45	282	1113	267	1112	2225	22:45	63	326	108	505	831
11:00	269		266			23:00	56		83		
11:15	285		256			23:15	48		74		
11:30	302		279			23:30	42		61		
11:45	289	1145	262	1063	2208	23:45	36	182	57	275	457
Total Vol.		8417		8411	**16828**			12778		12647	**25425**

Daily Totals

EB	WB	Combined
21195	21058	**42253**

	AM			PM		
Split %	50.0%	50.0%	**39.8%**	50.3%	49.7%	**60.2%**
Peak Hour	7:30	7:45	**7:30**	15:45	16:45	**16:30**
Volume	1405	1488	**2888**	1638	1630	**3234**
P.H.F.	0.94	0.94	**0.95**	0.94	0.96	**0.98**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS21 Florence Ave from Paramount Blvd to Lakewood Blvd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	24	1	1	0	0	0	26	12:00	235	19	3	4	0	1	262
0:15	25	2	1	0	0	0	28	12:15	259	12	2	7	0	0	280
0:30	19	0	0	1	0	0	20	12:30	224	16	0	5	0	1	246
0:45	15	0	0	0	0	0	15	12:45	240	17	1	5	0	2	265
1:00	19	2	0	1	0	0	22	13:00	257	12	2	6	0	1	278
1:15	11	0	0	2	0	0	13	13:15	276	13	1	8	0	0	298
1:30	15	0	0	0	0	0	15	13:30	243	15	1	6	0	2	267
1:45	17	1	0	0	0	0	18	13:45	303	9	0	6	0	1	319
2:00	17	2	0	2	0	0	21	14:00	296	12	0	6	0	1	315
2:15	29	2	0	0	0	2	33	14:15	271	13	1	5	0	1	291
2:30	23	4	2	1	0	0	30	14:30	327	7	1	6	0	0	341
2:45	15	1	0	1	0	0	17	14:45	298	11	0	7	0	2	318
3:00	19	0	0	0	0	0	19	15:00	316	9	1	7	0	2	335
3:15	26	1	0	1	0	0	28	15:15	356	11	0	6	0	0	373
3:30	32	2	0	1	0	0	35	15:30	351	8	0	5	0	1	365
3:45	36	2	0	1	0	0	39	15:45	336	9	1	6	0	1	353
4:00	32	0	0	2	0	0	34	16:00	373	6	1	7	0	1	388
4:15	45	3	0	2	0	0	50	16:15	350	8	2	8	0	2	370
4:30	68	3	2	4	0	0	77	16:30	328	10	0	7	0	0	345
4:45	61	7	1	3	0	0	72	16:45	359	6	0	7	0	0	372
5:00	79	5	0	2	0	0	86	17:00	362	8	1	7	0	0	378
5:15	89	8	3	2	0	0	102	17:15	324	9	0	5	0	0	338
5:30	139	5	2	5	0	0	151	17:30	314	10	0	5	0	1	330
5:45	116	8	0	7	0	0	131	17:45	339	8	2	4	0	0	353
6:00	137	10	2	5	0	1	155	18:00	310	6	1	6	0	0	323
6:15	143	14	1	4	0	0	162	18:15	360	3	0	6	0	2	371
6:30	221	19	1	7	0	2	250	18:30	326	7	2	4	0	1	340
6:45	239	11	2	4	0	2	258	18:45	324	5	0	3	0	0	332
7:00	257	13	0	6	0	0	276	19:00	257	3	1	3	0	0	264
7:15	353	19	1	4	0	0	377	19:15	219	5	1	4	0	0	229
7:30	350	22	0	6	0	2	380	19:30	225	2	0	5	0	0	232
7:45	334	19	1	4	0	2	360	19:45	173	4	0	2	0	0	179
8:00	324	17	2	7	0	0	350	20:00	168	4	0	3	0	0	175
8:15	321	15	3	8	0	0	347	20:15	144	2	2	1	0	1	150
8:30	270	19	2	7	0	1	299	20:30	131	3	0	2	0	0	136
8:45	264	21	3	5	0	0	293	20:45	138	1	1	1	0	0	141
9:00	248	20	1	7	0	1	277	21:00	125	2	0	2	0	0	129
9:15	209	16	2	9	0	1	237	21:15	107	1	1	1	0	0	110
9:30	298	18	3	5	0	0	324	21:30	95	1	0	0	0	0	96
9:45	271	14	1	6	0	0	292	21:45	84	2	0	1	0	0	87
10:00	206	18	2	5	0	1	232	22:00	75	1	1	1	0	0	78
10:15	200	23	1	4	0	1	229	22:15	73	0	0	0	0	0	73
10:30	253	17	4	5	0	0	279	22:30	64	0	1	1	0	0	66
10:45	218	18	4	6	0	1	247	22:45	42	1	1	0	0	0	44
11:00	223	20	3	6	0	0	252	23:00	49	0	0	1	0	0	50
11:15	233	18	4	4	0	1	260	23:15	35	1	0	0	0	0	36
11:30	263	12	2	4	0	0	281	23:30	32	0	0	1	0	0	33
11:45	254	17	4	6	0	2	283	23:45	25	0	0	0	0	0	25
TOTAL	7,060	469	61	172	0	20	7,782	TOTAL	10,918	312	32	193	0	24	11,479

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,467

PM PEAK HOUR	3:15 PM
PM PEAK VOLUME	1,479

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	17,978	781	93	365	0	44	19,261
% OF TOTAL	93.3%	4.1%	0.5%	1.9%	0.0%	0.2%	100.0%
TOTAL: ALL	35,798	1,477	178	700	0	90	38,243
% OF TOTAL	93.6%	3.9%	0.5%	1.8%	0.0%	0.2%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913
CITY: Downey
LOCATION: CLASS21 Florence Ave from Paramount Blvd to Lakewood Blvd

AM TIME	WESTBOUND 1	2	3	4	5	6	TOTAL	PM Time	WESTBOUND 1	2	3	4	5	6	TOTAL
0:00	35	3	0	0	0	0	38	**12:00**	261	13	1	5	0	2	282
0:15	23	0	0	1	0	0	24	**12:15**	254	7	2	5	0	1	269
0:30	25	0	0	0	0	0	25	**12:30**	228	9	2	4	0	0	243
0:45	33	0	1	1	0	0	35	**12:45**	234	7	0	6	0	0	247
1:00	31	0	0	0	0	0	31	**13:00**	220	11	1	5	0	0	237
1:15	17	0	0	0	0	0	17	**13:15**	224	8	2	6	0	1	241
1:30	23	0	0	0	0	0	23	**13:30**	237	10	0	6	0	0	253
1:45	15	0	0	1	0	0	16	**13:45**	275	8	2	5	0	0	290
2:00	13	0	1	0	0	0	14	**14:00**	230	12	2	4	0	2	250
2:15	20	0	1	1	0	0	22	**14:15**	249	14	1	7	0	0	271
2:30	25	0	0	0	0	0	25	**14:30**	280	12	1	5	0	0	298
2:45	24	1	0	1	0	0	26	**14:45**	319	10	0	4	0	1	334
3:00	24	0	0	1	0	0	25	**15:00**	322	15	1	6	0	2	346
3:15	17	0	0	0	0	0	17	**15:15**	266	12	2	5	0	0	285
3:30	14	0	0	0	0	0	14	**15:30**	244	9	0	5	0	0	258
3:45	27	0	0	0	0	0	27	**15:45**	303	11	0	6	0	0	320
4:00	21	0	1	0	0	0	22	**16:00**	330	9	1	7	0	1	348
4:15	29	0	0	0	0	0	29	**16:15**	278	14	0	8	0	1	301
4:30	26	0	0	1	0	0	27	**16:30**	288	11	2	8	0	0	309
4:45	41	0	2	1	0	0	44	**16:45**	315	10	0	7	0	2	334
5:00	47	2	0	1	0	0	50	**17:00**	306	10	0	5	0	1	322
5:15	66	1	2	2	0	0	71	**17:15**	325	9	1	6	0	0	341
5:30	111	11	0	2	0	0	124	**17:30**	295	11	0	6	0	2	314
5:45	145	5	1	4	0	1	156	**17:45**	243	8	2	6	0	0	259
6:00	128	6	0	5	0	1	140	**18:00**	265	7	1	4	0	0	277
6:15	178	11	2	4	0	1	196	**18:15**	295	10	0	5	0	1	311
6:30	247	17	1	4	0	1	270	**18:30**	252	6	0	4	0	2	264
6:45	357	21	0	6	0	0	384	**18:45**	266	7	0	3	0	0	276
7:00	372	16	3	7	0	0	398	**19:00**	280	5	2	1	0	0	288
7:15	275	15	1	6	0	1	298	**19:15**	252	3	1	2	0	1	259
7:30	346	19	2	8	0	0	375	**19:30**	201	4	0	2	0	1	208
7:45	328	16	2	7	0	0	353	**19:45**	190	5	0	3	0	1	199
8:00	323	15	3	9	0	0	350	**20:00**	152	2	0	1	0	0	155
8:15	358	17	2	5	0	1	383	**20:15**	155	1	0	0	0	1	157
8:30	338	21	3	3	0	1	366	**20:30**	145	1	0	1	0	0	147
8:45	352	14	3	5	0	1	375	**20:45**	135	0	0	1	0	1	137
9:00	307	25	3	4	0	0	339	**21:00**	135	2	1	1	0	0	139
9:15	308	21	2	7	0	0	338	**21:15**	145	2	1	2	0	0	150
9:30	288	21	4	6	0	0	319	**21:30**	144	0	0	1	0	0	145
9:45	234	17	2	4	0	2	259	**21:45**	103	0	0	1	0	0	104
10:00	285	12	2	5	0	1	305	**22:00**	99	1	0	2	0	0	102
10:15	248	11	1	7	0	0	267	**22:15**	108	1	1	0	0	0	110
10:30	263	18	3	6	0	2	292	**22:30**	87	0	1	1	0	0	89
10:45	260	13	1	7	0	1	282	**22:45**	71	1	0	1	0	0	73
11:00	237	10	1	5	0	1	254	**23:00**	55	0	0	0	0	0	55
11:15	236	7	1	9	0	4	257	**23:15**	71	0	0	1	0	0	72
11:30	234	9	0	7	0	2	252	**23:30**	46	1	0	0	0	0	47
11:45	251	12	2	8	0	1	274	**23:45**	37	0	1	0	0	0	38
TOTAL	7,605	387	53	161	0	22	8,228	**TOTAL**	10,215	309	32	174	0	24	10,754

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	1,474

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	1,311

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	17,820	696	85	335	0	46	18,982
% OF TOTAL	93.9%	3.7%	0.4%	1.8%	0.0%	0.2%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS21 Florence Ave from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	59	4	1	0	0	0	64	**12:00**	496	32	4	9	0	3	544
0:15	48	2	1	1	0	0	52	**12:15**	513	19	4	12	0	1	549
0:30	44	0	0	1	0	0	45	**12:30**	452	25	2	9	0	1	489
0:45	48	0	1	1	0	0	50	**12:45**	474	24	1	11	0	2	512
1:00	50	2	0	1	0	0	53	**13:00**	477	23	3	11	0	1	515
1:15	28	0	0	2	0	0	30	**13:15**	500	21	3	14	0	1	539
1:30	38	0	0	0	0	0	38	**13:30**	480	25	1	12	0	2	520
1:45	32	1	0	1	0	0	34	**13:45**	578	17	2	11	0	1	609
2:00	30	2	1	2	0	0	35	**14:00**	526	24	2	10	0	3	565
2:15	49	2	1	1	0	2	55	**14:15**	520	27	2	12	0	1	562
2:30	48	4	2	1	0	0	55	**14:30**	607	19	2	11	0	0	639
2:45	39	2	0	2	0	0	43	**14:45**	617	21	0	11	0	3	652
3:00	43	0	0	1	0	0	44	**15:00**	638	24	2	13	0	4	681
3:15	43	1	0	1	0	0	45	**15:15**	622	23	2	11	0	0	658
3:30	46	2	0	1	0	0	49	**15:30**	595	17	0	10	0	1	623
3:45	63	2	0	1	0	0	66	**15:45**	639	20	1	12	0	1	673
4:00	53	0	1	2	0	0	56	**16:00**	703	15	2	14	0	2	736
4:15	74	3	0	2	0	0	79	**16:15**	628	22	2	16	0	3	671
4:30	94	3	2	5	0	0	104	**16:30**	616	21	2	15	0	0	654
4:45	102	7	3	4	0	0	116	**16:45**	674	16	0	14	0	2	706
5:00	126	7	0	3	0	0	136	**17:00**	668	18	1	12	0	1	700
5:15	155	9	5	4	0	0	173	**17:15**	649	18	1	11	0	0	679
5:30	250	16	2	7	0	0	275	**17:30**	609	21	0	11	0	3	644
5:45	261	13	1	11	0	1	287	**17:45**	582	16	4	10	0	0	612
6:00	265	16	2	10	0	2	295	**18:00**	575	13	2	10	0	0	600
6:15	321	25	3	8	0	1	358	**18:15**	655	13	0	11	0	3	682
6:30	468	36	2	11	0	3	520	**18:30**	578	13	2	8	0	3	604
6:45	596	32	2	10	0	2	642	**18:45**	590	12	0	6	0	0	608
7:00	629	29	3	13	0	0	674	**19:00**	537	8	3	4	0	0	552
7:15	628	34	2	10	0	1	675	**19:15**	471	8	2	6	0	1	488
7:30	696	41	2	14	0	2	755	**19:30**	426	6	0	7	0	1	440
7:45	662	35	3	11	0	2	713	**19:45**	363	9	0	5	0	1	378
8:00	647	32	5	16	0	0	700	**20:00**	320	6	0	4	0	0	330
8:15	679	32	5	13	0	1	730	**20:15**	299	3	2	1	0	2	307
8:30	608	40	5	10	0	2	665	**20:30**	276	4	0	3	0	0	283
8:45	616	35	6	10	0	1	668	**20:45**	273	1	1	2	0	1	278
9:00	555	45	4	11	0	1	616	**21:00**	260	4	1	3	0	0	268
9:15	517	37	4	16	0	1	575	**21:15**	252	3	2	3	0	0	260
9:30	586	39	7	11	0	0	643	**21:30**	239	1	0	1	0	0	241
9:45	505	31	3	10	0	2	551	**21:45**	187	2	0	2	0	0	191
10:00	491	30	4	10	0	2	537	**22:00**	174	2	1	3	0	0	180
10:15	448	34	2	11	0	1	496	**22:15**	181	1	1	0	0	0	183
10:30	516	35	7	11	0	2	571	**22:30**	151	0	2	2	0	0	155
10:45	478	31	5	13	0	2	529	**22:45**	113	2	1	1	0	0	117
11:00	460	30	4	11	0	1	506	**23:00**	104	0	0	1	0	0	105
11:15	469	25	5	13	0	5	517	**23:15**	106	1	0	1	0	0	108
11:30	497	21	2	11	0	2	533	**23:30**	78	1	0	1	0	0	80
11:45	505	29	6	14	0	3	557	**23:45**	62	0	1	0	0	0	63
TOTAL	14,665	856	114	333	0	42	16,010	**TOTAL**	21,133	621	64	367	0	48	22,233

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,898

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	2,767

TOTAL: AM+PM	35,798	1,477	178	700	0	90	38,243
% OF TOTAL	93.6%	3.9%	0.5%	1.8%	0.0%	0.2%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT22 Florence Ave from Lakewood Blvd to I-605 Freeway. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB			PM Period	EB		WB		
0:00	24		26			12:00	250		207		
0:15	28		24			12:15	218		243		
0:30	29		23			12:30	224		218		
0:45	25	106	19	92	198	12:45	217	909	200	868	1777
1:00	19		23			13:00	228		211		
1:15	20		13			13:15	245		251		
1:30	22		18			13:30	227		236		
1:45	24	85	17	71	156	13:45	279	979	255	953	1932
2:00	27		16			14:00	262		219		
2:15	30		25			14:15	284		272		
2:30	24		21			14:30	295		278		
2:45	29	110	25	87	197	14:45	280	1121	305	1074	2195
3:00	23		19			15:00	273		270		
3:15	33		18			15:15	310		283		
3:30	37		21			15:30	278		269		
3:45	40	133	26	84	217	15:45	315	1176	302	1124	2300
4:00	35		28			16:00	342		325		
4:15	51		17			16:15	313		300		
4:30	72		32			16:30	319		296		
4:45	82	240	58	135	375	16:45	324	1298	299	1220	2518
5:00	85		63			17:00	352		302		
5:15	97		79			17:15	329		299		
5:30	128		124			17:30	315		266		
5:45	139	449	169	435	884	17:45	280	1276	268	1135	2411
6:00	146		196			18:00	299		252		
6:15	177		268			18:15	338		286		
6:30	233		353			18:30	301		243		
6:45	267	823	358	1175	1998	18:45	251	1189	327	1108	2297
7:00	288		406			19:00	229		241		
7:15	315		414			19:15	179		246		
7:30	332		425			19:30	172		211		
7:45	334	1269	430	1675	2944	19:45	157	737	197	895	1632
8:00	318		428			20:00	150		142		
8:15	291		390			20:15	146		132		
8:30	276		342			20:30	142		136		
8:45	252	1137	381	1541	2678	20:45	122	560	143	553	1113
9:00	233		362			21:00	119		120		
9:15	218		333			21:15	106		122		
9:30	244		301			21:30	98		115		
9:45	240	935	283	1279	2214	21:45	89	412	94	451	863
10:00	208		218			22:00	85		82		
10:15	182		249			22:15	77		73		
10:30	225		283			22:30	62		65		
10:45	210	825	238	988	1813	22:45	51	275	53	273	548
11:00	218		247			23:00	46		42		
11:15	227		273			23:15	38		34		
11:30	215		232			23:30	35		31		
11:45	230	890	236	988	1878	23:45	31	150	30	137	287
Total Vol.		7002		8550	**15552**			10082		9791	**19873**

Daily Totals

EB	WB	Combined
17084	18341	**35425**

	AM			PM		
Split %	45.0%	55.0%	**43.9%**	50.7%	49.3%	**56.1%**
Peak Hour	7:15	7:15	**7:15**	16:30	15:45	**16:30**
Volume	1299	1697	**2996**	1324	1223	**2520**
P.H.F.	0.97	0.99	**0.98**	0.94	0.94	**0.96**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT23 Firestone Blvd from City Limits to Old River School Rd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	57		55			12:00	317		346		
0:15	45		48			12:15	415		312		
0:30	43		36			12:30	431		289		
0:45	39	184	42	181	365	12:45	434	1597	313	1260	2857
1:00	25		36			13:00	385		302		
1:15	19		13			13:15	461		296		
1:30	27		17			13:30	459		303		
1:45	21	92	19	85	177	13:45	429	1734	284	1185	2919
2:00	12		9			14:00	489		327		
2:15	19		10			14:15	437		317		
2:30	15		14			14:30	552		288		
2:45	20	66	12	45	111	14:45	492	1970	346	1278	3248
3:00	33		19			15:00	462		325		
3:15	27		24			15:15	425		318		
3:30	35		31			15:30	505		306		
3:45	44	139	46	120	259	15:45	497	1889	377	1326	3215
4:00	46		48			16:00	505		366		
4:15	50		63			16:15	501		372		
4:30	66		86			16:30	424		344		
4:45	69	231	96	293	524	16:45	547	1977	353	1435	3412
5:00	74		97			17:00	468		415		
5:15	100		106			17:15	492		327		
5:30	111		148			17:30	494		342		
5:45	157	442	169	520	962	17:45	431	1885	316	1400	3285
6:00	141		190			18:00	514		291		
6:15	182		203			18:15	456		315		
6:30	184		264			18:30	427		301		
6:45	247	754	322	979	1733	18:45	389	1786	271	1178	2964
7:00	305		306			19:00	396		248		
7:15	358		345			19:15	378		210		
7:30	423		393			19:30	311		216		
7:45	440	1526	370	1414	2940	19:45	242	1327	226	900	2227
8:00	399		371			20:00	249		242		
8:15	441		349			20:15	236		195		
8:30	393		416			20:30	213		199		
8:45	388	1621	326	1462	3083	20:45	202	900	195	831	1731
9:00	356		267			21:00	173		204		
9:15	326		343			21:15	157		172		
9:30	368		307			21:30	129		146		
9:45	375	1425	339	1256	2681	21:45	137	596	139	661	1257
10:00	310		374			22:00	122		128		
10:15	386		330			22:15	109		107		
10:30	394		302			22:30	93		93		
10:45	377	1467	293	1299	2766	22:45	84	408	84	412	820
11:00	352		271			23:00	91		76		
11:15	386		284			23:15	83		69		
11:30	404		295			23:30	72		67		
11:45	388	1530	302	1152	2682	23:45	64	310	58	270	580
Total Vol.		9477		8806	**18283**			16379		12136	**28515**

Daily Totals

EB	WB	Combined
25856	20942	**46798**

	AM			PM		
Split %	51.8%	48.2%	**39.1%**	57.4%	42.6%	**60.9%**
Peak Hour	7:30	7:45	**7:30**	15:30	16:15	**16:45**
Volume	1703	1506	**3186**	2008	1484	**3438**
P.H.F.	0.97	0.91	**0.98**	0.99	0.89	**0.96**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT24 Firestone Blvd from Old River School Rd to Paramount Blvd.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB			
0:00	24		27			12:00	218		212			
0:15	16		18			12:15	255		202			
0:30	22		11			12:30	275		174			
0:45	21	83	22	78	161	12:45	268	1016	200	788		1804
1:00	11		15			13:00	320		184			
1:15	17		10			13:15	308		201			
1:30	15		11			13:30	293		196			
1:45	19	62	12	48	110	13:45	296	1217	188	769		1986
2:00	12		11			14:00	293		224			
2:15	15		10			14:15	322		211			
2:30	10		9			14:30	329		198			
2:45	17	54	7	37	91	14:45	319	1263	217	850		2113
3:00	20		11			15:00	356		206			
3:15	27		16			15:15	291		205			
3:30	31		27			15:30	298		226			
3:45	34	112	23	77	189	15:45	331	1276	270	907		2183
4:00	36		16			16:00	348		266			
4:15	42		15			16:15	276		222			
4:30	52		25			16:30	270		229			
4:45	65	195	32	88	283	16:45	361	1255	219	936		2191
5:00	56		30			17:00	314		264			
5:15	66		42			17:15	345		235			
5:30	73		53			17:30	301		226			
5:45	96	291	74	199	490	17:45	305	1265	214	939		2204
6:00	104		92			18:00	312		202			
6:15	111		101			18:15	286		224			
6:30	126		133			18:30	286		176			
6:45	168	509	160	486	995	18:45	257	1141	167	769		1910
7:00	185		153			19:00	246		158			
7:15	216		223			19:15	250		152			
7:30	297		252			19:30	208		148			
7:45	327	1025	239	867	1892	19:45	147	851	157	615		1466
8:00	296		243			20:00	158		142			
8:15	311		198			20:15	130		138			
8:30	290		229			20:30	120		140			
8:45	261	1158	167	837	1995	20:45	136	544	138	558		1102
9:00	222		163			21:00	119		115			
9:15	228		170			21:15	107		110			
9:30	240		179			21:30	98		107			
9:45	256	946	174	686	1632	21:45	84	408	93	425		833
10:00	244		211			22:00	83		89			
10:15	255		191			22:15	71		75			
10:30	281		173			22:30	57		61			
10:45	290	1070	187	762	1832	22:45	40	251	54	279		530
11:00	232		159			23:00	37		42			
11:15	253		176			23:15	35		31			
11:30	294		130			23:30	28		32			
11:45	272	1051	186	651	1702	23:45	23	123	26	131		254
Total Vol.		6556		4816	**11372**			10610		7966		**18576**

Daily Totals

EB	WB	Combined
17166	12782	**29948**

	AM			PM		
Split %	57.7%	42.3%	**38.0%**	57.1%	42.9%	**62.0%**
Peak Hour	7:30	7:15	**7:30**	14:15	15:45	**16:45**
Volume	1231	957	**2163**	1326	987	**2265**
P.H.F.	0.94	0.95	**0.96**	0.93	0.91	**0.98**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS25 Firestone Blvd from Paramount Blvd to Lakewood Blvd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	29	0	0	0	0	0	29	**12:00**	217	10	3	8	0	0	238
0:15	29	0	1	1	0	0	31	**12:15**	234	14	2	9	0	2	261
0:30	30	0	1	0	0	0	31	**12:30**	265	11	1	7	0	0	284
0:45	21	0	0	0	0	0	21	**12:45**	236	12	2	6	0	1	257
1:00	14	1	0	0	0	0	15	**13:00**	256	15	3	11	0	0	285
1:15	12	0	0	1	0	0	13	**13:15**	223	16	0	12	0	1	252
1:30	12	1	0	1	0	0	14	**13:30**	236	12	2	5	0	0	255
1:45	24	0	0	0	0	0	24	**13:45**	271	11	1	6	0	0	289
2:00	17	0	0	0	0	0	17	**14:00**	281	10	1	10	0	1	303
2:15	10	0	0	0	0	0	10	**14:15**	261	9	2	12	0	1	285
2:30	10	2	0	1	0	0	13	**14:30**	272	8	2	8	0	1	291
2:45	17	1	0	0	0	0	18	**14:45**	253	10	1	12	0	0	276
3:00	12	0	0	0	0	0	12	**15:00**	247	11	0	13	0	2	273
3:15	16	0	0	2	0	0	18	**15:15**	262	14	1	9	1	0	287
3:30	22	0	1	0	0	0	23	**15:30**	248	16	3	8	0	1	276
3:45	23	1	0	0	0	0	24	**15:45**	237	15	1	9	0	1	263
4:00	18	0	0	1	0	0	19	**16:00**	197	17	1	9	0	0	224
4:15	21	2	0	1	0	0	24	**16:15**	250	18	2	5	0	2	277
4:30	29	1	0	4	0	0	34	**16:30**	245	13	1	6	0	1	266
4:45	36	4	1	2	0	0	43	**16:45**	258	21	0	10	0	0	289
5:00	45	3	0	4	0	0	52	**17:00**	258	17	1	12	0	0	288
5:15	38	2	1	2	0	0	43	**17:15**	215	12	2	8	0	2	239
5:30	63	1	1	3	0	0	68	**17:30**	220	15	0	9	0	1	245
5:45	63	2	0	4	0	1	70	**17:45**	237	14	0	7	0	1	259
6:00	74	5	0	5	0	0	84	**18:00**	271	10	0	5	0	2	288
6:15	82	6	1	6	0	0	95	**18:15**	240	9	1	2	0	0	252
6:30	118	8	0	4	0	2	132	**18:30**	230	11	0	3	0	0	244
6:45	126	9	4	7	1	1	148	**18:45**	226	8	0	3	1	1	239
7:00	147	10	1	4	0	2	164	**19:00**	225	9	1	4	0	1	240
7:15	191	9	1	7	0	1	209	**19:15**	210	5	0	1	0	0	216
7:30	251	12	0	10	0	0	273	**19:30**	187	3	1	2	0	0	193
7:45	295	14	0	9	0	2	320	**19:45**	159	2	0	3	0	0	164
8:00	270	15	3	8	0	2	298	**20:00**	150	4	0	1	0	1	156
8:15	265	18	2	10	0	0	295	**20:15**	131	5	1	6	0	0	143
8:30	246	14	2	8	0	1	271	**20:30**	115	6	1	0	0	0	122
8:45	208	16	0	12	0	1	237	**20:45**	127	5	0	1	0	1	134
9:00	186	12	2	13	0	0	213	**21:00**	120	2	1	0	0	0	123
9:15	203	13	0	8	0	2	226	**21:15**	112	3	0	1	0	0	116
9:30	206	15	0	9	0	1	231	**21:30**	89	4	0	2	0	0	95
9:45	225	10	2	8	1	0	246	**21:45**	78	1	0	0	0	0	79
10:00	231	15	1	10	0	0	257	**22:00**	81	3	0	1	0	0	85
10:15	197	12	2	11	0	1	223	**22:15**	63	2	0	0	0	0	65
10:30	223	14	2	9	0	1	249	**22:30**	57	3	0	0	0	0	60
10:45	227	13	1	7	0	2	250	**22:45**	55	1	0	0	0	0	56
11:00	266	12	0	8	0	0	286	**23:00**	50	1	0	1	0	0	52
11:15	219	11	1	10	0	0	241	**23:15**	42	0	1	1	0	0	44
11:30	212	15	1	9	0	0	237	**23:30**	30	1	0	0	0	0	31
11:45	260	12	1	7	0	1	281	**23:45**	26	0	0	0	0	0	26
TOTAL	5,539	311	33	226	2	21	6,132	**TOTAL**	8,953	419	39	248	2	24	9,685

AM PEAK HOUR	7:30 AM	**PM PEAK HOUR**	1:45 PM
AM PEAK VOLUME	1,186	**PM PEAK VOLUME**	1,168

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	14,492	730	72	474	4	45	15,817
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	91.6%	4.6%	0.5%	3.0%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	27,298	1,517	188	933	5	89	30,030
CLASS 6	Buses	**% OF TOTAL**	90.9%	5.1%	0.6%	3.1%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS25 Firestone Blvd from Paramount Blvd to Lakewood Blvd

AM TIME	WESTBOUND 1	2	3	4	5	6	TOTAL	PM Time	WESTBOUND 1	2	3	4	5	6	TOTAL
0:00	33	0	0	1	0	0	34	**12:00**	219	14	1	8	0	1	243
0:15	32	0	0	0	0	0	32	**12:15**	194	12	2	9	0	0	217
0:30	31	0	0	1	0	0	32	**12:30**	199	15	1	6	0	0	221
0:45	20	0	0	2	0	0	22	**12:45**	190	12	3	8	0	1	214
1:00	23	0	0	2	0	0	25	**13:00**	183	19	1	7	0	1	211
1:15	11	0	0	1	0	0	12	**13:15**	191	14	1	8	0	0	214
1:30	18	0	0	1	0	0	19	**13:30**	191	13	2	10	0	2	218
1:45	13	0	0	1	0	0	14	**13:45**	209	8	1	8	0	0	226
2:00	8	0	1	4	0	0	13	**14:00**	199	9	2	9	0	0	219
2:15	13	0	0	0	0	0	13	**14:15**	191	12	1	7	0	0	211
2:30	6	2	1	0	0	0	9	**14:30**	212	9	1	8	0	1	231
2:45	8	2	0	1	0	0	11	**14:45**	210	10	3	7	0	2	232
3:00	10	0	0	0	0	0	10	**15:00**	216	8	2	5	0	0	231
3:15	14	2	0	0	0	0	16	**15:15**	187	10	1	9	0	1	208
3:30	21	1	1	0	0	0	23	**15:30**	260	13	2	5	0	2	282
3:45	14	2	0	1	0	0	17	**15:45**	268	11	2	3	0	0	284
4:00	12	1	0	0	0	0	13	**16:00**	250	12	0	4	1	2	269
4:15	19	2	0	2	0	0	23	**16:15**	240	16	1	7	0	2	266
4:30	24	0	1	0	0	0	25	**16:30**	229	12	1	2	0	1	245
4:45	33	3	0	0	0	0	36	**16:45**	208	9	2	5	0	0	224
5:00	29	5	0	2	0	0	36	**17:00**	233	13	1	4	0	2	253
5:15	37	4	0	1	0	0	42	**17:15**	224	12	0	7	0	2	245
5:30	50	4	2	1	0	0	57	**17:30**	212	10	2	3	0	0	227
5:45	76	0	2	6	0	0	84	**17:45**	197	11	1	4	0	0	213
6:00	72	12	2	4	0	0	90	**18:00**	210	9	0	6	0	0	225
6:15	74	10	8	7	0	1	100	**18:15**	204	8	1	3	0	2	218
6:30	112	13	2	8	0	0	135	**18:30**	203	7	1	2	0	1	214
6:45	148	11	2	11	0	2	174	**18:45**	185	6	2	2	0	0	195
7:00	151	14	3	12	0	0	180	**19:00**	179	5	2	4	0	0	190
7:15	177	17	4	14	0	0	212	**19:15**	164	9	0	3	0	0	176
7:30	193	15	1	15	0	2	226	**19:30**	155	6	2	1	0	0	164
7:45	220	16	2	11	0	1	250	**19:45**	182	5	0	2	0	0	189
8:00	195	14	4	9	0	1	223	**20:00**	157	8	1	2	0	1	169
8:15	231	13	3	12	0	0	259	**20:15**	170	3	1	3	0	0	177
8:30	227	17	2	15	0	0	261	**20:30**	167	4	0	1	0	0	172
8:45	132	18	3	9	0	0	162	**20:45**	153	5	0	3	0	0	161
9:00	160	19	1	10	0	0	190	**21:00**	135	5	0	0	0	0	140
9:15	160	20	2	8	0	1	191	**21:15**	112	3	0	1	0	0	116
9:30	181	16	2	8	0	2	209	**21:30**	110	4	1	2	0	0	117
9:45	174	21	3	7	0	0	205	**21:45**	106	2	1	1	0	0	110
10:00	184	17	2	12	0	1	216	**22:00**	99	3	0	1	0	0	103
10:15	190	15	2	9	0	2	218	**22:15**	89	1	1	3	0	0	94
10:30	159	13	0	11	0	1	184	**22:30**	76	2	0	2	0	0	80
10:45	170	17	3	8	0	1	199	**22:45**	71	1	2	1	0	0	75
11:00	167	19	2	7	0	0	195	**23:00**	68	0	0	0	0	0	68
11:15	183	14	0	8	0	3	208	**23:15**	55	1	0	1	0	0	57
11:30	178	16	3	10	0	0	207	**23:30**	39	2	1	0	0	0	42
11:45	173	18	2	9	0	2	204	**23:45**	39	1	0	1	0	0	41
TOTAL	4,566	403	66	261	0	20	5,316	**TOTAL**	8,240	384	50	198	1	24	8,897

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	993

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	1,101

TOTAL: AM+PM	12,806	787	116	459	1	44	14,213
% OF TOTAL	90.1%	5.5%	0.8%	3.2%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS25 Firestone Blvd from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	62	0	0	1	0	0	63	12:00	436	24	4	16	0	1	481
0:15	61	0	1	1	0	0	63	12:15	428	26	4	18	0	2	478
0:30	61	0	1	1	0	0	63	12:30	464	26	2	13	0	0	505
0:45	41	0	0	2	0	0	43	12:45	426	24	5	14	0	2	471
1:00	37	1	0	2	0	0	40	13:00	439	34	4	18	0	1	496
1:15	23	0	0	2	0	0	25	13:15	414	30	1	20	0	1	466
1:30	30	1	0	2	0	0	33	13:30	427	25	4	15	0	2	473
1:45	37	0	0	1	0	0	38	13:45	480	19	2	14	0	0	515
2:00	25	0	1	4	0	0	30	14:00	480	19	3	19	0	1	522
2:15	23	0	0	0	0	0	23	14:15	452	21	3	19	0	1	496
2:30	16	4	1	1	0	0	22	14:30	484	17	3	16	0	2	522
2:45	25	3	0	1	0	0	29	14:45	463	20	4	19	0	2	508
3:00	22	0	0	0	0	0	22	15:00	463	19	2	18	0	2	504
3:15	30	2	0	2	0	0	34	15:15	449	24	2	18	1	1	495
3:30	43	1	2	0	0	0	46	15:30	508	29	5	13	0	3	558
3:45	37	3	0	1	0	0	41	15:45	505	26	3	12	0	1	547
4:00	30	1	0	1	0	0	32	16:00	447	29	1	13	1	2	493
4:15	40	4	0	3	0	0	47	16:15	490	34	3	12	0	4	543
4:30	53	1	1	4	0	0	59	16:30	474	25	2	8	0	2	511
4:45	69	7	1	2	0	0	79	16:45	466	30	2	15	0	0	513
5:00	74	8	0	6	0	0	88	17:00	491	30	2	16	0	2	541
5:15	75	6	1	3	0	0	85	17:15	439	24	2	15	0	4	484
5:30	113	5	3	4	0	0	125	17:30	432	25	2	12	0	1	472
5:45	139	2	2	10	0	1	154	17:45	434	25	1	11	0	1	472
6:00	146	17	2	9	0	0	174	18:00	481	19	0	11	0	2	513
6:15	156	16	9	13	0	1	195	18:15	444	17	2	5	0	2	470
6:30	230	21	2	12	0	2	267	18:30	433	18	1	5	0	1	458
6:45	274	20	6	18	1	3	322	18:45	411	14	2	5	1	1	434
7:00	298	24	4	16	0	2	344	19:00	404	14	3	8	0	1	430
7:15	368	26	5	21	0	1	421	19:15	374	14	0	4	0	0	392
7:30	444	27	1	25	0	2	499	19:30	342	9	3	3	0	0	357
7:45	515	30	2	20	0	3	570	19:45	341	7	0	5	0	0	353
8:00	465	29	7	17	0	3	521	20:00	307	12	1	3	0	2	325
8:15	496	31	5	22	0	0	554	20:15	301	8	2	9	0	0	320
8:30	473	31	4	23	0	1	532	20:30	282	10	1	1	0	0	294
8:45	340	34	3	21	0	1	399	20:45	280	10	0	4	0	1	295
9:00	346	31	3	23	0	0	403	21:00	255	7	1	0	0	0	263
9:15	363	33	2	16	0	3	417	21:15	224	6	0	2	0	0	232
9:30	387	31	2	17	0	3	440	21:30	199	8	1	4	0	0	212
9:45	399	31	5	15	1	0	451	21:45	184	3	1	1	0	0	189
10:00	415	32	3	22	0	1	473	22:00	180	6	0	2	0	0	188
10:15	387	27	4	20	0	3	441	22:15	152	3	1	3	0	0	159
10:30	382	27	2	20	0	2	433	22:30	133	5	0	2	0	0	140
10:45	397	30	4	15	0	3	449	22:45	126	2	2	1	0	0	131
11:00	433	31	2	15	0	0	481	23:00	118	1	0	1	0	0	120
11:15	402	25	1	18	0	3	449	23:15	97	1	1	2	0	0	101
11:30	390	31	4	19	0	0	444	23:30	69	3	1	0	0	0	73
11:45	433	30	3	16	0	3	485	23:45	65	1	0	1	0	0	67
TOTAL	10,105	714	99	487	2	41	11,448	TOTAL	17,193	803	89	446	3	48	18,582

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	2,177

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	2,141

TOTAL: AM+PM	27,298	1,517	188	933	5	89	30,030
% OF TOTAL	90.9%	5.1%	0.6%	3.1%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT26 Firestone Blvd from Lakewood Blvd to Woodruff Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	6		26			12:00	62		217		
0:15	8		28			12:15	39		170		
0:30	6		20			12:30	71		156		
0:45	8	28	24	98	126	12:45	80	252	175	718	970
1:00	5		14			13:00	64		175		
1:15	4		21			13:15	76		213		
1:30	4		14			13:30	53		179		
1:45	5	18	16	65	83	13:45	70	263	190	757	1020
2:00	9		23			14:00	86		170		
2:15	2		16			14:15	53		173		
2:30	7		18			14:30	86		195		
2:45	7	25	22	79	104	14:45	45	270	216	754	1024
3:00	3		25			15:00	62		290		
3:15	9		24			15:15	57		230		
3:30	12		21			15:30	78		263		
3:45	6	30	31	101	131	15:45	109	306	251	1034	1340
4:00	15		20			16:00	60		236		
4:15	21		29			16:15	81		228		
4:30	20		45			16:30	76		254		
4:45	19	75	73	167	242	16:45	69	286	224	942	1228
5:00	27		46			17:00	83		216		
5:15	19		64			17:15	90		207		
5:30	33		60			17:30	69		224		
5:45	48	127	114	284	411	17:45	90	332	228	875	1207
6:00	37		118			18:00	56		195		
6:15	48		140			18:15	80		191		
6:30	47		211			18:30	64		176		
6:45	51	183	244	713	896	18:45	57	257	177	739	996
7:00	67		220			19:00	54		167		
7:15	75		254			19:15	40		149		
7:30	86		301			19:30	57		175		
7:45	60	288	256	1031	1319	19:45	43	194	125	616	810
8:00	83		257			20:00	30		133		
8:15	71		248			20:15	45		132		
8:30	83		273			20:30	42		121		
8:45	63	300	238	1016	1316	20:45	46	163	113	499	662
9:00	56		244			21:00	45		95		
9:15	66		197			21:15	40		106		
9:30	75		194			21:30	31		101		
9:45	72	269	225	860	1129	21:45	21	137	99	401	538
10:00	63		245			22:00	31		91		
10:15	84		164			22:15	20		83		
10:30	58		192			22:30	18		64		
10:45	50	255	188	789	1044	22:45	1	70	10	248	318
11:00	87		206			23:00	1		2		
11:15	66		187			23:15	1		3		
11:30	75		159			23:30	2		4		
11:45	56	284	173	725	1009	23:45	2	6	4	13	19
Total Vol.		1882		5928	**7810**			2536		7596	**10132**

Daily Totals

EB	WB	Combined
4418	13524	**17942**

	AM			PM		
Split %	24.1%	75.9%	**43.5%**	25.0%	75.0%	**56.5%**
Peak Hour	7:15	7:15	**7:15**	17:00	15:00	**15:00**
Volume	304	1068	**1372**	332	1034	**1340**
P.H.F.	0.88	0.89	**0.89**	0.92	0.89	**0.93**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT27 Firestone Blvd from Stewart and Gray Rd to City Limits.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	36		46			12:00	357		294		
0:15	38		39			12:15	348		298		
0:30	32		34			12:30	343		315		
0:45	39	145	36	155	300	12:45	347	1395	286	1193	2588
1:00	28		29			13:00	336		291		
1:15	24		27			13:15	350		328		
1:30	20		21			13:30	354		322		
1:45	24	96	22	99	195	13:45	350	1390	317	1258	2648
2:00	30		24			14:00	407		313		
2:15	23		26			14:15	379		333		
2:30	25		24			14:30	413		322		
2:45	35	113	38	112	225	14:45	387	1586	318	1286	2872
3:00	43		31			15:00	422		401		
3:15	41		37			15:15	399		413		
3:30	53		43			15:30	394		408		
3:45	56	193	50	161	354	15:45	446	1661	357	1579	3240
4:00	64		52			16:00	427		407		
4:15	72		72			16:15	461		377		
4:30	98		91			16:30	390		407		
4:45	112	346	105	320	666	16:45	402	1680	400	1591	3271
5:00	109		86			17:00	443		432		
5:15	134		96			17:15	460		398		
5:30	171		101			17:30	414		388		
5:45	164	578	129	412	990	17:45	369	1686	396	1614	3300
6:00	171		145			18:00	369		369		
6:15	221		204			18:15	386		356		
6:30	240		338			18:30	349		346		
6:45	258	890	413	1100	1990	18:45	338	1442	337	1408	2850
7:00	306		360			19:00	270		341		
7:15	390		433			19:15	331		292		
7:30	354		472			19:30	270		283		
7:45	362	1412	503	1768	3180	19:45	279	1150	254	1170	2320
8:00	352		427			20:00	253		223		
8:15	348		437			20:15	249		240		
8:30	347		483			20:30	204		217		
8:45	355	1402	448	1795	3197	20:45	219	925	180	860	1785
9:00	302		406			21:00	172		162		
9:15	282		343			21:15	187		161		
9:30	272		337			21:30	168		156		
9:45	332	1188	404	1490	2678	21:45	132	659	145	624	1283
10:00	331		366			22:00	119		128		
10:15	340		345			22:15	93		115		
10:30	341		322			22:30	78		95		
10:45	354	1366	308	1341	2707	22:45	69	359	87	425	784
11:00	312		305			23:00	61		76		
11:15	332		294			23:15	59		64		
11:30	326		273			23:30	53		51		
11:45	336	1306	334	1206	2512	23:45	44	217	48	239	456
Total Vol.		9035		9959	**18994**			14150		13247	**27397**

Daily Totals

EB	WB	Combined
23185	23206	**46391**

	AM			PM		
Split %	47.6%	52.4%	**40.9%**	51.6%	48.4%	**59.1%**
Peak Hour	7:15	7:45	**7:15**	15:30	16:30	**16:45**
Volume	1458	1850	**3293**	1728	1637	**3337**
P.H.F.	0.93	0.92	**0.95**	0.94	0.95	**0.95**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT28 Imperial Hwy from Old River School Rd to Paramount Blvd. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB			PM Period	EB		WB			
0:00	32		24			12:00	244		273			
0:15	27		18			12:15	249		321			
0:30	23		16			12:30	224		270			
0:45	21	103	15	73	176	12:45	248	965	331	1195		2160
1:00	24		20			13:00	247		321			
1:15	20		18			13:15	245		400			
1:30	16		13			13:30	221		347			
1:45	19	79	18	69	148	13:45	268	981	385	1453		2434
2:00	15		17			14:00	272		330			
2:15	16		15			14:15	239		393			
2:30	12		16			14:30	272		372			
2:45	17	60	10	58	118	14:45	296	1079	347	1442		2521
3:00	21		14			15:00	271		375			
3:15	15		20			15:15	269		403			
3:30	25		22			15:30	219		406			
3:45	28	89	23	79	168	15:45	232	991	393	1577		2568
4:00	33		28			16:00	289		352			
4:15	34		26			16:15	268		337			
4:30	44		35			16:30	299		374			
4:45	57	168	49	138	306	16:45	266	1122	365	1428		2550
5:00	69		45			17:00	245		392			
5:15	75		60			17:15	317		336			
5:30	110		92			17:30	290		368			
5:45	133	387	110	307	694	17:45	261	1113	394	1490		2603
6:00	163		117			18:00	274		367			
6:15	203		140			18:15	220		360			
6:30	245		181			18:30	271		372			
6:45	338	949	233	671	1620	18:45	220	985	379	1478		2463
7:00	306		259			19:00	229		270			
7:15	361		391			19:15	235		241			
7:30	300		390			19:30	197		258			
7:45	295	1262	462	1502	2764	19:45	157	818	229	998		1816
8:00	242		442			20:00	184		195			
8:15	225		380			20:15	197		177			
8:30	314		337			20:30	141		145			
8:45	288	1069	316	1475	2544	20:45	151	673	132	649		1322
9:00	281		320			21:00	165		128			
9:15	345		269			21:15	128		114			
9:30	349		265			21:30	125		105			
9:45	242	1217	284	1138	2355	21:45	130	548	103	450		998
10:00	261		273			22:00	117		93			
10:15	285		274			22:15	92		75			
10:30	280		304			22:30	79		70			
10:45	277	1103	301	1152	2255	22:45	71	359	56	294		653
11:00	282		266			23:00	58		48			
11:15	250		303			23:15	43		39			
11:30	273		256			23:30	45		34			
11:45	273	1078	261	1086	2164	23:45	37	183	26	147		330
Total Vol.		7564		7748	**15312**			9817		12601		**22418**

Daily Totals

EB	WB	Combined
17381	20349	**37730**

	AM			**PM**		
Split %	49.4%	50.6%	**40.6%**	43.8%	56.2%	**59.4%**
Peak Hour	6:45	7:15	**7:15**	17:15	15:00	**17:15**
Volume	1305	1685	**2883**	1142	1577	**2607**
P.H.F.	0.90	0.91	**0.95**	0.90	0.97	**0.99**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS29 Imperial Hwy from Paramount Blvd to Lakewood Blvd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	24	0	0	0	0	0	24	**12:00**	205	11	2	9	0	0	227
0:15	23	2	0	0	0	1	26	**12:15**	208	9	3	10	0	1	231
0:30	15	0	0	0	0	0	15	**12:30**	179	13	1	9	0	1	203
0:45	16	0	0	0	0	0	16	**12:45**	201	15	1	10	0	0	227
1:00	19	1	0	0	0	0	20	**13:00**	220	9	1	8	0	1	239
1:15	12	0	0	0	0	0	12	**13:15**	239	14	2	9	0	2	266
1:30	9	0	0	0	0	0	9	**13:30**	228	15	3	11	0	1	258
1:45	10	0	1	0	0	0	11	**13:45**	240	8	1	9	0	0	258
2:00	13	1	0	1	0	0	15	**14:00**	252	9	1	8	0	1	271
2:15	11	0	0	0	0	0	11	**14:15**	253	11	3	11	0	1	279
2:30	7	0	0	1	0	0	8	**14:30**	219	19	1	14	0	1	254
2:45	5	1	0	0	0	0	6	**14:45**	243	18	2	10	0	1	274
3:00	7	0	0	0	0	0	7	**15:00**	225	15	2	11	0	0	253
3:15	11	0	0	1	0	0	12	**15:15**	254	14	1	9	0	1	279
3:30	19	0	0	0	0	0	19	**15:30**	277	18	3	9	0	0	307
3:45	13	1	0	0	0	0	14	**15:45**	288	14	2	8	1	0	313
4:00	24	0	0	0	0	0	24	**16:00**	259	21	1	9	0	2	292
4:15	22	2	0	2	0	0	26	**16:15**	250	23	1	7	0	1	282
4:30	27	3	0	0	0	0	30	**16:30**	241	19	2	9	0	2	273
4:45	19	2	0	0	0	0	21	**16:45**	286	25	2	10	0	1	324
5:00	33	3	0	2	0	0	38	**17:00**	262	16	1	7	0	0	286
5:15	44	5	0	1	0	0	50	**17:15**	255	14	0	6	0	1	276
5:30	53	4	0	0	0	0	57	**17:30**	283	16	1	9	0	2	311
5:45	69	7	0	3	0	0	79	**17:45**	265	11	0	7	0	0	283
6:00	76	6	1	0	0	0	83	**18:00**	270	12	0	4	0	2	288
6:15	91	9	0	3	0	1	104	**18:15**	249	9	0	3	0	0	261
6:30	141	8	3	6	0	2	160	**18:30**	243	8	0	6	0	0	257
6:45	152	10	2	9	0	1	174	**18:45**	228	7	0	2	0	1	238
7:00	170	9	1	5	0	1	186	**19:00**	206	5	0	2	0	0	213
7:15	213	11	1	9	0	1	235	**19:15**	177	9	0	4	0	1	191
7:30	266	14	2	11	0	0	293	**19:30**	192	7	1	4	0	0	204
7:45	284	15	2	17	0	0	318	**19:45**	133	4	0	3	0	0	140
8:00	263	14	4	18	0	2	301	**20:00**	124	6	0	0	0	1	131
8:15	290	9	2	19	0	1	321	**20:15**	119	5	0	2	0	0	126
8:30	250	15	3	16	0	0	284	**20:30**	89	3	0	3	0	0	95
8:45	232	16	0	13	0	1	262	**20:45**	102	4	0	1	0	1	108
9:00	217	11	4	11	0	1	244	**21:00**	81	1	0	0	0	0	82
9:15	186	17	0	10	0	0	213	**21:15**	81	2	0	1	0	0	84
9:30	177	20	1	8	0	0	206	**21:30**	77	3	1	2	0	0	83
9:45	151	11	0	4	0	1	167	**21:45**	60	1	0	2	0	0	63
10:00	179	18	3	9	0	0	209	**22:00**	65	0	0	1	0	0	66
10:15	198	19	2	11	0	1	231	**22:15**	61	2	0	2	0	0	65
10:30	213	12	1	8	1	2	237	**22:30**	64	3	0	0	0	0	67
10:45	191	14	0	11	0	1	217	**22:45**	48	1	0	0	0	0	49
11:00	182	12	2	10	0	2	208	**23:00**	36	0	0	0	0	0	36
11:15	213	18	1	14	0	0	246	**23:15**	39	1	0	0	0	0	40
11:30	175	19	2	9	1	2	208	**23:30**	30	2	2	3	0	0	37
11:45	186	12	1	9	0	1	209	**23:45**	27	1	0	0	0	0	28
TOTAL	5,201	351	39	251	2	22	5,866	**TOTAL**	8,633	453	41	264	1	26	9,418

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,233

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	1,197

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	13,834	804	80	515	3	48	15,284
% OF TOTAL	90.5%	5.3%	0.5%	3.4%	0.0%	0.3%	100.0%
TOTAL: ALL	28,880	1,636	187	1,091	5	98	31,897
% OF TOTAL	90.5%	5.1%	0.6%	3.4%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913
CITY: Downey
LOCATION: CLASS29 Imperial Hwy from Paramount Blvd to Lakewood Blvd

AM TIME	WESTBOUND 1	2	3	4	5	6	TOTAL	PM Time	WESTBOUND 1	2	3	4	5	6	TOTAL
0:00	32	2	0	1	0	0	35	12:00	197	13	2	10	0	1	223
0:15	20	0	1	0	0	0	21	12:15	192	18	3	9	0	1	223
0:30	24	1	1	0	0	0	26	12:30	200	16	1	11	0	1	229
0:45	14	0	0	1	0	0	15	12:45	229	14	2	10	0	0	255
1:00	19	1	0	0	0	0	20	13:00	227	18	2	8	0	1	256
1:15	18	0	0	0	0	0	18	13:15	205	14	2	12	0	1	234
1:30	18	0	0	0	0	0	18	13:30	251	19	1	10	0	0	281
1:45	19	0	0	0	0	0	19	13:45	242	12	2	10	0	2	268
2:00	11	0	0	0	0	0	11	14:00	227	18	2	13	0	1	261
2:15	10	0	0	0	0	0	10	14:15	211	20	4	17	0	0	252
2:30	14	0	0	0	0	0	14	14:30	254	19	1	10	0	1	285
2:45	17	0	0	0	0	0	17	14:45	270	17	3	11	0	2	303
3:00	15	1	0	0	0	0	16	15:00	233	11	3	12	0	1	260
3:15	15	0	1	0	0	0	16	15:15	209	13	2	12	0	1	237
3:30	15	2	0	1	0	0	18	15:30	221	14	1	9	0	0	245
3:45	24	0	0	1	0	0	25	15:45	222	17	2	12	0	0	253
4:00	23	2	0	1	0	0	26	16:00	234	9	3	14	0	2	262
4:15	22	3	1	1	0	0	27	16:15	221	19	0	14	0	0	254
4:30	38	2	0	1	0	0	41	16:30	242	16	0	11	0	1	270
4:45	31	2	0	2	0	0	35	16:45	267	17	5	13	0	1	303
5:00	44	4	0	3	0	1	52	17:00	254	11	2	10	1	0	278
5:15	55	3	1	4	0	0	63	17:15	289	13	2	8	0	0	312
5:30	82	4	0	3	0	0	89	17:30	243	9	1	2	0	0	255
5:45	115	6	0	6	0	0	127	17:45	274	14	2	9	0	0	299
6:00	108	8	0	4	0	1	121	18:00	225	9	1	6	0	0	241
6:15	140	9	0	6	0	2	157	18:15	234	8	2	4	0	1	249
6:30	207	11	2	7	0	0	227	18:30	240	5	0	5	0	0	250
6:45	259	13	0	6	0	1	279	18:45	213	7	3	6	0	0	229
7:00	245	10	1	9	1	0	266	19:00	209	5	2	5	0	3	224
7:15	313	17	0	10	0	1	341	19:15	224	8	0	4	0	0	236
7:30	291	16	1	8	0	2	318	19:30	186	7	0	3	0	1	197
7:45	252	11	2	9	0	0	274	19:45	143	3	3	2	0	1	152
8:00	287	14	1	13	0	2	317	20:00	169	4	1	0	0	1	175
8:15	265	15	0	17	0	1	298	20:15	164	4	1	3	0	0	172
8:30	233	21	1	19	0	3	277	20:30	154	3	0	1	0	0	158
8:45	227	18	2	14	0	1	262	20:45	120	4	0	1	0	0	125
9:00	237	20	1	10	0	0	268	21:00	146	2	0	1	0	1	150
9:15	240	21	3	12	0	0	276	21:15	108	3	0	2	0	0	113
9:30	177	18	2	13	0	1	211	21:30	111	3	0	3	0	0	117
9:45	209	19	3	15	0	0	246	21:45	119	1	2	2	0	0	124
10:00	225	17	1	9	0	0	252	22:00	90	2	0	1	0	0	93
10:15	233	16	1	8	0	1	259	22:15	89	2	1	0	0	2	94
10:30	220	18	3	7	0	2	250	22:30	61	3	2	2	0	0	68
10:45	198	12	4	10	0	0	224	22:45	51	1	0	3	0	0	55
11:00	226	9	1	9	0	1	246	23:00	51	1	0	1	0	0	53
11:15	233	12	2	7	0	1	255	23:15	45	0	0	0	0	0	45
11:30	209	10	1	6	0	2	228	23:30	40	3	0	1	0	0	44
11:45	273	14	3	9	0	0	299	23:45	38	1	1	1	0	0	41
TOTAL	6,202	382	40	262	1	23	6,910	TOTAL	8,844	450	67	314	1	27	9,703

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,250

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,163

TOTAL: AM+PM	15,046	832	107	576	2	50	16,613
% OF TOTAL	90.6%	5.0%	0.6%	3.5%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS29 Imperial Hwy from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	56	2	0	1	0	0	59	12:00	402	24	4	19	0	1	450
0:15	43	2	1	0	0	1	47	12:15	400	27	6	19	0	2	454
0:30	39	1	1	0	0	0	41	12:30	379	29	2	20	0	2	432
0:45	30	0	0	1	0	0	31	12:45	430	29	3	20	0	0	482
1:00	38	2	0	0	0	0	40	13:00	447	27	3	16	0	2	495
1:15	30	0	0	0	0	0	30	13:15	444	28	4	21	0	3	500
1:30	27	0	0	0	0	0	27	13:30	479	34	4	21	0	1	539
1:45	29	0	1	0	0	0	30	13:45	482	20	3	19	0	2	526
2:00	24	1	0	1	0	0	26	14:00	479	27	3	21	0	2	532
2:15	21	0	0	0	0	0	21	14:15	464	31	7	28	0	1	531
2:30	21	0	0	1	0	0	22	14:30	473	38	2	24	0	2	539
2:45	22	1	0	0	0	0	23	14:45	513	35	5	21	0	3	577
3:00	22	1	0	0	0	0	23	15:00	458	26	5	23	0	1	513
3:15	26	0	1	1	0	0	28	15:15	463	27	3	21	0	2	516
3:30	34	2	0	1	0	0	37	15:30	498	32	4	18	0	0	552
3:45	37	1	0	1	0	0	39	15:45	510	31	4	20	1	0	566
4:00	47	2	0	1	0	0	50	16:00	493	30	4	23	0	4	554
4:15	44	5	1	3	0	0	53	16:15	471	42	1	21	0	1	536
4:30	65	5	0	1	0	0	71	16:30	483	35	2	20	0	3	543
4:45	50	4	0	2	0	0	56	16:45	553	42	7	23	0	2	627
5:00	77	7	0	5	0	1	90	17:00	516	27	3	17	1	0	564
5:15	99	8	1	5	0	0	113	17:15	544	27	2	14	0	1	588
5:30	135	8	0	3	0	0	146	17:30	526	25	2	11	0	2	566
5:45	184	13	0	9	0	0	206	17:45	539	25	2	16	0	0	582
6:00	184	14	1	4	0	1	204	18:00	495	21	1	10	0	2	529
6:15	231	18	0	9	0	3	261	18:15	483	17	2	7	0	1	510
6:30	348	19	5	13	0	2	387	18:30	483	13	0	11	0	0	507
6:45	411	23	2	15	0	2	453	18:45	441	14	3	8	0	1	467
7:00	415	19	2	14	1	1	452	19:00	415	10	2	7	0	3	437
7:15	526	28	1	19	0	2	576	19:15	401	17	0	8	0	1	427
7:30	557	30	3	19	0	2	611	19:30	378	14	1	7	0	1	401
7:45	536	26	4	26	0	0	592	19:45	276	7	3	5	0	1	292
8:00	550	28	5	31	0	4	618	20:00	293	10	1	0	0	2	306
8:15	555	24	2	36	0	2	619	20:15	283	9	1	5	0	0	298
8:30	483	36	4	35	0	3	561	20:30	243	6	0	4	0	0	253
8:45	459	34	2	27	0	2	524	20:45	222	8	0	2	0	1	233
9:00	454	31	5	21	0	1	512	21:00	227	3	0	1	0	1	232
9:15	426	38	3	22	0	0	489	21:15	189	5	0	3	0	0	197
9:30	354	38	3	21	0	1	417	21:30	188	6	1	5	0	0	200
9:45	360	30	3	19	0	1	413	21:45	179	2	2	4	0	0	187
10:00	404	35	4	18	0	0	461	22:00	155	2	0	2	0	0	159
10:15	431	35	3	19	0	2	490	22:15	150	4	1	2	0	2	159
10:30	433	30	4	15	1	4	487	22:30	125	6	2	2	0	0	135
10:45	389	26	4	21	0	1	441	22:45	99	2	0	3	0	0	104
11:00	408	21	3	19	0	3	454	23:00	87	1	0	1	0	0	89
11:15	446	30	3	21	0	1	501	23:15	84	1	0	0	0	0	85
11:30	384	29	3	15	1	4	436	23:30	70	5	2	4	0	0	81
11:45	459	26	4	18	0	1	508	23:45	65	2	1	1	0	0	69
TOTAL	11,403	733	79	513	3	45	12,776	TOTAL	17,477	903	108	578	2	53	19,121

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,440

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	2,345

TOTAL: AM+PM	28,880	1,636	187	1,091	5	98	31,897
% OF TOTAL	90.5%	5.1%	0.6%	3.4%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT30 Imperial Hwy from Lakewood Blvd to Woodruff Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	38		45			12:00	249		270		
0:15	31		38			12:15	223		312		
0:30	30		35			12:30	274		271		
0:45	27	126	38	156	282	12:45	241	987	283	1136	2123
1:00	22		35			13:00	232		263		
1:15	19		21			13:15	253		329		
1:30	21		28			13:30	282		278		
1:45	17	79	18	102	181	13:45	260	1027	330	1200	2227
2:00	20		19			14:00	286		311		
2:15	10		23			14:15	332		283		
2:30	9		20			14:30	365		328		
2:45	10	49	32	94	143	14:45	319	1302	384	1306	2608
3:00	16		26			15:00	297		351		
3:15	15		36			15:15	336		298		
3:30	19		25			15:30	382		339		
3:45	17	67	32	119	186	15:45	354	1369	295	1283	2652
4:00	21		30			16:00	369		316		
4:15	29		35			16:15	344		306		
4:30	33		50			16:30	383		319		
4:45	39	122	52	167	289	16:45	358	1454	345	1286	2740
5:00	34		63			17:00	423		325		
5:15	52		70			17:15	338		358		
5:30	70		91			17:30	324		326		
5:45	84	240	130	354	594	17:45	307	1392	355	1364	2756
6:00	98		159			18:00	310		297		
6:15	113		187			18:15	305		278		
6:30	144		295			18:30	279		285		
6:45	164	519	315	956	1475	18:45	285	1179	273	1133	2312
7:00	151		381			19:00	235		234		
7:15	199		388			19:15	223		202		
7:30	246		465			19:30	191		193		
7:45	283	879	399	1633	2512	19:45	171	820	171	800	1620
8:00	270		501			20:00	129		137		
8:15	278		480			20:15	131		144		
8:30	271		369			20:30	106		145		
8:45	234	1053	368	1718	2771	20:45	114	480	161	587	1067
9:00	206		324			21:00	111		158		
9:15	197		290			21:15	92		126		
9:30	180		292			21:30	99		117		
9:45	194	777	310	1216	1993	21:45	84	386	104	505	891
10:00	220		265			22:00	72		87		
10:15	236		273			22:15	68		75		
10:30	216		228			22:30	63		72		
10:45	259	931	261	1027	1958	22:45	56	259	67	301	560
11:00	248		253			23:00	51		51		
11:15	251		238			23:15	37		52		
11:30	229		250			23:30	43		48		
11:45	207	935	248	989	1924	23:45	38	169	40	191	360
Total Vol.		5777		8531	**14308**			10824		11092	**21916**

Daily Totals

EB	WB	Combined
16601	19623	**36224**

	AM			PM		
Split %	40.4%	59.6%	**39.5%**	49.4%	50.6%	**60.5%**
Peak Hour	7:45	7:30	**7:30**	16:15	14:45	**16:30**
Volume	1102	1845	**2922**	1508	1372	**2849**
P.H.F.	0.97	0.92	**0.95**	0.89	0.89	**0.95**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS31 Woodruff Ave from Firestone Blvd to Imperial Hwy

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	8	1	0	0	0	0	9	12:00	145	9	2	11	0	2	169
0:15	7	0	0	0	0	0	7	12:15	115	10	3	7	0	0	135
0:30	8	0	0	0	0	0	8	12:30	99	8	4	7	0	1	119
0:45	12	0	0	0	0	0	12	12:45	89	9	2	8	0	1	109
1:00	4	0	0	0	0	0	4	13:00	76	15	2	7	0	0	100
1:15	8	0	0	1	0	0	9	13:15	94	12	0	9	0	0	115
1:30	4	0	0	0	0	0	4	13:30	123	8	0	7	0	2	140
1:45	7	1	1	2	0	0	11	13:45	116	12	1	10	0	3	142
2:00	7	1	1	1	0	0	10	14:00	153	11	1	6	0	3	174
2:15	4	0	1	0	0	0	5	14:15	156	15	2	5	0	2	180
2:30	9	1	1	1	0	0	12	14:30	166	14	1	7	0	1	189
2:45	2	0	0	2	0	0	4	14:45	177	17	1	6	0	1	202
3:00	7	0	1	1	0	0	9	15:00	166	13	2	4	0	1	186
3:15	7	1	0	0	0	0	8	15:15	173	15	7	5	0	0	200
3:30	3	0	0	2	0	0	5	15:30	177	19	8	6	0	2	212
3:45	17	2	0	1	0	0	20	15:45	142	16	4	4	0	0	166
4:00	12	2	0	0	0	0	14	16:00	162	13	2	3	0	1	181
4:15	18	0	1	1	0	0	20	16:15	172	20	2	5	0	0	199
4:30	13	2	1	1	0	0	17	16:30	164	16	1	5	0	1	187
4:45	27	3	2	0	0	0	32	16:45	170	15	1	7	0	1	194
5:00	20	4	0	0	0	0	24	17:00	167	11	2	3	0	0	183
5:15	33	5	0	2	0	0	40	17:15	146	14	2	4	0	1	167
5:30	33	2	0	3	0	0	38	17:30	154	10	1	9	0	0	174
5:45	54	4	1	2	0	0	61	17:45	160	8	2	3	0	0	173
6:00	42	8	2	3	0	1	56	18:00	137	7	1	3	0	0	148
6:15	58	6	2	2	0	0	68	18:15	109	8	2	3	0	1	123
6:30	70	9	0	5	0	1	85	18:30	90	6	1	3	0	1	101
6:45	109	8	1	4	0	0	122	18:45	91	3	1	1	0	1	97
7:00	101	7	1	6	0	0	115	19:00	104	3	1	1	0	0	109
7:15	134	10	1	4	0	3	152	19:15	92	4	0	0	0	0	96
7:30	158	12	0	4	0	0	174	19:30	78	1	0	2	0	0	81
7:45	195	15	1	6	0	2	219	19:45	70	3	0	1	0	1	75
8:00	198	13	1	9	0	2	223	20:00	60	3	0	0	0	0	63
8:15	154	11	1	10	0	2	178	20:15	54	4	0	1	0	0	59
8:30	135	14	3	8	0	1	161	20:30	61	1	1	3	0	0	66
8:45	136	11	2	9	0	2	160	20:45	58	1	1	1	0	0	61
9:00	103	12	3	13	0	2	133	21:00	55	2	0	0	0	0	57
9:15	94	15	3	11	1	0	124	21:15	46	2	0	0	0	0	48
9:30	105	10	1	12	0	1	129	21:30	42	0	1	2	0	0	45
9:45	79	14	3	10	0	0	106	21:45	33	2	0	1	0	0	36
10:00	67	12	1	10	0	0	90	22:00	22	0	1	1	0	0	24
10:15	80	12	2	9	0	0	103	22:15	20	0	1	0	0	0	21
10:30	107	11	2	13	0	1	134	22:30	21	1	1	0	0	0	23
10:45	124	12	3	10	0	2	151	22:45	18	1	0	1	0	0	20
11:00	90	10	2	13	0	1	116	23:00	13	1	0	0	0	0	14
11:15	89	9	2	9	0	2	111	23:15	9	0	0	2	0	0	11
11:30	80	12	1	10	0	0	103	23:30	7	1	0	0	0	0	8
11:45	93	13	2	12	0	1	121	23:45	9	0	0	1	0	0	10
TOTAL	2,925	295	50	222	1	24	3,517	TOTAL	4,761	364	65	175	0	27	5,392

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	794

PM PEAK HOUR	2:45 PM
PM PEAK VOLUME	800

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	7,686	659	115	397	1	51	8,909
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	86.3%	7.4%	1.3%	4.5%	0.0%	0.6%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	15,183	1,307	198	942	1	92	17,723
CLASS 6	Buses	% OF TOTAL	85.7%	7.4%	1.1%	5.3%	0.0%	0.5%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913
CITY: Downey
LOCATION: CLASS31 Woodruff Ave from Firestone Blvd to Imperial Hwy

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	11	0	0	0	0	0	11	12:00	129	7	1	10	0	2	149
0:15	6	1	1	1	0	0	9	12:15	110	10	0	12	0	0	132
0:30	9	0	1	0	0	0	10	12:30	108	9	2	10	0	1	130
0:45	8	0	0	0	0	0	8	12:45	130	8	3	11	0	0	152
1:00	6	1	0	1	0	0	8	13:00	119	7	1	14	0	0	141
1:15	9	0	0	0	0	0	9	13:15	148	9	1	9	0	2	169
1:30	6	0	0	1	0	0	7	13:30	105	8	2	10	0	2	127
1:45	6	0	0	0	0	0	6	13:45	129	10	1	8	0	0	148
2:00	10	1	0	0	0	0	11	14:00	123	12	3	10	0	2	150
2:15	8	0	0	0	0	0	8	14:15	130	18	1	9	0	0	158
2:30	8	1	0	1	0	0	10	14:30	164	12	3	12	0	0	191
2:45	7	0	0	0	0	0	7	14:45	129	16	0	11	0	2	158
3:00	7	0	0	1	0	0	8	15:00	158	9	2	8	0	1	178
3:15	10	0	0	1	0	0	11	15:15	124	16	0	6	0	2	148
3:30	9	0	0	0	0	0	9	15:30	170	15	3	9	0	0	197
3:45	9	2	0	0	0	0	11	15:45	193	14	2	13	0	1	223
4:00	5	0	0	3	0	0	8	16:00	184	11	0	8	0	2	205
4:15	9	3	0	3	0	0	15	16:15	190	16	0	12	0	0	218
4:30	11	1	0	1	0	0	13	16:30	144	15	1	9	0	0	169
4:45	22	2	0	0	0	0	24	16:45	153	14	1	8	0	3	179
5:00	22	5	1	0	0	0	28	17:00	202	10	2	4	0	0	218
5:15	16	5	0	2	0	0	23	17:15	154	8	1	8	0	1	172
5:30	15	8	0	2	0	0	25	17:30	141	7	1	5	0	0	154
5:45	47	4	1	4	0	0	56	17:45	128	9	0	6	0	0	143
6:00	30	10	0	2	0	1	43	18:00	94	11	0	9	0	0	114
6:15	47	11	4	5	0	0	67	18:15	110	6	0	4	0	1	121
6:30	62	14	0	6	0	2	84	18:30	115	10	1	8	0	0	134
6:45	57	15	2	11	0	1	86	18:45	115	6	1	7	0	0	129
7:00	64	13	3	10	0	1	91	19:00	100	2	1	8	0	0	111
7:15	78	11	0	13	0	0	102	19:15	114	2	0	6	0	1	123
7:30	134	9	3	13	0	0	159	19:30	75	5	0	4	0	0	84
7:45	134	18	1	11	0	0	164	19:45	68	3	1	5	0	0	77
8:00	152	15	1	15	0	2	185	20:00	70	4	0	6	0	0	80
8:15	186	12	2	14	0	1	215	20:15	83	1	0	2	0	0	86
8:30	133	13	7	8	0	0	161	20:30	67	3	0	3	0	0	73
8:45	93	16	2	10	0	0	121	20:45	61	2	0	1	0	0	64
9:00	70	14	0	9	0	2	95	21:00	48	3	0	1	0	0	52
9:15	79	18	2	8	0	1	108	21:15	56	2	1	0	0	0	59
9:30	95	10	1	7	0	0	113	21:30	54	0	1	2	0	0	57
9:45	103	8	1	9	0	0	121	21:45	50	0	0	1	0	0	51
10:00	85	9	0	11	0	1	106	22:00	45	0	0	0	0	0	45
10:15	90	8	2	7	0	0	107	22:15	36	1	0	1	0	0	38
10:30	92	7	3	12	0	1	115	22:30	25	1	1	0	0	0	27
10:45	84	9	1	10	0	1	105	22:45	21	1	0	0	0	0	22
11:00	116	10	3	6	0	2	137	23:00	19	0	0	0	0	0	19
11:15	97	10	0	13	0	1	121	23:15	17	0	0	1	0	0	18
11:30	91	11	2	14	0	1	119	23:30	14	1	0	0	0	0	15
11:45	116	9	0	9	0	0	134	23:45	11	0	1	0	0	0	12
TOTAL	2,564	314	44	254	0	18	3,194	TOTAL	4,933	334	39	291	0	23	5,620

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	725

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	843

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	7,497	648	83	545	0	41	8,814
% OF TOTAL	85.1%	7.4%	0.9%	6.2%	0.0%	0.5%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS31 Woodruff Ave from Firestone Blvd to Imperial Hwy

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	19	1	0	0	0	0	20	12:00	274	16	3	21	0	4	318
0:15	13	1	1	1	0	0	16	12:15	225	20	3	19	0	0	267
0:30	17	0	1	0	0	0	18	12:30	207	17	6	17	0	2	249
0:45	20	0	0	0	0	0	20	12:45	219	17	5	19	0	1	261
1:00	10	1	0	1	0	0	12	13:00	195	22	3	21	0	0	241
1:15	17	0	0	1	0	0	18	13:15	242	21	1	18	0	2	284
1:30	10	0	0	1	0	0	11	13:30	228	16	2	17	0	4	267
1:45	13	1	1	2	0	0	17	13:45	245	22	2	18	0	3	290
2:00	17	2	1	1	0	0	21	14:00	276	23	4	16	0	5	324
2:15	12	0	1	0	0	0	13	14:15	286	33	3	14	0	2	338
2:30	17	2	1	2	0	0	22	14:30	330	26	4	19	0	1	380
2:45	9	0	0	2	0	0	11	14:45	306	33	1	17	0	3	360
3:00	14	0	1	2	0	0	17	15:00	324	22	4	12	0	2	364
3:15	17	1	0	1	0	0	19	15:15	297	31	7	11	0	2	348
3:30	12	0	0	2	0	0	14	15:30	347	34	11	15	0	2	409
3:45	26	4	0	1	0	0	31	15:45	335	30	6	17	0	1	389
4:00	17	2	0	3	0	0	22	16:00	346	24	2	11	0	3	386
4:15	27	3	1	4	0	0	35	16:15	362	36	2	17	0	0	417
4:30	24	3	1	2	0	0	30	16:30	308	31	2	14	0	1	356
4:45	49	5	2	0	0	0	56	16:45	323	29	2	15	0	4	373
5:00	42	9	1	0	0	0	52	17:00	369	21	4	7	0	0	401
5:15	49	10	0	4	0	0	63	17:15	300	22	3	12	0	2	339
5:30	48	10	0	5	0	0	63	17:30	295	17	2	14	0	0	328
5:45	101	8	2	6	0	0	117	17:45	288	17	2	9	0	0	316
6:00	72	18	2	5	0	2	99	18:00	231	18	1	12	0	0	262
6:15	105	17	6	7	0	0	135	18:15	219	14	2	7	0	2	244
6:30	132	23	0	11	0	3	169	18:30	205	16	2	11	0	1	235
6:45	166	23	3	15	0	1	208	18:45	206	9	2	8	0	1	226
7:00	165	20	4	16	0	1	206	19:00	204	5	2	9	0	0	220
7:15	212	21	1	17	0	3	254	19:15	206	6	0	6	0	1	219
7:30	292	21	3	17	0	0	333	19:30	153	6	0	6	0	0	165
7:45	329	33	2	17	0	2	383	19:45	138	6	1	6	0	1	152
8:00	350	28	2	24	0	4	408	20:00	130	7	0	6	0	0	143
8:15	340	23	3	24	0	3	393	20:15	137	5	0	3	0	0	145
8:30	268	27	10	16	0	1	322	20:30	128	4	1	6	0	0	139
8:45	229	27	4	19	0	2	281	20:45	119	3	1	2	0	0	125
9:00	173	26	3	22	0	4	228	21:00	103	5	0	1	0	0	109
9:15	173	33	5	19	1	1	232	21:15	102	4	1	0	0	0	107
9:30	200	20	2	19	0	1	242	21:30	96	0	2	4	0	0	102
9:45	182	22	4	19	0	0	227	21:45	83	2	0	2	0	0	87
10:00	152	21	1	21	0	1	196	22:00	67	0	1	1	0	0	69
10:15	170	20	4	16	0	0	210	22:15	56	1	1	1	0	0	59
10:30	199	18	5	25	0	2	249	22:30	46	2	2	0	0	0	50
10:45	208	21	4	20	0	3	256	22:45	39	2	0	1	0	0	42
11:00	206	20	5	19	0	3	253	23:00	32	1	0	0	0	0	33
11:15	186	19	2	22	0	3	232	23:15	26	0	0	3	0	0	29
11:30	171	23	3	24	0	1	222	23:30	21	2	0	0	0	0	23
11:45	209	22	2	21	0	1	255	23:45	20	0	1	1	0	0	22
TOTAL	5,489	609	94	476	1	42	6,711	TOTAL	9,694	698	104	466	0	50	11,012

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,517

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	1,601

TOTAL: AM+PM	15,183	1,307	198	942	1	92	17,723
% OF TOTAL	85.7%	7.4%	1.1%	5.3%	0.0%	0.5%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS32 Old River School Rd from Florence Ave to Firestone Blvd

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	14	0	0	0	0	0	14	12:00	126	11	1	0	0	0	138
0:15	18	0	1	0	0	0	19	12:15	110	7	0	2	0	1	120
0:30	8	0	0	0	0	0	8	12:30	117	9	1	0	0	0	127
0:45	8	0	1	0	0	0	9	12:45	130	9	1	1	0	0	141
1:00	12	0	0	0	0	0	12	13:00	93	8	0	1	0	0	102
1:15	3	0	0	0	0	0	3	13:15	125	9	4	0	0	0	138
1:30	7	0	0	0	0	0	7	13:30	109	13	2	3	0	2	129
1:45	5	0	0	0	0	0	5	13:45	128	10	1	1	0	0	140
2:00	6	0	0	0	0	0	6	14:00	153	11	2	1	0	1	168
2:15	7	0	0	0	0	0	7	14:15	139	12	0	1	0	2	154
2:30	8	0	0	0	0	0	8	14:30	192	10	1	3	0	2	208
2:45	6	1	0	1	0	0	8	14:45	178	9	3	2	0	2	194
3:00	9	1	0	0	0	0	10	15:00	163	6	2	1	0	0	172
3:15	9	0	0	0	0	0	9	15:15	166	6	2	1	0	2	177
3:30	12	0	0	0	0	0	12	15:30	180	9	1	4	0	1	195
3:45	18	2	1	0	0	0	21	15:45	208	8	2	5	0	0	223
4:00	14	1	0	0	0	0	15	16:00	208	7	1	2	0	0	218
4:15	13	0	0	0	0	0	13	16:15	204	4	2	1	0	0	211
4:30	21	1	0	0	0	0	22	16:30	215	3	0	0	0	2	220
4:45	35	1	0	0	0	0	36	16:45	208	3	2	2	0	0	215
5:00	27	2	0	0	0	0	29	17:00	170	2	0	0	0	1	173
5:15	32	1	1	1	0	0	35	17:15	175	3	0	0	0	0	178
5:30	48	3	0	0	0	0	51	17:30	211	1	0	5	0	2	219
5:45	43	4	0	2	0	0	49	17:45	198	3	1	3	0	1	206
6:00	49	4	1	1	0	1	56	18:00	172	2	1	1	0	0	176
6:15	55	7	0	1	0	0	63	18:15	148	7	0	1	0	1	157
6:30	70	6	0	0	0	0	76	18:30	145	3	0	3	0	1	152
6:45	81	7	0	2	0	1	91	18:45	137	0	0	3	0	1	141
7:00	133	9	5	2	0	0	149	19:00	121	3	0	3	0	0	127
7:15	145	7	3	3	0	2	160	19:15	119	2	0	0	0	1	122
7:30	195	9	0	3	0	2	209	19:30	87	2	0	2	0	0	91
7:45	204	7	1	3	0	1	216	19:45	101	0	1	0	0	0	102
8:00	202	10	2	6	0	1	221	20:00	79	2	0	1	0	0	82
8:15	154	11	1	2	0	0	168	20:15	74	1	0	4	0	0	79
8:30	156	8	0	6	0	1	171	20:30	72	2	0	1	0	0	75
8:45	127	7	2	3	0	2	141	20:45	61	1	0	0	0	0	62
9:00	132	8	2	3	0	1	146	21:00	73	0	0	1	0	0	74
9:15	108	0	0	1	0	0	109	21:15	40	0	0	1	0	0	41
9:30	101	5	1	3	0	0	110	21:30	62	3	0	0	0	0	65
9:45	98	10	0	4	0	0	112	21:45	52	2	0	0	0	0	54
10:00	100	7	1	1	0	2	111	22:00	48	3	0	0	0	0	51
10:15	117	5	1	0	0	1	124	22:15	39	2	0	0	0	0	41
10:30	113	8	1	2	0	2	126	22:30	29	1	0	0	0	0	30
10:45	112	11	0	0	0	1	124	22:45	28	1	0	0	0	0	29
11:00	101	6	0	1	0	1	109	23:00	28	1	0	0	0	0	29
11:15	109	5	0	2	0	0	116	23:15	26	1	0	0	0	0	27
11:30	110	8	1	3	0	1	123	23:30	23	1	0	0	0	0	24
11:45	115	10	1	2	0	0	128	23:45	20	1	0	0	0	0	21
TOTAL	3,270	192	27	58	0	20	3,567	TOTAL	5,690	214	31	60	0	23	6,018

AM PEAK HOUR	7:30 AM	PM PEAK HOUR	3:45 PM
AM PEAK VOLUME	814	PM PEAK VOLUME	872

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	8,960	406	58	118	0	43	9,585
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	93.5%	4.2%	0.6%	1.2%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	17,019	790	156	272	1	109	18,347
CLASS 6	Buses	% OF TOTAL	92.8%	4.3%	0.9%	1.5%	0.0%	0.6%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS32 Old River School Rd from Florence Ave to Firestone Blvd

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	16	0	0	0	0	0	16	12:00	102	8	2	3	0	0	115
0:15	17	0	0	0	0	0	17	12:15	106	10	1	4	0	0	121
0:30	7	0	0	0	0	0	7	12:30	99	10	2	1	0	1	113
0:45	13	0	0	0	0	1	14	12:45	111	5	2	4	0	2	124
1:00	10	0	0	0	0	1	11	13:00	130	7	2	3	0	0	142
1:15	6	0	1	0	0	0	7	13:15	109	13	0	4	0	2	128
1:30	6	0	0	0	0	0	6	13:30	94	14	1	5	0	2	116
1:45	6	2	0	1	0	0	9	13:45	139	8	0	1	0	1	149
2:00	5	0	0	0	0	0	5	14:00	124	11	2	4	0	1	142
2:15	7	0	0	0	0	0	7	14:15	112	4	1	3	0	1	121
2:30	4	0	0	1	0	0	5	14:30	135	6	1	7	0	0	149
2:45	8	1	0	1	0	0	10	14:45	142	9	1	3	0	0	155
3:00	5	0	0	0	0	1	6	15:00	152	8	1	2	0	0	163
3:15	11	1	0	1	0	0	13	15:15	167	10	1	1	0	1	180
3:30	8	0	1	1	0	0	10	15:30	157	13	2	3	0	0	175
3:45	14	1	0	0	0	0	15	15:45	149	13	2	2	0	1	167
4:00	16	2	1	0	0	0	19	16:00	144	7	1	1	0	1	154
4:15	12	0	0	0	0	0	12	16:15	129	14	2	3	0	2	150
4:30	23	1	1	0	0	0	25	16:30	171	5	1	2	0	0	179
4:45	29	0	0	1	0	0	30	16:45	166	8	0	2	0	0	176
5:00	27	1	1	0	0	0	29	17:00	154	11	2	3	0	1	171
5:15	33	3	2	3	0	0	41	17:15	162	10	0	2	0	0	174
5:30	54	1	2	1	0	0	58	17:30	164	1	2	1	0	2	170
5:45	66	2	1	2	0	0	71	17:45	156	2	1	2	0	0	161
6:00	50	5	1	3	0	0	59	18:00	167	1	1	1	0	0	170
6:15	55	3	1	2	0	1	62	18:15	162	1	0	1	0	2	166
6:30	80	4	2	3	0	1	90	18:30	143	0	2	0	1	1	147
6:45	114	6	3	2	0	1	126	18:45	127	0	1	0	0	1	129
7:00	123	3	1	4	0	2	133	19:00	115	1	2	1	0	0	119
7:15	134	7	1	2	0	4	148	19:15	100	3	2	0	0	0	105
7:30	136	7	1	3	0	3	150	19:30	99	2	0	2	0	0	103
7:45	166	4	1	2	0	0	173	19:45	93	1	1	3	0	0	98
8:00	144	5	1	4	0	3	157	20:00	76	2	1	2	0	0	81
8:15	155	7	2	2	0	2	168	20:15	61	2	0	0	0	1	64
8:30	129	3	1	0	0	4	137	20:30	70	1	1	1	0	0	73
8:45	118	3	2	1	0	1	125	20:45	63	1	1	0	0	0	65
9:00	98	7	1	4	0	0	110	21:00	71	1	1	2	0	0	75
9:15	104	5	1	3	0	1	114	21:15	60	1	1	0	0	0	62
9:30	105	8	2	3	0	2	120	21:30	68	0	1	1	0	0	70
9:45	117	7	3	6	0	2	135	21:45	46	0	1	0	0	1	48
10:00	92	9	1	4	0	1	107	22:00	38	0	1	0	0	0	39
10:15	105	7	2	2	0	1	117	22:15	43	0	2	1	0	0	46
10:30	100	6	1	3	0	1	111	22:30	41	0	0	1	0	0	42
10:45	83	8	2	0	0	4	97	22:45	38	1	2	1	0	0	42
11:00	103	7	1	1	0	2	114	23:00	24	1	0	0	0	0	25
11:15	106	9	3	3	0	0	121	23:15	22	0	0	0	0	0	22
11:30	102	6	2	0	0	0	110	23:30	24	0	0	0	0	0	24
11:45	93	7	1	2	0	3	106	23:45	19	0	0	0	0	0	19
TOTAL	3,015	158	47	71	0	42	3,333	TOTAL	5,044	226	51	83	1	24	5,429

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	648

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	700

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	8,059	384	98	154	1	66	8,762
% OF TOTAL	92.0%	4.4%	1.1%	1.8%	0.0%	0.8%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS32 Old River School Rd from Florence Ave to Firestone Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	30	0	0	0	0	0	30	12:00	228	19	3	3	0	0	253
0:15	35	0	1	0	0	0	36	12:15	216	17	1	6	0	1	241
0:30	15	0	0	0	0	0	15	12:30	216	19	3	1	0	1	240
0:45	21	0	1	0	0	1	23	12:45	241	14	3	5	0	2	265
1:00	22	0	0	0	0	1	23	13:00	223	15	2	4	0	0	244
1:15	9	0	1	0	0	0	10	13:15	234	22	4	4	0	2	266
1:30	13	0	0	0	0	0	13	13:30	203	27	3	8	0	4	245
1:45	11	2	0	1	0	0	14	13:45	267	18	1	2	0	1	289
2:00	11	0	0	0	0	0	11	14:00	277	22	4	5	0	2	310
2:15	14	0	0	0	0	0	14	14:15	251	16	1	4	0	3	275
2:30	12	0	0	1	0	0	13	14:30	327	16	2	10	0	2	357
2:45	14	2	0	2	0	0	18	14:45	320	18	4	5	0	2	349
3:00	14	1	0	0	0	1	16	15:00	315	14	3	3	0	0	335
3:15	20	1	0	1	0	0	22	15:15	333	16	3	2	0	3	357
3:30	20	0	1	1	0	0	22	15:30	337	22	3	7	0	1	370
3:45	32	3	1	0	0	0	36	15:45	357	21	4	7	0	1	390
4:00	30	3	1	0	0	0	34	16:00	352	14	2	3	0	1	372
4:15	25	0	0	0	0	0	25	16:15	333	18	4	4	0	2	361
4:30	44	2	1	0	0	0	47	16:30	386	8	1	2	0	2	399
4:45	64	1	0	1	0	0	66	16:45	374	11	2	4	0	0	391
5:00	54	3	1	0	0	0	58	17:00	324	13	2	3	0	2	344
5:15	65	4	3	4	0	0	76	17:15	337	13	0	2	0	0	352
5:30	102	4	2	1	0	0	109	17:30	375	2	2	6	0	4	389
5:45	109	6	1	4	0	0	120	17:45	354	5	2	5	0	1	367
6:00	99	9	2	4	0	1	115	18:00	339	3	2	2	0	0	346
6:15	110	10	1	3	0	1	125	18:15	310	8	0	2	0	3	323
6:30	150	10	2	3	0	1	166	18:30	288	3	2	3	1	2	299
6:45	195	13	3	4	0	2	217	18:45	264	0	1	3	0	2	270
7:00	256	12	6	6	0	2	282	19:00	236	4	2	4	0	0	246
7:15	279	14	4	5	0	6	308	19:15	219	5	2	0	0	1	227
7:30	331	16	1	6	0	5	359	19:30	186	4	0	4	0	0	194
7:45	370	11	2	5	0	1	389	19:45	194	1	2	3	0	0	200
8:00	346	15	3	10	0	4	378	20:00	155	4	1	3	0	0	163
8:15	309	18	3	4	0	2	336	20:15	135	3	0	4	0	1	143
8:30	285	11	1	6	0	5	308	20:30	142	3	1	2	0	0	148
8:45	245	10	4	4	0	3	266	20:45	124	2	1	0	0	0	127
9:00	230	15	3	7	0	1	256	21:00	144	1	1	3	0	0	149
9:15	212	5	1	4	0	1	223	21:15	100	1	1	1	0	0	103
9:30	206	13	3	6	0	2	230	21:30	130	3	1	1	0	0	135
9:45	215	17	3	10	0	2	247	21:45	98	2	1	0	0	1	102
10:00	192	16	2	5	0	3	218	22:00	86	3	1	0	0	0	90
10:15	222	12	3	2	0	2	241	22:15	82	2	2	1	0	0	87
10:30	213	14	2	5	0	3	237	22:30	70	1	0	1	0	0	72
10:45	195	19	2	0	0	5	221	22:45	66	2	2	1	0	0	71
11:00	204	13	1	2	0	3	223	23:00	52	2	0	0	0	0	54
11:15	215	14	3	5	0	0	237	23:15	48	1	0	0	0	0	49
11:30	212	14	3	3	0	1	233	23:30	47	1	0	0	0	0	48
11:45	208	17	2	4	0	3	234	23:45	39	1	0	0	0	0	40
TOTAL	6,285	350	74	129	0	62	6,900	TOTAL	10,734	440	82	143	1	47	11,447

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,462

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	1,523

TOTAL: AM+PM	17,019	790	156	272	1	109	18,347
% OF TOTAL	92.8%	4.3%	0.9%	1.5%	0.0%	0.6%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT33 Old River School Rd from Stewart and Gray Rd to Imperial Hwy.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB			
0:00	12		9			12:00	110		61			
0:15	4		7			12:15	85		76			
0:30	6		4			12:30	96		83			
0:45	3	25	6	26	51	12:45	84	375	79	299		674
1:00	6		5			13:00	83		76			
1:15	3		6			13:15	91		75			
1:30	5		7			13:30	102		74			
1:45	2	16	4	22	38	13:45	109	385	57	282		667
2:00	4		8			14:00	131		88			
2:15	5		9			14:15	130		90			
2:30	3		5			14:30	149		64			
2:45	4	16	3	25	41	14:45	167	577	96	338		915
3:00	7		8			15:00	165		83			
3:15	4		10			15:15	153		77			
3:30	5		7			15:30	176		84			
3:45	7	23	9	34	57	15:45	169	663	102	346		1009
4:00	8		10			16:00	160		88			
4:15	11		9			16:15	165		78			
4:30	15		17			16:30	172		87			
4:45	17	51	16	52	103	16:45	135	632	73	326		958
5:00	14		27			17:00	165		107			
5:15	21		42			17:15	141		103			
5:30	24		46			17:30	162		86			
5:45	26	85	62	177	262	17:45	165	633	104	400		1033
6:00	32		54			18:00	129		118			
6:15	38		55			18:15	125		83			
6:30	52		67			18:30	104		69			
6:45	73	195	83	259	454	18:45	96	454	57	327		781
7:00	100		92			19:00	91		60			
7:15	129		107			19:15	82		69			
7:30	141		152			19:30	73		54			
7:45	137	507	145	496	1003	19:45	75	321	49	232		553
8:00	123		175			20:00	61		50			
8:15	125		130			20:15	59		47			
8:30	113		117			20:30	44		38			
8:45	119	480	109	531	1011	20:45	48	212	33	168		380
9:00	78		82			21:00	44		42			
9:15	73		61			21:15	32		36			
9:30	72		56			21:30	39		35			
9:45	91	314	73	272	586	21:45	38	153	31	144		297
10:00	95		63			22:00	43		24			
10:15	75		73			22:15	36		18			
10:30	88		60			22:30	29		15			
10:45	86	344	57	253	597	22:45	21	129	12	69		198
11:00	93		68			23:00	22		14			
11:15	104		52			23:15	12		9			
11:30	111		56			23:30	15		12			
11:45	99	407	88	264	671	23:45	14	63	10	45		108
Total Vol.		2463		2411	**4874**			4597		2976		**7573**

Daily Totals

NB	SB	**Combined**
7060	5387	**12447**

	AM			**PM**		
Split %	50.5%	49.5%	**39.2%**	60.7%	39.3%	**60.8%**
Peak Hour	7:15	7:30	**7:30**	15:30	17:15	**17:00**
Volume	530	602	**1128**	670	411	**1033**
P.H.F.	0.94	0.86	**0.95**	0.95	0.87	**0.95**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS34 Downey Ave from Florence Ave to Firestone Blvd

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	68	2	0	2	0	0	72
0:15	6	0	0	0	0	0	6	12:15	61	3	0	1	0	0	65
0:30	5	0	0	0	0	0	5	12:30	79	3	0	2	0	1	85
0:45	0	0	0	0	0	0	0	12:45	71	2	1	0	0	2	76
1:00	6	0	0	0	0	0	6	13:00	70	3	0	3	0	0	76
1:15	3	0	0	0	0	0	3	13:15	80	2	0	1	0	2	85
1:30	1	0	0	0	0	0	1	13:30	104	3	1	0	0	0	108
1:45	2	0	0	0	0	0	2	13:45	89	5	0	3	0	1	98
2:00	3	0	0	0	0	0	3	14:00	89	4	0	2	0	1	96
2:15	1	0	0	0	0	0	1	14:15	103	5	0	3	0	0	111
2:30	2	0	0	0	0	0	2	14:30	144	4	1	1	0	0	150
2:45	1	0	0	0	0	0	1	14:45	154	5	1	1	0	0	161
3:00	0	0	0	0	0	0	0	15:00	152	2	1	2	0	1	158
3:15	2	0	0	1	0	0	3	15:15	175	3	1	4	0	0	183
3:30	4	0	0	0	0	0	4	15:30	189	4	0	1	0	1	195
3:45	0	1	1	0	0	0	2	15:45	188	3	1	2	0	2	196
4:00	3	0	0	1	0	0	4	16:00	187	2	1	1	0	1	192
4:15	11	0	0	1	0	0	12	16:15	175	4	0	2	0	0	181
4:30	10	2	0	1	0	0	13	16:30	184	6	1	2	0	1	194
4:45	6	2	0	0	0	0	8	16:45	159	7	0	2	0	0	168
5:00	6	1	0	1	0	0	8	17:00	208	3	0	0	0	0	211
5:15	12	1	0	0	0	0	13	17:15	169	2	1	2	0	0	174
5:30	11	3	0	0	0	0	14	17:30	130	3	0	0	0	2	135
5:45	17	3	0	1	0	0	21	17:45	148	4	0	0	0	1	153
6:00	16	1	0	1	0	0	18	18:00	116	2	1	0	0	2	121
6:15	20	2	0	2	0	0	24	18:15	94	5	0	2	0	0	101
6:30	33	3	0	1	0	1	38	18:30	77	3	1	1	0	0	82
6:45	50	4	0	1	0	1	56	18:45	76	2	1	0	0	0	79
7:00	78	4	1	2	0	0	85	19:00	66	0	0	1	0	1	68
7:15	115	3	0	0	0	0	118	19:15	58	0	0	1	0	0	59
7:30	158	4	1	1	0	2	166	19:30	32	2	0	0	0	0	34
7:45	172	2	0	0	0	1	175	19:45	53	0	0	0	0	0	53
8:00	149	5	0	2	0	1	157	20:00	42	1	0	0	0	0	43
8:15	177	5	0	2	0	2	186	20:15	40	1	0	0	0	0	41
8:30	113	3	1	1	0	2	120	20:30	38	1	0	0	0	1	40
8:45	82	4	0	1	0	0	87	20:45	36	0	0	0	0	0	36
9:00	83	2	1	2	0	0	88	21:00	44	0	0	0	0	0	44
9:15	64	3	0	1	0	1	69	21:15	30	1	0	0	0	0	31
9:30	51	4	0	0	0	1	56	21:30	21	0	0	1	0	0	22
9:45	58	3	1	0	0	0	62	21:45	21	0	1	0	0	0	22
10:00	60	3	0	1	0	0	64	22:00	18	0	0	0	0	0	18
10:15	67	1	1	2	0	1	72	22:15	14	0	0	0	0	0	14
10:30	53	2	0	2	0	1	58	22:30	15	1	0	0	0	0	16
10:45	59	4	0	1	0	1	65	22:45	16	0	0	0	0	0	16
11:00	68	3	0	1	0	3	75	23:00	13	0	0	0	0	0	13
11:15	75	4	1	2	0	0	82	23:15	8	0	0	0	0	0	8
11:30	61	2	0	1	0	0	64	23:30	7	0	0	0	0	0	7
11:45	84	2	0	1	0	0	87	23:45	5	0	0	0	0	0	5
TOTAL	2,066	86	8	34	0	18	2,212	TOTAL	4,116	103	14	43	0	20	4,296

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	684

PM PEAK HOUR	3:15 PM
PM PEAK VOLUME	766

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	6,182	189	22	77	0	38	6,508
% OF TOTAL	95.0%	2.9%	0.3%	1.2%	0.0%	0.6%	100.0%
TOTAL: ALL	10,356	408	47	168	0	71	11,050
% OF TOTAL	93.7%	3.7%	0.4%	1.5%	0.0%	0.6%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS34 Downey Ave from Florence Ave to Firestone Blvd

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	3	0	0	0	0	0	3	12:00	62	4	0	2	0	0	68
0:15	4	0	0	1	0	0	5	12:15	52	7	0	3	0	1	63
0:30	8	1	0	0	0	0	9	12:30	50	5	0	2	0	0	57
0:45	5	0	0	1	0	0	6	12:45	71	4	0	1	0	0	76
1:00	3	0	0	0	0	0	3	13:00	65	2	1	2	0	1	71
1:15	1	0	0	1	0	0	2	13:15	58	3	0	3	0	0	64
1:30	1	0	0	0	0	0	1	13:30	55	4	0	3	0	0	62
1:45	1	0	0	0	0	0	1	13:45	61	5	0	4	0	0	70
2:00	3	0	0	0	0	0	3	14:00	68	6	1	2	0	0	77
2:15	2	0	0	0	0	0	2	14:15	78	6	2	4	0	1	91
2:30	1	0	0	1	0	0	2	14:30	62	2	0	5	0	1	70
2:45	1	0	0	0	0	0	1	14:45	94	3	0	1	0	1	99
3:00	1	0	0	0	0	0	1	15:00	106	5	1	2	0	2	116
3:15	1	2	0	0	0	0	3	15:15	115	4	0	1	0	1	121
3:30	1	2	0	0	0	0	3	15:30	100	3	0	0	0	1	104
3:45	4	1	0	1	0	0	6	15:45	98	4	1	2	0	2	107
4:00	2	0	0	0	0	0	2	16:00	66	2	1	1	0	0	70
4:15	0	2	0	0	0	0	2	16:15	86	3	3	0	0	1	93
4:30	5	1	0	0	0	0	6	16:30	88	1	0	2	0	0	91
4:45	3	0	0	0	0	0	3	16:45	118	2	1	2	0	0	123
5:00	8	0	0	0	0	0	8	17:00	94	1	1	0	0	1	97
5:15	9	1	0	0	0	0	10	17:15	97	2	0	0	0	0	99
5:30	10	1	0	1	0	0	12	17:30	69	3	0	1	0	0	73
5:45	4	2	0	1	0	0	7	17:45	93	2	0	2	0	0	97
6:00	7	4	0	0	0	0	11	18:00	79	1	0	1	0	0	81
6:15	14	2	0	1	0	0	17	18:15	59	0	0	1	0	0	60
6:30	14	4	0	0	0	0	18	18:30	49	1	1	0	0	0	51
6:45	13	6	1	1	0	0	21	18:45	73	1	1	0	0	0	75
7:00	40	4	1	0	0	1	46	19:00	46	2	0	1	0	1	50
7:15	64	2	0	1	0	0	67	19:15	47	0	0	0	0	0	47
7:30	70	3	1	0	0	2	76	19:30	45	1	0	0	0	0	46
7:45	123	6	0	2	0	1	132	19:45	34	2	0	0	0	0	36
8:00	148	7	0	1	0	2	158	20:00	30	2	0	0	0	0	32
8:15	127	4	1	3	0	2	137	20:15	29	2	0	0	0	0	31
8:30	85	4	0	0	0	1	90	20:30	28	0	0	1	0	0	29
8:45	59	3	0	2	0	2	66	20:45	35	1	0	0	0	1	37
9:00	76	4	0	1	0	2	83	21:00	33	0	0	0	0	0	33
9:15	46	5	2	2	0	0	55	21:15	19	1	0	0	0	0	20
9:30	45	4	1	2	0	0	52	21:30	27	0	0	1	0	0	28
9:45	53	6	0	3	0	1	63	21:45	19	0	0	0	0	0	19
10:00	57	7	0	2	0	0	66	22:00	16	0	0	0	0	0	16
10:15	51	5	0	1	0	0	57	22:15	16	0	0	1	0	0	17
10:30	64	4	1	1	0	1	71	22:30	10	0	0	0	0	0	10
10:45	61	7	2	2	0	1	73	22:45	10	1	0	1	0	0	12
11:00	60	2	0	3	0	1	66	23:00	5	1	0	0	0	0	6
11:15	51	6	0	1	0	1	59	23:15	15	0	0	0	0	0	15
11:30	55	4	1	1	0	0	61	23:30	11	0	0	0	0	0	11
11:45	61	3	0	2	0	0	66	23:45	8	1	0	0	0	0	9
TOTAL	1,525	119	11	39	0	18	1,712	TOTAL	2,649	100	14	52	0	15	2,830

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	517

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	448

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	4,174	219	25	91	0	33	4,542
% OF TOTAL	91.9%	4.8%	0.6%	2.0%	0.0%	0.7%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS34 Downey Ave from Florence Ave to Firestone Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	11	0	0	0	0	0	11	12:00	130	6	0	4	0	0	140
0:15	10	0	0	1	0	0	11	12:15	113	10	0	4	0	1	128
0:30	13	1	0	0	0	0	14	12:30	129	8	0	4	0	1	142
0:45	5	0	0	1	0	0	6	12:45	142	6	1	1	0	2	152
1:00	9	0	0	0	0	0	9	13:00	135	5	1	5	0	1	147
1:15	4	0	0	1	0	0	5	13:15	138	5	0	4	0	2	149
1:30	2	0	0	0	0	0	2	13:30	159	7	1	3	0	0	170
1:45	3	0	0	0	0	0	3	13:45	150	10	0	7	0	1	168
2:00	6	0	0	0	0	0	6	14:00	157	10	1	4	0	1	173
2:15	3	0	0	0	0	0	3	14:15	181	11	2	7	0	1	202
2:30	3	0	0	1	0	0	4	14:30	206	6	1	6	0	1	220
2:45	2	0	0	0	0	0	2	14:45	248	8	1	2	0	1	260
3:00	1	0	0	0	0	0	1	15:00	258	7	2	4	0	3	274
3:15	3	2	0	1	0	0	6	15:15	290	7	1	5	0	1	304
3:30	5	2	0	0	0	0	7	15:30	289	7	0	1	0	2	299
3:45	4	2	1	1	0	0	8	15:45	286	7	2	4	0	4	303
4:00	5	0	0	1	0	0	6	16:00	253	4	2	2	0	1	262
4:15	11	2	0	1	0	0	14	16:15	261	7	3	2	0	1	274
4:30	15	3	0	1	0	0	19	16:30	272	7	1	4	0	1	285
4:45	9	2	0	0	0	0	11	16:45	277	9	1	4	0	0	291
5:00	14	1	0	1	0	0	16	17:00	302	4	1	0	0	1	308
5:15	21	2	0	0	0	0	23	17:15	266	4	1	2	0	0	273
5:30	21	4	0	1	0	0	26	17:30	199	6	0	1	0	2	208
5:45	21	5	0	2	0	0	28	17:45	241	6	0	2	0	1	250
6:00	23	5	0	1	0	0	29	18:00	195	3	1	1	0	2	202
6:15	34	4	0	3	0	0	41	18:15	153	5	0	3	0	0	161
6:30	47	7	0	1	0	1	56	18:30	126	4	2	1	0	0	133
6:45	63	10	1	2	0	1	77	18:45	149	3	2	0	0	0	154
7:00	118	8	2	2	0	1	131	19:00	112	2	0	2	0	2	118
7:15	179	5	0	1	0	0	185	19:15	105	0	0	1	0	0	106
7:30	228	7	2	1	0	4	242	19:30	77	3	0	0	0	0	80
7:45	295	8	0	2	0	2	307	19:45	87	2	0	0	0	0	89
8:00	297	12	0	3	0	3	315	20:00	72	3	0	0	0	0	75
8:15	304	9	1	5	0	4	323	20:15	69	3	0	0	0	0	72
8:30	198	7	1	1	0	3	210	20:30	66	1	0	1	0	1	69
8:45	141	7	0	3	0	2	153	20:45	71	1	0	0	0	1	73
9:00	159	6	1	3	0	2	171	21:00	77	0	0	0	0	0	77
9:15	110	8	2	3	0	1	124	21:15	49	2	0	0	0	0	51
9:30	96	8	1	2	0	1	108	21:30	48	0	0	2	0	0	50
9:45	111	9	1	3	0	1	125	21:45	40	0	1	0	0	0	41
10:00	117	10	0	3	0	0	130	22:00	34	0	0	0	0	0	34
10:15	118	6	1	3	0	1	129	22:15	30	0	0	1	0	0	31
10:30	117	6	1	3	0	2	129	22:30	25	1	0	0	0	0	26
10:45	120	11	2	3	0	2	138	22:45	26	1	0	1	0	0	28
11:00	128	5	0	4	0	4	141	23:00	18	1	0	0	0	0	19
11:15	126	10	1	3	0	1	141	23:15	23	0	0	0	0	0	23
11:30	116	6	1	2	0	0	125	23:30	18	0	0	0	0	0	18
11:45	145	5	0	3	0	0	153	23:45	13	1	0	0	0	0	14
TOTAL	3,591	205	19	73	0	36	3,924	TOTAL	6,765	203	28	95	0	35	7,126

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,187

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	1,180

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	10,356	408	47	168	0	71	11,050
% OF TOTAL	93.7%	3.7%	0.4%	1.5%	0.0%	0.6%	100.0%

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT35 Downey Ave from Stewart and Gray Rd to Imperial Hwy.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB			
0:00	10		15			12:00	80		89			
0:15	9		13			12:15	106		100			
0:30	7		9			12:30	93		112			
0:45	8	34	11	48	82	12:45	101	380	106	407		787
1:00	3		7			13:00	92		99			
1:15	5		8			13:15	98		102			
1:30	7		7			13:30	98		99			
1:45	8	23	3	25	48	13:45	123	411	102	402		813
2:00	4		2			14:00	118		133			
2:15	6		6			14:15	144		144			
2:30	1		4			14:30	155		122			
2:45	2	13	5	17	30	14:45	169	586	112	511		1097
3:00	6		4			15:00	173		138			
3:15	3		5			15:15	206		144			
3:30	8		10			15:30	172		150			
3:45	9	26	7	26	52	15:45	183	734	170	602		1336
4:00	6		4			16:00	141		169			
4:15	6		8			16:15	129		134			
4:30	11		12			16:30	134		150			
4:45	7	30	11	35	65	16:45	140	544	148	601		1145
5:00	8		19			17:00	149		183			
5:15	8		27			17:15	170		211			
5:30	16		38			17:30	127		127			
5:45	20	52	30	114	166	17:45	136	582	119	640		1222
6:00	24		34			18:00	125		116			
6:15	33		49			18:15	117		105			
6:30	51		54			18:30	103		99			
6:45	72	180	63	200	380	18:45	107	452	91	411		863
7:00	78		74			19:00	96		79			
7:15	102		95			19:15	81		63			
7:30	154		129			19:30	67		65			
7:45	198	532	145	443	975	19:45	77	321	68	275		596
8:00	186		128			20:00	54		76			
8:15	162		123			20:15	50		84			
8:30	111		128			20:30	34		69			
8:45	116	575	103	482	1057	20:45	46	184	64	293		477
9:00	92		102			21:00	30		53			
9:15	79		80			21:15	41		45			
9:30	105		92			21:30	38		40			
9:45	117	393	121	395	788	21:45	21	130	34	172		302
10:00	107		92			22:00	26		45			
10:15	87		89			22:15	30		35			
10:30	81		113			22:30	18		20			
10:45	112	387	86	380	767	22:45	17	91	23	123		214
11:00	96		83			23:00	18		25			
11:15	80		85			23:15	14		16			
11:30	88		92			23:30	12		23			
11:45	97	361	98	358	719	23:45	11	55	18	82		137
Total Vol.		2606		2523	**5129**			4470		4519		**8989**

Daily Totals

NB	SB	**Combined**
7076	7042	**14118**

	AM				**PM**		
Split %	50.8%	49.2%	**36.3%**		49.7%	50.3%	**63.7%**
Peak Hour	7:30	7:30	**7:30**		15:00	16:30	**15:00**
Volume	700	525	**1225**		734	692	**1336**
P.H.F.	0.88	0.91	**0.89**		0.89	0.82	**0.95**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS36 Brookshire Ave from Florence Ave to Firestone Blvd

AM TIME	NORTHBOUND 1	2	3	4	5	6	TOTAL	PM Time	NORTHBOUND 1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	**12:00**	105	5	1	5	0	0	116
0:15	5	1	0	0	0	0	6	**12:15**	125	7	1	6	0	0	139
0:30	1	2	0	0	0	0	3	**12:30**	128	8	0	3	0	1	140
0:45	10	0	0	1	0	0	11	**12:45**	109	6	1	2	0	0	118
1:00	8	0	0	0	0	0	8	**13:00**	111	7	0	3	0	1	122
1:15	2	0	0	0	0	0	2	**13:15**	84	9	1	7	0	2	103
1:30	3	1	0	0	0	0	4	**13:30**	142	5	0	6	0	1	154
1:45	2	0	1	0	0	0	3	**13:45**	114	7	0	4	0	1	126
2:00	3	0	0	0	0	0	3	**14:00**	149	6	0	5	0	2	162
2:15	3	0	0	1	0	0	4	**14:15**	145	5	0	5	0	0	155
2:30	3	0	0	0	0	0	3	**14:30**	173	4	0	4	0	0	181
2:45	4	0	0	0	0	0	4	**14:45**	184	7	0	2	0	1	194
3:00	2	0	0	0	0	0	2	**15:00**	158	6	1	2	0	3	170
3:15	3	0	0	0	0	0	3	**15:15**	160	7	1	3	0	1	172
3:30	5	0	0	0	0	0	5	**15:30**	158	8	2	4	0	1	173
3:45	2	0	0	0	0	0	2	**15:45**	187	5	1	5	0	2	200
4:00	8	0	0	0	0	0	8	**16:00**	170	8	1	6	0	1	186
4:15	6	1	0	0	0	0	7	**16:15**	191	6	2	4	0	0	203
4:30	4	1	0	0	0	0	5	**16:30**	209	2	0	2	0	0	213
4:45	14	1	0	0	0	0	15	**16:45**	199	3	0	5	0	2	209
5:00	10	2	0	0	0	0	12	**17:00**	197	5	0	3	0	0	205
5:15	13	1	0	1	0	0	15	**17:15**	192	3	0	2	0	1	198
5:30	20	2	0	0	0	0	22	**17:30**	176	4	1	2	0	1	184
5:45	18	2	1	2	0	0	23	**17:45**	167	2	2	4	0	2	177
6:00	33	1	0	0	0	1	35	**18:00**	171	2	0	1	0	1	175
6:15	39	2	0	1	0	0	42	**18:15**	174	3	1	4	0	1	183
6:30	41	2	2	3	0	1	49	**18:30**	134	2	1	3	0	0	140
6:45	56	3	0	1	0	1	61	**18:45**	125	2	0	2	0	0	129
7:00	85	6	1	3	0	0	95	**19:00**	102	2	0	2	0	0	106
7:15	98	5	4	4	0	0	111	**19:15**	98	3	0	1	0	0	102
7:30	156	4	1	5	0	2	168	**19:30**	94	1	0	1	0	1	97
7:45	142	4	1	2	0	4	153	**19:45**	93	1	0	1	0	0	95
8:00	151	6	0	4	0	2	163	**20:00**	88	2	1	1	0	0	92
8:15	154	5	0	5	0	2	166	**20:15**	85	2	0	1	0	0	88
8:30	146	7	2	3	0	3	161	**20:30**	64	0	0	1	0	0	65
8:45	97	4	0	3	0	0	104	**20:45**	70	0	0	0	0	0	70
9:00	98	5	1	2	0	0	106	**21:00**	57	2	0	0	0	0	59
9:15	82	3	1	0	0	0	86	**21:15**	41	1	0	0	0	0	42
9:30	86	4	0	3	0	1	94	**21:30**	37	2	1	0	0	0	40
9:45	77	6	0	2	0	1	86	**21:45**	30	0	1	0	0	0	31
10:00	80	5	0	4	0	0	89	**22:00**	43	0	0	0	0	0	43
10:15	85	1	2	1	0	1	90	**22:15**	33	1	0	1	0	0	35
10:30	78	3	0	4	0	2	87	**22:30**	28	0	0	1	0	0	29
10:45	89	2	1	2	0	0	94	**22:45**	22	1	0	0	0	1	24
11:00	92	4	1	4	0	0	101	**23:00**	22	0	0	1	0	0	23
11:15	97	5	0	3	0	0	105	**23:15**	19	0	0	0	0	0	19
11:30	110	3	1	3	0	1	118	**23:30**	18	1	0	0	0	0	19
11:45	118	5	0	4	0	2	129	**23:45**	14	1	0	0	0	0	15
TOTAL	2,447	109	20	71	0	24	2,671	**TOTAL**	5,395	164	20	115	0	27	5,721

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	650

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	830

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	7,842	273	40	186	0	51	8,392
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	93.4%	3.3%	0.5%	2.2%	0.0%	0.6%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	13,501	629	134	328	3	106	14,701
CLASS 6	Buses	**% OF TOTAL**	91.8%	4.3%	0.9%	2.2%	0.0%	0.7%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS36 Brookshire Ave from Florence Ave to Firestone Blvd

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7	12:00	89	7	1	2	0	1	100
0:15	2	0	2	1	0	0	5	12:15	74	5	0	1	0	1	81
0:30	4	0	0	0	0	0	4	12:30	84	4	2	2	0	0	92
0:45	2	0	0	1	0	0	3	12:45	88	5	2	3	0	1	99
1:00	5	0	0	0	0	0	5	13:00	95	6	2	6	0	0	109
1:15	3	0	0	0	0	0	3	13:15	73	8	2	2	0	1	86
1:30	2	0	0	0	0	0	2	13:30	96	6	3	1	0	1	107
1:45	3	0	0	0	0	0	3	13:45	88	7	1	4	0	1	101
2:00	1	0	0	0	0	0	1	14:00	88	4	2	4	0	2	100
2:15	3	0	0	0	0	0	3	14:15	94	8	0	3	0	3	108
2:30	3	0	0	1	0	0	4	14:30	97	9	1	5	0	1	113
2:45	2	0	0	0	0	0	2	14:45	118	10	1	3	0	2	134
3:00	2	0	0	0	0	0	2	15:00	104	12	1	4	0	1	122
3:15	1	0	0	0	0	0	1	15:15	123	9	0	4	0	1	137
3:30	6	0	0	0	0	0	6	15:30	116	12	3	3	0	1	135
3:45	6	0	0	0	0	0	6	15:45	90	10	1	4	0	2	107
4:00	3	2	0	0	0	0	5	16:00	123	11	1	2	0	1	138
4:15	6	3	1	0	0	0	10	16:15	116	12	2	1	0	2	133
4:30	6	3	1	1	0	0	11	16:30	123	8	1	3	0	1	136
4:45	14	1	0	1	0	0	16	16:45	100	9	0	3	0	0	112
5:00	13	5	0	0	0	0	18	17:00	105	8	2	2	0	0	117
5:15	21	2	0	1	0	0	24	17:15	123	5	3	2	0	0	133
5:30	31	1	1	0	0	0	33	17:30	118	6	1	4	0	1	130
5:45	38	0	0	0	0	0	38	17:45	109	4	0	1	1	2	117
6:00	32	1	1	1	0	0	35	18:00	89	3	1	1	0	0	94
6:15	31	7	2	1	0	0	41	18:15	106	2	3	3	0	0	114
6:30	47	2	2	1	0	0	52	18:30	96	2	1	2	0	1	102
6:45	63	4	2	2	0	0	71	18:45	87	2	1	1	0	2	93
7:00	61	9	4	3	0	2	79	19:00	63	0	1	0	0	1	65
7:15	98	7	2	2	0	1	110	19:15	71	1	0	2	0	0	74
7:30	126	8	1	2	1	3	141	19:30	41	2	2	1	0	0	46
7:45	151	8	1	2	0	2	164	19:45	53	2	0	0	0	0	55
8:00	168	6	0	1	0	2	177	20:00	51	1	1	1	0	0	54
8:15	146	8	2	4	0	2	162	20:15	46	2	2	0	0	0	50
8:30	92	5	1	2	0	2	102	20:30	39	0	1	3	0	0	43
8:45	89	3	1	3	0	2	98	20:45	34	2	1	0	0	0	37
9:00	65	3	2	5	0	1	76	21:00	35	0	0	0	0	0	35
9:15	97	2	1	0	0	2	102	21:15	37	2	0	0	0	0	39
9:30	99	6	0	1	0	1	107	21:30	18	1	1	0	0	0	20
9:45	85	9	1	5	0	1	101	21:45	20	0	1	1	0	0	22
10:00	92	2	2	2	0	0	98	22:00	25	0	1	0	0	0	26
10:15	64	9	3	4	0	1	81	22:15	16	0	0	0	0	0	16
10:30	63	7	2	2	0	0	74	22:30	17	0	1	0	0	0	18
10:45	76	8	3	3	0	0	90	22:45	10	0	0	0	0	0	10
11:00	70	2	1	1	1	0	75	23:00	18	2	0	0	0	0	20
11:15	71	3	3	1	0	2	80	23:15	7	1	0	0	0	0	8
11:30	83	4	1	2	0	1	91	23:30	10	0	0	0	0	0	10
11:45	75	6	1	2	0	0	84	23:45	8	0	0	0	0	0	8
TOTAL	2,228	146	44	58	2	25	2,503	TOTAL	3,431	210	50	84	1	30	3,806

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	644

PM PEAK HOUR	2:45 PM
PM PEAK VOLUME	528

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	5,659	356	94	142	3	55	6,309
% OF TOTAL	89.7%	5.6%	1.5%	2.3%	0.0%	0.9%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS36 Brookshire Ave from Florence Ave to Firestone Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	15	0	0	0	0	0	15	12:00	194	12	2	7	0	1	216
0:15	7	1	2	1	0	0	11	12:15	199	12	1	7	0	1	220
0:30	5	2	0	0	0	0	7	12:30	212	12	2	5	0	1	232
0:45	12	0	0	2	0	0	14	12:45	197	11	3	5	0	1	217
1:00	13	0	0	0	0	0	13	13:00	206	13	2	9	0	1	231
1:15	5	0	0	0	0	0	5	13:15	157	17	3	9	0	3	189
1:30	5	1	0	0	0	0	6	13:30	238	11	3	7	0	2	261
1:45	5	0	1	0	0	0	6	13:45	202	14	1	8	0	2	227
2:00	4	0	0	0	0	0	4	14:00	237	10	2	9	0	4	262
2:15	6	0	0	1	0	0	7	14:15	239	13	0	8	0	3	263
2:30	6	0	0	1	0	0	7	14:30	270	13	1	9	0	1	294
2:45	6	0	0	0	0	0	6	14:45	302	17	1	5	0	3	328
3:00	4	0	0	0	0	0	4	15:00	262	18	2	6	0	4	292
3:15	4	0	0	0	0	0	4	15:15	283	16	1	7	0	2	309
3:30	11	0	0	0	0	0	11	15:30	274	20	5	7	0	2	308
3:45	8	0	0	0	0	0	8	15:45	277	15	2	9	0	4	307
4:00	11	2	0	0	0	0	13	16:00	293	19	2	8	0	2	324
4:15	12	4	1	0	0	0	17	16:15	307	18	4	5	0	2	336
4:30	10	4	1	1	0	0	16	16:30	332	10	1	5	0	1	349
4:45	28	2	0	1	0	0	31	16:45	299	12	0	8	0	2	321
5:00	23	7	0	0	0	0	30	17:00	302	13	2	5	0	0	322
5:15	34	3	0	2	0	0	39	17:15	315	8	3	4	0	1	331
5:30	51	3	1	0	0	0	55	17:30	294	10	2	6	0	2	314
5:45	56	2	1	2	0	0	61	17:45	276	6	2	5	1	4	294
6:00	65	2	1	1	0	1	70	18:00	260	5	1	2	0	1	269
6:15	70	9	2	2	0	0	83	18:15	280	5	4	7	0	1	297
6:30	88	4	4	4	0	1	101	18:30	230	4	2	5	0	1	242
6:45	119	7	2	3	0	1	132	18:45	212	4	1	3	0	2	222
7:00	146	15	5	6	0	2	174	19:00	165	2	1	2	0	1	171
7:15	196	12	6	6	0	1	221	19:15	169	4	0	3	0	0	176
7:30	282	12	2	7	1	5	309	19:30	135	3	2	2	0	1	143
7:45	293	12	2	4	0	6	317	19:45	146	3	0	1	0	0	150
8:00	319	12	0	5	0	4	340	20:00	139	3	2	2	0	0	146
8:15	300	13	2	9	0	4	328	20:15	131	4	2	1	0	0	138
8:30	238	12	3	5	0	5	263	20:30	103	0	1	4	0	0	108
8:45	186	7	1	6	0	2	202	20:45	104	2	1	0	0	0	107
9:00	163	8	3	7	0	1	182	21:00	92	2	0	0	0	0	94
9:15	179	5	2	0	0	2	188	21:15	78	3	0	0	0	0	81
9:30	185	10	0	4	0	2	201	21:30	55	3	2	0	0	0	60
9:45	162	15	1	7	0	2	187	21:45	50	0	2	1	0	0	53
10:00	172	7	2	6	0	0	187	22:00	68	0	1	0	0	0	69
10:15	149	10	5	5	0	2	171	22:15	49	1	0	1	0	0	51
10:30	141	10	2	6	0	2	161	22:30	45	0	1	1	0	0	47
10:45	165	10	4	5	0	0	184	22:45	32	1	0	0	0	1	34
11:00	162	6	2	5	1	0	176	23:00	40	2	0	1	0	0	43
11:15	168	8	3	4	0	2	185	23:15	26	1	0	0	0	0	27
11:30	193	7	2	5	0	2	209	23:30	28	1	0	0	0	0	29
11:45	193	11	1	6	0	2	213	23:45	22	1	0	0	0	0	23
TOTAL	4,675	255	64	129	2	49	5,174	TOTAL	8,826	374	70	199	1	57	9,527

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,294

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	1,330

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	13,501	629	134	328	3	106	14,701
% OF TOTAL	91.8%	4.3%	0.9%	2.2%	0.0%	0.7%	100.0%

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT37 Brookshire Ave from Stewart and Gray Rd to Imperial Hwy.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	10		11			12:00	90		76		
0:15	7		12			12:15	89		79		
0:30	9		8			12:30	85		81		
0:45	5	31	5	36	67	12:45	88	352	87	323	675
1:00	4		6			13:00	77		108		
1:15	2		7			13:15	84		104		
1:30	0		5			13:30	107		112		
1:45	2	8	2	20	28	13:45	95	363	121	445	808
2:00	4		2			14:00	124		109		
2:15	2		2			14:15	127		116		
2:30	2		2			14:30	148		133		
2:45	1	9	1	7	16	14:45	196	595	114	472	1067
3:00	1		0			15:00	191		142		
3:15	3		1			15:15	195		112		
3:30	4		1			15:30	202		174		
3:45	2	10	4	6	16	15:45	146	734	195	623	1357
4:00	2		2			16:00	147		187		
4:15	5		3			16:15	138		142		
4:30	7		8			16:30	141		130		
4:45	5	19	7	20	39	16:45	163	589	141	600	1189
5:00	4		11			17:00	170		144		
5:15	8		8			17:15	134		155		
5:30	14		14			17:30	159		131		
5:45	19	45	18	51	96	17:45	132	595	108	538	1133
6:00	25		19			18:00	129		97		
6:15	37		39			18:15	143		95		
6:30	63		48			18:30	114		91		
6:45	77	202	57	163	365	18:45	103	489	83	366	855
7:00	94		63			19:00	72		76		
7:15	142		97			19:15	53		80		
7:30	177		151			19:30	59		71		
7:45	271	684	176	487	1171	19:45	64	248	67	294	542
8:00	265		147			20:00	72		65		
8:15	162		154			20:15	65		63		
8:30	136		109			20:30	54		58		
8:45	108	671	71	481	1152	20:45	33	224	40	226	450
9:00	92		68			21:00	31		42		
9:15	89		69			21:15	26		53		
9:30	95		63			21:30	28		49		
9:45	91	367	76	276	643	21:45	21	106	34	178	284
10:00	65		67			22:00	18		32		
10:15	70		63			22:15	16		28		
10:30	82		76			22:30	15		23		
10:45	70	287	55	261	548	22:45	14	63	17	100	163
11:00	74		66			23:00	17		14		
11:15	79		68			23:15	10		19		
11:30	83		78			23:30	9		17		
11:45	76	312	72	284	596	23:45	12	48	14	64	112
Total Vol.		2645		2092	**4737**			4406		4229	**8635**

Daily Totals

NB	SB	**Combined**
7051	6321	**13372**

	AM			**PM**		
Split %	55.8%	44.2%	**35.4%**	51.0%	49.0%	**64.6%**
Peak Hour	7:30	7:30	**7:30**	14:45	15:30	**15:15**
Volume	875	628	**1503**	784	698	**1358**
P.H.F.	0.81	0.89	**0.84**	0.97	0.89	**0.90**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS38 Gallatin Rd from Paramount Blvd to Lakewood Blvd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	61	3	0	3	0	0	67
0:15	5	0	0	2	0	0	7	12:15	56	6	2	4	0	1	69
0:30	4	0	0	0	0	0	4	12:30	59	7	1	2	0	1	70
0:45	4	0	0	0	0	0	4	12:45	52	5	1	3	0	0	61
1:00	3	0	0	0	0	0	3	13:00	57	4	1	4	0	1	67
1:15	4	0	0	0	0	0	4	13:15	44	8	1	3	0	0	56
1:30	0	0	0	0	0	0	0	13:30	70	7	0	2	0	1	80
1:45	4	1	0	0	0	0	5	13:45	53	4	2	4	0	1	64
2:00	4	0	0	1	0	0	5	14:00	74	8	1	1	0	0	84
2:15	1	0	0	0	0	0	1	14:15	71	5	0	4	0	1	81
2:30	1	0	0	0	0	0	1	14:30	81	5	2	4	0	0	92
2:45	2	0	0	0	0	0	2	14:45	106	6	0	2	0	0	114
3:00	5	1	0	0	0	0	6	15:00	103	6	0	2	0	1	112
3:15	1	0	0	0	0	0	1	15:15	96	5	1	5	0	1	108
3:30	2	0	0	0	0	0	2	15:30	109	7	0	3	0	0	119
3:45	3	0	0	0	0	0	3	15:45	130	8	1	4	0	2	145
4:00	8	0	0	0	0	0	8	16:00	112	8	1	2	0	1	124
4:15	3	0	0	0	0	0	3	16:15	124	4	1	3	0	3	135
4:30	4	0	0	1	0	0	5	16:30	97	2	3	1	0	2	105
4:45	9	0	0	0	0	0	9	16:45	132	3	1	3	0	1	140
5:00	9	1	0	1	0	0	11	17:00	104	5	2	2	0	2	115
5:15	15	1	1	3	0	0	20	17:15	127	6	0	0	0	1	134
5:30	6	2	0	1	0	0	9	17:30	102	3	0	1	0	0	106
5:45	24	0	0	2	0	0	26	17:45	118	4	1	0	0	0	123
6:00	21	2	0	1	0	1	25	18:00	105	2	0	1	0	1	109
6:15	20	3	0	1	0	0	24	18:15	96	3	1	2	0	1	103
6:30	28	3	1	2	0	0	34	18:30	86	4	0	1	0	0	91
6:45	26	4	0	0	0	1	31	18:45	60	2	0	1	0	1	64
7:00	48	3	1	3	0	0	55	19:00	67	2	0	2	0	0	71
7:15	61	5	0	1	0	2	69	19:15	58	3	0	1	0	0	62
7:30	82	7	0	2	0	1	92	19:30	50	1	0	1	0	0	52
7:45	90	4	1	5	0	0	100	19:45	44	1	0	1	0	0	46
8:00	120	4	0	4	0	3	131	20:00	47	2	0	3	0	0	52
8:15	145	7	0	4	0	2	158	20:15	37	1	1	1	0	0	40
8:30	63	4	1	2	0	1	71	20:30	39	1	0	1	0	0	41
8:45	60	2	0	3	0	0	65	20:45	34	0	0	2	0	0	36
9:00	48	4	1	3	0	1	57	21:00	34	1	1	0	0	0	36
9:15	33	6	0	2	0	0	41	21:15	22	0	0	1	0	0	23
9:30	43	5	2	2	0	0	52	21:30	22	1	0	1	0	0	24
9:45	33	6	0	3	0	0	42	21:45	24	0	0	0	0	0	24
10:00	52	7	1	2	0	0	62	22:00	19	2	0	0	0	0	21
10:15	37	6	0	3	0	0	46	22:15	16	0	0	2	0	0	18
10:30	37	7	2	3	0	0	49	22:30	11	0	0	1	0	0	12
10:45	46	5	1	4	0	1	57	22:45	14	0	0	1	0	0	15
11:00	50	4	0	2	0	0	56	23:00	8	0	0	1	0	0	9
11:15	34	3	2	1	0	0	40	23:15	9	1	0	0	0	0	10
11:30	52	6	1	2	0	1	62	23:30	7	0	1	0	0	0	8
11:45	51	4	0	1	0	1	57	23:45	9	0	0	0	0	0	9
TOTAL	1,409	117	15	67	0	15	1,623	TOTAL	3,056	156	26	86	0	23	3,347

AM PEAK HOUR	7:30 AM	PM PEAK HOUR	3:30 PM
AM PEAK VOLUME	481	PM PEAK VOLUME	523

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	4,465	273	41	153	0	38	4,970
% OF TOTAL	89.8%	5.5%	0.8%	3.1%	0.0%	0.8%	100.0%
TOTAL: ALL	9,366	597	91	358	0	83	10,495
% OF TOTAL	89.2%	5.7%	0.9%	3.4%	0.0%	0.8%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS38 Gallatin Rd from Paramount Blvd to Lakewood Blvd

AM	WESTBOUND							PM	WESTBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	8	0	0	1	0	0	9	12:00	63	4	0	4	0	0	71
0:15	6	0	0	0	0	0	6	12:15	47	2	1	5	0	1	56
0:30	5	0	0	2	0	0	7	12:30	62	6	0	3	0	0	71
0:45	4	0	0	2	0	0	6	12:45	63	5	2	3	0	2	75
1:00	4	0	0	0	0	0	4	13:00	67	8	1	6	0	2	84
1:15	0	0	0	1	0	0	1	13:15	63	6	0	4	0	1	74
1:30	8	0	0	0	0	0	8	13:30	45	9	2	5	0	1	62
1:45	4	0	0	0	0	0	4	13:45	60	8	1	3	0	1	73
2:00	6	0	0	0	0	0	6	14:00	78	3	1	5	0	1	88
2:15	2	1	0	0	0	0	3	14:15	56	5	2	6	0	1	70
2:30	1	1	0	0	0	0	2	14:30	54	7	1	3	0	0	65
2:45	1	0	0	1	0	0	2	14:45	122	14	1	4	0	0	141
3:00	0	0	0	0	0	0	0	15:00	77	7	3	5	0	1	93
3:15	0	0	0	0	0	0	0	15:15	90	9	1	7	0	1	108
3:30	7	0	0	0	0	0	7	15:30	64	6	0	6	0	0	76
3:45	2	0	1	0	0	0	3	15:45	86	9	2	4	0	1	102
4:00	8	0	0	0	0	0	8	16:00	88	10	0	3	0	1	102
4:15	4	0	0	0	0	0	4	16:15	79	7	1	2	0	1	90
4:30	4	0	0	1	0	0	5	16:30	109	15	1	5	0	0	130
4:45	9	0	0	0	0	0	9	16:45	109	9	0	3	0	1	122
5:00	6	1	0	2	0	0	9	17:00	124	14	3	2	0	1	144
5:15	18	4	0	0	0	0	22	17:15	86	4	0	3	0	1	94
5:30	24	2	1	0	0	0	27	17:30	89	2	2	4	0	0	97
5:45	14	4	0	1	0	0	19	17:45	118	4	0	2	0	0	124
6:00	30	2	0	0	0	0	32	18:00	96	5	1	2	0	2	106
6:15	37	2	1	2	0	0	42	18:15	88	2	0	3	0	0	93
6:30	45	5	0	2	0	0	52	18:30	100	3	1	2	0	0	106
6:45	70	7	0	1	0	1	79	18:45	75	2	1	2	0	1	81
7:00	104	6	0	2	0	0	112	19:00	71	2	0	3	0	0	76
7:15	103	5	2	3	0	1	114	19:15	64	2	0	2	0	0	68
7:30	129	3	0	2	0	2	136	19:30	56	1	1	2	0	0	60
7:45	154	4	1	3	0	2	164	19:45	73	0	1	2	0	0	76
8:00	100	7	1	4	0	3	115	20:00	59	0	0	0	0	0	59
8:15	114	5	2	5	0	1	127	20:15	57	1	0	0	0	0	58
8:30	125	4	1	2	0	2	134	20:30	46	1	0	3	0	0	50
8:45	93	9	0	3	0	1	106	20:45	42	0	0	0	0	0	42
9:00	69	5	0	4	0	1	79	21:00	36	1	0	3	0	0	40
9:15	57	5	1	3	0	3	69	21:15	42	1	0	1	0	0	44
9:30	53	6	2	3	0	0	64	21:30	47	0	0	1	0	0	48
9:45	41	6	0	3	0	0	50	21:45	32	0	0	1	0	0	33
10:00	63	4	1	1	0	1	70	22:00	30	0	0	0	0	0	30
10:15	66	3	1	1	0	1	72	22:15	23	0	0	0	0	0	23
10:30	43	5	0	2	0	0	50	22:30	21	0	0	0	0	0	21
10:45	51	6	2	3	0	1	63	22:45	19	0	0	0	0	0	19
11:00	47	5	1	4	0	3	60	23:00	14	0	0	0	0	0	14
11:15	49	5	2	4	0	1	61	23:15	7	0	0	1	0	0	8
11:30	40	4	0	6	0	0	50	23:30	8	2	0	0	0	0	10
11:45	62	2	0	5	0	0	69	23:45	6	0	0	1	0	0	7
TOTAL	1,890	128	20	79	0	24	2,141	TOTAL	3,011	196	30	126	0	21	3,384

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	542

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	490

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	4,901	324	50	205	0	45	5,525
% OF TOTAL	88.7%	5.9%	0.9%	3.7%	0.0%	0.8%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS38 Gallatin Rd from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	16	0	0	1	0	0	17	12:00	124	7	0	7	0	0	138
0:15	11	0	0	2	0	0	13	12:15	103	8	3	9	0	2	125
0:30	9	0	0	2	0	0	11	12:30	121	13	1	5	0	1	141
0:45	8	0	0	2	0	0	10	12:45	115	10	3	6	0	2	136
1:00	7	0	0	0	0	0	7	13:00	124	12	2	10	0	3	151
1:15	4	0	0	1	0	0	5	13:15	107	14	1	7	0	1	130
1:30	8	0	0	0	0	0	8	13:30	115	16	2	7	0	2	142
1:45	8	1	0	0	0	0	9	13:45	113	12	3	7	0	2	137
2:00	10	0	0	1	0	0	11	14:00	152	11	2	6	0	1	172
2:15	3	1	0	0	0	0	4	14:15	127	10	2	10	0	2	151
2:30	2	1	0	0	0	0	3	14:30	135	12	3	7	0	0	157
2:45	3	0	0	1	0	0	4	14:45	228	20	1	6	0	0	255
3:00	5	1	0	0	0	0	6	15:00	180	13	3	7	0	2	205
3:15	1	0	0	0	0	0	1	15:15	186	14	2	12	0	2	216
3:30	9	0	0	0	0	0	9	15:30	173	13	0	9	0	0	195
3:45	5	0	1	0	0	0	6	15:45	216	17	3	8	0	3	247
4:00	16	0	0	0	0	0	16	16:00	200	18	1	5	0	2	226
4:15	7	0	0	0	0	0	7	16:15	203	11	2	5	0	4	225
4:30	8	0	0	2	0	0	10	16:30	206	17	4	6	0	2	235
4:45	18	0	0	0	0	0	18	16:45	241	12	1	6	0	2	262
5:00	15	2	0	3	0	0	20	17:00	228	19	5	4	0	3	259
5:15	33	5	1	3	0	0	42	17:15	213	10	0	3	0	2	228
5:30	30	4	1	1	0	0	36	17:30	191	5	2	5	0	0	203
5:45	38	4	0	3	0	0	45	17:45	236	8	1	2	0	0	247
6:00	51	4	0	1	0	1	57	18:00	201	7	1	3	0	3	215
6:15	57	5	1	3	0	0	66	18:15	184	5	1	5	0	1	196
6:30	73	8	1	4	0	0	86	18:30	186	7	1	3	0	0	197
6:45	96	11	0	1	0	2	110	18:45	135	4	1	3	0	2	145
7:00	152	9	1	5	0	0	167	19:00	138	4	0	5	0	0	147
7:15	164	10	2	4	0	3	183	19:15	122	5	0	3	0	0	130
7:30	211	10	0	4	0	3	228	19:30	106	2	1	3	0	0	112
7:45	244	8	2	8	0	2	264	19:45	117	1	1	3	0	0	122
8:00	220	11	1	8	0	6	246	20:00	106	2	0	3	0	0	111
8:15	259	12	2	9	0	3	285	20:15	94	2	1	1	0	0	98
8:30	188	8	2	4	0	3	205	20:30	85	2	0	4	0	0	91
8:45	153	11	0	6	0	1	171	20:45	76	0	0	2	0	0	78
9:00	117	9	1	7	0	2	136	21:00	70	2	1	3	0	0	76
9:15	90	11	1	5	0	3	110	21:15	64	1	0	2	0	0	67
9:30	96	11	4	5	0	0	116	21:30	69	1	0	2	0	0	72
9:45	74	12	0	6	0	0	92	21:45	56	0	0	1	0	0	57
10:00	115	11	2	3	0	1	132	22:00	49	2	0	0	0	0	51
10:15	103	9	1	4	0	1	118	22:15	39	0	0	2	0	0	41
10:30	80	12	2	5	0	0	99	22:30	32	0	0	1	0	0	33
10:45	97	11	3	7	0	2	120	22:45	33	0	0	1	0	0	34
11:00	97	9	1	6	0	3	116	23:00	22	0	0	1	0	0	23
11:15	83	8	4	5	0	1	101	23:15	16	1	0	1	0	0	18
11:30	92	10	1	8	0	1	112	23:30	15	2	1	0	0	0	18
11:45	113	6	0	6	0	1	126	23:45	15	0	0	1	0	0	16
TOTAL	3,299	245	35	146	0	39	3,764	TOTAL	6,067	352	56	212	0	44	6,731

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,023

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	984

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	9,366	597	91	358	0	83	10,495
% OF TOTAL	89.2%	5.7%	0.9%	3.4%	0.0%	0.8%	100.0%

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT39 Stewart and Gray Rd from Old River School Rd to Paramount Blvd. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB			PM Period	EB		WB		
0:00	12		20			12:00	131		107		
0:15	10		19			12:15	128		111		
0:30	9		17			12:30	123		103		
0:45	11	42	14	70	112	12:45	142	524	115	436	960
1:00	14		13			13:00	119		120		
1:15	10		9			13:15	124		111		
1:30	8		7			13:30	131		124		
1:45	7	39	10	39	78	13:45	166	540	133	488	1028
2:00	8		5			14:00	153		126		
2:15	6		2			14:15	137		138		
2:30	5		4			14:30	133		160		
2:45	3	22	6	17	39	14:45	219	642	158	582	1224
3:00	5		10			15:00	211		133		
3:15	6		15			15:15	185		145		
3:30	9		14			15:30	151		173		
3:45	18	38	20	59	97	15:45	123	670	186	637	1307
4:00	11		13			16:00	113		178		
4:15	15		23			16:15	110		172		
4:30	25		27			16:30	106		160		
4:45	31	82	32	95	177	16:45	109	438	175	685	1123
5:00	24		39			17:00	117		182		
5:15	28		43			17:15	81		161		
5:30	33		63			17:30	78		175		
5:45	45	130	59	204	334	17:45	99	375	178	696	1071
6:00	56		65			18:00	119		142		
6:15	63		76			18:15	88		154		
6:30	74		100			18:30	93		133		
6:45	106	299	134	375	674	18:45	101	401	141	570	971
7:00	104		121			19:00	86		124		
7:15	141		176			19:15	72		133		
7:30	215		163			19:30	78		110		
7:45	249	709	167	627	1336	19:45	43	279	99	466	745
8:00	226		148			20:00	52		90		
8:15	165		134			20:15	58		82		
8:30	124		142			20:30	44		101		
8:45	148	663	118	542	1205	20:45	49	203	82	355	558
9:00	122		104			21:00	47		92		
9:15	132		100			21:15	33		73		
9:30	135		93			21:30	33		78		
9:45	158	547	107	404	951	21:45	29	142	64	307	449
10:00	126		115			22:00	29		70		
10:15	112		97			22:15	30		55		
10:30	104		101			22:30	27		48		
10:45	133	475	98	411	886	22:45	32	118	41	214	332
11:00	107		92			23:00	24		33		
11:15	124		101			23:15	21		30		
11:30	125		102			23:30	14		29		
11:45	122	478	113	408	886	23:45	16	75	23	115	190
Total Vol.		3524		3251	**6775**			4407		5551	**9958**

Daily Totals

EB	WB	Combined
7931	8802	**16733**

	AM			PM		
Split %	52.0%	48.0%	**40.5%**	44.3%	55.7%	**59.5%**
Peak Hour	7:30	7:15	**7:15**	14:45	15:30	**14:45**
Volume	855	654	**1485**	766	709	**1375**
P.H.F.	0.86	0.93	**0.89**	0.87	0.95	**0.91**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS40 Stewart and Gray Rd from Paramount Blvd to Lakewood Blvd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	18	0	0	1	0	0	19	12:00	139	8	2	9	0	1	159
0:15	16	1	0	0	0	0	17	12:15	144	6	0	7	0	0	157
0:30	14	0	0	0	0	0	14	12:30	112	8	1	7	0	0	128
0:45	13	0	0	0	0	0	13	12:45	164	8	1	6	0	2	181
1:00	15	0	0	1	0	0	16	13:00	114	9	1	5	0	1	130
1:15	8	0	0	1	0	0	9	13:15	121	11	2	9	0	2	145
1:30	8	0	0	0	0	0	8	13:30	139	13	0	7	0	2	161
1:45	10	1	0	0	0	0	11	13:45	139	11	1	5	0	1	157
2:00	6	0	0	1	0	0	7	14:00	158	12	0	6	0	0	176
2:15	10	1	0	1	0	0	12	14:15	121	16	1	5	0	2	145
2:30	9	1	0	0	0	0	10	14:30	141	17	2	7	0	1	168
2:45	7	0	0	1	0	0	8	14:45	164	14	2	6	0	1	187
3:00	9	0	0	0	0	0	9	15:00	189	11	0	4	0	2	206
3:15	10	1	0	0	0	0	11	15:15	158	14	1	7	0	2	182
3:30	9	0	0	0	0	0	9	15:30	197	10	3	6	0	1	217
3:45	15	2	0	1	0	0	18	15:45	177	13	2	4	0	1	197
4:00	10	1	0	2	0	0	13	16:00	179	11	1	7	0	2	200
4:15	15	0	0	0	0	0	15	16:15	175	14	1	2	0	1	193
4:30	26	2	0	1	0	0	29	16:30	149	15	1	3	0	0	168
4:45	47	0	1	0	0	0	48	16:45	183	10	3	5	0	0	201
5:00	23	4	2	2	0	0	31	17:00	192	11	0	3	0	1	207
5:15	37	5	0	1	0	0	43	17:15	181	13	1	3	0	0	198
5:30	34	2	0	0	0	0	36	17:30	177	10	1	4	0	0	192
5:45	43	3	0	2	0	0	48	17:45	170	9	0	3	0	1	183
6:00	59	4	1	3	0	0	67	18:00	189	6	0	1	0	1	197
6:15	65	7	1	2	0	0	75	18:15	196	8	1	2	0	0	207
6:30	68	9	0	1	0	2	80	18:30	149	6	1	3	0	1	160
6:45	101	7	2	3	0	1	114	18:45	148	4	0	2	0	0	154
7:00	100	10	0	8	0	3	121	19:00	128	3	1	2	0	0	134
7:15	124	8	2	9	0	1	144	19:15	131	2	0	0	0	0	133
7:30	152	9	0	4	0	1	166	19:30	106	1	2	1	0	0	110
7:45	162	12	1	8	0	1	184	19:45	85	3	0	4	0	0	92
8:00	161	5	2	9	0	2	179	20:00	73	3	0	2	0	0	78
8:15	156	10	1	4	0	1	172	20:15	98	1	1	1	0	0	101
8:30	101	7	2	5	0	2	117	20:30	63	1	2	2	0	0	68
8:45	127	12	1	6	0	1	147	20:45	82	1	0	1	0	0	84
9:00	116	10	1	9	0	2	138	21:00	68	0	2	2	0	0	72
9:15	129	8	3	7	0	2	149	21:15	50	2	1	0	0	0	53
9:30	130	10	2	8	0	0	150	21:30	47	0	0	0	0	0	47
9:45	110	13	2	6	1	1	133	21:45	55	1	0	1	0	0	57
10:00	122	9	1	8	0	0	140	22:00	55	0	0	1	0	0	56
10:15	118	11	1	7	0	0	137	22:15	30	1	0	1	0	0	32
10:30	120	10	3	8	0	2	143	22:30	38	1	0	1	0	0	40
10:45	105	11	1	6	0	1	124	22:45	30	2	0	1	0	0	33
11:00	111	14	1	9	0	0	135	23:00	42	1	1	0	0	0	44
11:15	127	9	2	9	0	0	147	23:15	24	0	0	1	0	0	25
11:30	126	11	1	5	0	1	144	23:30	27	1	0	0	0	0	28
11:45	135	11	1	8	0	0	155	23:45	23	0	0	0	0	0	23
TOTAL	3,237	251	35	167	1	24	3,715	TOTAL	5,720	322	39	159	0	26	6,266

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	701

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	807

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	8,957	573	74	326	1	50	9,981
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	89.7%	5.7%	0.7%	3.3%	0.0%	0.5%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	20,927	1,245	146	732	3	108	23,161
CLASS 6	Buses	% OF TOTAL	90.4%	5.4%	0.6%	3.2%	0.0%	0.5%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS40 Stewart and Gray Rd from Paramount Blvd to Lakewood Blvd

AM	WESTBOUND							PM	WESTBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	29	0	0	0	0	0	29	12:00	183	10	1	5	0	0	199
0:15	24	1	0	0	0	0	25	12:15	184	11	1	4	0	0	200
0:30	14	0	0	0	0	0	14	12:30	167	9	1	7	0	1	185
0:45	10	0	0	2	0	0	12	12:45	161	12	2	9	0	3	187
1:00	21	1	0	0	0	0	22	13:00	169	10	1	11	0	2	193
1:15	5	0	0	1	0	0	6	13:15	137	13	2	10	0	0	162
1:30	8	0	0	0	0	0	8	13:30	154	14	0	8	0	2	178
1:45	10	0	0	0	0	0	10	13:45	175	15	3	9	0	2	204
2:00	4	0	0	0	0	0	4	14:00	163	16	1	6	0	3	189
2:15	1	0	1	1	0	0	3	14:15	185	12	1	12	0	1	211
2:30	5	1	0	0	0	0	6	14:30	201	13	2	14	1	3	234
2:45	4	0	0	2	0	0	6	14:45	222	14	1	15	0	2	254
3:00	13	0	0	1	0	0	14	15:00	234	18	2	13	0	1	268
3:15	10	0	0	0	0	0	10	15:15	205	16	2	10	0	1	234
3:30	14	0	0	1	0	0	15	15:30	197	14	3	12	0	2	228
3:45	20	2	0	0	0	0	22	15:45	222	13	1	14	0	0	250
4:00	10	0	0	1	0	0	11	16:00	229	11	0	10	0	1	251
4:15	15	2	0	1	0	0	18	16:15	245	15	1	13	0	1	275
4:30	27	1	1	1	0	0	30	16:30	234	17	3	7	0	0	261
4:45	35	2	0	1	0	0	38	16:45	270	12	1	8	0	1	292
5:00	23	3	0	0	0	0	26	17:00	240	11	0	5	0	2	258
5:15	37	5	0	3	0	0	45	17:15	265	10	0	4	0	0	279
5:30	56	3	0	1	0	0	60	17:30	240	10	0	1	0	1	252
5:45	53	4	0	4	0	0	61	17:45	242	9	1	2	0	0	254
6:00	58	10	0	5	0	1	74	18:00	214	8	1	3	0	0	226
6:15	73	11	2	4	0	0	90	18:15	238	6	2	2	0	0	248
6:30	98	14	1	6	0	1	120	18:30	199	7	0	2	0	1	209
6:45	127	16	1	5	0	2	151	18:45	208	5	0	3	0	0	216
7:00	140	13	2	7	0	1	163	19:00	189	3	1	2	0	0	195
7:15	235	11	0	5	1	1	253	19:15	190	2	3	2	0	0	197
7:30	213	14	1	5	0	1	234	19:30	180	4	1	3	0	0	188
7:45	202	18	0	7	0	2	229	19:45	135	3	0	2	0	0	140
8:00	183	17	2	8	0	3	213	20:00	126	2	0	1	0	0	129
8:15	226	10	1	7	0	1	245	20:15	156	4	0	0	0	0	160
8:30	182	14	2	6	0	2	206	20:30	140	3	0	1	0	0	144
8:45	145	13	2	8	0	1	169	20:45	116	3	0	0	0	0	119
9:00	104	12	2	7	0	0	125	21:00	108	2	0	1	0	0	111
9:15	125	11	3	8	0	1	148	21:15	104	2	1	0	0	0	107
9:30	152	10	1	5	0	1	169	21:30	97	1	0	1	0	0	99
9:45	160	8	1	4	0	0	173	21:45	74	0	0	3	0	0	77
10:00	177	9	2	8	0	2	198	22:00	87	0	0	2	0	0	89
10:15	171	12	3	5	0	0	191	22:15	74	1	0	1	0	0	76
10:30	160	8	2	7	0	1	178	22:30	54	3	0	0	0	0	57
10:45	172	13	0	6	0	1	192	22:45	39	2	0	1	0	0	42
11:00	158	10	1	3	0	1	173	23:00	34	0	0	0	0	1	35
11:15	174	11	1	8	0	1	195	23:15	24	1	0	1	0	0	26
11:30	163	8	1	6	0	1	179	23:30	30	0	0	1	0	0	31
11:45	151	7	0	5	0	2	165	23:45	33	0	0	0	0	0	33
TOTAL	4,197	305	33	165	1	27	4,728	TOTAL	7,773	367	39	241	1	31	8,452

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	929

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,090

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	11,970	672	72	406	2	58	13,180
% OF TOTAL	90.8%	5.1%	0.5%	3.1%	0.0%	0.4%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS40 Stewart and Gray Rd from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	47	0	0	1	0	0	48	12:00	322	18	3	14	0	1	358
0:15	40	2	0	0	0	0	42	12:15	328	17	1	11	0	0	357
0:30	28	0	0	0	0	0	28	12:30	279	17	2	14	0	1	313
0:45	23	0	0	2	0	0	25	12:45	325	20	3	15	0	5	368
1:00	36	1	0	1	0	0	38	13:00	283	19	2	16	0	3	323
1:15	13	0	0	2	0	0	15	13:15	258	24	4	19	0	2	307
1:30	16	0	0	0	0	0	16	13:30	293	27	0	15	0	4	339
1:45	20	1	0	0	0	0	21	13:45	314	26	4	14	0	3	361
2:00	10	0	0	1	0	0	11	14:00	321	28	1	12	0	3	365
2:15	11	1	1	2	0	0	15	14:15	306	28	2	17	0	3	356
2:30	14	2	0	0	0	0	16	14:30	342	30	4	21	1	4	402
2:45	11	0	0	3	0	0	14	14:45	386	28	3	21	0	3	441
3:00	22	0	0	1	0	0	23	15:00	423	29	2	17	0	3	474
3:15	20	1	0	0	0	0	21	15:15	363	30	3	17	0	3	416
3:30	23	0	0	1	0	0	24	15:30	394	24	6	18	0	3	445
3:45	35	4	0	1	0	0	40	15:45	399	26	3	18	0	1	447
4:00	20	1	0	3	0	0	24	16:00	408	22	1	17	0	3	451
4:15	30	2	0	1	0	0	33	16:15	420	29	2	15	0	2	468
4:30	53	3	1	2	0	0	59	16:30	383	32	4	10	0	0	429
4:45	82	2	1	1	0	0	86	16:45	453	22	4	13	0	1	493
5:00	46	7	2	2	0	0	57	17:00	432	22	0	8	0	3	465
5:15	74	10	0	4	0	0	88	17:15	446	23	1	7	0	0	477
5:30	90	5	0	1	0	0	96	17:30	417	20	1	5	0	1	444
5:45	96	7	0	6	0	0	109	17:45	412	18	1	5	0	1	437
6:00	117	14	1	8	0	1	141	18:00	403	14	1	4	0	1	423
6:15	138	18	3	6	0	0	165	18:15	434	14	3	4	0	0	455
6:30	166	23	1	7	0	3	200	18:30	348	13	1	5	0	2	369
6:45	228	23	3	8	0	3	265	18:45	356	9	0	5	0	0	370
7:00	240	23	2	15	0	4	284	19:00	317	6	2	4	0	0	329
7:15	359	19	2	14	1	2	397	19:15	321	4	3	2	0	0	330
7:30	365	23	1	9	0	2	400	19:30	286	5	3	4	0	0	298
7:45	364	30	1	15	0	3	413	19:45	220	6	0	6	0	0	232
8:00	344	22	4	17	0	5	392	20:00	199	5	0	3	0	0	207
8:15	382	20	2	11	0	2	417	20:15	254	5	1	1	0	0	261
8:30	283	21	4	11	0	4	323	20:30	203	4	2	3	0	0	212
8:45	272	25	3	14	0	2	316	20:45	198	4	0	1	0	0	203
9:00	220	22	3	16	0	2	263	21:00	176	2	2	3	0	0	183
9:15	254	19	6	15	0	3	297	21:15	154	4	2	0	0	0	160
9:30	282	20	3	13	0	1	319	21:30	144	1	0	1	0	0	146
9:45	270	21	3	10	1	1	306	21:45	129	1	0	4	0	0	134
10:00	299	18	3	16	0	2	338	22:00	142	0	0	3	0	0	145
10:15	289	23	4	12	0	0	328	22:15	104	2	0	2	0	0	108
10:30	280	18	5	15	0	3	321	22:30	92	4	0	1	0	0	97
10:45	277	24	1	12	0	2	316	22:45	69	4	0	2	0	0	75
11:00	269	24	2	12	0	1	308	23:00	76	1	1	0	0	1	79
11:15	301	20	3	17	0	1	342	23:15	48	1	0	2	0	0	51
11:30	289	19	2	11	0	2	323	23:30	57	1	0	1	0	0	59
11:45	286	18	1	13	0	2	320	23:45	56	0	0	0	0	0	56
TOTAL	7,434	556	68	332	2	51	8,443	TOTAL	13,493	689	78	400	1	57	14,718

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,622

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	1,879

TOTAL: AM+PM	20,927	1,245	146	732	3	108	23,161
% OF TOTAL	90.4%	5.4%	0.6%	3.2%	0.0%	0.5%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

ADT41 Stewart and Gray Rd from Lakewood Blvd to Woodruff Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	18		23			12:00	207		207		
0:15	14		19			12:15	222		199		
0:30	10		12			12:30	216		175		
0:45	13	55	15	69	124	12:45	199	844	190	771	1615
1:00	9		11			13:00	206		208		
1:15	8		9			13:15	203		220		
1:30	5		8			13:30	219		194		
1:45	7	29	10	38	67	13:45	199	827	210	832	1659
2:00	11		13			14:00	256		203		
2:15	10		12			14:15	240		206		
2:30	9		8			14:30	258		211		
2:45	12	42	7	40	82	14:45	250	1004	237	857	1861
3:00	11		9			15:00	274		258		
3:15	20		13			15:15	254		252		
3:30	17		16			15:30	318		246		
3:45	18	66	19	57	123	15:45	337	1183	221	977	2160
4:00	21		13			16:00	309		240		
4:15	23		25			16:15	293		245		
4:30	35		30			16:30	298		264		
4:45	50	129	28	96	225	16:45	298	1198	271	1020	2218
5:00	48		32			17:00	323		289		
5:15	52		43			17:15	288		281		
5:30	67		54			17:30	292		267		
5:45	74	241	58	187	428	17:45	260	1163	286	1123	2286
6:00	83		69			18:00	220		251		
6:15	115		80			18:15	247		232		
6:30	135		115			18:30	231		217		
6:45	148	481	129	393	874	18:45	199	897	190	890	1787
7:00	204		167			19:00	208		211		
7:15	183		184			19:15	207		176		
7:30	251		230			19:30	170		150		
7:45	232	870	256	837	1707	19:45	152	737	136	673	1410
8:00	227		287			20:00	134		122		
8:15	250		290			20:15	127		129		
8:30	208		209			20:30	110		138		
8:45	209	894	180	966	1860	20:45	93	464	101	490	954
9:00	185		173			21:00	88		106		
9:15	147		182			21:15	84		84		
9:30	152		186			21:30	74		88		
9:45	149	633	207	748	1381	21:45	67	313	71	349	662
10:00	168		180			22:00	55		62		
10:15	199		194			22:15	49		51		
10:30	181		139			22:30	29		38		
10:45	186	734	223	736	1470	22:45	32	165	41	192	357
11:00	176		212			23:00	34		40		
11:15	206		176			23:15	35		35		
11:30	181		169			23:30	28		24		
11:45	191	754	193	750	1504	23:45	23	120	25	124	244
Total Vol.		4928		4917	**9845**			8915		8298	**17213**

Daily Totals

EB	WB	Combined
13843	13215	**27058**

	AM			PM		
Split %	50.1%	49.9%	**36.4%**	51.8%	48.2%	**63.6%**
Peak Hour	7:30	7:30	**7:30**	15:30	17:00	**16:30**
Volume	960	1063	**2023**	1257	1123	**2312**
P.H.F.	0.96	0.92	**0.94**	0.93	0.97	**0.94**

cs@aimtd.com Tell. 714 253 7888

Tuesday, February 24, 2026 | CITY: Downey | PROJECT: SC5913

ADT42 Gardendale St from Garfield Ave to Paramount Blvd. | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB			PM Period	EB		WB		
0:00	9		8			12:00	41		66		
0:15	8		6			12:15	70		59		
0:30	13		3			12:30	61		54		
0:45	8	38	3	20	58	12:45	58	230	65	244	474
1:00	7		7			13:00	61		80		
1:15	5		4			13:15	66		69		
1:30	1		3			13:30	51		60		
1:45	3	16	6	20	36	13:45	65	243	82	291	534
2:00	2		7			14:00	83		83		
2:15	3		3			14:15	92		71		
2:30	2		3			14:30	108		92		
2:45	2	9	2	15	24	14:45	98	381	112	358	739
3:00	4		4			15:00	128		143		
3:15	2		5			15:15	116		150		
3:30	5		8			15:30	131		145		
3:45	7	18	8	25	43	15:45	109	484	133	571	1055
4:00	4		11			16:00	117		107		
4:15	5		7			16:15	104		115		
4:30	11		11			16:30	116		136		
4:45	6	26	12	41	67	16:45	117	454	131	489	943
5:00	11		23			17:00	127		163		
5:15	8		30			17:15	132		137		
5:30	16		22			17:30	116		146		
5:45	14	49	31	106	155	17:45	107	482	115	561	1043
6:00	25		37			18:00	105		127		
6:15	33		48			18:15	92		102		
6:30	31		65			18:30	81		95		
6:45	39	128	92	242	370	18:45	79	357	78	402	759
7:00	46		133			19:00	76		73		
7:15	77		139			19:15	65		65		
7:30	117		145			19:30	78		56		
7:45	144	384	147	564	948	19:45	67	286	51	245	531
8:00	134		216			20:00	51		52		
8:15	89		154			20:15	53		48		
8:30	77		128			20:30	59		42		
8:45	86	386	100	598	984	20:45	48	211	34	176	387
9:00	66		83			21:00	35		36		
9:15	41		92			21:15	39		39		
9:30	56		115			21:30	32		32		
9:45	59	222	85	375	597	21:45	36	142	27	134	276
10:00	58		73			22:00	28		28		
10:15	57		69			22:15	26		22		
10:30	45		63			22:30	21		18		
10:45	49	209	92	297	506	22:45	15	90	15	83	173
11:00	52		61			23:00	12		10		
11:15	57		74			23:15	11		9		
11:30	45		68			23:30	14		11		
11:45	55	209	64	267	476	23:45	10	47	7	37	84
Total Vol.		1694		2570	**4264**			3407		3591	**6998**

Daily Totals

EB	WB	Combined
5101	6161	**11262**

	AM			PM		
Split %	39.7%	60.3%	**37.9%**	48.7%	51.3%	**62.1%**
Peak Hour	7:30	7:30	**7:30**	16:30	16:45	**16:45**
Volume	484	662	**1146**	492	577	**1069**
P.H.F.	0.84	0.77	**0.82**	0.93	0.88	**0.92**

cs@aimtd.com Tell. 714 253 7888

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS43 Gardendale St from Paramount Blvd to Lakewood Blvd

AM TIME	EASTBOUND							PM Time	EASTBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	12	0	0	0	0	0	12	12:00	152	11	0	1	0	0	164
0:15	8	0	0	1	0	0	9	12:15	134	10	1	2	0	1	148
0:30	10	0	0	1	0	0	11	12:30	100	8	2	3	0	1	114
0:45	2	1	0	0	0	0	3	12:45	112	9	0	4	0	0	125
1:00	5	0	0	0	0	0	5	13:00	150	10	1	2	0	2	165
1:15	7	0	0	0	0	0	7	13:15	141	7	2	3	0	2	155
1:30	2	0	1	1	0	0	4	13:30	158	11	0	2	0	3	174
1:45	3	0	0	0	0	0	3	13:45	140	12	1	3	0	2	158
2:00	3	1	0	0	0	0	4	14:00	143	13	1	4	0	2	163
2:15	7	1	0	0	0	0	8	14:15	188	12	2	5	0	2	209
2:30	4	0	0	0	0	0	4	14:30	288	15	1	2	0	1	307
2:45	6	0	0	1	0	0	7	14:45	224	16	1	3	0	1	245
3:00	6	0	0	0	0	0	6	15:00	242	12	2	4	0	1	261
3:15	9	0	0	0	0	0	9	15:15	235	13	1	1	0	0	250
3:30	11	1	0	1	0	0	13	15:30	248	14	1	2	0	1	266
3:45	12	0	0	0	0	0	12	15:45	267	10	0	3	0	0	280
4:00	10	0	0	0	0	0	10	16:00	250	9	1	2	1	1	264
4:15	12	0	1	1	0	0	14	16:15	242	7	2	4	0	2	257
4:30	34	2	0	1	0	0	37	16:30	255	8	2	4	0	0	269
4:45	27	1	0	2	0	0	30	16:45	238	9	1	3	0	1	252
5:00	25	3	0	0	0	0	28	17:00	223	10	2	2	0	0	237
5:15	37	1	1	1	0	0	40	17:15	221	6	0	1	0	0	228
5:30	42	3	0	0	0	0	45	17:30	211	5	2	1	0	0	219
5:45	39	2	0	2	0	0	43	17:45	259	3	1	2	0	0	265
6:00	57	4	2	1	0	0	64	18:00	212	2	0	1	0	0	215
6:15	66	3	0	2	0	1	72	18:15	186	1	1	3	0	1	192
6:30	70	2	1	2	0	0	75	18:30	156	2	1	2	0	0	161
6:45	75	5	0	3	0	2	85	18:45	168	2	2	1	0	0	173
7:00	100	6	1	3	0	2	112	19:00	153	2	2	3	0	0	160
7:15	150	9	1	4	0	0	164	19:15	99	0	2	4	0	0	105
7:30	221	12	2	2	0	2	239	19:30	122	1	1	1	0	0	125
7:45	282	14	0	3	0	2	301	19:45	88	1	1	3	0	0	93
8:00	315	15	2	1	0	1	334	20:00	82	2	1	2	0	0	87
8:15	229	18	1	2	0	3	253	20:15	78	2	0	1	0	0	81
8:30	213	13	0	4	0	2	232	20:30	66	0	1	1	0	0	68
8:45	147	10	1	3	0	1	162	20:45	71	1	0	0	0	0	72
9:00	128	8	0	5	0	3	144	21:00	67	1	1	1	0	0	70
9:15	100	7	2	3	0	1	113	21:15	65	0	1	0	0	0	66
9:30	112	6	1	3	0	2	124	21:30	55	1	0	2	0	0	58
9:45	124	9	2	1	0	0	136	21:45	38	0	0	1	0	0	39
10:00	134	5	3	2	0	1	145	22:00	38	2	0	1	0	0	41
10:15	170	7	2	1	0	0	180	22:15	28	1	0	1	0	0	30
10:30	156	9	0	2	0	0	167	22:30	31	0	0	1	0	0	32
10:45	131	5	1	3	0	1	141	22:45	31	0	0	0	0	0	31
11:00	112	7	2	2	0	1	124	23:00	12	1	0	1	0	0	14
11:15	106	9	0	1	0	0	116	23:15	19	0	0	0	0	0	19
11:30	105	10	1	2	0	1	119	23:30	13	1	0	0	0	0	14
11:45	114	12	2	2	0	0	130	23:45	10	1	0	0	0	0	11
TOTAL	3,750	221	30	69	0	26	4,096	TOTAL	6,709	264	41	93	1	24	7,132

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,127

PM PEAK HOUR	3:45 PM
PM PEAK VOLUME	1,070

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	10,459	485	71	162	1	50	11,228
% OF TOTAL	93.2%	4.3%	0.6%	1.4%	0.0%	0.4%	100.0%
TOTAL: ALL	19,948	1,023	127	377	1	103	21,579
% OF TOTAL	92.4%	4.7%	0.6%	1.7%	0.0%	0.5%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS43 Gardendale St from Paramount Blvd to Lakewood Blvd

AM	WESTBOUND							PM	WESTBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	21	0	0	0	0	0	21	12:00	99	7	1	4	0	1	112
0:15	14	0	0	0	0	0	14	12:15	97	5	2	3	0	2	109
0:30	19	0	0	0	0	0	19	12:30	96	9	1	5	0	2	113
0:45	15	0	0	0	0	0	15	12:45	139	8	1	6	0	1	155
1:00	10	1	0	0	0	0	11	13:00	114	9	1	4	0	1	129
1:15	9	0	0	0	0	0	9	13:15	114	10	0	5	0	2	131
1:30	11	1	0	0	0	0	12	13:30	120	9	1	3	0	1	134
1:45	7	0	0	0	0	0	7	13:45	137	12	1	4	0	2	156
2:00	9	1	0	0	0	0	10	14:00	123	7	0	4	0	2	136
2:15	5	0	0	0	0	0	5	14:15	137	8	0	4	0	2	151
2:30	11	0	0	0	0	0	11	14:30	218	10	2	3	0	1	234
2:45	6	0	0	0	0	0	6	14:45	261	12	1	5	0	2	281
3:00	9	0	0	0	0	0	9	15:00	234	13	4	6	0	2	259
3:15	9	1	0	0	0	0	10	15:15	211	15	1	4	0	0	231
3:30	4	0	0	0	0	0	4	15:30	213	16	3	5	0	1	238
3:45	7	0	0	0	0	0	7	15:45	234	12	0	3	0	0	249
4:00	8	1	0	0	0	0	9	16:00	191	9	1	5	0	0	206
4:15	10	2	0	1	0	0	13	16:15	207	12	1	4	0	1	225
4:30	9	1	0	0	0	0	10	16:30	202	11	2	3	0	1	219
4:45	24	0	0	0	0	0	24	16:45	227	13	0	5	0	0	245
5:00	16	2	0	1	0	0	19	17:00	304	17	1	4	0	0	326
5:15	19	3	0	0	0	0	22	17:15	229	14	0	6	0	0	249
5:30	25	2	1	1	0	0	29	17:30	248	15	1	3	0	0	267
5:45	23	4	0	0	0	0	27	17:45	235	13	1	5	0	0	254
6:00	33	5	1	1	0	1	41	18:00	207	10	2	4	0	0	223
6:15	44	7	2	2	0	1	56	18:15	177	9	1	2	0	1	190
6:30	70	3	0	0	0	2	75	18:30	178	3	1	1	0	0	183
6:45	109	4	1	2	0	2	118	18:45	152	4	0	2	0	0	158
7:00	112	9	1	3	0	1	126	19:00	135	2	0	3	0	0	140
7:15	152	10	0	5	0	1	168	19:15	105	4	1	2	0	2	114
7:30	177	12	4	2	0	0	195	19:30	99	2	1	2	0	0	104
7:45	185	11	2	9	0	2	209	19:45	81	2	0	3	0	0	86
8:00	192	14	0	10	0	1	217	20:00	106	3	1	1	0	0	111
8:15	197	13	1	8	0	1	220	20:15	106	2	0	1	0	1	110
8:30	125	10	1	5	0	1	142	20:30	93	1	0	0	0	0	94
8:45	117	12	0	6	0	0	135	20:45	75	2	1	2	0	0	80
9:00	95	8	0	2	0	1	106	21:00	71	1	0	1	0	0	73
9:15	113	9	1	6	0	2	131	21:15	64	2	0	0	0	0	66
9:30	115	7	1	2	0	3	128	21:30	71	2	0	1	0	0	74
9:45	95	9	0	1	0	2	107	21:45	54	0	0	0	0	0	54
10:00	72	8	1	2	0	1	84	22:00	47	1	1	0	0	0	49
10:15	96	9	0	1	0	2	108	22:15	35	0	0	1	0	0	36
10:30	96	10	2	3	0	0	111	22:30	41	0	0	0	0	0	41
10:45	98	8	0	0	0	0	106	22:45	33	1	1	0	0	0	35
11:00	112	7	0	1	0	0	120	23:00	21	2	0	0	0	0	23
11:15	128	5	0	3	0	1	137	23:15	32	1	0	1	0	0	34
11:30	134	3	0	5	0	0	142	23:30	29	0	1	0	0	0	30
11:45	102	6	0	3	0	0	111	23:45	18	0	0	0	0	0	18
TOTAL	3,069	218	19	85	0	25	3,416	TOTAL	6,420	320	37	130	0	28	6,935

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	841

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	1,096

TOTAL: AM+PM	9,489	538	56	215	0	53	10,351
% OF TOTAL	91.7%	5.2%	0.5%	2.1%	0.0%	0.5%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS43 Gardendale St from Paramount Blvd to Lakewood Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	33	0	0	0	0	0	33	12:00	251	18	1	5	0	1	276
0:15	22	0	0	1	0	0	23	12:15	231	15	3	5	0	3	257
0:30	29	0	0	1	0	0	30	12:30	196	17	3	8	0	3	227
0:45	17	1	0	0	0	0	18	12:45	251	17	1	10	0	1	280
1:00	15	1	0	0	0	0	16	13:00	264	19	2	6	0	3	294
1:15	16	0	0	0	0	0	16	13:15	255	17	2	8	0	4	286
1:30	13	1	1	1	0	0	16	13:30	278	20	1	5	0	4	308
1:45	10	0	0	0	0	0	10	13:45	277	24	2	7	0	4	314
2:00	12	2	0	0	0	0	14	14:00	266	20	1	8	0	4	299
2:15	12	1	0	0	0	0	13	14:15	325	20	2	9	0	4	360
2:30	15	0	0	0	0	0	15	14:30	506	25	3	5	0	2	541
2:45	12	0	0	1	0	0	13	14:45	485	28	2	8	0	3	526
3:00	15	0	0	0	0	0	15	15:00	476	25	6	10	0	3	520
3:15	18	1	0	0	0	0	19	15:15	446	28	2	5	0	0	481
3:30	15	1	0	1	0	0	17	15:30	461	30	4	7	0	2	504
3:45	19	0	0	0	0	0	19	15:45	501	22	0	6	0	0	529
4:00	18	1	0	0	0	0	19	16:00	441	18	2	7	1	1	470
4:15	22	2	1	2	0	0	27	16:15	449	19	3	8	0	3	482
4:30	43	3	0	1	0	0	47	16:30	457	19	4	7	0	1	488
4:45	51	1	0	2	0	0	54	16:45	465	22	1	8	0	1	497
5:00	41	5	0	1	0	0	47	17:00	527	27	3	6	0	0	563
5:15	56	4	1	1	0	0	62	17:15	450	20	0	7	0	0	477
5:30	67	5	1	1	0	0	74	17:30	459	20	3	4	0	0	486
5:45	62	6	0	2	0	0	70	17:45	494	16	2	7	0	0	519
6:00	90	9	3	2	0	1	105	18:00	419	12	2	5	0	0	438
6:15	110	10	2	4	0	2	128	18:15	363	10	2	5	0	2	382
6:30	140	5	1	2	0	2	150	18:30	334	5	2	3	0	0	344
6:45	184	9	1	5	0	4	203	18:45	320	6	2	3	0	0	331
7:00	212	15	2	6	0	3	238	19:00	288	4	2	6	0	0	300
7:15	302	19	1	9	0	1	332	19:15	204	4	3	6	0	2	219
7:30	398	24	6	4	0	2	434	19:30	221	3	2	3	0	0	229
7:45	467	25	2	12	0	4	510	19:45	169	3	1	6	0	0	179
8:00	507	29	2	11	0	2	551	20:00	188	5	2	3	0	0	198
8:15	426	31	2	10	0	4	473	20:15	184	4	0	2	0	1	191
8:30	338	23	1	9	0	3	374	20:30	159	1	1	1	0	0	162
8:45	264	22	1	9	0	1	297	20:45	146	3	1	2	0	0	152
9:00	223	16	0	7	0	4	250	21:00	138	2	1	2	0	0	143
9:15	213	16	3	9	0	3	244	21:15	129	2	1	0	0	0	132
9:30	227	13	2	5	0	5	252	21:30	126	3	0	3	0	0	132
9:45	219	18	2	2	0	2	243	21:45	92	0	0	1	0	0	93
10:00	206	13	4	4	0	2	229	22:00	85	3	1	1	0	0	90
10:15	266	16	2	2	0	2	288	22:15	63	1	0	2	0	0	66
10:30	252	19	2	5	0	0	278	22:30	72	0	0	1	0	0	73
10:45	229	13	1	3	0	1	247	22:45	64	1	1	0	0	0	66
11:00	224	14	2	3	0	1	244	23:00	33	3	0	1	0	0	37
11:15	234	14	0	4	0	1	253	23:15	51	1	0	1	0	0	53
11:30	239	13	1	7	0	1	261	23:30	42	1	1	0	0	0	44
11:45	216	18	2	5	0	0	241	23:45	28	1	0	0	0	0	29
TOTAL	6,819	439	49	154	0	51	7,512	TOTAL	13,129	584	78	223	1	52	14,067

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,968

PM PEAK HOUR	2:30 PM
PM PEAK VOLUME	2,068

TOTAL: AM+PM	19,948	1,023	127	377	1	103	21,579
% OF TOTAL	92.4%	4.7%	0.6%	1.7%	0.0%	0.5%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 03, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS44 Foster Rd from Lakewood Blvd to Woodruff Ave_note-diff date

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	65	0	0	0	0	0	65	**12:00**	189	11	3	6	0	0	209
0:15	59	1	0	0	0	0	60	**12:15**	210	12	2	7	0	2	233
0:30	51	2	0	0	0	0	53	**12:30**	179	14	1	8	0	2	204
0:45	39	0	0	1	0	0	40	**12:45**	138	15	2	7	0	1	163
1:00	45	0	0	0	0	0	45	**13:00**	171	13	3	5	0	1	193
1:15	48	0	0	1	0	0	49	**13:15**	194	15	1	8	0	0	218
1:30	33	2	0	0	0	0	35	**13:30**	251	12	0	5	0	2	270
1:45	32	1	0	0	0	0	33	**13:45**	215	11	1	6	0	1	234
2:00	27	1	0	0	0	0	28	**14:00**	189	15	2	7	0	1	214
2:15	46	2	0	1	0	0	49	**14:15**	193	16	0	8	0	1	218
2:30	39	0	0	1	0	0	40	**14:30**	159	17	2	9	0	2	189
2:45	30	0	0	1	0	0	31	**14:45**	208	14	0	7	0	3	232
3:00	50	0	0	0	0	0	50	**15:00**	207	18	1	9	0	2	237
3:15	34	3	0	0	0	0	37	**15:15**	222	15	2	9	0	1	249
3:30	62	2	0	0	0	0	64	**15:30**	242	13	3	8	0	1	267
3:45	49	5	0	1	0	0	55	**15:45**	222	16	2	10	0	1	251
4:00	70	3	0	2	0	0	75	**16:00**	219	15	1	11	0	0	246
4:15	63	3	0	1	0	0	67	**16:15**	245	12	0	9	0	0	266
4:30	125	4	0	0	0	0	129	**16:30**	236	14	1	10	0	2	263
4:45	110	5	1	3	0	0	119	**16:45**	224	16	1	11	0	1	253
5:00	154	4	1	4	0	0	163	**17:00**	232	14	1	9	1	3	260
5:15	211	6	0	3	0	0	220	**17:15**	230	11	0	6	0	1	248
5:30	279	7	0	2	0	0	288	**17:30**	228	13	1	8	0	1	251
5:45	257	10	0	4	0	0	271	**17:45**	220	11	0	7	0	0	238
6:00	250	12	1	5	0	0	268	**18:00**	217	8	2	5	0	0	232
6:15	241	13	1	6	0	1	262	**18:15**	223	8	1	8	0	0	240
6:30	288	14	2	7	0	1	312	**18:30**	214	9	2	3	0	0	228
6:45	255	16	1	6	0	0	278	**18:45**	207	5	2	2	0	0	216
7:00	273	10	3	7	0	2	295	**19:00**	211	9	1	1	0	0	222
7:15	290	11	2	5	0	1	309	**19:15**	202	8	1	2	0	1	214
7:30	241	11	1	4	0	2	259	**19:30**	188	6	0	1	0	0	195
7:45	279	13	3	5	0	1	301	**19:45**	149	8	1	1	0	1	160
8:00	276	15	2	6	0	3	302	**20:00**	158	4	0	1	0	0	163
8:15	245	16	3	4	0	1	269	**20:15**	173	5	0	0	0	0	178
8:30	229	17	2	6	0	2	256	**20:30**	178	3	1	1	0	0	183
8:45	214	19	1	5	0	3	242	**20:45**	157	3	1	0	0	0	161
9:00	223	18	1	6	1	2	251	**21:00**	137	5	1	0	0	0	143
9:15	197	14	2	4	0	1	218	**21:15**	188	2	0	1	0	0	191
9:30	179	13	2	6	0	2	202	**21:30**	142	3	0	0	0	0	145
9:45	198	10	1	5	0	1	215	**21:45**	123	2	1	0	0	0	126
10:00	209	10	2	6	0	2	229	**22:00**	115	1	0	1	0	0	117
10:15	195	11	2	8	0	0	216	**22:15**	104	1	1	1	0	0	107
10:30	193	14	3	7	0	1	218	**22:30**	100	2	0	0	0	0	102
10:45	176	17	2	5	0	1	201	**22:45**	95	3	0	0	0	0	98
11:00	194	14	1	4	0	0	213	**23:00**	86	1	0	1	0	0	88
11:15	199	13	0	5	0	0	217	**23:15**	76	2	0	0	0	0	78
11:30	203	16	2	7	0	0	228	**23:30**	57	0	1	1	0	0	59
11:45	199	14	3	8	0	0	224	**23:45**	69	1	0	0	0	0	70
TOTAL	7,424	392	45	162	1	27	8,051	**TOTAL**	8,592	432	46	220	1	31	9,322

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	1,194

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	1,042

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	16,016	824	91	382	2	58	17,373
% OF TOTAL	92.2%	4.7%	0.5%	2.2%	0.0%	0.3%	100.0%
TOTAL: ALL	30,800	1,530	152	731	3	111	33,327
% OF TOTAL	92.4%	4.6%	0.5%	2.2%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 03, 2026
JOB #: SC5913
CITY: Downey
LOCATION: CLASS44 Foster Rd from Lakewood Blvd to Woodruff Ave_note-diff date

AM TIME	SOUTHBOUND 1	2	3	4	5	6	TOTAL	PM Time	SOUTHBOUND 1	2	3	4	5	6	TOTAL
0:00	74	0	1	1	0	0	76	12:00	204	14	1	5	0	1	225
0:15	71	0	1	1	0	0	73	12:15	157	16	2	4	0	2	181
0:30	71	0	0	0	0	0	71	12:30	129	13	0	5	0	1	148
0:45	73	1	0	0	0	0	74	12:45	147	12	1	4	0	2	166
1:00	57	1	1	1	0	0	60	13:00	184	10	1	5	0	1	201
1:15	53	2	1	0	0	0	56	13:15	192	14	2	4	0	1	213
1:30	40	0	0	1	0	0	41	13:30	203	15	1	4	0	1	224
1:45	52	0	0	0	0	0	52	13:45	175	12	2	5	0	2	196
2:00	31	0	0	0	0	0	31	14:00	185	13	0	6	0	1	205
2:15	43	0	0	1	0	0	44	14:15	233	15	1	7	0	3	259
2:30	44	1	0	0	0	0	45	14:30	216	14	0	8	0	1	239
2:45	35	2	1	0	0	0	38	14:45	200	12	0	8	0	2	222
3:00	31	1	0	1	0	0	33	15:00	228	17	0	9	0	1	255
3:15	37	2	0	1	0	0	40	15:15	222	15	1	8	0	1	247
3:30	47	1	0	0	0	0	48	15:30	228	18	2	7	0	0	255
3:45	34	2	0	1	0	0	37	15:45	217	15	1	10	0	2	245
4:00	26	3	0	2	0	0	31	16:00	257	12	2	7	0	1	279
4:15	38	2	0	0	0	0	40	16:15	256	13	2	8	0	0	279
4:30	44	3	0	3	0	0	50	16:30	256	14	1	9	0	1	281
4:45	55	3	0	1	0	0	59	16:45	279	12	0	8	0	1	300
5:00	51	4	1	2	0	0	58	17:00	321	11	1	6	0	0	339
5:15	58	3	0	3	0	0	64	17:15	232	10	0	8	0	0	250
5:30	75	4	0	1	0	0	80	17:30	189	12	1	7	0	0	209
5:45	94	5	0	2	0	0	101	17:45	167	11	2	5	0	0	185
6:00	95	6	1	4	0	2	108	18:00	240	8	0	5	0	0	253
6:15	110	5	1	6	0	1	123	18:15	244	9	1	4	0	1	259
6:30	151	7	0	4	0	1	163	18:30	252	7	2	2	0	0	263
6:45	150	9	0	6	0	2	167	18:45	266	6	0	1	0	0	273
7:00	156	13	1	7	0	1	178	19:00	247	5	1	2	0	0	255
7:15	173	14	1	8	0	2	198	19:15	251	4	1	2	0	0	258
7:30	196	10	2	9	0	1	218	19:30	226	3	1	1	0	1	232
7:45	173	14	3	7	0	0	197	19:45	205	4	0	3	0	1	213
8:00	185	14	1	5	0	1	206	20:00	216	3	1	2	0	0	222
8:15	177	11	0	8	0	2	198	20:15	205	4	0	1	0	0	210
8:30	199	13	1	7	0	1	221	20:30	204	2	1	2	0	0	209
8:45	165	14	1	8	0	1	189	20:45	186	3	0	1	0	0	190
9:00	179	15	0	5	0	2	201	21:00	174	4	0	1	0	0	179
9:15	144	12	2	7	1	0	166	21:15	166	2	1	2	0	0	171
9:30	179	11	0	3	0	1	194	21:30	158	3	0	1	0	0	162
9:45	194	14	1	4	0	0	213	21:45	153	2	0	2	0	0	157
10:00	171	11	0	8	0	0	190	22:00	145	3	1	0	0	0	149
10:15	159	10	1	4	0	1	175	22:15	144	2	0	1	0	0	147
10:30	184	9	2	5	0	2	202	22:30	140	1	0	1	0	0	142
10:45	193	10	0	6	0	1	210	22:45	118	1	0	0	0	0	119
11:00	160	12	0	3	0	1	176	23:00	127	0	0	1	0	0	128
11:15	187	9	0	4	0	2	202	23:15	119	1	0	0	0	0	120
11:30	220	11	1	3	0	0	235	23:30	110	2	1	0	0	0	113
11:45	190	13	1	3	0	0	207	23:45	87	0	0	1	0	0	88
TOTAL	5,324	307	26	156	1	25	5,839	TOTAL	9,460	399	35	193	0	28	10,115

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	823

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	1,199

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	14,784	706	61	349	1	53	15,954
% OF TOTAL	92.7%	4.4%	0.4%	2.2%	0.0%	0.3%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 03, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS44 Foster Rd from Lakewood Blvd to Woodruff Ave_note-diff date

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	139	0	1	1	0	0	141	**12:00**	393	25	4	11	0	1	434
0:15	130	1	1	1	0	0	133	**12:15**	367	28	4	11	0	4	414
0:30	122	2	0	0	0	0	124	**12:30**	308	27	1	13	0	3	352
0:45	112	1	0	1	0	0	114	**12:45**	285	27	3	11	0	3	329
1:00	102	1	1	1	0	0	105	**13:00**	355	23	4	10	0	2	394
1:15	101	2	1	1	0	0	105	**13:15**	386	29	3	12	0	1	431
1:30	73	2	0	1	0	0	76	**13:30**	454	27	1	9	0	3	494
1:45	84	1	0	0	0	0	85	**13:45**	390	23	3	11	0	3	430
2:00	58	1	0	0	0	0	59	**14:00**	374	28	2	13	0	2	419
2:15	89	2	0	2	0	0	93	**14:15**	426	31	1	15	0	4	477
2:30	83	1	0	1	0	0	85	**14:30**	375	31	2	17	0	3	428
2:45	65	2	1	1	0	0	69	**14:45**	408	26	0	15	0	5	454
3:00	81	1	0	1	0	0	83	**15:00**	435	35	1	18	0	3	492
3:15	71	5	0	1	0	0	77	**15:15**	444	30	3	17	0	2	496
3:30	109	3	0	0	0	0	112	**15:30**	470	31	5	15	0	1	522
3:45	83	7	0	2	0	0	92	**15:45**	439	31	3	20	0	3	496
4:00	96	6	0	4	0	0	106	**16:00**	476	27	3	18	0	1	525
4:15	101	5	0	1	0	0	107	**16:15**	501	25	2	17	0	0	545
4:30	169	7	0	3	0	0	179	**16:30**	492	28	2	19	0	3	544
4:45	165	8	1	4	0	0	178	**16:45**	503	28	1	19	0	2	553
5:00	205	8	2	6	0	0	221	**17:00**	553	25	2	15	1	3	599
5:15	269	9	0	6	0	0	284	**17:15**	462	21	0	14	0	1	498
5:30	354	11	0	3	0	0	368	**17:30**	417	25	2	15	0	1	460
5:45	351	15	0	6	0	0	372	**17:45**	387	22	2	12	0	0	423
6:00	345	18	2	9	0	2	376	**18:00**	457	16	2	10	0	0	485
6:15	351	18	2	12	0	2	385	**18:15**	467	17	2	12	0	1	499
6:30	439	21	2	11	0	2	475	**18:30**	466	16	4	5	0	0	491
6:45	405	25	1	12	0	2	445	**18:45**	473	11	2	3	0	0	489
7:00	429	23	4	14	0	3	473	**19:00**	458	14	2	3	0	0	477
7:15	463	25	3	13	0	3	507	**19:15**	453	12	2	4	0	1	472
7:30	437	21	3	13	0	3	477	**19:30**	414	9	1	2	0	1	427
7:45	452	27	6	12	0	1	498	**19:45**	354	12	1	4	0	2	373
8:00	461	29	3	11	0	4	508	**20:00**	374	7	1	3	0	0	385
8:15	422	27	3	12	0	3	467	**20:15**	378	9	0	1	0	0	388
8:30	428	30	3	13	0	3	477	**20:30**	382	5	2	3	0	0	392
8:45	379	33	2	13	0	4	431	**20:45**	343	6	1	1	0	0	351
9:00	402	33	1	11	1	4	452	**21:00**	311	9	1	1	0	0	322
9:15	341	26	4	11	1	1	384	**21:15**	354	4	1	3	0	0	362
9:30	358	24	2	9	0	3	396	**21:30**	300	6	0	1	0	0	307
9:45	392	24	2	9	0	1	428	**21:45**	276	4	1	2	0	0	283
10:00	380	21	2	14	0	2	419	**22:00**	260	4	1	1	0	0	266
10:15	354	21	3	12	0	1	391	**22:15**	248	3	1	2	0	0	254
10:30	377	23	5	12	0	3	420	**22:30**	240	3	0	1	0	0	244
10:45	369	27	2	11	0	2	411	**22:45**	213	4	0	0	0	0	217
11:00	354	26	1	7	0	1	389	**23:00**	213	1	0	2	0	0	216
11:15	386	22	0	9	0	2	419	**23:15**	195	3	0	0	0	0	198
11:30	423	27	3	10	0	0	463	**23:30**	167	2	2	1	0	0	172
11:45	389	27	4	11	0	0	431	**23:45**	156	1	0	1	0	0	158
TOTAL	12,748	699	71	318	2	52	13,890	**TOTAL**	18,052	831	81	413	1	59	19,437

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,990

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	2,241

TOTAL: AM+PM	30,800	1,530	152	731	3	111	33,327
% OF TOTAL	92.4%	4.6%	0.5%	2.2%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS45 Bellflower Ave from Stewart and Gray Rd to Imperial Hwy

AM TIME	NORTHBOUND							PM Time	NORTHBOUND						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	22	1	0	0	0	0	23	**12:00**	153	13	0	6	0	0	172
0:15	21	0	0	1	0	0	22	**12:15**	146	15	3	8	0	1	173
0:30	18	0	0	0	0	0	18	**12:30**	164	11	1	9	0	2	187
0:45	21	0	0	0	0	0	21	**12:45**	150	14	0	10	0	3	177
1:00	16	1	0	0	0	0	17	**13:00**	141	11	2	12	0	0	166
1:15	14	0	0	2	0	0	16	**13:15**	155	10	2	13	0	1	181
1:30	12	0	0	0	0	0	12	**13:30**	140	13	3	14	0	2	172
1:45	8	0	0	0	0	0	8	**13:45**	112	11	2	15	0	2	142
2:00	12	0	0	0	0	0	12	**14:00**	137	12	1	9	0	2	161
2:15	16	0	0	0	0	0	16	**14:15**	148	16	2	8	0	1	175
2:30	4	1	0	2	0	0	7	**14:30**	177	17	1	10	0	1	206
2:45	13	0	0	1	0	0	14	**14:45**	201	11	1	12	0	1	226
3:00	3	0	0	1	0	0	4	**15:00**	208	10	0	13	0	0	231
3:15	15	0	0	1	0	0	16	**15:15**	212	13	2	9	0	2	238
3:30	11	1	1	1	0	0	14	**15:30**	217	15	0	14	0	3	249
3:45	15	2	0	0	0	0	17	**15:45**	177	14	1	10	0	0	202
4:00	14	1	0	0	0	0	15	**16:00**	193	12	1	9	1	1	217
4:15	17	0	0	1	0	0	18	**16:15**	165	16	1	10	0	0	192
4:30	18	0	1	2	0	0	21	**16:30**	215	17	2	8	0	0	242
4:45	37	1	0	1	0	0	39	**16:45**	201	12	2	9	0	0	224
5:00	21	2	0	2	0	0	25	**17:00**	223	13	1	11	0	2	250
5:15	16	3	0	3	0	0	22	**17:15**	179	10	0	12	0	2	203
5:30	33	6	0	4	0	0	43	**17:30**	201	12	1	14	0	0	228
5:45	52	7	0	2	0	0	61	**17:45**	188	11	2	13	0	1	215
6:00	44	5	0	3	0	0	52	**18:00**	202	14	1	12	0	1	230
6:15	61	4	2	4	0	1	72	**18:15**	172	10	1	10	0	0	193
6:30	72	7	0	7	0	1	87	**18:30**	189	9	0	9	0	0	207
6:45	105	8	1	6	0	0	120	**18:45**	184	8	1	8	0	0	201
7:00	95	7	3	10	0	1	116	**19:00**	185	11	1	9	0	0	206
7:15	143	10	2	6	0	1	162	**19:15**	159	8	1	8	0	0	176
7:30	152	15	3	5	0	2	177	**19:30**	131	9	2	7	0	0	149
7:45	159	14	1	7	0	3	184	**19:45**	120	5	1	8	0	0	134
8:00	141	11	1	6	0	1	160	**20:00**	120	7	1	3	0	1	132
8:15	134	15	1	5	0	1	156	**20:15**	99	4	0	4	0	0	107
8:30	102	10	2	4	0	2	120	**20:30**	104	5	1	6	0	0	116
8:45	124	9	0	9	0	2	144	**20:45**	87	3	2	5	0	0	97
9:00	92	8	1	8	1	1	111	**21:00**	78	4	0	4	0	0	86
9:15	102	7	1	11	0	1	122	**21:15**	75	4	0	3	0	0	82
9:30	124	12	1	7	0	1	145	**21:30**	65	1	1	2	0	0	69
9:45	150	14	0	8	0	0	172	**21:45**	60	2	0	1	0	0	63
10:00	126	12	2	6	0	3	149	**22:00**	56	1	1	1	0	0	59
10:15	144	13	1	7	0	3	168	**22:15**	52	2	0	1	0	0	55
10:30	130	10	1	5	0	3	149	**22:30**	42	1	0	1	0	0	44
10:45	133	12	0	6	0	2	153	**22:45**	36	3	0	0	0	0	39
11:00	128	13	0	8	0	0	149	**23:00**	33	2	0	1	0	0	36
11:15	117	13	2	7	0	0	139	**23:15**	26	1	0	2	0	0	29
11:30	141	8	1	6	0	1	157	**23:30**	24	0	0	0	0	0	24
11:45	138	12	1	5	0	0	156	**23:45**	24	0	1	1	0	0	26
TOTAL	3,286	275	29	180	1	30	3,801	**TOTAL**	6,526	423	46	364	1	29	7,389

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	683

PM PEAK HOUR	2:45 PM
PM PEAK VOLUME	944

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	9,812	698	75	544	2	59	11,190
% OF TOTAL	87.7%	6.2%	0.7%	4.9%	0.0%	0.5%	100.0%
TOTAL: ALL	19,319	1,427	141	985	4	114	21,990
% OF TOTAL	87.9%	6.5%	0.6%	4.5%	0.0%	0.5%	100.0%

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026
JOB #: SC5913

CITY: Downey
LOCATION: CLASS45 Bellflower Ave from Stewart and Gray Rd to Imperial Hwy

AM	SOUTHBOUND							PM	SOUTHBOUND						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	19	2	1	0	0	0	22	12:00	150	12	2	4	0	2	170
0:15	17	1	0	1	0	0	19	12:15	158	11	1	5	0	1	176
0:30	17	0	0	0	0	0	17	12:30	162	13	0	8	0	1	184
0:45	12	0	0	1	0	0	13	12:45	178	10	0	7	0	1	196
1:00	13	1	0	0	0	0	14	13:00	150	17	2	5	0	2	176
1:15	9	0	0	0	0	0	9	13:15	209	15	2	4	0	1	231
1:30	8	0	0	0	0	0	8	13:30	167	12	1	5	0	1	186
1:45	5	0	0	0	0	0	5	13:45	155	13	1	7	0	2	178
2:00	5	0	0	0	0	0	5	14:00	157	17	1	8	0	1	184
2:15	3	0	0	0	0	0	3	14:15	183	15	2	10	0	0	210
2:30	12	0	0	0	0	0	12	14:30	169	13	1	12	0	1	196
2:45	6	0	0	0	0	0	6	14:45	151	14	2	9	0	2	178
3:00	20	1	0	0	0	0	21	15:00	174	13	1	13	0	1	202
3:15	14	0	0	1	0	0	15	15:15	122	17	2	14	0	1	156
3:30	11	0	0	0	0	0	11	15:30	113	18	0	12	0	1	144
3:45	8	0	0	1	0	0	9	15:45	145	14	1	13	0	2	175
4:00	9	1	1	2	0	0	13	16:00	133	17	2	16	0	0	168
4:15	11	2	0	1	0	0	14	16:15	132	15	0	14	0	1	162
4:30	12	0	0	1	0	0	13	16:30	154	13	2	12	1	1	183
4:45	24	2	0	3	0	0	29	16:45	131	14	1	13	0	0	159
5:00	33	3	0	1	0	0	37	17:00	150	10	0	9	0	2	171
5:15	47	2	0	2	0	0	51	17:15	157	12	1	8	0	1	179
5:30	61	4	0	4	0	0	69	17:30	159	10	3	10	0	0	182
5:45	58	5	0	3	0	0	66	17:45	137	8	1	8	0	0	154
6:00	64	6	0	5	0	1	76	18:00	135	9	0	5	0	1	150
6:15	85	7	2	7	0	0	101	18:15	132	10	0	6	0	0	148
6:30	102	9	1	5	0	1	118	18:30	164	7	1	5	0	1	178
6:45	99	8	1	6	0	0	114	18:45	168	8	1	3	0	0	180
7:00	96	10	0	4	0	1	111	19:00	183	5	2	2	0	0	192
7:15	113	14	2	5	0	1	135	19:15	171	7	0	3	0	0	181
7:30	160	15	1	5	0	2	183	19:30	154	6	1	1	0	0	162
7:45	174	13	0	6	0	2	195	19:45	144	4	0	2	0	0	150
8:00	195	16	0	5	0	3	219	20:00	146	3	0	3	0	0	152
8:15	166	14	2	8	0	1	191	20:15	131	2	0	2	0	1	136
8:30	117	15	3	4	0	2	141	20:30	119	3	1	2	0	0	125
8:45	110	12	1	5	0	1	129	20:45	99	2	0	2	0	0	103
9:00	101	17	1	6	0	2	127	21:00	109	2	0	1	0	0	112
9:15	124	13	0	5	1	0	143	21:15	80	3	0	1	0	0	84
9:30	134	11	2	7	0	1	155	21:30	85	2	1	1	0	0	89
9:45	133	17	0	6	0	1	157	21:45	74	2	0	2	0	0	78
10:00	112	15	1	8	0	2	138	22:00	61	1	0	3	0	0	65
10:15	97	18	2	9	0	1	127	22:15	51	1	0	1	0	0	53
10:30	114	12	1	8	0	0	135	22:30	49	0	0	0	0	0	49
10:45	166	14	1	7	0	2	190	22:45	44	0	1	0	0	0	45
11:00	129	12	2	8	0	2	153	23:00	35	2	0	1	0	0	38
11:15	117	9	1	6	0	1	134	23:15	35	0	0	1	0	0	36
11:30	110	12	2	5	0	0	129	23:30	29	0	0	1	0	0	30
11:45	138	13	1	6	0	0	158	23:45	23	1	0	0	0	0	24
TOTAL	3,390	326	29	167	1	27	3,940	TOTAL	6,117	403	37	274	1	28	6,860

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	788

PM PEAK HOUR	12:45 PM
PM PEAK VOLUME	789

TOTAL: AM+PM	9,507	729	66	441	2	55	10,800
% OF TOTAL	88.0%	6.8%	0.6%	4.1%	0.0%	0.5%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

21126

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, February 24, 2026 **CITY:** Downey

JOB #: SC5913 **LOCATION:** CLASS45 Bellflower Ave from Stewart and Gray Rd to Imperial Hwy

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	41	3	1	0	0	0	45	12:00	303	25	2	10	0	2	342
0:15	38	1	0	2	0	0	41	12:15	304	26	4	13	0	2	349
0:30	35	0	0	0	0	0	35	12:30	326	24	1	17	0	3	371
0:45	33	0	0	1	0	0	34	12:45	328	24	0	17	0	4	373
1:00	29	2	0	0	0	0	31	13:00	291	28	4	17	0	2	342
1:15	23	0	0	2	0	0	25	13:15	364	25	4	17	0	2	412
1:30	20	0	0	0	0	0	20	13:30	307	25	4	19	0	3	358
1:45	13	0	0	0	0	0	13	13:45	267	24	3	22	0	4	320
2:00	17	0	0	0	0	0	17	14:00	294	29	2	17	0	3	345
2:15	19	0	0	0	0	0	19	14:15	331	31	4	18	0	1	385
2:30	16	1	0	2	0	0	19	14:30	346	30	2	22	0	2	402
2:45	19	0	0	1	0	0	20	14:45	352	25	3	21	0	3	404
3:00	23	1	0	1	0	0	25	15:00	382	23	1	26	0	1	433
3:15	29	0	0	2	0	0	31	15:15	334	30	4	23	0	3	394
3:30	22	1	1	1	0	0	25	15:30	330	33	0	26	0	4	393
3:45	23	2	0	1	0	0	26	15:45	322	28	2	23	0	2	377
4:00	23	2	1	2	0	0	28	16:00	326	29	3	25	1	1	385
4:15	28	2	0	2	0	0	32	16:15	297	31	1	24	0	1	354
4:30	30	0	1	3	0	0	34	16:30	369	30	4	20	1	1	425
4:45	61	3	0	4	0	0	68	16:45	332	26	3	22	0	0	383
5:00	54	5	0	3	0	0	62	17:00	373	23	1	20	0	4	421
5:15	63	5	0	5	0	0	73	17:15	336	22	1	20	0	3	382
5:30	94	10	0	8	0	0	112	17:30	360	22	4	24	0	0	410
5:45	110	12	0	5	0	0	127	17:45	325	19	3	21	0	1	369
6:00	108	11	0	8	0	1	128	18:00	337	23	1	17	0	2	380
6:15	146	11	4	11	0	1	173	18:15	304	20	1	16	0	0	341
6:30	174	16	1	12	0	2	205	18:30	353	16	1	14	0	1	385
6:45	204	16	2	12	0	0	234	18:45	352	16	2	11	0	0	381
7:00	191	17	3	14	0	2	227	19:00	368	16	3	11	0	0	398
7:15	256	24	4	11	0	2	297	19:15	330	15	1	11	0	0	357
7:30	312	30	4	10	0	4	360	19:30	285	15	3	8	0	0	311
7:45	333	27	1	13	0	5	379	19:45	264	9	1	10	0	0	284
8:00	336	27	1	11	0	4	379	20:00	266	10	1	6	0	1	284
8:15	300	29	3	13	0	2	347	20:15	230	6	0	6	0	1	243
8:30	219	25	5	8	0	4	261	20:30	223	8	2	8	0	0	241
8:45	234	21	1	14	0	3	273	20:45	186	5	2	7	0	0	200
9:00	193	25	2	14	1	3	238	21:00	187	6	0	5	0	0	198
9:15	226	20	1	16	1	1	265	21:15	155	7	0	4	0	0	166
9:30	258	23	3	14	0	2	300	21:30	150	3	2	3	0	0	158
9:45	283	31	0	14	0	1	329	21:45	134	4	0	3	0	0	141
10:00	238	27	3	14	0	5	287	22:00	117	2	1	4	0	0	124
10:15	241	31	3	16	0	4	295	22:15	103	3	0	2	0	0	108
10:30	244	22	2	13	0	3	284	22:30	91	1	0	1	0	0	93
10:45	299	26	1	13	0	4	343	22:45	80	3	1	0	0	0	84
11:00	257	25	2	16	0	2	302	23:00	68	4	0	2	0	0	74
11:15	234	22	3	13	0	1	273	23:15	61	1	0	3	0	0	65
11:30	251	20	3	11	0	1	286	23:30	53	0	0	1	0	0	54
11:45	276	25	2	11	0	0	314	23:45	47	1	1	1	0	0	50
TOTAL	6,676	601	58	347	2	57	7,741	TOTAL	12,643	826	83	638	2	57	14,249

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,465

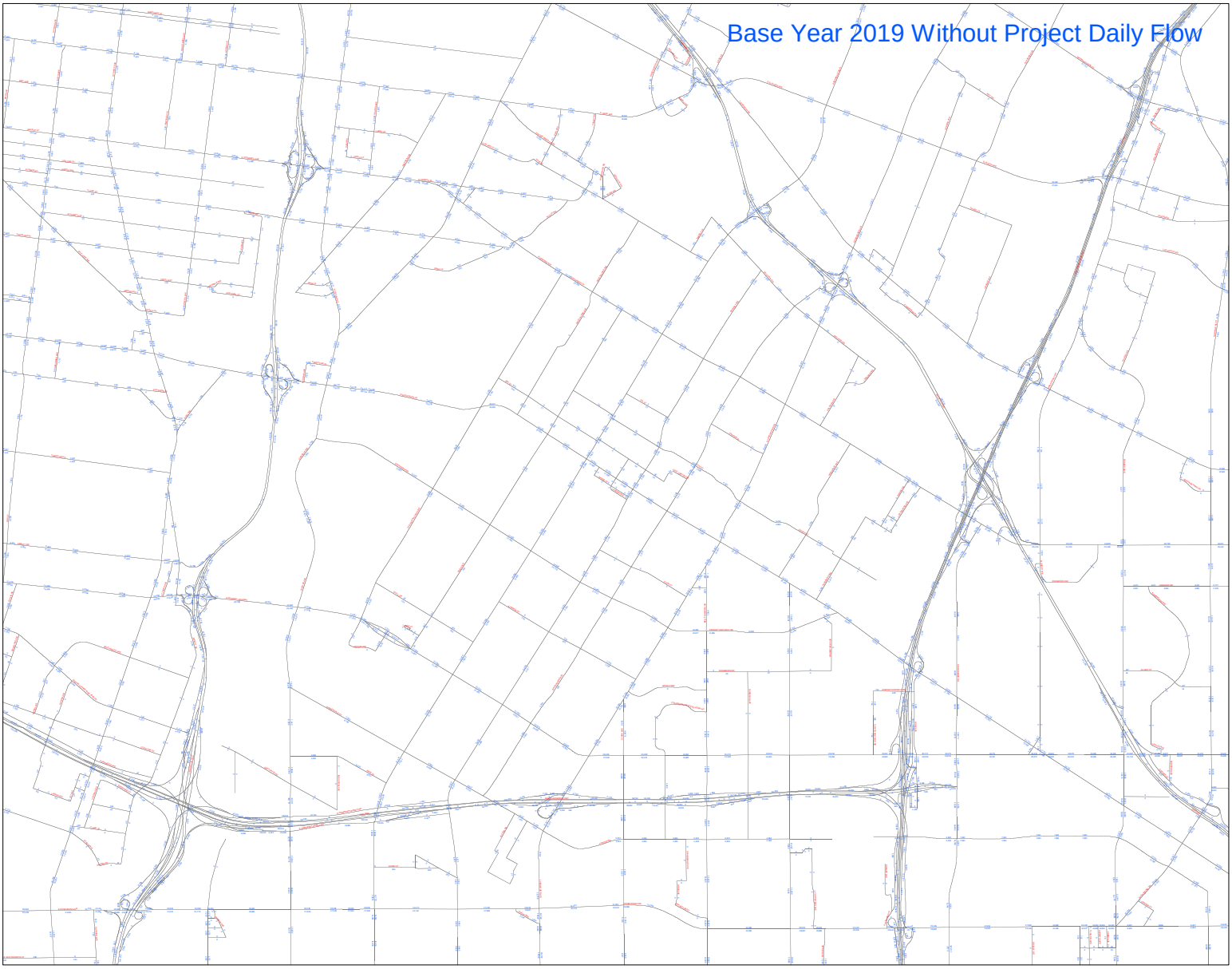
PM PEAK HOUR	2:30 PM
PM PEAK VOLUME	1,633

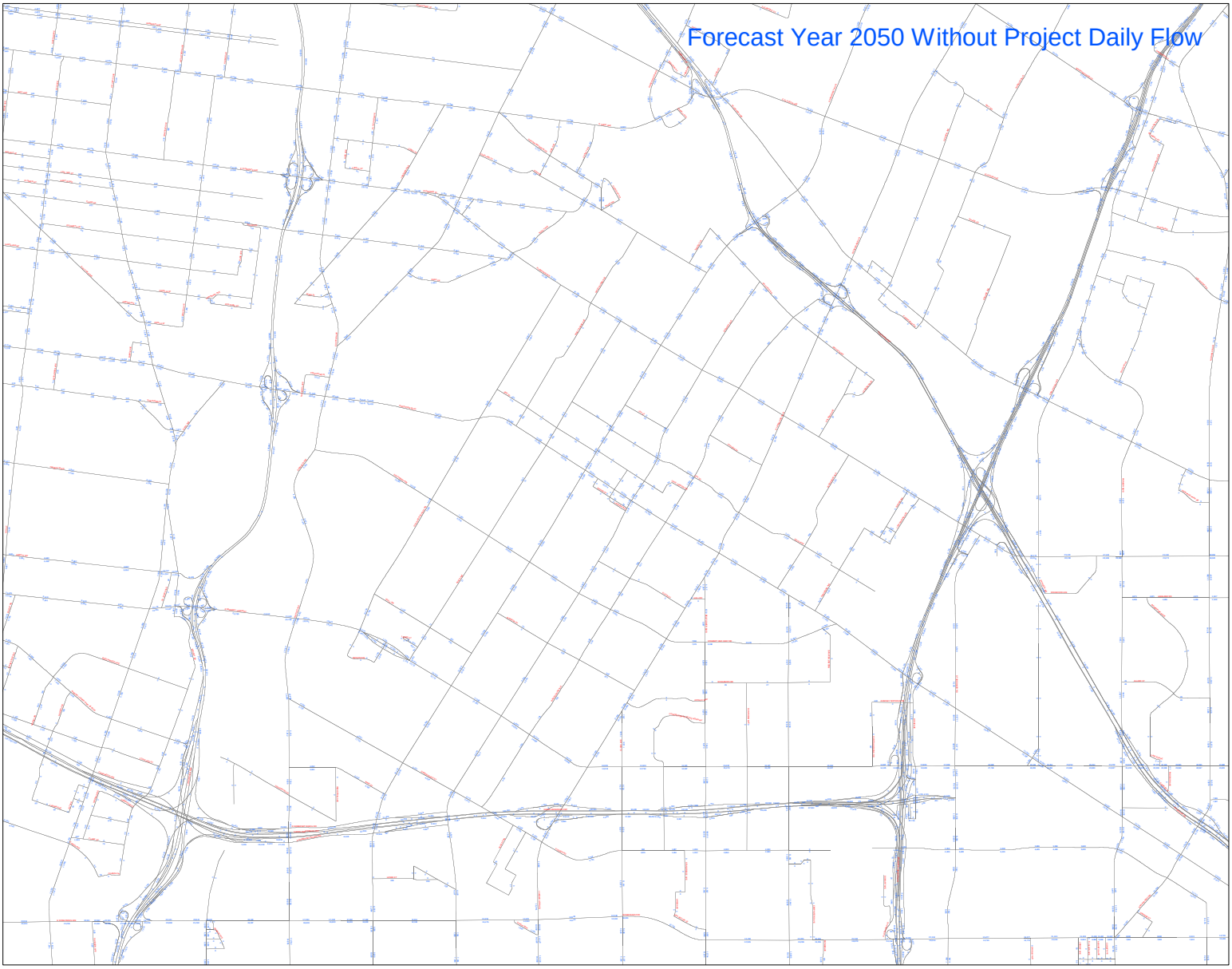
TOTAL: AM+PM	19,319	1,427	141	985	4	114	21,990
% OF TOTAL	87.9%	6.5%	0.6%	4.5%	0.0%	0.5%	100.0%

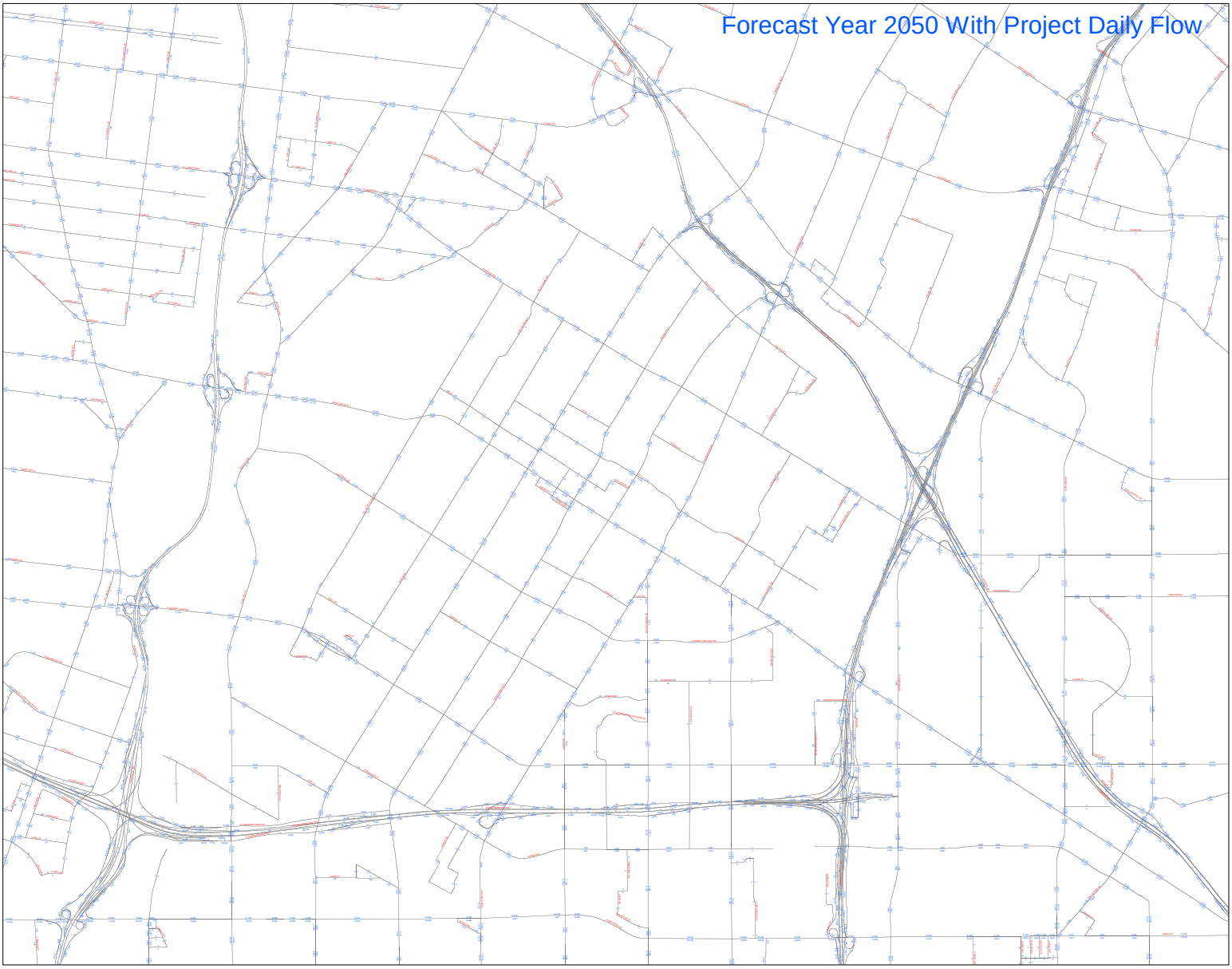
CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

APPENDIX C

TRAVEL DEMAND MODEL PLOTS


Base Year 2019 Without Project Daily Flow


Forecast Year 2050 Without Project Daily Flow


Forecast Year 2050 With Project Daily Flow

APPENDIX D

POST-PROCESSING WORKSHEETS

Roadway	Study Segment	Daily Traffic Volume					
		SCAG Base 2019	Existing 2026	SCAG Future 2050	SCAG Proposed 2050	Current GP Buildout 2045	Proposed GP Buildout 2045
1. Paramount Blvd	Telegraph Rd to I-5 Freeway	46,300	32,900	50,300	51,600	35,400	36,200
2. Paramount Blvd	I-5 Freeway to Gallatin Rd	59,000	42,500	60,800	62,700	44,600	44,800
3. Paramount Blvd	Gallatin Rd to Florence Ave	44,700	34,600	48,400	48,900	36,900	37,200
4. Paramount Blvd	Florence Ave to Firestone Blvd	33,500	30,900	38,100	38,700	33,700	34,000
5. Paramount Blvd	Firestone Blvd to Stewart & Gray Rd	29,700	27,300	31,200	33,300	28,700	29,500
6. Paramount Blvd	Stewart & Gray Rd to Imperial Hwy	26,200	27,700	29,800	32,000	29,900	31,300
7. Paramount Blvd	Imperial Hwy to Gardendale St	24,600	25,400	26,900	28,800	26,800	28,000
8. Lakewood Blvd	Telegraph Rd to I-5 Freeway	58,100	46,600	60,200	62,200	48,900	49,100
9. Lakewood Blvd	I-5 Freeway to Gallatin Rd	55,700	39,400	58,600	57,200	41,400	41,400
10. Lakewood Blvd	Gallatin Rd to Florence Ave	42,200	32,300	38,400	41,500	33,900	33,900
11. Lakewood Blvd	Florence Ave to Firestone Blvd	52,700	29,600	47,100	50,800	31,100	31,100
12. Lakewood Blvd	Firestone Blvd to Stewart & Gray Rd	42,000	19,700	41,000	44,800	20,700	21,400
13. Lakewood Blvd	Stewart & Gray Rd to Imperial Hwy	38,900	31,700	35,700	42,800	33,300	34,100
14. Lakewood Blvd	Imperial Hwy to I-105 Freeway	39,300	31,600	38,300	43,000	33,200	33,900
15. Lakewood Blvd	Foster Rd to Rosecrans Ave	37,900	30,800	32,700	35,300	32,300	32,300
16. Telegraph Rd	City Limits to Paramount Blvd	57,600	23,900	38,700	39,100	25,100	25,100
17. Telegraph Rd	Paramount Blvd to Lakewood Blvd	60,100	31,200	42,300	42,300	32,800	32,800
18. Telegraph Rd	Lakewood Blvd to City Limits	50,300	27,700	33,300	33,600	29,100	29,100
19. Florence Ave	City Limits to Old River School Rd	57,900	37,800	65,300	66,300	42,400	42,900
20. Florence Ave	Old River School Rd to Paramount Blvd	56,400	42,300	61,100	62,300	45,200	45,900
21. Florence Ave	Paramount Blvd to Lakewood Blvd	53,500	38,200	59,200	61,100	41,700	42,800
22. Florence Ave	Lakewood Blvd to I-605 Freeway	58,600	35,400	64,000	68,000	38,700	41,200
23. Firestone Blvd	City Limits to Old River School Rd	53,000	46,800	56,900	57,900	49,200	49,800
24. Firestone Blvd	Old River School Rd to Paramount Blvd	51,100	29,900	56,400	58,200	33,200	34,300
25. Firestone Blvd	Paramount Blvd to Lakewood Blvd	37,600	30,000	39,900	40,700	31,500	31,900
26. Firestone Blvd	Lakewood Blvd to Woodruff Ave	47,200	42,500	49,500	52,600	44,600	45,800
27. Firestone Blvd	Stewart & Gray Rd to City Limits	59,200	46,400	56,000	61,200	48,700	48,700
28. Imperial Hwy	Old River School Rd to Paramount Blvd	44,000	37,700	32,100	35,000	39,600	39,600
29. Imperial Hwy	Paramount Blvd to Lakewood Blvd	44,100	31,900	33,000	35,200	33,500	33,500
30. Imperial Hwy	Lakewood Blvd to Woodruff Ave	39,500	36,200	30,900	35,000	38,000	38,000
31. Woodruff Ave	Firestone Blvd to Imperial Hwy	25,300	17,700	23,700	27,000	18,600	18,800
32. Old River School Rd	Florence Ave to Firestone Blvd	15,200	18,300	7,700	8,100	19,200	19,200
33. Old River School Rd	Stewart & Gray Rd to Imperial Hwy	31,800	12,400	21,000	22,100	13,000	13,000
34. Downey Ave	Florence Ave to Firestone Blvd	9,100	11,100	7,100	9,000	11,700	11,700
35. Downey Ave	Stewart & Gray Rd to Imperial Hwy	12,900	14,100	11,000	12,400	14,800	14,800
36. Brookshire Ave	Florence Ave to Firestone Blvd	7,300	14,700	4,100	4,600	15,400	15,400
37. Brookshire Ave	Stewart & Gray Rd to Imperial Hwy	2,400	13,400	1,200	1,700	14,100	14,100
38. Gallatin Rd	Paramount Blvd to Lakewood Blvd	16,400	10,500	13,000	15,000	11,000	11,000
39. Stewart & Gray Rd	Old River School Rd to Paramount Blvd	35,300	16,700	31,500	34,800	17,500	17,500
40. Stewart & Gray Rd	Paramount Blvd to Lakewood Blvd	29,600	23,200	23,700	26,400	24,400	24,400
41. Stewart & Gray Rd	Lakewood Blvd to Woodruff Ave	23,000	27,100	19,300	23,700	28,500	28,500
42. Gardendale St	Garfield Ave to Paramount Blvd	14,300	11,300	7,400	7,500	11,900	11,900
43. Gardendale St	Paramount Blvd to Lakewood Blvd	18,800	12,000	12,200	13,800	12,600	12,600
44. Foster Rd	Lakewood Blvd to Woodruff Ave	6,900	9,500	6,900	7,100	10,000	10,000
45. Bellflower Ave	Stewart & Gray Rd to Imperial Hwy	18,400	22,000	14,400	14,800	23,100	23,100

APPENDIX E

SED WORKSHEETS

	Residential				Non-Residential Employment						
TAZ	Single-Family DU	ADU	Mulfifamily DU	Total DU	Comm	Office	Industrial	Public Facility	Hotel	Hospital	Total Employment
21714100	289	0	0	289	37	0	0	0	0	0	37
21761100	17	9	700	726	1,420	293	483	0	2,010	1,909	6,115
21762100	222	116	423	761	80	122	0	22	0	0	224
21762200	466	71	938	1,475	20	0	0	0	159	0	179
21762300	597	36	253	886	48	0	0	35	31	0	114
21762400	355	7	42	404	157	131	0	0	12	101	401
21767100	445	44	365	854	242	265	4	4	37	0	552
21767200	662	45	64	771	304	7	0	0	122	0	433
21767300	261	89	371	721	191	211	0	0	9	0	411
21767400	363	37	344	744	29	0	0	0	8	0	37
21768100	341	17	143	501	207	260	0	29	1	0	497
21768200	523	80	3	606	0	0	103	0	9	0	112
21770100	411	28	460	899	455	66	0	0	129	0	650
21770200	340	12	126	478	8	22	0	0	0	0	30
21770300	412	0	25	437	0	0	0	0	0	0	0
21770400	150	1	122	273	169	51	0	0	0	0	220
21771100	671	68	695	1,434	241	179	0	0	238	0	658
21772100	227	72	242	541	87	317	0	0	65	0	469
21772200	261	36	175	472	86	172	0	0	12	0	270
21772300	474	90	72	636	159	16	0	0	30	0	205
21772400	320	16	36	372	107	0	0	0	130	0	237
21772500	278	100	460	838	569	52	138	28	211	0	998
21772600	225	63	69	357	5	0	0	0	0	0	5
21776100	412	21	128	561	41	239	0	25	198	44	547
21776200	329	78	640	1,047	248	64	0	0	300	0	612
21776300	574	98	363	1,035	33	0	0	0	8	0	41
21778100	326	10	189	525	573	449	392	9	54	1,541	3,018
21778200	264	13	432	709	148	648	52	0	111	191	1,150
21778300	155	7	777	939	768	216	238	25	220	0	1,467
21780100	460	14	17	491	98	0	0	0	522	0	620
21780200	380	39	0	419	0	0	0	0	2	0	2
21780300	204	57	58	319	28	112	0	0	428	0	568
21780400	250	81	232	563	118	59	56	0	123	0	356
21780500	252	4	0	256	0	0	0	0	0	0	0
21780600	309	29	0	338	3	0	45	0	59	0	107
21782100	379	40	275	694	17	163	0	0	52	0	232
21782200	56	2	606	664	186	111	0	37	235	0	569
21782300	232	7	1,238	1,477	267	624	0	9	148	0	1,048
21782400	75	6	1,686	1,767	182	244	0	0	74	0	500
21783100	185	9	1,523	1,717	2,012	790	263	557	233	5,660	9,515
21784100	230	0	556	786	60	25	0	0	174	0	259
21784200	141	4	7	152	37	0	0	0	0	0	37
21784300	134	4	0	138	0	0	0	0	0	0	0

TAZ	Residential				Non-Residential Employment						
	Single-Family DU	ADU	Mulfifamily DU	Total DU	Comm	Office	Industrial	Public Facility	Hotel	Hospital	Total Employment
21784400	353	11	159	523	210	0	0	0	134	0	344
21784500	175	15	157	347	297	91	0	0	711	0	1,099
21784600	197	16	7	220	0	0	0	0	0	0	0
21784700	173	10	267	450	48	0	0	13	18	0	79
21787100	418	127	36	581	124	206	0	0	32	0	362
21787200	90	33	154	277	278	196	0	7	436	0	917
21790100	586	19	656	1,261	112	86	10	7	15	0	230
21790200	300	39	0	339	0	0	0	0	72	0	72
21790300	342	44	324	710	44	43	0	0	42	0	129
21790400	307	79	16	402	101	354	0	21	22	0	498
21790500	557	89	413	1,059	615	494	0	0	202	0	1,311
21790600	369	29	0	398	0	0	0	0	0	0	0
21791100	6	0	459	465	633	168	1,644	11	346	0	2,802
21791200	174	2	1,102	1,278	561	1,381	580	0	89	0	2,611
21791300	94	23	728	845	751	123	1,188	51	13	0	2,126
21791400	193	0	413	606	192	11	356	0	213	0	772
21794100	617	55	199	871	202	0	0	28	74	0	304
21794200	362	29	909	1,300	1,245	96	1	261	214	0	1,817
21794300	235	8	296	539	0	0	0	0	6	0	6
21794400	247	18	165	430	30	62	0	0	0	0	92
21794500	342	63	0	405	0	0	0	0	281	0	281
21798100	589	17	463	1,069	324	118	0	0	255	0	697
21798200	187	1	192	380	92	51	0	0	0	78	221
21798300	389	90	0	479	104	8	0	0	0	0	112
21798400	914	377	0	1,291	0	0	0	0	179	0	179
21798500	309	112	66	487	104	210	0	0	19	0	333
21803100	390	22	14	426	435	0	0	0	21	0	456

Tier1 TAZ	Tier2 TAZ	POP	RES	HH	MFDU	Tot_emp	Median	K12	COLLEGE	KtoG8	G9toG12	Ag_emp	Const_emp	Manu_emp	Whole_emp	Ret_emp	Trans_emp	Infor_emp	FIRE_emp	Prof_emp	Educ_emp	ArtEnt_emp	OthSer_emp	PubAdm_emp
21714000	21714100	2202	2202	635	207	329	101361	0	0	0	0	0	7	168	17	19	9	0	10	24	22	54	1	0
21761000	21761100	1992	1992	707	707	5094	0	0	0	0	0	0	0	32	536	367	19	878	28	87	2203	0	47	882
21762000	21762100	2310	2310	734	495	273	74555	0	0	0	0	0	10	9	0	11	12	20	68	30	34	53	26	0
21762000	21762200	4449	4416	1500	1099	1015	58184	1760	0	1760	0	0	8	0	0	20	29	4	10	22	226	17	9	666
21762000	21762300	2996	2976	885	275	230	66675	0	0	0	0	0	5	0	1	1	166	0	2	0	50	26	3	0
21762000	21762400	1379	1322	418	49	669	60160	0	0	0	0	0	0	3	3	151	0	0	235	0	167	99	11	0
21767000	21767100	2619	2618	802	419	562	63197	0	0	0	0	0	1	3	1	-1	23	3	24	411	38	21	40	0
21767000	21767200	2627	2623	741	89	572	105791	627	0	627	0	0	9	0	0	227	6	0	1	117	109	93	12	0
21767000	21767300	2310	2310	726	492	249	47855	0	0	0	0	0	6	0	4	13	40	0	14	46	28	80	19	0
21767000	21767400	2367	2367	774	417	458	69618	0	0	0	0	0	8	4	16	356	8	17	10	15	0	17	10	0
21768000	21768100	1557	1536	486	186	355	57052	0	0	0	0	0	17	0	6	70	0	40	-21	-1	28	201	16	0
21768000	21768200	2410	2407	662	118	176	58690	0	0	0	0	0	4	33	0	0	10	0	1	118	12	0	1	0
21770000	21770100	2871	2871	893	511	601	58636	460	0	460	0	0	39	0	1	58	8	0	-11	5	120	333	49	0
21770000	21770200	1525	1525	469	122	54	72391	0	0	0	0	0	0	0	2	2	0	0	0	0	7	43	0	0
21770000	21770300	1985	1985	544	150	13	69316	0	0	0	0	0	8	0	0	2	0	0	0	0	0	0	3	0
21770000	21770400	1155	1136	321	214	228	42561	0	0	0	0	0	3	0	0	89	5	0	2	37	23	36	32	0
21771000	21771100	4405	4367	1374	707	846	55829	683	0	683	0	0	10	9	21	111	9	0	2	18	348	242	54	22
21772000	21772100	1211	1210	420	169	798	66863	86	0	86	0	0	4	0	8	5	11	5	22	548	31	136	29	0
21772000	21772200	1382	1382	437	157	408	144907	0	0	0	0	0	7	17	3	26	10	0	48	81	73	128	15	0
21772000	21772300	1875	1867	568	178	198	66675	33	0	33	0	0	0	3	0	0	29	0	8	14	42	64	41	0
21772000	21772400	1046	1046	357	125	254	66863	695	0	695	0	0	0	0	4	1	0	2	1	4	108	133	1	0
21772000	21772500	2366	2366	725	429	556	56963	0	0	0	0	0	6	0	0	252	7	0	3	17	94	173	7	0
21772000	21772600	1240	1240	341	166	79	71539	0	0	0	0	0	0	0	1	17	6	0	0	0	53	0	1	0
21776000	21776100	2204	1813	491	167	886	53361	609	0	609	0	0	6	0	57	21	17	0	0	267	500	8	8	0
21776000	21776200	3174	3174	961	657	478	74508	998	0	998	0	0	0	0	8	29	0	0	55	20	164	159	43	0
21776000	21776300	3215	3215	1027	411	116	56491	0	0	0	0	0	39	0	10	8	3	0	0	1	40	18	3	0
21778000	21778100	1809	1809	611	427	2395	35560	0	0	0	0	0	88	53	68	63	35	35	4	74	1750	170	33	12
21778000	21778200	2299	2071	803	648	1546	55874	0	0	0	0	0	17	16	0	60	9	69	135	120	945	146	24	0
21778000	21778300	2587	2573	934	836	1830	59476	3078	0	0	3078	0	52	116	79	59	70	44	74	114	868	284	56	11
21780000	21780100	1649	1643	470	18	108	48793	0	0	0	0	0	10	0	2	0	91	0	0	1	6	0	0	0
21780000	21780200	1203	1203	364	24	38	118057	0	0	0	0	0	2	0	1	0	0	12	1	4	15	0	1	0
21780000	21780300	945	945	301	113	396	151478	1866	0	1866	0	0	11	0	0	0	0	0	20	47	226	88	4	0
21780000	21780400	1952	1952	619	447	224	84544	0	0	0	0	0	2	12	12	7	0	0	-4	0	31	162	2	0
21780000	21780500	993	993	247	4	10	112291	0	0	0	0	0	0	0	0	1	0	0	0	1	5	0	3	0
21780000	21780600	1101	1097	320	21	68	59473	0	0	0	0	0	27	4	0	0	0	0	0	24	12	0	0	0
21782000	21782100	1980	1980	657	355	201	115171	38	0	38	0	0	0	0	0	2	0	0	14	124	39	18	4	0
21782000	21782200	1930	1930	687	589	1625	56516	0	0	0	0	0	5	2	8	7	12	15	63	42	39	238	48	1137
21782000	21782300	4281	4083	1491	1424	1865	54558	75	0	75	0	0	34	7	71	40	0	4	402	525	461	154	159	7
21782000	21782400	4747	4747	1732	1656	539	49784	277	0	277	0	0	5	0	0	88	22	33	35	50	183	117	3	0
21783000	21783100	4518	4518	1611	1511	9024	66366	0	0	0	0	0	18	269	101	961	0	331	121	619	4662	1805	131	0
21784000	21784100	2053	1999	824	646	323	56963	473	0	287	186	2	4	0	3	22	0	0	12	4	207	8	55	0
21784000	21784200	703	703	161	26	24	108636	0	0	0	0	0	1	0	11	6	0	0	0	0	6	0	0	0
21784000	21784300	605	605	132	32	16	105791	0	0	0	0	0	0	0	0	2	0	2	0	0	8	0	4	0
21784000	21784400	1874	1866	534	163	534	126494	772	0	772	0	0	6	0	0	0	7	7	0	32	205	196	5	74
21784000	21784500	1163	1163	358	141	4632	153028	316	0	316	0	0	1	0	2	8	0	0	8	37	3169	143	28	1236
21784000	21784600	754	754	213	32	25	118250	0	0	0	0	0	7	0	0	0	8	0	0	0	8	0	1	0
21784000	21784700	1141	1140	420	232	161	53340	0	0	0	0	0	0	0	0	7	0	0	1	5	29	114	5	0
21787000	21787100	1683	1683	494	172	743	105791	10	0	10	0	0	15	19	15	33	3	0	5	261	277	100	12	0
21787000	21787200	749	749	271	201	668	53340	3670	0	0	3670	0	3	0	0	5	3	3	-11	35	488	137	5	0
21790000	21790100	3700	3700	1180	658	278	66675	0	0	0	0	0	15	0	0	31	34	21	12	13	46	89	17	0
21790000	21790200	1151	1151	299	35	56	63078	0	0	0	0	0	34	0	0	0	0	0	1	6	11	0	0	0
21790000	21790300	1805	1805	620	382	191	114337	0	0	0	0	0	3	0	1	1	0	0	10	65	16	95	0	0
21790000	21790400	1137	1137	350	83	598	91526	0	0	0	0	0	25	3	11	3	2	18	38	350	124	10	13	0
21790000	21790500	3055	3055	949	545	1648	101555	664	0	664	0	0	11	54	17	200	37	7	429	100	304	242	248	0
21790000	21790600	1446	1446	379	54	11	126944	0	0	0	0	0	1	0	0	0	0	0	0	10	0	0	0	0
21791000	21791100	1094	1034	401	382	2560	51091	10	0	3	7	0	282	300	371	184	574	29	108	196	59	54	262	182
21791000	21791200	4039	4010	1277	1123	1633	80145	0	0	0	0	0	27	317	187	17	52	0	-44	75	296	79	555	70
21791000	21791300	2696	2685	863	682	1855	45244	0	0	0	0	0	78	603	474	173	249	4	25	87	24	60	57	0
21791000	21791400	2067	2067	576	444	569	34562	505	0	505	0	4	58	155	112	0	21	9	12	59	80	3	46	0
21794000	21794100	2746	2746	849	316	246	118057	0	0	0	0	0	4	0	0	109	0	0	0	28	55	43	6	0
21794000	21794200	3882	3882	1291	981	2890	56540	830	0	830	0	0	21	49	5	1335	0	99	102	44	254	892	90	0
21794000	21794300	1293	1293	454	193	31	105791	0	0	0	0	0	8	0	0	0	0	0	2	2	16	1	1	0
21794000	21794400	1323	1323	373	58	147	124611	0	0	0	0	0	4	0	4	1	0	0	0	94	38	0	6	0
21794000	21794500	1254	1254	384	71	151	155392	1245	0	1245	0	1	0	14	2	1	4	0	0	14	112	0	3	0
21798000	21798100	2999	2999	973	367	911	104599	614	0	614	0	0	3	1	3	22	0	0	16	308	181	247	129	0
21798000	21798200	1308	1263	362	297	305	59476	0	0	0	0	0	43	0	0	22	34	0	0	2	154	34	4	0
21798000	21798300	1406	1406	432	75	337	105791	0	0	0	0	0	16	0	0	61	6	0	10	33	32	165	13	0
21798000	21798400	2463	2463	748	180	182	103119	0	0	0	0	0	5	2	1	3	106	0	22	13	15	11	1	0
21798000	21798500	999	999	289	111	513	69645	0	0	0	0	0	3	0	11	2	0	2	10	202	88	172	23	0
21803000	21803100	1484	1461	413	21	304	104546	0	0	0	0	11	5	4	0	231	4	8	3	0	19	0	8	0

APPENDIX F

TDM+ WORKSHEETS



GANDDINI GROUP INC.

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STATE OF CALIFORNIA Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

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NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

March 16, 2026

RECEIVED
MAR 25 2026
PLANNING

Swati Meshram
City of Downey
11111 Brookshire Avenue
Los Angeles CA 90241

Re: 2026030591 Downey 2045 General Plan Update and Zoning Text and Map Amendments Project, Los Angeles County

To Whom It May Concern:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@NAHC.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

City of Downey

March 12, 2026

Erica Schenk, Chairperson
Cahuilla Band of Indians
52701 CA Highway 371
Anza, CA 92539

Dear Chairperson Schenk,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

City of Downey

March 12, 2026

Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians – Kizh Nation
P.O. BOX 393
Covina, CA 91723

Dear Chairperson Salas,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

March 12, 2026

Anthony Morales, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. BOX 693
San Gabriel, CA 91778

Dear Chairperson Morales,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

City of Downey

March 12, 2026

Robert Dorame, Chairperson
Gabrielino Tongva Indians of California Tribal Council
P.O. BOX 490
Covina, CA 90707

Dear Chairperson Dorame,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

City of Downey

March 12, 2026

Christina Conley, Tribal Consultant and Administrator
Gabrielino Tongva Indians of California Tribal Council
P.O. BOX 941078
Simi Valley, CA 93094

Dear Ms. Conley,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

City of Downey

March 12, 2026

Sandonne Goad, Chairperson
Gabrielino/Tongva Nation
106 ½ Judge John Aiso St., #231
Los Angeles, CA 90012

Dear Chairperson Goad,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

City of Downey

March 12, 2026

Sam Dunlap, Cultural Resource Director
Gabrielino-Tongva Tribe
P.O. BOX 3919
Seal Beach, CA 90740

Dear Director Dunlap,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

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Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

City of Downey

March 12, 2026

Charles Alvarez, Chairperson
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA 91307

Dear Chairperson Alvarez,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

March 12, 2026

Steven Estrada, Tribal Chairman
Santa Rosa Band of Cahuilla Indians
P.O. BOX 391820
Anza, CA 92539

Dear Chairman Estrada,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning

March 12, 2026

Joseph Ontiveros, Tribal Historic Preservation Officer
Soboba Band of Luiseno Indians
P.O. BOX 487
San Jacinto, CA 92581

Dear Mr. Ontiveros,

We would like to formally invite you to request consultation pursuant to Senate Bill (SB) 18 (California Government Code Section 65352.3 and 65352.4) regarding a proposed project in the City of Downey, Los Angeles County. As you are aware, SB 18 requires local governments to consult with California Native American Tribes before amending or adopting any general plan or specific plan or designating land as open space for the purpose of protecting traditional tribal cultural places or sacred sites. The proposed project, described below, involves the adoption of a General Plan Update; therefore, it is subject to the requirements of SB 18. Additionally, we would like to invite you to request consultation pursuant to Assembly Bill (AB) 52 (California Public Resources Code Section 21080.3.1) and the requirements of the California Environmental Quality Act (CEQA).

The City has prepared a General Plan Update ("GPU") and Zoning Text and Map Amendment to serve as the blueprint for the City's future growth and development over the next 20 years. The GPU incorporates statutory requirements for general plans and guidance provided in the 2017 General Plan Guidelines; coordinates future development and policies with regional planning efforts; and serves as the City's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The project also includes an amendment to the Zoning Map to expand the City's Housing Overlay target areas along commercial corridors where additional housing would be allowed through a newly created Residential Corridor Overlay. The Zoning text amendment will create the Residential Corridor Overlay designation within the Zoning Code. In addition, the project includes targeted updates to the specific parcels to maintain consistency between their General Plan Land Use Map, use, and Zoning designation.

As part of the project, the City of Downey is committed to fulfilling the goals of SB 18 and AB 52 and believes that tribal participation in the planning process is crucial. The intent of consultation is to provide an opportunity for local governments and interested tribes to work together in the planning process toward the protection of Native American cultural places and resources that might not appear on cultural resource registries. This is an opportunity for your tribe to participate in the process for this project.

Under SB 18, a Request for Consultation about the project must be made within ninety (90) days of this notice, and if your tribe provides information during the consultation process, any sensitive information shared with the City regarding cultural places and/or sacred sites will be kept strictly

confidential and will not be divulged to the public. In accordance with AB 52, California Native American Tribes may request consultation regarding possible significant effects that implementation of the project may have on tribal cultural resources. If consultation is requested, the City of Downey will begin the consultation process within 30 days. If your tribe would like to initiate consultation with the City about the project under SB 18 and AB 52, please contact me at (562) 904-7154 or generalplan2045@downeyca.gov.

Sincerely,

CITY OF DOWNEY
COMMUNITY DEVELOPMENT DEPARTMENT

Swati Meshram, PhD, AICP
Deputy Director of Community Development - Planning