Lynwood Transit Area Specific Plan

Draft Environmental Impact Report
(State Clearinghouse No. 2015121020)

prepared by
The City of Lynwood
Community Development Department
11330 Bullis Road
Lynwood, California 90262
Contact: Bruno Naulls, Project Manager

prepared with the assistance of
Rincon Consultants, Inc.
700 South Hill Street, Suite 1200
Los Angeles, California 90014

July 2016

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

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0 Executive Summary

This section summarizes the characteristics of the proposed Lynwood Transit Area Specific Plan and the significant environmental impacts, mitigation measures, and residual impacts associated with the proposed Specific Plan.

0.1. Project Synopsis

Lead Agency/Project Applicant

City of Lynwood
11330 Bullis Road
Lynwood, CA 90262

Contact

Michael R. Kodama, Michael R. Kodama Planning Consultants
(818) 846-6272, mkodama@mkplanners.com

Bruno Naulls, Project Manager
Lynwood Community Development Department
(310) 603-0220 ext. 253, bnaulls@lynwood.ca.us

Project Location

The Lynwood Transit Area Specific Plan ("Plan Area") is located in the city of Lynwood, a "Gateway City," approximately nine miles south of downtown Los Angeles. Lynwood is bordered by the cities of Los Angeles to the west, Compton to the south, Southgate to the north, and Paramount to the east. Lynwood is situated near the intersection of two major freeways, Interstate 105 (I-105) and Interstate 710 (I-710). Lynwood is also situated along the Alameda corridor, which connects the Ports of Long Beach and Los Angeles to the rest of the Los Angeles, Orange County, and the Inland Empire. The boundaries of the Plan Area were intended to capture opportunity sites within 0.5 mile of the Metro Green Line Station and within 0.5 mile of the junction of the Alameda Street, Long Beach Boulevard and Imperial Highway bus corridors. The Plan Area encompasses properties located along Long Beach Boulevard, from Virginia Avenue to Norton Avenue; Imperial Highway, from Alameda Street to Martin Luther King Boulevard; the Plaza Mexico shopping center; the Long Beach Boulevard Green Line Station and Long Beach Boulevard/I-105 Freeway Ramps; the industrial uses located along Alameda Street, just south and north of the I-105 Freeway; the St. Francis Medical Center; and existing residential and commercial uses located along Beechwood Avenue, Sanborn Avenue, Mulford Avenue, and California Avenue.

Project Description

The Specific Plan's vision for development is focused on the area around the Green Line station and is intended to contribute to the City's desire to create transit-oriented communities. Therefore, the planning boundary generally contains properties within a one-mile radius of the station. Some of the key land uses, facilities, and corridors located in the Specific Plan area include the Plaza Mexico Shopping Center, the Green Line station and associated I-105 on/off-ramps, St. Francis Medical Center, Long Beach Boulevard, Imperial Highway, and Martin Luther King Jr. Boulevard.

The Specific Plan concentrates and prioritizes development on key opportunity sites within walking distance of the existing Long Beach Boulevard Metro Station, and existing bus service along major roadway corridors, the existing industrial and hospital districts, and existing neighborhoods in the project area. In addition, the Specific Plan is intended to facilitate healthy community design by promoting complete streets, enhancing pedestrian linkages between the Long Beach Boulevard Station, Plaza Mexico, future mixed use areas along Long Beach Boulevard and Imperial Highway, and enhancement of pedestrian/bicycle infrastructure within existing residential neighborhoods. The Specific Plan's objectives are listed below.

Goal 1: Promote Transit-Oriented Development Near the Metro Green Line station

Expand the accessibility and improve the aesthetics of the Metro station and surrounding environs, including Long Beach Boulevard and at Plaza Mexico by creating a dynamic "downtown" transit district with a distinctive identity while also reducing vehicle miles traveled and reliance on the automobile.

Goal 2: Allow for Flexibility in Land Uses

Provide a framework for future approval of infill development projects that offer a mixed of uses, building types, and community benefits that can accommodate changes in the market.

Goal 3: Consolidate Uses and Create New Development Sites

Identify sites or areas most suitable for assembly and revitalization.

Goal 4: Enhance Pedestrian Comfort and Safety

Increase facilities, add connections, and multiply opportunities to safely and conveniently travel the area on "complete" streets by foot, bike, and public transit.

Goal 5: Enhance Recreational Opportunities

Increase the opportunity to develop landscaped areas, parks, open space, and trails that are supportive of the public life of the community. Improve security and well-being for the area's residents, employees, and visitors through increased activity, increased walkability, controls on cars and drivers, and better design and wayfinding.

Goal 6: Improve and Facilitate Additional Housing

A variety of housing types should be provided that are compatible with existing housing types and neighborhoods in the community. A diverse mix of ownership and rental housing, and market -rate, affordable, and workforce housing should be maintained.

Goal 7: Create a Sustainable Community

Ensure public health, safety, and welfare by providing and maintaining sustainable infrastructure and facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.

It is envisioned that full implementation of the proposed Specific Plan during the proposed 25-year planning horizon could increase density and intensity of existing land uses, including the following:

- Up to 3,500 residential dwellings;
- Up to 1,200,000 million square feet of commercial development;
- Up to 350 hotel rooms; and

Up to 750,000 square feet of industrial development.

0.2. Areas of Controversy Known to the Lead Agency

Areas of controversy known for the Plan Area include potential development within and/or adjacent to existing residential land uses and other land use issues (lack of Transit Oriented Development, lack of sufficient pedestrian and bicycle infrastructure, and excessive parking requirements), lack of sufficient transportation

services (lack of amenities and connections to the Long Beach Boulevard Metro Station and inconsistent levels of operation and visibility of the municipal trolley system), lack of pedestrian and bike circulation (barrier of the 105 Freeway encourages north/southbound cyclists to use Long Beach Boulevard; alternative north/southbound routes are difficult to reach; Long Beach Boulevard vehicular traffic lanes and parking lanes leaves no safe path for cyclists, who use traffic lanes or already-narrow sidewalks, and make many difficult and unsafe crossings at major thoroughfares), and potential lack of developable parcels (several parcels are fully or partially occupied by existing structures owned by city, county, or federal governments, or in private ownership by major employers; several parcels are fully or partially occupied by recent development; and some parcels on partial blocks may have limited access and/or relatively shallow dimensions). Please see Section 1.0, Introduction, for a summary of comments received in response to the Notice of Preparation, and Appendix A to this EIR for the written comments received.

0.3. Scope and Content of the EIR

The following issues are evaluated in the Draft EIR:

- Aesthetics
- Air Quality
- Cultural Resources
- Greenhouse Gas Emissions
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities and Service Systems
- Other CEQA Discussions

Alternatives

As required by Section 15126.6 of the CEQA *Guidelines*, this EIR examines a reasonable range of alternatives to the proposed project, and identifies the Environmentally Superior Alternative as also required by the CEQA *Guidelines*.

The following alternatives are evaluated in this EIR:

- Alternative 1: No Project
- Alternative 2: No Project (Buildout Under Long Beach Boulevard Specific Plan)

Alternative 3: Lower Growth Alternative – Buildout pursuant to the SCAG 2040 Growth Forecast

Of the development alternatives being considered, the Lower Growth alternative (Alternative 3) could be considered environmentally superior, as it would reduce impacts in many issue areas, due primarily to the reduction in future housing unit construction. However, this alternative would not eliminate the significant and unavoidable impacts on the local roadway system at the I-105 freeway. This alternative would generally meet the project goals and objectives, but would meet Goal 6 ot a lesser extent than the proposed Specific Plan, as it would provide a lower quantity of housing in the proposed Specific Plan Area.

0.4. Summary of Significant Impacts and Mitigation Measures

Table 1 includes a brief description of the environmental issues relative to the proposed project, the identified significant environmental impacts, proposed mitigation measures, and residual impacts. Impacts are categorized by classes. *Significant and Unavoidable* impacts are defined as significant, unavoidable, adverse impacts that require a statement of overriding considerations to be issued pursuant to the *State CEQA*

Guidelines §15093 if the proposed project is approved. *Significant but mitigable* impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and that require findings to be made under Section 15091 of the *State CEQA Guidelines. Less than significant* impacts are impacts that are not considered significant.

Table 1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measures	Residual Impact
Aesthetics		
Impact AES-1. The proposed Specific Plan would facilitate changes to the visual character of the Plan Area, relative to buildout under the existing Municipal Code regulations. However, the proposed land use districts and the corresponding development standards and the City's design guidelines would improve the visual quality of the environment, and the proposed design review criteria for new developments would ensure their visual compatibility with existing uses in the Plan Area. Impacts to visual character would be *less than significant.*	None required.	Less than significant without mitigation.
Impact AES-2. The proposed project would result in new sources of light and glare in and around the project area. However, these new sources would not substantially increase the amount of light and glare in the already urbanized Plan Area, and would be regulated by the Lynwood Transit Area Specific Plan design guidelines. This would be a *less than significant* impact.	None required.	Less than significant without mitigation.
Air Quality		
Impact AQ-1. Implementation of the proposed Specific Plan would encourage transit-oriented growth in the Plan Area consistent with air quality control measures and 2012 RTP/SCS active transportation strategies. Full buildout could result in population and employment growth that exceeds growth projections in SCAG's 2012 RTP/SCS, upon which the 2012 AQMP is based. However, on balance, impacts related to consistency with the 2012 AQMP would be *less than significant*.	None required.	Less than significant without mitigation.
Impact AQ-2. Buildout of the proposed Specific Plan would result in the temporary generation of air pollutants during construction that would affect local air quality. However, emissions would not exceed SCAQMD regional thresholds. Impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact AQ-3. Operational emissions associated with buildout of the proposed Specific Plan of ROG, CO, NO_X, PM_{10}, and $PM_{2.5}$ would exceed SCAQMD's daily thresholds. However, individual projects would be required to undergo project-specific review to reduce operational emissions to below SCAQMD's daily thresholds. Therefore, the	None required.	Less than significant without mitigation.

Impact	Mitigation Measures	Residual Impact
proposed Specific Plan would have a *less than significant* impact on regional air quality.		
Impact AQ-4. The proposed Specific Plan would increase traffic along all studied roadway segments, however, increased traffic would not result in the creation of carbon monoxide (CO) hotspots. The Specific Plan does not envision siting sensitive receptors near sources of toxic air contaminants. However, locating residential uses near transit services in the City of Lynwood may involve locating some residential dwellings near the I-105 Freeway and other major transportation corridors. Therefore, impacts related to exposing sensitive receptors to pollutant concentrations would be *potentially significant, but mitigable.*	AQ-4(a) Health Risk Assessment If a future development project locates sensitive receptors within 500 feet of the I-105 Freeway or other roadway corridor identified by the City of Lynwood as a potential source of substantial toxic air contaminants, the project applicants shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the California Air Resources Board and the Office of Environmental Health and Hazard Assessment requirements to determine exposure of project residents/occupants/users to stationary and mobile (e.g. cards and trucks) sources of air pollution prior to the issuance of a demolition, grading, or building permit. The HRA shall be submitted to the City of Lynwood for review and approval. The project applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required. AQ-4 (b) Air Quality Health Risk Reduction As determined necessary by a Health Risk Assessment to reduce health risks from poor air quality, future project applicants shall implement the following features that have been found to reduce air quality risks to sensitive receptors and these measures may be included in future project construction plans. These measures shall be submitted to the City of Lynwood for review and approval prior to the issuance of a demolition, grading, or building permit. 1. Do not locate sensitive receptors near distribution centers' entry and exit points. 2. Do not locate sensitive receptors in the same building as perchloroethylene dry cleaning facilities. 3. Maintain a 50-foot buffer from a typical gas dispensing facility(under	Less than significant after mitigation.

Impact	Mitigation Measures	Residual Impact
	3.6 million gallons per year). 4. Install, operate, and maintain in good working order a central heating and ventilation (HV) system or other air intake system in the building(s), or in each individual residential unit, that meets the appropriate efficiency standards. The HV system should include the following features: (1) installation of a high efficiency filter and/or carbon filter to filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters should be used. (2) Retain a qualified HV consultant or HERS rater during the design phase of the project to locate the HV system based on exposure modeling form the mobile and/or stationary pollutant sources. (3) Maintain positive air pressure in the building. (4) Achieve a performance standard or at least one air exchange per hour of fresh outside filtered air. (5) Achieve a performance standard of at least 4 air exchanges per hour of recirculation. (6) Achieve a performance standard of 0.25 air exchanges per hour of unfiltered infiltration if the building is not positively pressurized. AQ-4 (c) HV System Repair and Maintenance Future project developments shall maintain, repair and/or replace the HV system, or prepare an Operation and Maintenance Manual for the HV system and the filter. The manual should include the operating instructions and maintenance and replacement schedule. This manual should be included in the CC&R's for residential projects and distributed to the building maintenance staff. In addition, the project developer may prepare a separate Homeowners Manual. The manual should contain the operation instructions and maintenance and replacement schedule for the HV system and the filters. It should also include a disclosure to the buyers of the air quality analysis and findings.	

Impact	Mitigation Measures	Residual Impact
	AQ-4 (d) Establish Appropriate Buffers To the maximum extent practicable, the City of Lynwood shall ensure that private (individual and common) exterior open space, including playgrounds, patios, and decks, be either shielded from sources of air pollution by buildings or otherwise buffered to further reduce air pollution for users and/or occupants. AQ-4 (e) Establish Landscape Buffers As applicable and feasible, future project applicants shall plant appropriate vegetation to reduce PM10/PM2.5 when constructing a sensitive receptor within 500 feet of freeways and high-traffic volume roadways generating substantial diesel particulate emissions.	
Impact AQ-5. The project would not create objectionable odors that would affect neighboring properties. Impacts related to odors would be *less than significant*.	None required.	Less than significant without mitigation.
Cultural and Historical Resources		
Impact CR-1. The Plan Area contains buildings over 45 years of age and other properties that could be eligible for listing as historic resources. These resources could be affected by future development permissible under the proposed Specific Plan. However, the adoption of Specific Plan policies governing historic preservation, existing zoning code regulations, and proposed Specific Plan policies would ensure that this impact would be *less than significant*.	None required.	Less than significant without mitigation.
Impact CR-2. The Plan Area includes known prehistoric and historic archaeological resources. In addition, ground disturbance associated with new construction could uncover previously unknown buried archeological deposits or human remains. However, adopted County policies and existing regulations would ensure that this impact would be *less than significant*.	None required.	Less than significant without mitigation.
Greenhouse Gas Emissions		
Impact GHG-1. Development under the proposed Specific Plan would generate additional GHG emissions beyond existing conditions due to construction activity and long-term operations. Total estimated GHG emissions would not exceed the efficiency threshold. Impacts related to GHG emissions would be *less than significant.*	None required.	Less than significant without mitigation.

Impact	Mitigation Measures	Residual Impact
Impact GHG-2. The proposed Specific Plan would be consistent with the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the Southern California Association of Government (SCAG) 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). As a result, the proposed Specific Plan would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Geology and Soils		
Impact GEO-1i. The Plan Area is not located in an area that has been identified as a known earthquake fault delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. No fault lines are located in the Plan Area. As a result, the proposed Specific Plan would not be subject to ground rupture. Impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-1ii. The Plan Area is susceptible to strong seismic ground shaking in the event of a major earthquake. However, with modern construction and adherence to applicable California Building Code provisions, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-1iii. The Plan Area is located in a liquefaction zone, but compliance with the CBC and the Lynwood General Plan policies would ensure that potential hazards due to liquefaction impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-1iv. The Plan Area is not located in a region that would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-2. With adherence to applicable laws and regulations, the proposed Specific Plan would not result in substantial soil erosion or the loss of topsoil. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-3. Compliance with the Alquist-Priolo Act Earthquake Fault Act, the CBC, and Lynwood General Plan policies would ensure that potential impacts associated with unstable soils, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-4. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact GEO-5. The proposed Specific Plan would not include septic tanks or alternative wastewater	None required.	No impact.

Impact	Mitigation Measures	Residual Impact
disposal systems. *No impact* would occur.		
Hazards and Hazardous Materials		
Impact HAZ-1. Implementation of the proposed Specific Plan would include policies and development standards to facilitate development of mixed uses, housing, and neighborhood-serving retail uses that could involve the utilization, storage, disposal, or transportation of hazardous materials. In addition, upset or accident conditions in the Plan Area could involve the release of hazardous materials into the environment. However, the required adherence to existing regulations would ensure that this is a *less than significant* impact.	None required.	Less than significant without mitigation.
Impact HAZ-2. Implementation of the proposed Specific Plan may involve the demolition or redevelopment of structures that could contain asbestos or lead-based paints. If these materials are present, demolition of these buildings, could potentially expose workers to hazards that would adversely affect human health and safety. However, compliance with both locally adopted Southern California Air Quality Management District (SCAQMD) and State regulations regarding the handling and disposal of these materials would reduce these potential impacts to *less than significant*.	None required.	Less than significant without mitigation.
Impact HAZ-3.Implementation of the proposed Specific Plan would not produce hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact HAZ-4. There are many properties in the Plan Area vicinity where past uses could have produced localized contamination or concentrations of hazardous substances. If these sites were redeveloped or excavated, workers or residents could be exposed to residual contaminants in the soils. However, development in the Plan Area would be subject to existing policies regarding development in contaminated areas. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact HAZ-5. The Plan Area is located approximately three miles north of the Compton/Woodley Airport. The proposed Specific Plan would not be located in 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, and result in a safety hazard for people residing or working in the project area. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.

Impact	Mitigation Measures	Residual Impact
Impact HAZ-6. There are no private airstrips located in the vicinity of the Plan Area. The proposed Specific Plan would not result in a safety hazard for people residing or working in the Plan Area. Therefore, *no impact* would occur.	None required.	No impact.
Impact HAZ-7. The proposed Specific Plan would improve transportation and circulation and it would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, *no impact* would occur.	None required.	No impact.
Impact HAZ-8. The Plan Area is in an urban area in the city of Lynwood. According to the City of Lynwood General Plan, the Plan Area is not adjacent to or near wildlands. There would be no risk of exposing people or structures to a significant loss, injury or death involving wildland fires. Therefore, *no impact* would occur.	None required.	No impact.
Hydrology and Water Quality		
Impact HYD-1. Construction of future development under the Specific Plan would involve ground-disturbing activities and the use of heavy machinery that could release hazardous materials, including sediments and fuels. Operation of proposed development could also result in discharges of wastewater that could be contaminated and affect downstream waters. However, compliance with permits and regulations, and implementation of Best Management Practices contained would ensure that potential water quality impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Land Use Planning		
Impact LU-1. The proposed Specific Plan is consistent with the goals, policies, and objectives of the 2003 City of Lynwood General Plan, the 2006 Long Beach Boulevard Specific Plan, and the 2012-2035 SCAG RTP SCS. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact LU-2. The proposed Specific Plan would not allow new development that would be incompatible with surrounding residential land uses and the existing pattern of development in the Plan Area. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Noise		
Impact N-1. Development associated with the proposed Specific Plan would be subject to Lynwood General Plan policies and would be required to comply with the Lynwood General Plan Noise Element Land Use and Noise Compatibility Guidelines. Impacts related to exposing people or generating noise levels in excess of standards would be *less than significant*.	None required.	Less than significant without mitigation.

Impact	Mitigation Measures	Residual Impact
Impact N-2. Construction-related activities associated with implementation of the proposed Specific Plan would intermittently generate high noise levels and ground-borne vibration in and adjacent to the Plan Area. However, buildout of the proposed Specific Plan would be consistent with the Lynwood General Plan. In addition, with adherence to City of Lynwood Municipal Code Chapter 3-12.3, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact N-3. Traffic generated by buildout of the proposed Specific Plan would incrementally increase noise levels on roads in the Plan Area. The increase of up to 0.2 dBA would exceed the FTA Significance of Changes in Operational Roadway Noise Exposure thresholds. Compliance with the standards required in the Lynwood General Plan and implementation of Mitigation Measures N-3(a) through N-3(e) would reduce roadway noise impacts to the maximum extent feasible. With mitigation, roadway noise impacts to interior noise levels in residences would be reduced to a less than significant level. However, roadway noise impacts to exterior noise levels would be *significant and unavoidable*.	N-3(a) Design of Outdoor Living Spaces Future exterior balconies and other outdoor living spaces shall be sited away from Imperial Highway and Long Beach Boulevard frontages, where feasible. N-3(b) Sound Transmission Class (STC) 30 Windows and Doors All residential structures in the Plan Area designed to face Imperial Highway or Long Beach Boulevard should include windows and exterior doors that have a minimum STC rating of 30 STC or higher. Exterior doors should be solid core and have weather stripping installed. N-3(c) Sound Transmission Class (STC) 45 Wall Assemblies All residential structures in the Plan Area designed to face Imperial Highway or Long Beach Boulevard should include exterior wall assemblies should have a STC rating of 45 or higher. N-3(d) Acoustical Analysis and Design Mitigation Residential developers shall retain a professional acoustical consultant to conduct acoustical analysis as part of the design process and the recommendations of the acoustical analysis shall be incorporated into project design. This will assure that the City's interior noise level standards are achieved. Noise reduction measures that may be required for future development may include but would not be limited to: ▪ Sound barriers, including sound walls ▫ To avoid secondary aesthetic impacts, long expanses of walls or fences shall be interrupted with offsets and provided with accents to prevent monotony. Landscape	Significant and Unavoidable.

Impact	Mitigation Measures	Residual Impact
	pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements shall be used, including solid fences, walls, and, landscaped berms. ▪ Site layout, including setbacks, open space separation, orientation of outdoor activity areas away from roadways, and shielding of noise sensitive uses with non-noise-sensitive uses ▪ Roof and attic vents facing away from the nearest roadway ▪ Air conditioning or a mechanical ventilation systems that allow doors and windows to remain closed ▪ Double-paned glass on all windows ▪ Windows and sliding glass doors mounted in low air infiltration rate frames ▪ Solid core exterior doors with perimeter weather stripping and threshold seals ▪ Acoustically insulated building wall construction N-3(e) Non-habitable Buffer Zone For future residential developments subject to significant noise impacts from I-105, developers shall site non-habitable uses such as storage sheds, indoor-recreational uses, or parking areas between residences and I-105 to maximize the distance of residences away from Highway 105 freeway noise exposure to the greatest extent feasible. **N-3(f) Noise Easement Dedication and Conformance with Metro Design Standards** Parties planning construction over, under or adjacent to a Metropolitan Transportation Authority (MTA) facility or structure shall record a Noise Easement Deed in favor of the MTA and shall submit for review by MTA development plans and calculations showing the relationship between their project and the MTA facilities. The purpose of the MTA review is to reduce	

Impact	Mitigation Measures	Residual Impact
	the chance of conflict, damage, and unnecessary remedial measures for both MTA and the parties and to determine conformance with MTA's Adjacent Construction Design Manual.	
Population and Housing		
Impact PH-1. Implementation of the Specific Plan would encourage growth in the Plan Area that would exceed SCAG projections, but this growth would be in line with local and regional development goals and policies and would include a balance of new jobs and housing. Therefore, impacts related to housing, population, and employment growth would be *less than significant*.	None Required.	Less than significant without mitigation.
Impact PH-2. Implementation of the Specific Plan would increase the Plan Area's housing stock. Impacts related to the displacement of housing and people would be *less than significant*.	None required.	Less than significant without mitigation.
Public Services		
Impact PS-1. Implementation of the proposed LTASP would add new residential and non-residential uses to the Plan Area, generating additional need for the Los Angeles County Sherriff's Office protection services. Expansion of the current Sheriff's Office or construction of a new facility would occur in existing urbanized areas where environmental impacts would be minimal. Therefore, impacts to police protection services and related facilities would be *less than significant*.	None required.	Less than significant without mitigation.
Impact PS-2. Implementation of the proposed Specific Plan would add residential and non-residential uses, generating additional need for Los Angeles County Fire Department protection services and facilities. Due to the location of the current and new or expanded fire facilities in existing urbanized areas, impacts to fire protection services and the potential for expanded facilities would be *less than significant*.	None required.	Less than significant without mitigation.
Impact PS-3. Implementation of the proposed Specific Plan would add up to 2,510 students to current student roles. However, with payment of State-mandated school impact fees, impacts related to public school operating capacity would be *less than significant*.	None required.	Less than significant without mitigation.
Impact PS-4. Implementation of the proposed Specific Plan would increase the service population of the Lynwood Public Library. However, because adequate capacity at existing libraries in the city and adjacent communities exists to serve the proposed Specific Plan, impacts related to libraries would be *less than significant*.	None required.	Less than significant without mitigation.

Impact	Mitigation Measures	Residual Impact
Impact PS-5. Implementation of the proposed Specific Plan would add 3,500 residential units and an estimated 15,549 residents to the Plan Area, which would increase use of recreational facilities, contributing to their physical deterioration, and the city's parkland deficiency. Impacts would be *significant but mitigable.*	**PS-1 Payment of Parkland Impact Fees or Dedication Parkland.** Future project applicants shall pay the appropriate parkland impact fees levied by the City of Lynwood in effect at the time of issuance of building permits, to the City's Parks and Recreation Department or dedicate their pro-rata share of parkland to the City's Parks and Recreation Department. If fees are paid, they shall be used for the development of additional parks in order to help meet the City's desired parkland standard of three acres per 1,000 residents. If land for public parkland is dedicated, the City shall confirm that said land is dedicated in a configuration that helps to meet the City's desired parkland standards of three acres per 1,000 residents. Applicants under the Specific Plan shall pay all fees or dedicate parkland prior to prior to approval of planning entitlements building permits for each development project under the Specific Plan. The Parks and Recreation Department shall verify payment of park impact mitigation fees or land dedication.	Less than significant with mitigation.
Transportation/Traffic		
Impact T-1. Development facilitated by the LTASP would increase traffic levels under Existing Year (2015) Plus Project conditions at Plan Area intersections. The Plan Area I-105 Freeway intersections are projected to operate at acceptable levels of service (better than LOS D) and acceptable VMT. Therefore, impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact T-2. The proposed LTASP would increase traffic levels along road segments under Existing Plus Project conditions. Based on project related vehicle trips added to the roadway network, the project is anticipated to have significant impacts on the Long Beach Boulevard roadway segment. Impacts would be *significant and unavoidable*.	**T-1(a) Signal Synchronization and Signal Timing.** All the traffic signals along major roadways shall be interconnected so that a coordinated signal timing plan can be implemented to minimize vehicle stopped delay and traffic congestion. Most of the major arterials in Los Angeles County are already under the County's Traffic Signal Synchronization System (TSSP) and others are in the process of implementation by the County. This strategy will greatly enhance area-wide mobility and efficiency in traffic circulation through arterial intersections when fully completed. **T-1(b) Automated Traffic Surveillance**	Significant and unavoidable.

Impact	Mitigation Measures	Residual Impact
	and Control and Adaptive Traffic Control. Automated Traffic Surveillance and Control (ATSAC) and Adaptive Traffic Control (ATC) systems are based on a comprehensive monitoring of traffic and circulation of area streets and intersections from a centralized location, usually a Transportation Management Center (TMC) at the City Hall, using video cameras and sensors located at various key locations. The ATSAC system allows City's traffic engineers to observe and adjust signal timing at the intersections based on real-time traffic demands at various approaches for various movements. The ATC system provides real-time advisories and guidance to motorists through various changeable message signs (CMS) located at key arterial locations upstream of congested intersections. These systems are extensively in use in the City of Los Angeles and have been considered as effective mitigation of traffic impacts, reducing intersection V/C ratio by 0.07 with ATSAC system and by 0.03 with ATC system. When used in combination, these mitigation measures can reduce V/C ratio by a total of 0.10, thereby significantly improving circulation conditions. **T-1(c) Carpool/Rideshare Programs.** The Los Angeles County Metropolitan Transportation Authority and other transportation agencies in the region offer rideshare services to area employers. Metro Commute Services, funded and implemented by MTA, has offered rideshare services to area employers since 2002. Metro Commute Services provides carpool/vanpool match lists, and additional survey data services to calculate employer work site average vehicle ridership for rideshare option. Employers who are committed to promoting ridesharing at their work sites and provide rideshare incentives to employees through Metro Commute Services programs are eligible t participate in Metro Rewards and the Guaranteed Ride Home Program. Metro Rewards1, initiated in 2000, provides a nominal financial reward for employees that commit to rideshare. The Guaranteed Ride Home Program,	

Impact	Mitigation Measures	Residual Impact
	initiated in 2006, provides a taxi ride or rental car to ridesharing employees in emergency situations, such as unexpected illnesses or unscheduled overtime. T-1(d) Incentives to Increase Transit Ridership. Encouraging ridership on transit is an important strategy for reducing vehicular trips on circulation system. The following services are particularly useful because they increase the potential for commuters to ride transit: ▪ EZ Transit Pass: The EZ transit pass encourages greater transit ridership by providing the ability for transit patrons to use different transit services with only one pass. It allows riders to transfer from one transit system to another without worrying about transfer payments or fare differentials. ▪ Transit Access Pass (TAP): The EZ transit pass and all other paper passes have been transitioning to a universal fare system known as TAP. TAP is a plastic "smart card" that can be used month after month to pay fares. Users simply tap their cards on the bus/rail fare box and a "beep" alert verifies that the cards are valid. Like the EZ transit pass, TAP is used for transfers among different transit systems. ▪ Employer-based transit fare subsidies: Employers and transit agencies encourage transit use throughout the county with pre-paid fare media. Employers have a choice among several programs that are part of Metro Commute Services. Two of these programs include MTA Annual Transit Access Pass (A-TAP) and Metro Business Transit Access Pass (B-TAP). A-TAP allows employers to buy and distribute annual transit passes to employees who take transit. B-TAP allows employers to purchase annual transit passes at a discounted group rate for all worksite employees. Another program for employers is Metro Mail. Through Metro Mail employers can encourage transit	

Impact	Mitigation Measures	Residual Impact
	use by ordering monthly passes for employees. Employers also have the option of requesting a weekly pass for newly hired employees. In addition to directly encouraging transit use, participating in any of these programs also makes employers eligible to participate in Metro Rewards and the Regional Guaranteed Ride Home. ▪ Commuter Benefits: Federal IRS tax code 132 (f) contains tax breaks available for subsidizing transit and vanpooling for employees. Participating employers can offer pretax dollars to employees who ride transit or join a vanpool. Once a year MTA holds a workshop with employers to encourage and help them implement this program. The Commuter Benefits program was recently expanded to include benefits for employees who bicycle to work. T-1(e) Bicycle Facilities and Other Non-motorized Transportation. Continue to implement the City of Lynwood's Bicycle and Pedestrian Transportation Plan, which will provide additional safe and comfortable options for cyclists by expanding the planned bicycle and pedestrian improvements throughout the City, in the form of connected network of on-street and off-street improvements. Improvement project have been specifically recommended on over 35 roadway segments, some of which are located in the LTASP. The type of improvements include: bike pathways, cycle tracks and bike lanes. Specifically in the LTASP, future development projects shall be required to construct or contribute funds toward the following major pedestrian/bicycle improvements: ▪ Construct a Class I Bike Path along Fernwood Avenue from the western boundary of the LTASP east adjacent to the I-105 Freeway and the southern boundary of the Plaza Mexico Shopping Center, across Long Beach Boulevard and further east along Fernwood Avenue. ▪ Construct Class II Buffered Bike Lanes along Imperial Highway east	

Impact	Mitigation Measures	Residual Impact
	from its intersection with Fernwood Avenue to Long Beach Boulevard and along State Street. ▪ Construct Class III Bike Lanes (Sharrows) along neighborhood streets in the LTASP, including but not limited to, California Avenue, Beechwood Avenue, Sanborn Avenue, and Mulford Avenue, Oakwood Avenue, and Lynwood Road. ▪ Construct Class IV Bike Lanes (Cycle Tracks) along Long Beach Boulevard south from its intersection with Imperial Highway to the southern boundary of the Plan Area. ▪ Establish enhanced sidewalks along Long Beach Boulevard with a dedicated six-foot wide amenity zone and an eight foot wide pedestrian zone. ▪ Establish enhanced sidewalks along Imperial Highway, State Street, and Beechwood Avenue with a dedicated 4-foot wide amenity zone and a 6ft. wide pedestrian zone. ▪ Add high visibility cross-walks at Imperial Highway and State Street, Long Beach Boulevard and Imperial Highway and California Avenue and Imperial Highway. ▪ Add sidewalk bulb-outs and extensions, or reducing curb returns on intersection corners wherever feasible. ▪ To the extent feasible, reconfigure the east and westbound I-105 on and off-ramps to allow safer pedestrian crossings. T-1(f) Transportation Demand Management. The Transit Center land use designation is envisioned as a place where one can conveniently access mass transit and alternative modes of transportation in the downtown area of Lynwood. Local and regional transportation alternatives will be provided in the Metro station and immediately surrounding areas, which is conveniently located at Metro's Long Beach Boulevard Green Line stop. Although the transit "hub" is proposed at this location, the TDM programs are	

Impact	Mitigation Measures	Residual Impact
	also planned to serve the surrounding communities and businesses throughout the LTASP and surrounding Lynwood neighborhoods. Individual developers in the LTASP will be responsible for implementation of the program prior to issuance of building permits, or upon verification by the City that sufficient transit demand exists. Transit services envisioned in the LTASP's Transit Center area include: ▪ Improved access to the existing Metro bus lines (Metro Buses Lines 25, 60, 251, 360, 622, and 751) and other transit services, such as the local trolley and Dial-a-Ride Traditional bus service to other local and regional destinations ▪ Expanded number Park-n-Ride spaces parking spaces in a multi-level parking structure with integrated ground-floor retail and/or other transit rider services (such as a police sub-station, coffee shop, and/or news stand); ▪ Creation of an on-site "Mobility Center", which will provide residents with opportunities to conveniently access ZipCar, bicycle rental, and bicycle storage and ▪ Van Pool Service to major employment centers such as downtown Los Angeles, Long Beach, LAX, and West Los Angeles Other key components that should be implemented as part of each new development in the LTASP, including: ▪ Introductory Transportation Information Packet: provided to all residents and employees, outlining TDM programs, routes, schedules, carpools/ vanpools, shuttle/bus service maps, menu of incentives, etc ▪ Carpool/Vanpool/Ridematching Services: This program would match residents and employees in Lynwood in carpools and vanpools to reduce drive alone trips. A Guaranteed Ride home service would provide reimbursement for immediate transportation home via Uber or Lyft or other similar mode to those in an emergency ▪ Subsidized Transit Pass: Transit	

Impact	Mitigation Measures	Residual Impact
	passes would be purchased in bulk so that bus and rail passes could be provided for residents and employees in the LTASP. These passes typically provide unlimited rides on local or regional transit for low monthly fees. ▪ Priced Commercial Parking: Multi-Spaced parking meters are planned along portions of Long Beach Boulevard, Imperial Highway, and in shared parking structures, with rates calibrated to ensure an 85% occupancy rate. This will provide a high level of convenience for parkers, largely eliminates circling for parking, and will help ensure turnover of the most convenient curb-parking spaces and availability for customers. ▪ Parking Cash-Out: Parking cash-out provides an equal transportation subsidy to employees who ride transit, carpool, vanpool, walk, or bicycle to work. Employees can be offered financial incentives such as free transit passes or a cash bonus to carpool, vanpool, bicycle, or walk, thus decreasing the demand for parking and ultimately reducing traffic congestion.	
Impact T-3. Development facilitated by the LTASP would increase traffic levels under Future Year (2040) Plus Project conditions at Plan Area freeway intersections. The Plan Area I-105 Freeway intersections are projected to operate at acceptable levels of service (better than LOS D) and acceptable VMT. Therefore, impacts would be *less than significant.*	None required.	Less than significant without mitigation.
Impact T-4. Development facilitated by the LTASP would increase traffic levels under Future Year (2040) Plus Project conditions at the reconfigured Plan Area I-105 Freeway intersections. The reconfigured I-105 Freeway intersections are projected to operate at acceptable levels of service (better than LOS D), with the exception of the Long Beach Boulevard/Park and Ride Access intersection. Therefore, impacts would be *significant and unavoidable*.	Same as above in T-2	Significant and unavoidable.
Impact T-5. The proposed LTASP would increase traffic levels along road segments under Future Year (2040) Plus Project (2040) conditions. Based on project related vehicle trips added to the roadway network, the project is anticipated to have	Same as above in T-2	Significant and unavoidable.

Impact	Mitigation Measures	Residual Impact
significant impacts on the Long Beach Boulevard roadway segment. Impacts would be *significant and unavoidable*.		
Impact T-6. The proposed LTASP would increase traffic levels along road segments under Future Year (2040) Plus Project (2040) conditions. The Project trips added to the roadway network would exceed the Los Angeles County Congestion Management Plan (CMP) standards for four roadway segments in the Plan Area. Impacts would be *significant and unavoidable*.	Same as above in T-2	Significant and unavoidable.
Utilities and Service Systems		
Impact U-1. Full buildout of development included under the proposed Specific Plan would generate an increased demand for water. The City would be able to supply projected demand based on existing entitlements provided that the proposed project incorporates conservation measures. Therefore, impacts to water supply would be *significant but mitigable*.	U-1 Water Efficiency. In accordance with LEED NC prerequisites, the applicant shall employ strategies that. in aggregate, use 20% less water than the water-use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): urinals, lavatory faucets, showers and kitchen sinks.	Less than significant with mitigation.
Impact U-2. Full buildout of development included under the proposed Specific Plan would generate a new source of wastewater, which would flow through the existing Joint Water Pollution Control Plant (JWPCP) system. Local conveyance infrastructure would be upgraded in accordance with the existing maintenance plan, and would not need to be upgraded as a result of the proposed Specific Plan buildout. Impacts would be *less than significant*.	None required.	Less than significant without mitigation.
Impact U-3. Implementation of the proposed Specific Plan would generate an increase of up to 12.1 tons of solid waste per day. However, because the Frank R. Bowerman Landfill and the Olinda Alpha Sanitary Landfill have adequate capacity to serve the proposed Specific Plan, impacts related to solid waste facilities would be *less than significant*.	None required.	Less than significant without mitigation.

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1 Introduction

This document is an Environmental Impact Report (EIR) that evaluates the potential environmental effects associated with implementation of the Lynwood Transit Area Specific Plan ("Specific Plan"). This section (1) provides an overview of the background and process involved in developing the proposed Specific Plan; (2) describes the purpose of and legal authority of the document; (3) summarizes the scope and content of the EIR; (4) lists lead, responsible, and trustee agencies for the EIR; (5) describes the intended uses of the EIR; and (6) provides a synopsis of the environmental review process required under the California Environmental Quality Act (CEQA).

The contents of other EIR sections contain the following information:

- Section 2.0, Project Description, provides a detailed discussion of the proposed Specific Plan and its proposed goals and objectives.
- Section 3.0, Environmental Setting, describes the general environmental setting for the Specific Plan Area.
- Section 4.0, Environmental Impact Analysis, describes the potential environmental effects associated with future development envisioned in the proposed Specific Plan Area.
- Section 5.0, Other CEQA Requirements, discusses issues such as growth inducement and significant irreversible environmental effects.
- Section 6.0, Alternatives, discusses alternatives to the proposed Specific Plan, including the CEQA-required "No Project" alternative.
- Section 7.0, References and Preparers, lists informational sources for the EIR and persons involved in the preparation of the document.

1.1. Overview of the Lynwood Transit Area Specific Plan

Under California law, a Specific Plan is a planning tool that allows a community to create a long-term vision for a defined area and develop guidelines and regulations to implement that vision. A Specific Plan may establish clear goals, policies, and implementation strategies to guide public and private investment in a coordinated manner.

The Specific Plan provides direction for future development in the 315-acre Plan Area that generally encompasses properties located along Long Beach Boulevard, from Virginia Avenue to Norton Avenue; along Imperial Highway, from Alameda Street to Martin Luther King Jr. Boulevard; the Plaza Mexico shopping center; the Long Beach Boulevard Green Line Station and Long Beach Boulevard/I-105 Freeway Ramps; the industrial uses located along Alameda Street, south and north of the I-105 Freeway; the St. Francis Medical Center; and existing residential and commercial uses located along Beechwood Avenue, Sanborn Avenue, Mulford Avenue, and California Avenue (Figure 1). The Lynwood Transit Area Specific Plan (LTASP) is intended to be consistent with and would implement the policies of the City of Lynwood General Plan (2003) and the Long Beach Boulevard Specific Plan adopted in 2006.

The Specific Plan's objectives are listed below.

a. Goal 1: Promote Transit-Oriented Development Near the Metro Green Line Station

Expand the accessibility and improve the aesthetics of the Metro station and surrounding environs, including Long Beach Boulevard and at Plaza Mexico by creating a dynamic "downtown" transit district with a distinctive identity while also reducing vehicle miles traveled and reliance on the automobile.

b. Goal 2: Allow for Flexibility in Land Uses

Provide a framework for future approval of infill development projects that offer a mixed of uses, building types, and community benefits that can accommodate changes in the market.

c. Goal 3: Consolidate Uses and Create New Development Sites

Identify sites or areas most suitable for land assembly and revitalization.

d. Goal 4: Enhance Pedestrian Comfort and Safety

Increase facilities, add connections, and multiply opportunities to safely and conveniently travel the area on "complete" streets by foot, bike, and public transit.

e. Goal 5: Enhance Recreational Opportunities

Increase the opportunity to develop landscaped areas, parks, open space, and trails that are supportive of the public life of the community. Improve security and well-being for the area's residents, employees, and visitors through increased activity, increased walkability, controls on cars and drivers, and better design and wayfinding.

f. Goal 6: Improve and Facilitate Additional Housing

A variety of housing types should be provided that are compatible with existing housing types and neighborhoods in the community. A diverse mix of ownership and rental housing, and market -rate, affordable, and workforce housing should be maintained.

g. Goal 7: Create a Sustainable Community

Ensure public health, safety, and welfare by providing and maintaining sustainable infrastructure and facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.

The preparation of the Specific Plan involved an approximately 18-month public outreach process. Members of the Lynwood City Council, key community stakeholders, City and consultant staff, and the public at-large were engaged and notified throughout the plan preparation process. The public outreach process used to develop the Specific Plan included the following:

- A series of stakeholder interviews with community members
- Three Community Workshops with the City, consultant team, and members of the public to discuss an overview of the project and to encourage participants to share their insights on what would best suit further development in the city
- Monthly Steering Committee meetings with prominent Lynwood business leaders and property owners to provide feedback on the plan concepts

1.2. Legal Authority

This EIR has been prepared in accordance with CEQA and the *State CEQA Guidelines*. In accordance with Section 15121 (a) of the *State CEQA Guidelines*, the purpose of an EIR is to:

> *Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project* (California Code of Regulations, Title 14, Division 6, Chapter 3).

This EIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as those of a Project EIR, Program EIRs are typically more conceptual and may contain a more general

discussion of impacts, alternatives, and mitigation measures than a Project EIR. As provided in Section 15168 of the *CEQA Guidelines*, a Program EIR may be prepared on a series of actions that may be characterized as one large project. Use of a Program EIR provides the City (as Lead Agency) with the opportunity to consider broad policy alternatives and program-wide mitigation measures and provides the City with greater flexibility to address environmental issues and/or cumulative impacts on a comprehensive basis. Agencies generally prepare Program EIRs for programs or a series of related actions that are linked geographically; are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program; or are individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. By its nature, a Program EIR considers the "macro" effects associated with implementing a program (such as a specific plan) and does not, and is not intended to, examine the specific environmental effects associated with individual actions that may be undertaken under the guise of the larger program.

Once a Program EIR has been prepared, subsequent activities under the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities could be found to be in the Program EIR scope and additional environmental documents may not be required (*CEQA Guidelines* Section 15168(c)). When a Program EIR is relied upon for a subsequent activity, the Lead Agency must incorporate feasible mitigation measures and alternatives developed in the Program EIR into the subsequent activities (*CEQA Guidelines* Section 15168(c)(3)). If a subsequent activity would have effects not addressed in the Program EIR, the Lead Agency must prepare a new Initial Study leading to a Negative Declaration (ND), Mitigated Negative Declaration (MND), or project-level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. The *CEQA Guidelines* (Section 15168(h)) encourage the use of Program EIRs, citing five advantages:

1 Provision of a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR
2 Focus on cumulative impacts that might be slighted in a case-by-case analysis
3 Avoidance of continual reconsideration of recurring policy issues
4 Consideration of broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them
5 Reduction of paperwork by encouraging the reuse of data (through tiering)

As a "macro-"level environmental document, this EIR uses macro-level thresholds as compared to the project-level thresholds that might be used for an EIR on a specific development project. It should not be assumed that impacts determined not to be significant at a macro level would not be significant at a project level. In other words, determination that implementation of the proposed Specific Plan as a "program" would not have a significant environmental effect does not necessarily mean that an individual project undertaken under the rubric of the proposed Specific Plan would not have significant effects based on project-level CEQA thresholds, even if the project is consistent with the proposed Specific Plan.

1.3. Scope and Content of the EIR

In accordance with the *CEQA Guidelines*, a Notice of Preparation (NOP) of a Draft EIR was circulated to potentially interested parties on December 11, 2015. The NOP, included in Appendix A, indicated that the following issues would be discussed in the EIR:

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

This EIR evaluates potential impacts in each of these areas.

In addition, the City received two written responses to the NOP regarding the scope and content of the EIR. These responses are included in Appendix A. The City also held an EIR scoping meeting on January 12, 2016, and received verbal comments regarding the scope and content of the EIR from four attendees. Verbal comments from the scoping meeting attendees and written comments are summarized in Verbal and written comments are addressed, as appropriate, in the analysis contained in the various subsections of Section 4.0, Environmental Impact Analysis.

Table 2 Notice of Preparation Comment Issues

Issue	EIR Section
The Specific Plan area is not safe for pedestrian or bicycle travel due to the lack of sidewalks, lighting, and the speed at which vehicles travel down Long Beach Boulevard and Imperial Highway.	Section 4.8, Land Use and Planning; Section 4.12, Transportation and Circulation
Growth in Specific Plan area could encourage people to shop locally rather than outside the Plan area, thereby reducing vehicle miles travelled.	Section 4.12, Transportation and Circulation
There is potential to improve pedestrian and bicycle facilities in Plan Area corridors.	Section 4.12, Transportation and Circulation
Overhead speed calming lights are not reliable. This results in accidents on the road as well as diminished safety for the residences in the Specific Plan area.	Section 4.12, Transportation and Circulation
The left turn at Long Beach Boulevard and Sandborn Avenue lacks adequate signal lights and protections for pedestrians.	Section 4.12, Transportation and Circulation
Cars travel too fast down State Street and the Specific Plan should incorporate measures to reduce automobile speed in this part of town.	Section 4.12, Transportation and Circulation
The schedule and routes for existing trams and trollies in the Specific Plan area should be improved to make transit more accessible.	Section 4.12, Transportation and Circulation
Freeway-oriented development configurations could negatively impact existing Southern California Edison facilities.	Section 4.13, Utilities

1.4. Lead, Responsible, and Trustee Agencies

The City of Lynwood is the lead agency under CEQA for this EIR because it has primary discretionary authority to determine whether or how to approve the Specific Plan.

"Responsible Agencies" are agencies other than the City that are responsible for carrying out/implementing a specific component of the proposed Specific Plan or for approving a project (such as an annexation) that implements the goals and policies of the proposed Strategic Plan. Section 15381 of the *State CEQA Guidelines* defines a "responsible agency" as follows:

> *A public agency which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, responsible agencies include all public agencies other than the lead agency that have discretionary approval authority over the project.*

There are no known responsible agencies with jurisdiction over the proposed Specific Plan.

Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project. *CEQA Guidelines* Section 15386 designates four agencies as trustee agencies: the California Department of Fish and Game with regard to fish and wildlife, native plants designated as rare or endangered, game refuges, and ecological reserves; the State Lands Commission with regard to State-owned "sovereign" lands, such as the beds of navigable waters and State

school lands; and the California Department of Parks and Recreation, with regard to units of the State park system.

There are no known trustee agencies with jurisdiction over the proposed Specific Plan.

1.5. Intended uses of the EIR

This EIR is as an informational document for use in the City's review and consideration of the Specific Plan. It is to be used to facilitate implementation of the Specific Plan that incorporates environmental considerations and planning principles into a cohesive policy document. The Specific Plan will guide subsequent actions taken by the City in its review of new development projects in the Plan Area and its establishment of new and/or revised programs for the Plan Area.

This EIR discloses the possible environmental consequences associated with the proposed Specific Plan. The information and analysis in this EIR will be used by the Lynwood City Council and the general public in determining whether to adopt the proposed .

1.6. Environmental Impact Report Process

The environmental review process, as required under CEQA, is summarized below and illustrated in Figure 1.

Notice of Preparation (NOP). After deciding that an EIR is required, the lead agency must file an NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the City Clerk's office for 30 days. For projects of regional significance, the lead agency holds a scoping meeting during the 30-day NOP review period.

Draft EIR. The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.

Notice of Completion. Upon completion of a Draft EIR, the lead agency must file a Notice of Completion with the State Clearinghouse and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the Notice in the City Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the Notice to anyone requesting it (*CEQA Guidelines* Section 15087). In addition, public notice of the availability of the Draft EIR must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off of the project site; or c) direct mailing to owners and occupants of contiguous properties and others who have requested such notification. The lead agency must solicit comments from the public and respond in writing to all written comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days (Public Resources Code Section 21091).

Final EIR. Following the close of the Draft EIR review period, a Final EIR is prepared. The Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) a list of persons and entities commenting; and d) responses to comments.

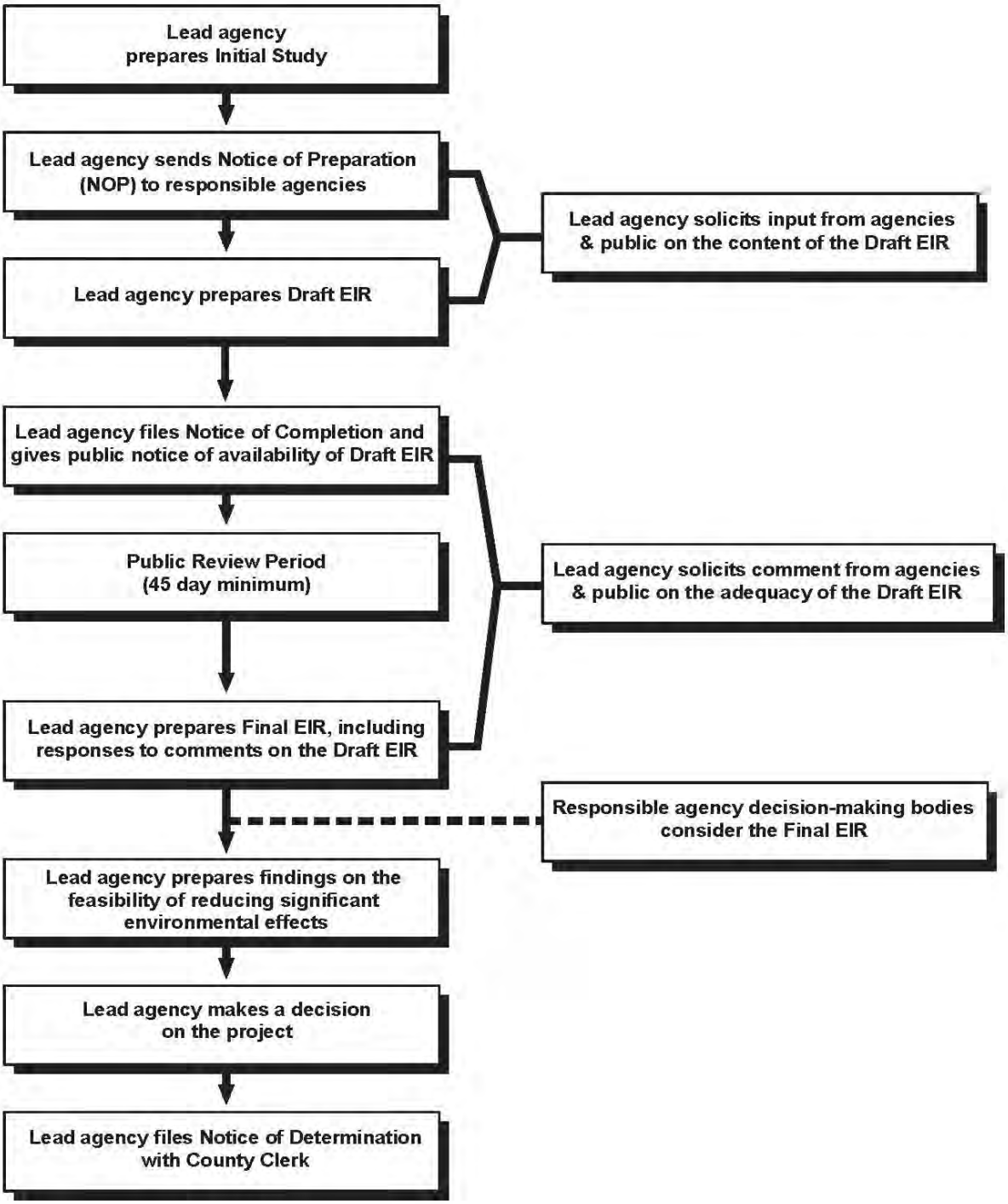
Final EIR Certification. Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered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

Lead Agency Project Decision. Upon certification of an EIR, the lead agency makes a decision on the project analyzed in the EIR. A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).

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

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

Figure 1 Environmental Review Process



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2 Project Description

2.1. Project Summary

The proposed project involves the adoption of the Lynwood Transit Area Specific Plan ("Specific Plan"). The Specific Plan is consistent with policies of the City of Lynwood General Plan (2002), the Long Beach Boulevard Specific Plan (2006), and the California Sustainable Communities and Climate Protection Act of 2008 (SB 375) Transit Priority Project Requirements.

The proposed Specific Plan includes policies and development standards to guide the development of future transit-oriented communities in the approximately 315-acre project area, which generally encompasses properties located along Long Beach Boulevard, from Virginia Avenue to Norton Avenue; along Imperial Highway, from Alameda Street to Martin Luther King Boulevard; the Plaza Mexico shopping center; the Long Beach Boulevard Green Line Station and Long Beach Boulevard/I-105 Freeway Ramps; the industrial uses located along Alameda Street, just south and north of the I-105 Freeway; the St. Francis Medical Center; and existing residential and commercial uses located along Beechwood Avenue, Sanborn Avenue, Mulford Avenue, and California Avenue (Figure 2). The Specific Plan concentrates and prioritizes development of key opportunity sites, along major roadway corridors, existing industrial and hospital districts, and existing neighborhoods in the project area. In addition, the Specific Plan is intended to facilitate transit-oriented community design by promoting complete streets, expanded transit services, and enhanced pedestrian and bicycle linkages throughout the Plan Area.

It is envisioned that full implementation of the proposed Specific Plan during the proposed 25-year planning horizon could increase density and intensity of existing land uses, including the following:

- Up to 3,500 residential dwellings;
- Up to 1,200,000 million square feet of commercial development;
- Up to 350 hotel rooms; and

Up to 750,000 square feet of industrial development.

This section describes the proposed Specific Plan location, characteristics of the plan area and potential buildout under the proposed Specific Plan, Specific Plan objectives, and the approvals needed to adopt the proposed Specific Plan. Actual development under the provisions of the Specific Plan would require subsequent approvals and permits including, in some cases, could require separate review and analysis under the California Environmental Quality Act (CEQA).

2.2. Lead Agency/Project Applicant

City of Lynwood
11330 Bullis Road
Lynwood, CA 90262

Contacts:
Bruno Naulls, Project Manager
Lynwood Community Development Department
(310) 603-0220 ext. 253, bnaulls@lynwood.ca.us

Michael R. Kodama, Michael R. Kodama Planning Consultants
(818) 846-6272, mkodama@mkplanners.com

2.3. Location and Setting

2.3.1 Plan Area Setting

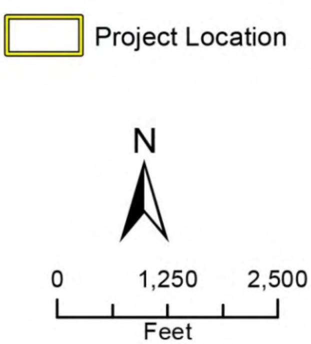
Lynwood is an incorporated municipality in the southern portion of the Los Angeles Basin. Located at the intersection of two major freeways, I-105 and I-710, the city is strategically situated along the Alameda rail corridor that connects the ports of Long Beach and Los Angeles to the rest of the Los Angeles, Orange County, the Inland Empire, and the nation beyond. Lynwood is also located just a few miles east of Los Angeles International Airport, another major hub for international cargo trade.

Bordered by the cities of South Gate to the north and Compton to the south, Lynwood was initially developed as a suburb of Los Angeles. The construction of the Century Freeway (I-105), connecting Los Angeles International Airport to the city of Norwalk, bisected Lynwood. As part of the entitlements allowing construction of the I-105, provisions were made for a new transit corridor in the freeway median. The Los Angeles County Metropolitan Transportation Authority's (Metro) Green Line was completed in 1995, connecting Redondo Beach to Norwalk. The Long Beach Boulevard Metro Station is located in the center median of the I-105 at the interchange with Long Beach Boulevard.

The Specific Plan encompasses approximately 315 acres of existing transit, commercial, industrial, and residential development, and includes approximately 141 developable acres. The boundaries of the Plan Area were intended to capture opportunity sites within 0.5 mile of the Metro Green Line Station and 0.5 mile of the junction of the Alameda Street and Imperial Highway bus corridors. The regional location of the Plan Area is illustrated in Figure 2 and Figure 3.

Figure 2 Regional Location

Imagery provided by National Geographic Society, ESRI and its licensors © 2016. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.



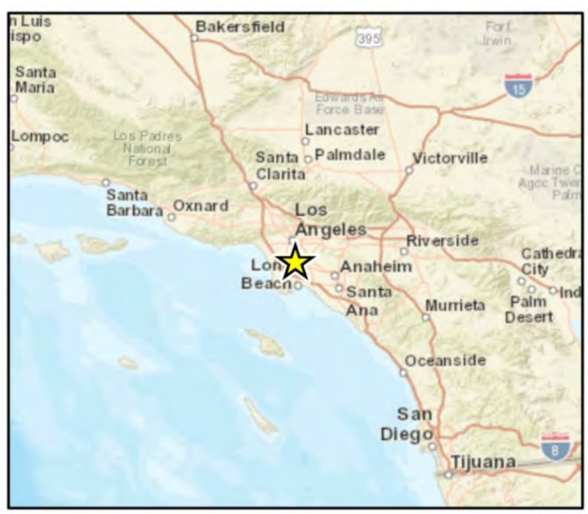
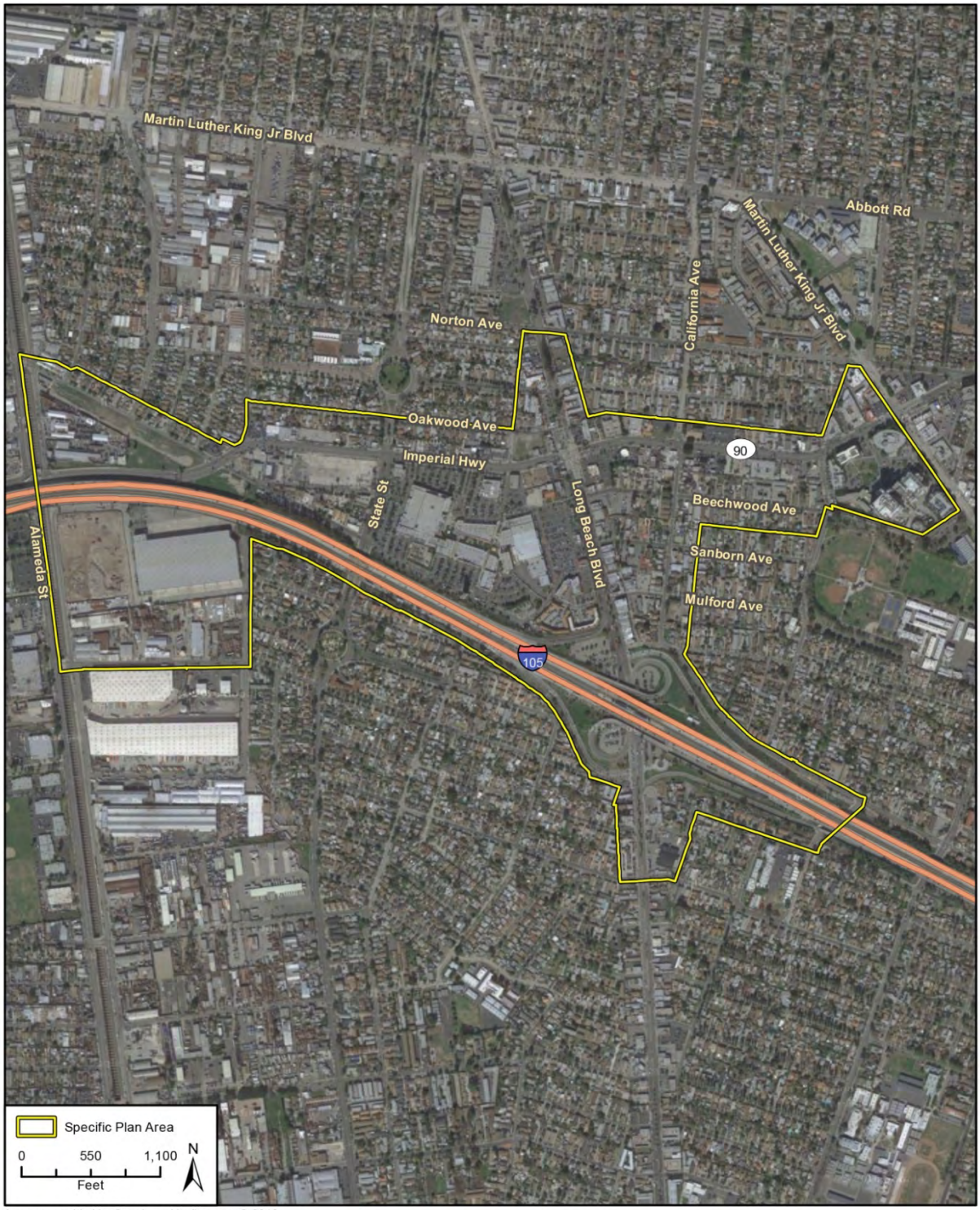


Figure 3 Specific Plan Area



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2.3.2 Regulatory Setting

City of Lynwood General Plan

The City of Lynwood General Plan provides the framework for the growth and development of the city. There are nine citywide elements: Land Use (2003), Circulation (2003), Infrastructure/Public Services (2003), Community Design (2003), Economic (2003), Public Health and Safety (2003), Noise (2003),Open Space (2003), and Housing (2013). These elements contain goals, policies, and actions that apply to all incorporated areas in the city of Lynwood.

Long Beach Boulevard Specific Plan

In addition to General Plan Elements, the Long Beach Boulevard Specific Plan contains additional goals, policies, and actions for community design, economic, circulation, land use, and infrastructure/public services for the Long Beach Boulevard corridor area.

California Global Warming Solutions Act of 2006 (AB 32)

In response to an increase in man-made Greenhouse Gas (GHG) concentrations over the past 150 years, California implemented AB 32, the “California Global Warming Solutions Act of 2006.” AB 32 codified the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels), and required the California Air Resources Board (ARB) to prepare a scoping plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 required ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

California Sustainable Communities and Climate Protection Act of 2008 (SB 375)

SB-375 supports the State's climate action goals to reduce GHG emissions as set forth in AB-32 through coordinated transportation and land use planning, with the goal of more sustainable communities. Under the Sustainable Communities Act, ARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, ARB established targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). Each of California’s MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, will allow the region to meet its GHG emission reduction targets. Furthermore, developers can get relief from certain environmental review requirements under the SB 375 Transit Priority CEQA Exemption if their project is consistent with the SCS and if the project is classified as a Transit Priority Project or a Residential Mixed-Use Project.

Transit Priority Project areas, as defined by SB-375, are meant to support the carbon reduction goals set by SB-375 and AB-32 and to provide CEQA relief by streamlining the process for reducing emissions[1]. Per SB-375, a Transit Priority Project is required to contain the following:

- Consistent with the adopted SCS
  - General Plan Designation
  - Zoning
  - Density
  - Building intensity
- Provides at least 50 percent residential use based on a floor area ratio (FAR) of 0.75 and contains 26-50 percent non-residential uses
  - Minimum of 20 dwelling units per acre
  - Within 0.5 mile of major transit stop or high quality transit corridor in the Regional Transportation Plan

[1] http://rtpscs.scag.ca.gov/Documents/scs/CEQAstreamliningChart.pdf

2012-2035 Regional Transportation Plan

On April 4, 2012, the Regional Council of the Southern California Association of Governments (SCAG) adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future*. The RTP/SCS is the culmination of a multi-year effort involving stakeholders from across the SCAG Region.

California Senate Bill No. 743 (SB-743)

The bill made several changes to the California Environmental Quality Act (CEQA) for projects located in areas served by transit (i.e., transit-oriented development or TOD). Those changes direct the Governor's Office of Planning and Research to develop new approaches for analyzing the transportation impacts under CEQA. SB 743 also creates a new exemption for certain projects that are consistent with a Specific Plan and, under some circumstances, eliminates the need to evaluate aesthetic and parking impacts of a project.

Executive Order B-30-15

On April 29, 2015, California Governor Brown issued the executive order establish a California GHG reduction target of 40 percent below 1990 levels by 2030. According to the California Planning and Development Report, the order requires all State agencies with jurisdiction over sources of GHG emissions to participate and agencies must prepare implementation plans by September 2015. This order may potentially affect the 2012-2035 Regional Transportation Plan since it would speed up the GHG emissions reduction targets, forcing changes to the land use policies in the Plan intended to help meet those goals.

California Senate Bill No. 32 (SB-32)

On December 1, 2014, Senator Pavley introduced a bill that would require the State Air Resources Board to approve a statewide greenhouse gas emissions limit that is equivalent to 80 percent below the 1990 level, which must be achieved by 2050. This bill works in conjunction with and supports AB-32 and SB-375. The text was amended by the Senate on March 16, 2015 and is pending a full vote by the legislature and signing by the Governor.

2.4. Project Objectives

The objectives of the proposed Specific Plan include:

1 Promote Transit-Oriented Development Near the Metro Green Line Station -Expand the accessibility and transportation services at the Green Line Station and focus revitalization efforts in the Plaza Mexico shopping center and properties in the Long Beach Boulevard and Imperial Highway corridors, and create a dynamic transit district with a distinctive mixed-use identity, and an active and attractive transit hub where people come to live, shop, work and play.

2 Allow for Flexibility in Land Uses - Provide a framework for approval of incremental development projects using a conceptual land use plan that offers defined ranges of flexibility to accommodate market changes.

3 Consolidate Uses and Create New Development Sites - Identify sites most suitable for land assembly and revitalization.

4 Enhance Pedestrian Comfort and Safety - Increase pedestrian facilities, add connections, and multiply opportunities to safely and conveniently get around the area on "complete" streets by foot, bike, and public transit.

5 Enhance Recreational Opportunities- Increase landscaped areas, parks, open space, and trails that support the public life of the community. Facilitate security and well-being for the Specific Plan Area's residents, employees, and visitors through increased activity, better walkability, controls on cars and drivers, and better design and wayfinding.

6 Improve and Facilitate Additional Housing – Promote the development of a variety of housing types, which are compatible with existing housing types and existing residential neighborhoods in the Plan Area. The

diverse mix of owned and rented housing, and market rate, affordable, and workforce housing should be maintained.

7 **Create a Sustainable Community -** Ensure public health, safety and welfare by providing and maintaining a balance between existing infrastructure and more sustainable infrastructure facilities. Continue to make certain that public services and facilities adequately support new development.

2.5. Specific Plan Components

2.5.1 Overview

In accordance with California Government Code Section 65454, which states that no specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan, the adoption of the Specific Plan will require a General Plan Amendment (GPA). The City of Lynwood General Plan, including the General Plan Land Use Map, will be amended concurrent with the adoption of the Specific Plan to include the proposed land use designations, as well as the goals and policies of the LTASP. The Specific Plan will also "overlay" portions of the Long Beach Boulevard Specific Plan, adopted by the City of Lynwood in 2006, and the development standards contained in the Lynwood Transit Area Specific Plan would apply to those areas.

The City of Lynwood Municipal Code Section 25-120-1 (Specific Plan Adoption and Amendment) states, "the City recognizes that certain large properties in Lynwood may benefit from focused planning efforts wherein infrastructure, land use relationships, land use intensities, public service needs, and resource protection goals can be carefully examined and planned in a comprehensive manner. The Specific Plan provides a mechanism to carry out such planning efforts. The purpose of this article is to establish uniform procedures and guidelines for specific plans prepared pursuant to Title 7, Division 1, Chapter 3, Article 8 of the California Government Code (Ord. #1563, §3). Consistent with the City's Municipal Code, the Specific Plan contains the following chapters:

- **Introduction** (Chapter 1) describes the purpose and goals of the proposed Specific Plan, the Plan Area conditions, and the public participation and plan preparation process.
- **Land Use Framework and Design Standards** (Chapter 2) provides the long-term land use vision, goals, and objectives for transit-oriented development for each land use designation and the associated design and development standards.
- **Mobility** (Chapter 3) presents the Multimodal Access Plan for the Plan Area. It provides the vision and development recommendations for all travel types: automobile, bicycle, pedestrian, and public transit. Parking, wayfinding/signage, lighting, and public art are also addressed in this chapter.
- **Infrastructure** (Chapter 4) addresses existing infrastructure and impact of the Plan on existing infrastructure resources: water, waste water, storm water, solid waste, schools, and public services.
- **Implementation Strategies** (Chapter 5) presents the goals, policies, and programs identified as necessary to achieve the vision described in Chapters 2 through 5. The chapter discusses potential funding sources to implement the Plan's programs.

2.5.2 Land Use Concept

The Specific Plan's proposed opportunities for placemaking and land use map are shown in Figure 4 and Figure 5. These figures identify key development opportunities and the proposed land use districts that support the project objectives listed in Section 2.4, Project Description. Chapter 2 of the proposed Specific Plan establishes the following land use districts:

- **Town Center District (TC).** The Town Center District land use designation intends to provide an urban form that can accommodate a vibrant, walkable, and urban mixed use environment and support public transportation alternatives. The TC provides commercial retail that serves local and regional customers and entertainment uses with a variety of urban housing choices in the area currently developed with Plaza Mexico and the immediately surrounding properties. The TC will also provide a connection to the adjacent Metro station. This zone would generally apply to parcels located in and adjoining the Plaza Mexico shopping center. Up to 2,500 dwellings at densities of approximately 60 dwelling units per acre, up to

950,000 square feet of commercial uses, and up to 350 hotel room are envisioned for this land use designation.

- Corridor Mixed Use-1 (CMU-1). The intent of this land use district is to provide an urban form that can accommodate a very diverse range of uses for the blocks fronting Long Beach Boulevard. The desired mix of uses include ground floor, mixed-use and neighborhood-serving commercial services with residential and office uses above. It is intended to encourage revitalization and investment. This zone would generally apply to parcels located along the Long Beach Boulevard Corridor. Up to 500 dwellings at densities of approximately 40 dwelling units per acre and up to 100,000 square feet of commercial uses are envisioned in this land use designation.
- Corridor Mixed Use-2 (CMU-2). The intent of this land use district is to provide an urban form that can accommodate mixed-use commercial with residential as a secondary use and to encourage revitalization and investment. This zone would generally apply to parcels located along the Imperial Highway Corridor. Up to 300 dwelling units at densities of approximately 40 dwelling units per acre and up to 100,000 square feet of commercial uses are envisioned in this land use designation.
- Industrial (I). The intent of this land use district is to provide an urban form that can accommodate a very diverse range of industrial uses, including heavy and light industrial uses, and live-work. This zone would generally apply to the parcels located along Alameda Street. Up to 750,000 square feet of industrial uses are permitted in this land use designation.
- St. Francis Medical (SFM). The St. Francis Medical District designation is established to provide an urban form that can accommodate the St. Francis Medical Center campus along with workforce housing, neighborhood-serving commercial uses, medical offices, and other compatible uses. The designation is intended to foster the growth of the institution while enhancing the livability of surrounding residential neighborhoods and the viability of nearby business areas by expanding pedestrian linkages between St. Francis Medical Center and the adjacent Lynwood Civic Center. Up to 100 dwelling units at densities of approximately 30 dwelling units per acre and 45,000 square feet of commercial uses are envisioned in this land use designation.
- Transit Station (TS). The intent of the Transit Station land use designation is to allow reconfiguration of the I-105 Freeway ramps to improve pedestrian and bicycle access to the Metro station and to promote the creation of a mobility hub with safe and inviting public spaces, affordable mobility choices, transit rider service uses, and gateway signage. Up to 5,000 square feet of commercial uses are envisioned in this land use designation.
- Residential (R). The intent of this land use designation is to preserve existing housing and allow small to medium lot detached and attached homes and to reinforce the role of this housing in walkable neighborhood. This zone generally applies to the parcels located south of Imperial Highway and east of Long Beach Boulevard. Up to 100 dwelling units at densities of approximately 20 dwelling units per acre are envisioned in this land use designation
- Open Space (OS). The intent of the Open Space land use designation is to promote the creation of inviting, safe, and accessible open spaces. The open spaces shall be include, but are not limited to, pedestrian and bicycle pathways, linear parks, neighborhood parks, plazas, courtyards, and roof-top gathering spaces.

Figure 4 Specific Plan Placemaking Opportunities

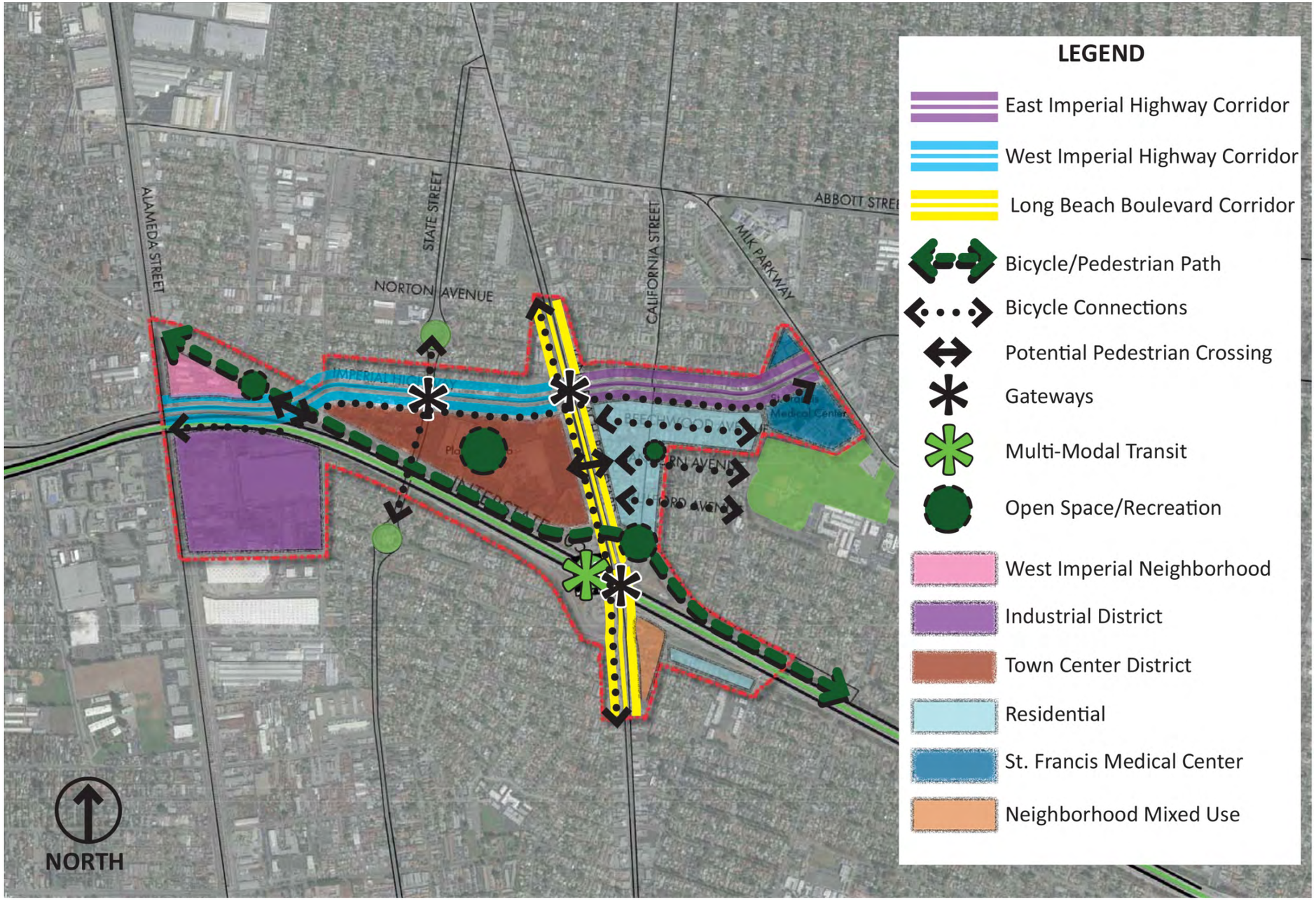
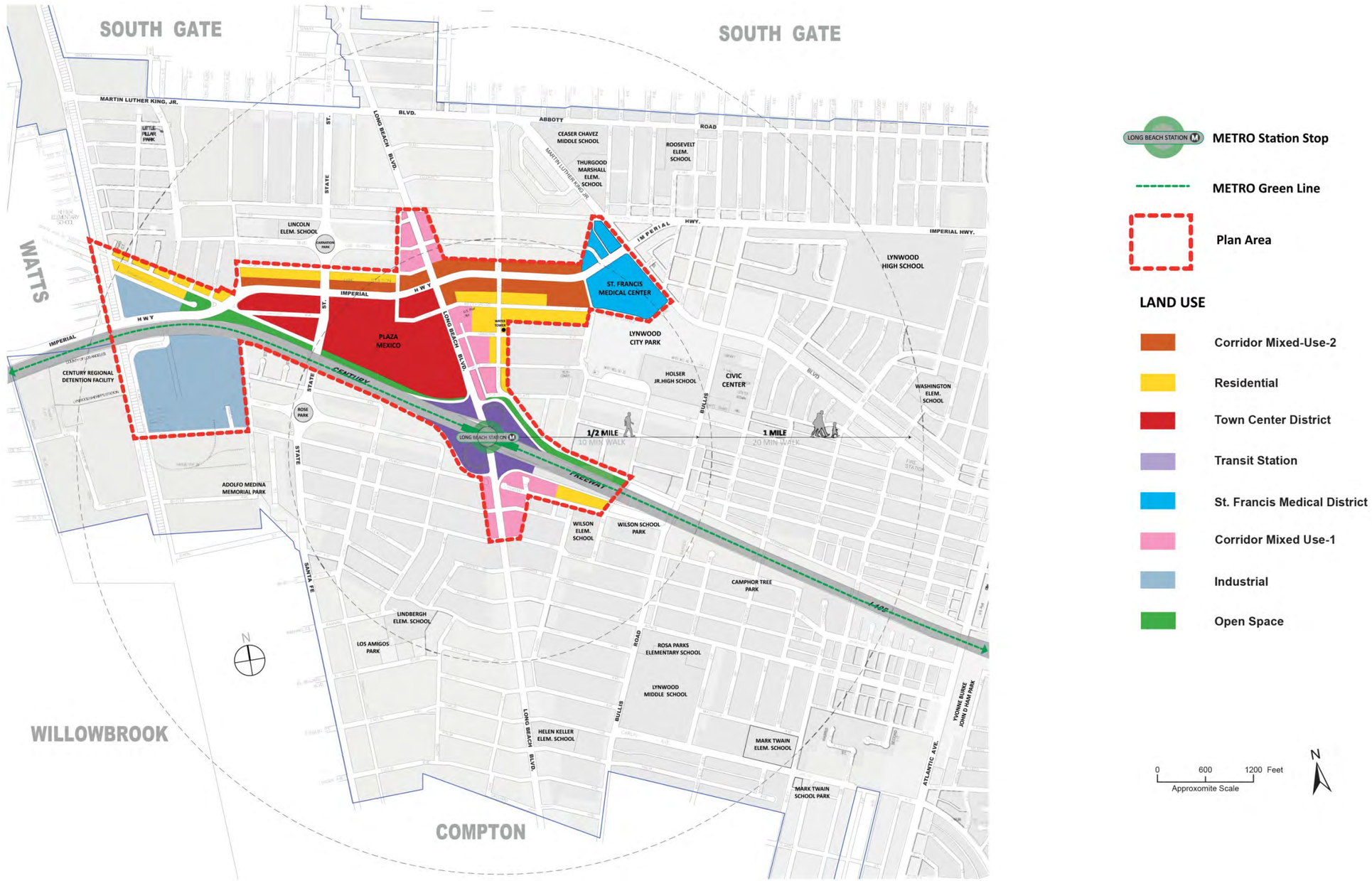


Figure 5 Specific Plan Land Use Diagram



Source: Long Beach Boulevard Specific Plan, 2006

2.5.3 Land Use and Development Standards

The Specific Plan establishes specific land use designations, densities, and target unit counts for the Plan Area and identifies the mix of permitted, permit requirements, and development standards for each zone. The uses and permit requirements are based on the existing zoning designations established by the City of Lynwood Zoning Ordinance (Municipal Code Chapter 25).

The Specific Plan also establishes urban design, landscaping, and streetscape improvement guidelines; parking and enhanced mobility strategies; infrastructure improvement, and financing strategies.

2.5.4 Transportation and Circulation

Chapter 3 of the Specific Plan presents the mobility and parking strategies for the Plan Area. It provides the vision and recommendations for all travel mode types, including automobile, bicycle, pedestrian, and public transit. Transportation demand management and parking management are also addressed in Chapter 3. Access and circulation improvements are based on the "Complete Streets" concept to design the street network to accommodate all users (pedestrians, bicycles, buses, automobiles, and trucks) safely and efficiently. Concepts and improvements related to all transit modes are as follows:

- Motor Vehicles. The Plan Area is dominated by construction that solely accommodates motor vehicles. The focus of this Plan is on improving circulation and access for pedestrians, bicycles, and transit users, but without an undue impact on automobile travel. The Specific Plan would involve intersection and roadway improvements that ensure safe and adequate vehicular circulation and access.
  The proposed Specific Plan outlines parking management and transportation demand management (TDM) strategies to reduce traffic and the Plan Area's overall automobile trip generation in comparison with more traditional suburban developments. Strategies to reduce traffic include implementing intelligent transportation system (ITS) technologies such as traffic signal timing, communication, and synchronization improvements. Parking strategies include establishing a parking benefit district (PBD), encouraging shared parking, establishing parking in-lieu fee program, monitoring parking demand and supply, and residential neighborhood permit parking if necessary.
- Bicycles. The Lynwood Bicycle and Pedestrian Transportation Plan includes a bike path west of Long Beach Avenue along Fernwood Avenue, but this path turns northwards before connecting to Sanborn Avenue across Long Beach Boulevard. The Plan also includes a bike path along Fernwood Avenue east of Long Beach Boulevard, but the bike path abruptly ends before it reaches either California Avenue or Long Beach Avenue. The Specific Plan envisions reconfiguring the I-105 Freeway on-ramps to allow for a new shared bicycle/pedestrian pathway along the freeway's north side and along private properties in the Plan Area. This would allow pedestrian/bicycle connections throughout the entire Plan Area and would facilitate future connections to City Parks and other improvements in the greater Lynwood community.
- Pedestrians. Overall, the pedestrian facilities in the Plan Area and the surrounding neighborhoods are not indicative of a walkable community. Pedestrian circulation in and surrounding the Plan Area is provided via sidewalks lacking amenities and marked crosswalks. The proposed Specific Plan's vision for the pedestrian network is to create high quality and interconnected pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates increased pedestrian activity throughout the Plan Area. The improved pedestrian circulation system envisioned by the Specific Plan would also involve reducing pedestrian crossing distances, implementing landscaping and street furniture improvements, improving pedestrian crossings, and providing direct pedestrian conenctions to existing transit services.
- Transit. Transit and bus service operated by Metro would continue to provide transit service to the Plan Area. The proposed Specific Plan's long-term vision for the Plan Area is to improve bus stops to enhance the efficiency and effectiveness of transit services. This may involve providing rider amenities, such as shelters, real time updates, trash cans, and benches at stops in the Plan Area.

2.5.5 Utilities and Infrastructure

Chapter 4 of the proposed Specific Plan discusses existing infrastructure and the impact of the Specific Plan on resources including water, waste water, storm water, solid waste, and public services. Because the proposed Specific Plan is consistent with the City of Lynwood General Plan, no improvements beyond those identified in the General Plan or those typically required as part of individual development proposals were identified.

2.6. Land Use Development Potential

2.6.1 Approach to the Program EIR Analysis

This EIR approaches the environmental analysis based on the overall development pattern and character described in the Specific Plan. As a program EIR, it describes the potential impacts that could result from the adoption and buildout of the Specific Plan in a 25-year horizon, with buildout assumed in 2040. The key sites where a majority of future development is envisioned include the potential re-development of a mixed-use project at the existing Plaza Mexico site, the Northgate mixed use project located just south of the I-105 eastbound on-ramp, and along the Long Beach Boulevard, Imperial Highway, and Alameda Street corridors. However, details of these projects have not been developed, and therefore, the environmental analysis is based on the programmatic development potential according to the Specific Plan's vision and proposed development concepts. Subsequent projects that are in the scope of this EIR may be subject to a more limited environmental review process if determined necessary by the City of Lynwood, Director of Planning. Should subsequent development projects differ significantly from the anticipated development scope and realistic densities/intensities described in this EIR, such as the size, type, height, or location of structures and uses or the access routes in and around the site, additional environmental review shall be required pursuant to CEQA. Additionally, subsequent specific development projects in the Plan Area that are not part of the key sites identified will require specific environmental review pursuant to CEQA.

2.6.2 Buildout Projection

Section 15126.2 of the *State CEQA Guidelines* requires that an EIR focus on the significant "direct and indirect" and "short-term and long-term" effects of a project. To ensure a conservative approach in analyzing environmental effects under CEQA, EIRs typically analyze what could be considered a maximum reasonable impact scenario in order to capture as many significant environmental effects as could reasonably be expected as a result of the project. For a programmatic evaluation of Specific Plan impacts, this entails projecting buildout calculations to carry through the environmental review process. These projections reflect the estimated number of new housing units, the amount of new commercial development, and increased resident and employment populations reasonably foreseeable for the 25-year planning period of the proposed Specific Plan. The actual rate and amount of development will depend upon market conditions and regulatory processes. Buildout estimates for residential and non-residential growth under the proposed Specific Plan include 3,500 multi-family residential units, 1,200,000 square feet of commercial space, 750,000 square feet of industrial space, and up to 350 hotel rooms. A breakdown of potential future growth for each planning area is shown in Table 3.

Table 3 Linwood Transit Area Specific Plan Buildout Potential

Land Use/Zoning Designation	Residential Units	Commercial Square Footage	Limited Industrial Square Footage	Hotel Units
Town Center District (TC)	2,500	950,000	--	350
Corridor Mixed Use-1 (CMU-1)	500	100,000	--	
Corridor Mixed-Use-2 (CMU-2)	300	100,000	--	
Industrial (LM)			750,000	
St. Francis Medical (SFM)	100	45,000	--	
Transit Station (TS)		5,000		
Residential (R)	100			
Open Space (OS)				
GRAND TOTAL	3,500	1,200,000	750,000	350

Residential buildout estimations were based on assumptions identifying the parcels likely to be developed over the next 25 years according to the Specific Plan. The assumed average densities range from 15-60 dwelling units per acre for the residential dwellings. For non-residential buildout, a floor-to-area ratio ranging from approximately 0.2 to 1.0 was utilized for commercial and industrial uses.

2.7. Required Discretionary Approvals

For the proposed Specific Plan to be implemented, it would require adoption by the Lynwood City Council. No other discretionary approvals would be required for adoption of the Specific Plan.

This EIR serves as the environmental review for subsequent discretionary actions associated with development of the Specific Plan unless changes are proposed, or potential project-specific impacts occur that are not covered in this EIR and that warrant additional environmental review. This EIR may also cover State, regional, and/or local government permits that may be required for development under the proposed Specific Plan, whether or not they are explicitly listed below. Federal, State, and regional agencies that may have jurisdiction over some aspects include, but are not limited to, the following:

- General Plan amendments (e.g., Land Use Map amendment ,Land Use Element text and map updates, Circulation Element text and map updates)

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3 Environmental Setting

This section describes the current environmental conditions in and near the Lynwood Transit Area Specific Plan Area ("Specific Plan"). More detailed descriptions of the setting for each environmental issue area can be found in Section 4.0, Environmental Impact Analysis.

3.1. Regional Setting

The city of Lynwood includes approximately 4.9 square miles in southeastern Los Angeles County and is considered one of the county's Gateway Cities. The city has approximately 42 percent residential uses, 7 percent commercial uses, 7 percent industrial uses, 7 percent governmental uses, 34 percent rights-of-way, and 3 percent vacant lands.

The city's 2010 population is 69,772 (Lynwood Housing Element). Families primarily make up the residents (89.5 percent), with a majority of those (61.1 percent) having children. The city is primarily Hispanic (86.6 percent) and African American (9.7 percent). The largest employment sector in the city is manufacturing (21.3 percent), followed by education/health and social services (15 percent).

According to the City of Lynwood 2014 Housing Element, the city has a total of 16,312 housing units, but only 15,270 units are occupied. A majority of those units (67.8 percent) are either detached or attached single family units. Approximately 48.7 percent of the city's housing units were built from 1940 to 1959. The owner/renter populations in the City are distributed evenly at 50 percent.

3.2. Site-specific Setting

The Plan Area (as defined in Section 2.0, Project Description) is located between the cities of Compton, South Gate, Paramount, and the Los Angeles in the southeastern part of Los Angeles County. An aerial view of the Plan Area is shown in Figure 5 in Section 2.0, Project Description.

The I-105 Freeway and Long Beach Boulevard are major arterials providing immediate access to and bisecting the Plan Area. The Plan Area is also served by the Metro Green Line rail system. The Metro Green Line and six bus lines also intersect in the Plan Area boundaries.

The Plan Area is largely built out with residential, commercial, and industrial uses and is relatively flat, located approximately 92 feet above mean sea level. Although no seismic faults are located directly in the city, several active faults surround the city limits of Lynwood, such as the Newport-Inglewood, Sierra Madre, Whittier, Elysian Hills, and San Andreas Faults.

3.3. Cumulative Projects

CEQA defines cumulative impacts as two or more individual actions that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be insignificant when analyzed separately, but could have a significant impact when analyzed together. Cumulative impact analysis provides a reasonable forecast of future environmental conditions and allows the City to accurately gauge the effects of a series of projects.

Due to the long-term, multi-phased characteristic of the proposed Project relative to most of the environmental topic areas, this EIR examines cumulative impacts based on a summary of projections in accordance with the long-range general plan buildout of the City of Lynwood. Table 4 summarizes these projections. The General Plan is

consistent with the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan/Sustainable Communities Strategy Forecast (SCAG Regional Forecast) through the year 2040. As shown in the table, the city had an estimated population of 70,300, approximately 14,700 housing units, and approximately 9,200 jobs in 2012. The potential buildout through the year 2040 in the city of Lynwood would result in an increase of approximately 5,800 residents, approximately 1,500 housing units, and approximately 1,700 jobs. It should be noted that the proposed Specific Plan is not considered in the existing City of Lynwood General Plan, and therefore is not specifically accounted for in the SCAG projections. Therefore, the cumulative analysis for each environmental topic area considers the proposed project buildout in addition to cumulative buildout, pursuant to the SCAG projections.

Cumulative impacts are discussed in each of the specific impact analysis discussions in Section 4.0, Environmental Impact Analysis.

Table 4 Population Growth Estimates for the City of Linwood, 2012 to 2040

Data	2012 Total	2040 Total	Net New
City of Lynwood Population	70,300	76,100	5,800
City of Lynwood Housing Units	14,700	16,200	1,500
City of Lynwood Employment	9,200	10,900	1,700

Source: Southern California Association of Governments, 2012 and 2016 RTP/SCS Adopted Growth Forecast

4 Environmental Impact Analysis

This section discusses the possible environmental effects of the proposed Specific Plan for the specific issue areas that were identified by the City, expert consultation, and NOP responses as having the potential to experience significant impacts. "Significant effect" is defined by the *CEQA Guidelines* §15382 as "a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of each issue area begins with an italicized introduction that summarizes the environmental effects considered for that issue area. This is followed by the setting and impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds" or those criteria adopted by the City, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded effect also contains a statement of the significance determination for the environmental effect as follows:

> ***Significant and Unavoidable:*** *An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the State CEQA Guidelines*
>
> ***Significant but Mitigable:*** *An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made under §15091 of the State CEQA Guidelines*
>
> ***Less than Significant:*** *An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable*
>
> ***Beneficial:*** *An effect that would reduce existing environmental problems or hazards*

Following each environmental effect discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect. The impact analysis concludes with a discussion of cumulative effects that assesses the impacts associated with the proposed project in conjunction with other future development in the area.

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4.1 Aesthetics

This section analyzes the proposed project's impacts to aesthetics, including the existing visual character of and scenic views in the Plan Area and whether the proposed Specific Plan would adversely affect surrounding land uses due to impacts to scenic resources or the introduction of new sources of light or glare.

4.1.1 Setting

The city of Lynwood is an incorporated municipality located in the southern portion of the Los Angeles Basin at the intersection of two major freeways, the Century Freeway (I-105) and the Long Beach Freeway (I-710). The city is strategically situated along the Alameda rail corridor that connects the ports of Long Beach and Los Angeles to the rest of the Los Angeles, Orange County, the Inland Empire, and the nation beyond. The city is located just a few miles east of Los Angeles International Airport and bordered by the cities of South Gate to the north and Compton to the south.

The Plan Area encompasses approximately 315 acres surrounding the I-105 Freeway at its junction with Long Beach Boulevard and the Metro Green Line Station (Figure 5 in Section 2). The Specific Plan encourages development close to the Metro Green Line Station and generally contains properties within a one-mile radius of the station. Some of the key facilities and corridors that are located in the Specific Plan area include the Plaza Mexico Shopping Center, the Long Beach Boulevard Green Line Station, and the associated Interstate 105 on/off-ramps, St. Francis Medical Center, Long Beach Boulevard, Imperial Highway, and Martin Luther King Jr. Boulevard.

The Metro Green Line Station is located in the center median of I-105 Freeway at its interchange with Long Beach Boulevard, and is in the boundaries of the Specific Plan. Immediately north and south, Long Beach Boulevard passes beneath the I-105 Freeway overpass. This roadway is the main commercial artery in the city, and thus it is utilized primarily as an auto-dominated corridor connecting Lynwood to cities to the north and south. A similar automobile-oriented environment exists along Imperial Highway and Martin Luther King Jr. Boulevard.

The entire Plan Area is urbanized, and includes a combination of regional and neighborhood serving commercial uses, industrial uses, hospital and medical uses, and single and multi-family residential uses. Notable areas of development in the Plan Area include: (1) Plaza Mexico, a regional specialty shopping center with a mix of national box stores and smaller-scale local businesses arranged around an interior plaza located within the center of the Plan Area; (2) existing heavy and light industrial uses along the Alameda Street roadway corridor; (3) existing commercial and residential uses along the eastern and western portions of the Imperial Highway roadway corridor; (4) existing commercial uses located along the Long Beach Boulevard corridor; (5) existing single- and multi-family residential development located along Beachwood Avenue, Sanborn Avenue, Mulford Avenue, California Avenue, and other local streets, and (6) the St. Francis Medical Center and surrounding commercial and residential uses located along Imperial Highway and Martin Luther King Jr. Boulevard (MLK Boulevard).

a. Visual Character

The Plan Area is almost entirely built out with residential, commercial, and industrial uses. Full implementation of the proposed Specific Plan within the proposed 25-year planning horizon would increase the permitted densities and intensities for future development projects, potentially adding up to 3,500 multi-family units, 1.2 million square feet of new commercial development, 750,000 square feet of industrial development, and 350 hotel rooms. The City of Lynwood General Plan Community Design Element envisions new development in the Plan Area to be attractive, safe, well-designed, and well-integrated with adjacent neighborhoods, while identifying proper corridors, gateways, and nodes. Such identified corridors, gateways and activity nodes present unique opportunities for enhancing urban design in the city.

Corridors

Interstate 710 (I-710) and I-105 form important corridors in the City, along with the Long Beach Boulevard corridor, the Imperial Highway corridor, and the Atlantic Avenue corridor. The Plan Area is traversed by I-105 to the south,

Long Beach Boulevard through the center portions of the Plan Area, Imperial Highway through the eastern/western portions of the Plan Area, Alameda Street through the Plan Area along the western edge of the Plan Area, and MLK Boulevard through the plan area along the eastern edge of the Plan Area.

Gateways

Significant gateways to the city include the intersections of MLK Boulevard and Alameda Street, Long Beach Boulevard at the city of Southgate border, Atlantic Avenue and Imperial Highway, and Long Beach Boulevard, Atlantic Avenue, and Alameda Street at the city of Compton Border. In addition, important gateways associated with the freeways include the ramps of the I-710 Freeway at Imperial Highway and MLK Boulevard, and the ramps of the I-105 Freeway at Long Beach Boulevard. Gateways for the Plan Area include the I-105's Long Beach Boulevard interchange and the intersection of Imperial Highway and Long Beach Boulevard.

Activity Nodes

The City of Lynwood General Plan identifies three distinct urban nodes that constitute the center of the city from both a functional and urban design perspective. These activity nodes include the Lynwood Towne Center/Marketplace (Plaza Mexico) establishes the commercial/retail node, the St. Francis Hospital and adjacent uses that make up the major institutional node in the city, and the Civic Center/Park node which represents the governmental node. In addition to those nodes identified in the General Plan, the Specific Plan envisions 12 major placemaking opportunity areas, including the Metro Green Line station and immediately surrounding properties (Multi-Modal Transit area), Plaza Mexico shopping center (Town Center area), Industrial District, West Imperial Highway Corridor, West Imperial Highway Neighborhood, East Imperial Highway Corridor, Long Beach Boulevard Corridor, Neighborhood Mixed Use (including the Northgate mixed-use shopping center), St. Francis Medical Center District, Residential neighorhoods, Gateways, an Open Space and Recreation. These planning areas are further categorized into formal land use designations including Town Center (TC), Transit Station (TS), Corridor Mixed Use-1 (CMU-1), Corridor Mixed Use-2 (CMU-2), Industrial (I), St. Francis Medical (SFM), Residential (R), and Open Space (OS) (see Figure 5).

Residential Districts

The city contains several residential areas that can be identified as distinct neighborhoods with unique nomenclature, community identity, and distinctive architectural guidelines. Residential areas are based upon land use policy, geographic considerations, and logical borders such as commercial and transportation corridors. Some of the elements that help distinguish neighborhoods include street trees, street lighting fixtures, street signs, sidewalk paving, and architectural details such as roof types. The Plan Area is generally characterized primarily by post-WWII era commercial and industrial development with single-family and multi-family neighborhoods located along Fernwood Avenue, Beechwood Avenue, Sanborn Avenue, Mulford Avenue, California Avenue, Birch Street, and others. Most of the commercial development consists of independent retail shops, motels, restaurants, strip malls, and a large retail center (Plaza Mexico and surrounding commercial development). The residential neighborhoods are primarily comprised of small lot single-family homes interspersed with duplex, townhouse, and multi-family apartment buildings.

b. Views and Scenic Resources

The city of Lynwood has no significant scenic vistas and no designated or proposed scenic routes. The city is relatively flat and is located approximately 92 feet above mean sea level. The Plan Area is built out with a mix of residential, commercial, and industrial uses. The urban character of the Plan Area is further reinforced by the major roadway corridors, including I-105, Long Beach Boulevard, Imperial Highway, MLK Boulevard, and Alameda Street, all of which are lined with existing commercial, industrial, or residential development. Furthermore, these roadway corridors are currently auto-oriented. Views of existing conditions in the Plan Area are shown in Figure 6, Sheets 1, 2, and 3.

Figure 6 Site Photos Sheet 1

Photo 1: Long Beach Boulevard Looking North Towards I-105

Photo 2: Long Beach Boulevard Looking North Under I-105 Overpass

Photo 3: Long Beach Boulevard Looking South Towards I-105

Photo 4: Public Sidewalks Along Long Beach Boulevard

Figure 6 Site Photos Sheet 2

Photo 1: Imperial Highway at Long Beach Boulevard Looking Northwest

Photo 2: Peach Street at Poplar Drive Looking South

Photo 3: State Street at Imperial Highway Looking South

Photo 4: Imperial Highway at State Street Looking Northwest

Figure 6 Site Photos Sheet 13

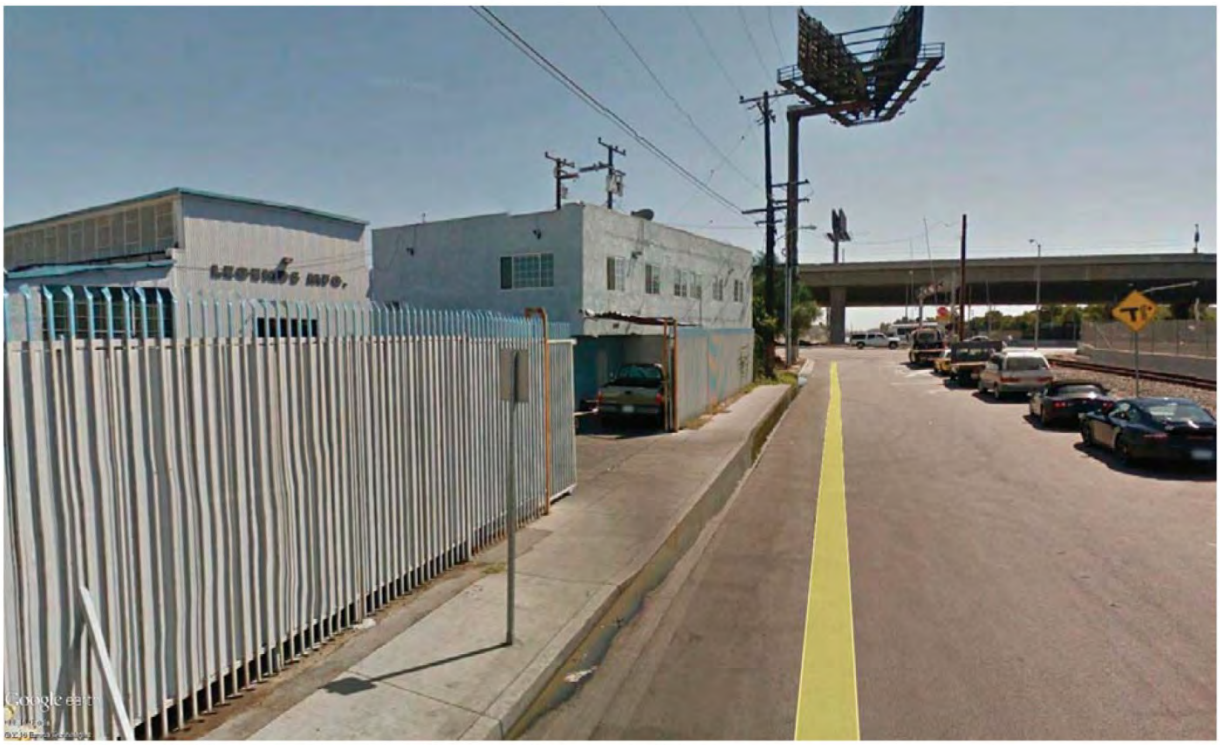

Photo 1: South Alameda Street Looking South Towards I-105

Photo 2: Lynwood Road East of Railroad Tracks Looking North

c. Light and Glare

The Plan Area has an urban character and currently has high nighttime light levels from streetlights, parking lot lighting, and light fixtures attached to exterior building facades. Headlights from motor vehicles traveling through the Plan Area also contribute to nighttime lighting. Glare is primarily a daytime phenomenon, caused by sunlight reflecting from structures (including windows), roadways, and cars. However, glare can also be created at night by vehicle headlights. Residential land uses in the Plan Area would be most sensitive to night lighting and glare.

d. Regulatory Setting

In accordance with California Government Code Section 65454 that states no specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan, the adoption of the Specific Plan will require a General Plan Amendment (GPA) of the City of Lynwood General Plan, including the General Plan Land Use Element and Land Use Map. These will be amended concurrently with the adoption of the LTASP to include the proposed land use designations, and goals and policies of the Specific Plan. The Specific Plan will also function as an "overlay district" for the planning areas that are coterminous with the Long Beach Boulevard Specific Plan, which was adopted by the City of Lynwood in 2006 and governs a portion of the project area.

The Lynwood General Plan Community Design Element delineates specific design guidelines which establish the City's image reflective of its history and its present and future aspirations. The following Community Design Element goals and policies are relevant to aesthetics:

> *Community Design Goal No.1: Encourage physical development that enhances the positive image of the City as a balanced residential community indicative of its "All American City" status.*
>
> *Community Design Goal No.2: Define urban design components that provide a unique visual character for the City and distinguish the City from its neighboring communities.*
>
> *Community Design Goal No.3: Develop innovative strategies for bridging the physical separation of the City created by the construction of the Century Freeway.*

In the process of developing generalized urban design goals for the City of Lynwood, specific policies were formulated to further refine and provide substantive recommendations in support of the community design goals articulated above. The policies, which accompany these goals, are as follows:

> *Policy No.1: Formulate general design guidelines for residential and commercial properties to ensure that new construction and renovation of existing structures achieve a high level of architectural and site design quality.*
>
> *Policy No. 2: Develop design guidelines, which facilitate the creation and identification of distinct neighborhoods throughout the City.*
>
> *Policy No. 3: Develop street median landscape standards to enhance the streetscape.*
>
> *Policy No. 4: Develop joint programs with adjacent jurisdictions to create a distinct image for the City as citizens travel to and from Lynwood; a pattern of identifiable portals should be created to improve the image and identity of the City.*
>
> *Policy No. 5: Ensure that signage is visually attractive, compatible within the neighborhood setting and provides a high quality image for the City.*

In addition to the General Plan, the Long Beach Boulevard Specific Plan also contains additional goals, policies and actions for community design, economic, circulation, land use, and infrastructure/public services for the Long Beach Boulevard corridor area. The objectives for new development in the Lynwood Transit Area Specific Plan are consistent with these goals and objectives, as they promote the revitalization of Long Beach Boulevard, Imperial Highway, and the areas surrounding the Long Beach Boulevard Green Line Station. The primary objectives of the Specific Plan are as follows:

1 **Promote Transit-Oriented Development Near Metro's Long Beach Boulevard Green Line Station -**Expand on the accessibility of the Green Line Station and the energy at Plaza Mexico by creating a dynamic town center and transit district with a distinctive identity --an active and attractive transit hub and a mixed-use entertainment center where people come to live, shop, work and play.
2 **Allow for Flexibility in Land Uses** - Provide a framework for approval of incremental development projects that offers defined ranges of flexibility to accommodate changes in market demand.
3 Consolidate Uses and Create New Catalytic Development Sites - Identify sites most suitable for assembly and revitalization.
4 **Enhance Pedestrian Comfort and Safety -** Increase facilities, add connections, and multiply opportunities to safely and conveniently get around the area on "complete" streets by foot, bike, and public transit.
5 **Enhance Recreational Opportunities-** Increase landscaped areas, parks, open space, and trails that are supportive of the public life of the community. Facilitate security and well-being for the Specific Plan Area's residents, employees, and visitors through increased activity, better walkability, controls on cars and drivers, and better design and wayfinding.
6 **Improve and Facilitate Additional Housing -** A variety of housing types should be provided which are compatible with existing housing types and neighborhoods in the community. A diverse mix of ownership and rental housing, and market rate, affordable, and workforce housing should be maintained.
7 **Create a Sustainable Community -** Ensure public health, safety and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to view sheds and aesthetic conditions differently. This evaluation measures the existing visual resource against the proposed action, analyzing the nature of the anticipated change. The Plan Area was observed and photographically documented to assist in the analysis (See Figures 8a through 8c).

According to Appendix G of the State CEQA Guidelines, an impact would be considered significant if the project causes any of the following:

1 A substantial adverse effect on a scenic vista
2 Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a state scenic highway
3 Substantial degradation of the existing visual character or quality of the site and its surroundings
4 A new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The impacts on visual character or quality that would be attributable to the proposed Specific Plan were evaluated relative to visual conditions currently experienced on the ground. Based on the following discussions, impacts related to thresholds 1 and 2 were found to be less than significant and thus are not discussed further in this EIR.

Scenic vistas are panoramic views of features such as mountains, forests, the ocean, or urban skylines. The project site approximately 12 miles east of the Pacific Ocean and thus views of the ocean are largely obstructed by existing building and structures and do not constitute scenic vistas. Furthermore, the project site is located in the southern portions of the Los Angeles metropolitan area and thus views of the mountains would be background views. Although implementation of the Specific Plan would intensify land uses in the Plan Area, development would not have the potential to obstruct or otherwise impact existing public views of scenic vistas, as none exist along the Plan Area.

There are no rock outcroppings or any other scenic resources on or adjacent to the Plan Area. There are some ornamental trees in onsite landscaped areas and in parking areas, but these trees are not considered scenic resources. They are typical of landscaped ornamental trees in urban areas of Southern California. Therefore, the removal of some of the trees onsite would not damage scenic resources and no impact would occur. Additionally,

there are no state scenic highways adjacent to or near the Plan Area as designated by the State of California Department of Transportation (Caltrans 2011). The Plan Area is not beside a state scenic highway, nor is it visible from any officially designated scenic highway.

b. Project Impacts and Mitigation Measures

Impact AES-1	The proposed Specific Plan would facilitate changes to the visual character of the Plan Area, relative to buildout under the existing General Plan and Municipal Code regulations. However, the proposed land use designations and the corresponding development standards and design guidelines in the Specific Plan would improve the visual quality of the environment, and the proposed design review criteria for new developments would ensure their visual compatibility with existing uses in the Plan Area. Impacts to visual character would be less than significant.

The proposed Specific Plan would facilitate changes to the visual character of the Plan Area by establishing new land use designations, development standards, and design guidelines. Overall, the Specific Plan contemplates the development of up to 3,500 residential dwellings, 1.2 million square feet of commercial uses, 750, 000 square feet of industrial uses, and up to 350 hotel rooms. As noted in Chapter 2 of the Specific Plan, the land use framework, design guidelines, and development standards are intended to provide the development and design criteria, which will reinforce the desired high quality architecture and form of development. The design guidelines and development standards require the construction of walkable, sustainable, mixed-use environments and development in keeping with the surrounding development. The Specific Plan's design guidelines and development standards would be applied to all of the placemaking opportunities proposed as part of the Specific Plan. In each of these areas, a wide range of commercial, civic, residential, and recreational development opportunities would be permitted. Provided below is a summary of the design/development strategy for each of the placemaking opportunities in the Specific Plan.

The Town Center District

This area is envisioned as a transformative mixed-use, transit-oriented development area, including the construction of approximately 2,500 multi-family residential units, approximately 950,000 square feet of local shopping, dining, civic, and entertainment options, and up to 350 hotel rooms. The applicable design guidelines and development regulations would promote destination and entertainment retail uses oriented around a central plaza with residential uses above. Safe pedestrian and bicycle pathways would be established through the area to connect the district with adjacent neighborhoods, parks, and the Metro Green Line Station. Shared parking structures should be developed to establish "park once" opportunities.

The West Town Center Neighborhood

This area would establish a transition from the vibrant, mixed-use entertainment, retail and high-density residential uses in the Town Center District. Future development would include a mixture of low- to medium- density residential dwellings and recreational/open space facilities parallel to Fernwood Avenue and Imperial Highway.

The Long Beach Boulevard Commercial Corridor

This area would include a mix of uses that offer places to work, shop, and live within a safe walking or cycling distance of the Metro Green Line Station and other existing transit services. Future development would feature aesthetically pleasing building frontages placed adjacent to a streetscape that encourage the presence of people in the public spaces at most times for safety and vitality and could safety accommodate all modes of travel. Parking lots should be moved to the side or rear of new businesses, parallel/angled parking should be added, and streetscape landscaping should be added along the corridor to improve the sense of pedestrian safety and beauty.

The Long Beach Boulevard Commercial Neighborhood

This area would include a mix of uses that provide places to work, shop, and live within a safe walking or cycling distance of the Metro Green Line Station and other transit services. Future development in this area would be centered around the underutilized commercial properties located on the east side of Long Beach Boulevard south of

the I-105 Freeway. Access to existing transit services would be expanded through streetscape improvements that would safely accommodate all modes of travel. Parking lots should be moved to the side or rear of new businesses, parallel/angled parking should be added, and streetscape landscaping should be added along the corridor to improve the sense of pedestrian safety and beauty. Future development would feature a neighborhood market combined with affordable housing.

The West Imperial Highway Corridor

This area would include medium-density, mixed-use development that would take advantage of its proximity to the Town Center District. Local retail and restaurant uses, live-work, and arts and culture mixed use are encouraged. Future development would also feature an aesthetically pleasing streetscape that encourages the presence of people in the public spaces at most times for safety and vitality. Streetscape improvements would safely accommodate all modes of travel. Provisional pop-up (outdoor dining and parklets) and food truck uses are encouraged on vacant and/or underutilized parcels or parking areas to create temporary neighborhood spaces until larger-scale, permanent, mixed-use development becomes more feasible. Parking lots should be moved to the side or rear of new businesses, parallel/angled parking should be added, and streetscape landscaping should be added along the corridor to improve the sense of pedestrian safety and beauty.

The East Imperial Highway Corridor

This area would include medium-density, mixed-use development that would take advantage of its proximity to a revitalized Long Beach Boulevard and its proximity to St. Francis Medical Center. Mixed-use retail/office uses and infill residential uses are encouraged, along with streetscape improvements to safely accommodate all modes of travel. Parking lots should be moved to the side or rear of new businesses, parallel/angled parking should be added, and streetscape landscaping should be added along the corridor to improve the sense of pedestrian safety and beauty.

The Alameda Street Corridor

This area would include a revitalized collection of coordinated industrial condominium buildings divisible for smaller firms needing less space than conventional manufacturers. New development in this area would include street-oriented buildings, with frontage close to the sidewalk, and with windows, entrances and architectural features facing the street. A compact parking arrangement is encouraged: structured parking rather than large surface lots, located in the middles of blocks, behind occupied buildings. Loading facilities would be located similarly, to facilitate a pedestrian-oriented streetscape.

Residential Neighborhood

This area would include existing residential neighborhoods and would permit the future intensification of residential development. However, physical compatibility between new buildings and existing residences would be required and thus a suitable transition between bigger, more intensive development and lower, less intense residential uses would be established to preserve and enhance existing residential uses. Several kinds of housing would be developed in this area, including single-family residential, townhouses, duplex/triplex, stacked flats, and live/work units.

St. Francis Medical Center

This area would continue to operate as a regional destination for medical, health and associated services. Future development on the campus will be guided by the St. Francis Medical Center Master Plan, which has largely been completed. Future development adjacent to the campus would include additional housing with enhanced pedestrian and transit connections between St. Francis Medical Center and the other activity areas in the immediate vicinity.

Gateways

The Metro Green Line Station/I-105 Interchange and the intersection of Long Beach Boulevard/Imperial Highway are conceived as areas of heightened architecture, signage, and landscaping that would help establish an improved

visual identity of the Specific Plan Area. The Metro Green Line station is envisioned as a revitalized transit hub that encourages continued transit ridership among current users and entices new riders to utilize public transportation. The re-design of the I-105 Freeway ramps is encouraged to remove the existing hazards caused by wide, scattered, and uncontrolled freeway access points that are hostile to pedestrians, transit riders, and bicyclists. Future mixed-use development could frame the Metro Green Line Station. A linear green space and bicycle/pedestrian pathway is encouraged parallel to the freeway, for the purposes of establishing a safe pedestrian and bicycle connection between the Town Center District, the Metro Green Line Station and the existing residential neighborhoods.

As described above, the proposed Specific Plan would alter the visual character of the Plan Area by facilitating significant growth in mixed-use commercial, residential, and transit-oriented uses. It should be noted, however, that the proposed Specific Plan includes many features to improve the visual quality of the urban environment. In an area that now lacks a cohesive visual identity, due to the haphazard implementation of existing development, the formation of distinct districts and corridors would improve the visual environment. Furthermore, future development proposals under the Specific Plan will be subject to design review in order to establish a sufficiently improved level of architectural and landscaping design, streetscape enhancement, addition of public art, lighting and signage designs. To ensure these improved design measures, the City will make all of the following findings pertaining to aesthetics during the review of each individual project proposed for the Specific Plan area:

1 The proposed project would be harmonious and compatible with existing development and with the overall character of the neighborhood.
2 The location, size, design, and operating characteristics of the proposed project would promote the orderly growth of the City and would not be detrimental to the public interest, health, safety, convenience, or welfare of neighboring properties or to that of the overall community.
3 Site and architectural design and functional plan of the structure(s) and related improvements, including landscaping, would be of reasonable aesthetic quality and implement the objectives of the Lynwood Transit Area Specific Plan.
4 Structure(s) and related improvements, including access and parking, would be suitable for the proposed use of the property, consistent with the intent of the applicable zone, promote orderly development in the vicinity of the subject site, and provide adequate consideration of the existing and contemplated uses of land.
5 The design and layout of the proposed project would be consistent with the General Plan, the Specific Plan land use designations, and the Specific Plan development standards.

The City's development review process would ensure that future development in the Specific Plan is consistent with the applicable design guidelines and development standards. This would also ensure that new developments are harmonious and visually compatible with existing land uses throughout the Plan Area. Therefore, impacts to visual character would be less than significant.

Mitigation Measures

The proposed project would not have a significant adverse impact related to visual character; therefore no mitigation is necessary.

Significance after Mitigation

Impacts would be **less than significant** without mitigation.

Impact AES-2	The proposed project would result in new sources of light and glare in and around the project area. However, these new sources would not substantially increase the amount of light and glare in the already urbanized Plan Area, and would be regulated by the Specific Plan development standards and design guidelines, and the City's Municipal Code. Impacts would be *less than significant.*

Future development proposed in the Plan Area would increase the overall development intensity and related, new sources of light would be introduced. The potential sources of new nighttime light include spillover from the windows of residences and businesses, and from outdoor security lighting, lighted signs, streetlights, and building-

mounted lighting. New development also could produce glare from sunlight reflecting off the windows of buildings and motor vehicles or vehicle headlights shining at night. However, these new sources would not substantially increase the amount of nighttime lighting or glare in the already urbanized Plan Area. Furthermore, Chapter 2 of the Specific Plan and the Lynwood Municipal Code Chapter 25 contain lighting standards for commercial and residential uses. Each future development would be reviewed for site-specific consistency with these standards. Therefore, impacts associated with light and glare would less than significant.

Mitigation Measures

The proposed project would not have a significant adverse impact related to light and glare; therefore no mitigation is necessary.

Significance after Mitigation

Impacts would be **less than significant** without mitigation.

c. Cumulative Impacts

As discussed in Section 2.0, *Project Description*, full implementation of the proposed Specific Plan within the proposed 25-year planning horizon envisions an increase density and intensity of existing land uses, adding up to 3,500 multi-family units, 1.2 million square feet of new commercial development, 750,000 square feet of industrial development, and 350 hotel rooms. This intensification of urban development would result in changes to the area's visual environment. However, buildout under the Specific Plan would not significantly affect scenic vistas or scenic resources. The proposed Specific Plan also would not result in significant adverse effects on visual character or quality, relative to buildout under the existing zoning code and compliance with the development standards would enhance the quality of the visual environment in the Plan Area. Furthermore, while new development in the Plan Area would increase sources of light and glare, compliance with the Lynwood General Plan and site-specific environmental review would reduce impacts from light and glare to a less than significant level. Therefore, cumulative impacts of the proposed Specific Plan on aesthetics in the Plan Area would not be cumulatively considerable.

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4.2 Air Quality

4.2.1 Setting

a. Climate and Meteorology

The Plan Area is located in the city of Lynwood, which is part of the South Coast Air Basin (Basin) and under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Air quality in the Basin is affected by various emission sources (e.g., motor vehicles and industry) as well as atmospheric conditions such as wind speed, wind direction, temperature, and rainfall, etc. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States give the Basin the worst air pollution problem in the nation.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunder showers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Long Beach WSCMO Station climatological station monitored precipitation from April 1958 to March 2013. Average monthly rainfall measured in Long Beach during that period varied from 2.90 inches in February to 0.42 inch or less between May and October, with an annual total of 12.01 inches.

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

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino counties. In the winter, the greatest pollution problem is the accumulation of carbon monoxide (CO) and nitrogen oxides (NO_X) due to low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

b. Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore, schools and hospitals. Sensitive receptors likely to be affected by air quality impacts associated with future development include residential areas near construction sites. The Plan Area is surrounded by residential sensitive receptors to the north, east, and south. There are four schools located within 1,000 feet of the Plan Area: Hosler Middle School, 650 feet east; Saint Emydius Catholic School, 650 feet northeast; Ritter Elementary School, 250 feet northwest; and Doctor Ralph Bunche Middle School, 1,000 feet southwest. St. Francis Medical Center is also located in the Plan Area.

In April 2005, the California Air Resources Board (ARB) released the final version of the Air Quality and Land Use Handbook, which is intended to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., homes or daycare centers) near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits, but could create air quality problems. The primary purpose of the handbook is to highlight the potential health impacts associated with proximity to common air pollution sources, so that those

issues are considered in the planning process. ARB makes recommendations regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources. These recommendations are based primarily on modeling information and may not be entirely reflective of conditions in the Plan Area. The Air Quality and Land Use Handbook notes that siting of new sensitive land uses within these distances may be possible, but recommends that site-specific studies be conducted to identify actual health risks. ARB acknowledges that land use agencies have to balance other siting considerations such as housing and transportation needs, economic development priorities and other quality of life issues.

c. Air Pollution Regulation

Federal Regulations/Standards

Pursuant to the Federal Clean Air Act (CAA) of 1970, the U.S. Environmental Protection Agency (U.S. EPA) established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants termed "criteria" pollutants, which are those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health. The current AAQS plus the California standards (generally more stringent than federal standards) are presented in Table 5.

Table 5 Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg) 0.10 ppm (1-hr avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)
Sulfur Dioxide	0.14 ppm (24-hr avg) 0.075 ppm (1-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 $\mu g/m^3$ (3-month avg)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	20 $\mu g/m^3$ (annual avg) 50 $\mu g/m^3$ (24-hr avg)
Particulate Matter ($PM_{2.5}$)	15 $\mu g/m^3$ (annual avg) 35 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board 2015

The U.S. EPA uses data collected at permanent monitoring stations to classify regions as "attainment" or "nonattainment," depending on whether the regions meet the requirements stated in the primary NAAQS. Nonattainment areas have additional restrictions imposed upon them as required by the U.S. EPA.

The U.S. EPA established new national air quality standards for ground-level ozone and fine particulate matter in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, relative to setting the new public health standards for ozone and particulate matter, was unconstitutional and an improper delegation of legislative authority to the U.S. EPA. On February 27, 2001, the U.S. Supreme Court upheld the way the government sets air quality standards under the CAA. The Court unanimously rejected industry arguments that the U.S. EPA must consider financial costs as well as health benefits in writing standards. The justices also rejected arguments that the U.S. EPA took too much lawmaking power from Congress when it set tougher

standards for ozone and soot in 1997. Nevertheless, the Court dismissed the U.S. EPA's policy for implementing new ozone rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the White House Office of Management and Budget (OMB) cleared the U.S. EPA to implement the eight-hour ground-level ozone standard. The U.S. EPA issued the proposed rule implementing the eight-hour ozone standard in April 2003 and completed the final eight-hour nonattainment status for the air quality regions on April 15, 2004. The U.S. EPA revoked the one-hour ozone standard on June 15, 2005, and lowered the eight-hour O_3 standard from 0.08 parts per million (ppm) to 0.075 ppm on April 1, 2008. The U.S. EPA issued the final $PM_{2.5}$ implementation rule in fall 2004. The U.S. EPA lowered the 24-hour $PM_{2.5}$ standard from 65 to 35 micrograms per cubic meter (µg/m_3) and revoked the annual PM_{10} standard on December 17, 2006. The U.S. EPA issued final designations for the 2006 24-hour $PM_{2.5}$ standard on December 12, 2008.

Descriptions of the criteria pollutants follow.

Ozone. O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases rather than being directly emitted. Ozone is a pungent, colorless gas typical of Southern California smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during the summer and early fall. The entire Basin is designated as a nonattainment area for the State one-hour and eight-hour ozone standards. The U.S. EPA has officially designated the status for the Basin regarding the eight-hour ozone standard as "Extreme." The Basin has until 2024 to attain the federal eight-hour O_3 standard.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless odorless gas that can cause dizziness, fatigue, and impairment to central nervous system functions. The entire Basin is in attainment for the State standards for CO. The Basin is designated as an "Attainment/ Maintenance" area under the federal CO standards.

Nitrogen Oxides. Nitrogen dioxide (NO_2), a reddish-brown gas, and nitric oxide (NO), a colorless odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X, which is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire Basin is designated as nonattainment for the State NO_2 standard and as an "Attainment/Maintenance" area under the federal NO_2 standard.

Sulfur Dioxide. Sulfur dioxide (SO_2) is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment for both federal and State SO_2 standards.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The Los Angeles county portion of the Basin was re-designated as nonattainment for the State and federal standards for lead in 2010.

Particulate Matter. Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (particulate matter less than 10 microns in diameter [PM_{10}]) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle ($PM_{2.5}$) levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems such as asthma. The U.S. EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to the health effects listed in a number of recently published community epidemiological studies that assessed the effects of concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death; increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary diseases such as asthma);

decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The Basin is a nonattainment area for the State PM_{10} and $PM_{2.5}$ standards and a nonattainment area for the federal $PM_{2.5}$ standards. The Basin was re-designated as an Attainment/Maintenance area for the federal PM_{10} standard in 2013.

Reactive Organic Compounds. Reactive organic compounds (ROC), also known as reactive organic gases (ROG) and volatile organic compounds (VOC), are formed through the combustion of fuels and evaporation of organic solvents. ROCs are not defined criteria pollutants but are a prime component of the photochemical smog reaction. Consequently, ROCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower.

Sulfates. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place fairly rapidly and completely in urban areas of California due to regional meteorological features. The entire Basin is in attainment for the State standard for sulfates.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It forms during bacterial decomposition of sulfur-containing organic substances and can be present in sewer gas and some natural gas. It can be emitted as the result of geothermal energy exploitation. In 1984, an ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance. The State standard for outdoor levels of H_2S is 30 parts per billion averaged over one hour (SCAQMD 2015).The entire Basin is unclassified for the State standard for H_2S.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made of many different materials such as metals, soot, soil, dust, and salt. The State standard intends to limit the frequency and severity of impairment to visibility due to regional haze. The entire Basin is unclassified for the State standard for visibility-reducing particles.

State Regulations/Standards

In 1967, the California Legislature passed the Mulford-Carrell Act, combining two Department of Health bureaus (the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board) to establish the ARB. The ARB coordinates and oversees both State and federal air pollution control programs in California. It also oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the U.S. EPA and local air districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution.

The ARB identified particulate emissions from diesel-fueled engines (diesel particulate matter [DPM]) as a toxic air contaminant (TAC) in August 1998. Following the identification process, ARB was required by law to determine whether there is a need for further control. In September 2000, the ARB adopted the Diesel Risk Reduction Plan (Diesel RRP), recommending many control measures to reduce the risks associated with DPM and to achieve the goal of 85 percent DPM reduction by 2020.

California Green Building Code. California Green Buildings Standards Code (Cal Green Code) (California Code of Regulations [CCR], Title 24, Part 11) was adopted by the California Building Standards Commission in 2010 and became effective in January 2011. The Code applies to all new constructed residential, nonresidential, commercial, mixed-use, and State-owned facilities, as well as schools and hospitals. Cal Green Code comprises Mandatory Residential and Nonresidential Measures and more stringent, Voluntary Measures (Tier I and Tier II).

Mandatory Measures are required for all new construction projects and consist of a wide array of green measures concerning project site design, water use reduction, indoor air quality improvement, and material and resource conservation. The Cal Green Building Code refers to Title 24, Part 6 compliance with respect to energy efficiency, but it encourages 15 percent energy use reduction over that required in Part 6. Voluntary Measures are optional,

more stringent than those required by mandatory code and may be used by jurisdictions to enhance their commitment to green and sustainable design and the achievement of Assembly Bill (AB) 32 goals. Under Tier I, all new construction projects are required to reduce energy consumption by 15 percent and by 30 percent under Tier II below the baseline required under the California Energy Commission (CEC).

Local Regulations and Policies

Regional Air Quality Planning Framework. The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the state. The ARB is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for U.S. EPA approval. Significant authority for air quality control in the local air basins has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan. The SCAQMD and the Southern California Association of Governments (SCAG) are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. Every three years, the SCAQMD prepares a new AQMP, updating the previous plan with a 20-year horizon. The SCAQMD adopted the Final 2012 AQMP on December 7, 2012 and forwarded it to the ARB for review in February 2013. The 2012 AQMP includes the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. The 2012 AQMP is based on the growth assumptions contained in SCAG's 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Currently, the SCAQMD is initiating an early development process for the 2016 AQMP, which will be a comprehensive and integrated Plan focused primarily on addressing the ozone standards. The Plan will be a regional and multi-agency effort (SCAQMD, ARB, SCAG, and U.S. EPA). State and federal planning requirements include developing control strategies, demonstrating attainment, showing reasonable further progress, and maintaining plans. The 2016 AQMP will incorporate the latest scientific and technical information and planning assumptions, including the most recent, applicable growth assumptions from the RTP/SCS and updated emission inventory methodologies for various source categories.

City of Lynwood General Plan. The Air Quality Element (2003) of the Lynwood General Plan includes goals and polices related to air quality. The following goals and policies are applicable to the proposed project:

- **Goal AQ-1:** Improve air quality in conformance with State and Federal standards.
  - **Policy AQ-1.1:** The City shall ensure that to the extent practical that air quality mitigation measures are incorporated into residential, commercial and industrial projects.
- **Goal AQ-2:** Improve the air quality of industrial and commercial operations.
  - **Policy AQ-2.1:** The City supports the acquisition of air quality permits from the SCAQMD.

d. Current Air Quality

The SCAQMD, with cooperation from CARB, maintains ambient air quality monitoring stations in the Basin. The closest air quality monitoring station to the site is the Compton station (700 North Bullis Road in Compton), and its air quality trends represent the ambient air quality in the project area. The pollutants monitored at this station are CO, O_3, NO_2, and $PM_{2.5}$. Data for PM_{10} and SO_2 is available from the second nearest station to the Plan Area (North Long Beach Station, at 3648 North Long Beach Boulevard).

Table 6 summarizes the ambient air quality levels measured at these stations during the years 2012 to 2014. The pollutants that exceeded thresholds during the monitoring period were O_3 and $PM_{2.5}$. The O_3 federal eight-hour standard was exceeded one time in 2012 and 2013, and four times in 2014, while the State eight-hour standard was exceed once in 2013 and twice in 2014. The $PM_{2.5}$ standard was exceeded one time in 2012, 2013, and 2014.

Table 6 Ambient Air Quality Data

Pollutant	2012	2013	2014
Ozone, ppm – Worst Hour	0.086	0.090	0.094
Number of days of State exceedances (>0.09 ppm)	0	0	0
Ozone, ppm – Worst 8 Hours	0.070	0.080	0.081
Number of days of State exceedances – 8 hour average (>0.07 ppm)	0	1	2
Number of days of Federal exceedances – 8 hour average (>0.07 ppm)	1	1	4
Carbon Monoxide, ppm - Worst 8 Hours	3.96	*	*
Number of days of State/Federal exceedances (>9.0 ppm)	0	0	0
Nitrogen Dioxide, ppb - Worst Hour	79.3	69.8	68.2
Number of days of State exceedances (>100 ppb)	0	0	0
Number of days of Federal exceedances (>180 ppb)	0	0	0
Sulfur Dioxide, ppm – Worst 24 Hours	0.003	0.001	*
Number of days of State exceedances (>0.04 ppm)	*	*	*
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours	45	37	*
Number of samples of State exceedances (>50 $\mu g/m^3$)	0	0	0
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours	51.2	52.1	35.8
Number of measured days of Federal exceedances (>35 $\mu g/m^3$)	1	1	1

Source: CARB, Annual Air Quality Data Summaries available at http://www.arb.ca.gov/adam/topfour/topfour1.php
Particulate matter (<2.5), ozone, carbon monoxide, and nitrogen dioxide data taken from Compton station.
Particulate matter (<10) and sulfur dioxide data from the North Long Beach station, which is the next closest station.
* Insufficient data available to determine the value

4.2.2. Impact Analysis

a. Significance Thresholds and Methodology

The analysis of the Specific Plan's air quality impacts follows the guidance and methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993), as well as Appendix G of the State *CEQA Guidelines*.

Significance Thresholds

According to Appendix G of the *State CEQA Guidelines*, impacts related to air quality from the proposed project would be significant if the project would have any of the following effects:

1 Conflict with or obstruct implementation of the applicable air quality plan
2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation
3 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 (including releasing emissions which exceed qualitative thresholds for ozone precursors)
4 Expose sensitive receptors to substantial pollutant concentrations
5 Create objectionable odors affecting a substantial number of people

The State *CEQA Guidelines* further state that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the determinations above. The analysis of the Specific Plan's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* (1993) and the significance thresholds on SCAQMD's website (SCAQMD 2015). The SCAQMD has not developed guidelines or thresholds of significance specifically for local plans; therefore, SCAQMD's thresholds of significance for regional air quality emissions for construction activities and project operation are used to assess the impacts of the Specific Plan.

Air Quality Management Plan Consistency

The criteria for determining consistency with the SCAQMD's AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's *CEQA Air Quality Handbook*, and includes the following:

- The project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- The proposed project will not exceed the assumptions in the AQMP based on the year of project buildout.

CONSTRUCTION EMISSION THRESHOLDS

The SCAQMD has developed specific numeric thresholds that apply to projects in the Basin. The SCAQMD currently recommends that impacts associated with projects with construction-related mass daily emissions that exceed any of the following emissions thresholds should be considered significant:

- 75 pounds per day of ROG
- 100 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_x
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

OPERATIONAL EMISSION THRESHOLDS

The SCAQMD has also established the following significance thresholds for project operations in the Basin:

- 55 pounds per day of ROG
- 55 pounds per day of NO_X
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

Localized Significance Thresholds

In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LST). LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor. However, LSTs are applicable to projects at the project-specific level and are not applicable to regional projects such as specific plans (SCAQMD 2003). As such, LSTs do not apply to the proposed Specific Plan.

Local Carbon Monoxide Concentrations

Areas with high vehicle density, such as congested intersections, have the potential to create high concentrations of CO, and are known as CO hotspots. A project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the federal and State 8-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (level of service [LOS] E or worse). Pursuant to SCAQMD guidance, a CO hotspot analysis should be conducted for intersections where a project would have a significant impact at a signalized intersection, causing the LOS to change to E or F, or when the volume to capacity ratio (V/C) increases by two percent or more as a result of a proposed project for intersections rated D or worse (SCAQMD 2003).

Methodology

Both temporary construction emissions and long-term operation emissions were calculated using the California Air Emissions Estimator Model (CalEEMod), version 2013.2.2. CalEEMod is a software model developed by SCAQMD to estimate air pollutant and GHG emissions from land use development projects. Operational emissions were estimated by using CalEEMod default inputs for the type and size of proposed land uses. Operational emissions would be composed of mobile source emissions, those associated with energy consumption, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Plan Area associated with operation of development proposed under the Specific Plan. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating and cooling. Area source emissions are generated by, for example, landscape maintenance equipment, consumer products, and architectural coatings.

The estimate of total daily trips associated with the proposed Specific Plan was based on vehicle trip data provided in Section 4.12, Transportation and Circulation, which includes a 25 percent transit trip reduction in daily vehicle trips and an 18 percent internal trip credit due to the Specific Plan's transit-oriented design. The overall vehicle fleet mix used for the analysis is the default fleet mix provided in the CalEEMod software.

CalEEMod provides an estimate of emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment use during construction. The actual rate and amount of development occurring under the Specific Plan is not known as it will depend upon market conditions and regulatory actions. Therefore, to provide a conservative estimate of maximum daily construction emissions, it was assumed that construction of all development facilitated by the Specific Plan (3,500 multi-family units, 1,200,000 square feet of commercial space, 750,000 square feet of industrial space, and 350 hotel rooms) would occur simultaneously and begin in 2017. In addition, it was assumed that grading would be concentrated in the key development sites and would be balanced in the Plan Area. Furthermore, it was assumed no offsite import or export of soil would be required during construction under the proposed Specific Plan. The CalEEMod construction analysis considered grading, building construction, architectural coatings, and paving phases. Demolition and site preparation phases of construction were not included in the analysis because formal development plans in Specific Plan areas that may require demolition and site preparation activities have not been submitted to the City of Lynwood for consideration. Therefore, any assessment of air quality emissions resulting from demolition in the Specific Plan area would be speculative.

Modeling assumed compliance with SCAQMD Architectural Coating Rule 1113, SCAQMD Wood-Burning Devices Rule 445, and SCAQMD Fugitive Dust Rule 403. Complete results from CalEEMod and assumptions are provided in Appendix B. All other values utilized in the modeling were based on applicable SCAQMD defaults for the Basin. SCAQMD Rule 1113 requires the use of low-VOC paint (150 g/L for non-flat coatings) in the South Coast Air Basin. SCAQMD Rule 445 prohibits permanent installation of indoor or outdoor wood burning devices in new

developments in the Basin. SCAQMD Rule 403 identifies measures to reduce fugitive dust and is required at all construction sites located in the Basin. Therefore, the following conditions, required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod for the site preparation and grading phases of construction.

- Minimization of Disturbance. Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
- Soil Treatment. Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least two times daily, preferably in the late morning and after work is done for the day.
- Soil Stabilization. Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
- Grading During High Winds. Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
- Street Sweeping. Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

b. Project Impacts and Mitigation Measures

Impact AQ-1	Implementation of the proposed Specific Plan would encourage transit-oriented growth in the Plan Area consistent with air quality control measures and 2012 RTP/SCS active transportation strategies. However, full buildout could result in population and employment growth that exceeds growth projections contained in SCAG's 2012 RTP/SCS on which the 2012 AQMP is based. Due to the project's impacts related to consistency with the 2012 AQMP would be *less than significant*.

A project may be inconsistent with the AQMP if it would generate population, housing or employment growth exceeding the forecasts used in the development of the AQMP. The 2012 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local city general plans and SCAG's 2012-2035 RTP/SCS socioeconomic forecast projections of regional population, housing and employment growth. The growth assumptions used in the AQMP are based on SCAG's 2012 growth forecasts. Therefore, if the proposed project would facilitate growth exceeding SCAG's 2012 forecasts, then the project would be inconsistent with the assumptions in the AQMP (SCAG 2012a).

As discussed in Section 4.10, Population and Housing, buildout under the proposed Specific Plan would generate approximately 15,260 residents. This would bring the population of the city to 87,099, a 21 percent increase. This population increase would be added incrementally over the anticipated 20- to 30-year period of full project buildout. The addition of 3,500 residential units would also increase the number of households in the county from 3,257,000 to 3,260,500, a 0.1 percent increase. The proposed Specific Plan would result in the generation of an estimated 4,162 employees at full buildout. Table 7 compares project-generated population, employment and housing growth to SCAG's 2012 growth projections, on which the 2012 AQMP is based.

Table 7 Comparison of Project-generated Population, Housing, and Employment Growth Projections

	Specific Plan Build Out Growth	SCAG 2035 Growth Projections1	Percentage of SCAG Growth
Population	15,260	5,000	305%
Housing	3,500	1,100	318%
Jobs	4,162	1,300	320%

[1] Unlike Section 4.10, Population and Housing, which compares population growth under the Specific Plan to the most recent 2016 RTP/SCS, this analysis compares population growth under the Specific Plan to the 2012 RTP/SCS, on which the 2012 AQMP is based.

As shown in Table 7, the increases in population, housing, and jobs associated with full buildout of the proposed Specific Plan would exceed SCAG growth projections for the city, but by promoting intensification and reuse of already developed lands near transit services, as opposed to low density development on undeveloped lands, the Specific Plan aims to reduce reliance on the drive-alone automobile. A reduction in vehicle use and vehicle miles traveled can result in a reduction in fuel consumption and in air pollutant emissions. Recent research indicates that infill development reduces vehicle miles traveled (VMT) and associated air pollutant emissions compared to development on sites at the periphery of metropolitan areas, also known as "greenfield" sites. For example, a 1999 simulation study conducted for the U.S. EPA comparing infill development to greenfield development found that infill development results in substantially fewer VMT per capita (39 percent to 52 percent) and generates fewer emissions of most air pollutants and greenhouse gases (see Table 8). Similarly, a 2007 study prepared by the Urban Land Institute (Ewing et al. 2007) found that compact development has the potential to reduce VMT per capita by anywhere from 20-40 percent relative to sprawl.

Table 8 Comparison of Vehicle Miles Traveled and Emissions: Infill versus Greenfield Development

Case Study	Per Capita Daily VMT, Infill as a Percentage of Greenfield	Emissions, Infill as a Percentage of Greenfield	
San Diego, CA	52%	CO	88%
		NO_x	58%
		SO_x	51%
		PM	58%
		CO_2	55%
Montgomery County, MD	42%	CO	52%
		NO_x	69%
		SO_x	110%
		PM	50%
		CO_2	54%
West Palm Beach, FL	39%	CO	75%
		NO_x	72%
		SO_x	94%
		PM	47%
		CO_2	50%

Source: Allen, E., Anderson, G., and Schroeer, W., "The Impacts of Infill vs. Greenfield Development: A Comparative Case Study Analysis," U.S. Environmental Protection Agency, Office of Policy, EPA Publication #231-R-99-005, September 2, 1999.

Overall, the proposed Specific Plan calls for higher density, mixed-use, walkable development around activity centers and transit stations. In addition, the aging commercial corridors (Long Beach Boulevard and Imperial Highway) are planned as revitalization areas, with new mixed-use developments proposed near freeway and transit-accessible locations. By increasing the overall population density of the community, encouraging mixed land uses

and improving access to sustainable transportation solutions including upgrading the active transportation network, implementation of the Specific Plan would be expected generally to reduce per capita automobile trips and travel distances compared to existing conditions or a lower density development strategy. The potential for VMT reduction through provision of compact, mixed-use urban forms conducive to biking and walking is explored further on page 42 of the Active Transportation Appendix of the 2012-2035 SCAG RTP/SCS. That document estimates that compact urban development, improvements in the active transportation network, and coordination among sustainable modes of transport is expected to result in a shift away from motor vehicle use and a relative reduction in regional VMT of approximately 7.8 million miles, graduating to 20.4 million miles for 2020 and 2035, respectively. Given that the proposed Specific Plan would both facilitate more compact development and provide access to transit via both bicycling and walking, it would generally reduce per capita air pollutant emissions associated with vehicle use and demonstrate consistency with the AQMP.

Recent history shows that improvements to air quality can be achieved during periods of healthy economic growth. Approximately 50 percent of air quality improvements were realized over a time period where the Basin's population and Gross Domestic Product (GDP) after adjusted for inflation, increased by approximately 22 percent and 42 percent, respectively (SCAQMD 2012).

Overall, the Specific Plan focuses Lynwood's future growth in corridor opportunities and strategic expansion areas (i.e., Plaza Mexico, Metro's Green Line Station, properties along Long Beach Boulevard and Imperial Highway, properties adjacent to St. Francis Medical Center, and properties along the Alameda Street Industrial Corridor). At the same time, there is an emphasis on expanded multi-modal transportation services and sustainable (energy efficient) development solutions as part of future development that would reduce air quality impacts. These include the transportation/mobility improvement strategies and recommendations outlined in Chapter 3 of the Specific Plan and supporting regional efforts to reduce GHG emissions from cars and light trucks, supporting the expansion of existing regional transit (bus and light rail), developing the Eco-Rapid Transit Line among the Gateway Cities, and development of a statewide high-speed rail network. In addition, the Specific Plan promotes the enhancement of a multi-modal transportation system that serves and is served by the future city infrastructure. This discussion presents a sample of the mobility strategies included in the Specific Plan that emphasizes expanding mulit-modal transportation services and sustainable development solutions in the Plan Area.

Consistency with the 2012 AQMP is a function of consistency with applicable AQMP control measures. The AQMP includes specific control measures to reduce air pollutant emissions in order meet federal and State air quality standards. One of the most important methods the AQMP relies on to achieve its goals is the use of emission control measures, many of which were established as part of the previous AQMP adopted in 2007. For example, between 2008 and 2011, 12 control measures or rules were adopted or amended by the SCAQMD. Adoption of these measures resulted in a reduction of 22.5 tons per day of VOC, 7.6 tons per day of NO_x, 4.0 tons per day of SO_x, and 1.0 ton per day of $PM_{2.5}$ by 2014. Additional reductions from these adopted rules will also be achieved by 2023.

The 2012 AQMP emission control measures most applicable to the proposed Specific Plan are the transportation control measures (TCM), which are based on SCAG's adopted 2012-2035 RTP/SCS and 2011 Federal Transportation Improvement Program (FTIP). The measures proposed improve every component of the regional multi-modal transportation system, including the following:

- Active transportation
- Transportation demand management (TDM)
- Transportation system management (TSM)
- Transit
- Passenger and high-speed rail
- Goods movement
- Aviation and airport ground access
- Highways
- Arterials
- Operations and maintenance

Table 9 lists applicable TCMs and the corresponding Specific Plan mobility strategies that support each TCM.

Table 9 Applicable Specific Plan Mobility Strategies Consistent with SCAQMD Transportation Control Measures

Transportation Control Measure	Specific Plan Mobility Strategy
Section 108 (f) 1. Programs for Improved Public Transit	▪ Expand the choices of available transportation modes to effectively increase the freedom of movement for Lynwood's residents and reduce reliance on the automobile. ▪ Support increased and more reliable funding for regional bus service to increase the frequency of service and number of stations on lines serving Lynwood and adjacent communities. ▪ Continue to implement the Bicycle and Pedestrian Transportation Plan to improve neighborhood connectivity for bicycles and pedestrians. ▪ Require proposed development to implement or fund capital improvements to 1) maintain or improve sidewalks, roadway paving, and landscaping, 2) implement streetscape design improvements, and 3) accommodate growth with an emphasis on reduced reliance on the automobile. ▪ Continue to support the Lynwood Transit Area as a transit and pedestrian-oriented district. ▪ Work with transit operators and private developers to provide amenities such as benches, shelters, lighting, and bus arrival information at bus stops, considering the needs of seniors and persons with disabilities. ▪ Require site designs that complement nearby transit stops and pedestrian linkages. ▪ Develop scalable TDM solutions for new development based upon land use types and site features.
Section 108 (f) 3. Employer-Based Transportation Management Plans, Including Incentives	▪ Encourage existing and future major employers to develop and implement TDM programs to reduce peak-period trip generation. ▪ Assign trip reduction credits and reduced transportation impact fees for demonstrated commitment to TDM strategies. ▪ Collaborate with Plaza Mexico, Cal-Trans, Metro, and neighborhood groups to minimize the impact of population growth on local traffic and parking demand, such as through TDM and parking measures.
Section 108 (f) 5. Traffic Flow Improvement Programs that Achieve Emissions Reductions	▪ Expand the choices of available transportation modes to effectively increase the freedom of movement for Lynwood residents and reduce reliance on the automobile. ▪ Develop a citywide Intelligent Transportation System (ITS) plan to maximize the efficiency of the transportation system through advanced technologies, such as adaptive signal controls, CCTV cameras, and real-time transit information and parking availability. ▪ Use the Motor Vehicle Level of Service (LOS) Guidelines, the Traffic Congestion Management Policy, and VMT traffic impact assessments to pursue efficient, balanced, multi-modal circulation. ▪ Encourage the use of public transportation, especially for commute trips, and increase citywide transit ridership.
Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use	▪ Continue to implement the Bicycle and Pedestrian Transportation Plan to improve neighborhood connectivity for bicycles and pedestrians. ▪ Continue to support the Lynwood Transit Area as a transit and pedestrian-oriented district. ▪ Encourage existing and future major employers to develop and implement TDM programs to reduce peak-period trip generation. ▪ Collaborate with Plaza Mexico, Cal-Trans, Metro, and neighborhood groups to minimize the impact of population growth on local traffic and parking demand, such as through TDM and parking measures. ▪ Encourage the use of public transportation, especially for commute trips, and

Transportation Control Measure	Specific Plan Mobility Strategy
	increase citywide transit ridership. ▪ Adopt land use designations that emphasize transit oriented communities near existing or planned transit corridors
Section 108 (f) 8. Programs For the Provision of All Forms of High-Occupancy, Shared-Ride Services	▪ Improve pedestrian safety and comfort along City streets, particularly in residential neighborhoods and areas where significant pedestrian activity is envisioned as identified in the Lynwood Transit Area Specific Plan. ▪ Foster walkable and accessible street environments that connect Lynwood's many unique neighborhoods to destination retail and employment districts. ▪ Develop a comprehensive bicycle network within the Lynwood Transit Area Specific Plan that connects local and regional commuter and recreation routes.
Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place	▪ Improve pedestrian safety and comfort along City streets, particularly in residential neighborhoods and areas where significant pedestrian activity is envisioned as identified in the Lynwood Transit Area Specific Plan. ▪ Foster walkable and accessible street environments that connect Lynwood's many unique neighborhoods to destination retail and employment districts. ▪ Develop a comprehensive bicycle network in the Lynwood Transit Area Specific Plan that connects local and regional commuter and recreation routes. ▪ When designing streetscape and circulation improvements, balance pedestrian needs with the needs of other transportation modes and put a higher priority on pedestrian facilities in areas of high pedestrian activity such as in the Transit District, Long Beach Boulevard Corridor, and Imperial Highway Corridor. ▪ Conduct an inventory of key pedestrian facilities and routes to identify missing or deficient links, pedestrian crossings or intersections, and focusing initially on transit and pedestrian oriented districts. ▪ Integrate pedestrian projects into the Capital Improvement Program and consider opportunities to make pedestrian improvements concurrently with other roadway improvements
Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas	▪ Develop a comprehensive bicycle network for the Lynwood Transit Area Specific Plan that connects local and regional commuter and recreation routes. ▪ Require new development or redevelopment to provide bicycle parking where appropriate and ensure it is in safe, prominent locations. ▪ Create pedestrian and bicycle-only cut-throughs to supplement shorter blocks and enhance neighborhood interconnectivity where street connections are limited due to existing cul-de-sac or dead-end conditions, grade separation, property ownership, or topographical challenges. ▪ Integrate bicycle facility features from the Lynwood Transit Area. ▪ Consider bicycle traffic, bicycle usability, and bicycle safety when designing vehicle detection systems for signal operation. ▪ Comply with the Lynwood Bicycle and Pedestrian Transportation Plan guidelines and standards for the design of bicycle facilities, including secure long-term bicycle parking. ▪ Evaluate the feasibility of lane removal ("road diets") on streets with excess capacity as a means for implementing bike lanes. ▪ When designing streetscape and circulation improvements, balance bicycle needs with the needs of other transportation modes.

Transportation Control Measure	Specific Plan Mobility Strategy
Section 108 (f) 13. Employer-sponsored programs to permit flexible work schedules	▪ Encourage existing and future major employers to develop and implement TDM programs to reduce peak-period trip generation. ▪ Establish a TDM program for Plaza Mexico employees.
Section 108 (f) 14. Programs and Ordinances to facilitate Non-automotive travel, provision to and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts	▪ Work with transit operators and private developers to provide amenities such as benches, shelters, lighting, and bus arrival information at bus stops and consider the needs of seniors and persons with disabilities. ▪ Adopt land use designations that emphasize transit oriented development near existing or planned transit corridors ▪ Coordinate transit improvement efforts among the various transit providers. ▪ Require site designs that complement transit stops and pedestrian linkages nearby.
Section 108 (f) 15. Programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other Non-motorized means of transportation when commercially feasible and in the public interest	▪ Develop an Active Transportation Plan as part of the proposed project that provides guidelines for public corridors, crosswalks, pathways, and stairs, as well as policies for pedestrian improvement projects and priorities. ▪ Conduct an inventory of key pedestrian facilities and routes to identify missing or deficient links, pedestrian crossings or intersections, and focusing initially on transit and pedestrian oriented districts. ▪ Integrate pedestrian projects into the Capital Improvement Program and consider opportunities to make pedestrian improvements concurrently with other roadway improvements. ▪ Allocate funds and/or identify funding sources (including the potential formation of assessment districts) for pedestrian and streetscape improvements in existing neighborhoods.

Source: South Coast Air Quality Management District, 2012 Air Quality Management Plan, Appendix IV-C, Attachment B: 2012 South Coast $PM_{2.5}$ AQMP Reasonably Available Control Measure (RACM) Analysis – TCMs

As noted above, development facilitated by the Specific Plan is anticipated to exceed the growth forecasts upon which the AQMP is based, yet the type of development and improvements envisioned by the Specific Plan would be substantially in compliance with SCAQMD's Transportation Control Measures and the RTP/SCS Active Transportation Plan. Therefore, the Lynwood Transit Area Specific Plan would be consistent with the AQMP and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact AQ-2 Buildout of the proposed Specific Plan would result in the temporary generation of air pollutants during construction, which would affect local air quality. However, emissions would not exceed SCAQMD regional thresholds. Impacts would be *less than significant*.

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles, in addition to ROG that would be released during the drying phase upon application of architectural coatings. Construction would generally consist of grading, construction of the proposed buildings, paving, and architectural coating.

Table 10 shows estimated maximum daily emissions over the entire construction period, reflecting the worst year of construction for each pollutant. With compliance with SCAQMD Fugitive Dust Rule 403 and SCAQMD Architectural Coating Rule 1113, construction emissions would not exceed SCAQMD regional thresholds for any criteria pollutant during any of the 15 years of construction. Impacts would be less than significant.

Table 10 Estimated Construction Maximum Daily Air Pollutant Emissions (lbs/day)

Year	Emissions Estimate (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum lbs/day[1]	45.9	99.1	287.8	0.8	52.5	15.1
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Source: See Appendix B for calculations, assumptions, and maximum lbs/day per year for entire construction period (2017 through 2032). Assumed compliance with SCAQMD Fugitive Dust Rule 403 and SCAQMD Architectural Coating Rule 1113.
[1] Maximum daily emissions include onsite and offsite emissions and reflect the worst year for each pollutant of the entire construction period (2017 through 2032).

Mitigation Measures

No mitigation is required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact AQ-3	Operational emissions associated with buildout of the proposed Specific Plan of ROG, CO, NO_X, PM_{10} and $PM_{2.5}$ would exceed SCAQMD's daily thresholds. However, individual projects would be required to undergo project-specific review to reduce operational emissions to below SCAQMD's daily thresholds. Therefore, the proposed Specific Plan would have a *less than significant* impact on regional air quality.

As described, operational emissions for the proposed Specific Plan would consist of mobile source emissions, emissions associated with energy consumption, and area source emissions. The emissions associated with all operations for with buildout of the proposed Specific Plan are shown in Table 11.

Mobile source emissions constitute the vast majority of operational emissions from these types of land use development projects. Compared to mobile source emissions, area-source emissions and energy source emissions are negligible. Mobile source emissions associated with the operational phase of the Specific Plan are presented in Table 11. The Specific Plan is based upon a land use pattern that would mix residential and commercial uses in the Plan Area adjacent to high quality transit services, resulting in reduced trip generation rates when compared to standard Institution of Transportation Engineers (ITE) trip generation rates for similar land uses. As discussed above, the estimate of total daily trips associated with the proposed Specific Plan was based on vehicle trip data provided in Section 4.12, Transportation and Circulation includes a 25 percent transit trip reduction in daily vehicle trips and an 18 percent internal trip credit from standard trip generation rates for similar land uses due to the Specific Plan's transit-oriented design.

Table 11 Estimated Operational Emissions

Emission Source	Emissions Estimate (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	143.5	3.3	288.0	<0.1	1.6	1.6
Energy	1.9	16.5	10.2	0.1	1.3	1.3
Mobile	105.1	245.7	1,114.6	4.6	304.6	85.9
Total Emissions[1]	**250.5**	**265.5**	**1,412.8**	**4.7**	**307.5**	**88.8**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	Yes

Source: Calculations using CalEEMod 2013.2.2. See Appendix B for calculations. Applied the highest emissions from summer or winter.
[1.] The sum of individual emissions sources may differ slightly from total emissions due to rounding.

Operational emissions associated with full buildout of the proposed Specific Plan are shown in Table 11, but no specific development projects are proposed at this time. In order to quantify the level of emissions associated with individual development projects and compare emissions to established project-level SCAQMD thresholds, specific information regarding the size and type of development would be needed. Though overall operational emissions associated with buildout of the proposed Specific Plan would exceed applicable SCAQMD thresholds for criteria pollutants, any project proposed for the Plan Area would be required to undergo site-specific CEQA review, including analysis of operational emissions. Appropriate project-specific mitigation measures would be identified at that time.

The Specific Plan includes policies that would reduce vehicle trips and emissions. Goal 1 involves promoting transit-oriented development near the Metro Green Line Station, while Goal 4 involves enhancing pedestrian comfort and safety. The Specific Plan also includes mobility strategies that support the creation of a "Complete Streets" network of automotive, bicycle, transit, and pedestrian circulation to improve overall mobility and safety. More general mobility strategies also include working to improve transit stops by enhancing facilities and integrating the transit system with alternative modes of transportation. The Specific Plan includes the creation of a Parking Management District along Long Beach Boulevard and Imperial Highway to make parking more efficient and to promote multi-modal transportation. All of these measures would reduce operational VMT in the Plan Area and subsequently reduce air pollutant emissions. In combination with the fact that future projects would be required to undergo their own CEQA review, the goals and strategies of the proposed Specific Plan would ensure that impacts related to operational air quality emissions would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be **less than significant** without mitigation.

Impact AQ-4	The proposed Specific Plan would increase traffic along all studied roadway segments, however, increased traffic would not result in the creation of carbon monoxide (CO) hotspots. The Specific Plan does not envision siting sensitive receptors near sources of toxic air contaminants. However, locating residential uses near transit services in the City of Lynwood may involve locating some residential dwellings near the I-105 Freeway and other major transportation corridors. Therefore, impacts related to exposing sensitive receptors to pollutant concentrations would be *potentially significant, but mitigable.*

Areas with high vehicle density, such as congested intersections, have the potential to create high concentrations of CO, known as CO hotspots. A project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the federal and state eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (level of service [LOS] E or worse).

Pursuant to SCAQMD guidance, a CO hotspot analysis should be conducted for intersections where the proposed project would have a significant impact at a signalized intersection, causing the LOS to change to E or F, or when the volume to capacity ratio (V/C) increases by two percent or more as a result of a proposed project for intersections rated D or worse (SCAQMD 2003). As discussed in Section 4.12, Transportation and Traffic, local roadways currently operate at LOS E or better during peak hours (Translutions 2016). Full buildout of the Specific Plan is forecast to result in a net increase of 2,069 vehicle trips during the a.m. peak hour and a net increase of 3,561 vehicles trips during the p.m. peak hour (Translutions 2016). Under existing-plus project conditions and cumulative-plus project conditions, the Long Beach Boulevard roadway segment north of Norton Avenue would operate at LOS F; the Long Beach Boulevard segment south of Josephine Street would operate at LOS E; the Alameda Street segment north of Fernwood Avenue would operate at LOS D; and Imperial Highway east of California Street would operate at LOS D. The project would also increase the V/C by more than two percent on all studied roadway segments. In addition, as shown in Table 11, project operational CO emissions would exceed SCAQMD regional thresholds. Therefore, full buildout of the Specific Plan could result in a CO hotspot and impacts would be potentially significant.

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

The Specific Plan traffic analysis demonstrates that two of the studied roadway segments (Long Beach Boulevard north of North Avenue and south of Josephine Street) would operate at LOS E or F in 2040 (assuming full buildout of the Specific Plan). The highest total intersection ADT for any of intersections along Long Beach Boulevard would be about 80,000 vehicles at the Long Beach Boulevard/Imperial Highway intersection in 2040, which is less than the 100,000 vehicle trip example above for the Wilshire Boulevard and Veteran Avenue intersection. Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions (year 2040) would be substantially lower than those under existing conditions. Thus, even though there would be more vehicle trips under the Specific Plan than under existing conditions, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO.

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011). Development that would be accommodated by the proposed Specific Plan would produce up to 3,561 vehicles trips during the p.m. peak hour, which would not increase the volume of traffic at any one intersection by the 24,000 to 44,000 vehicles per hour required to generate a CO hot spot. Localized air quality impacts related to CO hot spots would therefore be less than significant. Nonetheless, future projects would be required to undergo their own CEQA review, which may include site-specific hot spot analysis depending on the proposed project's location and trip generation.

Although the Specific Plan envisions locating residential uses near the Metro Station, which is adjacent to the I-105 Freeway, open space and multi-story structures (in the form of parking structures and open space) would be located in between future residential uses and the I-105 Freeway. Therefore, the Specific Plan does not anticipate concentrating a large number of sensitive receptors (such as residences, hospitals, or schools) within 500 feet of the I-105 Freeway, which is consistent with the buffer recommendations included in the ARB's *Air Quality and Land Use Handbook* (2005). Nevertheless, concentrating future residential development near transit services in the Specific Plan could result in the construction of some residential dwellings in within 500 feet of I-105 Freeway and other major roadway corridors (Long Beach Boulevard and Imperial Highway). Therefore, impacts related to exposing sensitive land uses to substantial pollutant concentrations would be potentially significant but mitigable.

Mitigation Measures

In order to comply with address the California Air Resources Board Air Quality and Land Use Handbook (2005) and achieve an acceptable interior air quality level for sensitive receptors, the following measures shall be considered as part of a future project's building design for residential or other sensitive uses located within 500 feet of freeways, heavily travelled arterials, railways and other sources of Diesel Particulate Matter and other known carcinogens.

AQ-4(a) Health Risk Assessment

If a future development project locates sensitive receptors within 500 feet of the I-105 Freeway or other roadway corridor identified by the City of Lynwood as a potential source of substantial toxic air contaminants, the project applicants shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the California Air Resources Board and the Office of Environmental Health and Hazard Assessment requirements to determine exposure of project residents/occupants/users to stationary and mobile (e.g. cards and trucks) sources of air pollution prior to the issuance of a demolition, grading, or building permit. The HRA shall be submitted to the City of Lynwood for review and approval. The project applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required.

AQ-4 (b) Air Quality Health Risk Reduction

As determined necessary by a Health Risk Assessment to reduce health risks from poor air quality, future project applicants shall implement the following features that have been found to reduce air quality risks to sensitive receptors and these measures may be included in future project construction plans. These measures shall be submitted to the City of Lynwood for review and approval prior to the issuance of a demolition, grading, or building permit.

1. Do not locate sensitive receptors near distribution centers' entry and exit points.
2. Do not locate sensitive receptors in the same building as perchloroethylene dry cleaning facilities.
3. Maintain a 50-foot buffer from a typical gas dispensing facility (under 3.6 million gallons per year).
4. Install, operate, and maintain in good working order a central heating and ventilation (HV) system or other air intake system in the building(s), or in each individual residential unit, that meets the efficiency standards of the MERV 13. The HV system should include the following features: (1) installation of a high efficiency filter and/or carbon filter to filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters should be used. (2) Retain a qualified HV consultant or HERS rater during the design phase of the project to locate the HV system based on exposure modeling form the mobile and/or stationary pollutant sources. (3) Maintain positive air pressure in the building. (4) Achieve a performance standard or at least one air exchange per hour of fresh outside filtered air. (5) Achieve a performance standard of at least 4 air exchanges per hour of recirculation. (6) Achieve a performance standard of 0.25 air exchanges per hour of unfiltered infiltration if the building is not positively pressurized.

AQ-4 (c) HV System Repair and Maintenance

Future project developments shall maintain, repair and/or replace the HV system, or prepare an Operation and Maintenance Manual for the HV system and the filter. The manual should include the operating instructions and maintenance and replacement schedule. This manual should be included in the CC&R's for residential projects and distributed to the building maintenance staff. In addition, the

project developer may prepare a separate Homeowners Manual. The manual should contain the operation instructions and maintenance and replacement schedule for the HV system and the filters. It should also include a disclosure to the buyers of the air quality analysis and findings.

AQ-4 (d) Establish Appropriate Buffers

To the maximum extent practicable, the City of Lynwood should ensure that private (individual and common) exterior open space, including playgrounds, patios, and decks, be either shielded from sources of air pollution by buildings or otherwise buffered to further reduce air pollution for users and/or occupants.

AQ-4 (e) Establish Landscape Buffers

As applicable and feasible, future project applicants shall plant appropriate vegetation to reduce PM10/PM2.5 when constructing a sensitive receptor within 500 feet of freeways and high-traffic volume roadways generating substantial diesel particulate emissions.

Significance after Mitigation

Impacts would be **less than significant** after implementation of the above mitigation measures.

Impact AQ-5 The project would not create objectionable odors that would affect neighboring properties. Impacts related to odors would be *less than significant.*

Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed Specific Plan does not include any uses that would be associated with objectionable odors. Odor emissions from buildout of the Specific Plan would be limited to odors associated with vehicle and engine exhaust and idling. The Specific Plan does not include any known sources of objectionable odors for long-term operations. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would be short-term, and would cease upon completion. Therefore, buildout of the Specific Plan is not expected to result in significant impacts related to objectionable odors during construction or operation.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be **less than significant** without mitigation.

c. Cumulative Impacts

The South Coast Air Basin is a non-attainment area for the federal standards for ozone, $PM_{2.5}$, and lead, and the State standards for ozone, PM_{10}, $PM_{2.5}$, NO_2, and lead. Any growth in the Los Angeles metropolitan area would contribute to existing exceedances of ambient air quality standards when taken as a whole with existing development. Cumulative development through the year 2040 in the Specific Plan Area would result in an increase of approximately 3,500 housing units, 15,260 residents, and 4,162 employees. As discussed under Impact AQ-1, population growth under the proposed Specific Plan would exceed long-term growth projections for the city. Therefore, buildout of the Specific Plan would conflict with, but would not potentially obstruct, the implementation of the 2012 AQMP because of its transit-oriented design. Nevertheless, the Specific Plan's cumulative air quality impacts would be cumulatively considerable but less than significant.

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4.3 Cultural and Historic Resources

4.3.1 Setting

a. Cultural Setting

Ethnographic History

The proposed Specific Plan and the city of Lynwood are located in the traditional territory of the Gabrieliño tribal group. The name Gabrieliño was applied by the Spanish to those Native Americans who were associated with or living near the Mission San Gabriel Arcángel (Bean and Smith 1978:538). Today, most contemporary Gabrieliño identify themselves as Tongva and this term will be used in this section to refer the Gabrieliño tribal group (King 1994:12).

Tongva territory included the eastern reaches of the Los Angeles basin, to the southern Channel Islands in the west, and extended from Aliso Creek in the south to Topanga Creek in the north. Tongva territory encompassed several biotic zones including Coastal Marsh, Coastal Strand, Prairie, Chaparral, Oak Woodland, and Pine Forest (Bean and Smith 1978).

The Tongva language belongs to the Takic branch of the Uto-Aztecan language family, and can be traced to the Great Basin region (Mithun 2004). This language family includes dialects spoken by the nearby Juaneño and Luiseño but is considerably different from those of the Chumash people living to the north and the Diegueño (including Ipai, Tipai, and Kumeyaay) people living to the south.

Tongva society was organized in patrilineal, non-localized clans, a common Takic pattern. Each clan had a ceremonial leader and comprised several lineages. The Tongva established large permanent villages and smaller satellite camps throughout their territory. Recent ethnohistoric work (O'Neil 2002) suggests a total tribal population of nearly 10,000, considerably more than earlier estimates of around 5,000 people (Bean and Smith 1978:540).

Tongva subsistence was oriented around acorns supplemented by the roots, leaves, seeds, and fruits of a wide variety of plants. Meat sources included large and small mammals, freshwater and saltwater fish, shellfish, birds, reptiles, and insects. (Bean and Smith 1978, Langenwalter et al. 2001, Kroeber 1925, McCawley 1996). The Tongva employed a wide variety of tools and implements to gather and hunt food. The digging stick, used to extract roots and tubers, was frequently noted by early European explorers (Rawls 1984). Other tools included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Like the Chumash, the Tongva made ocean-going plank canoes (known as a ti'at) capable of holding six to 14 people and used for fishing, travel, and trade between the mainland and the Channel Islands. Tule reed canoes were employed for near-shore fishing (Blackburn 1963, McCawley 1996:117-127).

Chinigchinich, the last in a series of heroic mythological figures, was central to Tongva religious life at the time of Spanish contact (Kroeber 1925:637–638). The belief in Chinigchinich was spreading south among other Takic-speaking groups at the same time the Spanish were establishing Christian missions. Elements of Chinigchinich beliefs suggest it was a syncretic mixture of Christianity and native religious practices (McCawley 1996:143-144).

Prior to European contact, deceased Tongva were either buried or cremated, with burial more common on the Channel Islands and the adjacent mainland coast and cremation on the remainder of the coast and in the interior (Harrington 1942, McCawley 1996:157). After pressure from Spanish missionaries, cremation essentially ceased during the post-contact period (McCawley 1996:157). Major Tongva villages located near Lynwood include Amupungna, Chokishgna, and Tajauta (Tongva People n.d.).

b. Historical Setting

The project's Area of Potential Effect (APE) is located in the city of Lynwood at an approximate elevation of 28 meters (92 feet) above mean sea level. The area around the APE does not exist in its natural setting, as the APE is surrounded by residential, commercial, and industrial developments on the east, west, south, and north sides.

Vegetation in the APE consists of formal landscaping, shrubs, and weeds consistent with urban environmental settings. The area has been occupied continuously from prehistory through the present.

Early Man Horizon (ca. 10,000 – 6,000 B.C.)

Numerous pre-8000 B.C. sites have been identified along the mainland coast and Channel Islands of southern California (Erlandson 1991, Johnson et al. 2002, Jones and Klar 2007, Moratto 1984, Rick et al. 2001:609). The Arlington Springs site on Santa Rosa Island produced human femurs dated to approximately 13,000 years ago (Arnold et al. 2004, Johnson et al. 2002). On nearby San Miguel Island, human occupation at Daisy Cave (SMI-261) has been dated to nearly 13,000 years ago and included basketry greater than 12,000 years old, the earliest on the Pacific Coast (Arnold et al. 2004).

Although few Clovis or Folsom-style, fluted points have been found in southern California (Dillon 2002 Erlandson et al. 1987), Early Man Horizon sites are generally associated with a greater emphasis on hunting than later horizons. Recent data indicate that the Early Man economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources in coastal areas (Jones et al. 2002) and on inland Pleistocene lakeshores (Moratto 1984). A warm and dry 3,000-year period called the Altithermal began around 6000 B.C. The conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game.

Milling Stone Horizon (6000–3000 B.C.)

Wallace defined the Milling Stone Horizon as “marked by extensive use of milling stones and mullers, a general lack of well-made projectile points, and burials with rock cairns” (1955:219). The dominance of such artifact types indicates a subsistence strategy oriented around collecting plant foods and small animals. A broad spectrum of food resources were consumed by the inhabitants of the area, including small and large terrestrial mammals, sea mammals, birds, shellfish, fishes, and other littoral and estuarine species, yucca, agave, and seeds and other plant products (Kowta 1969; Reinman 1964). Variability in artifact collections over time and from the coast to inland sites indicates that Milling Stone Horizon subsistence strategies adapted to environmental conditions (Byrd and Raab 2007:220). The Topanga Canyon site in the Santa Monica Mountains is considered one of the definitive Milling Stone Horizon sites in Los Angeles County.

Lithic artifacts associated with Milling Stone Horizon sites are dominated by locally available tool stone and in addition to ground stone tools such as manos and metates, chopping, scraping, and cutting tools are very common. Kowta (1969) attributes the presence of numerous scraper-plane tools in Milling Stone Horizon collections to the processing of agave or yucca for food or fiber. The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Milling Stone Horizon and increased dramatically in later periods (Wallace 1955, 1978; Warren 1968).

Mortuary practices observed at Milling Stone Horizon sites include extended and loosely flexed burials. Flexed burials oriented north were common in Orange and San Diego counties, with reburials common in Los Angeles County (Wallace 1955, 1978; Warren 1968).

Intermediate Horizon (3000 B.C. – A.D. 500)

Wallace’s Intermediate Horizon dates from approximately 3000 B.C.-A.D. 500 and is characterized by a shift toward a hunting and maritime subsistence strategy and a greater use of plant foods. During the Intermediate Horizon, a noticeable trend occurred toward greater adaptation to local resources including a broad variety of fish, land mammal, and sea mammal remains along the coast. Tool kits for hunting, fishing, and processing food and materials reflect this increased diversity, with flake scrapers, drills, various projectile points, and shell fishhooks being manufactured.

Mortars and pestles became more common during this transitional period, gradually replacing manos and metates as the dominant milling equipment. Many archaeologists believe this change in milling stones signals a change from the processing and consuming of hard seed resources to the increasing reliance on acorn (Glassow et al. 1988, True 1993). Mortuary practices during the Intermediate typically included fully flexed burials oriented toward the north or west (Warren 1968:2-3).

Late Prehistoric Horizon (A.D. 500–Historical Contact)

During the Late Prehistoric Horizon, according to Wallace (1955, 1978), the diversity of plant food resources and land and sea mammal hunting increased even more than during the Intermediate Horizon. More classes of artifacts were observed during this period and high quality exotic lithic materials were used for small, finely worked projectile points associated with the bow and arrow. Steatite containers were made for cooking and storage and an increased use of asphalt for waterproofing is noted. More artistic artifacts were recovered from Late Prehistoric sites and cremation became a common mortuary custom. Larger, more permanent villages supported an increased population size and social structure (Wallace 1955:223).

Warren (1968) attributes the dramatic change in material culture, burial practices, and subsistence focus to the westward migration of desert people he called the Takic, or Numic, Tradition into Los Angeles, Orange, and western Riverside counties. This Takic Tradition was formerly referred to as the "Shoshonean wedge" (Warren 1968), but this nomenclature is no longer used to avoid confusion with ethnohistoric and modern Shoshonean groups (Heizer 1978:5; Shipley 1978:88, 90). Modern Gabrielino/Tongva in Los Angeles County are generally considered by archaeologists to be descendants of these prehistoric Uto-Aztecan, Takic-speaking populations that settled along the California coast during the Late Prehistoric Horizon.

Historic Period

The land where Lynwood is now located was originally part of property granted for use by Antonio Maria Lugo by the Spanish Governor Arrillaga in 1810. The rancho was re-granted by Mexican Governor Alvarado in 1838 and patented in 1847 (Shumway, et al 2006). Antonio Maria Lugo was *alcalde* (mayor) of Los Angeles from 1816 to 1819. His approximately 29,513 acre ranch was called Rancho San Antonio. It was adjacent to the southeastern boundary of the pueblo of Los Angeles and the northern boundary of Rancho San Pedro. Its eastern boundary was the San Gabriel River (now known as the Los Angeles River). After Lugo's death in 1860 the rancho was divided among his eight children. His daughter Guadalupe Lugo inherited the area now known as Lynwood (Johnson and Diaz 2012: 11). She sold the land and it changed hands a few times through the turn to the twentieth century.

During the late 1870s and 1880s, new settlers arrived in the area that was to become Lynwood (Johnson and Diaz, 2012:17). Barley fields, groves of willow trees, and marshland were the chief floral and landscape characteristics through the late 1800s (City of Lynwood, 2003).

Charles H. Sessions acquired approximately 400 acres of land from Jonathon S. Slauson in 1902. Sessions established a dairy and creamery near the present-day intersection of Long Beach Boulevard and Sanborn Avenue. He named the dairy after his wife Lynne Wood (Johnson and Diaz 2012: 12, Swan 1974).

Shortly thereafter the Southern Pacific Railway created a siding at this location which took its name from the dairy and was called the Lynwood Siding. In 1905, the Pacific Electric Railway ran a line from Los Angeles to Santa Ana and passed through the still rural area (City of Lynwood n.d.). At the turn of the century beet fields were widespread and the beet crop was transported by rail to a sugar refinery in Santa Ana. The railway attracted new residents and stimulated land development. Eventually Pacific Electric created several stops in Lynwood. A depot was also built at Long Beach Boulevard and Fernwood Avenue in 1917. Lynwood remained primarily residential; the railway served working commuters and also provided transportation for weekend and recreational outings (Swan 1974).

In 1913 a group of investors, including Charles H. Sessions, formed the Lynwood Company and began offering residential lots for suburban home sites. The offer of free water was the biggest draw for potential buyers. Eventually Long Beach Boulevard was paved and became the main road in town (City of Lynwood n.d.). The Lynwood Company ceased operation by 1918 and donated its building to the community, and after the city was incorporated in 1921, it was used as the first city hall (McAvoy 1995). Lynwood's population in 1930 was approximately 7,300 people (City of Lynwood General Plan 2003). The dairy industry started moving east to San Bernardino by the end of the 1930s due to the housing boom in the Los Angeles area (Johnson and Diaz 2012: 23).

After World War II, large numbers of veterans and their families settled in the city. Being close to Los Angeles, Lynwood provided jobs, affordable homes, and retail opportunities for middle class workers. After the 1965 riots in nearby Watts, many residents began to move out of the city. The construction of the I-105 (also known as the

Century Freeway) in the 1980s influenced this change in the community. The freeway was constructed through the center of Lynwood. It divided the city, impacting it physically, economically, and socially. Hundreds of homes were demolished, and some remaining homes were vacated. Businesses moved out of the area and property values declined.

Existing Cultural and Historic Resources

In the Plan Area, there are no historic resources listed on either the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). The Lynwood Pacific Electric Railway Depot, listed on the National Register, was previously located at 11453 Long Beach Boulevard but was moved to Lynwood Park near Martin Luther King Jr. Boulevard and Carson Drive, outside of the Plan Area. Another historic resource at 11331 Plaza Street was listed on the California Register and found eligible for the National Register. The building is no longer extant and a shopping center is currently on the site.

An Initial Study completed by LSA Associates, Inc. in 2005 for the Long Beach Boulevard Specific Plan described locally important historical resources. The City of Lynwood had identified four structures as having "significant importance to the local heritage of the community," but it was noted that the structures were not listed on the California Register at the time. Although four structures were mentioned, only three were described in more detail: The Helen Grace Chocolate Factory (3303 Martin Luther King Jr. Blvd.), the Lynwood Hotel (3304 Mulford Ave), and a residential dwelling unit built in the 1960s (address not provided). The Helen Grace Chocolate Factory is outside of the Plan Area, but the Lynwood Hotel is in the Plan Area and is in one of the areas identified for development (Lynwood Transit Area Specific Plan May 2016, Chapter 2, Land Use Framework and Design Guidelines).

Existing Paleontological Resources

The Plan Area is located in the U.S. Geological Survey South Gate 7.5-minute quadrangle. This quadrangle is mostly covered by alluvial sediments of Quaternary age (less than or equal to 2.58 million years) deposited by the Los Angeles, Rio Hondo, and San Gabriel rivers. While older alluvial fan deposits of Pleistocene age occur in the nearby Montebello and Dominguez hills, the city of Lynwood rests atop younger alluvial fan deposits of Holocene and late Pleistocene age (designated Qya2 by Saucedo et al. 2016) comprising poorly consolidated, poorly sorted, permeable flood-plain deposits of soft clay, silt and loose to moderately dense sand and silty sand (Saucedo et al. 2016).

A search of online paleontological resources uncovered a single locality (LACM 4250) in the South Gate quadrangle containing Pleistocene camel (*Camelops*), horse (*Equus*), and elephant (*Mammuthus*) (MIOMAP 2016).

c. Regulatory Setting

Federal

National Historic Preservation Act (NHPA). The NHPA, enacted in 1966, established the National Register of Historic Places, which serves as the official designation of historical resources. Districts, sites, buildings, structures and objects are eligible for listing in the Register. Nominations are listed if they are significant in American history, architecture, archeology, engineering and/or culture. The National Register is administered by the National Park Service. To be eligible for the NRHP, a property must be significant under criterion A (history), B (persons), or C (design/construction); possess integrity; and ordinarily be 50 years of age or more.

Listing in the National Register does not entail specific protection or assistance for a property, but it does guarantee recognition in the planning for federal or federally assisted projects (see Section 106), eligibility for Federal tax benefits, and qualification for Federal historic preservation assistance. The National Register is influential beyond its statutory role because it achieves uniform standards of documentation and evaluation. Additionally, project effects on properties listed in the National Register must be evaluated under CEQA.

State

California Register of Historical Resources (CRHR). The California Register is an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State's historic resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change

(Public Resources Code Section 5024.1(a)). The CRHR is overseen and administered by the State Historical Resources Commission. The criteria for listing resources on the CRHR are based on those developed by the National Park Service for listing on the National Register of Historic Places, with modifications to include a broader range of resources that better reflect the history of California. A resource is considered historically significant if it:

- Is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States
- Is associated with the lives of persons important to the nation or to California's past
- It 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
- It has yielded, or may be likely to yield, information important to the prehistory or history of the State and the Nation

The Register includes properties that are listed or have been formally determined to be eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other resources require nomination for inclusion in the Register. These may include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic resource surveys conducted in accordance with State Historic Preservation Office (SHPO) procedures, historic resources or districts designated under a local ordinance consistent with Commission procedures, and local landmarks or historic properties designated under local ordinance.

California Public Resources Code. Section 5097.9 of the California Public Resources Code (PRC) stipulates that it is contrary to the free expression and exercise of Native American religion to interfere with or cause severe irreparable damage to any Native American cemetery, place of worship, religious or ceremonial site, or sacred shrine.

Section 5097.5 of the PRC prohibits excavation or removal of any "vertebrate paleontological site or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." PRC 30244 requires reasonable mitigation of adverse impacts to paleontological resources from development on public land. Penal Code Section 623 spells out regulations for the protection of caves, including their natural, cultural, and paleontological contents. It specifies that no "material" (including all or any part of any paleontological item) will be removed from any natural geologically formed cavity or cave.

California Health and Safety Code. Section 7052 of the California State Health and Safety Code states that it is a felony to disturb Native American cemeteries. If human remains are discovered or exposed during construction, Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American, who will serve as a consultant on how to proceed with the remains (i.e., avoid, rebury).

California Native American Historical, Cultural and Sacred Sites Act. The California Native American Historical, Cultural, and Sacred Sites Act applies to both State and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and the County coroner be notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The Act stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

California Environmental Quality Act (CEQA). The State *CEQA Guidelines* Section 15064.5 definition of a "historical resource" is presented in Section 4.3.2(a), Methodology and Significance Thresholds. CEQA requires that historical resources and unique archaeological resources be taken into consideration during the CEQA review process (Public Resources Code, Section 21083.2). If feasible, adverse effects to the significance of historical resources must be avoided, or significant effects mitigated [*CEQA Guidelines* Section 15064.5(b)(4)].

If the cultural resource in question is an archaeological resource, *CEQA Guidelines* Section 15064.5(c)(1) requires that the lead agency first determine if the resource is a historical resource as defined in Section 15064.5(a). If the resource qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (California Office of Historic Preservation 2001a:5). If the archaeological resource does not qualify as a historical resource but does qualify as a "unique archaeological resource," then the archaeological resource is treated in accordance with Public Resources Code Section 21083.2 [see also *CEQA Guidelines* Section 15069.5(c)(3)]. "Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Treatment options under Public Resources Code Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource").

Local

CITY OF LYNWOOD

The city does not have an historic preservation ordinance and nor does it have formal designation criteria for evaluating historic resources at the local level of significance. The 2003 Lynwood General Plan contains a brief overview of the city's cultural resources in the form of a short development history of the community (Section 6.1.3), but does not contain policies relevant to cultural and historic resources. The Land Use Element, Section 4.1, does not address historic resources in the General Plan Goals or Land Use Policies.

4.3.2. Impact Analysis

a. Methodology and Significance Thresholds

CEQA provides guidelines for mitigating impacts to archaeological and historical resources in Section 15126.4. Preservation in place is the preferred manner of mitigating impacts to archaeological resources (14 CCR 15126.4(b)(3)). Preservation in place may be accomplished by planning construction to avoid the resource, incorporating sites in parks or open space, covering sites with chemically stable and culturally sterile fill, or deeding the site into a permanent conservation easement. When data recovery excavation of an archaeological site is the only feasible mitigation, a detailed data recovery plan must be prepared and adopted prior to any excavation.

For buildings and structures, maintenance, repair, restoration, preservation, conservation, or reconstruction consistent with the Secretary of Interior's Standards and Guidelines for the Treatment of Historic Properties is considered mitigation of impacts to a less than significant level (14 CCR 15126.4(b)(1)). Simply documenting a historical resource, however, will not mitigate the effects of demolition to a less than significant level (14 CCR 15126.4(b)(2)).

The following criteria are based on Appendix G of the *State CEQA Guidelines*. The effects of the proposed Specific Plan on recreation are considered to be significant if the proposed Specific Plan would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
4. Disturb any human remains, including those interred outside of formal cemeteries.

Based on the following discussion, impacts related to threshold number 3 was found to be less than significant and is not discussed further in this EIR.

The Plan Area is located in a developed area of Lynwood and has already been subjected to grading activities associated with existing development. As the project site has already been previously disturbed and developed, it has already been subject to similar construction and ground-disturbing activities associated with the Proposed Specific Plan. No paleontological resources were identified during prior development actives in the Project Site, and it is unlikely that any such resources would be uncovered or affected during project-related grading and construction activities. Furthermore, the Plan Area and immediate surroundings are not recognized as an area having the potential for subsurface paleontological resources. Therefore, the likelihood of discovering paleontological resources is considered very low and no impact would occur.

b. Impacts and Mitigation Measures

Impact CR-1	The Plan Area contains buildings over 45 years of age and other properties that could be eligible for listing as historic resources. These resources could be affected by future development allowed under the proposed Specific Plan. However, adopted Specific Plan policies governing historic preservation, existing zoning code regulations, and proposed Specific Plan policies would ensure that this impact would be *less than significant.*

While some of the development that may be facilitated by adoption of the proposed Specific Plan would take place on vacant land, future development could occur in areas containing existing buildings. For properties with an identified or potentially eligible resource, changes to building exteriors or demolition of buildings could result in impacts to historic resources.

Although the City of Lynwood's General Plan does not include policies that address potential historic resources, the proposed Specific Plan itself includes the following policy that directly addresses specific historic resources:

- Identify, conserve, and restore historic resources, including buildings and places such as the Lynwood Hotel, which have value and importance to the identity of the community.

With required adherence to these existing and proposed policies and regulations, impacts would be less than significant.

Mitigation Measures

As impacts would be less than significant, no mitigation is required.

Significance after Mitigation

Impacts would be **less than significant** without mitigation.

Impact CR-2	The Plan Area includes known prehistoric and historic archaeological resources. In addition, ground disturbance associated with new construction could uncover previously unknown buried archeological deposits or human remains. However, adopted County policies and existing regulations would ensure that this impact would be *less than significant.*

As described in the Physical Setting section above, the Plan Area includes known prehistoric and historic archaeological resources. The vast majority of the Plan Area, where new or more intense development could be facilitated by the proposed Specific Plan, has been disturbed by previous development over many decades, and by farming before development. Therefore, archeological resources that may have existed at or near the surface have likely been disturbed by past farming and development. As a result, the uppermost sediments are not likely to contain archeological resources. However, given the well-documented occupation of the area by indigenous tribes and others both prehistorically and historically, there is a reasonable potential that the development that could occur under the Specific Plan could take place on sites with previously unknown archaeological resources.

Effects on archeological resources are only knowable once a specific project has been proposed, because the effects are highly dependent on both the individual project site conditions and the characteristics of the proposed ground-disturbing activity. Pursuant to adopted County of Los Angeles policies, ordinances, and procedures as described above under Regulatory Setting, projects that include excavation below levels of past disturbance for such things as deep foundations, subterranean parking, or other uses, or that require soil remediation would be required to undergo project-specific review by the City that would include CEQA review where appropriate and, if warranted, archaeological resources investigations and mitigation programs.

If human remains are unearthed during excavation for projects under the proposed Specific Plan, State Health and Safety Code Section 7050.5 requires that no further disturbance may occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the California Native American Heritage Commission.

With required adherence to existing policies and regulations, impacts would be less than significant.

Mitigation Measures

As impacts would be less than significant, no mitigation is required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

c. Cumulative Impacts

Full implementation of the proposed Specific Plan would increase density and intensity of existing land uses, adding up to (1) 3,500 residential units, (2) 1.2 million square feet of commercial property, (3) 750,000 square feet of industrial, uses, and (4) 350 hotel rooms. Potential impacts to cultural and historic resources associated with the proposed Specific Plan would be less than significant and similar findings were made for implementation of the City of Lynwood General Plan, which encompasses the Plan Area. Cumulative impacts to these resources would not be significant. The proposed Specific Plan, the City of Lynwood General Plan Open Space and Conservation Element, and County and State regulations would protect historic and archaeological resources on a case-by-case basis as projects are considered. Therefore, the proposed Specific Plan's impact on cultural resources would not be cumulatively considerable.

4.4 Greenhouse Gas Emissions

4.4.1 Setting

a. Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC 2013), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2013).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHG). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFC) and perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA] 2006). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC 2007).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34°C cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [U.S. EPA] 2014). CO_2 was the first GHG

demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the second half of the 20th century. Concentrations of CO_2 in the atmosphere have risen approximately 40 percent since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC 2007, Oceanic and Atmospheric Administration [NOAA] 2010). The average annual CO_2 concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA 2010). Currently, CO_2 represents an estimated 74 percent of total GHG emissions (IPCC 2007). The largest source of CO_2 emissions, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a GWP approximately 25 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148 percent (IPCC 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (U.S. EPA 2014).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA 2010). N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 298 times that of CO_2 (IPCC 2007).

Fluorinated Gases (HFCS, PFCS and SF_6). Fluorinated gases, such as hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfurhexafluoride (SF_6), are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), and halons, regulated since the mid-1980s because of their ozone-destroying potential and phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT or gigatonne) CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, carbon dioxide was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases account for six and two percent respectively (IPCC 2014).

Total U.S. GHG emissions were 6,525.6 MMT CO_2e in 2012 (U.S. EPA 2014). Total U.S. emissions have increased by 4.7 percent since 1990; emissions decreased by 3.4 percent from 2011 to 2012 (U.S. EPA 2014). The decrease from 2011 to 2012 was due to a decrease in the carbon intensity of fuels consumed to generate electricity due to a decrease in coal consumption, with increased natural gas consumption. Additionally, relatively mild winter conditions, especially in regions of the United States where electricity is important for heating, resulted in an overall decrease in electricity demand in most sectors. Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2012, the transportation and industrial end-use sectors accounted for 28.2 percent and 27.9 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16.3 percent and 16.4 percent of CO_2 emissions, respectively (U.S. EPA 2014).

Based on the California Air Resources Board (ARB) California Greenhouse Gas Inventory for 2000-2013, California produced 459.3 MMT CO_2E in 2013 (ARB 2015). The major source of GHG in California is transportation, contributing 37 percent of the state's total GHG emissions. Industrial sources are the second largest source of the

state's GHG emissions (ARB 2015). California emissions are due in part to its large size and large population compared to other states. However, compared to other states, California's per capita fuel use and GHG emissions are lower due to the state's relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO_2e (ARB 2014). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed in the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 was the warmest. The global, combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012, when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2013).

According to the CalEPA's *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss of snow pack, sea level rise, and increases in extreme heat days per year, high ozone days, large forest fires, and drought years (CalEPA 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

AIR QUALITY

Higher temperatures conducive to air pollution formation could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission [CEC] 2009).

WATER SUPPLY

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice in the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR] 2008, California Climate Change Center [CCCC] 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also

anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (CCCC 2009), climate change has the potential to induce substantial sea level rise in the 21st century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea–level rise of 11-38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7-23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition in communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

b. Regulatory Setting

The following regulations address both climate change and GHG emissions.

International Regulations

The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced in 1992. The UNFCCC is an international environmental treaty with the objective to achieve the "stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (United Nations 1992: 7) This is generally understood to be achieved by stabilizing global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2.0 and 2.4°C above pre-industrial levels (IPCC 2007). The UNFCCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Five years later, the UNFCCC brought nations together again to draft the Kyoto Protocol (1997). The Kyoto Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs) to 5.2 percent below 1990 levels by 2012. The United States is a signatory of the Kyoto Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC 2007). The first commitment period of the Kyoto Protocol ended in 2012. Governments, including 38 industrialized countries, agreed to a second commitment period of the Kyoto Protocol beginning January 1, 2013 and ending either on December 31, 2017 or December 31, 2020, to be decided by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its seventeenth session (UNFCCC 2011).

At the convention held in Durban, South Africa (United Nations 2011), governments decided to adopt a universal legal agreement on climate change. Work began on that task immediately under a new group called the Ad Hoc Working Group on the Durban Platform for Enhanced Action. Progress was also made regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted (UNFCCC 2011, United Nations 2011).

In December 2015, the 21st session of the Conference of the Parties (COP21) adopted the Paris Agreement. The deal requires all countries that ratify the agreement to commit to cutting greenhouse gas emissions "as soon as possible" (Worland 2015). The agreement includes commitments to (1) achieve a balance between sources and sinks of greenhouse gases in the second half of this century; (2) to keep global temperature increase "well below" 2˚C or 3.6˚F and to pursue efforts to limit it to 1.5˚C; (3) to review progress every five years; and (4) to spend $100 billion a year in climate finance for developing countries by 2020 (UNFCCC 2015). The agreement includes both legally binding measures, like reporting requirements, and voluntary or non-binding measures, such as setting emissions targets for individual countries (Worland 2015).

Federal Regulations

The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons CO_2e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons CO_2e per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 tons CO_2e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons CO_2e per year.

On July 3, 2012 the U.S. EPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

California Regulations

ARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (ARB 2011).

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT) that published the Climate Action Team Report (the "2006 CAT Report") in March 2006 (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015 Governor Brown issued EO B-30-15, calling for a new target of 40% below 1990 levels by 2030.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by ARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted over the last five years. Implementation activities are ongoing and ARB is currently the process of updating the Scoping Plan.

In May 2014, ARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (ARB 2014).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

ARB Resolution 07-54 establishes 25,000 metric tons (MT) of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was assigned targets of an eight percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In early 2010, ARB adopted a regulation for reducing SF_6 emissions from electric power system gas-insulated switchgear (17 CCR 95350). SF_6 gas is commonly used as an arc quenching and insulating medium for high and medium voltage switchgear systems used in electrical substations. The regulation requires owners of such switchgear to (1) annually report their SF_6 emissions; (2) determine the emission rate relative to the SF_6 capacity of the switchgear; (3) provide a complete inventory of all gas-insulated switchgear and their SF_6 capacities; (4) produce a SF_6 gas container inventory; and (5) keep all information current for ARB enforcement staff inspection and verification.

In April 2011, Governor Brown signed SB 2X requiring California to generate 33 percent of its electricity from renewable energy by 2020.

On April 29, 2015, Governor Brown issued an executive order to establish a statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030. According to ARB, reducing GHG emissions by 40 percent below 1990 levels in 2030 ensures that California will continue its efforts to reduce carbon pollution and help to achieve federal health-based air quality standards. Setting clear targets beyond 2020 also provides market certainty to foster investment and growth in a wide array of industries throughout the State, including clean technology and clean energy. ARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan is expected to be completed and adopted by ARB in 2016 (ARB 2015).

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

California Environmental Quality Act. Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Local Regulations

The City of Lynwood does not currently have an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. However, the General Plan includes Policy EC-1.1, which requires the City to ensure that energy conservation measures are implemented in all development projects.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds

Based on Appendix G of the *State CEQA Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would do either of the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

The majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change. Therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines*, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). However, neither the SCAQMD nor the City of Lynwood has adopted GHG emissions thresholds, and no GHG emissions reduction plan with established GHG emissions reduction strategies has yet been adopted. The SCAQMD threshold, adopted in December 2008, considers emissions of over 10,000 MT CO_2e per year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is intended to apply only when the SCAQMD is the CEQA lead agency. In the latest guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD has considered a tiered approach to determine the significance of residential and commercial projects. The draft-tiered approach is outlined in the meeting minutes, dated September 29, 2010.

> *Tier 1 - If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.*
>
> *Tier 2 - Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.*
>
> *Tier 3 - Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 tons of CO_2e per year for all land use projects.*
>
> *Tier 4 – Establishes an efficiency target threshold to determine significance. The Working Group has provided a recommendation for a 2020 target of 4.8 MT/year CO_2e per service population for project level threshold (land use employment only) or 6.6 MT/year CO_2e per service population for plan level threshold and a 2035 target of 3.0 MT/year CO_2e per service population for project level threshold and 4.1 MT/year CO_2e per service population for plan level threshold.*

Near-term development of the key development site areas under the Specific Plan is expected to occur over the next 10 years (by 2025), while complete buildout of the Specific Plan is expected in 2040. Therefore, the Plan's contribution to cumulative impacts related to GHG emissions and climate change would be cumulatively considerable if its GHG emissions exceed SCAQMD's recommended Tier 4 plan-level threshold of 4.1 MT/year CO_2e per service population for target year 2035, because the majority of near-term development and buildout under the Plan would occur after that 2020.

Study Methodology

Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that buildout of the Plan would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. Emissions of all GHGs are converted into their equivalent weight in CO_2 (CO_2e). Minimal amounts of other main GHGs (such as chlorofluorocarbons [CFC]) would be emitted, but these other GHG emissions would not substantially add to the calculated CO_2e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (January 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (January 2009).

GHG emissions associated with buildout of the Specific Plan were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (see Appendix B for calculations).

Operational Emissions. CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (*Compilation of Air Pollutant Emissions Factors*) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide 2013). The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from ARB, U.S. EPA, and emission factor values provided by the local air district (CalEEMod User Guide 2013).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 *Refining Estimates of Water-Related Energy Use in California,* using the average values for northern and southern California.

For mobile sources, CO_2 and CH_4 emissions were quantified in CalEEMod. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (CAPCOA 2009) direct emissions factors for mobile combustion (see Appendix B for calculations). The overall vehicle fleet mix used in the analysis is the default fleet mix provided in the CalEEMod software. The estimate of total daily trips associated with the proposed Specific Plan was based on vehicle trip data provided in Section 4.12, Transportation and Circulation, which includes a 25 percent transit trip reduction in daily vehicle trips and an 18 percent internal trip credit due to the Specific Plan's transit-oriented design. The estimate of total daily was then extrapolated to derive total annual mileage in CalEEMod. Emission rates for N_2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

Emissions models like CalEEMod are limited in the way they perform the quantitative analysis of emissions from mobile combustion as they only evaluate aggregate emissions. This means that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, the proportion of these emissions that are actually "new" and specifically attributable to the project in question. For most projects, the main contributor to regional air quality emissions is from motor vehicles, but the number of vehicle trips appropriately characterized as "new" is usually uncertain as traffic associated with a project may be relocated trips from other locales. In other words, vehicle trips associated with the Specific Plan may include trips relocated from other existing locations, as people begin to use development under the Specific Plan instead of similar existing land uses. Therefore, because

the proportion of "new" versus relocated trips is unknown, the VMT estimate generated by CalEEMod is used as a conservative, "worst-case" estimate.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). Nevertheless, air districts such as the SCAQMD (2015) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the operational emissions associated with development under the Specific Plan. The amortized construction emissions are added to the annual average operational emissions and then compared to the applicable operational threshold.

Construction of development under the Specific Plan would generate temporary GHG emissions primarily from the operation of construction equipment in the Plan Area and from vehicles transporting construction workers to and from the Plan Area. CalEEMod provides an estimate of emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment use during construction. It was assumed that grading would be concentrated on the key development sites and would be balanced across the Plan Area. It was also assumed that no offsite import or export of soil would be required during construction under the proposed Specific Plan. The CalEEMod construction analysis considered grading, building construction, architectural coatings, and paving phases. As discussed in Section 4.2, Air Quality, modeling assumed compliance with SCAQMD Architectural Coating Rule 1113, SCAQMD Wood-Burning Devices Rule 445, and SCAQMD Fugitive Dust Rule 403.

Service Population Calculation. The service population is the sum of residents and employees generated by buildout under the Specific Plan. As discussed in Section 4.10, Population and Housing, buildout of the Specific Plan would generate 15,260 new residents and 5,053 new employees. Therefore, the service population for the proposed Specific Plan would be 20,313 people.

b. Project Impacts and Mitigation Measures

Impact GHG-1	Development under the proposed Specific Plan would generate additional GHG emissions beyond existing conditions due to construction activity and long-term operations. Total estimated GHG emissions would not exceed the efficiency threshold. Impacts related to GHG emissions would be *less than significant*.

As discussed above, GHG emissions for proposed buildout of the Specific Plan were estimated using CalEEMod. The following summarizes the Specific Plan's overall GHG emissions (see Appendix B for detailed CalEEMod worksheets). Tables 12 and 13 show emissions expected from buildout under the Specific Plan.

Construction under the Specific Plan would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. In CalEEMod, construction activity is assumed to occur simultaneously over a period of approximately 15 years based on CalEEMod's default construction schedule for all construction phases, except architectural coating, which was assumed to overlap with the end of building construction. Based on the CalEEMod results, construction activity under the proposed Specific Plan would generate an estimated 79,352 MT of CO_2e units (as shown in Table 12). Amortized over a 30-year period, construction under the Specific Plan would generate an estimated 2,645 MT of CO_2e per year. Construction assumptions used to calculate the emissions are shown in the CalEEMod output tables in Appendix B.

Table 12 Estimated Construction Emissions of Greenhouse Gases

Emission Source	Annual Emissions
Construction	79,352 MT CO_2e
Amortized over 30 years	2,645 MT CO_2e/year

[1] See Appendix B for calculations and for GHG emission factor assumptions.

Onsite Operational Emissions

As discussed above, operational emissions from energy use (electricity and natural gas use), area sources (consumer products, landscape maintenance, and architectural coating), waste generation, water use, wastewater generation, and mobile sources for the proposed Specific Plan were estimated using CalEEMod (see Appendix B for calculations).Table 13 combines the construction, operational, and mobile GHG emissions associated with development under the proposed Specific Plan. As described above, emissions associated with total construction activity are amortized over 30 years.

Table 13 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions
Construction	2,645 MT CO_2e
Operational	
Area	60 MT CO_2e
Energy	16,042 MT CO_2e
Solid Waste	1,816 MT CO_2e
Water	3,122 MT CO_2e
Mobile	
CO_2 and CH_4	47,037 MT CO_2e
N_2O	2,609 MT CO_2e
Total	**73,331 MT CO_2e**
Service Population	20,313
Total / service population	3.6 MT CO_2e
Threshold	4.1 MT CO_2e/service population/year
Threshold Exceeded?	No

Sources: See Appendix B for calculations and for GHG emission factor assumptions.

As shown in Table 13, the combined annual emissions would total approximately 73,331 MT per year of CO_2e. Therefore, the combined annual emissions would result in per-service-population emissions of 3.6 MT CO_2e/service population/year. These emissions would not exceed the applicable threshold of 4.1 metric tons CO_2e/service population/year. Therefore, impacts related to GHG emissions from buildout of the proposed Specific Plan would be less than significant.

Mitigation Measures

No mitigation would be required.

Significance after Mitigation.

Impacts would be less than significant without mitigation.

Impact GHG-2	The proposed Specific Plan would be consistent with the Climate Action Team GHG reduction strategies, the 2008 Attorney General Greenhouse Gas Reduction Measures, and the Southern California Association of Government (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). As a result, the proposed Specific Plan would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts would be *less than significant.*

As discussed in Section 4.4.1, Setting, a number of plans and policies aimed at GHG reduction apply to the Specific Plan. The "2006 CAT Report," identifies a recommended list of strategies that the State could pursue to reduce climate change GHG emissions at a statewide level to meet the goals of the Executive Order S-3-05. The strategies are designed so that various State agencies can use these to ensure that the Governor's targets are met while remaining within the scope of their existing authority.

The California Attorney General's Office has developed *Global Warming Measures* (2008) that, along with OPR's *CEQA and Climate Change* (CAPCOA, 2008) document, includes GHG reduction measures intended to reduce GHG emissions in order to achieve statewide emissions reduction goals. All of these measures aim to curb the GHG emissions occurring because of land use, transportation, renewable energy, and energy efficiency practices. Several of these actions are already required by California regulations. They are as follows:

- AB 1493 (Pavley) requires the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks.
- In 2004, ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.
- The Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989) established a 50 percent waste diversion mandate for California.
- Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).
- California's Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 33 percent of retail electricity sales from renewable energy sources by 2020, with certain cost constraints.
- Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels.

The Specific Plan would be required to comply with these existing, adopted State regulations to help achieve the overall GHG emissions reduction goals identified in AB 32.

In addition, the SCAG 2016 RTP/SCS also contains a number of strategies that relate to the operations of SCAG and regional land use planning. The 2016 RTP/SCS plans for focusing new growth around transit, which is infill and investment; structuring the Plan on centers development; developing "Complete Communities;" developing nodes on a corridor; planning for additional housing and jobs near transit; planning for changing demand in types of housing; continuing to protect stable, existing single-family areas; ensuring adequate access to open space and preservation of habitat; and incorporating local input and feedback on future growth. These policies support the development of the following:

- High Quality Transit Areas (HQTA): areas within 0.5 mile of a fixed guideway transit stop or a bus transit corridor where buses pick up passengers at a frequency of every 15 minutes or less during peak commuting hours. While HQTAs account for only three percent of total land area in SCAG region, they are planned and projected to accommodate 46 percent of the region's future household growth and 55 percent of the future employment growth
- Livable Corridors: arterial roadways where jurisdictions may plan for a combination of the following elements: high-quality bus frequency; higher density residential and employment at key intersections; and increased active transportation through dedicated bikeways
- Neighborhood Mobility Areas (NMA): strategies intended to provide sustainable transportation options for residents of the region who lack convenient access to high-frequency transit but make many short trips in urban neighborhoods. NMAs are conducive to active transportation and include a "Complete Streets" approach to

roadway improvements to encourage replacing single- and multi-occupant automobiles with biking, walking, skateboarding, neighborhood electric vehicles, and senior mobility devices.

The proposed Specific Plan includes a number of goals that would support these 2016 RTP/SCS policies, including:

- Goal 1: Promote Transit-Oriented Development Near the Metro Green Line Station -Expand on the accessibility of the Green Line Station and the energy at Plaza Mexico by creating a dynamic transit district with a distinctive identity --an active and attractive hub where people come to live, shop, work and play
- Goal 4: Enhance Pedestrian Comfort and Safety - Increase facilities, add connections, and multiply opportunities to safely and conveniently get around the area on "complete" streets by foot, bike, and public transit
- Goal 5: Enhance Recreational Opportunities- Increase landscaped areas, parks, open space, and trails that are supportive of the public life of the community. Facilitate security and well-being for the Specific Plan Area's residents, employees, and visitors through increased activity, better walkability, controls on cars and drivers, and better design and wayfinding

The Specific Plan concentrates and prioritizes development in key opportunity sites, along major roadway corridors, existing industrial and hospital districts, and existing neighborhoods in the project area. In addition, the Specific Plan is intended to facilitate transit-oriented community design by promoting complete streets, expanded transit services, and enhanced pedestrian and bicycle linkages throughout the project area. The Specific Plan includes a mobility strategy that would support the creation of a NMA by creating a complete streets network of automotive, bicycle, transit and pedestrian circulation in order to improve overall mobility and safety, and support a more neighborhood scale throughout the Plan Area. The Specific Plan also includes a mobility strategy that would support the creation of a HQTA by encouraging transit station and bus stop enhancements and integrating the transit system with alternative modes of transportation. Lastly, the Specific Plan would create a more livable corridor by concentrating higher density multi-family housing and employment opportunities along major roadway corridors. The proposed Specific Plan would help achieve SCAG RTP/SCS goals, policies, and strategies. Implementation of the Specific Plan would not conflict with the 2008 Attorney General Greenhouse Gas Reduction Measures or applicable SCAG 2016 RTP/SCS strategies. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

c. Cumulative Impacts

GHG and climate change are, by definition, cumulative impacts as they affect the accumulation of greenhouse gases in the atmosphere. As indicated in Impacts GHG-1 and GHG-2, emissions associated with the proposed Specific Plan would be less than significant and the project would be consistent with applicable GHG reduction plans. Therefore, the proposed Specific Plan's impacts would not be cumulatively considerable.

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4.5 Geology and Soils

4.5.1 Setting

a. Topography and Geology

Topography

The city of Lynnwood is located in the Gateway Cities area of southeast Los Angeles County. The boundaries of the South Gate Quadrangle encompass an area of about 62 square miles in eastern Los Angeles county. There are four major transportation routes traversing the South Gate Quadrangle: Santa Ana Freeway (I-5), Century Freeway (I-105), Artesia Freeway (State Highway 91), and Long Beach Freeway (I-710). Seventy-five percent or more of the quadrangle is covered with Holocene alluvial deposits from the regional coastal basin, the Downey Plain. The main drainage courses in the quadrangle are the Los Angeles River, Compton Creek, and the Rio Hondo (City of Lynwood General Plan Safety Element 2003).

The city of Lynnwood is located between the city of South Gate to the north, the city of Willowbrook to the west, the city of Downey to the east, and city of Compton to the south. It is accessible from the I-105 and the I-710. The Plan Area is located in the city of Lynwood and includes approximately 315 acres along the I-105 corridor, the Long Beach Boulevard corridor, and the Imperial Highway corridor (refer to Figure 4 in Section 2, Project Description).

The Plan Area is located in the Peninsular Ranges, which include the southern portion of Los Angeles County, the southwest corner of San Bernardino County, all of Orange County, and the San Jacinto Mountains and the Coachella Valley in the central portion of Riverside County. The ranges are composed of a series of northwest-southeast trending mountains separated by several active faults, including the San Jacinto and Elsinore fault zones. The Peninsular Ranges' highest elevations are found in the San Jacinto-Santa Rosa Mountains, with San Jacinto Peak reaching 10,805 feet above mean sea level (msl) (SCAG RTP/SCS Draft PEIR 2016). The Plan Area is almost entirely built out with residential, commercial, and industrial uses and is relatively flat, located approximately 92 feet above mean sea level (amsl).

The city of Lynwood is in the area of one or more known earthquake faults. Although no seismic faults are directly in the city, several active faults surround the city limits of Lynwood, including the Newport-Inglewood, Whittier, Palos Verdes, Santa Monica, and San Andreas Faults (Figure 7). This area has a history of powerful and relatively frequent earthquakes, dating back to the powerful 8.0+ San Andreas earthquake of 1857 which did substantial damage to the relatively few buildings that existed at the time (City of Lynwood 2004). Other notable earthquakes include the 1933 Long Beach Earthquake, the 1971 San Fernando Earthquake, the 1987 Whittier Earthquake and the 1994 Northridge Earthquake (City of Lynwood 2004).

Figure 7 Regional Fault Map

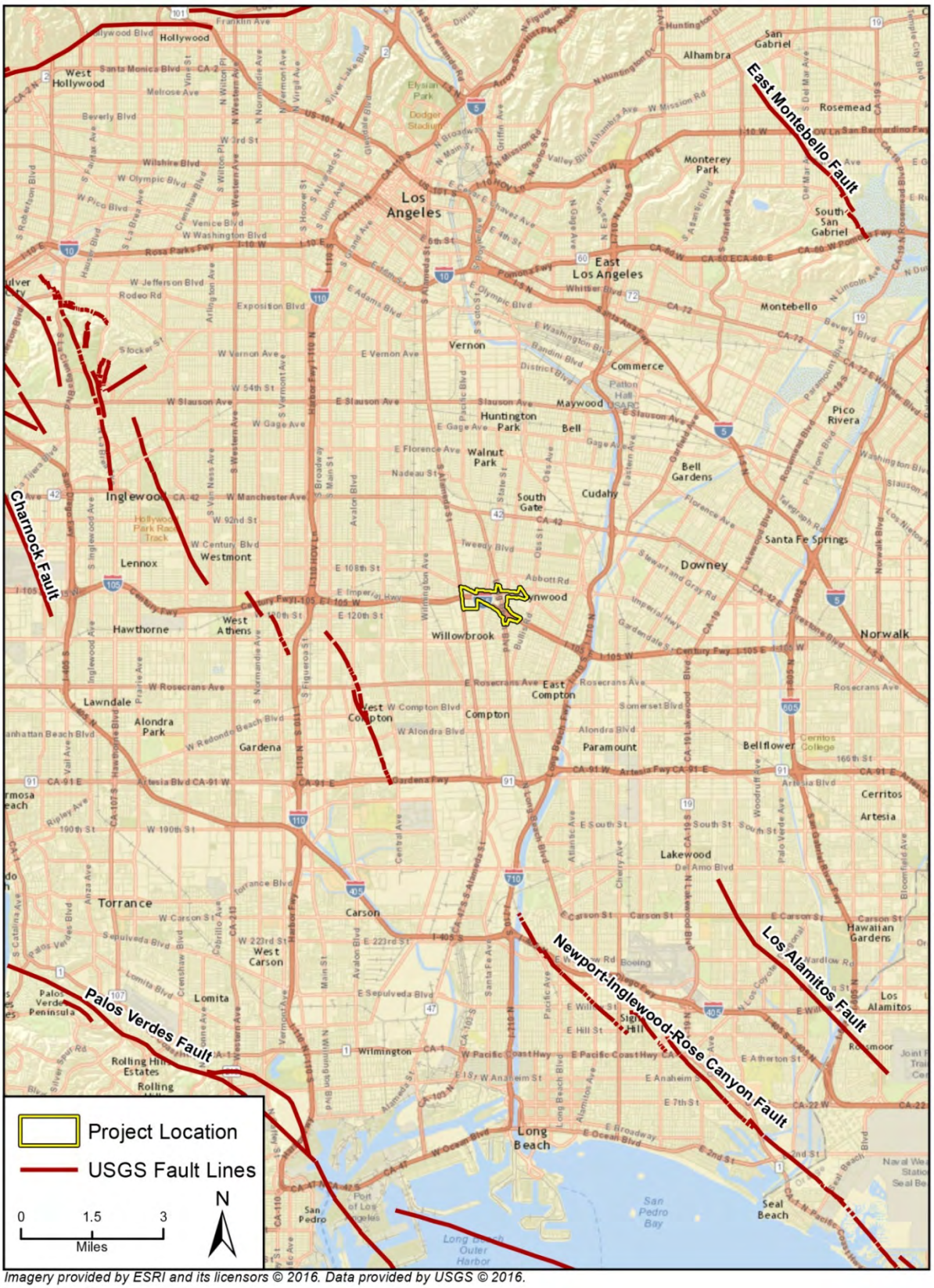

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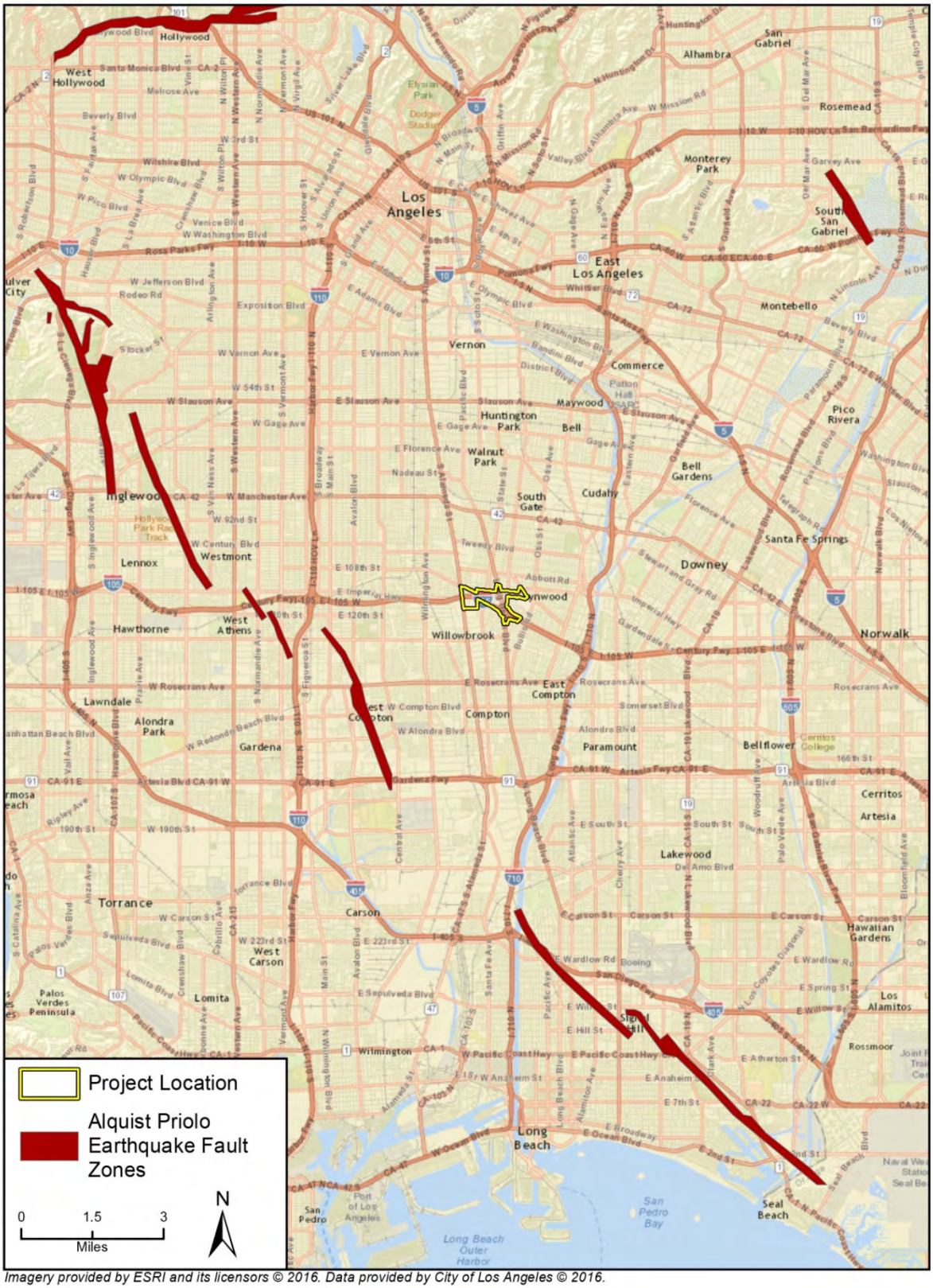
Figure 8 Alquist-Priolo Fault Zone Map



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Geology

The South Gate Quadrangle is mostly covered by alluvial sediments of Quaternary age. While older alluvial fan sediments of Pleistocene age are associated with the Montebello Hills and Dominguez Hills, elsewhere across the quadrangle including in the city of Lynwood, the younger alluvial fan sediments of Holocene and late Pleistocene age are found. The young Quaternary alluvial deposits came primarily from deposits by the San Gabriel River and the Rio Hondo River. The region has experienced multiple episodes of historic inundation during the past 150 years. Surface mapping has distinguished two units; Qya1 is considered to be relatively older than Qya2. Borehole data from Qya1 along the northeast flank of the Dominguez Hills indicate a variable unit ranging from very stiff clays and silts, to loose sands. Meanwhile, the Qya2 mapped in the flood plain is virtually undistinguishable from Qya1 in the subsurface. In general, these subsurface deposits consist of loose to medium dense very coarse- to very fine-grained sand, gravel, and silt that appear to inter-finger and grade laterally into each other.

Soil Characteristics

Soil is generally defined as the unconsolidated mixture of mineral grains and organic material that mantles the land surfaces of the earth. Soils can develop on unconsolidated sediments and weathered bedrock. The characteristics of soil reflect the five major influences on their development topography, climate, biological activity, parent source material, and time. As mentioned above, the South Gate Quadrangle is mostly covered by alluvial sediments of Quaternary age. These deposits consist of varying proportions of sand, gravel, silt, and clay. Soil mapping by the Natural Resources Conservation Resource Conservation Service (NRCS) has not been completed for the city of Lynwood.

b. Geologic Hazards

As with much of California, the Plan Area is located in a seismically active region. The seismic hazards relevant to the Plan Area are described below.

Faulting and Seismically Induced Ground Shaking

The U.S. Geological Survey (USGS) defines active faults as those that have had surface displacement during Holocene time (about the last 11,000 years). Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are faults that have had surface displacement during the last 1.6 million years. Inactive faults have not had surface displacement in the last 1.6 million years. The Plan Area is in the vicinity of several faults (refer to Figure 10). The city of Lynwood, like most of the Los Angeles Basin, lies on top of one or more known earthquake faults, and potentially many more unknown faults. These include so-called lateral or blind thrust faults. The major faults that have the potential to affect the greater Los Angeles Basin, and therefore the city of Lynwood are described below.

SAN ANDREAS FAULT

The San Andreas Fault, the most likely source of a major earthquake in California, is approximately 60 miles northeast of the Plan Area. The San Andreas Fault is the primary surface boundary between the Pacific and the North American plates. There have been numerous historic earthquakes along the San Andreas Fault, and it generally poses the greatest earthquake risk to California. In general, the San Andreas Fault is likely capable of producing a Maximum Credible Earthquake (MCE) of 8.0 (Caltrans 1996).

NEWPORT INGLEWOOD FAULT

The Newport Inglewood Fault, approximately four miles west of the Plan Area, stretches about 47 miles from Culver City through Inglewood and other coastal communities to Newport Beach, at which point it extends east-southeast into the Pacific Ocean. The Newport Inglewood Fault is capable of producing a Maximum Credible Earthquake (MCE) of 7.4 (Caltrans 1996).

WHITTIER FAULT

The Whittier Fault, located approximately 10 miles east of the Plan Area, stretches 25 miles along the Chino Hills range between the cities of Chino Hills and Whittier. The Whittier Fault is likely capable of producing a Maximum Credible Earthquake (MCE) of 7.2 (Caltrans 1996).

Other active faults in the Plan Area vicinity include the Palos Verdes and Santa Monica faults, and several potentially active and unnamed secondary faults adjacent to these faults. There are few or no studies pertaining to these additional secondary faults, and it is unknown if these faults may or may not experience secondary ground rupture during a large earthquake.

Surface Rupture

Faults generally produce damage in two ways: ground shaking and surface rupture. Surface rupture is limited to very near the fault. The Alquist-Priolo Act was developed by the State of California to regulate development occurring near active faults and to mitigate the risks associated with surface rupture. The Plan Area (approximately 315 acres) is not subject to the Alquist-Priolo Act (State of California Department of Conservation 2016).

Ground Shaking

Seismically induced ground shaking covers a wide area and is greatly influenced by the distance of the site to the seismic source, soil conditions, and depth to groundwater. The USGS and the Southern California Association of Government (SCAG) have worked together to map the likely intensity of ground-shaking throughout the SCAG region under various earthquake scenarios. Earthquakes on the various and potentially active fault systems are expected to produce a wide range of ground shaking intensities in the SCAG region. However, Figure 3.7.2-3 of the Geology and Soils Element of the SCAG RTP/SCS Programmatic EIR shows the Alquist-Priolo Zones (Figure 8) and Potential Areas of Probabilistic Ground Acceleration, the city of Lynwood would not be located in an area identified to have major or severe acceleration (SCAG 2016).

Hazards associated with seismically induced ground shaking include liquefaction, seismically induced settlement, and earthquake-triggered landslides. Movement along any of the faults shown in Figure 10 could potentially generate substantial ground shaking in the Plan Area leading to these secondary hazards, as discussed below. In Lynwood peak accelerations are .38-.39 in firm rock, .42-.43 in soft rock and .44-.45 in alluvium (City of Lynwood General Plan 2003).

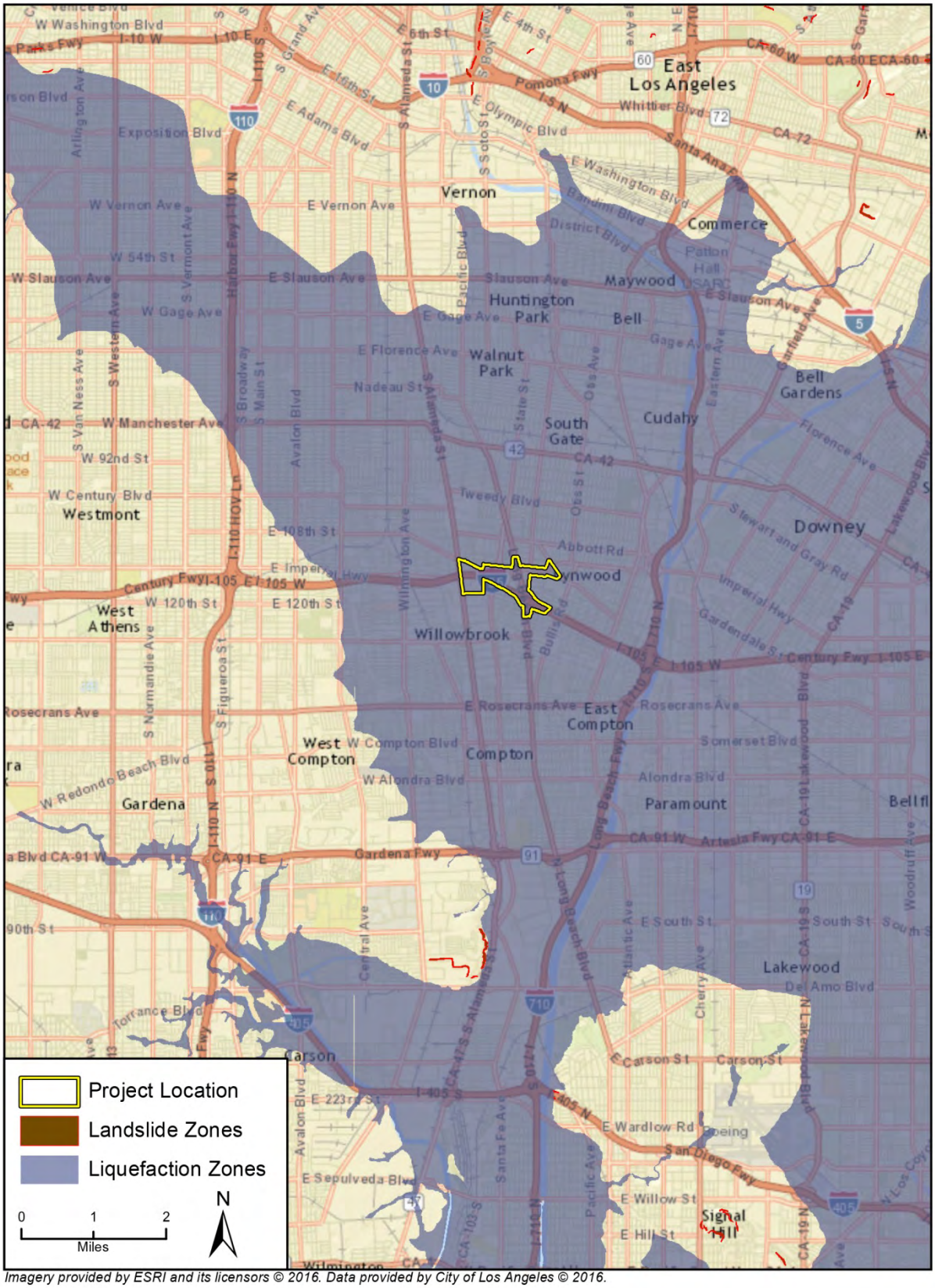
Liquefaction and Seismically-Induced Settlement

Liquefaction is defined as the sudden loss of soil strength due to a rapid increase in soil pore water pressure resulting from seismic ground shaking. Liquefaction potential depends on such factors as soil type, depth to ground water, degree of seismic shaking, and the relative density of the soil. When liquefaction of the soil occurs, buildings and other objects on the ground surface may tilt or sink, and lightweight buried structures (such as pipelines) may float toward the ground surface. Liquefied soil may be unable to support its own weight or that of structures, which could result in loss of foundation bearing or differential settlement. Liquefaction may also result in cracks in the ground surface followed by the emergence of a sand-water mixture.

Seismically induced settlement occurs in loose to medium dense unconsolidated soil above groundwater, which compress (settle) when they are subject to seismic shaking. The settlement can be exacerbated by increased loading, such as from the construction of buildings. Settlement can also result solely from human activities including improperly placed artificial fill, and structures built on soils or bedrock materials with differential settlement rates.

According to the Seismic Hazard Zone Report for the South Gate Quadrangle, the liquefaction zone covers nearly the entire South Gate Quadrangle (Figure 9) because a shallow water table and young alluvial sediments characterize the region (California Department of Conservation 1998). Only those areas of land that rise toward the hills near the corners of the quadrangle are not in the zone (California Department of Conservation 1998). Furthermore, many areas in the Los Angeles Basin have sandy soils that are subject to liquefaction. According to the City of Lynwood's Natural Hazards Mitigation Plan, the entire City of Lynwood is in a liquefaction zone (City of Lynwood 2003).

Figure 9 Landslide Locations and Liquefaction Potential



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Slope Stability and Landslides

Landslides result when the driving forces that act on a slope (i.e., the weight of the slope material and the weight of objects placed on it) are greater than the slope's natural resisting forces (i.e., the shear strength of the slope material). Slope instability may result from natural processes, such as the erosion of the toe of a slope by a stream, or by ground shaking caused by an earthquake. Slopes can also be modified artificially by grading, or by the addition of water or structures to a slope. Development that occurs on a slope can substantially increase the frequency and extent of potential slope stability hazards.

Areas susceptible to landslides are typically characterized by steep, unstable slopes in weak soil/bedrock units which have a record of previous slope failure. There are numerous factors that affect the stability of the slope, including: slope height and steepness, type of materials, material strength, structural geologic relationships, ground water level, and level of seismic shaking.

The potential for landslides may exist locally, particularly along streambanks, margins of drainage channels, and similar settings where steep banks or slopes occur. In the liquefaction zones, some geologic settings may be susceptible to lateral-spreading (a condition wherein low-angle landsliding is associated with liquefaction). However, according to the Safety Element of the City of Lynwood General Plan (2003), there are no areas, including the city of Lynwood, in the South Gate Quadrangle that have been designated as "zones of required investigation for earthquake-induced landslides." Additionally, according to the California Seismic Hazard Map, the city of Lynwood is not located in an earthquake-induced landslide hazard zone (California Department of Conservation 2016). Therefore, landslides in the Plan Area are unlikely.

Expansive Soils

Expansive soils possess a "shrink-swell" behavior, which is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. The Plan Area soils have not been studied. The South Gate Quadrangle is mostly covered by alluvial sediments of Quaternary age. While older alluvial fan sediments of Pleistocene age are associated with the Montebello Hills and Dominguez Hills, elsewhere across the quadrangle, including the City of Lynwood, are the younger alluvial fan sediments of Holocene and late Pleistocene age (City of Lynwood, 2003). These deposits consist of varying proportions of sand, gravel, silt, and clay.

Erosion

Soil erosion is also a natural ongoing process that transports, erodes, and displaces soil particles through a transport mechanism such as flowing water or wind. Erosion is the physical detachment and movement of soil materials through natural processes or human activities. According to SCAG's Program Environmental Impact Report (PEIR), the majority of the soils in the SCAG region exhibit moderate to high erosion potential (SCAG RTP/SCS PEIR 2016). Figure 3.7.2-8 of the PEIR shows the city of Lynwood in an area with moderate potential for erosion (0.25-0.45) (SCAG RTP/SCS PEIR 2016). According to the Lynwood General Plan more than 75 percent of the quadrangle is covered with Holocene alluvial deposits from the regional coastal basin, also known as the Downey Plain (City of Lynwood 2003). These deposits overlie an erosional surface of late Pleistocene age. Goal SO-1 of the Environmental Resources Element in the General Plan is to ensure the protection of soils from erosion by wind and water (City of Lynwood 2003). Policy SO-1.1 states that the City shall control grading of land to minimize the impact of soil erosion from wind and water). Soil Implementation Measure 1.0 states that the City shall continue to implement its soil erosion control management plan. The City shall periodically solicit comments and recommendations from the South Coast Air Quality Management District when revising plans. Additionally, Soil Implementation Measure 2.0 states the City shall review all grading plans for consistency with the soil erosion control requirements.

c. Regulatory Setting

Federal

The International Building Code (IBC), published by the International Code Council (ICC), covers major aspects of construction and design of structures and buildings, except for three-story one and two-family dwellings and town homes. The 2006 International Building Code replaces the 1997 Uniform Building Code and contains provisions for

structural engineering design. The International Building Code addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs.

State

State geotechnical regulations applicable to the plan area include the Alquist-Priolo Act, the Seismic Hazards Mapping Act, and the California Building Code (CBC). The Alquist-Priolo Act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults. Under the Act, development of a building for human occupancy is generally restricted within 50 feet of an identified fault. The Plan Area is not located in the Alquist-Priolo Fault Zone and would not be subject to the Alquist-Priolo Act (California Department of Conservation 2016).

The Seismic Hazards Mapping Act addresses geo-seismic hazards, other than surface faulting, and applies to public buildings and most private buildings intended for human occupancy. The Seismic Hazards Mapping Act identifies and maps seismic hazard zones to assist cities and counties in preparing the safety elements of their general plans and encourages land use management policies and regulations that reduce seismic hazards. The Act mandated the preparation of maps delineating "Liquefaction and Earthquake-Induced Landslide Zones of Required Investigation." The Plan Area contains land designated as liquefaction areas according to the City of Lynwood General Plan (City of Lynwood 2003).

The California Building Code (CBC) requires, among other things, seismically resistant construction and foundation and soil investigations prior to construction. The CBC also establishes grading requirements that apply to excavation and fill activities, and requires the implementation of erosion control measures. The City is responsible for enforcing the 2013 CBC.

Local

Projects built under the proposed Specific Plan would also be required to comply with the requirements of the Lynwood General Plan. Specifically, the City's Public Health and Safety Element provide criteria for evaluation of geologic hazards and geotechnical requirements related to new development. Consistency with specific geotechnical policies that apply to the Plan Area is evaluated in Section 4.8, Land Use and Planning.

Chapter 25, Zoning, of the City of Lynwood's Municipal Code contains grading, conditional grading compliance, and erosion and sediment control. Article 91 of Chapter 25 consists of grading regulations. The purpose of Article 91, Conditional Grading Compliance is to assure compliance with conditions of approval on projects involving earthwork by providing continuous on-site inspection of grading projects or developments for which adopted conditions of approval require any specific or general features to be incorporated into the earthwork, or restrict or limit the earthwork in any way which is more restrictive than the grading provisions as prescribed in the uniform building code (Ord. #1563, §3; Ord. #1572, §13). The purpose of Article 93, Erosion and Sediment Control is to eliminate and prevent accelerated erosion that has led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil and vegetation cover, disruption of water supply, increased danger from flooding and the deposition of sediments and associated nutrients (Ord. #1563, §3).

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds

Assessment of impacts is based on review of site information and conditions and County information regarding geologic issues. In accordance with Appendix G of the *State CEQA Guidelines*, a project would result in a significant impact if it would do any of the following:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
   a. 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
   b. Strong seismic ground shaking
   c. Seismic-related ground failure, including liquefaction
   d. Landslides
2. Result in substantial soil erosion or the loss of topsoil
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
5. 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

b. Impacts and Mitigation Measures

Impact GEO-1i	The Plan Area is not located in an area that has been identified as a known earthquake fault delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. No fault lines are located in the Plan Area. As a result, the proposed Specific Plan would not be subject to ground rupture. Impacts would be *less than significant.*

The Plan Area is not located in an area that has been identified as having a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (State of California Department of Conservation, 2016). As a result, the risk of rupture of the ground surface would be low. Nearby active faults include the San Andreas Fault, the Newport Inglewood Fault, the Palos Verdes Fault, the Whittier Fault, and the Santa Monica Fault, but no known fault lines are located in the Plan Area. Therefore, the project would not expose people or structures to significant risk of loss, injury, or death involving the rupture of an earthquake fault. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact GEO-1ii	The Plan Area is susceptible to strong seismic ground shaking in the event of a major earthquake. However, with modern construction and adherence to applicable California Building Code provisions, impacts would be *less than significant.*

No known faults cross the Plan Area and the Plan Area is not located in an Alquist-Priolo Earthquake Fault Zone. As with any site in the Southern California region, the project site is susceptible to strong seismic ground shaking in the event of a major earthquake. Nearby active faults include the San Andreas Fault, the Newport Inglewood Fault, the Palos Verdes Fault, the Whittier Fault, and the Santa Monica Fault. These faults are capable of producing strong seismic ground shaking to the Plan Area. The impact to people, buildings, or structures on the project site from strong seismic ground shaking would be reduced by the required conformance with applicable building codes, accepted engineering practices, and Lynwood General Plan Policies. A geology and seismicity implementation measure in the Lynwood General Plan requires all structures in the city to be built to the latest seismic safety requirements of the California Uniform Building and Safety Code. With modern construction and adherence to the

geology and soil provisions of the California Building Code (CBC), which sets forth seismic design standards (Ch. 16, 18) and geohazard study requirements (Ch. 18), impacts would be less than significant.

Mitigation Measures

No mitigation measures are necessary beyond adherence to applicable laws and regulations.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact GEO-1iii	The Plan Area is located in a liquefaction zone. However, compliance with the CBC and the Lynwood General Plan policies would ensure that potential hazards due to liquefaction impacts would be *less than significant.*

Liquefaction is a potential hazard associated with certain types of soils and subsurface conditions. Liquefaction occurs when saturated or partially saturated and unconsolidated soils lose strength in response to a stress, typically on earthquake. This phenomenon can result in damage to infrastructure and foundations. Similarly, seismically-induced settlement, or the potential for the ground surface to lower/settle, is an existing geologic hazard that typically occurs where loose- to medium-density unconsolidated soils are located above groundwater; settlement can also be induced or exacerbated by the improper placement of artificial fill, or the placement of structures on soils or bedrock with differential settlement rates. As mentioned earlier, according to the City of Lynwood's Natural Hazards Mitigation Plan, the entire city of Lynwood is in a liquefaction zone (City of Lynwood 2008). Full build-out of the Plan Area would increase population of the area, structural development, and infrastructure that would be exposed to these hazards. Therefore, the proposed project would be required to comply with applicable provisions for construction in a liquefaction zone of the most recently adopted version of the CBC as well as other laws, policies, and regulations described below.

Laws, Policies, and Regulations

Subsection 4.5.1(c), Regulatory Environment, of this section describes federal, State, and local laws, policies, and regulations relevant to potential impacts associated with geology and soils. This discussion identifies how certain laws, policies, and regulations would minimize or avoid potential hazards associated with development under the proposed Specific Plan, as relevant to the geologic issues, including liquefaction.

Alquist-Priolo Earthquake Fault Zone Act

Under this Act, development of a building for human occupancy is generally restricted within 50 feet of an identified fault. This restriction would not completely remove such a structure from potential damage if a major seismic event were to occur along the identified fault, but it would minimize potential for habitable structures to receive the most direct damage potentially associated with a major seismic event.

California Building Code (2013)

The CBC requires, among other things, that structures be designed and constructed to resist seismic hazards, including through foundation design and the completion of soil investigations prior to construction. The CBC also specifies grading requirements for excavation and fill activities, and requires the implementation of erosion control measures. The City of Lynwood would ensure that any development occurring under the proposed Specific Plan would be consistent with the current CBC, thereby ensuring that appropriate investigations and design measures have been employed to effectively minimize or avoid potential hazards associated with redevelopment and/or new building construction.

It is likely that a number of structures currently situated in the Plan Area were built prior to 1970, when the CBC was originally established (the most recent version of the CBC became effective in 2013). Existing structures may not meet current CBC design standards for seismic hazards. Implementation of the proposed Specific Plan would likely replace some of these older structures with current, CBC-compliant structures, thereby reducing existing potential for earthquake-related damage in the area. In addition, new development that would occur in the Plan Area would

conform to the CBC (as amended at the time of permit approval) as required by law. Proper engineering, including compliance with the CBC, would minimize the risk to life and property associated with potential seismic activity in the area.

City of Lynwood General Plan

The City of Lynwood General Plan includes policies and actions to address geology and seismicity, as presented below. Compliance with these policies and actions would minimize the potential for construction and development included under the proposed Specific Plan to experience damage in the case of a major seismic event by ensuring appropriate and modern design of structures, while also minimizing the potential for health and safety hazards to occur in association with any such damage.

Public Health & Safety Element, Goal SAF-1

Protect the public health, safety, and welfare and minimize the damage to structures, property and infrastructure as a result of seismic activity.

- *Policy Geo-1.2.* Geologic Hazards. Discourage land uses that are considered critical from being located in areas subject to liquefaction hazards, fault rupture, landslides, and seismically induced seiches.
- *Policy Geo-1.3.* Seiches/Water Tanks. Provide safety to property, structures and human life in areas that may be subject to seiches from water tank rupture.
- *Policy Geo-1.4.* Hazardous Buildings. Require that all potentially hazardous buildings (i.e., unreinforced masonry, precast concrete tilt-up, non-ductile concrete frame, and soft-story buildings) in the city be inventoried and upgraded.
- *Policy Geo-1.4.* Seismic Safety by Design. Ensure that all new construction is designed to meet current safety regulations.

Additionally, a geology and seismicity implementation measure in the Lynwood General Plan requires a liquefaction report prepared by a California registered civil engineer practicing in soils engineering for each development proposal that is located in the liquefaction hazard zone (City of Lynwood General Plan, 2003). Compliance with the Alquist-Priolo Act Earthquake Fault Act, the CBC, and Lynwood General Plan policies would ensure that potential impacts associated with potential liquefaction events, would be less than significant.

Mitigation Measures

No mitigation measures are necessary beyond adherence to applicable laws and regulations.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact GEO-1iv	The Plan Area is not located in an area that would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Therefore, impacts would be *less than significant.*

Earthquakes can trigger landslides that may cause injuries and damage to many types of structures. Landslides are typically a hazard on or near slopes or hillside areas, rather than generally level areas like the Plan Area. According to the Safety Element of the City of Lynwood General Plan (2003), there are no areas in the City of Lynwood or in the South Gate Quadrangle that have been designated as “zones of required investigation for earthquake-induced landslides.” Additionally, according to the California Seismic Hazard Map, the City of Lynwood is not located in an earthquake-induced landslide hazard zone (California Department of Conservation, 2016). Therefore, landslides in the Plan Area would not occur. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact GEO-2	With adherence to applicable laws and regulations, the proposed Specific Plan would not result in substantial soil erosion or the loss of topsoil. Therefore, impacts would be *less than significant.*

The City of Lynwood has relatively flat terrain, with elevations ranging from a high of 95 feet to a low of 75 feet (City of Lynwood 2004). The Plan Area encompasses approximately 315 acres made up of transit, commercial, industrial and residential development that are all generally level, which limits the potential for substantial soil erosion. The grading and excavation phase when soils are exposed has the highest potential for erosion. Ground-disturbing activities that would occur with implementation of the proposed Specific Plan would include site-specific grading for foundations, subterranean parking, building pads, access roads, and utility trenches. Temporary erosion could occur during project construction.

The proposed project would be required to comply with erosion control standards administered by the Los Angeles Regional Water Quality Control Board (RWQCB) through the National Pollutant Discharge Elimination System (NPDES) permit process, which requires implementation of nonpoint source control of storm water runoff. Such controls would be included as best management practices (BMP) identified in Storm Water Pollution Prevention Plans (SWPPP) for future development in the Plan Area.

The California Storm water Quality Association (CASQA) BMP Handbook for Construction (2009) provides guidance for drafting project-specific BMPs for erosion control, among other storm water issues. For example, CASQA Measure WE-1 (Wind Erosion Control) identifies a variety of BMPs to stabilize exposed surfaces and minimize activities that suspend to track dust particles (CASQA 2009). This is commonly achieved by applying soil binders or water to disturbed surfaces. Furthermore, adherence to Goal SO-1 of the Environmental Resources Element in the City of Lynwood General Plan would ensure the protection of soils from erosion by wind and water. Adherence to General Plan Policy SO-1.1, which states that the City shall control grading of land to minimize the impact of soil erosion from wind and water, would ensure that future development in the Plan Area would not result in substantial soil erosion or the loss of topsoil (City of Lynwood 2003).

With compliance with above listed requirements, impacts of the proposed Specific Plan associated with soil erosion and the loss of topsoil would be less than significant.

Mitigation Measures

No mitigation measures are necessary beyond adherence to applicable laws and regulations.

Significance after Mitigation

Impacts would be *less than significant* without mitigation.

Impact GEO-3	Compliance with the Alquist-Priolo Act Earthquake Fault Act, the CBC, and Lynwood General Plan policies would ensure that potential impacts associated with unstable soils would be *less than significant*.

Seismic hazards in the Plan Area include the potential for unstable soils to result in damage to existing or proposed infrastructure, and/or to introduce potential hazards to human health and safety. Unstable soils may include any materials not capable of supporting a selected land use. It is anticipated that site-specific geotechnical evaluations would be conducted for individual development projects as the Plan Area builds out. Such investigations would assess hazardous soil conditions onsite and would provide recommendations as needed to minimize these potential soils hazards. Compliance with CBC standards as well as the recommendations of the geotechnical evaluation will be required as a condition of a grading permit and/or building permit, and would be monitored by the City's Public Works Department during the development review and plan check process for each individual project. Therefore, impacts resulting from unstable soils would be less than significant.

Mitigation Measures

No mitigation measures are necessary beyond adherence to applicable laws and regulations.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact GEO-4	Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Therefore, impacts would be *less than significant.*

The South Gate Quadrangle is mostly covered by alluvial sediments of Quaternary age. These deposits consist of varying proportions of sand, gravel, silt, and clay. A number of widely used treatments are available to address expansive soil hazards, including soil grouting, recompaction, and replacement with a non-expansive material. CBC Section 1808.6 requires special foundation design for buildings constructed on expansive soils. If the soil is not removed or stabilized, then foundations must be designed to prevent uplift of the supported structure, to resist forces exerted on the foundation due to soil volume changes, or isolated from the expansive soil. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are necessary beyond adherence to applicable laws and regulations.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact GEO-5	The proposed Specific Plan would not include septic tanks or alternative wastewater disposal systems. No impact would occur.

Future development in the Plan Area would be served by the City's wastewater disposal system. The propose Specific Plan would not include septic tanks or alternative wastewater disposal systems; therefore, there is no potential for adverse effects due to soil incompatibility. No impact would occur.

Mitigation Measures

No mitigation is required.

Significance after Mitigation

There would be no impact.

d. Cumulative Impacts

Cumulative development in the Plan Area would increase population and therefore increase the number of people exposed to potential geological hazards, including effects associated with seismic events such as ground rupture and strong shaking. The Lynwood General Plan, which includes the Plan Area, accounts for an increase in population and housing units in this Plan Area; as described, conformance with the CBC and Lynwood General Plan policies, as well as other laws and regulations mentioned above, would ensure than project-specific impacts associated with geology and soils would be less than significant. Potential impacts associated with geology and soils would not be cumulatively considerable.

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4.6 Hazards and Hazardous Materials

4.6.1 Setting

a. Plan Area Hazardous Materials Setting

The Plan Area includes approximately 315 acres made up of transit, commercial, industrial and residential development, with approximately 141 developable acres. While there are some residential units, there are no educational and institutional uses in the Plan Area. According to the Public Health and Safety Element of the City of Lynwood General Plan (2002), the most common hazardous materials and hazardous waste problems and concerns in the city and its surrounding sphere of influence are related to transportation accidents, illegal dumping, underground storage tank (UST) leaks, leaking natural gas pipelines, commercial/industrial wastes, pesticides, and illegal drug laboratories (Lynwood 2002).

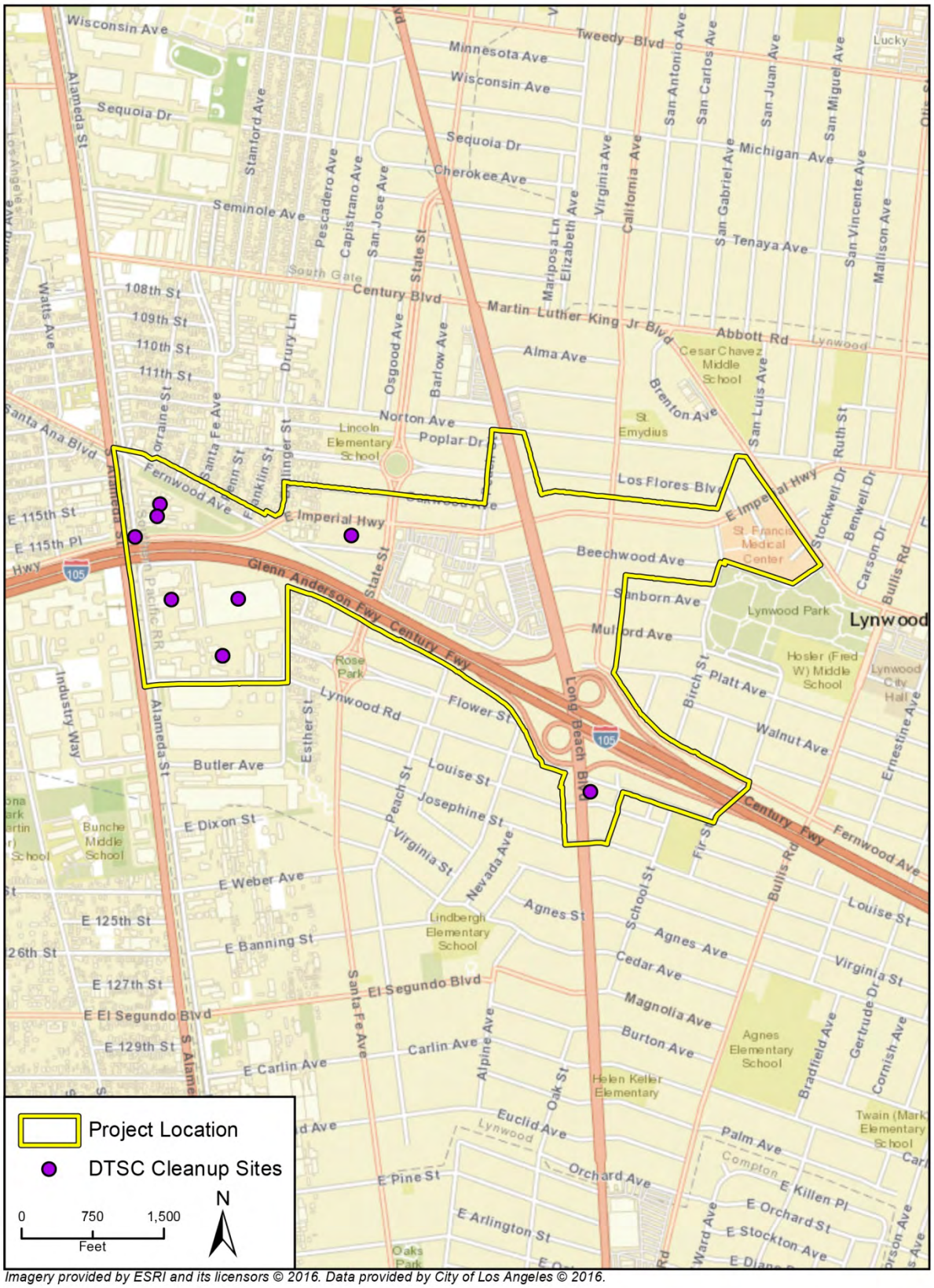
The California Department of Toxic Substance Control's (DTSC) EnviroStor database contains information on properties in California where hazardous substances have been released or where the potential for a release exists. A search of this database was conducted on February 10, 2016,and identified six "Active" cleanups sites. Table 14 and Figure 10 show all DTSC listed cleanup sites in the Plan Area. The EnviroStor Database did not identify any Superfund (NPL) or State Response sites in the Plan Area.

Table 14 Department of Toxic Substance Control Cleanup Sites within 1,000 feet of the Plan Area

Project Type	Name	Address	Status
School Investigation	Agnes Elementary School	3814-3862 Agnes Ave.	No Further Action
Voluntary Cleanup	Northgate Gonzalez Redevelopment Project	11600 Long Beach Blvd.	Active
School Investigation	Lynwood Education Village Site	3545-3581 Martin Luther King Jr. Blvd./3898 Abbott Rd	No Further Action
School Investigation	Elementary School No. 1	10817-10831 Long Beach Blvd./3145-3167 Pluma St/10766-10792 Barlow Ave.	No Action Required
Evaluation	City Of Lynwood Redevelopment - Phase II (Plaza Mexico Extension)	Area between Imperial Highway, State Street and 105 Freeway	Active
Corrective Action	PCCR USA Inc.	2801 Lynwood Rd.	Active
HAZ WASTE - RCRA	Polynt Composites USA Inc	2801 Lynwood Rd.	Undergoing Closure
Voluntary Cleanup	Caltrans Witco	2601 E. Emperial Hwy.	Active
Military Evaluation	Western Gear Works	NA	Inactive- Needs Evaluation
Voluntary Cleanup	Westech Lynwood Site	2600 East Imperial Hwy.	Active
Voluntary Cleanup	2700 East Imperial Highway, Inc	2700 East Imperial Hwy.	No Further Action
Tiered Permit	Universal Molding Co.	10840 Drury Ln.	Refer: Other Agency
Voluntary Cleanup	Magnetek	11510 S. Alameda St.	Refer: EPA
Voluntary Cleanup	City Of Lynwood Redevelopment Phase I (Alameda Triangle)	Northeast Corner Of Alameda Street & Imperial Hwy.	Active
Evaluation	Lynwood TSI #2	Fernwood Avenue Of The Alameda Triangle	Inactive – Action Required
Evaluation	Lynwood TSI #1	11400, 11410, 11420 South Alameda Ave	Inactive - Needs Evaluation

Source: EnviroStor Database, 2016

Figure 10 Department of Toxic Substances Control Cleanup sites in the Specific Plan Area.



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Sites outside of the Plan Area not identified above could also have releases that may affect the Plan Area. In addition to hazardous materials used and generated in the Plan Area, there is substantial potential for uncontrolled release of hazardous materials from vehicular accidents on both the Century (I-105) and Long Beach (I-710) Freeways. According to the Lynwood General Plan, it is estimated that one-fifth to one-quarter of all vehicles using these freeways are transporting some type of hazardous material (Lynwood, 2002). Additionally, the Alameda Corridor would be another large transportation corridor through Lynwood that would be a major carrier of hazardous materials (Lynwood 2002). Approximately 100 trains would pass under the corridor each 24-hour period, and it is estimated that 70 percent of the trains would carry some type of hazardous materials (Lynwood 2002). Furthermore, the City of Lynwood is situated along a major east-west LAX aircraft corridor. There is the potential an accident could involve an aircraft carrying hazardous materials and fuels in general overflight (Lynwood 2002).

The Los Angeles County Fire Department is designated as the Administrating Agency for hazardous materials for the City of Lynwood as required by Chapter 6.95 of the Health and Safety Code pursuant to the Los Angeles County Fire Department Area Plan (Lynwood 2002).

b. Regulatory Setting

The management of hazardous materials and hazardous wastes is regulated at the federal, State, and local levels through programs administered by the U.S. Environmental Protection Agency (U.S. EPA), agencies in the California Environmental Protection Agency (CalEPA), such as the DTSC, federal and state occupational safety agencies, the South Coast Air Quality Management District (SCAQMD), and Los Angeles County Department of Environmental Health.

Federal

At the federal level, the Environmental Protection Agency (EPA) is the principal regulatory agency. The Occupational Safety and Health Administration (Fed/OSHA) regulates the use of hazardous materials, including hazardous building materials, insofar as these affect worker safety through a delegated State program. Furthermore, at the federal level, the Department of Transportation (DOT) regulates transportation of hazardous materials.

Resource Conservation and Recovery Act of 1974 (RCRA). RCRA was enacted in 1974 to provide a general framework for the national hazardous waste management system, including the determination of whether hazardous waste are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities.

The Hazardous and Solid Waste Amendments. The Hazardous and Solid Waste Amendments were enacted in 1984 to better address hazardous waste. This amendment began the process of eliminating land disposal as the principal hazardous waste disposal method.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). CERCLA, also known as Superfund, was enacted in 1980 to ensure that a source of funds were available to clean up abandoned hazardous waste sites, compensate victims, address releases of hazardous materials , and establish liability standards for responsible parties.

The Superfund Amendments and Reauthorization Act of 1986 (SARA). SARA amended CERCLA in 1986 to increase Superfund budget, modify contaminated site cleanup criteria and schedules, and revise settlement procedures. SARA also provides a regulatory program and fund for underground storage tank clean ups.

State

At the State level, agencies such as Cal/OSHA, the Office of Emergency Services (OES), and the Department of Health Services (DHS) have rules governing the use of hazardous materials that parallel federal regulations and are sometimes more stringent. The Department of Toxic Substances Control (DTSC) is the primary State agency governing the storage, transportation and disposal of hazardous wastes. DTSC is authorized by the U.S. EPA to enforce and implement federal hazardous materials laws and regulations. DTSC has oversight of Annual Work Plan sites (commonly known as State Superfund sites), sites designated as having the greatest potential to affect human health and the environment.

The primary California State laws for hazardous waste are: the California Hazardous Waste Control Law (HWCL), the State equivalent of RCRA, and the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), the State equivalent of CERCLA. State hazardous materials and waste laws are contained in the California Code of Regulations, Titles 22 and 26. The State regulation concerning the use of hazardous materials in the workplace is included in Title 8 of the California Code Regulations.

One key State law, which requires special assessment under CEQA, relates to Hazardous Waste and Substance Sites (Cortese) List, which is a planning document used by State and local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires that an updated list be prepared at least annually by the California EPA.

Regional and Local

The Regional Water Quality Control Board (RWQCB) is authorized by the State Water Resources Control Board to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the State is threatened and to require remediation of the site, if necessary.

In the urban portions of Los Angeles; Orange, Riverside, and San Bernardino counties, the South Coast Air Quality Management District (SCAQMD) may impose specific requirements on remediation activities to protect ambient air quality from dust or other airborne contaminates.

Administration and enforcement of the major environmental programs were transferred to local agencies as Certified Unified Program Agencies (CUPA) beginning in 1996. The purpose of this was to simplify environmental reporting by reducing the number of regulatory agency contacts a facility must maintain and requiring the use of more standardized forms and reports. The Los Angeles County Department of Environmental Health has primary responsibility for enforcing most regulations pertaining to hazardous materials in the city of Lynwood. The Los Angeles County Fire Department is the designated Administering Agency for hazardous materials in the city of Lynwood. Hazardous waste programs in the city are also governed by the County of Los Angeles Fire Department Health Hazardous Materials Division. The County of Los Angeles Fire Department's Compliance Guidelines for Hazardous Wastes and Materials includes Hazardous Waste Generator Program/Tiered Permitting, Hazardous Materials Management Program, California Accidental Release Prevention Program, Aboveground Petroleum Storage Tanks-Spill Prevention Control and Countermeasure Plan, Underground Storage Tank Program, and Site Remediation Oversight Program (County of Los Angeles Fire Department 2009).

In addition to the programs and plans mentioned above, the Household Hazardous and Waste (HHW) Program is sponsored jointly by the Los Angeles County Sanitation District and the County of Los Angeles. The HHW Collection Program gives Los Angeles County residents a legal and cost free way to dispose unwanted household chemicals. City of Lynwood residents may take their household hazardous waste to the collection facility located in Lynwood at the intersection of Butler Avenue and Bellinger Street.

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds

The following thresholds are based on Appendix G of the *State CEQA Guidelines*. A significant impact would occur if the proposed project would result in any of the following conditions:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
2. 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
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within .25 mile of an existing or proposed school

4 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
5 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, and result in a safety hazard for people residing or working in the project area
6 Be located in the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area
7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
8 Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

b. Project Impacts and Mitigation Measures

Impact HAZ-1	Implementation of the Specific Plan would include policies and development standards to facilitate development of mixed uses, housing, and neighborhood-serving retail uses that could involve the use, storage, disposal or transportation of hazardous materials. In addition, upset or accident conditions in the Plan Area could involve the release of hazardous materials into the environment. However, the required adherence to existing regulations would ensure that impacts would be *less than significant*.

The proposed Specific Plan would facilitate development (residential and employment generating uses close to the Long Beach Boulevard Metro Green Line Station) in areas where hazardous materials could be stored or used, or where previous use has resulted in contamination of the site. The development of residential uses near commercial or industrial facilities that use or store hazardous materials could increase the risk of exposure to harmful health effects. Impacts related to hazardous materials relate to operation of residential and commercial uses, construction activity, and mixed-use residential development. Each of these issues is described below.

Operational Activities

Hazardous materials are routinely transported by trucks along the major state routes and roadways and railways. The Plan Area includes I-105 and the Metro Green Line. However, transportation of such materials is highly regulated to ensure the safety of the public. The proposed residential and commercial uses could involve the use, storage, disposal or transportation of hazardous materials, but the potential residential and most of the potential commercial uses do not generally involve the utilization, storage, disposal, or transportation of significant quantities of hazardous materials. They may involve use and storage of some materials that are considered hazardous, but these materials would likely be limited to solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. These materials would not be substantially different from household chemicals and solvents already widely used throughout the Plan Area.

Currently, there are areas in the Specific Plan zoned for industrial uses. Although the Specific Plan would establish new land use districts to facilitate the future development of mixed-use transit-oriented uses, the proposed Specific Plan would not establish any new zoning designations in the Plan Area. Rather, the Specific Plan is intended to allow the mixing of permitted and conditionally permitted uses associated with compatible zoning designations in each land use district (e.g. R-3, C-2, C-2A, and PCD uses in the Transit Station land use designation). Onsite activity involving hazardous substances (e.g., diesel fuel, oil, lubricants), and the transport, storage, handling, and retail sale of these substances must adhere to applicable local, State, and federal safety standards, ordinances, or regulations. Businesses engaged in the use, sale, storage, or transport of hazardous substances is monitored by various local (i.e., the County of Los Angeles and the Los Angeles County Fire Department) and State (i.e., Department of Toxic Substance Control) entities. Potential future auto uses would be required to store hazardous materials in designated areas designed to prevent accidental release into the environment. Oil and other potentially hazardous waste

produced during operation would also be collected, stored, and disposed of in accordance with applicable laws and regulations.

Construction Activities

Construction associated with future development in the Plan Area may include the temporary transport, storage, and use of potentially hazardous materials including fuels, lubricating fluids, cleaners, solvents or contaminated soils. However, the transport of such materials would be subject to federal, State and local regulations pertaining to the transport of hazardous materials, which would assure that risks associated with the transport hazardous materials are minimized. In addition, construction activities that transport hazardous materials would be required to transport such materials along designated roadways in the city, thereby limiting risk of upset.

Mixed-Use Residential Development

The proposed Specific Plan would permit mixed-use development close to existing mass transit services and existing commercial and industrial uses. Therefore, residential uses in mixed-use or commercial areas may be exposed to the transport of hazardous materials. In addition, certain permitted commercial uses in the proposed land use districts located near mixed residential uses may utilize or create hazardous materials. For example, laundry cleaning establishments could be located on the ground floor of mixed-use residential buildings and they generally handle significant quantities of hazardous cleaning materials. Medical offices and residential uses would also be permitted in the proposed land use districts and may result in the transport and use of medical supplies or other medically related materials, some of which could be biohazards.

However, the numerous hazardous material regulations detailed in the Section 4.6b, Regulatory Setting above would minimize any impacts from the transport of hazardous materials in the Plan Area. Compliance with existing laws and regulations governing the transport, use, release, and storage of hazardous materials and wastes and compliance with City of Lynwood General Plan policies would reduce impacts related to exposure of the public or environment to hazardous materials to less than significant levels. Furthermore, any future development projects that would be accommodated by the Specific Plan would be subject to the City's development review process upon a formal request for a development permit. The City's development review process would include verification of land use compatibility compliance in accordance with the development standards of the Specific Plan and the City's zoning regulations (Title 25 of the City's Municipal Code). Additionally, the City's zoning regulations provide a list of allowable uses that are tailored for highly urban areas of the City, thereby minimizing the exposure of future residents to potential impacts. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are necessary beyond adherence to applicable laws and regulations.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact HAZ-2	Implementation of the proposed Specific Plan may involve the demolition or redevelopment of structures that could contain asbestos or lead-based paints (LBP). Demolition of these buildings, if these materials are present, could potentially expose workers to hazards that would adversely affect human health and safety. However, compliance with both locally adopted Southern California Air Quality Management District (SCAQMD) and State regulations regarding the handling and disposal of these materials would reduce these potential impacts to *less than significant* levels.

Implementation of the Specific Plan could facilitate demolition or redevelopment of existing buildings in the Plan Area. The Plan Area includes approximately 315 acres of transit, commercial, industrial and residential development that, due to age, may contain asbestos and/or LBP. Structures built before the 1970s typically contained asbestos containing materials (ACM). Demolition or redevelopment of these structures could result in health hazard impacts to workers if not remediated prior to construction activities. Therefore, demolition and construction activities would

be required to adhere to SCAQMD Rule 1403, which establishes Survey Requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities and California Occupational Safety and Health Administration (CalOSHA) regulations regarding lead-based materials. The California Code of Regulations, §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials, such that exposure levels do not exceed CalOSHA standards. With adherence to SCAQMD and CalOSHA policies regarding ACM and lead-based paint, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact HAZ-3 Implementation of the Specific Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Impacts would be *less than significant*.

The proposed Specific Plan would involve intensification of development and redevelopment of existing uses in the Plan Area. Lincoln Elementary School is located within 0.25 mile to the north outside of the Plan Area. Wilson Elementary and Hosler Middle School is located within 0.25 mile to the east outside of the Plan Area. There are no schools in the Plan Area.

As discussed in Impact HAZ-1, the proposed Specific Plan would not involve the development of new heavy industrial or heavy manufacturing uses. The proposed Industrial land use district envisions the future redevelopment of existing heavy industrial and heavy manufacturing uses located in western portions of the Specific Plan Area. Furthermore, the potential residential uses and most of the potential commercial uses would not generally involve the use, storage, disposal, or transportation of significant quantities of hazardous materials. They may involve use and storage of some materials that are considered hazardous, though these materials would be primarily limited to solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. These materials would not be substantially different from household chemicals and solvents already in general and wide use throughout the Plan Area. Any new auto-related uses would be required to adhere to applicable regulations to prevent the release of hazardous materials into the environment. Therefore, implementation of the proposed Specific Plan would not involve development of any facilities that would produce or emit hazardous materials near any schools and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact HAZ-4 There are many properties in the Plan Area vicinity where past uses could have produced localized contamination or concentrations of hazardous substances. If these sites were redeveloped or excavated, workers or residents could be exposed to residual contaminants in the soils. However, development in the Plan Area would be subject to existing policies regarding development in contaminated areas. Therefore, impacts would be *less than significant.*

Table 14 includes RWQCB and DTSC listed cleanup sites within 1,000 feet of the Plan Area. Sites that are “closed” indicate that cleanup has occurred. Six “active” cases are undergoing voluntary cleanup, evaluation, or corrective action. For years, the DTSC’s statutory mandate meant that if the site presented grave threat to public health or the environment, then it was listed on the State Superfund list and the parties responsible conducted the cleanup under an enforcement order. Alternatively, DTSC used State funds to conduct the cleanup themselves. The Voluntary

Cleanup Program enables motivated entities that are able to fund the cleanup, to restore properties quickly and efficiently, rather than having their projects compete for DTSC's limited resources with other low-priority hazardous waste sites.

Hazardous substance contaminated properties are regulated at the federal, State, and local level, and are subject to compliance with stringent laws and regulations for investigation and remediation. For example, compliance with the CERCLA, RCRA, California Code of Regulations Title 22, and related requirements would remedy any potential impacts caused by hazardous substance contamination. Future development projects that would be accommodated by the Specific Plan would be required to comply with these existing laws and regulations. Additionally, Phase I Environmental Site Assessments (Phase I ESA) would be required for land purchasers to qualify for the Innocent Landowner Defense under CERCLA and to minimize environmental liability under other laws such as RCRA as a prerequisite for a lender to extend a loan for purchase of land. Phase I ESAs are also conducted to establish an environmental baseline before a lease of land.

Phase I ESAs for future development projects pursuant to the Specific Plan would determine whether recognized environmental conditions are present on the development site. If such conditions are present, the site assessments would recommend sampling and testing of soil, soil vapor, and/or groundwater as needed to determine whether contaminants were present on or under the site at levels exceeding regulatory agency screening levels for the proposed type of land use. Where contaminant levels are identified at concentrations above screening levels, health risk assessments would be required to identify whether project development would expose project residents, workers, or visitors to substantial health risks. If substantial health risks arising from environmental contamination on, under, or near the site were identified, cleanup of such contamination would be required before the City of Lynwood would issue a certificate of occupancy for such project. With compliance of all applicable laws and regulation, impacts related to hazardous materials site listings would be less than significant. Compliance with these laws, regulations would be ensured through the City’s development review and building plan check process.

Mitigation Measures

No mitigation required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact HAZ-5	The Plan Area is located approximately three miles north of the Compton/Woodley Airport. The proposed Specific Plan would not be located in 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, and would not result in a safety hazard for people residing or working in the project area. Therefore, impacts would be *less than significant.*

The Plan Area is located approximately 10 miles east of Los Angeles International Airport (LAX), six miles east of the Hawthorne Municipal Airport, and three miles north of the Compton/Woodley Airport. The Compton/Woodley Airport has 175 aircraft based at the site and experiences more than 66,000 annual general aircraft operations from its two paved parallel runways (FAA 2015). Compton/Woodley Airport does not have an adopted airport land use plan at this time, but the Plan Area would be more than two miles north of Compton/Woodley Airport. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact HAZ-6	There are no private airstrips located in the vicinity of the Plan Area. The proposed Specific Plan would not result in a safety hazard for people residing or working in the Plan Area. Therefore, *no impact* would occur.

According to Airnav.com, there are no private airstrips located within 10 miles of the Plan Area. The only airstrips (public) listed are the ones mentioned above under Impact HAZ-5. Therefore, no impact would occur.

Mitigation Measures

No mitigation required.

Significance after Mitigation

No impact without mitigation.

Impact HAZ-7	The proposed Specific Plan would improve transportation and circulation. The proposed Specific Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, *no impact* would occur.

The proposed Specific Plan would provide improved vehicle, pedestrian, and bicycle access and connectivity from the Metro Green Line Station to and throughout the greater Plan Area. Access and circulation improvements are based on the "Complete Streets" concept to design the street network to accommodate all users (pedestrians, bicycles, buses, automobiles, and trucks) safely and efficiently. The proposed project does not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No streets would be closed, rerouted or substantially altered. Therefore, no impact would occur.

Mitigation Measures

No mitigation required.

Significance after Mitigation

No impact without mitigation.

Impact HAZ-8	The Plan Area is in an urban area in the city of Lynwood. According to the City of Lynwood General Plan, the Plan Area is not adjacent to or near wildlands. There would be no risk of exposing people or structures to a significant loss, injury, or death involving wildland fires. Therefore *no impact* would occur.

The City of Lynwood includes approximately 4.9 square miles in southeastern Los Angeles County. The city is comprises approximately 42 percent residential uses, 7 percent commercial uses, 7 percent industrial uses, 7 percent governmental uses, 34 percent rights-of-way, and 3 percent vacant lands (City of Lynwood General Plan 2003). The Plan Area is located between the cities of Compton, South Gate, Paramount, and Los Angeles in the southeastern part of Los Angeles county. The Plan Area is almost entirely built out with residential, commercial, and industrial uses and is in an urban setting. According to the City of Lynwood General Plan, the city is highly urbanized and is not adjacent to or near wildlands. There would be no risk of exposing people or structures to a significant loss, injury or death involving wildland fires. Therefore, no impact would occur.

Mitigation Measures

No mitigation required.

Significance after Mitigation

No impact without mitigation.

c. Cumulative Impacts

Cumulative development in the Plan Area and its surrounds has potential to expose future area residents, employees, and visitors to current and historical use of hazardous materials. As indicated in Section 3.0, Environmental Setting, build out of the Plan Area could include up to 3,500 new housing units, 1.2 million square feet of new commercial uses, 750,000 square feet of new industrial uses, and 350 hotel rooms by 2040. Continued urban development in the Plan Area would cumulatively increase the potential for exposure to existing hazards associated with hazardous materials. Therefore, an overall increase in the potential for human health hazards would occur as intensification of development occurs. The magnitude of hazards for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Compliance with appropriate federal, State, and local hazardous waste remediation and disposal requirements, including remedial action on contaminated sites, would avoid potential hazard impacts associated with cumulative development in the city of Lynwood. Overall, hazards and hazardous materials impacts associated with individual developments are site-specific in nature and must be addressed on a case-by-case basis. Since hazards and hazardous materials are required to be examined as part of the permit application and environmental review process, it is anticipated that potential impacts associated with individual projects will be adequately addressed and mitigated prior to development permit approval. Therefore, the Specific Plan's contribution to cumulative impacts related to hazardous materials and waste or the creation of any health hazards would not be cumulatively considerable.

4.7 Hydrology and Water Quality

4.7.1 Setting

a. Regional Hydrology

The city of Lynwood is located in the South Coast Hydrologic Region. This region covers approximately 10,600 square miles (6.78 million acres) and includes all of Orange County, the majority of Ventura, Los Angeles and San Diego counties, portions of San Bernardino and Riverside counties, and small amounts of Santa Barbara and Kern counties. The South Coast Hydrologic Region receives inflows via precipitation and surface runoff from the South Lahontan and Colorado River Regions. All surface waters in the South Coast Hydrologic Region flow into the Pacific Ocean (DWR 2003).

Watersheds

There are 19 major watersheds in the South Coast Region. Many of these have densely urbanized lowlands with concrete-lined channels and dams controlling flood flows. The headwaters for many rivers, however, are in coastal mountain ranges and have remained largely undeveloped. The Plan Area is located in the Los Angeles River Watershed, which covers a land area of 834 square miles. The western portion spans from the Santa Monica Mountains to the Simi Hills and the eastern portion spans from the Santa Susana Mountains to the San Gabriel Mountains. The watershed encompasses and is shaped by the path of the Los Angeles River, which flows from its headwaters in the mountains eastward to the northern corner of Griffith Park. The channel turns southward through the Glendale Narrows before it flows across the coastal plain and into the San Pedro Bay near Long Beach (LADPW 2007 and 2016a).

Surface Water

In the Los Angeles River Watershed, the Arroyo Calabasas (Calabasas Creek) and Bell Creek (at the origin of the Los Angeles River), Brown's Canyon Wash, the Burbank Western Channel, Tujunga Wash, Arroyo Seco, Rio Hondo, and Compton Creek form the major tributaries. The watershed contains 22 lakes and 37 flood control reservoirs, as well as a number of spreading grounds (DWR 2013). The Los Angeles River forms the eastern boundary of the city of Lynwood. but no surface water bodies are in the city or in the Plan Area (Lynwood 2003).

Groundwater

The Plan Area is in the West Coast Subbasin of the Coastal Plain of Los Angeles Groundwater Basin, referred to as the "West Coast Basin." This area is bound to the north by the Ballona Escarpment, to the east by the Newport-Inglewood fault zone, and to the south and west by the Palos Verdes Hills and the Pacific Ocean. The Los Angeles River crosses the region through the Dominguez Gap, and the San Gabriel River crosses through the Alamitos Gap, with both rivers flowing into the San Pedro Bay (DWR 2013). Average precipitation throughout the subbasin is 12 to 14 inches. Discharge of groundwater from the subbasin occurs primarily by pumping extractions.

There are nine principal aquifers in the subbasin. The Gaspur and Lynwood Aquifers are near the Plan Area. The water in the underlying aquifers is confined throughout most of the subbasin.

b. City of Lynwood Water Resources

Water Supplies

The water supply to the Plan Area is provided by the City of Lynwood Public Services Department and Park Water Co. (Lynwood 2006). Groundwater provides the primary source of water for the city, largely from the Gaspur Aquifer, which lies below the city. The aquifer is 23 miles long and ranges from 1 to 5.5 miles wide, with a maximum depth of 150 feet at the Rio Hondo and a maximum thickness of 120 feet. The City owns and operates six active wells and one three million gallon reservoir. There is also a 16-inch Metropolitan Water District (MWD) feeder to the reservoir that conveys State Water Project (SWP) water supply, when needed, to replenish the reservoir. The City

pumps about 5,500 acre-feet per year (AFY) of groundwater and receives about 1,000 AFY of imported surface water from the MWD feeder line. When the reservoir is depleted to four feet in total depth, the MWD feeder automatically activates. MWD surface water comes from the Colorado River and the State Water Project in northern California. (Lynwood 2003 and 2014).

Water Quality

The project area is highly urbanized resulting in contaminant loads from both point and nonpoint sources. The Los Angeles Regional Water Quality Control Board (RWQCB) is the primary agency charged with protecting and enhancing surface and groundwater quality in the region. Major sources of pollutants to surface and groundwater resources include wastewater treatment plants, septic systems, agricultural/livestock operations, wildlife, urban storm water runoff, oil/gas production, and mining activities (Lynwood 2014).

The character and quality of groundwater in the Gaspur Aquifer is variable. Seawater intrusion has produced deterioration of water quality over time. Early tests indicated that the water was sodium bicarbonate in character. It is questionable whether this is representative of the entire zone, because the higher quality water outside the subbasin is calcium bicarbonate in nature (DWR 2003). Groundwater in the area is generally high in total dissolved solids (TDS).

c. Flood Hazards

Flood Hazard Zones

The Federal Emergency Management Agency (FEMA) establishes base flood elevations (BFE) for Special Flood Hazard Areas (SFHA) that indicate 100-year flood zones or areas that could be inundated by the flood which has a one percent probability of occurring in any given year. Although flooding was a serious problem in Lynwood in the first half of the 20th century, the complete channeling of the Los Angeles and Rio Hondo Rivers in the 1950s eliminated many of these problems (Lynwood 2003). Based on FEMA's current Flood Insurance Rate Map (FIRM) for the area, the city is in Zone X and includes areas that would be inundated as a result of flows associated with the 500-year flood, the 100-year flood to average depths of less than one foot or with drainage areas less than one square mile, and areas protected by levees from the 100-year flood (FEMA 2008).

Due to recent weather conditions, the Los Angeles County Department of Public Works created an online map for El Niño Storm Hazard Areas. Based on this map, some southwestern portions and the entire eastern portion of the city are in the Moderate Flood Risk Area; and the eastern boundary of the city near the Los Angeles River is located in a High Flood Risk Area. However, the Plan Area is located in the central and western portions of the city, and therefore, is not located in a designated flood risk area (LADPW 2016b).

Tsunami and Seiche

A tsunami is a series of waves generated by an impulsive disturbance in the ocean or in a small, connected body of water. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. Sudden vertical movement of the ocean floor by fault movement displaces the overlying water column, creating a wave that travels outward from the earthquake source. An earthquake anywhere in the Pacific can cause tsunamis around the entire Pacific basin. The areas susceptible to tsunamis are those near to the ocean shore and along low-lying river channels. The Plan Area is located approximately 12 miles east of the Pacific Ocean with ground-level elevations ranging from 70 to 100 feet above mean sea level (amsl).

Seiches are waves generated in an enclosed body of water, such as a lake or bay, by seismic activity. Seiches are like tsunamis for enclosed bays, inlets, and lakes, and their waves can be generated by earthquakes, subsidence or uplift of large blocks of land, submarine and onshore landslides, sediment failures and volcanic eruptions. The strong currents associated with these events may be more damaging than inundation by waves. The Plan Area does not lie in an area near any large bodies of water or bays that could be affected by a seiche. However, as discussed in the City's General Plan, water tank rupture could present the potential for seiches in the city. There are no water tanks in the boundaries of the Specific Plan, but there is one water tank at north of the corner of Sanborn Avenue and California Street, adjacent to the northeast boundary of the Plan Area along California Street.

Dams

There are no dams or reservoirs in the city of Lynwood. The closest is the Garvey Reservoir located approximately 10 miles northeast of the Plan Area in the city of Monterey Park.

d. Drainage

Storm water runoff that does not infiltrate into the subsurface is directed into the City's storm drain system that consists of five major north to south drainage facilities. The Plan Area is located between the State Street and Bullis Road street systems. These include but are not limited to the following facilities:

- The State Street system serves the drainage area generally west of Long Beach Boulevard
- The Bullis Road street system drains the area generally east of Long Beach Boulevard and several blocks east of Bullis Road
- The eastern system consists of three drains that cut from the northwest to the southeast and enter the Los Angeles River

e. Regulatory Setting

Federal

Clean Water Act. In 1972, Congress passed the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), with the goal of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. § 1251(a)). The CWA directs states to establish water quality standards for all "waters of the United States" and to review and update such standards on a triennial basis. Section 319 mandates specific actions for the control of pollution from non-point sources. The EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the National Pollutant Discharge Elimination System (NPDES) Program, to the SWRCB and the RWQCBs.

Section 402 of the CWA authorizes the California State Water Resources Control Board (SWRCB) to issue NPDES General Construction Storm Water Permit (Water Quality Order 99-08-DWQ), referred to as the "General Construction Permit." Construction activities can comply with and be covered under the General Construction Permit provided that they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMP) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving offsite into receiving waters
- Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation
- Perform inspections of all BMPs

Projects that disturb one or more acres are required to obtain NPDES coverage under the Construction General Permits. The USEPA's NPDES Phase II Final Rule and the SWRCB NPDES General Permit No. CAS000004, "Waste Discharge Requirements for Storm water Discharges from Small Municipal Separate Storm Sewer Systems (MS4) General Permit (referred to as the "MS4 General Permit") require that the County, as the MS4 operator, implement a Storm water Management Program (SWMP) that reduces the discharge of pollutants to the "maximum extent practicable," that protects water quality, and that satisfies the requirements of the Clean Water Act according to California's MS4 General Permit. The County of Los Angeles administers NPDES regulations. MS4 General Permit coverage for the County must be renewed every five years, under the jurisdiction of the Los Angeles RWQCB.

Section 401 of the CWA requires that any activity, including river or stream crossing during road, pipeline, or transmission line construction that may result in discharges into a State waterbody, must be certified by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards. The limits of non-tidal waters extend to the Ordinary High Water Mark (OHWM), defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris. The USACE may issue either individual, site-specific permits or general, nationwide permits for discharge into U.S. waters.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. A Water Quality Certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or waiver thereof) from the Los Angeles RWQCB. When an application for a Section 404 permit is made the Applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the U.S. where practicable;
- Minimized unavoidable impacts on waters of the U.S. and wetlands; and
- Provided mitigation for unavoidable impacts.

Section 303(d) of the CWA (CWA, 33 USC 1250, et seq., at 1313(d)) requires states to identify "impaired" waterbodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of TMDL requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act establishes the SWRCB and each RWQCB as the principal State agencies for coordinating and controlling water quality in California. Specifically, the Porter-Cologne Act authorizes the SWRCB to adopt, review, and revise policies for all waters of the State (including both surface and groundwater) and directs the RWQCBs to develop regional Basin Plans.

The city of Lynwood is located in the jurisdiction of the Los Angeles RWQCB, which is responsible for the implementation of State and federal water quality protection statutes, regulations, and guidelines. The Los Angeles Region has developed a Water Quality Control Plan (Basin Plan) to show how the quality of the surface and groundwater in the Los Angeles Region should be managed to provide the highest water quality reasonably possible. The Basin Plan lists the various beneficial uses of water in the region, describes the water quality that must be maintained to allow those uses, describes the programs, projects, and other actions necessary to achieve the standards established in this plan, and summarizes plans and policies to protect water quality. Together, narrative and numerical objectives define the level of water quality that shall be maintained in the region. The water quality objectives are achieved primarily through the establishment and enforcement of waste discharge requirements (WDR).

The RWQCBs have primary responsibility for issuing WDRs. The RWQCBs may issue individual WDRs to cover individual discharges or general WDRs to cover a category of discharges. WDRs may include effluent limitations or other requirements that are designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions. Violations of WDRs may be addressed by issuing Cleanup and Abatement Orders (CAO) or Cease and Desist Orders (CDOs), assessing administrative civil liability, or seeking imposition of judicial civil liability or judicial injunctive relief.

Local

2012 Los Angeles County NPDES Permit

Effective on December 28, 2012, the Los Angeles RWQCB adopted Order No. R4-2012-0175, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges into the Coastal Watersheds of Los Angeles County. The permit establishes new performance criteria for new development and redevelopment projects in the coastal watersheds of Los Angeles County (with the exception of the city of Long Beach). Storm water and non-storm water discharges consist of surface runoff generated from various land uses, which are conveyed via the municipal separate storm sewer system and ultimately discharged into surface waters throughout the region ("storm water" discharges are those that originate from precipitation events, while "non-storm water" discharges are all those that are transmitted through an MS4 and to do originate from precipitation

events). Discharges of storm water and non-storm water from the MS4s, or storm drain systems, in the Coastal Watersheds of Los Angeles County convey pollutants to surface waters throughout the Los Angeles Region. Non-storm water discharges through an MS4 in the Los Angeles Region are prohibited unless authorized under an individual or general NPDES permit; these discharges are regulated by the Los Angeles County NPDES Permit, issued pursuant to CWA Section 402. Coverage under a general NPDES permit such as the Los Angeles County permit can be achieved through development and implementation of a project-specific SWPPP. (LARWQCB 2012)

County of Los Angeles Flood Control Act

The California State legislature adopted the County of Los Angeles Flood Control Act in 1915, establishing the Los Angeles County Flood Control District (LACFCD) and empowering it to provide flood protection, water conservation, recreation, and aesthetic enhancement within its boundaries. In August 2000, the Watershed Management Division of the Los Angeles County Department of Public Works became the planning and policy arm of the LACFCD. The District encompasses more than 3,000 square miles, 85 cities, and approximately 2.1 million land parcels. It includes a vast majority of drainage infrastructure in incorporated and unincorporated areas in every watershed, including 500 miles of open channels, 2,800 miles of underground storm drains, and an estimated 120,000 catch basins. The LACFCD regulates hydrologic and hydraulic design within its boundaries through its *1982 Hydraulic Design Manual* and its *2006 Hydrology Manual*, and provides criteria and planning procedures for flood plains, waterways, channels, and closed conduits in Los Angeles County.

Lynwood General Plan 2020. The Infrastructure/Public Services Element of the City's General Plan includes the following goal and policy associated with water conservation:

- Goal DW-1. Provide for the planning and funding mechanism to construct, expand, and maintain water facilities (transmission, storage, distribution, and treatment) needed to meet current and future demand.
- Policy DW-1.3 Water Conservation. The City shall require that water conservation measures be implemented into all construction projects.

The Safety Element of the City's General Plan includes the following goal and policy associated public safety associated:

- Goal GEO-1. Protect the public health, safety, and welfare and minimize the damage to structures, property, and infrastructure as a result of seismic activity.
- Policy Geo-1.3 Seiches/Water Tanks. Provide safety to property, structures and human life in areas that may be subject to seiches from water tank rupture.

The Open Space and Conservation Element of the City's General Plan include goals and policies associated with water quality and conservation:

- Goal WR-1. Protect surface and subsurface water resources in the water basin that are impacted by actions in the city.
- Policy WR-1.1 Ensure Clean Water. The City shall ensure that development and redevelopment projects do not degrade surface waters and groundwater basins.
- Goal WR-2. Require sounds water conservation measures to ensure water availability to all persons living, working, and visiting the city.
- Policy WR-2.1 Water Conservation. The City shall ensure that water conservation measures are implemented in all development projects.

Lynwood Municipal Code

Chapter 14 provides regulations for public utilities and City services. Section 14-13 (Storm water and Urban Runoff Pollution and Conveyance Controls) provides requirements for Standards Urban Storm water Mitigation Plans (SUSMP) and Low Impact Development (LID) for new projects and redevelopment projects. The following lists the planning projects that are subject to conditioning and controls:

> *14-3.3c Applicability – Planning Priority Projects: The following development and redevelopment projects shall be designated as planning priority projects, which are subject to city conditioning and approval for the*

design and implementation of post-construction controls to mitigate storm water pollution prior to completion of the projects, and shall meet the requirements of this section:

1. New Development Projects:

(a) All development projects equal to one acre or greater of disturbed area that adds more than ten thousand (10,000) square feet of impervious surface area.

(b) Industrial parks ten thousand (10,000) square feet or more in surface area.

(c) Commercial malls ten thousand (10,000) square feet or more in surface area.

(d) Retail gasoline outlets with five thousand (5,000) square feet or more of surface area.

(e) Restaurants (Standard Industrial Classification (SIC) of 5812) with five thousand (5,000) square feet or more of surface area.

(f) Parking lots with five thousand (5,000) square feet or more of impervious surface area, or with twenty-five (25) or more parking spaces.

(g) Streets and roads construction of ten thousand (10,000) square feet or more of impervious surface area. Street and road construction applies to stand-alone streets, roads, highways, and freeway projects, and also applies to streets within larger projects.

(h) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532 through 7534 and 7536 through 7539) five thousand (5,000) square feet or more in surface area.

(i) Projects located in or directly adjacent to, or discharging directly to a significant ecological area (SEA), where the development will:

(1) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and

(2) Create two thousand five hundred (2,500) square feet or more of impervious surface area.

(3) Single-family hillside homes.

2. Redevelopment Projects:

(a) Land disturbing activity that results in the creation or addition or replacement of five thousand (5,000) square feet or more of impervious surface area on an already developed site on planning priority project categories.

(b) Where redevelopment results in an alteration to more than fifty percent (50%) of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, the entire project must be mitigated.

(c) Where redevelopment results in an alteration of less than fifty percent (50%) of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

(d) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

(e) Existing single-family dwelling and accessory structures are exempt from the redevelopment requirements unless such projects create, add, or replace ten thousand (10,000) square feet of impervious surface area.

The remainder of Section 14-13 of the Lynwood Municipal Code provides requirements for storm water pollution control measures, and authorizes the City to further define and adopt storm water pollution control measures and

to develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies. Proposed projects in the Plan Area may be subject to Chapter 14-13 of the Municipal Code.

Chapter 25 of the Municipal Code consists of the City's zoning regulations. Article 93 provides regulations associated with erosion and sediment control. The purpose of this article is to eliminate and prevent accelerated erosion that has led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil and vegetation cover, disruption of water supply, increased danger from flooding, and the deposition of sediments and associated nutrients. This article sets forth required provisions for project planning, preparation of erosion control plans, runoff control, land clearing and winter construction operations. It also establishes procedures for administering those provisions. Proposed projects in the Plan Area may be subject to Chapter 25, Article 93 of the Municipal Code.

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds

Assessment of impacts is based on review of site information and conditions and Los Angeles County information regarding hydrology and water quality issues. In accordance with the *State CEQA Guidelines*, a project would result in a significant impact if it would do any of the following:

1. Violate any water quality standards or waste discharge requirements
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
5. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff
6. Otherwise substantially degrade water quality
7. Place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map
8. Place in a 100-year flood hazard area structures which would impede or redirect flood flows
9. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam
10. Result in inundation by seiche, tsunami, or mudflow

Based on the following discussions, impacts related to threshold numbers 2, 3, 4, 7, 8, 9, and 10 were found to be less than significant and a brief paragraph explaining the decision is following, but these numbers are not discussed further in this EIR. Section b (Impacts and Mitigation Measures) provides the impact analyses associated with criteria 1, 5, and 6 under Impact HYD-1.

2) The Plan Area is fully developed and full buildout under the proposed Specific Plan would not introduce substantial new impervious areas that would interfere with groundwater recharge. Groundwater is the primary water supply for the Plan Area, followed by MWD supplies from the Colorado River and the State Water Project in northern California. Development under the proposed Specific Plan does not include installation of new groundwater wells, or use of groundwater from existing wells. Therefore, development under the proposed Specific Plan would not result in a net deficit in aquifer volume or a lowering of the groundwater table. Impacts would be less than significant and this issue is not further assessed in this EIR.

3) The Plan Area is urbanized and connected to an existing storm water drainage system located between the City's State Street and Bullis Road street systems. Storm water runoff in the Plan Area is currently directed through a

series of storm water drainage facilities to the Los Angeles River and eventually the San Pedro Bay. These drainage patterns would be maintained with implementation of development under the proposed Specific Plan. Potential impacts to drainage patterns and the course of would be less than significant and further investigation in this EIR is not warranted. In addition, the Los Angeles River forms the eastern boundary of the City of Lynwood; however, no surface water bodies are in the city of Lynwood or in the Plan Area. Therefore, implementation of development that could be facilitated by the proposed Specific Plan would not alter the course of any stream or river.

4) As described above, buildout under the Plan Area would not alter the course of any stream or river. Site-specific drainage pattern alterations would occur with development that could be facilitated by full buildout, but such alterations would not result in substantial adverse effects. The area is largely paved, and proposed development would not introduce new paved areas to the extent that the rate or amount of surface runoff would substantially increase. Development that could be facilitated by full buildout would not introduce new surface water discharges, and would not result in flooding on- or off-site. No impact would occur and this issue is not further assessed in the EIR.

7, 8) Based on the relevant FEMA FIRM, the Plan Area is in an area that has 0.2 percent annual chance of flood. Therefore, housing development or other structures under the proposed Specific Plan would not be located within a 100-year flood hazard area, and would not impede or redirect flood flows. No impact would occur and this is not further assessed in this EIR.

9) There are no dams or reservoirs located in the Plan Area; the closest is the Garvey Reservoir located 10 miles northeast of the Plan Area. Therefore, development that could be facilitated by the proposed Specific Plan would not expose new areas to potential inundation from dam failure. The proposed Specific Plan would not alter existing risks associated with the potential for dam failure. Potential impacts would be less than significant and further investigation in the EIR is not warranted.

10) The Plan Area is located approximately 12 miles east of the Pacific Ocean with ground-level elevations ranging from 70 to 100 feet amsl. Due to the distance and elevations, the potential for a tsunami affecting the Plan Area is unlikely and potential impacts would be less than significant. In addition, the nearest water bodies that could experience a seiche event are water tanks. There is one water tank near the boundary of the Plan Area in an area that is fully developed. Development under the proposed Specific Plan would not occur in this area of the City, and potential flooding impacts associated with a rupture of this tank would result in less than significant impacts to the Plan Area. Therefore, the Plan Area is not considered subject to inundation by seiche, tsunami, or mudflow; impacts would be less than significant and are not further assessed in this EIR.

b. Project Impacts and Mitigation Measures

Impact HYD-1	Construction of future development under the Specific Plan would involve ground-disturbing activities and the use of heavy machinery that could release hazardous materials, including sediments and fuels. Operation of proposed development could also result in discharges of wastewater that could be contaminated and affect downstream waters. However, compliance with permits and regulations, and implementation of Best Management Practices contained therein would ensure that potential water quality impacts would be *less than significant.*

Implementation of development envisioned in the proposed Specific Plan would result in a significant impact if activities would conflict with applicable water quality permits or waste discharge requirements. Future development under the proposed Specific Plan would be subject to multiple permits and approvals associated with the protection of water quality, and actions included under the Specific Plan are expected to occur in compliance with all applicable standards and regulations.

The proposed project site is in the region covered by the Los Angeles County Municipal Storm Water (MS4) NPDES Permit No. CAS004001, issued by the Los Angeles RWQCB for MS4 discharges into the coastal watersheds of Los Angeles County, except for the City of Long Beach as it operates under a separate permit. The City of Lynwood is a designated Permittee in NPDES Permit No. CAS004001 (Waste Discharge Identification Number 4B190189001). The NPDES permit requires implementation of a Standard Urban Storm Water Mitigation Plan (SUSMP) for projects that

fall into one of nine categories, including development projects equal to one acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area. This requirement is also specified in the City of Lynwood Municipal Code Chapter 14-13, Storm water and Urban Runoff Pollution and Conveyance Control Regulations, Section 14-13.3, Standard Urban Storm Water Mitigation Plan (SUSMP), and Low Impact Development Requirements for New Development and Redevelopment Projects. The SUSMP typically contains a list of minimum required BMPs that must be used for a proposed project; additional BMPs may be required by ordinance or code adopted by the City and applied generally or on a case-by-case basis.

In addition, activities subject to the NPDES general permit for construction must develop and implement a SWPPP, including a site map and description of construction activities. The SWPPP will identify BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. A monitoring program is generally required to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of pollutants that are related to storm water.

The Plan Area is currently developed, and future development included under the Specific Plan would not substantially alter land use types or drainage patterns, although alterations would be implemented. Operation of the proposed future development would not include the discharge of hazardous materials directly into the storm water drainage system, and wastewater would be appropriately treated and discharged. Section 4.15, Utilities and Service Systems, provides a discussion of existing and planned wastewater treatment and conveyance facilities.

Additionally, future development would be implemented in compliance with existing programs and permits, including the City's Storm water and Urban Runoff Pollution and Conveyance Controls and the Regional Storm water NPDES Permit (No. CAS004001). Development design would include BMPs to avoid adverse effects associated with storm water runoff quality.

For instance, Section 14-13.3 of the City's Municipal Code includes a Low Impact Development (LID) which consists of building and landscape features designed to retain or filter storm water runoff. This is to be accomplished by employing BMPs such as biofiltration, bioretention, and green roofs to intercept rainfall. These LID practices, as well as other provisions and BMPs specified in the storm water NPDES Permit, may require long-term operational inspections and maintenance activities to ensure the effective avoidance of significant adverse impacts associated with water quality degradation. As "operation of proposed development could also result in discharges of wastewater that could be contaminated and affect downstream waters," (see Impact HYD-1 above), individual future projects in the Plan Area would be required to comply with the NPDES Permit and other regulatory requirements described above. Furthermore, Section 4.3 of the Specific Plan addresses drainage and water quality improvement measures to be implemented as part of future development in the Plan Area. The objectives of the Specific Plan's storm water management program include; (1) the use of Low Impact Development (LID) practices wherever feasible, (2) to capture, treat, and convey stormwater before it enters the storm drain system, and (3) minimize impacts to water quality using both mechanical and natural detention, infiltration, and treatment methods in a "treatment train" approach. Therefore, operation and maintenance of Specific Plan development would not result in significant impacts associated with the discharges of wastewater that could be contaminated and that could affect downstream waters.

During construction and implementation of future development, there is potential for water quality impacts to occur due to unanticipated leaks, spills, or releases of hazardous or potentially hazardous materials, and due to the potential for encountering existing contamination in the Plan Area. It is anticipated that the permits and approvals summarized above will include standard BMPs and spill response measures to address any unanticipated occurrence that could potentially affect water quality in the Plan Area or in downstream areas. With the implementation of these policies and compliance with the permits and regulations discussed above, potential impacts to water quality during construction and operation of future projects in the Plan Area would be minimized or avoided, and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

c. Cumulative Impacts

As discussed under Impact HYD-1, the potential for water quality degradation to result from future development in the Plan Area could occur during both construction and operational activities, and would be minimized or avoided through the implementation of BMPs required to be in compliance with existing laws and regulations. Potential water quality-related impacts would be less than significant, and would be localized due to the implementation of BMPs. The potential for water quality impacts of the proposed Specific Plan development to occur in the same temporal and geographic scope as potential water quality impacts of other projects in the cumulative scenario would be low, due to the aforementioned BMPs. Potential impacts associated with water quality would not be cumulatively considerable.

4.8 Land Use and Planning

4.8.1 Setting

a. Land Uses in the Plan Area

Character of Existing Land Uses

The proposed Specific Plan encompasses 315 acres along the I-105 Freeway (I-105), terminating at Alameda Street to the west and Martin Luther King Jr. Boulevard to the east. The Plan Area along Alameda Street includes commercial auto repair services north of I-105 /Imperial Highway and industrial uses and vacant property south of I-105/Imperial Highway. Imperial Highway, traversing the Plan Area from east to west, serves as a commercial corridor. At the southwest intersection of Imperial Highway and Long Beach Boulevard, Plaza Mexico, a regional shopping center, provides major retail shopping and restaurants. The Plan Area is bisected by two major road corridors running north and south, Long Beach Boulevard and State Street. Long Beach Boulevard serves as a regional commercial corridor. State Street is characterized a local corridor adjacent largely to residential neighborhoods. East of Long Beach Boulevard, commercial uses are dominant along Imperial Highway, transitioning north and south along local roadways to single-family and multi-family residences. The easternmost portion of the Plan Area terminates at the St. Francis Medical Center.

Regional transportation routes serve as physical barriers in and around the Plan Area. The I-105 runs east/west through the center of the Plan Area and is elevated through the entire Plan Area. The Metro Green Line, a transit corridor, runs along the I-105 median. Long Beach Boulevard, running north/south, separates the Plan Area into two parts. This corridor largely consists of commercial uses. The Metro Green Line station is at the southeast portion of the Plan Area at the Long Beach Boulevard and I-105 intersection.

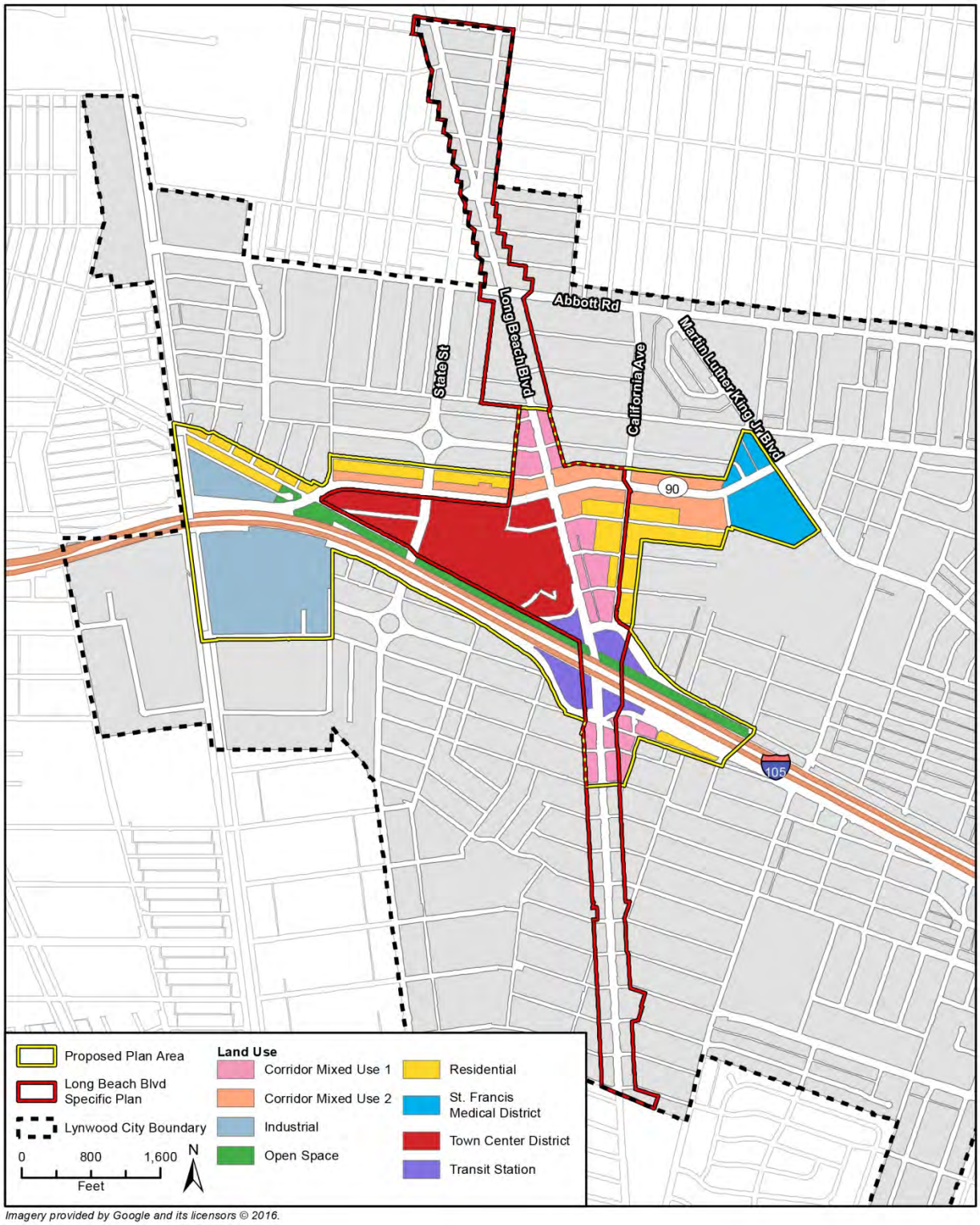
Existing Land Use Designations

The proposed Specific Plan divides the Plan Area into eight land use districts, including 1) Town Center (TC) 2) Transit Station (TS); 3) Corridor Mixed-Use -1 (CMU-1); 4) Corridor Mixed-Use-2 (CMU-2); 5) Industrial (I); 6) St. Francis Medical (SFM); 7) Residential (R); and 8) Open Space (OS). At the west end of the Plan Area, north and south of Imperial Highway, the dominant land use designation is Manufacturing (M). As Imperial Highway traverses northeast, east of Fernwood, the existing land use designation is primarily Commercial (C). Land use designations beyond those immediately adjacent to the Commercial land use designations along the Imperial Highway Corridor are predominantly single-family and multi-family to the north. Between Fernwood Avenue and California Avenue, land uses south of the Imperial Highway are designated by the Long Beach Boulevard Specific Plan and east of California Avenue Commercial land uses are designated by the Lynwood General Plan.

In the Plan Area, the Long Beach Boulevard Specific Plan designates land uses along Long Beach Boulevard and areas northwest and northeast Long Beach Boulevard and Century Freeway (I-105), which are in proximity to the Metro Green Line transit station. This area includes the Plaza Mexico area south of Imperial Highway, north of the I-105 Freeway between Fernwood Avenue and California Avenue. The two key elements defining the land use designations in the Long Beach Boulevard Specific Plan are: 1) The combination of land uses, particularly mixed uses in close proximity to transit services; and 2) Strong pedestrian and bicycle connectivity. The proposed Lynwood Transit Area Specific Plan's land use districts overlap the Long Beach Boulevard Specific Plan's Mixed Use: Retail/Commercial/Residential land use designation as shown on the Downtown Village II Land Use Plan (Village II) and Village III-Transit Village Land Use Plan (Village III). As described, Village II and Village III relates directly to Transit Oriented Development (TOD) as it permits medium to high densities, planned pedestrian walkways, and multiple uses (particularly uses supporting transit ridership such as retail, child care, book stores, coffee shops, and amenities that improve public safety). The proposed Specific Plan would land use designations and development standards would function as an "overlay district" over the portions of the Plan Area coterminous with the Long Beach Boulevard Specific Plan boundary and would supersede the previously adopted Long Beach Boulevard development

standards. Figure 11 illustrates the relationship between the existing Long Beach Boulevard Specific Plan boundaries and the proposed Lynwood Transit Area Specific Plan boundary.

Figure 11 Relationship between the Long Beach Boulevard Specific Plan and the Lynwood Transit Area Specific Plan Boundaries



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Existing Zoning

The City of Lynwood's Zoning Ordinance has the force of zoning in the Plan Area. At the west end of the Plan Area, north and south of Imperial Highway, the predominant zoning designation is Manufacturing (M). As Imperial Highway traverses northeast, east of Fernwood, the existing zoning designation to the north is primarily C-3 (Heavy Commercial) and C-2 (Light Commercial). The zoning designation to the south of Imperial Highway, west of Long Beach Boulevard is primarily CB1 (Controlled Business Zone). Zoning designations beyond those immediately adjacent to C-3, C-2, and CB1 zoning along the Imperial Highway Corridor are zoned mostly R-1 (Single Family Residential) and also R-3 (Multi-Family Residential). The zoning designation immediately adjacent to Long Beach Boulevard is C2A (Medium Commercial). R1 and R2 zoning designations are located adjacent to the C2A designation.

The portions of the Long Beach Boulevard Specific Plan that overlap the proposed Specific Plan area have a proposed zoning designation of Mixed Use: Retail/Commercial/Residential (Lynwood 2006). Development standards apply for Village II, and in the Plan Area include the following:

- Maximum Floor Area Ratio: 0.7 of the lot size
- Maximum Allowable Dwelling Units: 30 dwelling units/acre
- Dwelling Units: Permitted on second story above
- Lot Size: No minimum acreage, parcel consolidation recommended
- Building Height: 190 feet maximum
- Existing Landscape Area Requirement: 7 percent of the site area
- Courtyard and Patio Requirement: 3 percent in addition to the above 7 percent for a total of 10 percent
- Front Setback: Current requirement of 10 feet minimum will be increased on parcel basis to accommodate an 18-foot sidewalk
- Side Street Setbacks: Current requirement of 10 feet minimum
- Rear Setback: 5 feet minimum

a. Regulatory Setting

Development in the Plan Area is subject to the goals and policies in the City of Lynwood General Plan (2003). The General Plan provides a policy framework to direct development in the city through 2020. Planning documents that are also applicable to the proposed Specific Plan include the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) adopted by the Regional Council of the Southern California Association of Governments (SCAG); and the general goals and policies of the Long Beach Boulevard Specific Plan prepared for and adopted by the City of Lynwood in November 2006.

City of Lynwood General Plan

The Plan Area is subject to the City of Lynwood's General Plan. A comprehensive general plan provides an area with a consistent framework for land use and other decision-making. The general plan has been called the "constitution" for land use development to emphasize its importance to land use decisions. The general plan and its maps, diagrams, and development policies form the basis for countywide zoning, subdivision, and public works actions. The California General Plan Guidelines require seven elements to be included in a community's General Plan. The City of Lynwood General Plan (2003) consolidates these seven elements into the following four:

- Community Development Element
- Environmental Resources Element
- Public Health and Safety Element
- Housing Element (adopted August 6, 2013)

Long Beach Boulevard Specific Plan

State law allows a general plan to be adopted as a series of Area Plans. These Area Plans must conform to all countywide general plan elements and be consistent with one another. The City of Lynwood's Long Beach Boulevard Specific Plan (November 2006) applies to Long Beach Boulevard, a 2.3 mile primary commercial corridor in Lynwood and a major north-south thoroughfare in the county. The intent of the Long Beach Boulevard Specific Plan is to

achieve a high-quality, aesthetically attractive urban area with land uses that are conducive to the presence of transit along I-105 and the numerous small, local markets that are also vital to the community. The Specific Plan identifies key issues, creates a land use development program based on sound planning principles, and established design guidelines for architecture and landscaping along Long Beach Boulevard. The Specific Plan provides direction to investors, developers, and the City, by establishing a framework for the visual quality desired by the City along Long Beach Boulevard. The Specific Plan is consistent with the City of Lynwood General Plan, and includes the following chapters:

- Introduction
- Existing Site Conditions
- Land Use Plan
- Architectural Design Guidelines
- Circulation and Landscape Plan
- Administration and Implementation

Regional Transportation Plan Sustainable Communities Strategy (RTP/SCS)

The Plan Area is subject to the Southern California Association of Government's (SCAG) 2012-2035 RTP/SCS, adopted by the SCAG Regional Council in April 2012. The purpose of the SCAG RTP/SCS, a 25-year plan, is to guide the development of a planned multimodal transportation system with emphasis on sustainability and integrated planning for the counties of Los Angeles, San Bernardino, Ventura, Orange, and Imperial Counties in compliance with SAFETEA-LU and all other applicable laws and regulations. The California Government Code Section 65080 (b)(2)(B), does not mandate that the SCS dictate local General Plan policies, rather the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose (SCAG RTP/SCS 2012). The RTP/SCS supports the integration of transportation and land use policies. The RTP/SCS includes nine advisory policies. Consistency with these policies is shown in Table 15.

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds

The LTASP would have a significant impact on land use if it would cause any of the following conditions to occur:

1 Physically divide an established community
2 Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
3 Conflict with any applicable habitat conservation plan or natural community conservation plan

Based on the following discussions, impacts related to threshold numbers 1 and 3 were found to be less than significant and are not discussed further in this EIR. Implementation of the proposed Specific Plan would not physically divide an established community and the Plan Area is not protected by a habitat conservation plan, natural community conservation plan, or other adopted conservation plan (California Department of Fish and Wildlife 2015). Therefore, impacts related to these issues were determined to be less than significant.

This section also assesses the potential for the project to result in significant incompatibility with surrounding land uses or the established pattern of development. This assessment is sometimes used as an additional threshold in EIRs to determine whether projects will have significant land use impacts.

b. Project Impacts and Mitigation Measures

Impact LU-1	The proposed Specific Plan is consistent with the goals, policies, and objectives of the 2003 City of Lynwood General Plan, the 2006 Long Beach Boulevard Specific Plan, and the 2012-2035 SCAG RTP SCS. Therefore, impacts would be *less than significant*.

The proposed Specific Plan must be consistent with the City of Lynwood General Plan's goals, and policies in order to be approved. The Specific Plan would establish new land use designations, design guidelines, development standards, and implementation strategies that support the overall objective of facilitating future transit-oriented development in the Plan Area, as shown in Figure 5. The Plan Area close to the Metro Green Line station and along the major corridors of Long Beach Boulevard and Imperial Highway.

Long Beach Boulevard and Imperial Highway and the properties immediately adjacent to these corridors would be designated Corridor Mixed-Use 1 (CMU-1) and Corridor-Mixed Use 2 (CMU-2), respectively. The intent of the CMU-1 and CMU-2 districts is to promote mixed-use commercial with residential as a secondary use and to encourage revitalization and investment. This zone would generally apply to parcels fronting Imperial Highway and Long Beach Boulevard.

The Town Center (TC) district encompasses the properties located south and northwest of Imperial Highway and west of Long Beach Boulevard (i.e., the Plaza Mexico shopping center and the properties west of State Street). The intent of the TC land use designation is to provide for the development of a transformative mixed-use transit collection of locally- and regionally-serving commercial, retail, and entertainment uses, as well as a variety of urban housing choices within walking distance of transit services.

The Transit Station (TS) designation includes the Metro Green Line station, the surrounding park and ride lots, and the I-105 Freeway on-ramps proposed for re-configuration. The intent of the TS designation is to provide a vibrant, walkable environment that enhances the existing Metro Green Line station and incorporates public use portions of a reconfigured I-105 interchange.

The Residential (R) designation encompasses the residential properties located south of Imperial Highway and east of the Long Beach Boulevard corridor, primarily along Beechwood Avenue, Sanborn Avenue, Mulford Avenue, California Avenue and others. The intent of the Residential designation is to preserve existing and allow new small-to-medium lot detached homes and reinforce their role within a walkable neighborhood.

The Open Space (OS) designation encompasses the areas parallel to the northern boundary of I-105 behind Plaza Mexico, and extends further west of State Street and Imperial Highway. This district also encompasses the northeast quadrant of the I-105/Long Beach Boulevard interchange and the areas parallel to the I-105 until its connection with Fernwood Avenue. The intent of the Open Space designation is to create land for parks, bicycle and pedestrian pathways, and open space supportive of transit-oriented development.

The Industrial (I) designation encompasses the existing industrial uses located east of Alameda Street and south of I-105. The intent of this designation is to provide an urban form that can accommodate a very diverse range of industrial uses, including heavy and light industrial uses, and live-work.

The St. Francis Medical (SFM) designation encompasses the existing St. Francis Medical Center campus and the areas immediately northwest of Imperial Highway. The intent of this district is to meet the existing and future needs of the St. Francis Medical Center campus, while ensuring compatibility with adjacent land uses. The designation will also maintain and promote medical, clinic, medical office, and associated supportive uses such as incidental retail, supportive residential and parking, and expand pedestrian linkages and connectivity between the St. Francis Medical Center, and the adjacent Lynwood Civic Center.

These proposed land use districts described above would be generally consistent with and would "overlay" (supersede) the underlying Mixed Use: Retail/Commercial/Residential land use designation previously adopted as part of the Long Beach Boulevard Specific Plan. However, in order for the Lynwood Transit Area Specific Plan to be implemented, the City's General Plan would need to be amended as part of the City's review and approval process for the Lynwood Transit Area Specific Plan. Specifically, the General Plan Land Use Map would need to be amended in order to change the current land use designations associated with the Long Beach Boulevard Specific Plan to "Lynwood Transit Area Specific Plan." Other project-related amendments to the City's General Plan include revisions to the text of the City's Circulation Element in order to permit future consideration of the reconfiguration of the I-105/Long Beach Boulevard intersection and future roadway improvements consistent with "Complete Streets" design principles. Adoption of these amendments is necessary in order for the Lynwood Transit Area Specific Plan to be fully consistent with the City's General Plan.

The proposed Specific Plan's consistency with other elements of the City's General Plan is contained in the analysis provided in the respective topical sections of this DEIR. Table 15 contains a discussion of the proposed Specific Plan's consistency with applicable objectives, policies, and standards of the City of Lynwood's General Plan, and Table 16 contains such a discussion with regard to policies in the Long Beach Boulevard Specific Plan. Table 17 provides a discussion of the proposed Specific Plan's consistency with design and development guidance in the 2012-2035 SCAG RTP/SCS. Consistent with the scope and purpose of this EIR, the discussion primarily focuses on those general plan requirements that relate to avoiding or mitigating environmental impacts, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment. The ultimate determination of whether the proposed Specific Plan is consistent with applicable general plans lies with the decision-making bodies (Planning Commission and City Council). Only policies relevant and applicable to the proposed Specific Plan are included. Policies that are redundant between elements are omitted, as are policies that call for City actions independent of review and approval or denial of the proposed Specific Plan.

Table 15 Specific Plan Policy Consistency with the City of Lynwood General Plan

General Plan Policy	Discussion
HOUSING ELEMENT	
Goal 1: Preserve and Improve Existing Housing	
Policy 1.2. Pursue the acquisition of substandard units and assembly of land for development of new residential units.	Potentially Consistent. Objective 3 of the Specific Plan states: "Consolidate Uses and Create New Development Sites – Identify sites most suitable for assembly and revitalization." Therefore, the Specific Plan would allow the acquisition of standard units and the assembly of land for development on new residential units.
Policy 1.5. Develop comprehensive neighborhood preservation strategies for portions of the community that need reinvestment.	Potentially Consistent. Objective 6 of the Specific Plan states, "Improve and Facilitate Additional Housing - A variety of housing types should be provided that are compatible with existing housing types and neighborhoods in the community. A diverse mix of ownership and rental housing, and market rate, affordable, and workforce housing should be maintained." Therefore, the Specific Plan would allow for the development of comprehensive neighborhood preservation strategies.
Policy 1.6 Encourage energy efficient design in existing and new residential units and promote sustainability upgrades in existing and proposed residential complexes.	Potentially Consistent. Objective 7 of the Specific Plan states: "Create a Sustainable Community – Ensure public health, safety, and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment." Therefore, Specific Plan would encourage energy efficient design and promote sustainability upgrades existing and proposed residential complexes.
Goal 2: Encourage a variety of housing types to meet the needs of city residents.	
Policy 2.2 Ensure that environmental, public infrastructure and traffic constraints are adequately addressed with regard to new residential development.	Potentially Consistent. This EIR analyzes and addresses environmental, public infrastructure, and traffic constraints on a programmatic level. Future development in the Plan Area will also need to comply with the CEQA on a project by project basis, and addresses all topics in Appendix G. Therefore, environmental, public infrastructure, and traffic constraints will be addressed at a project-level as development proposals are submitted to the City.
Policy 2.3. Facilitate and encourage development of affordable housing for seniors, large families, and other identified special housing needs.	Potentially Consistent. Objective 6 of the proposed Specific Plan states, "Improve and Facilitate Additional Housing - A variety of housing types should be provided that are compatible with existing

General Plan Policy	Discussion
	housing types and neighborhoods in the community. A diverse mix of ownership and rental housing, and market rate, affordable, and workforce housing should be maintained." Therefore, the proposed Specific Plan would facilitate and encourage development of affordable housing for seniors, large families, and other identified special housing needs.
Policy 2.5. Provide developer incentives, such as a density bonus or flexibility in development standards, to facilitate the development of quality housing that is affordable to lower and moderate-income households.	Potentially Consistent. The Specific Plan establishes land use districts and corresponding development standards that allow increased density and intensity throughout the Plan Area. The Specific Plan also promotes the future development of quality housing that would be affordable to low- and moderate-income households.
Goal 4: Remove governmental constraints to the development of new housing opportunities	
Policy 4.3. Utilize density bonuses, fee reductions, or other regulatory incentives to minimize the effect of governmental constraints.	Potentially Consistent. The Specific Plan will facilitate new or redeveloped high quality and high density housing options near transit in the Transit District land use that meets current and projected housing needs.
Policy 4.4. Encourage lot consolidation in the Long Beach Boulevard Specific Plan area in order to cohesively redevelop larger areas.	Potentially Consistent. Objective 3 of the Specific Plan states, "Consolidate Uses and Create New Development Sites – Identify sites most suitable for assembly and revitalization." Therefore, Specific Plan would encourage the consolidation of land in the Plan Area, and where the Plan Area overlaps with the Long Beach Boulevard Specific Plan, the Specific Plan's land use districts, permitted land uses, design guidelines, and development standards would control.
Goal 5: Promote Equal Housing opportunities	
Policy 5.3. Comply with the requirements of the Federal Fair Housing Act and the California Fair Employment and Housing Act to provide for a reasonable accommodation in the zoning code and other land use regulations to provide housing for persons with disabilities.	Potentially Consistent. Objective 6 of the L Specific Plan states: "Improve and Facilitate Additional Housing – A variety of housing types should be provided which are compatible with existing housing types and neighborhoods in the community. A diverse mix of ownership and rental housing, and market rate, affordable, and workforce housing should be maintained." In addition, the City will continue to coordinate with the Fair Housing Foundation, the agency that provides housing counseling, housing discrimination investigations, and landlord-tenant mediation and counseling to Lynwood residents free of charge. In addition, there is the potential to continue working with the Housing Authority of the City of Los Angeles, which offers a variety of Section 8 special programs (Housing Element, p.136,). Therefore, the Specific Plan would not hinder compliance with the Federal Fair Housing Act and the California Fair Employment and Housing Act.
LAND USE ELEMENT	
Policy 1.2. Nonresidential Land Uses Allowed in All Residential Designations. Certain nonresidential land uses are considered to be compatible with residential uses and may be allowed in any residential district. The City's Zoning Code may require additional review	Potentially Consistent. The Specific Plan includes key land use districts that include the opportunity for residential land uses, including: Transit District (TD), Corridor Mixed Use-1, Corridor Mixed-Use-2, Residential (R), and St. Francis Medical Center (SFM). The TD, CMU-1, CMU-2, R, and SFM land use districts would provide

General Plan Policy	Discussion
for some land uses to insure that they are properly designed and will be compatible with existing or planned land uses. Examples of allowed uses: Flood control facilities, public parks, open space, schools, places of worship, daycare facilities, skilled nursing care, and utility infrastructure (i.e. substations).	opportunities for a variety of housing choices while also compatible non-residential uses within walking distance of transit or other services. The Residential (R) land use district would be adjacent or near these supportive, non-residential land uses.
Policy 1.3. Density Bonuses for Low Income and Special Needs Housing Developments. Any density bonuses allowed under this General Plan shall be in addition to bonuses allowed under state law to encourage the provision of housing for low-income groups and special needs housing groups.	Potentially Consistent. The Specific Plan establishes land use districts and corresponding development standards that allow increased density and intensity throughout the Plan Area. The Specific Plan also promotes the future development of quality housing that would be affordable to low-income housing groups and special needs housing groups.
Policy 6.3. Specific Plans. The Specific Plan designation is intended to allow for a mix of residential and commercial land uses. This designation will be used to allow persons to live close to employment opportunities, and to provide for a transition from higher intensity commercial uses to more traditional residential developments.	Potentially Consistent. The Specific Plan meets the intent of this policy as it includes locally- and regionally-serving mixed-use commercial and a variety of housing choices (e.g., attached) close to the transit station, with detached homes on small-to-medium lots further from the transit station.
CIRCULATION ELEMENT	
Policy 1.5. Pedestrian Friendly Systems. Establish street sections in residential neighborhoods and certain commercial areas that, while accommodating vehicular traffic, give preference to pedestrian users.	Potentially Consistent. Objective 4 of the Specific Plan states: "Enhance Pedestrian Comfort and Safety – Increase facilities, add connections, and multiply opportunities to safely and conveniently get around the area on "complete streets" by foot, bike, and public transit. In addition, the Mobility and Parking discussion in Chapter 3 of the Specific Plan presents the Multimodal Access Plan for the Plan Area. This provides the vision and development recommendations for all travel mode types, including automobile, bicycle, pedestrian, and public transit. Furthermore, Design Guidelines are provided for each land use district in the Specific Plan and include design considerations for residential and commercial street sections. Therefore, the Specific Plan would encourage pedestrian friendly, multi-modal accessibility.
Policy 2.1. Public Transportation. Require dedication and/or construction of appropriate facilities in support of a public transportation system.	Potentially Consistent. Transit and bus service operated by Metro would continue to provide transit service to the Plan Area. The Specific Plan's long term vision for the Plan Area is to improve bus stops to enhance efficiency and effectiveness of transit services. As discussed in Section 4.12, Transportation and Circulation, the Specific Plan includes a Multimodal Access Plan, key elements of which include a set of recommended infrastructure improvements and the goals and policies established to guide improvement for automobiles, bicyclists, pedestrians, and transit in the Plan Area.
Policy 2.2. Bike Lane and Trails. Provide a circulation network that accommodates the safe and efficient movement of cyclists on bike lanes and bike trails.	Potentially Consistent. As discussed in Section 4.12, Transportation and Circulation, the Specific Plan includes a Multimodal Access Plan, key elements of which include a set of recommended infrastructure improvements and the goals and policies established to guide improvement for automobiles, bicyclists, pedestrians, and transit in the Plan Area. The overall goal for mobility is to create a network of "complete streets" and public spaces that are friendly to

General Plan Policy	Discussion
	pedestrians, transit riders, and bicyclists.
Policy 2.3. Pedestrian Walkways. Provide a system of sidewalks or pathways in residential and commercial areas that provides a safe environment for pedestrians.	Potentially Consistent. The Specific Plan's vision for the pedestrian environment is to create high quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates included pedestrian activity throughout the Plan Area. Street enhancement strategies proposed in the proposed Specific Plan are intended to improve circulation for bicycles and pedestrians, including a "complete streets" network.
Policy 3.1. Regional Transportation Facilities. Interface with appropriate jurisdictions and agencies to encourage the timely improvement of roadway and transit facilities which address areawide and regional travel needs.	Potentially Consistent. Transit and bus service operated by Metro would continue to provide transit service to the Plan Area. The Specific Plan's long-term vision for the Plan Area is to improve bus stops to enhance efficiency and effectiveness of transit services. As discussed in Section 4.12, Transportation and Circulation, the Specific Plan proposes various multimodal transportation network improvements to accommodate planned growth in the Plan Area.
INFRASTRUCTURE AND/PUBLIC SERVICES ELEMENT	
Policy DW-1.1. Domestic Water Supply. The City shall provide an adequate supply of domestic water needed to meet current City demand and future developments.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, it is anticipated that sufficient water supply will be available to meet needs associated with development under the proposed Specific Plan.
Policy DW-1.3. The City shall require that water conservation measures be implemented into all construction projects.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, Objective 7 of the proposed Specific Plan, would encourage a sustainable community. The Specific Plan would support the use of reclaimed water in the Plan Area.
Policy DW-1.4. The City shall encourage the use of reclaimed water.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, the Objective 7 of the Specific Plan would encourage a sustainable community. The Specific Plan would support the use of reclaimed water in the Plan Area.
Policy WCT-1.1. The City shall work to ensure that an adequate wastewater collection and treatment system is available to service current demand and future developments.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, wastewater conveyance capacity would be sufficient to provide service for development envisioned by the Specific Plan.
GOAL SD-1. Provide for the planning and funding mechanism to construct, expand, and maintain storm drain facilities needed to protect existing and future development. Policy SD-1.1 Adequate Facilities. The City shall provide storm drain facilities with sufficient capacity to protect the public and property from stormwater drainage.	Potentially Consistent. As described in Section 4.7, Hydrology, the Plan Area is urbanized and connected to an existing storm drainage system located between the City's State Street and Bullis Street systems. Storm water runoff in the Plan Area is currently directed through a series of storm water drainage facilities to the Los Angeles River and eventually the San Pedro Bay. These drainage patterns would be maintained with implementation of development envisioned by the Specific Plan.
Policy SD-1.3. Facilities Management. The City shall manage flood control facilities in accordance with local, state, and federal guidelines.	Potentially Consistent. As described in Section 4.7, Hydrology, the Specific Plan would require LID stormwater management standards in conformance with local, state, and federal guidelines.

General Plan Policy	Discussion
Policy ELC-1.1 Adequate Service Capacity. Ensure adequate, low-cost electricity is available to service current demand and future developments.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, future development in the Plan Area would be adequately served by existing electrical infrastructure. Future development would also be required to comply with Title 24 standards for energy efficiency.
Policy GAS-1.1. Adequate Service Capacity. The City shall work with Southern California Gas Company (SCG) to ensure that adequate, low-cost gas service is available to meet existing demand and service future projects.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, future development in the Plan Area would be adequately served by existing natural gas infrastructure. Future development would also be required to comply with Title 24 standards for energy efficiency.
Policy TEL-1.1. Adequate Service Capacity. The City shall work with Pacific Bell, various long distance telephone companies, and telecommunication companies to ensure that adequate telephone service and telecommunication services are available to meet current and future demand.	Potentially Consistent. As described in Section 4.13, Utilities and Service Systems, future development in the Plan Area would be adequately served by existing telecommunication infrastructure.
GOAL SW-1. Provide for the efficient collection, disposal, recycling, and reuse of solid waste. Policy SW-1.1. The City shall work with Western Waste to ensure low-cost refuse disposal is available for residential, industrial, and commercial properties.	Potentially Consistent. As discussed in Section 4.13, Utilities and Service Systems, no new or expanded waste disposal facilities would be needed to serve the Plan area. Western Waste or a current provider would serve new development associated with the proposed Specific Plan.
GOAL SCH-1. Provide appropriate school facilities to adequately serve the population.	Potentially Consistent. As discussed in Section 4.11, Public Services, the proposed Specific Plan could potentially create the need for additional school capacity or possible expansion of an existing school, the construction of that could impact overall school district service capacity. As part of any future development proposal in the Plan Area that would involve a residential component and may generate students, the project applicant would be required to pay an in-lieu school impact fee. In accordance with SB 50, the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization.
GOAL HC-1. Provide a complete range of medical services to fill the needs of all sectors of the population in the community as well as the surrounding region. Policy HC-1.3. Location of Routine Health Care Facilities. The City shall distribute throughout the Planning Area land use designations that allow medical service facilities.	Potentially Consistent. The Specific Plan would establish the St. Francis Medical district. The intent of this land use district is to meet the existing and future needs of the St. Francis Medical Center campus, while ensuring compatibility with adjacent land uses. The intent is to maintain and promote medical, clinic, medical office, and associated supportive uses, such as incidental retail, supportive residential and parking, and to expand pedestrian linkages and connectivity between the St. Francis Medical Center and the Lynwood Civic Center.
GOAL PR-1. Provide a variety of recreational opportunities to serve the needs of all segments of the population.	Potentially Consistent. The Specific Plan identifies Open Space (O) as a land use district. The intent of this land use district is to create land for parks and open space for active or passive recreational uses.

General Plan Policy	Discussion
Policy PR-1.1. Parkland Acreage. The City shall work to achieve additional acres of parkland.	
Policy PR-1.2. Park Site Selection. The City shall ensure that parks are developed on the appropriate sized parcels in locations that best serve the community.	
Policy PR-1.4. Recreational Activities and Park Amenities. The City shall promote the development of park facilities that allow for both active and passive, as well as commercial recreation.	Potentially Consistent. The Specific Plan identifies Open Space (O) as a land use district. The intent of this land use district is to create land for parks and open space for active or passive recreational uses.
COMMUNITY DESIGN ELEMENT	
Policy 2. Develop design guidelines, which facilitate the creation and identification of distinct neighborhoods throughout the City.	Potentially Consistent. Design guidelines appropriate for each land use district are included in the Land Use and Urban Design Framework Chapter in the Specific Plan.
Policy 3. Develop street median landscape standards to enhance the streetscape.	Potentially Consistent. The improved circulation system envisioned by the Specific Plan would involve implementing landscaping and street furniture improvements. Pedestrian and streetscape improvement strategies encourage the design of parkways and wide sidewalks to accommodate and support large street trees that will enhance the streetscape and improve safety for pedestrians and cyclists.
Policy 5. Ensure that signage is visually attractive, compatible with the neighborhood setting and provides a high quality image for the City.	Potentially Consistent. The Specific Plan includes wayfinding strategies for the establishment of gateway identification signs, district Identification signs, directional signs, and median monument signs.
Policy ED-1.1. Regional Economic Development. The City shall encourage increases in economic development within the Community.	Potentially Consistent. The Plan Area includes regional transportation corridors (i.e., Long Beach Boulevard and Imperial Highway) and land use districts that create opportunities for both locally- and regionally-serving commercial, retail, and entertainment uses, as well as a variety of housing choices within walking distance of transit services. Therefore, the Specific Plan would facilitate opportunities for revitalization likely encouraging new investment and regional economic development.
Policy ED-1.2. Local Economic Development. The community shall strive to diversify its local business makeup so that it avoids dependence on one segment of the local economy to provide employment, revenues, and retail outlets for the citizenry.	Potentially Consistent. The Plan Area includes regional transportation corridors (i.e., Long Beach Boulevard and Imperial Highway) and land use districts that create opportunities for both locally- and regionally-serving commercial, retail, and entertainment uses, as well as a variety of housing choices within walking distance of transit services. Therefore, the Specific Plan would facilitate opportunities for revitalization and would encourage new investment and regional economic development.
PUBLIC HEALTH AND SAFETY ELEMENT	
Policy NOI-1.1. Sensitive Receptors. Prohibit the	Potentially Consistent. As described in Section 4.9, Noise, the Plan

General Plan Policy	Discussion
development of new commercial, industrial, or other noise-generating land uses adjacent to existing residential uses and sensitive noise receptors such as schools, health care facilities, libraries, and churches if noise levels are to exceed 65 dBA CNEL.	Area is surrounded by residential sensitive receptors to the north, east, and south, including the. St. Francis Medical Center and four schools within 1,000 feet of the Plan Area. Future development envisioned in the Plan Area would only include those uses determined to be compatible with surrounding sensitive receptors and those uses deemed to have a less than significant impact on operational noise exposure for sensitive receptors.
Policy NOI-1.3. Ensure that exterior noise levels for dwellings in residential areas do not exceed noise levels of 65dBA CNEL and interior noise levels of 45 dBA CNEL.	Potentially Consistent. The Specific Plan establishes land use districts, development standards (e.g., parking requirements, setbacks, building heights), and design guidelines (e.g., architectural styles, building form and massing, landscaping, signage) that will limit resident exposure to excessive exterior and interior noise. The use of construction techniques documenting compliance with California Building Code, and California Noise Insulation Standards for interior noise are required as part of any future site specific development proposal in the Plan Area.
Policy NOI-1.4. Continue to work with Caltrans and the Federal Highway Administration to mitigate noise impacts on sensitive noise receptors along the Century and Long Beach Freeways.	Potentially Consistent. The Specific Plan establishes an open space buffer between the I-105 and future residential uses in the Transit District. This feature, combined with required compliance with California Building Code and California Noise Insulation Standards, will reduce potential freeway noise impacts to the maximum extent feasible.
Policy NOI-1.5. Provide guidelines to contractor for reducing potential noise impacts on surrounding land uses.	Potentially Consistent. As described in Section 4.9, construction under the Specific Plan would be required to comply with Chapter 3-12.13 of the City of Lynwood Municipal Code, limiting construction activity near noise-sensitive land uses during daylight hours (7:00 a.m. to 10:00 p.m.).
Policy HM-1.4. Ensure that new hazardous waste facilities and those commercial and industrial land uses that use or produce hazardous waste are sited in an appropriate manner.	As discussed in Section 4.6, Hazards and Hazardous Materials, the Plan Area includes areas zoned for industrial uses, and the Specific Plan would not establish any new zoning designations in the Plan Area. Onsite activity involving hazardous substances (e.g., diesel fuel, oil, lubricants), and the transport, storage, handling, and retail sale of these substances must adhere to applicable local, State, and federal safety standards, ordinances, or regulations. Businesses engaged in the use, sale, storage, or transport of hazardous substances are monitored by various local (i.e., Los Angeles County and the Los Angeles County Fire Department) and State (i.e., Department of Toxic Substance Control) entities. Potential future automobile-related uses would be required to store hazardous materials in designated areas designed to prevent accidental release into the environment. Oil and other potentially hazardous waste produced during operation would also be collected, stored, and disposed of in accordance with applicable laws and regulations.
Policy GEO-1.2. Discourage land uses that are considered critical from being located in areas subject to liquefaction hazards, fault rupture, landslides, and seismically induced seiches.	Potentially Consistent. As discussed in Section 4.5, Geology and Soils, according the City of Lynwood's Natural Hazards Mitigation Plan, the entire city is in a liquefaction zone. Full build-out of the Plan Area would increase population in the area, structural development, and infrastructure that would be exposed to these hazards. Therefore, any project proposed under the Specific Plan would be required to comply with applicable provisions for construction in a liquefaction

General Plan Policy	Discussion
	zone of the most recently adopted version of the CBC as well as other laws, policies, and regulations described in Section 4.5. The Plan Area is not located in a region that has been identified on the most recent Alquist-Priolo Earthquake Fault Zoning Map. Therefore, any project developed under the Specific Plan would not expose people or structures to significant risk of loss, injury, or death involving the rupture of an earthquake fault.
Policy OS-1.4. Public Access. The City shall ensure that areas designated as open space for public use remain accessible to the general public.	Potentially Consistent. The Specific Plan includes an Open Space land use district. The intent of this district is to preserve and/or create land for parks and open space for active or passive recreational uses.
Policy WR-1.1. Ensure Clean Water. The City shall ensure that development and redevelopment projects do not degrade surface water and groundwater basins.	Potentially Consistent. As discussed in Section 4.7, Hydrology, future development in the Specific Plan would be subject to multiple permits and approvals associated with the protection of water quality, and actions included under the Specific Plan are expected to occur in compliance with all applicable standards and regulations. With the implementation of these policies, as well as compliance with the permits and regulations discussed in Section 4.7, potential impacts to water quality during construction and operation of future projects in the Plan Area would be minimized or avoided, and impacts would be less than significant.
Policy WR-2.1. Water Conservation. The City shall ensure that water conservation measures are implemented in all development projects.	Potentially Consistent. The Specific Plan establishes the land use districts, development standards (e.g., parking requirements, setbacks, building heights), and design guidelines (e.g., architectural styles, building form and massing, landscaping, signage). The landscaping guidelines require the use of water conserving landscape techniques, such as the use of native plants, water efficient irrigation systems, the use of recycled water for landscape irrigation, and low-impact storm water capture systems.
Policy WR-2.1. The City shall ensure that energy conservation measures are implemented in all development projects.	Potentially Consistent. The Specific Plan establishes the land use districts, development standards (e.g., parking requirements, setbacks, building heights) and design guidelines. The architectural guidelines require compliance with 2008 Building and Energy Efficiency Standards and the 2010 California Green Building Standards Code.
Policy AQ-1.1. Air Quality Mitigation Measures. The City shall ensure that to the extent practical that air quality mitigation measures are incorporated into residential, commercial, and industrial projects.	Potentially Consistent. Program level mitigation would be applied, as described in Section 4.2, Air Quality. In addition, as new development is proposed, the required air quality mitigation measures would be analyzed and applied on a project-level.

Table 16 Specific Plan Policy Consistency with the 2006 Long Beach Boulevard Specific Plan

General Plan Policy	Discussion
Policy 1. Establishment of four villages with distinct functions and focus.	Potentially Consistent. As discussed in Section 4.8, Land Use and Planning, the Specific Plan's proposed land use districts would supersede the previously adopted overlapping land use designations in the Long Beach Boulevard Specific Plan. The Specific Plan's land use districts would promote transit-oriented development, consistent with Long Beach Boulevard Specific Plan's land use plan

General Plan Policy	Discussion
	for Village II and Village III.
Policy 2. Transit-oriented development around Metro Green Line.	Potentially Consistent. Objective 1 of the proposed Specific Plan is to promote transit-oriented development near the Metro Green Line station, specifically to expand accessibility of the station and enhance Plaza Mexico by creating a dynamic transit district with a distinctive identity – an active and attractive hub where people come to live, shop, work, and play.
Policy 3. Combination of land uses, particularly mixed uses.	Potentially Consistent. The Specific Plan establishes land use districts that support mixed uses, including the Transit District, Corridor Mixed-Use 1, and Corridor Mixed-Use 2, Residential, Industrial and St. Francis Medical Center. The Specific Plan encourages a vertical and/or horizontal combination of land uses, including mixed uses; and therefore is consistent with this policy.
Policy 4. Strong architectural and landscape character.	Potentially Consistent. The Specific Plan provides guidelines to ensure sustainable landscape design and aesthetically pleasing architectural character. In addition, each land use district has a set of development standards that will ensure context sensitive architectural design.
Policy 5. Pedestrian connectivity to transit.	Potentially Consistent. Objective 4 of Specific Plan states: "Enhance Pedestrian Comfort and Safety – Increase facilities, add connections, and multiply opportunities to safely and conveniently get around the area on 'complete streets' by foot, bike, and public transit." Therefore, the Specific Plan would enhance pedestrian and bicycle connectivity to transit.

Table 17 2015-2025 Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy Advisory Land Use Policies

RTP/SCS Advisory Policy	Discussion
1. Identify regional strategic areas for infill and reinvestment. Identify strategic opportunity areas for infill development of aging and underutilized areas and increased investment in order to accommodate future growth.	Potentially Consistent. An objective of the Specific Plan is to "Consolidate Uses and Create New Development Sites" in order to identify sites most suitable for assembly and revitalization. The proposed land use districts, including Transit District, Corridor Mixed Use-1, Corridor Mixed-Use 2, Residential (R), Industrial (I), and St. Francis Medical Center (SFM) would accommodate infill development and revitalization of aging and underutilized areas, which would be likely to attract future growth to the Plan Area.
2. Structure the plan on a three-tiered system of centers development. Identify strategic centers based on a three-tiered system of existing, planned, and potential, relative to transportation infrastructure.	Not applicable. This policy is specific to plan development of the SCAG RTP/SCS and does not apply to the Specific Plan.
3. Develop "complete communities." Create mixed-use districts, or "complete communities," in strategic growth areas through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other.	Potentially Consistent. The Specific Plan would ensure that mobility, accessibility, travel safety, and reliability for people and goods would be maximized. Furthermore, the Specific Plan is designed to create sustainable, urban neighborhoods, focused on providing a blend of parks, strong businesses, and transit-oriented housing, as well as a wide range of multi-modal transportation practices.

RTP/SCS Advisory Policy	Discussion
4. Develop nodes on a corridor – Intensity nodes along corridors with people-scaled, mixed-use developments.	Potentially Consistent. Objective 1 of the Specific Plan states: "Expand on the accessibility of the Green Line station and the energy at Plaza Mexico by creating a dynamic transit district with a distinctive identity-an active and attractive hub where people come to live, shop, work, and play." As the Specific Plan is focused around the Long Beach Boulevard Metro Green Line station, its objectives would contribute to this advisory policy.
5. Plan for additional housing and jobs near transit. Support and improve transit use and ridership by creating pedestrian-friendly environments and more compact development patterns in close proximity to transit.	Potentially Consistent. The Specific Plan would ensure that mobility, accessibility, travel safety, and reliability for people and goods would be maximized. Furthermore, the Specific Plan is designed to create sustainable, urban neighborhoods focused on providing a blend of parks, strong businesses, and transit-oriented housing, as well as a wide range of multi-modal transportation practices.
6. Plan for a changing demand in types of housing. Address shifts in the labor force that will likely induce a demand shift in the housing market for additional development types such as multi-family and infill housing in central locations, which will appeal to the needs and lifestyles of these large populations.	Potentially Consistent. The Specific Plan would allow for shifts in the labor force. The proposed land use districts would allow a variety of urban housing choices (e.g., multi-family and infill housing) near the Long Beach Boulevard Green Line station. The Specific Plan would address a demand for a variety of housing choices close to public transit; and would likely appeal to the needs and lifestyles of a wide range of residents
7. Continue to protect stable, existing single-family areas. Continue to protect stable, existing single-family neighborhoods as future growth and a more diverse housing stock are in infill locations near transit stations.	Potentially Consistent. The Specific Plan includes a Residential (R) land use district. The intent of this zone is to preserve existing and allow new small-to-medium zone lot detached homes and reinforce their role in a walkable neighborhood. This zone generally applies to the parcels located northwest and south of Imperial Highway and east of Long Beach Boulevard, as shown on the Specific Plan land use diagram.
8. Ensure adequate access to open space and preservation of habitat. Ensure access to open space and habitat preservation despite competing quality-of-life demands driven by growth, housing, and employment needs, and traditional development patterns.	Potentially Consistent. Objective 5 of the Specific Plan states, "increase landscaped areas, parks, open space, and trails that are supportive of the public life of the community." The proposed Specific Plan also creates an Open Space (O) land use district that will expand recreational opportunities in the Plan Area.
9. Incorporate local input and feedback on future growth. Continue public outreach efforts and incorporate local input through public workshops, scenario planning, and stakeholder outreach.	Potentially Consistent. The preparation of the Specific Plan involved multiple rounds of public outreach including two community meetings, regular monthly stakeholder meetings, and public meetings before the City Council.

Airport Land Use Compatibility Plan

The closest airport, the Compton/Woodley Airport, is approximately two miles southwest of the Plan Area. The Plan Area is outside of the Airport Influence Area of the Compton/Woodley Airport (County of Los Angeles 2004); therefore development under the proposed Specific Plan would not be required to comply with standards for exterior and interior noise standards in the Airport Influence Area.

Conclusion

The project is potentially consistent with goals, policies, and objectives of the City of Lynwood General Plan, the Long Beach Boulevard Specific Plan, and the 2012-2035 SCAG RTP/SCS, with inclusion of the mitigation measures described throughout this EIR and as described in the tables above.

Impact LU-2	The proposed Specific Plan would not allow new development that would be incompatible with surrounding residential land uses and the existing pattern of development in the Plan Area. Therefore, impacts would be *less than significant.*

Existing commercial land uses in the Plan Area primarily include neighborhood commercial uses along the Imperial Highway and Long Beach Boulevard, a regional commercial shopping center, Plaza Mexico, south of Imperial Highway and west of Long Beach Boulevard, and St. Francis Medical Center located just west of the Imperial Highway/Martin Luther King Jr. Boulevard. Existing residential land uses are located north of the commercial uses along the Imperial Highway corridor and east and west of the commercial uses along the Long Beach Boulevard corridor. Existing industrial uses in the Plan Area are located along the Alameda Street Corridor, west of Alameda Street along Imperial Highway. Some of the industrial properties contain heavy industrial uses with a history of contamination. In this existing land use setting, the Specific Plan establishes seven land use districts, including: 1) Transit District (TD), 2) Corridor Mixed-Use-1 (CMU-1), 3) Corridor Mixed-Use-2 (CMU-2), 4) Limited Industrial (I), 5) St. Francis Medial (SFM), 6) Residential (R), and 7) Open Space (OS).

The proposed Specific Plan outlines seven primary objectives (outlined in detail in Section 2.4, Project Objectives). To meet these objectives, the Specific Plan is designed to create a sustainable mix of urban neighborhoods focused on providing a blend of businesses, and transit-oriented housing, parks and open spaces, as well as a wide range of multi-modal transportation practices. The list of permitted uses, development standards, design guidelines, landscape guidelines, and strategies promoting integration between new development have all been tailored for each land use district proposed in the Specific Plan in order to ensure that future development would create a cohesive community of residential, commercial, employment-generating, open space and other uses. Furthermore, the Specific Plan would enable development to occur incrementally and the City's design review process would ensure that potential land use compatibility issues related to height and massing, noise, and parking, are addressed on a project-by-project basis. Therefore, impacts from land use incompatibility would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation.

Impacts would be less than significant without mitigation.

c. Cumulative Impacts

Cumulative development in the Plan Area, represented by buildout under the Specific Plan, would result in an overall intensification of land uses. As discussed in Section 2.0, Project Description, the Specific Plan would accommodate up to 3,500 multi-family units, 1,200,000 square feet of commercial space, 750,000 square feet of limited industrial space, and 350 hotel rooms. While the Specific Plan would increase the intensity of development in the Plan Area beyond that envisioned in the Long Beach Boulevard Specific Plan and 2012 RTP/SCS, the project-specific impacts related to land use compatibility would be less than significant, as discussed in Impact LU-2. The Specific Plan would be consistent with overall goals and policies in the Lynwood General Plan, as discussed in Impact LU-1. Therefore the project-specific impacts associated with land use consistency would be less than significant. Potential impacts would not be cumulatively considerable.

4.9 Noise

4.9.1 Setting

a. Overview of Noise

Noise is generally considered to be unwanted sound, perceived by the ear when pressure fluctuations occur. There are many ways in which pressure fluctuations are generated, but typically they are caused by the vibrating movement of a solid object (FTA 2006). Noise can result in annoyance or it can cause direct physical damage or environmental stress.

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (or drop off) at a rate of 6 dBA for each doubling of distance from point sources (e.g., industrial machinery). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance. Noise levels may also be reduced by intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed (approximately 30 years old or older) generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units and office buildings is generally 30 dBA or more (FTA 2006).

In addition to the actual, instantaneous measurement of sound levels the duration of a sound is important since those that occur over a long period of time are more likely to become an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. Lmax is the highest RMS (root mean squared) sound pressure level during the measurment period, and Lmin is the lowest RMS sound pressure level during the measuring period.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime (10 p.m. to 7 a.m.) hours, or Community Noise Equivalent Level (CNEL), the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7 p.m. to 10 p.m. and a 10 dBA penalty for noise occurring from 10 p.m. to 7 a.m. Noise levels described by Ldn and CNEL usually do not differ by more than 1 dB.

b. Existing Noise Levels

City of Lynwood. Primary sources of intrusive sound in the region are attributed to motor vehicles traveling on area roads and highways, aircraft activities, train operations, and commercial/industrial operations. According to the City's General Plan Noise Element, the largest noise generators in the city are those caused by transportation uses. including traffic on the I-105, the I-710, and on major arterials like Atlantic Street, Imperial Highway, Long Beach Boulevard, and Martin Luther King Jr. Boulevard (City of Lynwood 2003).

Rail operations are also a significant source of noise. Four rail lines run beside Alameda Street, along the western boundary of the city and the Plan Area. All are owned by Union Pacific Railroad (UPRR), and carry mostly freight traffic. The Metro Green Line runs on elevated tracks along I-105. Therefore, frequent commuter trains contribute to the adjacent freeway traffic noise.

Aircraft approaching Los Angeles International Airport (LAX) are the main source of aircraft noise in the city. Flight paths from LAX pass over the city, but the noise generated is regulated by the FAA and is outside of the jurisdiction and influence of the city. The Compton/Woodley Airport and Hawthorne Municipal Airport are the closest municipal facilities, approximately three miles southwest and approximately six miles west of the Plan Area, respectively. While noise from flight operations would be audible, the Plan Area is outside of the 55 dBA CNEL noise contours for both of these airports (Los Angeles County Airport Land Use Commission 2016).

Other sources of noise in the community include stationary ones associated with industrial and commercial uses. Many uses in industrial areas generate noise from the regular operation of equipment such as generators, fans, chillers, compressors, boilers, pumps, and air conditioning systems that may operate continually. Other sources of noise can include gas stations, car washes, fire stations, commercial mechanical equipment, child care centers, and schools. Although these sources do not usually produce sound levels as great as those from industry, they are more frequently located near residential or other noise-sensitive uses, and it follows that they can be sources of irritation and complaint.

Plan Area and Vicinity

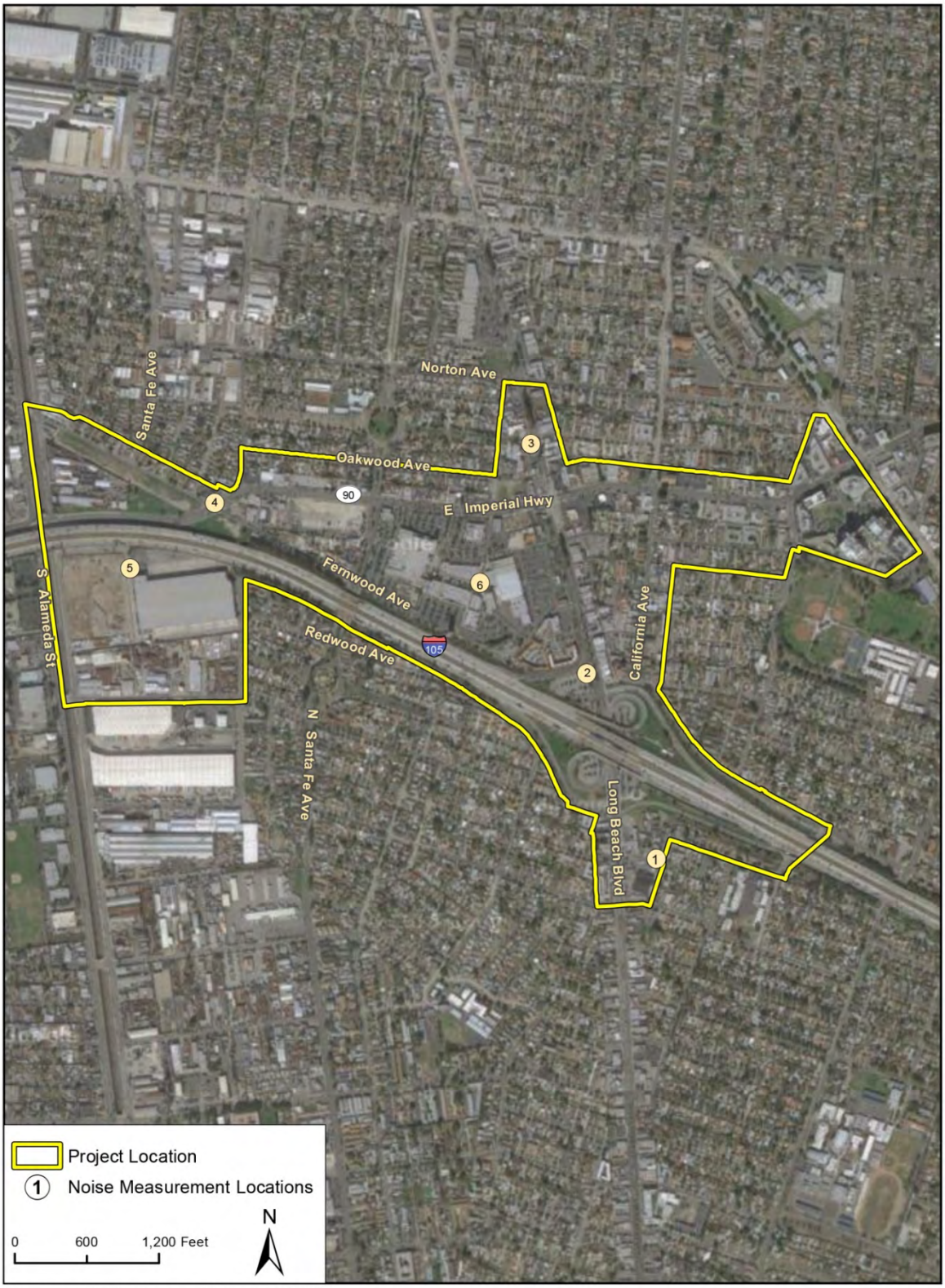
To establish the existing conditions, noise level readings were taken on February 22, 2016 at six locations in the Plan Area using an ANSI Type II integrating sound level meter in accordance with industry standard protocols (Figure 12). The noise measurements were collected between 7:50 a.m. and 11:10 a.m., and provide an estimate of the noise environment during morning peak hours in the Plan Area. Locations were selected as representative of actual noise levels from major roadways. These measurements provide baseline data against which modeled noise level projections can be compared. Table 18 identifies the noise measurement locations and measured noise levels. Figure 12 shows the location of the noise measurements. The table demonstrates that the locations nearest Long Beach Boulevard, Imperial Highway, and the I-105 Freeway are exposed to the highest noise levels as a result of traffic.

Table 18 Noise Measurement Results (dBA)

Measurement Location	Distance to Roadway Centerline	Primary Noise Source	Sample Time	Leq
#1 Lynwood Road and Lewis Street	15 feet	Vehicle traffic on Lynwood Road and freeway	2/22/16 7:52 a.m.– 8:07 a.m.	70
#2 Metro parking lot on Long Beach Boulevard	80 feet	Vehicle traffic on Long Beach Boulevard and freeway	2/22/16 8:30 a.m.– 8:45 a.m.	73
#3 Southwest corner Long Beach Boulevard and Los Flores Boulevard	46 feet	Vehicle traffic on Long Beach Boulevard	2/22/16 9:07 a.m.– 9:22 a.m.	78.4
#4 Imperial Highway and Fernwood Avenue	50 feet	Vehicle traffic on Imperial Highway	2/22/16 9:36 a.m.– 9:51 a.m.	76.9
#5 Philadelphia Way and Philadelphia Way	16 feet	Construction	2/22/16 10:21 a.m.– 10:36 a.m.	62.4
#6 Center of Plaza Mexico	+500 feet	Plaza patrons	2/22/16 10:55 a.m.– 11:10 a.m.	65.2

Source: Field visit using ANSI Type II Integrating sound level meter. See Appendix C for noise measurement data sheets

Figure 12 Noise Measurement Locations



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c. Sensitive Receptors

The Lynwood General Plan Noise Element defines sensitive noise receptors as residential uses, schools, health care facilities, libraries, and churches. Many jurisdictions also consider residential uses particularly noise sensitive because families and individuals expect to use time at home for rest and relaxation, and noise can interfere with those activities.

The Plan Area is surrounded by noise-sensitive residential land uses in each direction. Five schools are located within approximately 1,000 feet of the Plan Area. They include Wilson Elementary School approximately 500 feet to the east, Lincoln Elementary approximately 900 feet to the north, Marshall Elementary approximately 650 feet to the north, Pathway High School approximately 1,000 feet to the east, and Hosler Middle School approximately 1,000 feet to the east. The Saint Francis Medical Center is also located in the Plan Area.

d. Regulatory Setting

Federal

Under the Occupational Safety and Health Act of 1970 (OSHA) (29 U.S.C. §651 et seq.), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) adopted regulations (29 CFR §1910.95) designed to protect workers against the effects of occupational noise exposure. These regulations list limits on noise exposure levels as a function of the amount of time during which the worker is exposed, as shown in Table 19. The regulations further specify requirements for a hearing conservation program (§1910.95(c)), a monitoring program (§1910.95(d)), an audiometric testing (i.e., test of hearing ability) program (§1910.95(g)), and hearing protection (§1910.95(i)). There are no federal laws governing community noise.

Table 19 OSHA Permissible Noise Exposure Standards

Duration of Noise (Hours/Day)	A-Weighted Noise Level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

Source: OSHA, 2008 as amended

FEDERAL HIGHWAY ADMINISTRATION

The Federal Highway Administration (FHWA) provides procedures and criteria for noise assessment studies for federal highway projects. It requires that noise abatement measures be considered on all major transportation projects if the project will cause a significant increase in noise levels, or if projected noise levels approach or exceed the noise abatement criteria level for activities occurring on adjacent lands. The California Department of Transportation (Caltrans) utilizes similar procedures and criteria.

The FHWA Noise Assessment Criteria for various land use ratings are given in Table 20. These noise criteria are assigned to both exterior and interior activities. The FHWA identifies a traffic noise impact when the predicted traffic noise levels approach or exceed the noise abatement criteria. If these criteria sound levels are predicted to be approached or exceeded during the noisiest one-hour period, noise abatement measures must be considered and, if found to be reasonable and feasible, they must be incorporated as part of a given project.

AIRCRAFT NOISE REGULATIONS

The Federal Aviation Administration (FAA) and the State of California Airport Noise Standards have established the Yearly Average CNEL as the noise standard by which airport noise and land compatibility is judged. The agencies have identified the 65 dBA CNEL contour for airport operations as the Noise Impact Boundary. Within this boundary airport operators are required to ensure that all land uses are compatible with the aircraft noise environment or the operator must provide noise mitigation or secure a variance from the governing agencies. Under most circumstances residences are considered to be an incompatible land use within the 65 dBA CNEL noise contour. The Plan Area is outside of the LAX 65 dBA CNEL noise contour.

Table 20 Federal Noise Abatement Criteria – Hourly A-weighted Sound Level Decibels (dBA)

Rank	Activity Criteria[2] Leq(h)	Activity Criteria[2] L10(h)	Evaluation Location	Suitable Locations
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[3]	67	70	Exterior	Residential
C[3]	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E[3]	72	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	--	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	--	Undeveloped lands that are not permitted

Source: FHWA, 2011

1- Either Leq(h) or L10(h) (but not both) may be used on a project.
2- The Leq(h) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.
3- Includes undeveloped lands permitted for this activity category

State

The California Commission of Housing and Community Development officially adopted noise insulation standards in 1974. In November 1988, the Building Standards Commission approved revisions to these standards (Title 24, Part 2,

California Code of Regulations). The standards are in Chapter 12 of the California Building Code and apply to all new construction in California.

Title 24 requires that interior noise levels attributable to exterior sources must not exceed 45 dB in any habitable room. Additionally, the code specifies that multi-family residential buildings or structures that will be located in exterior CNEL (or Ldn) contours of 60 dB or greater from sources such as a freeway, expressway, parkway, major street, thoroughfare, airport, rail line, rapid transit line, or industrial noise source shall require an acoustical analysis showing that the building has been designed to limit intruding noise to an interior CNEL (or Ldn) of 45 dB. Worst-case noise levels must be used to determine compliance. Predictions must also be made for future noise levels for a period of at least 10 years from the time of building permit application.

California Government Code §65302 encourages each local government entity to implement a noise element as part of its general plan. In addition, the California Governor's Office of Planning and Research has developed guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.

Regional and Local

LYNWOOD GENERAL PLAN 2020 – NOISE ELEMENT

The Lynwood General Plan Noise Element contains a goal, policies, and implementation measures to control noise and promote compatibility of land uses with respect to noise. The Noise Element does not explicitly establish exterior noise standards, but it does reference noise and land use compatibility standards developed by the Office of Noise Control (ONC), considered representative for use in the city of Lynwood. These standards define noise exposure for various land uses that are considered acceptable, conditionally acceptable, or unacceptable. An acceptable noise environment is one in which development may be permitted without requiring specific noise studies or specific noise-reducing features. A conditionally acceptable noise environment is one is in which development should be permitted only after noise mitigation has been designed as part of the project, to reduce noise exposure to acceptable levels. In unacceptable noise environments, development generally should not be undertaken.

Low-density residential uses with noise levels of up to 60 dBA CNEL are considered "normally acceptable" (65 dBA CNEL for multifamily uses). For schools, churches, hospitals, and business and commercial areas, noise levels up to 70 dBA CNEL are "normally acceptable." For industrial, manufacturing, and utility uses, noise levels up to 75 dBA CNEL may be considered "normally acceptable." Furthermore, the Lynwood General Plan Noise Element includes the following goal and policies to regulate noise impacts:

Goal NOI-1 – Protect those living, working, and visiting the community from exposure to excessive noise:

> *Policy NOI-1.1. Sensitive Receptors. Prohibit the development of new commercial, industrial, or other noise-generating land uses adjacent to existing residential uses and sensitive noise receptors such as schools, health care facilities, libraries, and churches if noise levels are to exceed 65 dBA CNEL (decibels on A-weighted scale Community Noise Equivalent Level).*
>
> *Policy NOI-1.2. Sleep Interference. Ensure that excessive noise levels do not interfere with sleep through the implementation of land use requirements.*
>
> *Policy NOI-1.3. Protect Residential Areas. Ensure that exterior noise levels for dwellings in residential areas do not exceed exterior noise levels of 65 dBA CNEL and interior noise levels of 45 dBA CNEL.*
>
> *Policy NOI-1.4. Highway Noise. Continue to work with Caltrans and Federal Highway Administration to mitigate noise impacts on sensitive noise receptors along the Century and Long Beach Freeways.*
>
> *Policy NOI-1.5. Construction Noise. Provide guidelines to contractors for reducing potential noise impacts on surrounding land uses.*

CITY OF LYNWOOD MUNICIPAL CODE

Chapter 3-12 of the City of Lynwood Municipal Code establishes regulations and standards regarding the generation of noise. The regulations identify exterior noise levels impacting residential, commercial, and manufacturing land uses. Ambient base noise level standards are set forth in Table 21.

Table 21 Noise Standards

Zone	Day (7:00 a.m. to 7:00 p.m.)	Day (7:00 a.m. to 7:00 p.m.)	Day (7:00 a.m. to 7:00 p.m.)
R-1 and R-2	60	60	60
R-3	60	60	55
Commercial	65	65	60
Manufacturing	75	75	75

Source: City of Lynwood Municipal Code, Chapter 3-12.5

For the construction of buildings and projects, the Municipal Code provides the following guidance:

> *It shall be unlawful for any person within a residential zone, or within a radius of five hundred feet (500') therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten o'clock (10:00) P.M. of one day and seven o'clock (7:00) A.M. of the next day in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the director of development services or his or her designee. No permit shall be required to perform "emergency work" as defined in subsection 3-12.2 of this section.* (Chapter 3-12.13)

4.9.2 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

The analysis of noise impacts considers the effects of both temporary construction-related noise and operational noise associated with long-term development under the Specific Plan, including its associated traffic. Construction noise estimates are based upon noise levels reported by the Federal Transit Administration (FTA), Office of Planning and Environment (FTA 2006) in the *Transit Noise and Vibration Impact Assessment*, and the distance to nearby sensitive receptors. Reference noise levels from the FTA document are used to estimate noise levels at adjacent sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Construction noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. The locations and land uses of future development under the proposed Specific Plan are not known. Therefore, it is assumed that construction would be immediately adjacent to sensitive receptors (as close as 25 feet). Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise. Construction activities are considered to be temporary because such activities do not occur in the same location for an extended period of time. While construction in the Plan Area would occur over more than 20 years (the buildout year for the proposed Specific Plan is 2035), the actual location from which noise would be generated would shift as different areas are developed.

Noise levels associated with existing and the proposed Specific Plan's buildout-related traffic along area roadways were calculated using the FHWA Traffic Noise Model Version 2.5 (U.S. Department of Transportation, FHWA, February 2004) (noise model data is provided in Appendix C to this EIR). The model calculations are based on traffic data discussed in Section 4.12, *Transportation and Circulation*. The May 2006 FTA *Transit Noise and Vibration Impact Assessment* recommendations were used to determine whether or not increases in roadway noise would be considered significant.

Significance Thresholds

Pursuant to Appendix G of the *CEQA Guidelines*, potentially significant impacts would occur if adoption of the Specific Plan would result in any of the following conditions:

1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
2 Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels
3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
5 For a project located in 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 level
6 For a project in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels

Based on the following discussions, impacts related to criteria 5 and 6 were found to be less than significant and are not discussed further in this EIR. The Plan Area is not located in any airport noise impact contours and would therefore not expose residents or workers to excessive noise levels from airport or private air strip operations. Section b (Impacts and Mitigation Measures) provides the impact analyses associated with criterion 1 under Impact N-1, criterion 2 under Impact N-2, and criteria 3 and 4 under Impact N-3.

For threshold number 1, an impact would be potentially significant if it would expose people to or generate noise levels in excess of standards established in the City of Lynwood General Plan Noise Element, the City of Lynwood Municipal Code, or other applicable agencies.

For threshold number 2, an impact would be potentially significant if an existing or proposed receptor would be exposed to vibration levels above the following standards, as established by FTA:

- 80 VdB at residences and buildings where people normally sleep
- 83 VdB at institutional buildings
- 100 VdB for fragile buildings

For traffic noise increases generated by the project (threshold number 3), impacts would be significant if that noise would result in exposure of sensitive receptors to unacceptable noise levels. The allowable noise exposure increase adjusts as noise exposure increases, such that lower ambient noise levels are allowed a higher noise exposure increase. Table 22 shows the significance thresholds for increases in traffic-related noise levels caused by the project. If residential development or other sensitive receptors would be exposed to traffic noise increases exceeding the FTA criteria, impacts would be considered significant.

Table 22 Significance of Changes in Operational Roadway Noise Exposure

Existing Noise Exposure	Allowable Noise Exposure Increase Ldn or Leq in dBA
45-50	7
50-55	5
55-60	3
60-65	2
65-75	1
75+	0

Source: FTA, May 2006

For threshold number 4, an impact would be potentially significant if construction activities that cause noise levels to exceed the standards shown in Table 21 or Chapter 3-12.13 of the City of Lynwood Municipal Code.

b. Project Impacts and Mitigation Measures

Impact N-1 Development associated with the proposed Specific Plan would be subject to Lynwood General Plan policies and would be required to comply with the Lynwood General Plan Noise Element Land Use and Noise Compatibility Guidelines. Impacts that expose people to or generate noise levels in excess of standards would be *less than significant*.

Buildout under the proposed Specific Plan would have significant noise impacts if it would expose people to or generate noise levels in excess of standards established in the Lynwood General Plan, Municipal Code noise ordinances, or by other applicable agencies. Specifically, the proposed Specific Plan would be subject to policies NOI-1.1 through NOI-1.5 under Goal NOI-1, discussed above. Policy NOI-1.1 prohibits new land uses adjacent to existing residential uses and/or sensitive noise receptors if they would cause noise levels exceeding 65 dBA CNEL. Therefore, new development under the proposed Specific Plan would be limited to areas where compliance with the City of Lynwood General Plan land use and noise compatibility guidelines would be possible. Otherwise, development would have to include measures to reduce noise to acceptable levels. Policy NOI-1.3 further reinforces the 65 dBA threshold for residential uses.

The Specific Plan would facilitate the development of new residential and other noise-sensitive uses that could be exposed to long-term noise exceeding the 65 dBA threshold. New noise sensitive uses would include residential development, a large majority of which would be located near Long Beach Boulevard, Imperial Highway, and I-105. Potential sources of noise exposure include traffic on city roadways, traffic from the elevated railroad along I-105, increased commercial activity especially along Long Beach Boulevard and Imperial Highway, and industrial activity on sites adjacent to or near noise-sensitive uses. For most sites, the primary generator of noise that could affect sensitive receptors would be roadway traffic. New residences could also be exposed to noise generated by commercial or industrial activity that exceeds the normally acceptable range.

As described in Chapter 2, Land Use Framework and Development Standards, of the Specific Plan, shared parking facilities would be constructed along the southern edge of the Downtown District in order to buffer uses from freeway noise. The Lynwood General Plan Noise Element includes additional development standards and design guidelines to protect existing and proposed single-family and multi-family residential development from excessive noise. For example, proposals for future residential development in the Transit District and the Corridor Mixed Use-1 and Corridor Mixed Use -2 districts would be required to prepare a site-specific acoustic study and implement effective interior and exterior construction techniques to reduce exterior noise levels below 65 dBA and interior

noise levels below 45 dBA. These measures would be enforced by Policies NOI-1.1 and NOI-1.3 of the Lynwood General Plan Noise Element and are specifically required as Mitigation Measures N-3(a) and N-3(e) below. Based on the implementation of Specific Plan development framework related to noise attenuation and compliance with Lynwood General Plan policies and the aforementioned mitigation measures, buildout of the Specific Plan would not result in any significant impacts related to established land use/noise compatibility standards. Impacts would be less than significant.

MITIGATION MEASURES

No mitigation is required. Impacts would be less than significant without mitigation.

Significance after Mitigation

Noise generated by buildout of the proposed Specific Plan would be less than significant.

Impact N-2	Construction-related activities associated with implementation of the Specific Plan would intermittently generate high noise levels and groundborne vibration in and adjacent to the Plan Area. Nevertheless, buildout of the Specific Plan would comply with the requirements of the Lynwood General Plan for noise. In addition, with adherence to City of Lynwood Municipal Code Chapter 3-12.3, impacts would be *less than significant.*

Residences and businesses adjacent to proposed development would be affected by construction noise during buildout of the Specific Plan. Most of the time construction noise impacts result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), when construction occurs in areas immediately adjacent to noise sensitive land uses, or when the duration of construction extends over long periods of time. Major noise-generating construction activities could include demolition activities, site grading and excavation, building erection, paving and landscaping. These activities could occur in areas immediately adjacent to existing noise-sensitive receptors or receptors proposed for future development under the Specific Plan.

The highest construction noise levels would be generated during grading and excavation, with lower noise levels occurring during building construction. Large earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 90 to 95 dBA at a distance of 25 feet. Table 23 gives the noises levels generated by common types of construction equipment. Typical hourly, average, construction-generated noise levels are about 85 to 90 dBA when measured at a distance of 25 feet from the site during busy construction periods. These noise levels drop off at a rate of about 6 dBA for each doubling of distance between the noise source and the receptor. Intervening structures or terrain would also attenuate noise and would reduce levels.

Table 23 Typical Noise Levels Generated by Construction Equipment

Equipment	Type	Typical Lmax (dBA) Distances from the Source	
		25 Feet	50 Feet
Air Compressor	Stationary	87	81
Backhoe	Mobile	86	80
Compactor (ground)	Mobile	89	83
Concrete Mixer	Stationary	91	85
Dump Truck	Mobile	82	76
Excavator	Mobile	87	81
Flat Bed Truck	Mobile	80	74
Front End Loader	Mobile	85	79
Generator	Stationary	87	81

Equipment	Type	Typical Lmax (dBA) Distances from the Source	
		25 Feet	50 Feet
Grader	Mobile	89	83
Paver	Mobile	95	89
Pickup Truck	Mobile	81	75
Pneumatic Tools	Stationary	91	85
Roller	Mobile	86	80
Saw	Stationary	76	70
Warning Horn	Stationary	89	83
Welder/Torch	Stationary	80	74

Source: FHWA, 2006.

Noise levels anticipated over temporary periods of time from construction activities related to the Specific Plan would exceed an hourly average of 65 dBA Leq and existing ambient noise levels by 5 dBA or more for sensitive receivers adjacent to potential development sites. In addition, construction activities may last for extended periods of time; therefore, the Specific Plan's construction noise impacts would be potentially significant.

Vibration from construction activities could also have an impact on nearby noise-sensitive land uses. The primary sources of man-made vibration are blasting, grading, pavement breaking and demolition. The primary vibratory source during construction in the Plan Area would likely be large bulldozers used to demolish existing structures and large trucks loaded with supplies and debris. Table 24 identifies vibration velocity levels for the common types of equipment that could be used in the Plan Area during construction. As shown in the table, typical bulldozer or loaded truck activities generate an approximate vibration level of 58-87 Vdb at a distance of 25 feet. Vibration levels in excess of 80 VdB often result in annoyance. As such, if existing and future residences located 25 feet from potential future construction in the Plan Area may intermittently be disturbed by vibration noise. As the Specific Plan involves residential and commercial land uses where standard construction techniques would be employed, vibration levels are not be anticipated to exceed 100 VdB in the Plan Area, which is the threshold where minor damage can occur in fragile buildings. Furthermore, construction under the Specific Plan would comply with Chapter 3-12.13 of the City of Lynwood Municipal Code limiting construction near sensitive land uses to daylight hours or 7:00 am to 10:00 pm. Therefore, construction-related groundborne noise and vibration would not be significant at receptors because activities would occur outside hours when people normally sleep. Further, construction-related noise and vibration would be temporary and intermittent and would not result in long-term noise impacts. Impacts would be less than significant.

Table 24 Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB	
	25 Feet	50 Feet
Large Bulldozer	87	81
Loaded Trucks	86	80
Jackhammer	79	73
Small Bulldozer	58	52

Vibration levels assume an attenuation rate of 6 VdB per doubling of distance.
Source: FTA 2006

MITIGATION MEASURES

Impacts would be less than significant with compliance with Chapter 3-12.13 of the City of Lynwood Municipal Code, which limits construction in the vicinity of noise sensitive land uses to daylight hours or 7:00 am to 10:00 pm.

Significance after Mitigation

Construction noise and vibration generated by buildout of the proposed Specific Plan would be less than significant.

Impact N-3	Traffic generated by buildout of the proposed Specific Plan would incrementally increase noise levels on roads in the Plan Area. The increase of up to 0.2 dBA would exceed the FTA Significance of Changes in Operational Roadway Noise Exposure thresholds. Compliance with the standards required in the Lynwood General Plan and implementation of Mitigation Measures N-3(a) through N-3(e) would reduce roadway noise impacts to the maximum extent feasible. With mitigation, roadway noise impacts to interior noise levels in residences would be reduced to a less than significant level. However, roadway noise impacts to exterior noise levels would be *significant and unavoidable*.

Buildout of the Specific Plan would result in an increase in the average number of daily vehicle trips and peak hour trips along the Long Beach Boulevard, I-105, and Imperial Highway roadway segments in the Plan Area. Traffic generated by buildout of the Specific Plan on these roadways is discussed in Section 4.12, Transportation and Circulation. The traffic levels described in that section were used to determine the Specific Plan's traffic-related noise impacts on sensitive receptors located along each roadway (Table 25). The Specific Plan would facilitate the development of new residential and other noise-sensitive uses that could be exposed to long-term noise from traffic generated along Long Beach Boulevard, I-105, and Imperial Highway roadway segments in the Plan Area.

The 24-hour average (dBA Ldn) traffic noise levels were modelled for Imperial Highway, I-105, and Long Beach Boulevard. Noise receptors were placed along these roadways and compared to Noise Measurements 1, 2, and 4 included in Table 25. These noise measurement locations are exposed to noise solely produced by the modelled roadways, and therefore were selected for an accurate measure of roadways noise increase. Traffic noise exposure for Measurement Locations 3 and 5 were not modelled since the traffic noise model did not account for roadway noise produced by Los Flores Boulevard and Philadelphia Way respectively. Measurement Location 6 received noise from non-traffic noise sources and therefore could not be accurately modelled for this assessment of traffic-related noise.

As shown in Table 25, existing traffic noise levels exceed 75 dBA Ldn. Therefore, traffic-related noise impacts would be significant if roadway noise would increase exterior, ambient noise levels (over 0 dBA) under the FTA significance of change in noise thresholds shown in Table 22. The increase in exterior ambient noise levels range from 0.1 to 0.2 dBA Ldn. This increase in noise exceeds the 0 dBA threshold for noise levels over 75 dBA and could be potentially significant without mitigation

Table 25 Existing and Existing Plus Project Sound Levels from Roadways in the Vicinity of the Plan Area (dBA Leq)[1]

Measurement Location	Modelled Existing Conditions (Dba Ldn)	Existing + Project Conditions	Change in Existing Noise (dBA)	Threshold Exceeded (Change Greater than 0 dBA)?[2]
#1 Lynwood Road and Lewis Street	76.9	77.1	0.2	Yes
#2 Metro parking lot on Long Beach Boulevard	76.8	77.0	0.2	Yes
#4 Imperial Highway and Fernwood Avenue	79.2	79.4	0.2	Yes

Source: FHWA Traffic Noise Model Version 2.5
Refer to Appendix C for full noise model output. Noise levels presented do not account for attenuation provided by all existing barriers or future barriers; therefore, actual noise levels at sensitive receptor locations influenced by study area roadways may in many cases be lower than presented herein.

Notes:
1. Average daily traffic based on ADT volume traffic for roadway segments analyzed in Section 4.12, Transportation and Circulation.
2. As existing noise levels exceed the ONC "normally acceptable" level, traffic-related noise impacts would be significant if roadway noise would result in a 0 dBA or more increase to noise levels at sensitive receptors.

To specifically address noise impacts on residential areas coming from I-105 and Long Beach Boulevard, the Lynwood General Plan Noise Element includes the following policies:

> *Policy NOI-1.3. Protect Residential Areas. Ensure that exterior noise levels for dwellings in residential areas do not exceed exterior noise levels of 65 dBA CNEL and interior noise levels of 45 dBA CNEL.*
>
> *Policy NOI-1.4. Highway Noise. Continue to work with CalTrans and Federal Highway Administration to mitigate noise impacts on sensitive noise receptors along the Century and Long Beach Freeways.*

In addition, development projects adjacent to METRO facilities are typically required to record a Noise Easement Deed that includes standards language related to METRO light rail and bus noise production. In addition, METRO has adopted design criteria for development adjacent to its rail systems to help reduce the risk of noise impacts on adjacent land uses.

Noise impacts can sometimes be mitigated on a case-by-case basis by implementing appropriate design methods, including building setbacks, building siting, sound barriers, and sound attenuating building techniques. Therefore, the use of such methods on all new development in the Plan Area would be expected to result in an acceptable noise environment. Implementation of the above policies would address and reduce traffic noise impacts to new sensitive receptors developed under the proposed Specific Plan to the greatest extent feasible.

Mitigation Measures

In addition to adherence to Lynwood General Plan Noise Element Policy NOI-1.3 and NOI-1.4, and METRO development standards, the most effective noise-reduction measure would be to ensure future exterior balconies or other outdoor living spaces are sited away or removed entirely from the façade facing Imperial Highway and Long Beach Boulevard frontages (Mitigation Measure N-3(a) below). This design change would separate the most noise-sensitive components from the largest sources of noise near the Project Area, reducing potential noise conflict to a less than significant level. If this redesign is determined to be infeasible, exterior noise levels at exterior balconies or other outdoor living spaces would be reduced through implementation of Mitigation Measure N-3(e), which would create a non-habitable buffer zone to minimize traffic noise exposure from I-105 and the METRO Green Line for nearby future residential uses. Implementation of Mitigation Measure N-3(b) through N-3(d) would provide adequate exterior-to-interior noise attenuation and reduce interior noise levels of future residences to below the 45 dBA CNEL threshold established by Lynwood General Plan Noise Element Policy NOI-1.3.

N-3(a) Design of Outdoor Living Spaces

Future exterior balconies and other outdoor living spaces shall be sited away from or removed from facades facing Imperial Highway and Long Beach Boulevard frontages, where feasible.

N-3 (b) Sound Transmission Class (STC) 30 Windows and Doors

All residential structures in the Plan Area designed to face Imperial Highway or Long Beach Boulevard should include windows and exterior doors that have a minimum STC rating of 30 STC or higher. Exterior doors should be solid core and have weather stripping installed.

N-3 (c) Sound Transmission Class (STC) 45 Wall Assemblies

All residential structures in the Plan Area designed to face Imperial Highway or Long Beach Boulevard should include exterior wall assemblies should have a STC rating of 45 or higher.

N-3(d) Acoustical Analysis and Design Mitigation

Residential developers shall retain a professional acoustical consultant to conduct acoustical analysis as part of the design process and the recommendations of the acoustical analysis shall be incorporated into project design. This will assure that the City's interior noise level standards are achieved. Noise reduction measures that may be required for future development may include but would not be limited to):

- Sound barriers, including sound walls
  - To avoid secondary aesthetic impacts, long expanses of walls or fences shall be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements shall be used, including solid fences, walls, and, landscaped berms.
- Site layout, including setbacks, open space separation, orientation of outdoor activity areas away from roadways, and shielding of noise sensitive uses with non-noise-sensitive uses
- Roof and attic vents facing away from the nearest roadway
- Air conditioning or a mechanical ventilation systems that allow doors and windows to remain closed
- Double-paned glass on all windows
- Windows and sliding glass doors mounted in low air infiltration rate frames
- Solid core exterior doors with perimeter weather stripping and threshold seals
- Acoustically insulated building wall construction

Incorporation of these and other similar design requirements would achieve an exterior-to-interior interior noise level reduction of 30 dBA or greater and would attenuate exterior noise levels to acceptable levels.

N-3(e) Non-habitable Buffer Zone

For future residential developments subject to significant noise impacts from I-105, developers shall site non-habitable uses such as storage sheds, indoor-recreational uses, or parking areas between residences and I-105 to maximize the distance of residences away from Highway 105 freeway noise exposure to the greatest extent feasible.

N-3(f) Noise Easement Dedication and Conformance with Metro Design Standards

Parties planning construction over, under or adjacent to a Metropolitan Transportation Authority (MTA) facility or structure shall record a Noise Easement Deed in favor of the MTA and shall submit for review by MTA development plans and calculations showing the relationship between their project and the MTA facilities. The purpose of the MTA review is to reduce the chance of conflict, damage, and

unnecessary remedial measures for both MTA and the parties and to determine conformance with MTA's Adjacent Construction Design Manual.

Significance after Mitigation

Although, compliance with the standards required in the Lynwood General Plan and implementation of Mitigation Measures N-3(a) through N-3(f) would reduce roadway noise impacts to interior noise levels in residences to a less than significant level, impacts to exterior noise levels would be significant and unavoidable.

c. Cumulative Impacts

Project construction would coincide with other planned and pending construction projects in the area, such as those identified in the Southern California Association of Governments (SCAG) Regional Transportation Plan. As shown in Table 26, traffic noise levels under cumulative conditions by the 2040 buildout year would be less than existing conditions both with and without development of the Specific Plan. It is anticipated that additional transit facilities and increased freeway capacity in the region will reduce 2040 traffic volumes in the city of Lynwood from existing (2015) conditions. Although development of the Specific Plan would increase traffic noise levels on Long Beach Boulevard, I-105, and Imperial Highway roadway segments in the Plan Area, the anticipated overall reduction of traffic volumes on freeways serving the region would lead to a general reduction in traffic noise levels. Therefore, the increase in noise due to buildout under the Specific Plan and associated cumulative traffic in the Plan Area would not be considerable cumulatively.

Table 26 Cumulative and Cumulative-Plus-Project Sound Levels from Roadways in the Plan Area (dBA Ldn) [1]

Roadway Segment[2]	Existing Conditions (2014)	Cumulative Conditions (2040)	Cumulative + Project Conditions (2040)	Change from Existing to Cumulative + Project (dBA)	Change from Cumulative to Cumulative + Project (dBA)	Threshold Exceeded (Change Greater than 0 dBA)?[4]
#1 Lynwood Road and Lewis Street	76.9	76.3	76.5	-0.6	-0.4	No
#2 Metro parking lot on Long Beach Boulevard	76.8	76.4	76.6	-0.4	-0.2	No
#4 Imperial Highway and Fernwood Avenue	79.2	79.1	79.2	-0.1	0.0	No

Source: FHWA Traffic Noise Model Version 2.5
Refer to Appendix C for full noise model output. Noise levels presented do not account for attenuation provided by all existing barriers or future barriers; therefore, actual noise levels at sensitive receptor locations influenced by study area roadways may in many cases be lower than presented herein.
Notes:
1. Peak hour traffic based on average daily traffic for roadway segments analyzed in Section 4.12, Transportation and Circulation.
2. As existing noise levels exceed the ONC "normally acceptable" level, traffic-related noise impacts would be significant if cumulative roadway noise would result in a 0 dBA or more increase to noise levels at sensitive receptors and the Specific Plan's contribution to noise was cumulatively considerable .

Noise impacts can generally be mitigated on a case-by-case basis through the use of appropriate design and engineering techniques, including building setbacks, appropriate building siting, sound barriers, and sound attenuating construction techniques. Therefore, the use of such techniques on all new development in the Plan Area would be expected to maintain an acceptable noise environment.

4.10 Population and Housing

4.10.1 Setting

a. City of Lynwood

Table 27 provides the most recent estimates of population and housing for the city of Lynwood and the county of Los Angeles as a whole. The city of Lynwood has an estimated 15,852 housing units and 15,577 households (occupied housing units) as of 2014, while the city's estimated population in 2014 was 71,839 (U.S. Census 2014c and 2014d).

Table 27 Current Housing and Population (One-Year Estimates)

	City of Lynwood (2014)	Los Angeles County (2014)
Population	71,846	10,116,705
Housing Units	15,852	3,482,681
Occupied Housing Units (Households)	15,577	3,269,112
Vacant Housing Units	275	213,569
Persons per Household	4.42	3.04
Owner-occupied Units	4.87	3.20
Renter-occupied Units	4.17	2.91

Source: U.S. Census 2014a, 2014b, 2014c, and 2014d

The information in the table indicates that the population in the city of Lynwood makes up about 0.71 percent of the countywide population and the city's housing units make up approximately 0.46 percent of the county's total housing units. The average number of persons per household in Lynwood is 4.42, about 45 percent higher than the countywide average of 3.04 persons per household. In both the city of Lynwood and Los Angeles county, the average number of persons per household for owner-occupied housing units is higher than for renter-occupied units.

Table 28 shows population, households, and employment projections for 2012 and 2040 for the city of Lynwood and Los Angeles County as reported by the Southern California Association of Governments (SCAG). From 2012 to 2040, it is forecast that the city will add 5,800 residents, 1,500 households, and 1,700 jobs (SCAG 2016b).

Table 28 Southern California Association of Governments Population, Housing, and Jobs Projections

	2012		2040		2012-2040 Growth	
	City of Lynwood	Los Angeles County	City of Lynwood	Los Angeles County	City of Lynwood	Los Angeles County
Population	70,300	9,923,000	76,100	11,514,000	8.3% (5,800)	16.0% (1,591,000)
Households	14,700	3,257,000	16,200	3,946,000	10.2% (1,500)	21.2% (689,000)
Employment	9,200	4,246,000	10,900	5,226,000	18.5% (1,700)	23.1% (980,000)

Source: SCAG 2016a and 2016b

As shown in Table 28, the population in Lynwood is anticipated to increase by 5,800 persons over the 28-year period from 2012 to 2040, which would be around 0.4 percent of the overall growth in population in the county. The number of housing units is anticipated to increase by 1,500 new units, constituting 0.22 percent of the overall

growth in units. The number of jobs is anticipated to increase by 1,700, accounting for 0.17 percent of the overall growth in employment for the county job growth.

According to the City of Lynwood's 2014-2021 Housing Element, the city has generally maintained its size over the last decade, with a population of approximately 69,899 residents in 2000 and 69,772 residents in 2010. In this period, the city experienced a slight decrease (0.1 percent) in population that can be attributed to the conditions of the city's built out. Over the last twenty years the city has experienced modest growth, adding 7,827 residents, an increase of approximately 12.6 percent, from 1990 to 2010. As seen in Table 29, this growth rate is slightly above that of Los Angeles County, which experienced a 10.7 percent increase in population during the same period (Lynwood 2013).

Table 29 Population Growth Trends

Jurisdiction	1990	2000	2010	Percent Change 1990-2010
Lynwood	61,945	69,899	69,772	12.6%
Los Angeles County	8,863,164	9,519,338	9,818,605	10.7%

Source: Lynwood 2013

The jobs-to-housing ratio in a jurisdiction is an indicator of the availability of jobs and housing, and the balance between local work opportunities versus local housing availability. Based on the number of households and employment levels in 2012, the City of Lynwood has a jobs-to-housing ratio of 0.63 jobs per household, relative to Los Angeles County's ratio of 1.30 jobs per household (SCAG 2016b). There is generally considered to be adequate housing to accommodate the labor market in a city when the jobs-to-housing ratio is close to 1.0. The City of Lynwood, however, has a significantly lower ratio, indicating that there is a shortage of jobs for residents in the City, and the City is a net exporter of labor to the surrounding areas.

b. Plan Area

The Plan Area is situated in the western portion of the city of Lynwood and covers approximately 315 acres along a 1.15-mile stretch of I-105 from Alameda Street on the west end to Martin Luther King Jr. Boulevard on the east end. The notable land uses and features in the Plan Area are the Long Beach Boulevard Metro Green Line Station, Plaza Mexico retail center, and St. Francis Medical Center. The retail center is a major employment and shopping area for the subregion. Much of the Plan Area west of Long Beach Boulevard is currently zoned for manufacturing and commercial use, and does not support substantial residential housing. This area does support businesses that provide employment opportunities for the surrounding residents. The Plan Area east of Long Beach Boulevard includes areas that support single- and multi-family residential units, and therefore house much of the residential population in the Plan Area.

c. Regulatory Setting

2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). The Plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The Plan charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The stated goals of this plan are to achieve the following:

- Align the plan investments and policies with improving regional economic development and competitiveness
- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking)

- Actively encourage and create incentives for energy efficiency, where possible
- Encourage land use and growth patterns that facilitate transit and active transportation

The land use strategies outlined in the plan for achieving the goals include the following:

- Reflect The Changing Population And Demands – Shifting to development of more small-lot, single-family and multifamily housing, in line with current market demand
- Focus New Growth Around Transit – Focusing housing and employment growth in High Quality Transit Areas in support of Transit Oriented Development and active transportation infrastructure
- Plan for Growth Around Livable Corridors – Revitalizing commercial strips through integrated transportation and land use planning, resulting in increased economic activity and improved mobility options
- Provide More Options for Short Trips – pursue land use strategies, Complete Streets integration, and a set of state and local policies to encourage the use of alternative modes of transportation for short trips[2]
- Support Local Sustainability Planning -- support local planning practices that help lead to a reduction of greenhouse gas emissions, including Sustainable Planning & Design, Sustainable Zoning Codes, and Climate Action Plans

City of Lynwood 2014-2021 Housing Element

The City of Lynwood's Housing Element contains goals and policies that address the city's current and future housing needs, including a housing program that responds identified needs. Goals include preserving and improving existing housing, encouraging of a variety of housing types, providing housing assistance where needed and as feasible, removing governmental constraints to the development of new housing opportunities, and promoting equal housing opportunities. In addition, Policy LU-36 of the Land Use Element states that "When reviewing non-residential proposals that involve discretion, the extent to which non-residential development would reduce existing housing stock, or reduce land available for residential development, should be weighed."

The housing needs of the city are determined by the demographic characteristics of the population (e.g., age, household size, employment, income levels), the characteristics of its housing (i.e., number of units, age of units, tenure, size, cost), and the nature of community (e.g., suburban, industrial, agricultural, resort/tourism, high tech, schools, parks, transportation). The 2014-2021 Housing Element Goals and Policies that directly apply to the Specific Plan include:

- Goal 1: Preserve and Improve Existing Housing.
  - Policy 1.2: Pursue the acquisition of substandard units and assembly of land for development of new residential units.
  - Policy 1.5: Develop comprehensive neighborhood preservation strategies for portions of the community that need reinvestment.
- Goal 2: Encourage a variety of housing types to meet the needs of city residents.
  - Policy 2.3: Facilitate and encourage the development of affordable housing for seniors, large families, and other identified special housing needs.
  - Policy 2.4: Support innovative public, private and non-profit partnership efforts for the development of affordable housing.
- GOAL 4: Remove Governmental Constraints to the Development of New Housing Opportunities.
  - Policy 4.2: Provide for streamlined, timely, and coordinated processing of residential projects to minimize holding costs and encourage housing production.
  - Policy 4.3: Utilize density bonuses, fee reductions, or other regulatory incentives to minimize the effect of governmental constraints.
  - Policy 4.4: Encourage lot consolidation in the Long Beach Boulevard Specific Plan area in order to cohesively redevelop larger areas.

[2] Complete Streets are streets designed, funded and operated to enable safe access for roadway users of all ages and abilities, including pedestrians, bicyclists, motorists and transit riders.

Long Beach Boulevard Specific Plan

The Long Beach Boulevard Specific Plan establishes goals and policies that aim to revitalize Long Beach Boulevard, increase transit use, instill a downtown presence, and provide a base for economic vitality for the future. Goals and policies of the Specific Plan create a land use plan and framework that promotes transit-oriented development, the establishment of the Plan Area into four villages, and an emphasis on mixed use and live/work development. The Specific Plan additionally establishes design guidelines for architecture and landscaping along Long Beach Boulevard.

4.10.1 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with Appendix G of the *State CEQA Guidelines,* the proposed Specific Plan could result in a significant impact on the population and housing environment if it would do any of the following:

1 Induce substantial 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)
2 Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
3 Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere
To calculate the potential population growth that would occur under the Specific Plan, this analysis considers the maximum number of new units that would be constructed and the number of people that could potentially reside in these units based on the average vacancy rate and household size in the city. Vacancy rates and household sizes can vary based on economic conditions and other factors, and therefore a three-year average was used for each of these aspects. Vacancy rates and household sizes used in this analysis are provided in Table 30.

Table 30 Vacancy Rates and Household Size (Three-Year Averages)

Percentage of Properties that are Vacant	Homeowner Vacancy Rate[1]	3.9
	Rental Vacancy Rate[1]	2.4
Persons per Household	Owner-occupied Units	4.69
	Renter-occupied Units	4.55

[1] The rental vacancy rate is the proportion of the rental inventory which is vacant for rent while the homeowner vacancy rate is the proportion of the homeowner inventory which is vacant for sale. These vacancy rates do not include all types of vacant properties, and exclude vacancies such as units held for occasional use, temporarily occupied by persons with usual residence elsewhere, and vacant for other reasons.
Source: U.S. Census 2014a, 2014b, 2014c, and 2014d

b. Project Impacts and Mitigation Measures

Impact PH-1	Implementation of the Specific Plan would encourage growth in the Plan Area that would exceed SCAG projections, but this growth would be in line with local and regional development goals and policies and would include a balance of new jobs and housing. Therefore, impacts related to housing, population, and employment growth would be *less than significant*.

Full implementation of the Specific Plan would encourage increased density and intensity of existing land uses, resulting in the addition of up to 3,500 dwellings, 350 hotel units, 1.2 million square feet of commercial development, and 750,000 square feet of industrial development, as described in Section 2.0, Project Description.

The proposed addition of 3,500 residential dwellings would generate an increase in the number of residents in the city of Lynwood. Approximately 100 of these units are expected to be constructed in residentially zoned areas, and are therefore likely to exhibit the characteristics of owner-occupied homes, which, in the city of Lynwood, are 96.1 percent occupied and support an average of 4.69 people per household. The remaining 3,400 units are expected to be constructed as multi-family units, located primarily in areas zoned for mixed-use development. These units are

expected to exhibit the characteristics of renter-occupied homes, which are 97.6 percent occupied and support an average household size of 4.55 persons per household in the city. Based on existing average household sizes and vacancy rates for owner- and renter-occupied housing units in the city, the Specific Plan is expected to generate an increase of approximately 15,549 residents. This would increase the population of the city by 87,395 persons, 21.6 percent more than the 2014 base population. The additional 15,549 residents would also increase the population of Los Angeles County by 0.15 percent, from 10,116,705 to 10,132,254. This population increase would be added incrementally over the anticipated 20- to 25-year period of full project buildout.

The addition of 3,500 residential units would also increase the number of housing units in the city from 15,852 to 19,352 units, an increase of 22.1 percent. The number of housing units in the county would increase by 0.10 percent, from 3,482,681to 3,486,181 units.

The proposed Specific Plan would result in the generation of an estimated 5,668 new employees at full buildout. Table 31 shows the estimated employment at full buildout of the Specific Plan.

Table 31 Estimated Onsite Employment at Project Buildout

Land Use	Build Out Square Footage	Square Feet per Employee1	Total New Employee
Commercial	1,200,000	405	2,963
Industrial	750,000	749	1,000
Hotel	508,200[2]	298	1,705
		Total	5,668

[1]Source: SCAG 2001 (Table 4B); the factor used for commercial space is the average of the factors for "Other Retail/Services" and "Low-Rise Office." The factor used for industrial space is for "Light Manufacturing."
[2]Hotel square footage of 350 hotel units from CalEEMod (Appendix B)

Table 32 compares project-generated population, employment and housing growth to SCAG growth projections. As indicated, the 15,549 new residents associated with Specific Plan buildout would exceed of projected growth in the city by approximately 168 percent, and would account for approximately 0.98 percent of the projected growth in Los Angeles County. The 3,500 new housing units would exceed projected housing growth in the city by 133 percent, and account for 0.51 percent of projected growth in Los Angeles County. The 5,668 new jobs associated with Specific Plan buildout would exceed the projected job growth in the city by approximately 233 percent, and would account for 0.58 percent of job growth in Los Angeles County.

Table 32 Comparison of Project Population, Housing, and Employment Growth Projections

	Specific Plan Build Out Growth	SCAG 2040 Growth Projections[1]		Percentage of SCAG Growth	
		City of Lynwood	LA County	City of Lynwood	LA County
Population	15,549	5,800	1,591,000	268%	0.98%
Housing	3,500	1,500	689,000	233%	0.51%
Jobs	5,668	1,700	980,000	333%	0.58%

[1]See Table 28

Although the increases in population, housing, and jobs associated with full buildout of the Specific Plan would exceed SCAG growth projections for the city, this growth is in line with local and regional development goals and policies that relate to population, housing, and employment. The forecast represents the most likely growth scenario, taking into account a combination of recent and past trends, reasonable key technical assumptions, and local or regional growth policies. These projections are not necessarily intended to encourage or discourage growth, but rather they allow communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance quality of life, improve access to jobs, promote transportation mobility, and address social equity and fair share housing needs. Therefore, growth that outstrips these projections does not necessarily represent substantial population growth, assuming it can be accommodated in the proposed locations and is in line with local and regional development goals and policies.

The Specific Plan promotes the development of transit-oriented communities in the Plan Area, and includes opportunity sites within 0.5 mile of the Metro Green Line Station and within 0.5 mile of the junction of the Alameda Street and Imperial Highway bus corridors. It concentrates and prioritizes development in these opportunity sites, along major roadway corridors, existing industrial and hospital districts, and existing neighborhoods in the Project Area. The Specific Plan promotes "Complete Streets," expanded transit services, and enhanced pedestrian and bicycle linkages throughout the Plan Area, and encourages development of multi-family housing. This type of development is encouraged in the goals and land use policies of the 2016 RTP/SCS, and incorporates all five of the land use strategies discussed in the RTP/SCS. As such, this development is in line with the goals and policies of the 2016 RTP/SCS.

The Specific Plan, in and of itself, is intended to guide future land use changes and population growth for the Plan Area. As such, it is an extension of the City's General Plan and the Long Beach Boulevard Specific Plan, both of which aim to integrate land use and transportation to achieve a sustainable community by strategically locating housing and population growth in areas associated with transit. A further goal of these Plans is to transition Long Beach Boulevard into a vibrant, community-serving commercial center surrounded by a mix of uses. The Specific Plan and others like it are designed to make efficient use of the land and promote and utilize the Metro Green Line station. Therefore, the Specific Plan is in line with the City's goals and policies, as outlined in their General Plan and Long Beach Boulevard Specific Plan.

The proposed housing and employment growth anticipated under the Specific Plan would be balanced to support new jobs and housing, so that residents have the opportunity to live and work locally. Development under the Specific Plan is expected to include a mix of commercial, industrial, and hotel uses that would support up to 5,668 jobs, and a mix of single-family and multi-family units that would support up to 3,500 units. Considering the city's homeowner and rental vacancy rates, it is anticipated that these housing units would support up to 3,415 households. The 5,668 new jobs and 3,415 new households, when added to the number of jobs and households that existed in the city in 2012, would shift the job-to-housing ratio from 0.62 to 0.82 jobs per household. This improvement in the jobs-to-housing ratio would allow a higher percentage of the city's residents to work locally, thereby supporting sustainable growth by reducing the number of vehicle miles traveled between work and home. Additionally, the mix of commercial and residential uses would encourage complete neighborhoods where services are available close to where people live.

Given that the growth that would occur under the Specific Plan would be in line with the goals and policies of the 2016 RTP/SCS, the City's General Plan, and the Long Beach Boulevard Specific Plan, and that it would be balanced to encourage sustainable development and transit oriented design, the impact to population growth would be less than significant.

Mitigation Measures

None required.

Significance after Mitigation

Impacts related to population growth would be less than significant without mitigation.

Impact PH-2	Implementation of the Specific Plan would increase the Plan Area's housing stock. Impacts related to the displacement of housing and people would be *less than significant*.

Implementation of the Specific Plan would add up to 3,500 residential dwellings in the Plan Area. A primary objective of the Specific Plan is to facilitate the addition of a variety of housing types compatible with existing housing types and neighborhoods in the community. Through land use designations ranging from medium-density residential to high-density residential/commercial, the Specific Plan would allow for a mixture of medium- and high-density in-fill of mixed-use residential housing near existing or future commercial centers or transit stops. The exact location and size of future residential development is unknown at this time, but the majority of future growth is anticipated in the Plaza Mexico shopping center, around the existing Long Beach Boulevard Metro Green Line station, along the Imperial Highway Corridor, and along the Long Beach Boulevard Corridor. Depending on the location of future projects, existing residents or housing could be displaced, but as the Specific Plan aims to achieve

a diverse mix of ownership and rental housing, as well as maintain market rate, affordable, and workforce housing as part of the housing stock, it would avoid the displacement of existing residents.

In addition, the Specific Plan encourages the addition of housing stock in the Plan Area that would include a diverse range of residential unit types at different cost levels to meet the needs of all households including those of seniors, large families, single persons, and persons with special needs. Land use districts in the Plan Area would generally intensify residential development by encouraging residential mixed uses in existing commercial areas and increasing the residential densities up to 20-60 dwelling units per acre for multi-family units in current residential areas.

Implementation of the Specific Plan would both increase the City's housing stock and preserve housing affordability for existing residents. Therefore, impacts related to the displacement of housing and population would be less than significant.

Mitigation Measures

None required.

Significance after Mitigation

Impacts related to the displacement of housing and people would be less than significant without mitigation.

c. Cumulative Impacts

The cumulative impacts analysis for this EIR is based on the growth projections within the 2016 SCAG RTP/SCS, and the PEIR for the RTP/SCS.

Housing, Population, and Employment. The SCAG RTP/SCS projects 1,500 new housing units and a population increase of 5,800 by 2040 within the City of Lynwood. As discussed above under Impact PH-1, population, housing and employment generation associated with the proposed Specific Plan exceeds the growth forecasts within the SCAG RTP/SCS. Therefore, the proposed project's cumulative contribution to population and housing impacts would be cumulatively considerable and impacts would be significant and unavoidable.

Displacement of Housing and Population. Depending on the location and size of future development within the proposed Specific Plan, the proposed Specific Plan could displace people and housing. However, the proposed land use districts establish development standards that would reduce the potential for future displacement of existing housing. For example, the Specific Plan proposes the Residential (R) land use district for the existing single-family residential neighborhoods in the Plan Area maintains the City's existing underlying zoning designations. Furthermore, the corresponding development standards for the Residential land use district permit residential development similar in scale, character, and mass to existing residential neighborhoods, thereby reducing the potential for displacement. Cumulative development projects throughout the SCAG region could similarly displace residences and populations. The 2016 RTP/SCS PEIR, found that development under the 2016 RTP/SCS would have potentially significant impact on the displacement of housing and population resulting from the buildout of necessary transportation infrastructure to accommodate projected growth. This would necessitate the construction or replacement of housing. As discussed in impact PH-2, the Specific Plan would add up to 3,500 new residential units through encouraging high-density residential and mixed-use development. Therefore, the Specific Plan's contribution to cumulative impacts related to the displacement of people and housing would be less than significant.

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4.11 Public Services

4.11.1 Setting

a. Police Protection

Police protection services for the city of Lynwood are provided by the Los Angeles County Sheriff's Department under contract with the City. The local sheriff's office is called Century Station and is located at 11073 Alameda Street, approximately 1,000 feet west of the Specific Plan area. Figure 13 shows the location of Sheriff's office in the Plan Area. The services offered to Lynwood residents and business owners are as follows:

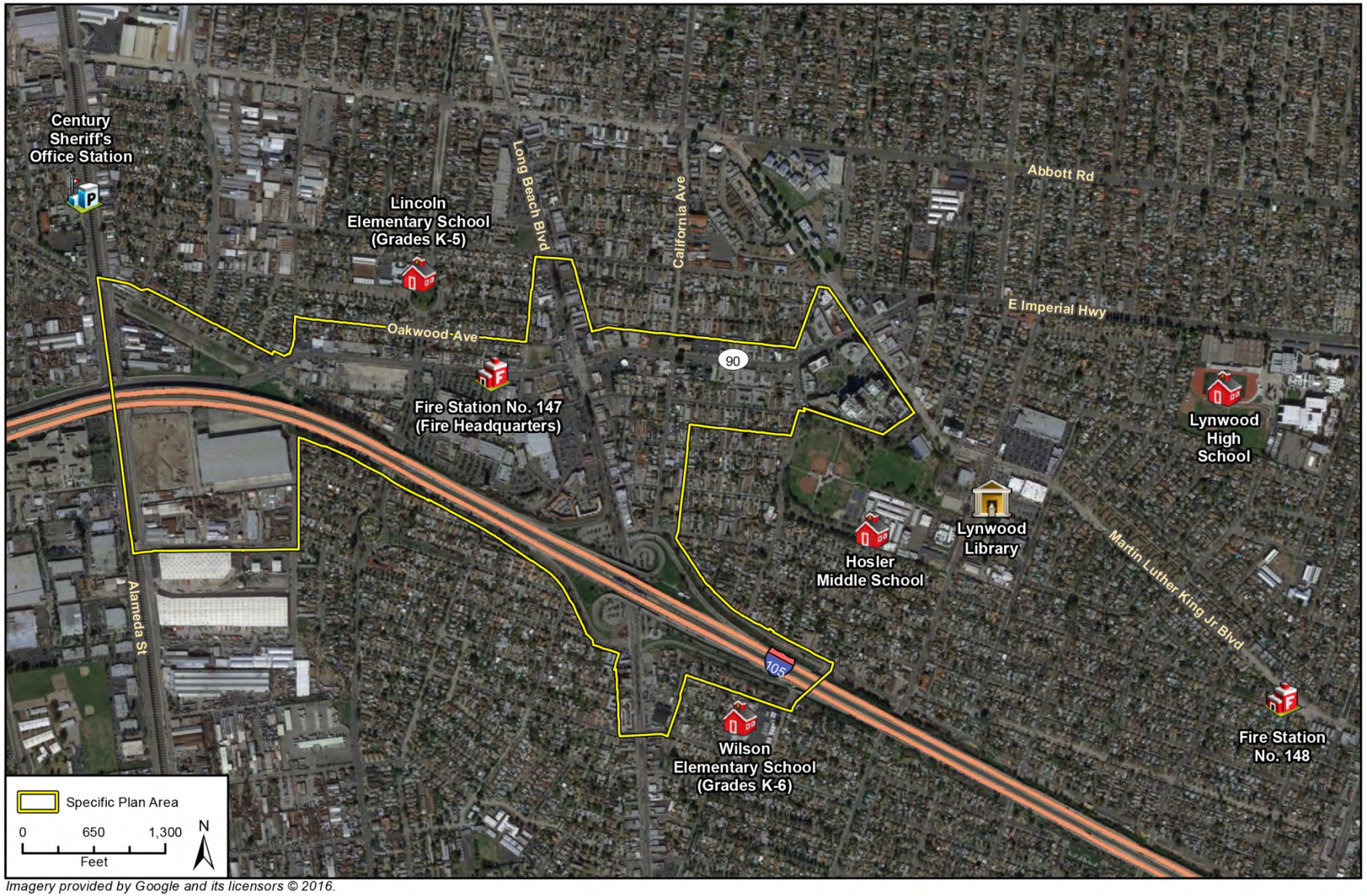
- Crime prevention training
- Vacation security checks
- Police reports
- Citizen community academies
- video surveillance cameras
- Red signal light camera enforcement

b. Fire Protection

Fire protection and other related services are provided by the consolidated Fire Protection District of Los Angeles County under contract with the City. There are two fire stations in the city: Station Number 147 (Fire Headquarters) is located at 3161 Imperial Highway in the Plan Area. Station Number 148 is located at 4264 Martin Luther King Jr. Boulevard, about 0.8 miles east of the Plan Area. Figure 16 illustrates the location of these stations relative to the rest of the Plan Area. The stations are staffed with a minimum of nine full-time firefighters at all times. The County provides services designed to protect lives and property of the people in the city of Lynwood from adverse effects of fires, sudden medical emergencies, or exposure to dangerous conditions created either by man or nature. Services include fire protection, hazardous materials, emergency medical services including paramedic services, fire code and related code enforcement, and fire cause and arson investigation.

The Los Angeles County Fire Department has an established response time goal of four minutes (Ripley 2016). This response time gives firefighters adequate time to respond to and contain emergency situations to, for example, keep a structural fire confined it to its point of origin and not spread to other structures.

Figure 13 Location of Police and Fire Stations in the Specific Plan Area



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c. Public Schools

The city of Lynwood and the Specific Plan Area are served by the Lynwood Unified School District. It is the only school district serving the city and its boundaries are contiguous with the City's jurisdictional boundaries. The Lynwood Unified School District includes twelve elementary schools, three middle schools, and three high schools. The schools closest to the Plan Area are as follows:

- Lincoln Elementary School (Grades K-5) at 11031 State Street, just north of the Plan Area,
- Wilson Elementary School (Grades K-6) at 11700 School Street, which is southeast of the Plan Area
- Hosler Middle School at 11300 Spruce Street, northeast of the Plan Area
- Lynwood High School at 4050 East Imperial Highway east of the Plan Area

d. Libraries

The city of Lynwood, including the Plan Area, is served by the Los Angeles Public Library System. The Lynwood Library was built in 1977 and is located at 11320 Bullis Road, just east of the Plan Area. Located in the Lynwood Civic Center, the library has an area of 12,000 square feet, and features an adult section, a children's area, an adult literacy area, and a meeting room with a capacity of 106. Special collections include Black History materials and Spanish books and magazines. The current collection comprises 115,542 books, 14,933 audio/visual materials (i.e., DVDs, audio tapes, CDs, and videos), 117 magazine and newspaper subscriptions, and a local history collection. Twenty percent of the collection is in Spanish.

The following goals and policies for libraries are included in the City of Lynwood General Plan (2006):

- Goal LIB-1: Libraries. Provide for sufficient and convenient library services for the community.
  - Policy LIB-1.1: Increase Library Standards. The City shall work with the Los Angeles County Library services to meet minimum standards.
  - Policy LIB-1.2: Develop additional Library Facilities. The City shall plan for the development of additional library facilities.

Lynwood General Plan policy LIB-1.1, under Goal LIB-1, strives for a standard of 0.5 square feet of library space per capita. The 2010 U.S. Census reported that there are 69,722 people residing in the city of Lynwood. Accordingly, the Lynwood Library has 0.17 square feet per capita.

Table 33 provides a list of the City of Lynwood's General Plan implementation measures and standards for libraries.

Table 33 City of Lynwood General Plan Library Goals/Policies Implementation Measures

Implementation Measure	Implementing Policy	Who is Responsible	Timeframe
1.0 - The City shall promote library usage and work with Los Angeles County to improve and modernize library facilities	LIB-1.1	Community Development Department	Ongoing
2.0 - The City shall work with Los Angeles County to meet the library standard of 1.2 volumes per capita and 0.5 square feet of library facilities per capita.	LIB-1.1	Community Development Department	Ongoing
4.0 – The City shall support literacy programs, mobile book services, and other library outreach programs in the community.	LIB-1.1 LIB-1.2	Community Development Department	Ongoing

4.11.2 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with Appendix G of the *State CEQA Guidelines*, the proposed Specific Plan would result in potentially significant impacts relating to public services if it would:

1 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 services ratios, response times or other performance objectives for any of the public services:

a. Fire protection
b. Police protection
c. Schools
d. Parks
e. Other public facilities

b. Project Impacts and Mitigation Measures

Impact PS-1	Implementation of the proposed Lynwood Transit Area Specific Plan would add new residential and non-residential uses to the Plan Area, generating additional need for the Los Angeles County Sherriff's office protection services. Expansion of the current Sheriff's office or construction of a new facility would occur in existing urbanized areas where environmental impacts would be minimal. Therefore, impacts to police protection services and related facilities would be *less than significant.*

Full implementation of the Specific Plan would add up to 3,500 residential units that would generate 15,549 new residents (see Section 4.10, Population and Housing*)*. When added to the existing city of Lynwood population of approximately 70,300 (SCAG 2016), implementation of the Specific Plan would increase the city's total population up to an estimated 87,395 residents at full buildout in 2040, approximately 21 percent more than the existing population. Based on current staffing levels necessary to serve the 87,395 residents, the Los Angeles County Sherriff's office may need additional deputies to maintain adequate coverage for increased population resulting from buildout of the Specific Plan.

The Los Angeles County Sherriff's office is mostly funded through a contract with the City of Lynwood. Implementation of the Specific Plan would increase demand for police protection services on an incremental basis and may cause service deficiencies unless adequate funding for service and facility improvements is provided prior to occupancy of new development. The Specific Plan exceeds the buildout assumptions in the City of Lynwood General Plan, which estimates a population of 74,446 by 2020.

Should the Los Angeles County Sherriff's office and the City of Lynwood determine that additional facilities are needed to provide police protection services to Plan Area and the remainder of the city, it is assumed that these facilities would be located in the city of Lynwood. The Specific Plan would not therefore require that the the Los Angeles County Sherriff's service area expand beyond its current boundaries. The potential demand for additional personnel, equipment, and operational costs generated by the proposed Specific Plan, would be funded and offset through the increased tax revenue generated from the development allowed under the Specific Plan. Furthermore, the City has established a public facilities development impact fee (PFDIF) (Municipal Code Section 11-19) to be imposed on all new development or development projects for which a development permit is issued. The impact fees shall be determined and calculated by the City Manager or his/her duly authorized designee and can be utilized to offset impacts to police services. Individual development projects would be reviewed by the City and would be required to comply with the PDFIF requirements in effect at the time building permits are issued.

Specific sites for future police protection facilities have not been identified. Therefore, an evaluation of the environmental impacts of implementation of the facilities is not feasible at this time. However, the City of Lynwood is almost entirely developed and urbanized and it is likely that future law enforcement facilities would be developed

on infill sites or would replace existing facilities with minimal environmental impacts. Nonetheless, when the Los Angeles County Sherriff's office and/or the City of Lynwood determine that expanded or new facilities are needed, a complete evaluation of potential environmental impacts would be conducted pursuant to CEQA. Impacts to police protection services would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts are less than significant without mitigation.

Impact PS-2	Implementation of the proposed Specific Plan would add residential and non-residential uses, generating additional need for Los Angeles County Fire Department protection services and facilities. Due to the location of the current and new or expanded fire facilities in existing urbanized areas, impacts to fire protection services and the potential for expanded facilities would be *less than significant.*

Full implementation of the Specific Plan would add 3,500 residential units that would generate 15,549 new residents (see Section 4.10, Population and Housing*)* and add up to two-million square feet of non-residential space. This increase in population and non-residential square footage is assumed to progress incrementally until full buildout in 2040 and would increase the demand for fire protection services. As discussed above, two Los Angeles County Fire Stations that service the Plan Area are adequate for the current needs and do not require replacement at this time. Fire services are funded through a contract with the City of Lynwood and neither the Los Angeles County Fire Department nor the City of Lynwood currently assess an impact fee on development in the city to pay for resulting service demands.

Implementation of the proposed Specific Plan would increase demand for fire protection services on an incremental basis and may cause service deficiencies unless adequate funding for service and facility improvements is provided prior to occupancy of new development. The proposed Specific Plan exceeds the buildout assumptions in the City of Lynwood General Plan, which forecasts 74,446 by 2020. Should the Los Angeles County Fire Department and the City of Lynwood determine that additional facilities are needed to provide fire protection services to Plan Area and the remainder of the city, it is assumed that these facilities would be located in the city of Lynwood. The Specific Plan would not therefore require that the Los Angeles County Fire Department's service area expand beyond its current boundaries. Additionally, the potential demand for additional personnel, equipment, and operational costs generated by the Specific Plan, would be funded and offset through the increased tax revenue generated from the development allowed under the proposed Specific Plan. Individual development projects in the Plan Area would be reviewed by the City and would be required to comply with the standards in effect at the time building permits are issued. Los Angeles County is responsible for planning new fire station locations as needed. The City's contract with the Los Angeles County Fire Department would ensure that adequate facilities are available to accommodate the growth envisioned under the Specific Plan. Specific sites for future fire protection facilities have not been identified. Therefore, an evaluation of the environmental impacts of implementation of the facilities is not feasible at this time. At the time the Los Angeles County Fire Department decides to expand existing facilities, or constructs new facilities, a complete evaluation of potential environmental impacts would be conducted under CEQA. Given the level of urban development existing within the City of Lynwood and with the Plan Area, it is likely that potential new future facilities would be built where current fire stations exist or would be developed on infill sites within the City of Lynwood. Impacts to fire protection services would be less than significant.

Mitigation Measures

No mitigation measures required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact PS-3	Implementation of the Specific Plan would add up to 2,450 students to current student roles. However, with payment of State-mandated school impact fees, impacts related to public school operating capacity would be *less than significant.*

Full implementation of the proposed Specific Plan would accommodate up to 3,500 additional residential units in the Plan Area. The Lynwood Unified School District (LUSD) operates four schools that would likely serve the Specific Plan Area. The LUSD typically uses a student generation rate of 0.7 students per unit for all housing types. Based on these generation rates, the proposed Specific Plan would generate a total of 2,450 students as shown in Table 34. These students would be distributed throughout the schools that serve the Plan Area depending on their grade level and on their location.

Table 34 Specific Plan Student Generation

Land Use	Potential New Residential Units	Generation Factor (students per unit)	Students Generated
Residential Units	3,500	0.7	2,450

Source: Lynwood Unified School District, 2016

Depending on which school the new students attend, the increase in students could create capacity issues for these schools or exacerbate existing capacity issues. Therefore, the proposed Specific Plan could potentially create the need for additional school capacity or possible expansion of an existing school, the construction of which could impact overall school district service capacity. As part of any future development proposal in the Plan Area that would involve a residential component and may generate students, the project applicant would be required to pay an in-lieu school impact fee. In accordance with Section 65995(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, pursuant to CGC §65994(h), impacts relating to school capacity would be less than significant.

Mitigation Measures

The applicable State-mandated school impact fees would be collected at the time of building permit issuance. No mitigation beyond this standard is required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact PS-4	Implementation of the Specific Plan would increase the service population of the Lynwood Public Library. However, because adequate capacity at existing libraries within the City and in adjacent communities exists to serve the proposed Specific Plan, impacts related to libraries would be less than significant.

As discussed in the existing conditions section above, the County Library System recommends that library facilities space should be 0.5 square feet per capita (City of Lynwood General Plan, 2003). The 2010 U.S. Census reported that there are 69,722 people residing in the City of Lynwood. Accordingly, the Lynwood Library currently has 0.17 square feet per capita. However, the County of Los Angeles Public Library system also has the following additional branch libraries that service the residents of the City of Lynwood and surrounding communities:

- Compton Library – 240 West Compton Boulevard, Compton
- Hollydale Library – 1200 South Garfield Avenue, South Gate
- Leland R. Weaver Library – 4035 Tweedy Boulevard, South Gate
- East Rancho Dominguez Library – 4420 East Rose Street, East Rancho Dominguez
- Willowbrook Library – 11838 Wilmington Avenue, Los Angeles

Buildout of the Specific Plan would increase the service population of Lynwood Public Library incrementally over the next 25 years by approximately 15,260 persons. Library services in the Plan Area may need to be increased by Los Angeles County over this time period to serve these additional residents. However, the other libraries in the city of Lynwood, listed above, would also be able to service new residents generated by implementation of the Specific Plan. In addition, the trend toward libraries providing increased electronic and downloadable library resources (e.g., e-books, audio books) could reduce the need for additional physical library resources in the future. If the current Lynwood Library is expanded or a new library is built, impacts environmental impacts are anticipated to be minimal because the city is urbanized. Therefore, impacts to library services would be less than significant.

Mitigation Measures

No mitigation measures are required

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact PS-5	Implementation of the Specific Plan would add 3,500 residential units and an estimated 15,549 residents to the Plan Area, increasing use of recreational facilities, contributing to their physical deterioration, and the city's parkland deficit. Impacts would be *significant but mitigable.*

Full implementation of the Specific Plan would encourage increased density and intensity of existing land uses, potentially resulting in the addition of up to 3,500 new residential units within the proposed 25-year growth period. This would add up to an estimated 15,549 additional residents to the Plan Area (see Section 4.10, Population and Housing*).* This increase in population would lead to increased use of recreational facilities, and would contribute to the physical deterioration of these facilities.

A total of 46.1 acres of park facilities and 52 acres of school playgrounds (available to local residents during off-school hours) are located in the city of Lynwood (Lynwood General Plan 2003). The park facilities include Lynwood Park (32.4 acres), Ham Memorial Park (10.2 acres), Lindbergh Park (0.5 acres), and Carnation Park (3.0 acres). The City of Lynwood General Plan recommends a combined standard for neighborhood parks, community parks, and sports complexes acreage-to-population ratio of three acres per 1,000 persons. Using the General Plan's suggested parkland standard and the 2012 population of 70,300, the City should have 210 acres of parks. Combining the 98 acres of public school playgrounds and City park facilities, there is a parkland deficit of approximately 112 acres.

Based on the City's suggested parkland dedication standard of three acres per 1,000 residents, the estimated future population of 15,549 residents would generate demand for approximately 46 total acres of parkland. Combining this future demand with the City's existing 112 acre parkland deficiency, the total parkland dedication shortfall could be as high as 158 acres. To help ameliorate existing and future impacts to recreational facilities, the City has established a public facilities development impact fee (PFDIF) (Municipal Code Section 11-19) that is imposed on all new development or development projects for which a development permit is issued. The impact fees shall be determined and calculated by the City Manager or his/her duly authorized designee and can be utilized to offset impacts to recreational facilities.

Because the timing of future development associated with the Specific Plan is not known at this time, the potential exists for residential development to occur prior to the construction of additional parks to help offset the existing parkland deficiency and the needs of the Plan Area as development occurs. Therefore, future project developers would be required to pay the applicable PFDIF impact fee pursuant to the City of Lynwood Municipal Code (Section 11-19) and/or dedicate a sufficient quantity of parkland to offset the pro-rata portion for each development of potential impacts to parks and recreation facilities. Following payment of PFDIF in-lieu fees and/or dedication of additional parkland facilities as part of each individual development project proposed in the Specific Plan, impacts to recreational resources, including the physical deterioration of existing facilities and the need for new facilities, would be reduced. However, impacts would be significant but mitigable.

Mitigation Measures

The following mitigation measures are required to help ensure that future developments under the Specific Plan pay their fair share of parkland impact fees. In addition, mitigation would be required to ensure that future development under the Specific Plan would dedicate their fair share of parkland to help offset deficiencies in public parks within the City of Lynwood.

PS-1 Payment of Parkland Impact Fees or Dedication Parkland

Future project applicants shall pay the appropriate parkland impact fees levied by the City of Lynwood in effect at the time of issuance of building permits, to the City's Parks and Recreation Department or dedicate their pro-rata share of parkland to the City's Parks and Recreation Department. If fees are paid, they shall be used for the development of additional parks in order to help meet the City's desired parkland standard of three acres per 1,000 residents. If land for public parkland is dedicated, the City shall confirm that said land is dedicated in a configuration that helps to meet the City's desired parkland standards of three acres per 1,000 residents. Applicants under the Specific Plan shall pay all fees or dedicate parkland prior to prior to approval of planning entitlements building permits for each development project under the Specific Plan. The Parks and Recreation Department shall verify payment of park impact mitigation fees or land dedication.

Significance after Mitigation

Impacts to recreational resources would be less than significant.

c. Cumulative Impacts

Development in the Lynwood Transit Area Specific Plan and other neighborhoods in Lynwood and surrounding communities would occur incrementally over time to gradually increase the City's overall population and demand for public services. The proposed Specific Plan could result in the construction of up to 3,500 additional residential units over the next 25 years. The City of Lynwood General Plan (2003) contains policies addressing the City's need to continually provide adequate facilities for additional police and fire personnel, library, and public school services. The need for additional public services would be provided through contractual agreements with the County of Los Angeles (police and fire), use of existing library facilities in the City of Lynwood and surrounding communities, and through the payment of impact fees for schools. Therefore, the Specific Plan's contribution to cumulative impacts associated with police protection services, fire protection services, libraries public schools would not be cumulatively considerable and would be *less than significant*.

Cumulative development in the proposed Plan Area would gradually increase population and therefore gradually increase demand for recreational facilities. To eliminate future deficiencies in public parkland within the City of Lynwood, future growth under the proposed Specific Plan, based on the City's desired park dedication ratio of three acres of parkland for every 1,000 people, the proposed Specific Plan would need to provide a minimum of 45.6 new acres of parkland available for public use. The City's Municipal Code currently permits the payment of development impact fees to offset impacts to parks and open space. With adherence to the City's Development Impact Fee Program and Mitigation Measure PS-1, the Specific Plan's contribution to cumulative parks impacts would not be cumulatively considerable and thus cumulative impacts would be less than significant.

4.12 Transportation and Circulation

4.12.1 Setting

a. Existing Street Network

Streets within the Plan Area are generally under the jurisdiction of the City of Lynwood, except for State Routes that are under Caltrans' jurisdiction. The Plan Area is primarily served by the two Interstates that intersect the City, as well as several many arterial streets. The following is a brief description of the two freeway corridors that transverse the Plan Area:

- Interstate 105 transverses the City in a generally east/west direction through the central portion of the Plan Area. To the west, Interstate 105 (I-105) continues to LAX and is the regional link to the 110 Freeway and the 405 Freeway and into the downtown Los Angeles area. To the east, I-105 continues to the City of Norwalk. Daily traffic volumes in 2000 on I-105 were 214,000.
- Interstate 710 is also called the Long Beach Freeway and runs in a generally north/south direction along the eastern edge of the Plan Area between Alhambra and Long Beach. Daily traffic volumes in 2000 were 219,000 vehicles per day.

A brief description of the five key arterial streets that transverse the Plan Area is provided below:

- Martin Luther King Boulevard is a four lane roadway that runs east/west through the northern portion of the City. Daily traffic volumes range from 8,000 vehicles per day to 15,700 vehicles per day.
- Imperial Highway is a four lane roadway that runs east/west through the northern portion of the City. Daily traffic volumes range from 23,300 vehicles per day to 27,800 vehicles per day.
- Alameda Street is a four lane roadway that runs north/south through the western portion of the City, just west of the Alameda Corridor. Daily traffic volumes range from 20,200 vehicles per day to 27,000 vehicles per day.
- Long Beach Boulevard is a six and four lane roadway that runs north/south through the central portion of the City. Daily traffic volumes range from 24,100 vehicles per day to 47,000 vehicles per day.
- State Street is a north/south roadway that is located in the center of the project limits. It crosses under I-105 within the project limits and a roundabout exists on either side of I-105, a roundabout with Flower Street and a roundabout with Los Flores Boulevard. State Street is two lanes in each direction with a raised median and parking permissible on both sides of the street within the project limits.

Barriers to travel on local streets in the Plan Area include the freeways that intersect the City and the regional Alameda rail corridor. The Plan Area is largely dominated by roadways that are designed to primarily accommodate motor vehicles. There is limited access for pedestrians, bicycles, and transit users because of the focus on automobile travel.

The public transportation services in Lynwood include METRO bus transit and the METRO Rail system. These services are further described below.

Fixed Route Bus Service

Fixed route bus service in the City for public bus transportation is provided by METRO, which provides the City with links to the region by running six bus lines. These systems include METRO routes 60, 120, 251, 260, and 612 which provide access to the cities of Long Beach, Whittier, Hawthorne, Watts, Walnut Park, Bell, South Gate, and downtown Los Angeles.

Rail Service

Rail service in the City is provided by the METRO Green Line rail system which runs through Lynwood. This service is part of METRO's overall transportation strategy to greatly improve mobility in Los Angeles County and throughout the surrounding southern California area. The Long Beach Boulevard METRO Green Line Station is located within the Plan Area. The Green Line connects to Redondo Beach to the west, and Norwalk to the east. The Green Line also connects to the METRO Blue Line via the Willowbrook/Rosa Parks station, which is the next stop on the Green Line

to the west. The Blue Line connects to Downtown Los Angeles and to Long Beach. Ridership on the Green Line ranges from 40,000 passenger boarding's per day during the weekday to approximately 24,000 boarding's on the weekend (Metro.net 2015).

Pedestrian circulation in the area is primarily provided via sidewalks. Most roadways within the City have sidewalks on either side. Very little formal bicycle striping or signage exists in the City. On many roadways, right-of-way is not available for striped bicycle lanes without removing on-street parking or widening the roadway. An existing bicycle path is located along the eastern side of I-710 in the vicinity of the Plan Area. There are no bicycle lanes within the project limits.

Despite the existing transit services, the circulation system surrounding the Plan Area is primarily automobile-oriented and auto-dominated. The METRO Green Line station is also difficult to access, and the station area is inhospitable to a large number of transit users, and at times unsafe throughout the day.

b. Existing Year (2013) Traffic Volumes and Automobile Levels of Service

The June 2016 *Lynwood Transit Area Specific Plan Traffic Impact Analysis* prepared by Translutions, Inc. analyzed traffic impacts associated with the LTASP (Appendix D). The following analysis of the potential traffic impacts is based on the traffic study (Translutions, 2016). For the purposes of evaluating the land use changes, transportation improvements and other policy directives that would ultimately result from the proposed LTASP, eight study roadway segments (Figure 14) were identified and analyzed for traffic operations:

1. Long Beach Boulevard north of Norton Avenue
2. Long Beach Boulevard south of Josephine Street
3. Alameda Street north of Imperial Highway
4. Alameda Street south of 119th Street
5. State Street north of Oakwood Avenue
6. State Street south of Redwood Avenue
7. Imperial Highway west of Alameda Street
8. Imperial Highway east of California Avenue

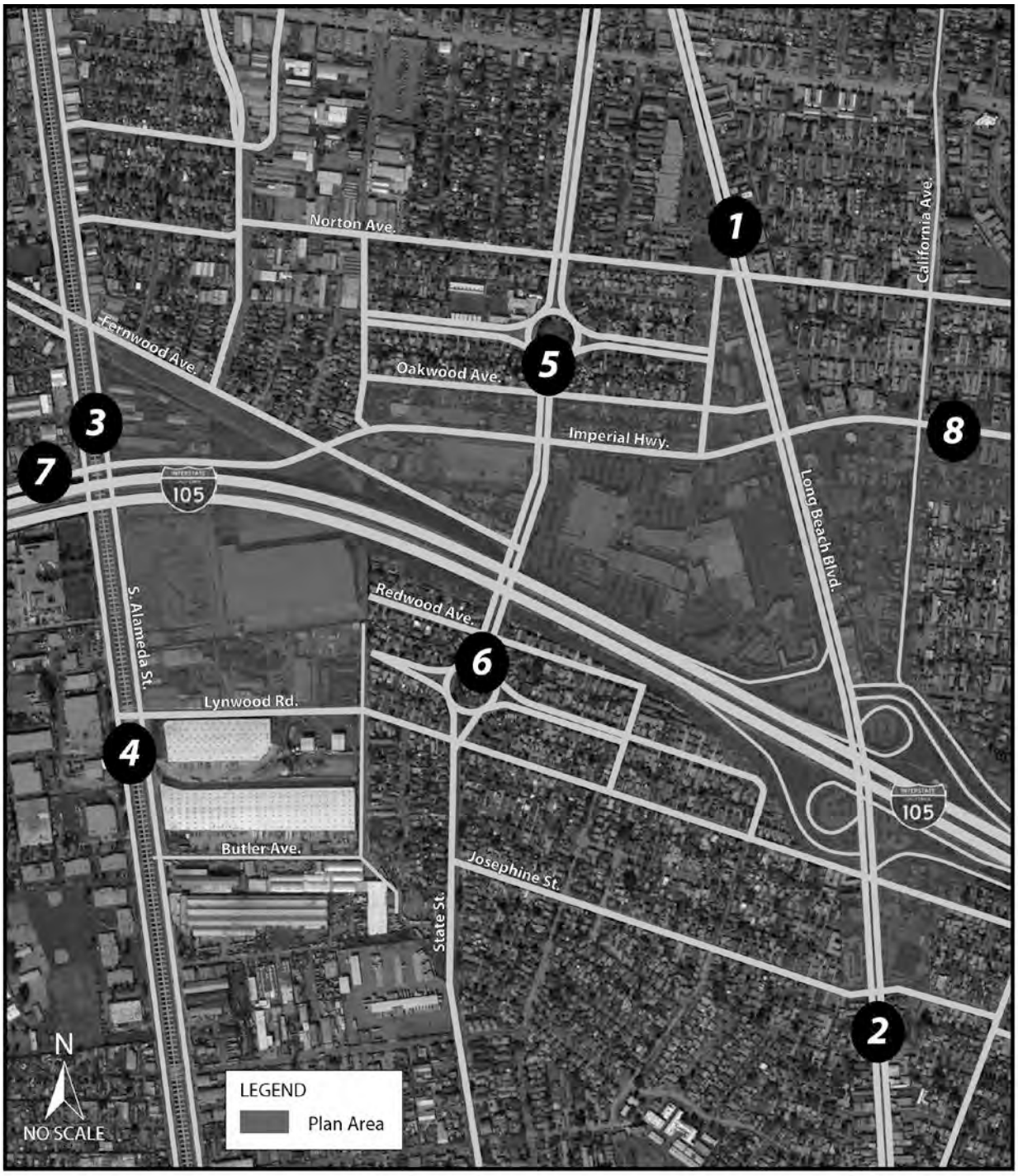
In addition, the traffic conditions were analyzed at six freeway off-ramp intersections (Figure 15). The intersections analyzed for the existing condition are listed below:

1. Long Beach Boulevard/I-105 West Bound Slip On Ramp
2. Long Beach Boulevard/I-105 West Bound Off Ramp
3. Long Beach Boulevard/I-105 West Bound Loop On Ramp
4. Long Beach Boulevard/I-105 East Bound Loop On Ramp
5. Long Beach Boulevard/I-105 East Bound Loop Off Ramp
6. Long Beach Boulevard/I-105 East Bound Slip On Ramp

Existing traffic volumes are based on peak hour intersection turn movement counts conducted in 2015. Therefore, 2015 was used as the *Existing Conditions* scenario. The concept of "Level of Service" (LOS) is used to characterize how well the roadway network operates for motor vehicles. LOS is a standard measure of traffic operating conditions, which varies from LOS A (indicating free flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity resulting in long queues and delays). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. The City of Lynwood's current LOS standard is to maintain LOS D or better.

An intersection LOS analysis was conducted for existing conditions to determine current circulation system performance. The existing automobile LOS for the Plan Area is shown below in Table 35. Morning peak hours were considered to occur between 7:00 a.m. to 9:00 a.m. and evening peak hours between 4:00 a.m. to 6:00 p.m.

Figure 14 Roadway Segments



1	Long Beach Blvd. North of Norton Ave.	5	State St. North of Oakwood Ave.
2	Long Beach Blvd. South of Josephine St.	6	State St. South of Redwood Ave.
3	Alameda St. North of Imperial Highway	7	Imperial Highway West of Alameda St.
4	Alameda St. South of 119th St.	8	Imperial Highway East of California Ave.

Figure 15 Freeway Intersection Locations

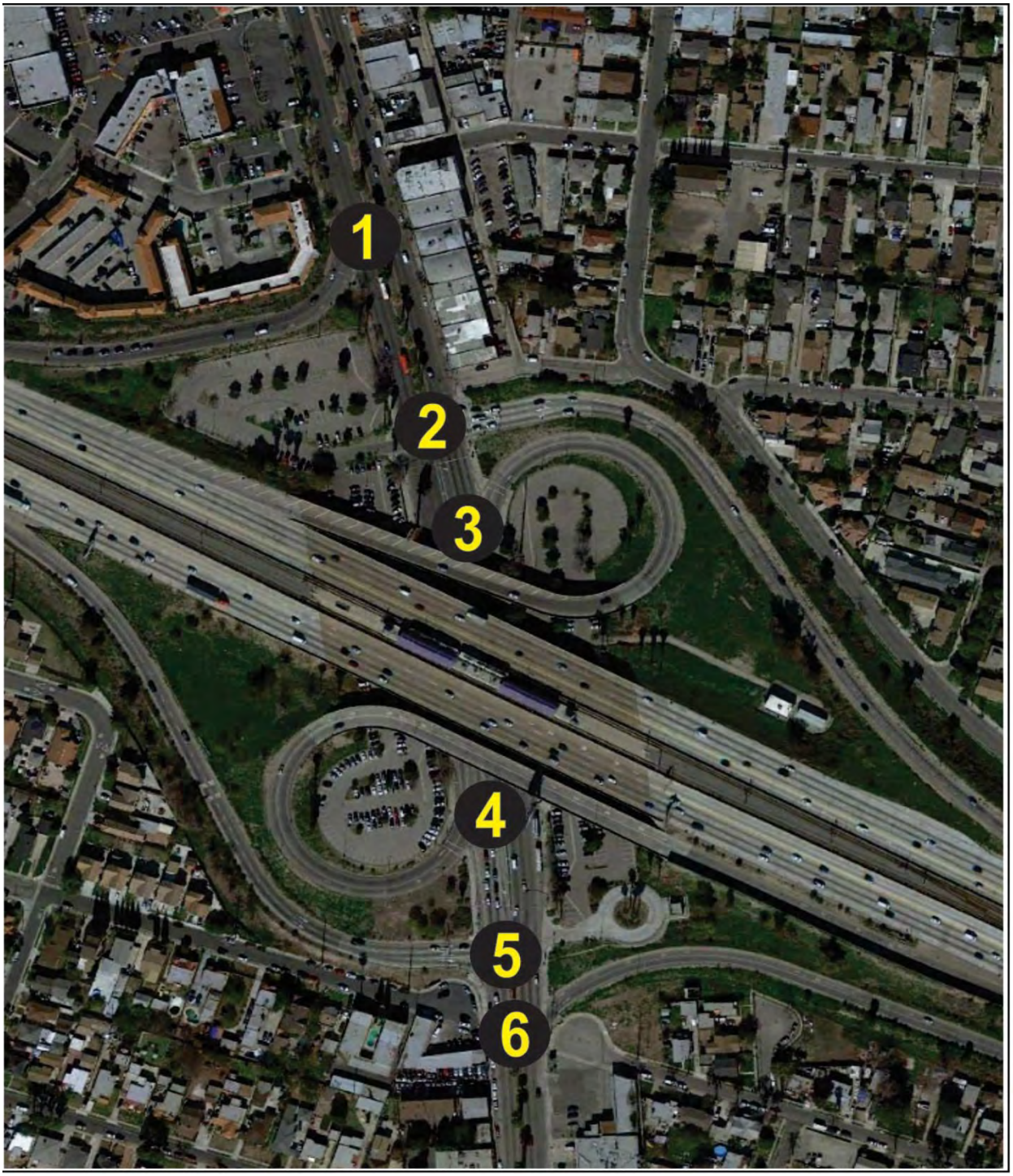


Table 35 Existing Intersections Level of Service

Intersection	Control	A.M. Peak Hour Delay	A.M. Peak Hour LOS (seconds)	P.M. Peak Hour Delay (seconds)	A.M. Peak Hour LOS
Long Beach Boulevard/ I-105 West Bound Slip On Ramp	Free	0	A	0	A
Long Beach Boulevard/ I-105 West Bound Off Ramp	Signal	11.9	B	17.2	B
Long Beach Boulevard/ I-105 West Bound Loop On Ramp	Free	0.4	A	0.4	A
Long Beach Boulevard/ I-105 East Bound Loop On Ramp	Free	0.4	A	0.4	A
Long Beach Boulevard/ I-105 East Bound Loop Off Ramp	Signal	8.8	A	7.3	A
Long Beach Boulevard/ I-105 East Bound Slip On Ramp	Free	0	A	0	A

Source: Translutions, Inc. Traffic Impact Analysis 2016

Table 35 shows that all six of the studied intersections operate at a satisfactory LOS under existing conditions. An LOS analysis was also conducted for roadway segments near the Plan Area. These were analyzed using volume-to-capacity (V/C) ratios. Table 36 shows the LOS and V/C for the roadway segments analyzed in the analysis. All roadway segments, with the exception of the two Long Beach Boulevard segments, operate at an acceptable LOS.

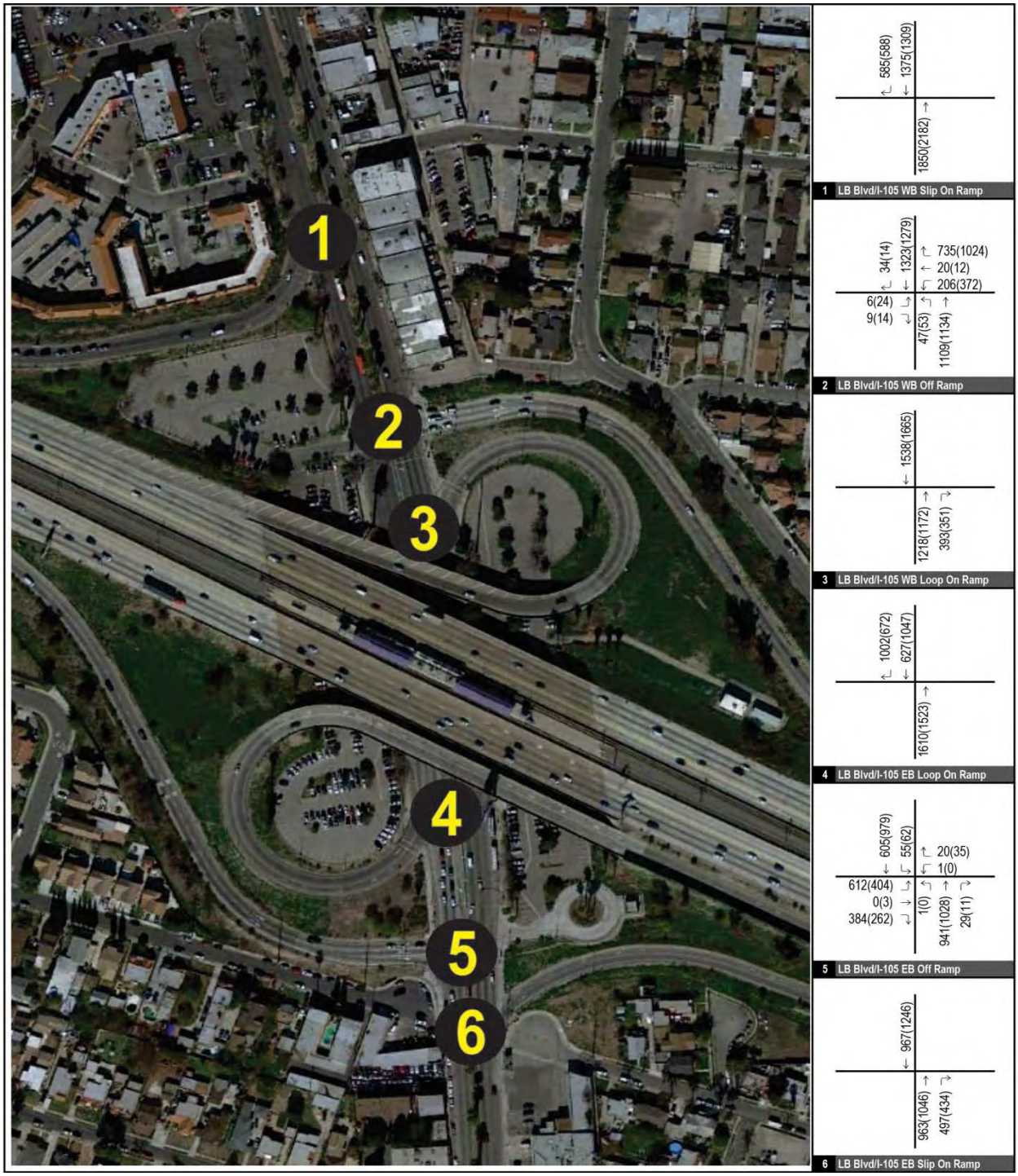
Table 36 Existing Roadway Segments Level of Service and V/C

Intersection	Lanes	Roadway Capacity	Existing Volume	V/C	Existing LOS
Long Beach Boulevard north of Norton Avenue	4	36,000	35,231	0.979	E
Long Beach Boulevard south of Josephine Street	4	36,000	33,442	0.929	E
Alameda Street north of Imperial Highway	4	36,000	28,446	0.790	C
Alameda Street south of 119th Street	4	36,000	23,555	0.654	A
State Street north of Oakwood Avenue	4	36,000	12,574	0.349	A
State Street south of Redwood Avenue	4	36,000	14,012	0.389	A
Imperial Highway west of Alameda Street	6	54,000	40,366	0.748	B
Imperial Highway east of California Avenue	4	36,000	29,318	0.814	C

Source: Translutions, Inc. Traffic Impact Analysis 2016

Existing peak hour traffic volumes and the configuration of each of the six study area intersections are shown in Figure 16.

Figure 16 Existing Plus Project Peak Hour Traffic Volumes



In addition to LOS as a measure of the existing conditions, Vehicle Miles Traveled (VMT) were analyzed. VMT is defined as the amount and distance of automobile travel attributable to a project. An estimate of base VMT for the

City of Lynwood was made using data from the California Statewide Travel Demand Model (CSTDM). Based on the CSTDM, the Year 2010 Per Capita VMT for residential uses is 13.85 miles per day, and for non-residential uses is 39 miles per day. The project occupies parts of Traffic Analysis Zones (TAZs) 4281, 4262, 4286, 4278, 4293, and 4294. The weighted average existing per capita VMT for the project TAZs is 13.16 miles per day for residential uses and 39.01 miles per day for nonresidential uses. Based on the Office of Planning and Research's (OPR) draft threshold for existing VMT, the project would have an impact if the per capita residential VMT is greater than 11.77 miles per day or if the non-residential VMT is greater than 32.96 miles per day.

4.12.2 Impact Analysis and Mitigation Measures

a. Methodology and Significance Thresholds

Forecast traffic volumes at the six study intersections were developed based on discussion with City staff and use of the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan (RTP) model as the basis. Future traffic volume forecasts were developed using a two-step process. The results of the current volumes based on Year 2015 counts and the 2012 SCAG RTP model were processed using the National Cooperative High Research Program Report 255 (NCHRP-255) methodologies. The future traffic volume forecasts were developed by overlaying the potential traffic changes related to the proposed implementation of the Specific Plan onto the current volumes. The trip generation for the areas where proposed land use designations are changing was calculated based on rates included in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 9th Edition. The future VMT was calculated based on trips to and from the TAZs included in the CSTDM for 2040.

The City of Lynwood's current LOS standard is to maintain better than a LOS D. Based on this standard, automobile traffic impacts are identified as significant if the proposed Specific Plan buildout would cause the LOS to degrade from LOS D or better to LOS E or F.

The Los Angeles County Congestion Management Program (CMP) requires an analysis of nearby mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours. For purposes of the CMP, a significant impact occurs when the proposed Plan increases traffic demand on a CMP facility by two percent of capacity (V/C ≥.0.02), causing LOS F (V/C > 1.00); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by two percent of capacity (V/C ≥ 0.02).

Additionally, a development project that results in vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. The proposed VMT guidelines have not yet been approved by the Natural Resources Agency (NRA), and do not currently specify thresholds of significance. The OPR, under its most recent (January 20, 2016) guidance has set a threshold of 15% less than existing VMT as the threshold of significance. Due to the transit oriented development concepts outlined in the Specific, OPR's draft VMT thresholds were utilized as an alternative assessment of traffic impacts.

In accordance with the *State CEQA Guidelines*, the proposed Specific Plan would result in a significant impact if it would:

1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system
2 Conflict with a applicable congestion management program, including, but not limited to the level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roadways or highways
3 Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
4 Substantially increase hazards due to a design feature or incompatible uses
5 Result in inadequate emergency access
6 Conflict with adopted plans, policies, or programs regarding public transit, bicycle, or pedestrian facilities
7 Otherwise decrease the performance or safety of such facilities

b. Proposed Project Transportation Network Improvements

The Specific Plan provides the vision and recommendations for all travel mode types: automobile, bicycle, pedestrian, and transit. Access and circulation improvements within the Plan Area are based on the "Complete Streets" concept, which involves designing the street network to accommodate all users (pedestrians, bicycles, buses, automobiles, and trucks) safely and efficiently. The LTASP proposes various multimodal transportation network improvements to accommodate planned growth within the Plan Area. The following mobility strategies are proposed as part of the project:

Local and Regional Connections

- Maintain acceptable levels of local circulation in the LTASP area and adjacent neighborhoods and good connections with the regional circulation network for both transit and personal/commercial vehicles
- Develop street typology based on functional and urban design considerations, emphasizing connectivity and linkages, pedestrian and cyclist safety and comfort, increasing transit movement and reducing total person delay, and compatibility with adjacent land uses
- Maintain, re-establish, and enhance the street grid, to promote flexibility of movement through greater street connectivity, capture natural views, and retain the historic relationships between various streets

Land Use and Transit

- Link land use and transit development policies to maximize transit use and convenience in the Plan Area.
- Cluster housing and employment around shared parking and major transit corridors and transfer nodes, connected by pedestrian streets
- Make street and transit stop improvements to facilitate the safety, attractiveness and convenience of transit use. This might include transit improvements to designated transit-priority streets to keep buses moving, upgrades to transit stops to include amenities such as weather protection, and real time trip information, and other improvements

Multi-Modal Future

- Increase transportation choices by providing viable alternatives to exclusive reliance on the auto for residents and visitors
- Through sound land use and transportation planning, emphasize diversifying modal choices, increasing number of downtown trips by transit, bicycle, and on foot, and improving pedestrian comfort and safety

Encourage Pedestrian and Bicycle Safety

- Implement the Lynwood Bicycle and Pedestrian Transportation Plan, to provide additional safe and comfortable options for cyclists by expanding the planned bicycle and pedestrian path along Fernwood Avenue to connect Long Beach Boulevard to California Avenue
- Provide a high level of pedestrian amenities throughout the Plan Area. Minimize interruptions, such as areas for loading and trash collection, and parking garage entries, in sidewalks designated for pedestrian priority
- Provide pedestrian crosswalks at all intersections and consider additional improvements to promote safety in key locations with high potential for pedestrian/vehicle conflicts
- Install bulb-outs and mid-block crossings to improve safety
- Consider the special mobility requirements of the young, the elderly, and wheelchair or mobility impaired users of the sidewalk network
- Promote increased walking for downtown residents and visitors with expanded marketing, promotional/informational events, and financial incentives
- Provide designated bicycle routes with lane markings and signage within and to and from major LTASP destinations
- Include bicycle parking, showers, and lockers to promote bicycle commuting in new development.
- Include bicycle parking in streetscape improvements
- Promote increased bicycling for downtown residents and visitors with expanded marketing, promotional/informational events, and financial incentives

Parking Management

- Maximize the efficiency of existing and future parking facilities by creating a comprehensive on-street and off-street parking system to achieve 85% parking space occupancy
- Establish demand based parking requirements (with future development having the option to prepare a parking management plan to further reducing parking requirements)
- Create a Transportation Management District to manage parking supply and revenue policies. The District can facilitate coordination of parking pricing to promote efficient use of parking resources, policies which provide incentives for transit use for employees, and other LTASP transportation programs and incentives.
- Utilize shared parking where possible and establish a parking trade program that allows for off-site parking (within 2,000 feet) to meet on-site requirements while minimize parking activity impacts, particularly spillover parking impacts on adjacent residential neighborhoods
- Protect residential parking –implement 50%/75% Residential Parking Program – share with employees and/or short term users. This program will be used in residential areas with 75% occupancy and 50% use by non-resident related vehicles. This limits intrusion of non-residents into adjacent residential communities.
- Protect residential parking –implement 50%/75% Residential Parking Program – share with employees and/or short term users. This program will be used in residential areas with 75% occupancy and 50% use by non-resident related vehicles. This limits intrusion of non-residents into adjacent residential communities
- Require a certain portion of on-site parking for motorcycle, bicycle, and carpool/carshare vehicle parking in addition to automobile spaces
- Allow excess parking to be converted to other uses or parking should be made available for shared use. At off-peak times where parking is not in use by an individual use, parking should be made available for shared use
- Implement public-private parking program through the Lynwood Parking Authority and reinvest parking revenues into parking and transportation and set up separate on-street and off-street revenue/expenditure programs

c. Traffic Scenarios

Traffic conditions along the study roadway segments and intersections listed in section 4.12.1.b above were evaluated for the following four scenarios:

- Existing Year (2015) conditions (discussed in Section 4.12.1 above)
- Existing Plus Project conditions
- Year 2040 conditions
- Year 2040 Plus Project conditions

d. Impact Analysis

Impact T-1	Development facilitated by the Specific Plan would increase traffic levels under Existing Year (2015) Plus Project conditions at Plan Area intersections. The Plan Area I-105 Freeway intersections are projected to operate at acceptable levels of service (better than LOS D) and acceptable VMT. Therefore, impacts would be *less than significant*.

Existing Year (2015) with the proposed LTASP buildout conditions was analyzed for the Existing Plus Project conditions scenario. Existing Plus Project condition peak hour traffic volumes and the configuration of each of the six study area intersections are shown in Figure 16. The LTASP is anticipated to generate 1,894 trips during the AM peak hour, 2,975 trips during the PM peak hour, and 33,550 daily trips. Table 37 summarizes the Existing Plus Project AM and PM peak hour results for study intersections, respectively. All six study intersections are expected to operate at LOS C or better conditions assuming proposed LTASP buildout, which is acceptable given the threshold of LOS D. Therefore, the proposed project would result in **less than significant** impacts for the six study intersections under Existing Plus Project conditions.

Table 37 Existing Plus Project Freeway Intersections Level of Service

Intersection	Control	A.M. Peak Hour Delay	A.M. Peak Hour LOS (seconds)	P.M. Peak Hour Delay (seconds)	A.M. Peak Hour LOS
Long Beach Boulevard/ I-105 West Bound Slip On Ramp	Free	0	A	0	A
Long Beach Boulevard/ I-105 West Bound Off Ramp	Signal	16.9	B	29.3	C
Long Beach Boulevard/ I-105 West Bound Loop On Ramp	Free	0.4	A	0.2	A
Long Beach Boulevard/ I-105 East Bound Loop On Ramp	Free	0.5	A	0.5	A
Long Beach Boulevard/ I-105 East Bound Loop Off Ramp	Signal	9.9	A	10	A
Long Beach Boulevard/ I-105 East Bound Slip On Ramp	Free	0	A	0	A

Source: Translutions, Inc. Traffic Impact Analysis 2016

MITIGATION MEASURES

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact T-2	Development facilitated by the Specific Plan would increase traffic levels along road segments under Existing Plus Project conditions. Based on project related vehicle trips added to the roadway network, the project is anticipated to have significant impacts on the Long Beach Boulevard roadway segment. Impacts would be *significant and unavoidable*.

A LOS analysis was conducted for the eight roadway segments listed in section 4.12.1.b above. As shown in Table 38 on the following page, all study area roadway segments, with the exception of Long Beach Boulevard, operate at an acceptable LOS. These two roadway segments exceed the City's LOS D threshold under Existing Plus Project Conditions. This is considered a **significant and unavoidable impact**.

Table 38 Existing Plus Project Roadway Segment Level of Service

Intersection	Lanes	Roadway Capacity	Volume (Existing + Project)	V/C (Existing + Project)	V/C Change	Existing + Project LOS
Long Beach Boulevard north of Norton Avenue	4	36,000	36,909	1.025	0.047	**F**
Long Beach Boulevard south of Josephine Street	4	36,000	35,120	0.976	0.047	**E**
Alameda Street north of Imperial Highway	4	36,000	30,124	0.837	0.047	D
Alameda Street south of 119th Street	4	36,000	25,233	0.701	0.047	B
State Street north of Oakwood Avenue	4	36,000	14,252	0.396	0.047	A
State Street south of Redwood Avenue	4	36,000	15,690	0.436	0.047	A
Imperial Highway west of Alameda Street	6	54,000	42,044	0.779	0.031	C
Imperial Highway east of California Avenue	4	36,000	32,673	0.908	0.093	D

Source: Translutions, Inc. Traffic Impact Analysis 2016. Bold indicates a significant impact.

MITIGATION MEASURES

Lane additions in the Plan Area are not feasible due to insufficient additional right-of-way and therefore they are not proposed in the Plan Area as part of the project. In order to reduce impacts at identified intersections where additional right-of-way is not feasible for implementing site-specific intersection improvements, the Specific Plan requires the implementation of various Transportation Demand Management improvement measures to roadway segment infrastructure, and transit, bicycle and pedestrian infrastructure improvements within the Plan Area. These improvements would provide residents, employees and visitors more transportation options to access the area and would therefore encourage more people to take transit, bike or walk. Mitigation Measures T-1(a) through T-1(f) shall be incorporated into any future development project proposed in the Plan Area to the greatest extent feasible.

T-1(a) Signal Synchronization and Signal Timing

All the traffic signals along major roadways shall be interconnected so that a coordinated signal timing plan can be implemented to minimize vehicle stopped delay and traffic congestion. Most of the major arterials in Los Angeles County are already under the County's Traffic Signal Synchronization System (TSSP) and others are in the process of implementation by the County. This strategy will greatly enhance area-wide mobility and efficiency in traffic circulation through arterial intersections when fully completed.

T-1(b) Automated Traffic Surveillance and Control and Adaptive Traffic Control

Automated Traffic Surveillance and Control (ATSAC) and Adaptive Traffic Control (ATC) systems are based on a comprehensive monitoring of traffic and circulation of area streets and intersections from a centralized location, usually a Transportation Management Center (TMC) at the City Hall, using video cameras and sensors located at various key locations. The ATSAC system allows City's traffic engineers to observe and adjust signal timing at the intersections based on real-time traffic demands at various approaches for various movements. The ATC system provides real-time advisories and guidance to motorists through various changeable message signs (CMS) located at key arterial locations upstream of congested intersections. These systems are extensively in use in the City of Los Angeles and have

been considered as effective mitigation of traffic impacts, reducing intersection V/C ratio by 0.07 with ATSAC system and by 0.03 with ATC system. When used in combination, these mitigation measures can reduce V/C ratio by a total of 0.10, thereby significantly improving circulation conditions.

T-1(c) Carpool/Rideshare Programs.

The Los Angeles County Metropolitan Transportation Authority and other transportation agencies in the region offer rideshare services to area employers. Metro Commute Services, funded and implemented by MTA, has offered rideshare services to area employers since 2002. Metro Commute Services provides carpool/vanpool match lists, and additional survey data services to calculate employer work site average vehicle ridership for rideshare option. Employers who are committed to promoting ridesharing at their work sites and provide rideshare incentives to employees through Metro Commute Services programs are eligible to participate in Metro Rewards and the Guaranteed Ride Home Program. Metro Rewards1, initiated in 2000, provides a nominal financial reward for employees that commit to rideshare. The Guaranteed Ride Home Program, initiated in 2006, provides a taxi ride or rental car to ridesharing employees in emergency situations, such as unexpected illnesses or unscheduled overtime.

Various vanpool programs have been undertaken in recent years by several agencies. The Metro Vanpool Program, administered by MTA, is a special incentive program designed to introduce commuters to vanpooling. Eligible commuters receive a vanpool lease subsidy of up to $400 per month, not to exceed 50 percent of the monthly lease costs for commuter vanpools of 7-15 passengers in return for reporting vanpool operating data and making the vanpool open to the public.

T-1(d) Incentives to Increase Transit Ridership

Encouraging ridership on transit is an important strategy for reducing vehicular trips on circulation system. The following services are particularly useful because they increase the potential for commuters to ride transit:

- EZ Transit Pass: The EZ transit pass encourages greater transit ridership by providing the ability for transit patrons to use different transit services with only one pass. It allows riders to transfer from one transit system to another without worrying about transfer payments or fare differentials.
- Transit Access Pass (TAP): The EZ transit pass and all other paper passes have been transitioning to a universal fare system known as TAP. TAP is a plastic “smart card” that can be used month after month to pay fares. Users simply tap their cards on the bus/rail fare box and a “beep” alert verifies that the cards are valid. Like the EZ transit pass, TAP is used for transfers among different transit systems.
- Employer-based transit fare subsidies: Employers and transit agencies encourage transit use throughout the county with pre-paid fare media. Employers have a choice among several programs that are part of Metro Commute Services. Two of these programs include MTA Annual Transit Access Pass (A-TAP) and Metro Business Transit Access Pass (B-TAP). A-TAP allows employers to buy and distribute annual transit passes to employees who take transit. B-TAP allows employers to purchase annual transit passes at a discounted group rate for all worksite employees. Another program for employers is Metro Mail. Through Metro Mail employers can encourage transit use by ordering monthly passes for employees. Employers also have the option of requesting a weekly pass for newly hired employees. In addition to directly encouraging transit use, participating in any of these programs also makes employers eligible to participate in Metro Rewards and the Regional Guaranteed Ride Home.
- Commuter Benefits: Federal IRS tax code 132 (f) contains tax breaks available for subsidizing transit and vanpooling for employees. Participating employers can offer pretax dollars to employees who ride transit or join a vanpool. Once a year MTA holds a workshop with employers to encourage and help them implement this program. The Commuter Benefits program was recently expanded to include benefits for employees who bicycle to work.

T-1(e) Bicycle Facilities and Other Non-motorized Transportation

Continue to implement the City of Lynwood's Bicycle and Pedestrian Transportation Plan, which will provide additional safe and comfortable options for cyclists by expanding the planned bicycle and pedestrian improvements throughout the City, in the form of connected network of on-street and off-street improvements. Improvement project have been specifically recommended on over 35 roadway segments, some of which are located within the LTASP. The type of improvements include: bike pathways, cycle tracks and bike lanes. Specifically within the LTASP, future development projects shall be required to construct or contribute funds toward the following major pedestrian/bicycle improvements:

- Construct a Class I Bike Path along Fernwood Avenue from the western boundary of the LTASP east adjacent to the I-105 Freeway and the southern boundary of the Plaza Mexico Shopping Center, across Long Beach Boulevard and further east along Fernwood Avenue.
  - Construct Class II Buffered Bike Lanes along Imperial Highway east from its intersection with Fernwood Avenue to Long Beach Boulevard and along State Street.
  - Construct Class III Bike Lanes (Sharrows) along neighborhood streets within the LTASP, including but not limited to, California Avenue, Beechwood Avenue, Sanborn Avenue, and Mulford Avenue, Oakwood Avenue, and Lynwood Road.
  - Construct Class IV Bike Lanes (Cycle Tracks) along Long Beach Boulevard south from its intersection with Imperial Highway to the southern boundary of the Plan Area.
  - Establish enhanced sidewalks along Long Beach Boulevard with a dedicated six-foot wide amenity zone and an eight foot wide pedestrian zone.
  - Establish enhanced sidewalks along Imperial Highway, State Street, and Beechwood Avenue with a dedicated 4-foot wide amenity zone and a 6ft. wide pedestrian zone.
  - Add high visibility cross-walks at Imperial Highway and State Street, Long Beach Boulevard and Imperial Highway and California Avenue and Imperial Highway.
  - Add sidewalk bulb-outs and extensions, or reducing curb returns on intersection corners wherever feasible.
  - To the extent feasible, reconfigure the east and westbound I-105 on and off-ramps to allow safer pedestrian crossings.

T-1(f) Transportation Demand Management

The Transit Center land use designation is envisioned as a place where one can conveniently access mass transit and alternative modes of transportation in the downtown area of Lynwood. Local and regional transportation alternatives will be provided within the Metro station and immediately surrounding areas, which is conveniently located at Metro's Long Beach Boulevard Green Line stop. Although the transit "hub" is proposed at this location, the TDM programs are also planned to serve the surrounding communities and businesses throughout the LTASP and surrounding Lynwood neighborhoods. Individual developers within the LTASP will be responsible for implementation of the program prior to issuance of building permits, or upon verification by the City that sufficient transit demand exists. Transit services envisioned within the LTASP's Transit Center area include:

- Improved access to the existing Metro bus lines (Metro Buses Lines 25, 60, 251, 360, 622, and 751) and other transit services, such as the local trolley and Dial-a-Ride Traditional bus service to other local and regional destinations
- Expanded number Park-n-Ride spaces parking spaces within a multi-level parking structure with integrated ground-floor retail and/or other transit rider services (such as a police sub-station, coffee shop, and/or news stand);
- Creation of an on-site "Mobility Center", which will provide residents with opportunities to conveniently access car sharing (Zip Car), bicycle rental, and bicycle storage; and
- Van Pool Service to major employment centers such as downtown Los Angeles, Long Beach, LAX, and West Los Angeles.

Other key components that should be implemented as part of each new development in the LTASP, including:

- Introductory Transportation Information Packet: provided to all residents and employees, outlining TDM programs, routes, schedules, carpools/ vanpools, shuttle/bus service maps, menu of incentives, etc.
- Carpool/Vanpool/Ridematching Services: This program would match residents and employees in Lynwood in carpools and vanpools to reduce drive alone trips. A Guaranteed Ride home service would provide reimbursement for immediate transportation home via Uber or Lyft or other similar mode to those in an emergency.
- Subsidized Transit Pass: Transit passes would be purchased in bulk so that bus and rail passes could be provided for residents and employees within the LTASP. These passes typically provide unlimited rides on local or regional transit for low monthly fees.
- Priced Commercial Parking: Multi-Spaced parking meters are planned along portions of Long Beach Boulevard, Imperial Highway, and within shared parking structures, with rates calibrated to ensure an 85% occupancy rate. This will provide a high level of convenience for parkers, largely eliminates circling for parking, and will help ensure turnover of the most convenient curb-parking spaces and availability for customers.
- Parking Cash-Out: Parking cash-out provides an equal transportation subsidy to employees who ride transit, carpool, vanpool, walk, or bicycle to work. Employees can be offered financial incentives such as free transit passes or a cash bonus to carpool, vanpool, bicycle, or walk, thus decreasing the demand for parking and ultimately reducing traffic congestion.

Significance after Mitigation

The above-described improvements are considered TDM strategies to fully utilize the potential of the project site. The project site has excellent transit opportunities, and the project design would enhance pedestrian and bicycle connectivity as well as improve transit accessibility. These project parameters were modeled into the California Emissions Estimator Model (CalEEMod) to identify the efficiency of each project parameter. Table 39 lists the project design parameters and resulting VMT reductions resulting from each measure.

Table 39 VMT Reductions from Project Design Features

TDM Measure	Unmitigated	Mitigated	% Reduction
10% Parking Reduction	195,477,946	185,704,049	5.00
Pedestrian Enhancements and Traffic Calming	195,477,946	185,704,049	5.00
Increase Density	195,477,946	191,260,315	2.16
Increase Land Diversity	195,477,946	145,766,092	25.43
Affordable Housing	195,477,946	180,230,667	7.80
Transit Adjacency	195,477,946	119,688,946	38.77
Net Reduction	195,477,946	101,462,865	48.09

Source: Translutions, Inc. Traffic Impact Analysis 2016.

As discussed is section 4.14.b, the required reduction in VMT from existing VMT for the TAZ was calculated at 10.52 percent for residential uses and 15.52 percent for non-residential uses. The LTASP achieves an overall VMT reduction of over 48 percent after successful implementation of TDM measures. After application of TDM land use strategies, the per capita project VMT for residential uses is forecast to be 6.83 miles per day and for the non-retail uses, the per capita VMT is forecast to be 20.25 miles per day. Therefore, the project would have a less than significant impact under the draft VMT threshold. Nevertheless, the Long Beach Boulevard north of Norton Avenue road segment and the Long Beach Boulevard south of Josephine Street road segment would likely still exceed the current LOS D threshold currently adopted by the City of Lynwood after implementation of the TDM measures described above. Therefore, under the current LOS D threshold, impacts would remain significant and unavoidable.

Impact T-3	Development facilitated by the Specific Plan would increase traffic levels under Future Year (2040) Plus Project conditions at Plan Area freeway intersections. The Plan Area I-105 Freeway intersections are projected to operate at acceptable levels of service (better than LOS D) and acceptable VMT. Therefore, impacts would be *less than significant*.

Future Year (2040) with the proposed LTASP buildout conditions was analyzed for Future Year (2040) Plus Project conditions scenario (Figure 17).

Table 40 summarizes the Future Year (2040) Plus Project AM and PM peak hour results for study intersections, respectively. All six study intersections are expected to operate at LOS C or better conditions assuming proposed LTASP buildout. Therefore, the proposed project would result in less than significant impacts for the six study intersections under Future Plus Project (2040) conditions.

Table 40 Future Year (2040) Plus Project Intersections Level of Service

Intersection	Control	A.M. Peak Hour Delay	A.M. Peak Hour LOS (seconds)	P.M. Peak Hour Delay (seconds)	A.M. Peak Hour LOS
Long Beach Boulevard/I-105 West Bound Slip On Ramp	Free	0	A	0	A
Long Beach Boulevard/I-105 West Bound Off Ramp	Signal	14	B	25.6	C
Long Beach Boulevard/I-105 West Bound Loop On Ramp	Free	0.4	A	0.3	A
Long Beach Boulevard/I-105 East Bound Loop On Ramp	Free	0.5	A	0.3	A
Long Beach Boulevard/I-105 East Bound Loop Off Ramp	Signal	8.8	A	8.9	A
Long Beach Boulevard/I-105 East Bound Slip On Ramp	Free	0	A	0	A

Translutions, Inc. Traffic Impact Analysis 2016.

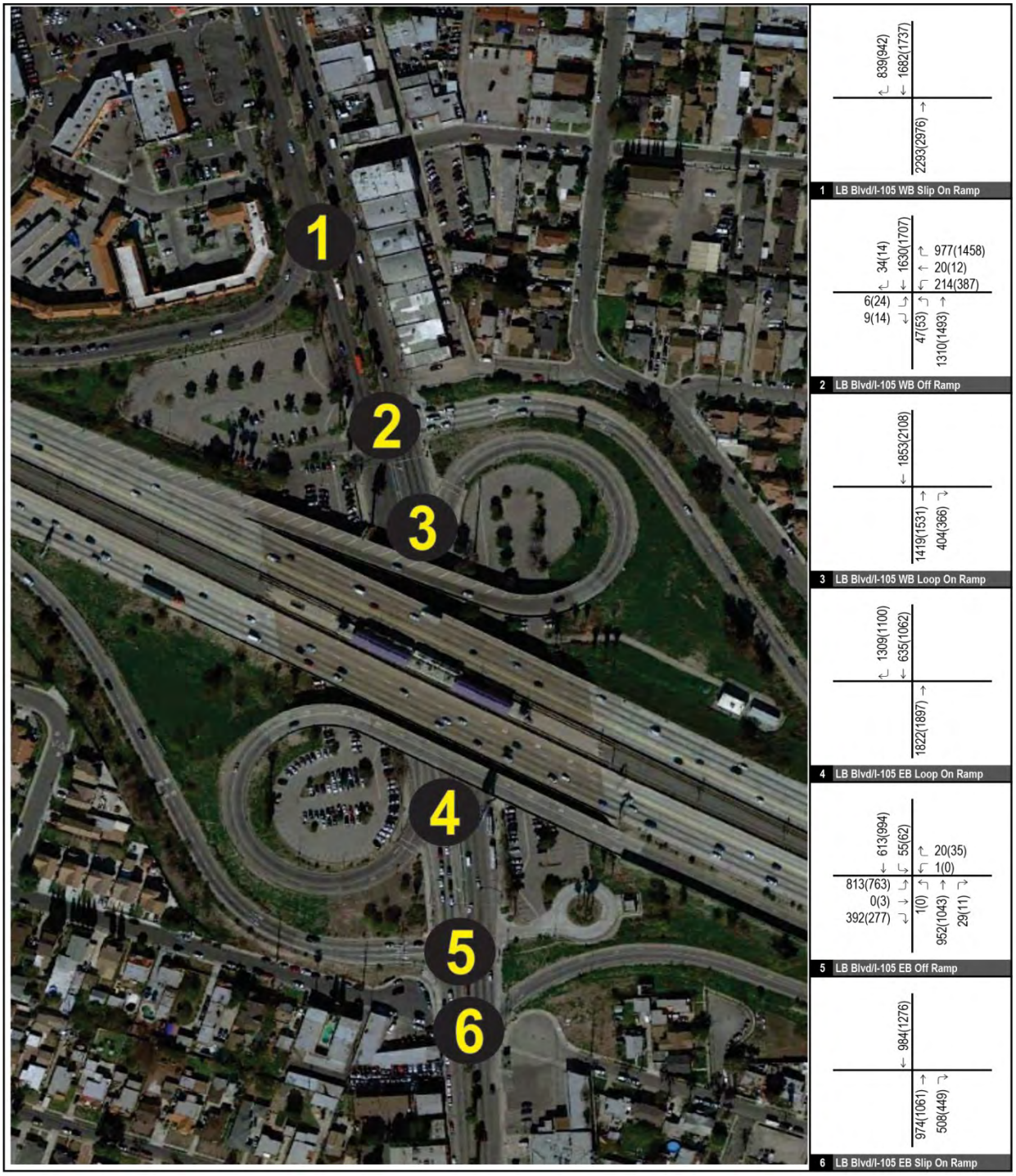
MITIGATION MEASURES

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Figure 17 Lynwood Transit Area Specific Plan Year 2040 Plus Project Peak Hour Traffic Volumes



Impact T-4	Development facilitated by the Specific Plan would increase traffic levels under Future Year (2040) Plus Project conditions at the reconfigured Plan Area I-105 Freeway intersections. The reconfigured I-105 Freeway intersections are projected to operate at acceptable levels of service (better than LOS D), with the exception of the Long Beach Boulevard/Park and Ride Access intersection. Therefore, impacts would be *significant and unavoidable*.

The Long Beach Boulevard/I-105 interchange allows for free right turns for on-ramp traffic, and presents a barrier to pedestrians and bicycles, creating a divide between the northern and southern parts of the City. To improve pedestrian/bicycle connectivity and pedestrian/bicycle safety within the Plan Area, the LTASP recommends the reconfiguration of the I-105 interchange to eliminate free right turns and make the area more pedestrian and bicycle friendly (Figure 18). The proposed geometrics for the interchange include the following modifications:

- Remove the westbound slip on ramp to the I-105 freeway
- Remove Park & Ride driveway from the west leg of the westbound off ramp to a location near the existing westbound slip on ramp
- Realign westbound loop on ramp nearer to the westbound off ramp to form one signalized intersection
- Realign eastbound loop on ramp and the eastbound slip on ramp with the eastbound off ramp
- Remove bus parking lot and Park & Ride access to approximately 100' north of the eastbound slip on ramp.

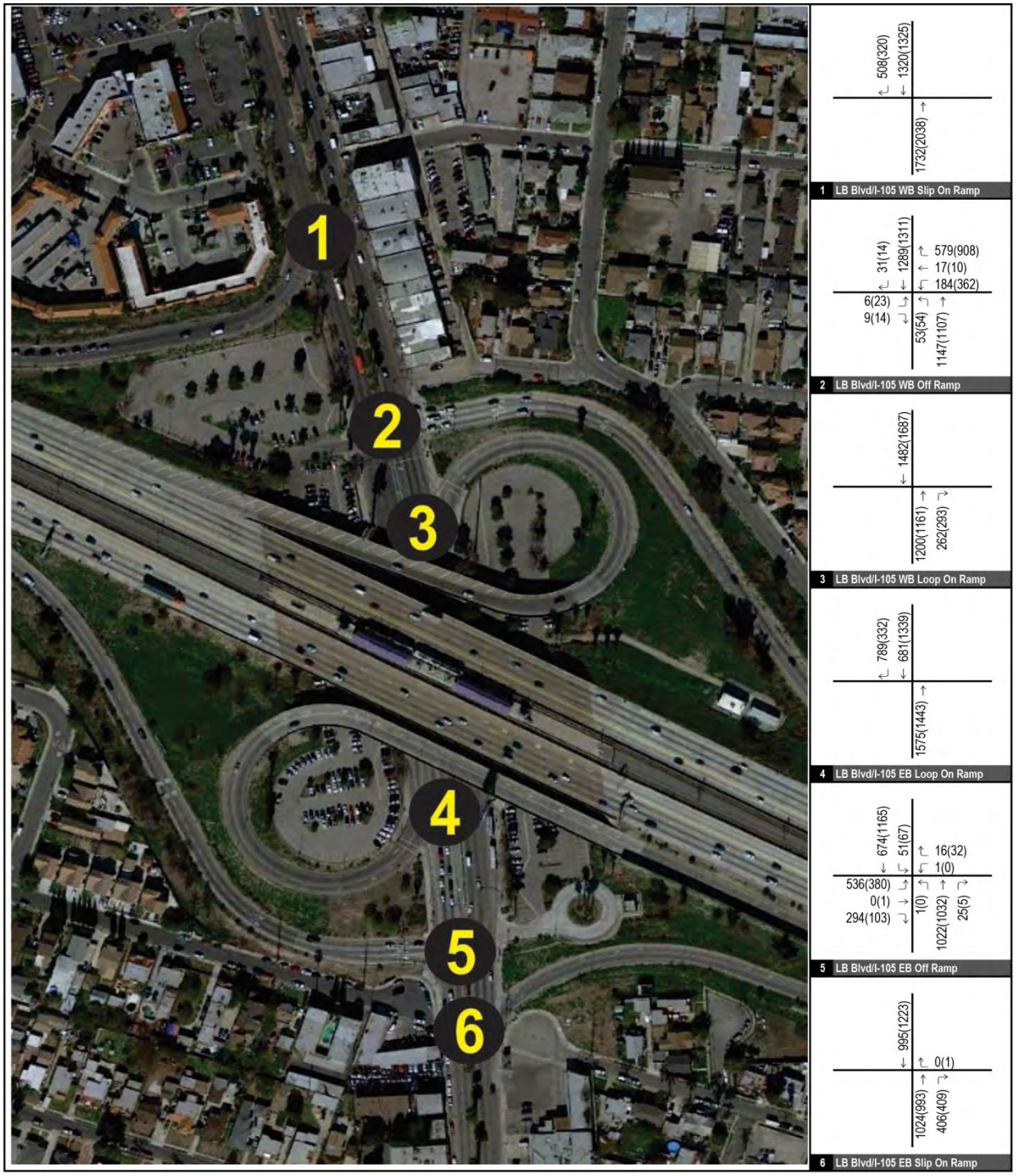
Table 41 summarizes the Future Year (2040) Plus Project AM and PM peak hour results for the reconfigured I-105 intersections. All four study intersections are expected to operate at LOS D or better conditions assuming proposed LTASP buildout, with the exception of the reconfigured Long Beach Boulevard/Park and Ride intersection where the delay for the westbound left turn operates at LOS E. This impact is considered significant and unavoidable.

Table 41 Future Year (2040) Plus Project Reconfigured Intersection Level of Service

Intersection	Control	A.M. Peak Hour Delay	A.M. Peak Hour LOS (seconds)	P.M. Peak Hour Delay (seconds)	A.M. Peak Hour LOS
Long Beach Boulevard/Park and Ride Access	TWSC	34.4	D	36.9	**E**
Long Beach Boulevard/I-105 West Bound Off Ramps	Signal	21.1	C	39.3	D
Long Beach Boulevard/Bus Park and Ride Access	TWSC	30.6	D	33.7	D
Long Beach Boulevard/I-105 East Bound Ramps	Signal	42.6	D	17.1	B

Translutions, Inc. Traffic Impact Analysis 2016. Bold indicates a significant impact.

Figure 18 Lynwood Transit Area Specific Plan Proposed Interchange Design



MITIGATION MEASURES

Mitigation Measures T-1(a) through T-1(f) described above shall be implemented as part of any future development project proposed within the Plan Area.

Significance after Mitigation

As stated above, the required reduction in VMT from baseline VMT for the TAZ was calculated at 10.52 percent for residential uses and 15.52 percent for non-residential uses. The project achieves an overall VMT reduction of over 48 percent after successful implementation of TDM measures. After application of TDM and land use strategies, the per capita project VMT under Year 2040 Plus Project conditions for residential uses is forecast to be 6.34 miles per day and for the non-retail uses, the per capita VMT is forecast to be 19.76 miles per day. Therefore, the project would have a less than significant impact under the draft VMT threshold. Nevertheless, the reconfigured Long Beach Boulevard/Park and Ride Access intersection would likely still exceed the current LOS D threshold currently adopted by the City of Lynwood after implementation of the TDM measures. Impacts would be significant and unavoidable.

Impact T-5	Development facilitated by the Specific Plan would increase traffic levels along road segments under Future Year (2040) Plus Project conditions. Based on project related vehicle trips added to the roadway network, the project is anticipated to have significant impacts on the Long Beach Boulevard roadway segment. Impacts would be *significant and unavoidable*.

Table 4.12-7 summarizes the roadway segment LOS analysis conducted for the Year 2040 conditions. Future development envisioned within the Plan Area incorporates multimodal transportation and accommodates automobile, bicycle, pedestrian, and public transit modes, as well as TDM and parking management strategies. As shown in Table 4.12-7, only the Long Beach Boulevard roadway segments would exceed the City's LOS D threshold. This is considered a significant and unavoidable impact.

Table 42 Year 2040 Plus Project Roadway Segments Level of Service

Intersection	Lanes	Roadway Capacity	Volume (2040 + Project)	V/C (2040 + Project)	V/C Change	2040 + Project LOS
Long Beach Boulevard north of Norton Avenue	4	36,000	36,351	1.010	0.047	**F**
Long Beach Boulevard south of Josephine Street	4	36,000	35,726	0.992	0.047	**E**
Alameda Street north of Imperial Highway	4	36,000	30,222	0.840	0.047	D
Alameda Street south of 119th Street	4	36,000	26,403	0.733	0.047	B
State Street north of Oakwood Avenue	4	36,000	12,463	0.346	0.047	A
State Street south of Redwood Avenue	4	36,000	16,438	0.457	0.047	A
Imperial Highway west of Alameda Street	6	54,000	43,376	0.803	0.031	C
Imperial Highway east of California Avenue	4	36,000	32,467	0.902	0.093	D

Source Translutions, Inc. Traffic Impact Analysis 2016. Bold indicates a significant impact.

MITIGATION MEASURES

Mitigation Measures T-1(a) through T-1(f) described above shall be implemented as part of any future development project proposed within the Plan Area.

Significance after Mitigation

The per capita VMT is forecast to be 19.76 miles per day. Therefore, the project would have a less than significant impact under the draft VMT threshold. Nevertheless, the Long Beach Boulevard north of Norton Avenue road segment and the Long Beach Boulevard south of Josephine Street road segment would likely still exceed the current LOS D threshold currently adopted by the City of Lynwood after implementation of the TDM measures. Impacts would be significant and unavoidable.

Impact T-6	Development facilitated by the Specific Plan would increase traffic levels along CMP road segments under Existing Plus Project and Future Year (2040) Plus Project conditions. The Project trips added to the roadway network would exceed the Los Angeles County Congestion Management Plan (CMP) standards for four roadway segments within the Plan Area. Impacts would be *significant and unavoidable*.

The Los Angeles County Congestion Management Program (CMP) requires an analysis of nearby mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours. For purposes of the CMP, a significant impact occurs when the proposed Plan increases traffic demand on a CMP facility by two percent of capacity (V/C ≥.0.02), causing LOS F (V/C > 1.00); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by two percent of capacity (V/C ≥ 0.02).

As shown above under Existing Plus Project and Future Year (2040) Plus Project Conditions, four study roadway segments would all experience an increase in V/C of greater than 2 percent. These roadway segments include Long Beach Boulevard north of Norton Avenue, Long Beach Boulevard South of Josephine Street, Alameda Street South of Fernwood Avenue, and Imperial Highway East of California Avenue. These study roadway segments would therefore exceed the threshold of V/C increase in the CMP guidelines, as the Specific Plan would add more than a two percent increase in traffic demand on a CMP Facility.

MITIGATION MEASURES

Mitigation Measures T-1(a) through T-1(f) described above shall be implemented as part of any future development project proposed within the Plan Area.

Significance after Mitigation

The per capita VMT is forecast to be 19.76 miles per day. Therefore, the project would have a less than significant impact under the draft VMT threshold. Nevertheless, the Long Beach Boulevard north of Norton Avenue road segment and the Long Beach Boulevard south of Josephine Street road segment would likely still exceed the current LOS D threshold currently adopted by the City of Lynwood after implementation of the TDM measures. Impacts would be significant and unavoidable.

Impact T-7	The Specific Plan is located approximately three miles north of Compton/Woodley Airport. The proposed Specific Plan would not 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, and would not result in the change of air traffic patterns. Therefore, impacts would be *less than significant*.

The Plan Area is located approximately 10 miles east of Los Angeles World Airports (LAX), 6 miles east of Hawthorne Municipal Airport, and 3 miles north of Compton/Woodley Airport. The Compton/Woodley Airport has 275 based aircraft and experiences over 66,000 annual operations off of its two paved parallel runways. Compton/Woodley Airport currently does not have an adopted airport land use plan and the Plan Area would be more than two miles north of Compton/Woodley Airport. Therefore, impacts would be *less than significant*.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact T-8	The Specific Plan would not disrupt existing or planned transit, bicycle, or pedestrian facilities compared to existing conditions. Increased infrastructure for transit, bicycle, and pedestrians would result from the proposed project improving circulation in the Plan Area. Impacts to transit, bicycle, and pedestrian infrastructure would *beneficial*.

The Specific Plan provides the vision and recommendations for all travel mode types: automobile, bicycle, pedestrian, and transit. The LTASP proposes the following pedestrian/bicycle network improvements to accommodate planned growth within the Plan Area:

- Construct a Class I Bike Path along Fernwood Avenue from the western boundary of the LTASP east adjacent to the I-105 Freeway and the southern boundary of the Plaza Mexico Shopping Center, across Long Beach Boulevard and further east along Fernwood Avenue.
- Construct Class II Buffered Bike Lanes along Imperial Highway east from its intersection with Fernwood Avenue to Long Beach Boulevard and along State Street.
- Construct Class III Bike Lanes (Sharrows) along neighborhood streets within the LTASP, including but not limited to, California Avenue, Beechwood Avenue, Sanborn Avenue, and Mulford Avenue, Oakwood Avenue, and Lynwood Road.
- Construct Class IV Bike Lanes (Cycle Tracks) along Long Beach Boulevard south from its intersection with Imperial Highway to the southern boundary of the Plan Area.
- Establish enhanced sidewalks along Long Beach Boulevard with a dedicated six-foot wide amenity zone and an eight foot wide pedestrian zone.
- Establish enhanced sidewalks along Imperial Highway, State Street, and Beechwood Avenue with a dedicated 4-foot wide amenity zone and a 6ft. wide pedestrian zone.
- Add high visibility cross-walks at Imperial Highway and State Street, Long Beach Boulevard and Imperial Highway and California Avenue and Imperial Highway.
- Add sidewalk bulb-outs and extensions, or reducing curb returns on intersection corners wherever feasible.
- To the extent feasible, reconfigure the east and westbound I-105 on and off-ramps to allow safer pedestrian crossings.
- The Transit Center area is envisioned as a place where one can conveniently access mass transit and alternative modes of transportation within the Plan Area. Local and regional transportation alternatives will be provided within the Metro station and immediately surrounding areas, which is conveniently located at Metro's Long Beach Boulevard Green Line station. Transit services envisioned within the LTASP's Transit Center area include:
- Improved access to the existing Metro bus lines (Metro Buses Lines 25, 60, 251, 360, 622, and 751) and other transit services, such as the local trolley and Dial-a-Ride Traditional bus service to other local and regional destinations;

- Expanded number Park-n-Ride spaces parking spaces within a multi-level parking structure with integrated ground-floor retail and/or other transit rider services (such as a police sub-station, coffee shop, and/or news stand);
- Creation of an on-site "Mobility Center", which will provide residents with opportunities to conveniently access car sharing (Zip Car), bicycle rental, and bicycle storage and
- Van Pool Service to major employment centers such as downtown Los Angeles, Long Beach, LAX, and West Los Angeles.

Implementation of these strategies identified in the LTASP will encourage the use of alternative transportation. Therefore, impacts will be beneficial.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

4.13 Utilities and Service Systems

4.13.1 Setting

a. Water Supply

Water supply to the Plan Area primarily derives from local groundwater extracted from the Central Groundwater Basin. The City also imports water purchased from the Metropolitan Water District (MWD) via the Central Basin Municipal Water District (CBMWD) and recycled water provided by CBMWD. About 90 percent of the water supply is provided by the City's active groundwater wells located throughout the City. The wells range in capacity from 550 to 2,000 gallons per minute with a combined production capacity of 5,650 gpm (9,600 AFY). The City supplements its groundwater supply with imported water from its connection to CBMWD on an as needed basis. The CBWMD is one of 11 wholesale agencies served by MWD. The City has an imported connection to CBMWD with a 12 CFS capacity of 5,376 gpm (about 8,670 AFY). In addition to imported water and groundwater, the City's water supply system also includes four 8-inch emergency interconnections with the City of Compton and one 8-inch connection with the City of South Gate. The connections to these other cities are located on the southern and northern portions, respectively of the Linwood's city limits.

The City's groundwater supply is extracted from wells in the Central Groundwater Basin. The basin is located in central Los Angeles County. It underlies the entire city of Lynwood and parts of the service areas of West Basin MWD and CBMWD. The Basin has a surface area of 277 square miles of mostly flat to hilly terrain. Water-bearing deposits of the Central Basin include unconsolidated marine and alluvial sediments deposited over time. Percolation from precipitation, subsurface inflows from the San Gabriel Basin through the Whittier Narrows, and surface flows from local rivers and streams naturally replenish groundwater. The Central Basin is mostly urbanized and soil surfaces have been paved, limiting percolation to a small portion of the basins soils. However, the Central Basin receives additional replenishment from the San Gabriel and Rio Hondo Spreading Basins, which receive a blend of imported water and recycled water. The Central Basin is an adjudicated basin. The California Department of Water Resources serves as the Watermaster. The City's combined pumping rights stand at 6,037 AFY. The City has adjudicated rights to the Central Basin and has an allowable pumping allocation of 5,337 AFY. In addition, the City leased 700 AFY of groundwater rights from another pumper in the Basin for five years.

The City has access to imported water from the Colorado River and the Sacramento-San Joaquin River Delta in Northern California. The two water systems provide Southern California with over two million acre-feet (MAF) of water annually for urban use. The Colorado River supplies 600,000 - 800,000 AF for urban purposes in MWD's service area. In addition to the Colorado River, the Sacramento-San Joaquin River Delta supplies Southern California with over 1 MAF of water annually. The Delta is located at the confluence of the Sacramento and San Joaquin Rivers east of the San Francisco Bay and is the West Coast's largest estuary. MWD utilizes two separate aqueduct systems to obtain imported water supplies. The Colorado River Aqueduct is a 242 mile long aqueduct that carries water from the Colorado River to Lake Matthews and is managed by MWD. The California Aqueduct is also known as the State Water Project, is 44 miles long, carries water from the Delta to Southern California, and is operated by the Department of Water Resources. These two aqueduct systems convey water from each source into two separate reservoirs. MWD pumps this water to treatment facilities one of its five treatment facilities (MWD 2016).

The City distributes its water to its customers through an approximately 90 mile long network of distribution mains with pipelines ranging from 2-inches to 16-inches. The water system consists of one pressure zone that provides sufficient water pressure to customers. The City also maintains a booster pump station consisting of three pumps that can deliver up to 3,600 gpm. The City maintains one water storage reservoir with a capacity of 3 million gallons (MG) for storage and fire flow needs. The reservoir is partially underground and is located adjacent to the City's Well Number 8 and booster pump station just west of the City Hall along Bullis Road (City of Lynwood 2011).

b. Wastewater

The Plan area is located in the Los Angeles County Sanitation District Number 1. The LACSD owns, operates, and maintains the large trunk sewers serving the regional wastewater conveyance system in the city of Lynwood. Wastewater is collected through a citywide network of gravity sewers and lift stations and conveyed to the County Sanitation District's Joint Water Pollution Control Plant (JWPCP) in the city of Carson. Treated effluent is then discharged through an ocean outfall. The JWPCP has a design capacity of 400 million gallons per day (mgd) and currently processes an average daily flow (DWF) of 258.4 mgd (Sanitation Districts of Los Angeles 2016b). The JWPCP is maintained and operated per guidance provided in the City of Los Angeles Regional Sewer System Management Plan (SSMP), which provides direction for maintenance, repairs, rehabilitation, and funding. This agency also supplies guidance for which hydraulic modeling to use in system design planning, capacity studies to anticipate where and how system improvements are needed, and contingency plans for emergency response (City of Los Angeles 2015). The JWPCP does not produce recycled water, but the Los Coyotes Water Reclamation Plant (LCWRP) in Cerritos provides those recycled water services. The recycled water from LCWRP is returned to the city through the CBMWD (City of Lynwood 2011).

The local system of sewer lines that collects wastewater is maintained by the City. The local sewer mains transfer sewage to County Sanitation District trunk lines where the sewage is received at the JWPCP. The City's wastewater collection system is regulated under the jurisdiction of the Los Angeles Regional Water Quality Control Board, the State Water Resources Control Board, and the U.S. Environmental Protection Agency.

c. Solid Waste

As of 2013, the City of Lynwood contracts with Waste Resources, Inc. (WRI) to provide direct collection services for solid waste, recycling, and yard waste services. The Los Angeles Regional Agency, an agency approved by the California Integrated Waste Management Board, assists member cities, including the City of Lynwood, to achieve AB 939 recycling goals. There is a Joint Powers Agreement between member cities to cooperate in the implementation of recycling and AB 939-related programs (City of Lynwood 2016b). Recyclables are processed at both the Puente Hills Material Recovery Facility (permitted for 4,000 tons per day) in Whittier, and the Downey Area Recycling and Transfer Facility (permitted for 5,000 tons per day) located in Downey (County of Los Angeles 2016). Waste generated in the city is taken to the two landfills in Orange County: the Frank R. Bowerman landfill, at 11002 Bee Canyon Access Road in Irvine permitted to receive a daily maximum of 11,500 tons per day; and the Olinda Alpha Sanitary landfill in Brea. The remaining capacity at the Frank R. Bowerman landfill stands at 205 million cubic yards (CalRecycle 2016a) and Olinda Alpha Sanitary landfill stands at 36.5 million cubic yards (CalRecycle 2016b). Table 43 shows the maximum and remaining capacity for the Frank R. Bowerman and Olinda Alpha Sanitary landfills.

Table 43 City Service Landfill Capacity

Site	Maximum Permitted Throughput per Day*		Maximum Permitted Capacity		Remaining Capacity	
	CY**	Tons	CY	Tons	CY	Tons
Frank R. Bowerman Landfill	23,000	11,500	266,000,000	133,000,000	205,000,000	102,500,000
Olinda Alpha Sanitary Landfill	16,000	8,000	148,800,000	74,400,000	36,589,707	18,294,854
Total	**39,000**	**19,500**	**414,800,000**	**207,400,000**	**241,589,707**	**120,794,854**

* CalRecycle. Facility/Site Summary Details: Retrieved http://www.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0360/Detail/ and http://www.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0035/Detail/.

** CalRecycle (2014) identifies Maximum Permitted Throughput only in Tons/Day, while Maximum Permitted Capacity and Remaining Capacity are only provided in Cubic Yards; therefore, standard conversion factors provided by the EPA (EPA 2015) are used to provide all figures in both Tons and Cubic Yards. EPA identifies a standard conversion factor for Municipal Solid Waste (MSW) compacted to "Landfill Density" of 750 to 1,250 pounds per cubic yard, or an average of 1,000 pounds per cubic yard, equating to approximately 0.5 ton per cubic yard of compacted MSW. Source: EPA (U.S. Environmental Protection Agency) 2015, Standard Volume-to-Weight Conversion Factors, http://www.epa.gov/epawaste/conserve/tools/recmeas/docs/guide_b.pdf.

d. Regulatory Setting

Water Supply

STATE

Drinking water quality in the Plan Area is regulated by the California Department of Public Health (CDPH), the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Board (RWQCB), Los Angeles (Region 4) (Los Angeles RWQB 2016). The California Code of Regulations, Title 22 (State Drinking Water Standards) is the primary body of State legislation providing water system standards, including those for water supply, storage capacity, and water quality. Other considerations include the Porter-Cologne Water Quality Control Act, the Safe Drinking Water Act, and the SWRCB Non-degradation Policy.

The Urban Water Management Planning Act of 1983 amended California Water Code to require all urban water suppliers in California to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet per year (AFY) of water. The City of Lynwood distributes water to approximately 9,000 customers. A UWMP was prepared for the City in 2011. Water demand projections described in the UWMP account for anticipated future water demands in the city of Lynwood, and changes in land uses including but not limited to densification and associated increases in water usage.

Senate Bill (SB) 610 (2002) amended California Water Code to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies, and ensuring that land use decisions for certain types of development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a Water Supply Assessment (WSA) for a project that is subject to CEQA and meets certain requirements, including residential developments of more than 500 dwelling units. It is expected that a number of future projects in the Specific Plan area will meet the threshold requirements for preparation of a WSA, and project-specific WSAs will be prepared by individual project proponents. The Specific Plan itself does not propose construction of individual projects, as residential and commercial build-out projections are based on development assumptions contained in the City of Lynwood General Plan, the Long Beach Boulevard Specific Plan, growth forecasts for the southern California region from the 2012 and 2016 RTP/SCS, and consultations with City staff. The City of Lynwood's current UWMP provides water supply availability and reliability projections based on population growth estimates, with an annual growth rate of 0.48 percent over the next 20 years (2015-2035). Population growth estimates show an increase in the City's service area population during the planning period from 67,580 to 74,444 (6,594 persons).

The 2010 UWMP serves as a long-range planning document for the City of Lynwood service area and it contains the same types of water supply and demand projections that would be included in a WSA, and this document is therefore an appropriate resource to use in developing the impact analysis provided below. As described in Section 1.0, *Introduction*, this is a Program EIR, which will be used in the future for tiering of project-level environmental review and CEQA documents; where appropriate, project-specific analyses will be accompanied by a WSA in accordance with SB 610, and may tier off the analysis provided in this Program EIR.

The Plan Area is located in the City of Lynwood's Water Service Area. The City's Public Works Department manages the City's Public Water Utility Division, which is responsible for providing high-quality drinking water through the operation and maintenance of water production, distribution treatment, and storage facilities. Water supply would be provided by active groundwater wells located throughout the city, and imported water from CBMWD on an as needed basis from its connection to CBMWD. Recycled water is used to irrigate landscapes and parks in the city, and is not conveyed as part of the City's potable distribution system infrastructure. The City of Lynwood operates under the Metropolitan Water District of Southern California's Regional Urban Water Management Plan (RUWMP) and the City of Lynwood Urban Water Management Plan, which calculates water supply requirements in their service areas through the year 2035, along with water supply availability and the reliability of existing and potential water sources through the year 2035 (City of Lynwood 2011). The Plan Area is located in the area assessed in the RUWMP and

Lynwood's UWMP, and therefore the RUWMP and UWMP were used to analyze potential water supply effects associated with full buildout of development included under the proposed Specific Plan.

The *Model Water Efficient Landscape Ordinance* was established by Assembly Bill 325 in 1990 and updated by Assembly Bill 2717 in 2004, requires the adoption of a water efficient landscape ordinance by cities and counties throughout the state. This ordinance promotes efficient landscapes in new developments and retrofitted landscapes, and reinforces landscape irrigation and water conservation best practices.

REGIONAL AND LOCAL

The proposed Specific Plan area is in the City of Lynwood's Water Service Area. Under administration of the City's Development Services Department, all applicants/proponents for new construction and rehabilitated landscapes are required to comply with the City of Lynwood's Water Efficient Landscaping Ordinance (Lynwood Municipal Code Article 45) adopted on February 16, 2016. In order to meet Water Efficient Landscape Ordinance requirements, all landscaping meeting the 2,500-square-foot threshold must comply the Ordinance by submitting a landscape documentation package that includes a grading, landscape, and irrigation design plan; and water budge calculations not to exceed the maximum water allowance (City of Lynwood 2016a).

City of Lynwood General Plan

Applicable Lynwood General Plan actions related to domestic water are provided below.

- Goal DW-1. Provide for the planning and funding mechanism to construct, and expand, and maintain water facilities (transmission, storage, distribution, and treatment) needed to meet current and future demand.
  - Policy DW-1.1. The City shall provide an adequate supply of domestic water needed to meet current City demand and future developments.
  - Policy DW-1.2. The City shall ensure that adequate funding is available to improve existing and construct new water facilities.
  - Policy DW-1.3. The City shall require that water conservation measures be implemented into all construction projects.
  - Policy DW-1.4. The City shall encourage the use of reclaimed water.

Lynwood Transit Area Specific Plan

In addition to the Lynwood General Plan, the Specific Plan also identifies project objectives relevant to wastewater, as described below.

> *Objective 7. Create a Sustainable Community – Ensure public health, safety, and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.*

Development included under the Specific Plan would occur in compliance with the goals and policies of the Lynwood General Plan and the proposed Specific Plan, including those listed above.

Wastewater

STATE

Standards for wastewater treatment plant effluent are established using state and federal water quality regulations. After treatment, wastewater effluent is either disposed of or reused as recycled water. The RWQCBs set the specific requirements for community and individual wastewater treatment and disposal and reuse facilities through the issuance of Waste Discharge Requirements (WDR), required for wastewater treatment facilities under the California Water Code Section 13260. The CDPH is also involved in permitting water reuse facilities. Requirements for disposal are set to protect present and potential beneficial uses of the water which receives the effluent. The CDPH sets specific requirements for treated effluent reuse, or recycled water, through Title 22 of the California Code of Regulations (mentioned above with regards to drinking water quality standards). These requirements are primarily set to protect public health.

The California Code of Regulations Title 22, Division 4, Chapter 3, Sections 60301 through 60355 are used to regulate recycled wastewater and are administered jointly by the CDPH and the RWQCBs. Title 22 contains effluent requirements for four levels of wastewater treatment, from undisinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water.

Salt concentrations (such as chloride, nitrogen, sodium, etc.) in the effluent are regulated based on the Water Quality Control Plan (Basin Plan) for the Los Angeles Region, which also considers local groundwater quality (discussed in Section 3, Water Quality Objectives). Recycled water quality goals for salts and other constituents would vary depending on the intended irrigation recipients. The RWQCB will develop waste discharge requirements based on the Basin Plan, designed to protect beneficial uses of the State waters. The RWQCB Basin Plan contains an anti-degradation policy so that existing quality shall be maintained (California Regional Water Quality Control Board, 1994).

Regional and Local

City of Lynwood General Plan

Applicable Lynwood General Plan actions related to wastewater are provided below.

- Goal WCT-1. Provide for the planning and funding mechanism to construct, expand, and maintain wastewater facilities (collection and treatment) needed to meet future demand.
  - Policy WCT-1.1. The City shall work to ensure that an adequate wastewater collection and treatment system is available to service current demand and future developments.
  - Policy WCT-1.2. The City shall work with the County of Los Angeles and to maintain and operate their wastewater facilities in a manner that does not jeopardize the public's health, safety, or welfare.
  - Policy WCT-1.3. The City shall work with County of Los Angeles to assure that they have adequate funding available to maintain/improve existing and construct new sewer facilities.
  - Policy WCT-1.4. The City shall work with the County of Los Angeles to pursue opportunities for the use of reclaimed wastewater.

Lynwood Transit Area Specific Plan

In addition to the Lynwood General Plan, the Specific Plan also identifies project objectives relevant to wastewater, as described below.

> *Objective 7. Create a Sustainable Community – Ensure public health, safety, and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.*

Development included under the Specific Plan would occur in compliance with the goals and policies of the City of Lynwood General Plan and the Specific Plan, including those listed above.

Solid Waste

State

The California Integrated Waste Management Act of 1989 (AB 939), required each city or county's source reduction and recycling element to include an implementation schedule showing that a city or county must divert 50 percent of solid waste from landfill disposal or transformation on and after January 1, 2000. SB 1016, passed in 2008, now requires the 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent.

REGIONAL AND LOCAL

City of Lynwood General Plan

Applicable Lynwood General Plan actions related to solid waste are provided below.

- Goal SW-1. Provide for the efficient collection, disposal, recycling, and reuse of solid waste.
  - Policy SW-1.1. The City shall work with Western Waste to ensure low-cost refuse disposal is available for residential, industrial, and commercial properties.

Lynwood Transit Area Specific Plan

In addition to the Lynwood General Plan, the Specific Plan also identifies project objectives relevant to wastewater, as described below.

> *Objective 7. Create a Sustainable Community – Ensure public health, safety, and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.*

Development included under the proposed Specific Plan would occur in compliance with the goals and policies of the Lynwood General Plan and the proposed Specific Plan, including those listed above.

4.13.2 Impact Analysis

a. Methodology and Significance Thresholds

Assessment of impacts is based on review of site information and conditions, analysis provided in the City of Lynwood's current UWMP and the MWD's Regional Urban Water Management Plan, and City and County information regarding utility-related issues, including water supply and facilities, wastewater facilities, and solid waste. According to Appendix G of the *State CEQA Guidelines,* a significant impact associated with utilities would occur if implementation of the Specific Plan would result in one of the following circumstances:

1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
4. Have insufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded entitlements are needed
5. Result in a determination but the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's demand in addition to the provider's existing commitments
6. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs
7. Not comply with federal, State, and local statutes and regulations related to solid waste

Impacts regarding stormwater drainage facilities (criteria 1 and 3) are discussed in Section 4.7, *Hydrology.*

b. Impacts and Mitigation Measures

Impact U-1	Development facilitated by the Specific Plan would generate an increased demand for water. The City would be able to supply projected demand based on existing entitlements provided that any proposed project incorporates conservation measures. Therefore, impacts to water supply would be *significant but mitigable*.

Table 44 provides water demand and supply projections included in the City of Lynwood's 2010 UWMP, including projections made over a period of 20 years and with consideration to varying climatic (drought) scenarios.

Table 44 City of Lynwood Water Demand and Supply Projections (AFY)

	2015	2020	2025	2030	2035
NORMAL YEAR					
Water Demand Sources					
Imported Water	1,727	1,898	2,073	2,253	2,437
Ground Water	5,337	5,337	5,337	5,337	5,337
Total Demand	*7,064*	*7,235*	*7,410*	*7,590*	*7,774*
Water Supply Sources					
Imported Water	3,000	3,741	4,270	4,339	4,413
Ground Water	5,337	5,337	5,337	5,337	5,337
Total Supply	*8,337*	*9,078*	*9,607*	*9,676*	*9,750*
Supply/Demand Difference	1,273	1,843	2,197	2,086	1,976
SINGLE-DRY YEAR					
Water Demand Sources					
Imported Water	1,939	2,115	2,295	2,481	2,670
Ground Water	5,337	5,337	5,337	5,337	5,337
Total Demand	*7,276*	*7,452*	*7,632*	*7,818*	*8,007*
Water Supply Sources					
Imported Water	2,195	2,722	3,106	3,106	3,097
Ground Water	5,337	5,337	5,337	5,337	5,337
Total Supply	*7,532*	*8,059*	*8,443*	*8,443*	*8,434*
Supply/Demand Difference	256	607	810	625	427
MULTIPLE DRY YEAR					
Water Demand Sources					
Imported Water	1,238	2,115	2,295	2,480	2,670
Ground Water	6,037	5,337	5,337	5,337	5,337
Total Demand	*7,275*	*7,452*	*7,632*	*7,817*	*8,007*
Water Supply Sources					
Imported Water	1,245	2,337	2,534	2,607	2,688
Ground Water	6,037	5,337	5,337	5,337	5,337
Total Supply	*7,282*	*7,674*	*7,871*	*7,944*	*8,025*
Supply/Demand Difference	6	222	239	126	19

Source: City of Lynwood. 2011
This table is intended only to show that the City will be able to meet demand for all years per the following:*
Total demand based on 84 GPCD (2005-2010 average) multiplied by population projections.
For a Normal Water Year, Imported Water Supply represents supply available to the City, if needed, based on Imported demand multiplied by Table 5.2 Row 1 in UWMP.
For a Single Dry Year, Imported Water Supply represents supply available to the City, if needed, based on Table 5.2 Row K in the UWMP.
For a Multiple Dry Year, Imported Water Supply represents supply available to the City, if needed, based on Table 5.3 Row K in the UWMP.
Groundwater Supply/Demand based on the City's adjusted right of 5,337 AFY.
Recycled Water accounts for less than 0.1% of the City's overall supply/water use and is not considered to be a significant factor of the City's water system.
*This Table is not intended to be a projection of the City's actual groundwater production. The City intends to lease additional groundwater rights with other agencies in future years.

Water demand associated with full buildout of development included under the proposed Specific Plan is anticipated to be approximately 1.19 million gallons per day (1,327 AFY) at full buildout, as detailed in the Table 45 (County of Los Angeles 2016c).

Table 45 Water Demand Given Lynwood Transit Area Specific Plan Buildout

Use	Lynwood Transit Area Specific Plan Buildout		Water Demand Factor[a]		Expected Demand		
			Gallons/Day	Unit	Gallons / Day	Million Gallons / Day	Acre-Feet/Year
Commercial	1,200,000	Square feet	340	1,000 SF	408,000	0.408	457
Multi-Family	3,500	Dwellings	164	Dwelling unit	574,000	0.574	643
Industrial (Manufacturing)	750,000	Square feet	210	1,000 SF	157,500	0.1575	176
Hotel	350	Rooms	131	Rooms	45,850	0.04585	51
		Total			1,185,350	1.19	1,327

[a] Water usage based on 1.05 of wastewater generation factor.
Source: Los Angeles County Sanitation District Generation Factor (http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531).

The Specific Plan water demands detailed above are based on full buildout of the Specific Plan, anticipated to be incremental over a 30-year period. Therefore, it is assumed that the projected water demand of 1,327 acre feet/year would be required in 2035 and beyond. These estimates represent standard water consumption rates absent water conservation techniques. With this anticipated growth, the UWMP projects that the City will have excess supply exceeding 1,327 acre-feet/year during normal year conditions. Under single-dry year conditions, supplies in 2030 would require an additional 169 AFY (a two percent increase) or a proportional reduction in demand to avoid deficit conditions. Under multiple dry year conditions, supplies in 2030 would require an additional 577 AFY (a seven percent increase) or a proportional reduction in demand to avoid deficit conditions.

The City acknowledges the semi-arid nature of the city's climate and as a result of drought conditions has mandated compliance with the City's Water Conservation Plan along with the implementation of the appropriate stage of regional plans such as Metropolitan Water District's Water Surplus and Drought Management Plan (WSDM). Some of the strategies discussed in the WSDM include the following:

- Conservation
- Water recycling and groundwater recovery
- Storage/groundwater management programs
- Storage programs related to the State Water Project and the Colorado River
- Other storage programs outside of the region (e.g., the Central Valley)

The City has also acknowledged that efficient water use is the foundation of its current and future water planning and operations policies and thus it has encouraged its customers to practice water-wise conservation measures. This has enabled the City to maintain relatively stable total water consumption levels over the past 15 years despite increases in population. In addition, the City of Lynwood has continued to work with the CBMWD to implement additional conservation measures, including: residential plumbing retrofits, leak detection and repair, universal metering, public information programs, school education programs, financial rebates for water efficient commercial and industrial users, water waste prohibition via the adoption of Ordinance 1618.

Goals and policies of the City of Lynwood's General Plan related to water supply reliability are discussed in Table 46.

Table 46 City of Lynwood General Plan Goal DW-1 Policies

#	Lynwood General Plan Text	Implications for Proposed Specific Plan
Goal DW-1 Policies		
DW-1.1	The City shall provide an adequate supply of domestic water needed to meet current City demand and future developments.	Future development would be implemented with consideration of water supply availability at the time of implementation, minimizing potential for supply deficit or overdraft.
DW-1.2	The City shall ensure that adequate funding is available to improve existing and construct new water facilities.	Future development would be required to pay for necessary improvements to water facilities.
DW-1.3	The City shall require that water conservation measures be implemented into all construction projects.	Residents, businesses, and community developments introduced with buildout of the proposed Specific Plan will be educated and incentivized to conserve water, which will reduce water demand.
DW-1.4	The City shall encourage the use of reclaimed water.	Use of reclaimed water would be encouraged, improving conservation of potable (drinking) water supply.
Goal DW-1 Domestic Water Implementation Measures		
1.0	The City shall develop an updated Water System Master Plan that provides an inventory of the existing system and outlines what facilities will be needed to adequately service future growth.	Providing an inventory of the existing water system and projecting future needs will help accommodate buildout of the Specific Plan.
2.0	The City shall implement water system improvements identified in the Capital Improvement Plan.	Water system improvements will help accommodate buildout of the Specific Plan.
3.0	The City shall annually review water service charges and fees to ensure that adequate funds are being charged and collected to expand and maintain the existing system and construct new facilities.	New development associated with the Specific Plan would be required to pay the current water service charges and fees.
4.0	The City shall develop water conservation guidelines for new developments and new remodels.	The use of water conservation practices will conserve water supply.
5.0	The City shall promote the use of drought-tolerant plants and landscaping to conserve water.	Landscaping water use will be reduced, reducing overall water demand, through the City Water Efficient Landscape Ordinance.
6.0	The City shall develop a standard for constructing dual water pipes (potable and reclaimed) in commercial and industrial projects.	The use of recycled water by constructing dual water pipes in commercial and industrial projects will conserve water supply.

Compliance with the above-described water conservation strategies and the water supply reliability policies and implementation measures would help to ensure sufficient supplies are maintained to accommodate future growth. The approval of new development within the Specific Plan area would continue to be conditional on the availability of sufficient water for the project and the City currently implements this by confirming with the City's Public Utility Division that sufficient water is available for a proposed project prior to approving the project. By withholding project approval based on water supply availability, implementation of the Specific Plan would avoid overextending water supplies available to the area. Furthermore, the proposed Specific Plan contains the following policies and strategies to reduce water use:

- Projects are highly encouraged to use native and low-water-use plants consistent with the landscaping palettes recommended by the City of Lynwood Public Utility Division;
- Irrigation systems should incorporate water conserving methods and water efficient technologies such as drip emitters, evapotranspiration controllers, and moisture sensors. Explore opportunities to reuse rain water and/or gray water for irrigation;

- Landscaping areas should use minimal water resources and impermeable surfaces. Drought-tolerant grasses should be used for lawn areas where possible, while lawn or turf shall be limited to areas that serve a functional purpose.
- Drainage should be directed to permeable areas to minimize discharge to the storm drain system. Use pervious or open grid paving for parking areas whenever possible to reduce the negative effects of stormwater runoff and to facilitate groundwater recharge.

Nevertheless, absent measures to ensure a minimum 20 percent water conservation rate as compared to normal baseline usage, water supply impacts would be significant.

Mitigation Measures

The City shall require that projects conserve at least 20 percent of potable water to be considered less than significant. To comply with this requirement, the following mitigation measure is required.

MM U-1 Water Efficiency

In accordance with LEED NC[3] requirements, the applicant shall employ strategies that in aggregate use 20 percent less water than the water-use baseline calculated for the building (not including irrigation), after the design meets the Energy Policy Act of 1992 requirements for fixture performance. Calculations are based on estimated occupant water use and shall include only the following fixtures (as applicable to the building): urinals, lavatory faucets, showers, and kitchen sinks.

Significance after Mitigation

Implementation of Mitigation Measure U-1 would result in a 20 percent reduction in water usage over normal baseline usage. This measure would that ensure Specific Plan development would be consistent with the City' General Plan Goal DW-1. The Specific Plan's impact to water service would be less than significant with implementation of Mitigation Measure U-1.

Impact U-2	Development facilitated by the Specific Plan would generate a new source of wastewater that would flow through the existing Joint Water Pollution Control Plant (JWPCP) system. Local conveyance infrastructure would be upgraded in accordance with an existing maintenance plan, and would not need to be upgraded as a result of buildout under the Specific Plan. Impacts would be *less than significant*.

WASTEWATER TREATMENT

Wastewater in the Specific Plan area would be collected by the City's local system of sewer lines and conveyed through regional trunk lines operated by the Los Angeles County Sanitation District (LACSD). Sewage is received for treatment at the Joint Water Pollution Control Plant (JWPCP) prior to discharge. The JWPCP has a design capacity of 400 million gallons per day (mgd) and currently processes an average daily flow (DWF) of 258.4 mgd (Sanitation Districts of Los Angeles 2016b). Table 47 shows estimated wastewater flows generated by buildout of the Specific Plan area, based on proposed land uses.

[3] Leadership in Energy and Environmental Design, New Construction Rating System (LEED-NC) is a nationally recognized voluntary rating system developed by the US Green Building Council primarily for new commercial office buildings, but has been applied to many other building types by LEED practitioners. LEED-NC addresses sustainable design and construction activities for both new buildings and major renovations of existing buildings, and promotes improved practices in energy and water efficiency, waste stream management, and sustainable design and construction, etc. (US Green Building Council, 2009).

Table 47 Project-generated Wastewater Flows

Use	Lynwood Transit Area Specific Plan Buildout		Wastewater Generation Factor		Expected Wastewater Generation		
			Gallons / Day	Unit	Gallons / Day	Million Gallons / Day	Acre-Feet/Year
Commercial	1,200,000	Square feet	323	1,000 SF [2]	387,600	0.38	434
Multi-Family	3,500	Dwellings	156	Dwelling unit	546,000	0.55	612
Industrial (Manufacturing)	750,000	Square feet	200	1,000 SF[2]	150,000	0.15	168
Hotel	350	Rooms	125	Rooms	43,750	0.043	49
Total					**1,127,350**	**1.1**	**1,263**

Source: Los Angeles County Sanitation District Generation Factor (http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531).

As indicated above, full buildout of development under the Specific Plan is expected to generate approximately 1.1 mgd of wastewater (1,263 AFY), which would account for approximately 0.8 percent of JWPCP's remaining treatment capacity. The master facilities plan for the Clearwater Program evaluated the flow projections of the Joint Outfall System to the year 2050. It was determined that the capacity of the JWPCP would remain at 400 MGD average flow in the year 2050 with upstream Water Reclamation Plant expansions (County of Los Angeles 2016b). The existing wastewater treatment capacity would be sufficient to accommodate projected development under the Lynwood General Plan (2003), which accounted for growth throughout the Plan Area, and anticipated the types of developments included under the Specific Plan. Therefore, buildout of the Plan Area would result in a determination by JWPCP that adequate capacity to serve the projected demand in addition to existing commitments is possible.

Wastewater Conveyance

Local wastewater (sewer) conveyance services in the proposed Plan Area are provided by the City of Lynwood and regional water conveyance services (i.e., trunk lines) are provided by the Los Angeles County Sanitation District (LACSD). The City of Lynwood and LACSD have a maintenance and capital improvement plan that provides for the continuing rehabilitation and replacement of sewer pipelines and other facilities, and includes specifications for manhole sealing, raising manholes to grade, private property repair, sewer grout, sewer lining, sewer replacement, and lower lateral replacement (City of Lynwood 2014, LACSD 2014). Full buildout of the Specific Plan would increase wastewater conveyance demand on the existing JWPCP system by apprximatley1.1 mgd, as described above. It is anticipated that continuous implementation of the City of Lynwood's capital improvement plan to maintain and rehabilitate sewer pipelines would ensure sufficient wastewater conveyance capacity for future Specific Plan development. Additionally, Policy WCT-1.1 under Goal WCT-1 of the 2010 City of Lynwood General Plan states that the City shall work to ensure that an adequate wastewater collection and treatment system is available to service current demand and future developments. All new development associated with the Specific Plan would be required to demonstrate that the JWPCP would have adequate capacity to accommodate anticipated sewage flows. Developers would be required to provide additional conveyance facilities if it is determined that existing facilities are insufficient to accommodate future development.

Future development associated with the Specific Plan would be required to comply with the JWPCP improvement program, ensuring compliance with the 2003 Lynwood General Plan Goals and Policies, and the Specific Plan, Objective 7 (Refer to Section 2.0, Project Description). Wastewater conveyance capacity would be sufficient to provide service for development included under the proposed Specific Plan, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

Impact U-3	Development facilitated by the Specific Plan would generate an increase of up to 12.1 tons of solid waste per day. However, because the Frank R. Bowerman Landfill and the Olinda Alpha Sanitary Landfill have adequate capacity to serve the Specific Plan, impacts related to solid waste facilities would be *less than significant.*

Solid waste generated from residential uses is a function of the number of homes, household size, and per capita waste generation. CalRecycle estimates that multi-family residential uses in the City of Lynwood generate an average of 12.23 pounds of solid waste per household per day (CalRecycle 2016c). Full implementation of the Specific Plan would add up to 3,500 residential households (Section 4.11, Population and Housing). Therefore, prior to implementation of recycling programs or State-mandated diversion requirements, residential buildout of the Specific Plan would generate approximately 42,805 pounds of solid waste per day or 21.4 tons of solid waste per day. Commercial and industrial solid waste generation is based on a per employee generation factor. The most recent and conservative solid waste generation rate per employee is provided by CalRecycle and assumes 10.53 pounds of solid waste generation per employee per day for commercial uses and 8.93 pounds of solid waste generation per employee per day for industrial uses. The Specific Plan would facilitate the development of approximately 2,400 new commercial jobs and 1,000 industrial jobs. Therefore, as shown in Table 48, prior to implementation of recycling programs or State-mandated diversion requirements, commercial buildout under the Specific Plan would generate approximately 25,272 pounds of solid waste per day or 12.6 tons of solid waste per day from commercial uses and 8,930 pounds of solid waste per day or 4.5 tons of solid waste per day from industrial uses. Solid waste generation for service establishments (i.e., hotels) is based on rates that estimate the amount of waste generated per room or a solid waste generation rate of 2 pounds per room, per day. The Specific Plan would ultimately develop 350 hotel rooms that would generate approximately 700 pounds of solid waste per day or 0.35 tons per day.

The full buildout of the Specific Plan would generate up to 82,172 pounds of solid waste per day or 41.05 tons of solid waste per day (Table 48).

Table 48 Solid Waste Generation

Land Use	Development	Generation Rate	Solid Waste (Pounds per day)	Solid Waste (Tons per day)	Solid Waste (Cubic Yards per day)*
Residential (Multi-Family)	3,500 households	12.23 lbs/household/day	42,805	21.4	42.8
Commercial	2,400 employees	10.53 lbs/employee/day	25,272	12.6	25.2
Industrial (manufacturing)	1,000 employees	8.93 lbs/employee/day	8,930	4.5	9.0
Service establishments (hotel)	350 rooms	2 lbs/room/day	700	0.35	0.7
Total			77,707	38.85	77.7
Total Assuming 50% Diversion Rate			38,853	19.4	39

Source: Generation Rates: http://www.calrecycle.ca.gov/wastechar/WasteGenRates/default.htm * Based on the conversion factor described under Table 4.15-1, City-Service Landfill Capacity for "landfill density" Municipal Solid Waste, of approximately 750 to 1,250 pounds per cubic yard, or an average of 1,000 pounds per cubic yard.

In accordance with California's Integrated Waste Management Act of 1989, cities and counties are required to divert 50 percent of all solid waste from landfills. Therefore, assuming 50 percent of generated waste is diverted, full buildout would send an estimated 19.4 tons of solid waste per day to area landfills, equating to approximately 39 cubic yards of solid waste per day.

As described in Section 4.15.1(c), the Frank R. Bowerman landfill and the Olinda Alpha Sanitary Landfill provides waste disposal services to the City of Lynwood. Table 43 indicates that the Frank R. Bowerman Landfill has approximately 205,000,000 cubic yards of remaining disposal capacity, while the Olinda Alpha Sanitary Landfill has a remaining disposal capacity of 36,589,707 cubic yards. Eventual full buildout of the Specific Plan would need to dispose of approximately 39 cubic yards per day of solid waste, equating to approximately 14,235 cubic yards per year, or 427,050 cubic yards over the 30-year implementation period for full buildout of the Plan Area. This total project waste disposal need is approximately 0.18 percent of the current total remaining landfill capacity. In addition, waste disposal facilities throughout the Los Angeles County are managed per the Countywide Integrated Waste Management Plan (CoIWMP), which anticipates disposal needs and identifies policies for achieving waste management goals throughout the county (County of Los Angeles, 2013). Continued implementation of the CoIWMP would ensure sufficient solid waste disposal capacity for full buildout of the Specific Plan. No new or expanded waste disposal facilities would be needed to serve the proposed Specific Plan. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance after Mitigation

Impacts would be less than significant without mitigation.

c. Cumulative Impacts

Water

The analysis provided under Impact U-1 is cumulative in nature and considers water demand associated with the development included under full buildout of the Specific Plan, as well as water demands associated with other developments (existing and projected) in the City of Lynwood's service area. As described above, projected water demands in the City's service area would exceed available supply (based on existing data) during certain drought years. However, it is anticipated that additional water supplies and water savings measures will be developed, and those future supplies/savings would contribute to long-term water supply reliability. Additionally, the Specific Plan's water supply requirements reflect a full buildout scenario, when in actuality, the rate of buildout (and associated water requirements) is not presently known. Projects proposed as part of the Specific Plan buildout would be subject to project-level environmental review, including preparation of WSAs where applicable. There are multiple thresholds for WSA review, but all projects requiring a WSA-level evaluation have in common that they are subject to CEQA; must identify groundwater as a potential supply source; and would introduce a water demand equivalent to that associated with a 500-unit residential development.

Furthermore, in compliance with Goal DW-1 and Policy DW-1.1 of the 2003 City of Lynwood General Plan, the City will work to ensure that an adequate supply is available of domestic water to meet current demand and future development. In addition, in compliance with Policy DW-1.3, the City will require that future development projects comply with mitigation measure U-1, which requires a 20 percent reduction in water use when compared to baseline conditions. No future development project would be approved until the availability of sufficient water supply is confirmed (likely through the development of a project-level WSA, based on current information at the time of project proposal) and compliance with mitigation measure U-1 is verified. Therefore, the Specific Plan would not result in cumulatively considerable water supply impacts, and cumulative impacts would be less than significant.

Wastewater

Buildout of cumulative projects in the city will continue to increase demands on the existing wastewater treatment and conveyance facilities. The Los Angeles County Sanitation District (LACSD) Joint Water Pollution Control Plant (JWPCP) would continue to provide service to its jurisdiction, including the Plan Area, in addition to serving a population of approximately 3.5 million people throughout Los Angeles County (County of Los Angeles 2016d). As described, current capacity of the JWPCP Wastewater Treatment Plant is sufficient to serve planned and pending development in its service area, and existing conveyance facilities in the Specific Plan area are sufficient to

accommodate planned and pending development included under the Specific Plan. With respect to future growth in the JWPCP service area and associated increases in wastewater treatment demands, continued implementation of system improvements that follow the guidance of the City of Los Angeles Regional, Sanitary Sewer System Management Plan (SSMP) would ensure sufficient conveyance and treatment capacity to meet cumulative needs.

In addition, in compliance with the 2003 City of Lynwood General Plan policies, individual projects included in full buildout of the Specific Plan would be required to mitigate wastewater collection and conveyance system capacity impacts on a case-by-case basis, should existing facilities become insufficient. Funding for such increases is available through a combination of connection fees paid by developers, service districts, and general fund monies. Compliance with these requirements would reduce cumulative impacts to wastewater treatment and collection systems to a less than significant level and the Specific Plan's contribution to wastewater service impacts would not be cumulatively considerable.

Solid Waste

Planned and pending development in the Specific Plan area would continue to increase solid waste generation. As discussed under Impact U-3, area landfills have capacity to accommodate additional solid waste, and potential impacts of full buildout of the Specific Plan would be less than significant. Cumulatively, other areas which utilize the same landfills as the proposed Specific Plan would likely also continue to experience growth and associated increases in solid waste generation. State-mandated solid waste diversion rates (for recycling) would continue to minimize the quantity of waste directed to area landfills, and compliance with General Plan and Specific Plan policies would maintain or improve upon existing solid waste diversion rates.

The Frank R. Bowerman Landfill is expected to remain open with sufficient disposal capacity to accommodate it existing service territory until 2053; and the Olinda Alpha Sanitary Landfill is expected to remain open with sufficient disposal capacity to accommodate its existing service territory until 2021 (County of Orange 2016, CalRecycle 2016). The Los Angeles Integrated Waste Management Plan includes strategies for meeting disposal capacity at both landfills, including increased waste diversion and potential expansion of landfill capacity. Solid waste disposal facilities and management approach would continue to adjust as needed to provide adequate disposal capacity throughout the county (County of Los Angeles 2014). Thus, cumulative impacts to solid waste facilities would be less than significant and the Specific Plan's contribution to solid waste impacts would not be cumulatively considerable.

5 Other CEQA-required Discussions

This section addresses other topics required to be addressed under the *State CEQA Guideline* that are not covered in other parts of this EIR, including growth inducing effects and significant irreversible changes.

5.1 Growth Effects

Section 15126 of the CEQA Guidelines requires that an EIR address the "growth inducing" effects of the proposed project. Pursuant to Section 15126.2(d) of the Guidelines, a project would be considered to have a growth-inducing effect if it would do any of the following:

- Directly or indirectly foster economic or population growth, or the construction of additional housing
- Remove obstacles to population growth
- Tax existing community services or facilities, requiring the construction of new facilities that could cause significant environmental effects
- Encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively

This section of the EIR analyzes the potential environmental consequences of growth that could be induced by implementation of the Specific Plan. Section 15126.2(d) of the CEQA guidelines states that it "must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment." Typically, the growth-inducing potential of the Specific Plan would be considered significant if it "fosters growth or a concentration of population above what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as the Southern California Association of Governments (SCAG). Significant growth impacts could also occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies." In general, a project may foster growth in a geographic area if it does any one of the following:

1. Removes an impediment to growth (e.g., establishes an essential public service or provide new access to an area)
2. Fosters economic expansion or growth (e.g., changes revenue base, expands employment)
3. Fosters population growth (e.g., constructs additional housing), either directly or indirectly
4. Establishes a precedent-setting action (e.g., an innovation, a change in zoning, or a general plan amendment approval)
5. Develops or encroaches on an isolated or adjacent areas of open space (distinct from an "infill" type of project)

The potential growth-inducing impacts of the Specific Plan are evaluated against these five criteria in what follows. Section 15126.2(d) of the CEQA Guidelines requires that an EIR "discuss the ways" a project could induce growth and "discuss the characteristics of some projects that may encourage…activities that could significantly affect the environment." However, the Guidelines do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The analysis provided below evaluates whether the Specific Plan would directly or indirectly induce population, housing, or economic growth in the surrounding environment.

It is important to note that direct forms of growth can have secondary effects of expanding the size of local markets and attracting additional economic activity to the area. A project could indirectly induce growth by resulting in any of the following:

- A substantial increase in permanent employment opportunities (e.g., commercial or industrial)

- A construction effort with substantial short-term employment opportunities that indirectly stimulate the need for additional housing and services to support the new temporary employment demand
- The removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area)

As noted above, typically the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies or the project itself.

5.1.1 Economic and Population Growth

As discussed in Section 2.0*, Project Description*, and Section 4.10, Population and Housing*,* the Specific Plan would add up to 15,260 new residents (i.e., 3,500 new households), and over 5,000 new jobs to the Plan Area. As indicated in Section 4.10, Population and Housing, the 15,260 new residents associated with Specific Plan buildout would exceed projected growth in the City by approximately 163 percent, and account for approximately 0.9 percent of the projected growth in Los Angeles County. The 3,500 new housing units would exceed projected housing growth within the City by 133 percent, and account for 0.5 percent of projected growth in Los Angeles County. The 5,000 new jobs associated with Specific Plan buildout would exceed the projected job growth in the City by approximately 297 percent, and account for 0.4 percent of job growth in Los Angeles County. Although some jobs generated by implementation of the Specific Plan would likely be filled by current residents of Los Angeles County and the city of Lynwood, some of the new job opportunities would be filled by people commuting or relocating to the area. In this way, the Specific Plan may indirectly generate population growth in the area.

Due to the proposed residential development and associated service population, implementation of the Specific Plan would also have incremental, indirect economic benefits, such as increasing demand for retail and commercial services. In this way, the Specific Plan would increase the amount of economic activity in the city and in Los Angeles County, thereby inducing growth. Furthermore, the Specific Plan would help implement the current General Plan Housing Element Goal 1 (preserve and improve existing housing), Goal 2 (encourage a variety of housing types to meet the needs of city residents), Goal 4 (remove governmental constraints to the development of new housing opportunities), and Goal 5 (promote equal housing opportunities). The Specific Plan was also determined to be consistent with all other applicable goals and policies of the General Plan and the 2012-2035 RTP/SCS advisory land use policies that promote transit-oriented growth. Nevertheless, the increases in population, housing, and jobs associated with full buildout of the Specific Plan would exceed SCAG growth projections for the city. Impacts would be significant and unavoidable. No mitigation is available and impacts related to growth in housing and population.

5.1.2 Removal of Obstacles to Growth

As discussed above, approval of the proposed Specific Plan would lead to increased development and population within the Plan Area. The project area is surrounded on all sides by urban development, and these areas are served by existing municipal services and utilities including roads, water, sewer, and other infrastructure. No substantial expansion of these facilities is proposed or would be necessary to accommodate buildout of the Specific Plan (see Section 4.11, *Public Services,* and Section 4.13, *Utilities and Service Systems)*. The proposed Specific Plan would therefore not require or induce extension of utilities or other services into undeveloped areas within or around the project area that would induce growth that would not otherwise occur. The proposed Specific Plan would not have any significant effect from removing obstacles to growth outside of the Plan Area.

5.2 Irreversible Environmental Effects

The *State CEQA Guidelines* require that EIRs evaluating projects that would require amendments to public plans, ordinances, or policies contain a discussion of significant irreversible environmental changes. CEQA also requires decision-makers to balance the benefits of a proposed project against its unavoidable environmental risks in

determining whether to approve that project. This section addresses nonrenewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed development.

Construction activity associated with the Specific Plan Area would involve the use of building materials and energy, some of which are nonrenewable resources. Consumption of these resources would occur with any development in the region and are not unique to the Plan Area. The addition of new residential and non-residential development in the Plan Area would irreversibly increase local demand for nonrenewable energy resources such as petroleum and natural gas. Increasingly efficient building fixtures and automobile engines, as well as implementation of the objectives included in the Specific Plan and the policies in the City of Lynwood General Plan, are expected to offset this demand to some degree. As discussed below, it is not anticipated that the development envisioned by the Specific Plan would significantly affect local or regional energy supplies.

Growth associated with the Specific Plan would require an irreversible commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. Future development accommodated under the Specific Plan would involve a long-term, irreversible commitment of vacant parcels of land or redevelopment of currently developed land in the city of Lynwood. However, as discussed in Section 4.13, Utilities and Service Systems, impacts related to utilities would be less than significant with incorporation of mitigation measure U-1.

The additional vehicle trips associated with the proposed Specific Plan would incrementally increase local traffic, noise levels and regional air pollutant emissions over the long term. Emissions associated with such vehicle trips would continue to contribute to the South Coast Air Basin's nonattainment designation for ozone and particulate matter (PM_{10} and $PM_{2.5}$), nonattainment for lead (Los Angeles County only) under the California and National Ambient Air Quality Standards (AAQS), and nonattainment for nitrogen dioxide (NO_2) under the California AAQS.

5.3 Significant, Unavoidable Impacts

Section 15126.2(b), "Significant Environmental Effects which Cannot Be Avoided if the Proposed Project is implemented," requires an EIR to describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. The evaluation of the environmental issues identified in all of the subsections of Section 4.0, Environmental Impact Analysis, concluded that significant and unavoidable project-related and/or cumulative impacts would occur in the area of transportation and circulation, if the Specific Plan was implemented as proposed.

5.4 Energy Effects

The *State CEQA Guidelines* Appendix F requires that EIRs include a discussion of the potential energy consumption and/or conservation impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, or unnecessary consumption of energy.

Implementation of the Specific Plan would involve the use of energy during construction and operation of the residential and non-residential uses. Energy use during the construction phase would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. In addition, temporary grid power may also be provided to any provisional construction trailers or electric construction equipment. Long-term operation of the proposed new development would require permanent grid connections for electricity and natural gas service to power internal and exterior residential lighting, appliances, and heating and cooling systems. In addition, the increase in vehicle trips associated with the project would increase fuel consumption in the county. The water supply infrastructure for the project would require electrical power as well. Gas and electric service for the Specific Plan would be provided by Pacific Gas and Electric Company (PG&E). PG&E's power mix consists of approximately 30 percent renewable energy sources (approximately 11 percent large hydroelectric facilities and approximately 19 percent other renewable resources such as wind, geothermal, biomass, solar, and small hydro) (PG&E 2016).

Development associated with the Specific Plan would be subject to the energy conservation requirements of the Title 24 of the California Code of Regulations, known as the California Building Standards Code or Title 24 that requires numerous energy savings measures. In addition, the Specific Plan includes policies to reduce overall energy and fuel use. The proposed Specific Plan policies encourage renewable energy use in order to decrease reliance on fossil fuels. Policies also encourage energy conservation by promoting energy-efficient appliances, signage, and lighting. The proposed policies related to energy conservation include:

- Overall Building Design
  - Building design and siting should take advantage of natural ventilation, heating, and cooling, sun and wind exposure, and solar energy opportunities. Passive solar orientation and design is encouraged to capture natural daylight and to use natural cooling techniques in place of air conditioning. Building siting should consider solar access for adjacent buildings.
- Windows and Doors
  - Energy efficient windows are strongly encouraged.
  - Operable windows are strongly encouraged, especially for residential units, to provide natural ventilation and to enhance the indoor-outdoor relationship
- Roofs
  - Roof colors and materials that meet or exceed Energy Star requirements shall be used to reduce the heat island effect.
  - Rooftop solar panels, solar films, small-scale wind turbines, and other similar features may be used to generate energy.
- Equipment Screening and Service Areas
  - Energy and water efficient appliances, fixtures, lighting, and windows shall meet or exceed state energy performance standards. Energy Star qualified (or equivalent rating system) models of mechanical equipment are strongly encouraged.
  - Equipment should be located to maximize energy efficiency, such as by locating cooling equipment in shaded areas that are protected from the hot sun, thus reducing the energy needed to cool the air.
- Exterior Lighting
  - Energy efficient, low voltage lighting is strongly encouraged. Decorative lighting shall be low intensity.
- Green Building
  - Energy Star bath fans included with each home.
  - Fluorescent lighting in strategic locations to reduce energy use.
  - Dimmer switches in strategic locations to reduce energy use.
  - Solar panels offered as an option.
  - 13 SEER (seasonal energy efficiency ratio) / 11 EER (energy efficiency rating) high efficiency air conditioners standard.
  - 80 percent annual fuel utilization efficiency (AFUE) furnaces standard, with option for 90 percent or higher.
- Parking Lots
  - As a means of providing a source of energy production and to shade parked vehicles, parking lots may include carport-style solar panel covering.
- Pedestrian Circulation
  - Walkways should be provided along natural paths of travel to connect between buildings, sidewalks, parking areas, and common areas.
- Bicycle Circulation
  - Bicycle racks are strongly encouraged on all properties in the amenity center, resort hotel, neighborhood commercial, parks, and golf course and clubhouse.

Furthermore, the Specific Plan is based on a land use pattern that would co-locate residential and commercial uses in the Plan Area, resulting in a reduction of vehicle trips, thereby reducing fossil fuel use from transportation. As discussed in Section 4.4, Greenhouse Gas Emissions, the vehicle trip data provided in the traffic study prepared by Translutions, Inc. (refer to Section 4.12, *Transportation and Circulation*), estimates a 25 percent transit trip reduction in daily vehicle trips and an 18 percent internal trip credit due to the Specific Plan's transit-oriented design. Adherence to Specific Plan policies and Title 24 energy conservation requirements would ensure that energy is not used in an inefficient, wasteful, or unnecessary manner.

6 Alternatives

As required by Section 15126(d) of the *State CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed project that could feasibly achieve similar objectives. The discussion focuses on alternatives that would achieve different economic and planning goals than the proposed Specific Plan. Included in this analysis are the CEQA-required "no project" alternative and three additional alternatives. These are listed and summarized below, and subsequently discussed in greater detail within the impact analysis for each alternative:

- Alternative 1: No Project (No Further Development)
- Alternative 2: No Project (Buildout Under Long Beach Boulevard Specific Plan)
- Alternative 3: Lower Growth Alternative – SCAG 2040 Growth Forecast

This section also identifies the Environmentally Superior Alternative in accordance with CEQA.

Table 49 provides a summary comparison of the development characteristics of the proposed Specific Plan and the alternatives. A more detailed description of the alternatives is included in the impact analysis for each alternative.

Table 49 Comparison of Proposed Project Alternatives Buildout Characteristics

Characteristic	Proposed Project	*Alternatives* Alternative 1: No Project	Alternative 2: Buildout Under Long Beach Boulevard Specific Plan	Alternative 3: Lower Growth Alternative-SCAG 2040 Growth
Residential				
Single-Family Units	100	0	0	0
Multi-Family Units	3400	0	575	1500
Total Residential Units	*3500*	0	*575*	*1,500*
Non-Residential				
Commercial Retail/Office (square feet)	1,200,000	0	1,580,000	870,000
Industrial (square feet)	750,000	0	0	0
Hotel (units)	350	0	0	0

As listed in Section 2.0 Project Description, the project objectives for the proposed project are as follows:

1. Promote Transit-Oriented Development Near the Metro Green Line Station -Expand on the accessibility of the Green Line Station and the energy at Plaza Mexico by creating a dynamic transit district with a distinctive identity --an active and attractive hub where people come to live, shop, work and play.
2. Allow for Flexibility in Land Uses - Provide a framework for approval of incremental development projects on a single concept plan that offers defined ranges of flexibility to accommodate market changes.
3. Consolidate Uses and Create New Development Sites - Identify sites most suitable for assembly and revitalization.
4. Enhance Pedestrian Comfort and Safety - Increase facilities, add connections, and multiply opportunities to safely and conveniently get around the area on "complete" streets by foot, bike, and public transit.
5. Enhance Recreational Opportunities- Increase landscaped areas, parks, open space, and trails that are supportive of the public life of the community. Facilitate security and well-being for the Specific Plan Area's

residents, employees, and visitors through increased activity, better walkability, controls on cars and drivers, and better design and wayfinding.

6 **Improve and Facilitate Additional Housing** - A variety of housing types should be provided which are compatible with existing housing types and neighborhoods within the community. A diverse mix of ownership and rental housing, and market rate, affordable, and workforce housing should be maintained.

7 **Create a Sustainable Community** - Ensure public health, safety and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.

6.1 No Project

This alternative assumes that the Specific Plan is not adopted and that the Plan Area would retain its existing land use designations according to the existing City of Lynwood General Plan. The existing growth assumptions for the Plan Area would continue to apply. Since the adoption of the City of Lynwood General Plan, little growth has occurred in the Plan Area. Therefore, this alternative assumes that this pattern would continue and no future growth beyond mere the replacement of existing commercial, residential, and industrial uses would occur in the Plan Area.

6.1.1 Impact Analysis

The No Project alternative would involve no changes to the existing regulatory controls and land use policies for the Plan Area. The circulation and infrastructure improvements in the Plan Area associated with the Specific Plan would not occur. In addition, zoning and other changes to the City's General Plan Land Use Map would not occur. No development associated with the Specific Plan would occur. As such, this alternative would have no impact with respect to aesthetics, air quality, biological resources, cultural resources, geology, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology, noise, population and housing, public services, traffic, or utilities and service systems. Temporary construction impacts associated with the Specific Plan would be avoided. This alternative would also avoid the proposed project's significant and unavoidable impacts with respect to noise and traffic. No mitigation measures would be required for the No Project alternative. This alternative would not preclude development in the Plan Area, but this alternative assumes that this pattern would continue and that limited transit-oriented development would occur in the Plan Area. Overall impacts would be lower than those of the proposed project since no substantial change to environmental conditions would occur. The beneficial effects associated with the Specific Plan (i.e., pedestrian facility, bicycle facility, intersection, and streetscape improvements) would also not occur.

The No Project alternative would not meet any of the objectives of the Specific Plan, which is designed to promote transit-oriented development near the Metro Green Line Station (objective 1), allow for flexibility in land uses (objective 2), consolidate uses and create new development sites (objective 3), enhance pedestrian comfort and safety (objective 4), enhance recreational opportunities (objective 5), improve and facilitate additional housing (objective 6), and create a sustainable community (objective 7).

6.2 Alternative 2: Buildout under the Long Beach Boulevard Specific Plan

Alternative 2 is based on the previously approved land use plan for the Long Beach Boulevard Specific Plan (LBBSP), and considers the buildout potential of only those portions of the LBBSP currently located in the proposed Lynwood Transit Area Specific Plan Area. Under this scenario, future development within Plaza Mexico and the Long Beach Boulevard Corridor from Norton Avenue to Josephine Street would occur within an area totaling approximately 75 acres. This alternative would include development of up to 575 total residential units in the LBBSP Area compared to 3,500 units with the Specific Plan, and 1,580,000 square feet of non-residential development compared to 1,200,000 square feet under the Specific Plan.

6.2.1 Aesthetics

Full buildout under Alternative 2 would generally continue the current land use in the city, with a concentration on expanding commercial development and adding multi-family residences. As a result, visibility of scenic vistas, the city's visual character, and light and glare would be generally the same as that which is currently present. Overall, the aesthetic impact of this alternative would not be substantially different than that identified to occur a result of the Specific Plan, though it is anticipated that implementation of the current LBBSP would have fewer benefits with respect to creating transit oriented communities with pedestrians and bicycle amenities along key transportation corridors and in key development sites identified in the Specific Plan.

6.2.2 Air Quality

While the Specific Plan would expand opportunities for new growth near transit services through re-use and infill, Alternative 2 would limit the ability to combine higher density housing with development. As a result, the overall reduction in vehicle miles traveled (VMT) expected to occur from development pattern proposed in the Specific Plan likely would be less under this alternative. As discussed in Section 4.2, Air Quality, the development of more compact, mixed-use urban forms that are conducive to biking and walking, combined with improvements in the active transportation network and increases in accessibility to sustainable modes of transport, would result in a regional reduction in VMT of approximately 20.4 million miles by 2035. While some reduction in VMT could occur under Alternative 2 as a result of the development of fewer mixed-use residential units compared to the Specific Plan, given the planned regional increase in the amount of sustainable transportation available to Lynwood residents and the increase in public acceptance of active forms of transportation as feasible forms of travel, this reduction would likely not be of the same magnitude as those facilitated by the Specific Plan, which would facilitate more compact development, focus on providing access to transit, and encourage bicycling and walking.

Overall, air quality impacts would likely be lower under this alternative due to fewer residential units. As with the proposed Specific Plan, air quality impacts would be less than significant.

6.2.3 Cultural Resources

Alternative 2 would decrease the area of development in comparison to the proposed project. It would involve development in an area totaling about 75 acres compared to 315 acres under the proposed project. However, the potential to impact cultural resources is low due to the previously developed condition of the Specific Plan and LBBSP areas. As with the proposed Specific Plan, cultural resources impacts would be less under this alternative.

6.2.4 Greenhouse Gas Emissions

Alternative 2 would accommodate 2,925 fewer residential units, no hotel units or industrial development, and 1,962 fewer jobs, but 380,000 more square feet of commercial development. The service population (sum of population and employees) for this alternative would be 5,598 (2,507 residents plus 3,091 employees), which is 71 percent less than the Specific Plan's service population of 19,422. Therefore, GHG emissions per service population would be less than those of the proposed project. As with the proposed Specific Plan, impacts would remain less than significant.

6.2.5 Geology and Soils

Alternative 2 would accommodate 2,925 fewer residential units, no hotel units or industrial development, and 1,962 fewer jobs. However, 380,000 more square feet of commercial development would occur. Development under this alternative, therefore, would expose fewer residential and non-residential structures to geologic hazards, including groundshaking, liquefaction, and expansion. Development under this alternative would still be subject to the Alquist-Priolo Earthquake Fault Zone Act, California Building Code (CBC) provisions, and policies contained in the City of Lynwood General Plan. AS with the proposed Specific plan impacts related to groundshaking and soil instability would remain less than significant with adherence to existing regulations.

6.2.6 Hazards and Hazardous Materials

Alternative 2 would decrease residential and non-residential development in comparison to the Specific Plan, but would still result in the development of residential or commercial land uses that may involve the use, storage, disposal or transportation of hazardous materials. As with the proposed Specific Plan, this alternative may also involve mixed-use structures that would place new residences near hazardous waste users. Adherence to existing regulations and Lynwood General Plan policies would reduce impacts to a less than significant level.

This alternative may also involve demolition or redevelopment of structures that could contain asbestos or lead based paints. Impacts related to lead and asbestos hazards would be similar to those of the proposed project and would be less than significant with adherence to existing regulations. In addition, it is not anticipated that this alternative would involve any new uses that would produce or emit hazardous materials near any schools. As with the proposed Specific Plan, impacts would be less than significant.

There are many properties in the Specific Plan Area where past uses could have produced localized containment or concentrations of hazardous substances. This alternative would decrease the amount and intensity of development within the Plan Area. Therefore, this alternative could decrease the number of workers or residents exposed to residual contaminants in the soils. In addition, as with the proposed Specific Plan, new development would be subject to existing policies regarding development in contaminated areas. Overall, the decrease in development under this alternative would result in fewer impacts associated with hazards and hazardous materials in comparison to the proposed Specific Plan, and impacts would be less than significant.

As with the proposed Specific Plan, this alternative is not located in an airport land use plan or within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area. The Plan Area is approximately three miles north of Compton/Woodley Airport. Therefore, potential impacts would be *less than significant*. In addition, as with the proposed Specific Plan, there would be no safety hazards associated with private airstrips, adopted emergency response plans, and wildland fires.

6.2.7 Hydrology and Water Quality

Alternative 2 would decrease the intensity and amount of residential and non-residential development compared to the proposed Specific Plan. Construction-related and operational erosion and sedimentation, and pollutant discharges would therefore decrease under this alternative. Compliance with NPDES Permit requirements and County ordinances would ensure that temporary construction-related water quality impacts would be similar to the proposed Specific Plan. Impacts would be *less than significant.*

6.2.8 Land Use and Planning

Alternative 2 would not be as consistent with most regional land use plans and policies, including those of SCAG's Regional Comprehensive Plan, Regional Transportation Plan/Sustainable Communities Strategy, and Southern California Compass Blueprint. Though population growth would be expected to be consistent with the SCAG 2040 population forecast of 76,100, this alternative would not facilitate development of a more compact urban form in close proximity to existing transit services and would not provide the same degree of growth through infill and redevelopment of existing underutilized properties. Therefore, this alternative would be less consistent with transit-oriented land use and planning policies when compared to the proposed Specific Plan.

6.2.9 Noise

Alternative 2 would reduce residential development and result in an overall decrease of non-residential buildout within the Plan Area. Noise and vibration levels would be similar to the proposed Specific Plan as the same type of construction equipment would be used. The overall duration of noise and vibration associated with construction would likely be less, as available land for development would be reduced. Similar to the proposed project, noise and vibration impacts from construction-related noise would be less than significant with adherence to the City's Municipal Code Chapter 3-12.3.

Similar to the proposed project, this alternative would involve development adjacent to residential neighborhoods. Existing and future sensitive receptors within the Plan Area would be exposed to operational noise from buildout under this alternative, although fewer sensitive receptors would be introduced to the Plan Area under this alternative. Similar to the proposed Specific Plan, development under this alternative would be subject to the Lynwood General Plan's goals, policies, and Land Use and Noise Compatibility Guidelines. Similar to the proposed project, impacts would be less than significant.

This alternative would still contribute additional vehicle trips on roadways that generate noise levels of approximately 75 dBA. Although this alternative's contribution to operational noise levels would be reduced when compared to the proposed Specific Plan, traffic related noise impacts would remain significant and unavoidable. This alternative would require compliance with all of the same noise mitigation measures required for the proposed Specific Plan.

6.2.10 Population and Housing

Alternative 2 would decrease residential development by 2,925 units. Based on the average of 4.36 persons per household in the city of Lynwood, the proposed addition of 575 residential dwellings under this alternative would generate an increase of approximately 2,507 residents. In comparison, buildout of the proposed Specific Plan would result 15,260 residents, so this alternative would decrease population growth by approximately 84 percent. This would bring the population of the City to 74,346, a 3.5 percent increase; and the number of households to 15,884, a 3.8 percent increase. This increase in the City's population and households would be added incrementally over the anticipated 25-year period of full project buildout, and would not exceed SCAG's 2040 population and household projections of 76,100 residents and 16,200 households.

This alternative would also result in 1,962fewer jobs. Similar to the proposed Specific Plan, this level of job growth would exceed the job projections for the City of Lynwood; however, the 3,091 new jobs under this alternative would exceed job growth by approximately 82 percent in comparison to 197 percent under the proposed Specific Plan. Similar to the proposed Specific Plan, this alternative would increases in population, housing and employment above SCAG and General Plan projections but impacts would be less than significant due to its consistency with transit oriented growth policies. As with the proposed Specific Plan, impacts would be less than significant.

6.2.11 Public Services

Alternative 2 would result in 2,925 fewer residential units than the proposed and would result in an overall decrease in non-residential development in comparison to the Specific Plan. Consequently, demand for police and fire protection and library services would decrease in comparison to the proposed Specific Plan and impacts would remain *less than significant.*

Based on the students per household generation rates used in the public services analysis for the proposed project (see Section 4.12, Public Services), this alternative would generate approximately 402 new students. In comparison, the proposed Specific Plan would generate approximately 2,450 new students. Therefore, demand for school services would also decrease under this alternative, and impacts to schools would remain *less than significant*.

6.2.12 Transportation and Circulation

Alternative 2 would generate less peak hour and daily trips compared to the proposed Specific Plan. The Proposed Specific Plan would generate 1,894 trips during the AM peak hour, 2,975 trips during the PM peak hour, and 33,550 daily trips. In comparison, this alternative would generate 493 trips during the AM peak hour, 1,299 trips during the PM peak hour, and 16,688 daily trips. Therefore, the proposed Specific Plan would generate nearly four times the AM peak hour, and more than double the PM peak hour and total daily vehicle trips in comparison to this alternative. Although a specific roadway segment evaluation was not conducted for this alternative, it can be reasonably assumed that this alternative would cause reduced traffic impacts along study area roadway segments and at the I-105 intersections. However, due to the existing poor level of service along the Long Beach Boulevard roadway segments, impacts would remain significant and unavoidable.

Similar to the proposed Specific Plan, this alternative would improve bicycle, pedestrian, and public transit facilities, however to a lesser extent that the proposed Specific Plan. Impacts would remain *less than significant*.

6.2.13 Utilities and Service Systems

Alternative 2 would reduce residential buildout by 2,925 units (84 percent) and would decrease non-residential (commercial and industrial) buildout by 370,000 square feet (19 percent). As shown in Table 50, water demand would be reduced by 551,850 gallons per day (47 percent) under this alternative compared to the proposed Specific Plan. Impacts would be reduced compared to the proposed Specific Plan and would remain *less than significant.*

Table 50 Alternative 2 Water Demands

Use	Alternative 2 Buildout		Water Demand Factor*		Expected Demand	
			Gallons / Day	Unit	Gallons / Day	Million Gallons / Day
Non-residential	1,580,000	Square feet	340	1,000 SF	537,200	0.537
Residential	575	Dwelling unit	164	Dwelling unit	94,300	0.094
Total Alternative 2					631,500	0.631
Proposed Specific Plan (includes Industrial and Hotel Uses)					1,183,350	1.19

*Water usage based on 1.05 of wastewater generation factor.
Source: Los Angeles County Sanitation District Generation Factor http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531

As shown in Table 51 and based on the wastewater demand factors used in Section 4.15, *Utilities and Service Systems*, Alternative 2 would generate an estimated 600,040 gallons per day or 0.69 million gallons per day. This represents a reduction of 551,850 gallons per day (47 percent) when compared to the proposed project. Therefore, impacts to wastewater infrastructure and treatment systems would be reduced compared to the proposed project and would remain *less than significant.*

Table 51 Alternative 2 Project-Generated Wastewater Flows

Use	Alternative 2 Buildout		Wastewater Generation Factor		Expected Wastewater Generation	
			Gallons / Day	Unit	Gallons / Day	Million Gallons / Day
Non-Residential	1,580,000	Square feet	323	1,000 SF	510,340	0.6
Residential	575	Dwelling unit	156	Dwelling unit	89,700	0.09
Total Alternative 2					600,040	0.69
Proposed Specific Plan (includes Industrial and Hotel Uses)					1,127,350	1.1

Source: Los Angeles County Sanitation District Generation Factor http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531

As shown on Table 52 and based on the solid waste generation rates used in the public services analysis for the proposed Specific Plan (see Section 4.15, *Utilities and Service Systems*), Alternative 2 would generate approximately 19 tons of solid waste per day prior to the consideration of any waste reduction efforts. This represents a decrease of 9.5 tons per day (49 percent) when compared to buildout of the proposed Specific Plan. Nonetheless, landfills that serve the Plan Area would be able to accommodate this increase in solid waste. Impacts would continue to be *less than significant.*

Table 52 Alternative 2 Solid Waste Generation

Use	Alternative 2 Development	Solid Waste Generation Rate	Overall Solid Waste Generation (tpd)*	
			Proposed Specific Plan (includes Industrial and Hotel Uses)	Alternative 2
Residential	575 households	12.23 lbs/household/day	21.4	3.5
Non-Residential	3,091 employees	10.53 lbs/employee/day	17.45	16.2
Total			**38.85**	**19.7**
Total Assuming 50% Diversion Rate			**19.4**	**9.9**

Source: Generation Rates: http://www.calrecycle.ca.gov/wastechar/WasteGenRates/default.htm * Based on the conversion factor described under Table 4.15-1, City-Service Landfill Capacity for "landfill density" Municipal Solid Waste, of approximately 750 to 1,250 pounds per cubic yard, or an average of 1,000 pounds per cubic yard.

6.3 Alternative 3: Lower Growth Alternative –SCAG 2040 Growth Forecast

The Lower Growth Alternative (Alternative 3) would accommodate the residential and job growth forecast for the City of Lynwood in SCAG's 2016 RTP/SCS in the Plan Area. Under this scenario, future development in the Plan Area would include 1,500 residential units and approximately 1,700 new jobs. Utilizing SCAG's square foot per job estimate of 511 square feet of commercial square footage per employee (SCAG, 2001), the forecast 1,700 new jobs equates to approximately 870,000 square feet of new commercial uses.

6.3.1 Aesthetics

Full buildout under Alternative 3 would generally continue the current land use in the city by expanding multi-family residences and adding commercial development. As a result, visibility of scenic vistas, the city's visual character and light and glare would generally remain the same. Overall, the aesthetic impact of this alternative would not be substantially different than that identified to occur throughout the city as a result of the Specific Plan, though it is anticipated that implementation of Alternative 3 would have fewer benefits with respect to creating transit oriented communities with pedestrians and bicycle improvements along key transportation corridors and in key development sites identified in the Specific Plan.

6.3.2 Air Quality

Alternative 3 would direct new growth through re-use and infill primarily to the City's main commercial corridors and in proximity to Transit Oriented Districts. The overall reduction in vehicle miles traveled (VMT) expected to occur as a result of the development pattern proposed in the Specific Plan likely would also occur under this alternative. As discussed in Section 4.2, *Air Quality*, the development of more compact, mixed-use urban forms, which are conducive to biking and walking, combined with improvements in the active transportation network and increases in accessibility to sustainable modes of transport, would result in a regional reduction in VMT of approximately 20.4 million miles by 2035, which would be similar under Alternative 3. In addition, the planned regional increase in the amount of sustainable transportation available to Lynwood residents and the increase in public acceptance of active forms of transportation as feasible forms of travel would also occur, which would both facilitate more compact development and focus on providing access to transit and encouraging bicycling and walking.

Overall, air quality impacts would be somewhat lower under this alternative due to lower growth projections. As with the proposed project, air quality impacts would be less than significant.

6.3.3 Cultural Resources

Alternative 3 would involve development within a similar area but would reduce the intensity of development. However, the potential to impact cultural resources is low due to the previously developed condition of the Specific Plan and LBBSP areas. As with the proposed Specific Plan, cultural resources impacts would be less than significant under this alternative.

6.3.4 Greenhouse Gas Emissions

Alternative 3 would accommodate 2,000 fewer residential units and 330,000 less square feet of commercial development, no hotel units or industrial development, and 3,351 (66 percent) fewer jobs compared to the proposed Specific Plan. The service population (sum of population and employees) of this alternative would be 8,242 (6,540 residents plus 1,702 employees), which is less than the proposed Specific Plan's service population of 19,422. Although development of residential units would decrease, available land would be maximized for non-residential uses. As with the proposed Specific Plan, impacts would remain less than significant.

6.3.5 Geology and Soils

Alternative 3 would accommodate 2,000 fewer residential units, 330,000 less square footage of commercial development, no hotel units, and no industrial development compared to the proposed Specific Plan. Therefore, development under this alternative would expose fewer residential and non-residential structures to geologic hazards, including groundshaking, liquefaction, and expansion. Development under this alternative would still be subject to the Alquist-Priolo Earthquake Fault Zone Act, California Building Code (CBC) provisions, and policies contained in the Lynwood General Plan. Therefore, impacts related to groundshaking and soil instability would remain less than significant with adherence to existing regulations.

6.3.6 Hazards and Hazardous Materials

Alternative 3 would decrease residential and non-residential development in comparison to the proposed Specific Plan, and would still involve the development of residential or commercial land uses that may involve the use, storage, disposal or transportation of hazardous materials. This alternative may also involve mixed-use structures that would place new residences near hazardous waste users. However, as with the proposed project, required adherence to existing regulations and Lynwood General Plan policies would reduce impacts to less than significant.

This alternative may also involve demolition or redevelopment of structures that could contain asbestos or lead based paints. Impacts related to lead and asbestos hazards would be similar to those of the proposed project and would be less than significant with adherence to existing regulations. In addition, it is not anticipated that this alternative would involve any new uses that would produce or emit hazardous materials near any schools. As with the proposed Specific Plan, impacts would be less than significant.

There are many properties within the Plan Area where past uses could have produced localized containment or concentrations of hazardous substances. This alternative would decrease the amount and intensity of development within the Plan Area. Therefore, this alternative could decrease the amount of workers or residents exposed to residual contaminants in the soils. In addition, as with the proposed Specific Plan, new development would be subject to existing policies regarding development in contaminated areas. As with the proposed Specific Plan, impacts would be less than significant.

As with the proposed Specific Plan, this alternative is not located in an airport land use plan or within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area. Future development under this alternative would be approximately three miles north of Compton/Woodley Airport. Therefore, potential impacts would be *less than significant*. In addition, as with the proposed Specific Plan, there would be no safety hazards associated with private airstrips, adopted emergency response plans, and wildland fires.

6.3.7 Hydrology and Water Quality

Alternative 3 would decrease the intensity and amount of residential and non-residential development compared to the proposed Specific Plan. Construction-related and operational erosion and sedimentation, and pollutant discharges would therefore decrease under this alternative. Compliance with NPDES Permit requirements and County ordinances would ensure that temporary construction-related water quality impacts would be less than significant.

6.3.8 Land Use and Planning

Alternative 3 would be consistent with most regional land use plans and policies, including those of SCAG's Regional Comprehensive Plan, Regional Transportation Plan/Sustainable Communities Strategy, and Southern California Compass. Population growth would be expected to be consistent with the SCAG 2040 population forecast of 76,100. However, this alternative would not facilitate development of a more compact urban form in close proximity to existing transit services and would not provide the same degree of growth through infill and redevelopment of existing underutilized properties as prescribed in the Specific Plan. Therefore, this alternative's consistency with transit-oriented land use and planning policies would less than the proposed Specific Plan.

6.3.9 Noise

Alternative 3 would reduce residential development and result in an overall decrease of non-residential buildout within the Plan Area. Noise and vibration levels would be similar to the proposed Specific Plan as the same type of construction equipment would be used. The overall duration of noise and vibration associated with construction would be incrementally less, as available land for development would be reduced. This alternative would introduce fewer sensitive receptors into the Plan Area. Similar to the proposed project, noise and vibration impacts from construction-related noise would be less than significant with adherence to the City's Municipal Code Chapter 3-12.3.

6.3.10 Population and Housing

This alternative would decrease residential development by 2,000 units (57 percent), and therefore, the population would decrease by 8,720 residents compared to buildout under the proposed Specific Plan. Based on the average of 4.36 persons per household in the City of Lynwood, the proposed addition of 1,500 residential dwellings would generate an increase of approximately 6,540 residents. This would bring the population of the City to 78,379, a nine percent increase; and the number of households to 16,809, a 9.7 percent increase. These increases in the city's population and households would be added incrementally over the anticipated 25-year period of full project buildout, and would exceed SCAG's 2040 population and household projections of 76,100 residents and 16,200 households. Similar to the proposed Specific Plan, this alternative would increases in population, housing and employment above SCAG and General Plan projections but impacts would be less than significant due to its consistency with transit oriented growth policies. As with the proposed Specific Plan, impacts would be less than significant.

Alternative 3 would result in an estimated 1,702 new jobs, which would be 3,351 (66 percent) fewer jobs than under the proposed Specific Plan. However, this level of job growth would be about equal to SCAG's 2040 job projections for the City of Lynwood. Therefore, this impact would be less than significant, similar to the proposed Specific Plan.

This alternative would increase the Plan Area's housing stock by adding 1,500 new residential units. Impacts related to displacement would be less than significant, similar to the proposed Specific Plan.

6.3.11 Public Services

Alternative 3 would result in 2,000 fewer residential units than the proposed and would result in an overall decrease in non-residential development in comparison to the proposed Specific Plan. Consequently, demand for police and fire protection and library services would decrease in comparison to the proposed Specific Plan. As with the proposed Specific Plan, impacts would be less than significant.

Based on the students per household generation rates used in the public services analysis for the proposed project (see Section 4.12, *Public Services*), this alternative would generate approximately 1,050 new students. In comparison, the proposed Specific Plan would generate approximately 2,450 new students. Therefore, demand for school services would also decrease under this alternative, and impacts to schools would remain less than significant.

6.3.12 Transportation and Circulation

Alternative 3 would generate less peak hour and daily trips compared to the proposed Specific Plan. The Proposed Specific Plan would generate 1,894 trips during the AM peak hour, 2,975 trips during the PM peak hour, and 33,550 daily trips. In comparison, this alternative would generate 921trips during the AM peak hour, 1,453 trips during the PM peak hour, and 16,759 daily trips. Therefore, the proposed Specific Plan would generate nearly two times the AM and PM peak hour trips, and approximately two times the total daily vehicle trips in comparison to this Alternative. Although a specific roadway segment evaluation was not conducted for this alternative, it can be reasonably assumed that this alternative would reduce traffic impacts along study area roadway segments and at the I-105 intersections. However, due to the existing level of service along the Long Beach Boulevard roadway segments, impacts would remain significant and unavoidable.

6.3.13 Utilities and Service Systems

Alternative 3 would reduce residential buildout by 2,000 units (57 percent) and would decrease non-residential buildout by 330,000 square feet (28 percent). As shown in Table 53, water demand would be reduced by 641,550 gallons per day (54 percent) under this alternative compared to the proposed Specific Plan. Impacts would be reduced compared to the proposed Specific Plan and would be less than significant.

Table 53 Alternative 3 Water Demand

Use	Alternative 3 Buildout		Water Demand Factor*		Expected Demand	
			Gallons / Day	Unit	Gallons / Day	Million Gallons / Day
Non-residential	870,000	Square feet	340	1000 SF	295,800	0.30
Residential	1,500	Dwelling unit	164	Dwelling unit	246,000	0.25
Total Alternative 3					541,800	0.54
Proposed Specific Plan (includes Industrial and Hotel Uses)					1,183,350	1.19

As shown in Table 54 and based on the wastewater demand factors used in Section 4.15, Utilities and Service Systems, Alternative 3 would generate 515,010 gallons per day or 0.51 million gallons per day. This represents a reduction of 612,340 gallons per day (54 percent) when compared to the proposed project. Impacts would be reduced compared to the proposed Specific Plan and would be less than significant.

Table 54 Alternative 3 Project-Generated Wastewater Flows

Use	Alternative 3 Buildout		Wastewater Generation Factor		Expected Wastewater Generation	
			Gallons / Day	Unit	Gallons / Day	Million Gallons / Day
Non-Residential	870,000	Square feet	323	1,000 SF	281,010	0.28
Residential	1,500	Dwelling unit	156	Dwelling unit	234,000	0.23
Total Alternative 3					515,010	0.51
Proposed Specific Plan (includes Industrial and Hotel Uses)					1,127,350	1.1

Source: Los Angeles County Sanitation District Generation Factor (http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531).

As shown in Table 55 and based on the solid waste generation rates used in Section 4.15, Utilities and Service Systems, Alternative 3 would generate approximately 18.2 tons of solid waste per day prior to the consideration of any waste reduction efforts. This represents a decrease of 20 tons per day (53 percent) when compared to buildout of the proposed Specific Plan. Nonetheless, landfills that serve the Plan Area would be able to accommodate this increase in solid waste. As with the proposed Specific Plan, impacts would be less than significant.

Table 55 Alternative 3 Solid Waste Generation

Use	Alternative 3 Units or Employees	Solid Waste Generation Rate	Overall Solid Waste Generation (tpd)1	
			Proposed Specific Plan	Alternative 3
Residential	1,500 units	12.23 lbs/household/day	21.4	9.2
Non-Residential	1,702 employees	10.53 lbs/employee/day	17.45	9.0
Total			**38.85**	**18.2**
Total Assuming 50% Diversion Rate			**19.4**	**9.1**

tpd – tons per day
[1] tpd was calculated by multiplying the unit amount by the generation factor and then dividing by 2,000 (the number of pounds in a ton)

6.4 Environmentally Superior Alternative

CEQA requires the identification of the environmentally superior alternative among the options studied. When the "No Project" alternative is determined to be environmentally superior, CEQA also requires identification of the environmentally superior alternative among the development options.

Table 56 indicates whether each alternative's environmental impact is greater than, lesser than, or similar to the proposed project. This comparison shows the No Project Alternative would avoid all of the proposed project impacts and would be environmentally superior to the proposed project. However, this alternative would not fulfill the project objectives.

Among the other alternatives being considered, the Lower Growth Alternative (Alternative 3) could be considered environmentally superior, as it would reduce impacts in many issue areas, primarily due to the reduction in housing units. This alternative would also meet most of the project objectives but to a lesser extent than the proposed Specific Plan.

Table 56 Comparison of Environmental Impacts for Each Alternative

Issue	Proposed Project	Alternative 1: No Project	Alternative 2: LBBSP Buildout	Alternative 3: Lower Growth – SCAG 2040 Buildout
Aesthetics	*Less than Significant*	+	=/-	=/-
Air Quality	*Less than Significant*	+	+	+
Cultural Resources	*Less than Significant*	+	+	+
Greenhouse Gas Emissions	*Less than Significant*	+	+	+
Geology and Soils	*Less than Significant*	+	+	+

Issue	Proposed Project	Alternative 1: No Project	Alternative 2: LBBSP Buildout	Alternative 3: Lower Growth – SCAG 2040 Buildout
Hazards and Hazardous Materials	*Less than Significant*	+	+	+
Hydrology and Water Quality	*Less than Significant*	+	+	+
Land Use and Planning	*Less than Significant*	+	-	=
Noise	*Significant and Unavoidable*	+	+	+
Population and Housing	*Less than Significant*	+	+	+
Public Services	*Less than Significant*	+	+	+
Transportation and Circulation	*Significant and Unavoidable*	+	+	+
Utilities and Service Systems	*Significant but Mitigable*	+	+	+
Overall	*N/A*	+	+	+

+Superior to the proposed Specific Plan
- Inferior to the proposed Specific Plan
= Similar impact to the proposed Specific Plan

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7.2 List of Preparers

This EIR was prepared by Rincon Consultants, Inc. under contract to Michael R. Kodama Planning Consultants and the City of Lynwood. Translutions, Inc. and Rikin Transportation Planning Group provided technical assistance to Rincon Consultants in the issue area of traffic.

Rincon Consultants, Inc.

Stephen Svete, AICP, LEED AP ND, Principal in Charge
Jasch Janowicz, Senior Program Manager
Christy Sabdo, AICP, Senior Environmental Project Manager
Lindsey Sarquilla, MESM, Senior Environmental Planner
Jerry Hittleman, Senior Planner
Bronwyn Green, Senior Environmental Planner & Economic Analyst
Wade Sherman, Graphics Technician
Doug Carreiro, GIS Analyst
April L. Durham, PhD, Technical Editor + Graphic Designer
Terra Stephan Document Production Specialist
Carolina L. Castellanos, Administrative Assistant

Translutions, Inc.

Sandipan Bhattacharjee, P.E., AICP

Rifkin Transportation Planning Group

Allyn D. Rifkin, PE

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Appendix A

Notice of Preparation

City of Lynwood Transit Area Strategic Plan

Notice of Preparation of a Draft Environmental Impact Report

The City of Lynwood will be the Lead Agency for the preparation of an Environmental Impact Report (EIR) that will analyze the environmental impacts associated with a proposed Lynwood Transit Area Strategic Plan (LTASP), which encompasses approximately 315 acres. The primary goal of the Lynwood Transit Area Strategic Plan is to facilitate the development of a transit-oriented development (TOD) district. The guiding principles of the LTASP include: 1) promote transit oriented development near the Metro Green Line Station; (2) allow flexibility in land uses; (3) consolidate uses and create new development sites; (4) enhance pedestrian safety and comfort; (5) create a sense of place and identity of downtown Lynwood; (6) improve and facilitate additional housing; and (7) create a sustainable community. The Lynwood TOD envisions a total development area of 142 acres with land use designations consisting of Mixed-Use (89.3 acres), Downtown Residential (10.8 acres), Limited Industrial (34.8 acres), and Open Space (7.0 acres) along with other multi-modal transportation and infrastructure improvements.

The LTASP includes design guidelines to facilitate high quality mixed-use, residential, limited industrial, open space, and town center development. The LTASP will also enable the creation of a network of "complete streets", improvements to the Highway 105 interchange, and public spaces that are friendly to pedestrians, transit riders, and bicyclists.

Environmental Impact Report

The EIR prepared for the LTASP will be a Program EIR. Per the *CEQA Guidelines*, a Program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project. The purpose of a program EIR is to allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.

The EIR will examine each of the issue areas on the City's environmental checklist. Issues to be discussed include:

- Aesthetics
- Air Quality
- Cultural Resources
- Geology/Soils
- Greenhouse Gas
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems

In addition to the CEQA-required "no project" alternative, the EIR will examine a range of land use scenarios that address one or more of the projects' potential environmental effects.

The City of Lynwood would like to know the views of your organization as to the scope and content of the environmental information that should be addressed in connection with the proposed project. Public agencies may need to use the EIR prepared by the City of Lynwood when considering permits or other approvals regarding certain aspects of the proposed actions.

Due to time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. The local public review period will begin on December 11, 2015 and will end on January 11, 2016.

Please send your response(s) to:

Bruno Naulls, Project Manager
City of Lynwood
Community Development Department
11330 Bullis Road
Lynwood, California 90262

Mr. Naulls can be reached at (310) 603-0220. Mr. Naull's email address is bnaulls@lynwood.ca.us. Please provide the name for a contact person in your agency.

The City of Lynwood will hold an EIR scoping meeting to provide an additional opportunity for input on the scope and content of the EIR. The public scoping meeting is scheduled for Tuesday, January 12, 2016, at 6:00 p.m., in Bateman Hall, located at 11330 Bullis Road in the City of Lynwood.

Project Title: City of Lynwood Transit Area Strategic Plan

Project Sponsor: City of Lynwood

Date	December 11, 2015	Signature	
		Title	Bruno Naulls, Community Development Project Manager
		Telephone	(310) 603-0220

LYNWOOD TRANSIT PLAN AREA

KEY PLACES IN LYNWOOD

METRO Station Stop
Plan Area
Parks
Schools
Hospital
Shopping Center
Public Facility

TRANSIT PLAN AREA

Plaza Mexico

Metro Green Line Station

Rose Park

St. Francis Medical Center

Civic Center

Water Tower

Long Beach Boulevard

New Freeway Park

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Lynwood Transit Area Strategic Plan

Lead Agency: City of Lynwood
Contact Person: Bruno Naulls
Mailing Address: 11330 Bullis Road
Phone: 310-603-0220
City: Lynwood
Zip: 90262
County: Los Angeles

Project Location: County: Los Angeles
City/Nearest Community: Lynwood
Cross Streets: Imperial Highway and Long Beach Boulevard
Zip Code: 90262
Longitude/Latitude (degrees, minutes and seconds): ____° ____′ ____″ N / ____° ____′ ____″ W
Total Acres: ____
Assessor's Parcel No.: ____
Section: ____ Twp.: ____ Range: ____ Base: ____
Within 2 Miles: State Hwy #: 105
Waterways: ____
Airports: ____
Railways: Metro Green Line
Schools: ____

Document Type:

CEQA:
- [x] NOP
- [ ] Early Cons
- [ ] Neg Dec
- [ ] Mit Neg Dec
- [ ] Draft EIR
- [ ] Supplement/Subsequent EIR (Prior SCH No.) ____
- Other: ____

NEPA:
- [ ] NOI
- [ ] EA
- [ ] Draft EIS
- [ ] FONSI

Other:
- [ ] Joint Document
- [ ] Final Document
- [ ] Other: ____

Local Action Type:

- [ ] General Plan Update
- [ ] General Plan Amendment
- [ ] General Plan Element
- [ ] Community Plan
- [ ] Specific Plan
- [ ] Master Plan
- [ ] Planned Unit Development
- [ ] Site Plan
- [ ] Rezone
- [ ] Prezone
- [ ] Use Permit
- [ ] Land Division (Subdivision, etc.)
- [ ] Annexation
- [ ] Redevelopment
- [ ] Coastal Permit
- [x] Other: Strategic Plan

Development Type:

- [ ] Residential: Units ____ Acres ____
- [ ] Office: Sq.ft. ____ Acres ____ Employees ____
- [ ] Commercial: Sq.ft. ____ Acres ____ Employees ____
- [ ] Industrial: Sq.ft. ____ Acres ____ Employees ____
- [ ] Educational: ____
- [ ] Recreational: ____
- [ ] Water Facilities: Type ____ MGD ____
- [ ] Transportation: Type ____
- [ ] Mining: Mineral ____
- [ ] Power: Type ____ MW ____
- [ ] Waste Treatment: Type ____ MGD ____
- [ ] Hazardous Waste: Type ____
- [x] Other: 315-acre Strategic Plan Area

Project Issues Discussed in Document:

- [x] Aesthetic/Visual
- [ ] Agricultural Land
- [x] Air Quality
- [x] Archeological/Historical
- [ ] Biological Resources
- [ ] Coastal Zone
- [x] Drainage/Absorption
- [ ] Economic/Jobs
- [ ] Fiscal
- [ ] Flood Plain/Flooding
- [ ] Forest Land/Fire Hazard
- [x] Geologic/Seismic
- [ ] Minerals
- [x] Noise
- [x] Population/Housing Balance
- [x] Public Services/Facilities
- [x] Recreation/Parks
- [ ] Schools/Universities
- [ ] Septic Systems
- [x] Sewer Capacity
- [ ] Soil Erosion/Compaction/Grading
- [x] Solid Waste
- [x] Toxic/Hazardous
- [x] Traffic/Circulation
- [ ] Vegetation
- [ ] Water Quality
- [x] Water Supply/Groundwater
- [ ] Wetland/Riparian
- [x] Growth Inducement
- [x] Land Use
- [x] Cumulative Effects
- [ ] Other: ____

Present Land Use/Zoning/General Plan Designation:

Long Beach Boulevard Specific Plan Area, Residential, Commercial, Open Space

Project Description: *(please use a separate page if necessary)*

The Lynwood Transit Area Strategic Plan envisions a 315-acre transit-oriented design (TOD) district . The guiding principles of the TOD district include: 1) promote transit oriented development near the Metro Green Line Station; (2) allow flexibility in land uses; (3) consolidate uses and create new development sites; (4) enhance pedestrian safety and comfort; (5) create a sense of place and identity of downtown Lynwood; (6) improve and facilitate additional housing; and (7) create a sustainable community. The Lynwood TOD envisions a total development area of 142 acres with land use designations consisting of Mixed-Use (89.3 acres), Downtown Residential (10.8 acres), Limited Industrial (34.8 acres), and Open Space (7.0 acres) along with other multi-modal transportation improvements.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X Air Resources Board
____ Boating & Waterways, Department of
____ California Emergency Management Agency
____ California Highway Patrol
X Caltrans District # 7
____ Caltrans Division of Aeronautics
____ Caltrans Planning
____ Central Valley Flood Protection Board
____ Coachella Valley Mtns. Conservancy
____ Coastal Commission
____ Colorado River Board
____ Conservation, Department of
____ Corrections, Department of
____ Delta Protection Commission
____ Education, Department of
X Energy Commission
____ Fish & Game Region # ____
____ Food & Agriculture, Department of
____ Forestry and Fire Protection, Department of
____ General Services, Department of
X Health Services, Department of
X Housing & Community Development
X Native American Heritage Commission

X Office of Historic Preservation
____ Office of Public School Construction
X Parks & Recreation, Department of
____ Pesticide Regulation, Department of
X Public Utilities Commission
X Regional WQCB # 4
____ Resources Agency
____ Resources Recycling and Recovery, Department of
____ S.F. Bay Conservation & Development Comm.
____ San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
____ San Joaquin River Conservancy
____ Santa Monica Mtns. Conservancy
____ State Lands Commission
____ SWRCB: Clean Water Grants
X SWRCB: Water Quality
____ SWRCB: Water Rights
____ Tahoe Regional Planning Agency
X Toxic Substances Control, Department of
X Water Resources, Department of

X Other: LA County Metropolitan Trans. Authority
____ Other: ____

Local Public Review Period (to be filled in by lead agency)

Starting Date December 11, 2015 Ending Date January 11, 2016

Lead Agency (Complete if applicable):

Consulting Firm: Rincon Consultants, Inc.
Address: 180 North Ashwood Ave.
City/State/Zip: Ventura, CA 93003
Contact: Jasch Janowicz, Senior Program Manager
Phone: 805.644.4455

Applicant: City of Lynwood
Address: 11330 Bullis Road
City/State/Zip: Lynwood, CA 90262
Phone: 310-603-0220

Signature of Lead Agency Representative: _____ **Date:** _____

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

January 8, 2016

Bruno Naulls
City of Lynwood
Community Development Department
11330 Bullis Road
Lynwood, California 90262

RE: City of Lynwood Transit Area Strategic Plan-Notice of Preparation for Draft Environmental Impact Report

Dear Mr. Naulls,

Thank you for the opportunity to comment on the Notice of Preparation of the Draft Environmental Impact Report for the proposed City of Lynwood Transit Area Strategic Plan. The plan area encompasses approx. 315 acres around the Long Beach Blvd. Station on the Metro Green Line. The Lynwood TOD envisions a total development area of approx. 142 acres with land use designations consisting of Mixed-Use (89.3 acres), Downtown Residential (10.8), Limited Industrial (34.8 acres), and Open Space (7.0 acres) along with other multi-modal transportation and infrastructure. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency's statutory responsibility in relation to our facilities and services that may be affected by the proposed project.

Several Metro bus lines operate within the Specific Plan area (120, 612, 60, 251, 760) Metro has standard language that relates to construction activity adjacent to bus transit facilities. Metro recommends that the Specific Plan include language that informs future development activity within the Specific Plan area of Metro's notification procedures and considerations for projects located in close proximity to a Metro facility that may impact Metro bus operations.

The Metro Green light rail currently operates weekday peak service as often as every five minutes in both directions and that trains may operate, in and out of revenue service, 24 hours a day, seven days a week, in the ROW proximate to the proposed project. Metro has development guidelines that describe the Metro's development project review process and considerations for project siting as it relates to Metro facilities. Metro suggests that the project sponsor include policy language or guidance in the Specific Plan that clearly denotes that development occurring within 100 feet of a Metro facility will require Metro review and approval and compliance with the Metro's Development Guidelines (Guidelines are attached). In particular, because of the proximity to the Metro Green Line, increased traffic at railroad grade crossings must be considered specifically in the Specific Plan. Provisions for transit priority treatments should be considered to make the development welcoming to transit access.

In addition, on development projects adjacent to Metro facilities, Metro typically requires the recordation of a Noise Easement Deed that includes standard language related to Metro light rail and bus noise production, vibration, and visual impacts. The recorded Noise Easement Deed in favor of LACMTA is required, a form of which is attached. In addition, any noise mitigation required for the project must be borne by the developers of the project and not LACMTA. The easement recorded in the Deed will extend to successors and tenants as well.

In addition, the Specific Plan has various policies in place that support active transportation and multi-modalism. Metro looks forward to continuing to collaborate with the City of Lynwood to effectuate policies and implementation activities that promote transit supportive communities.

If you have any questions regarding this response, please contact Elizabeth Carvajal at 213-922-3084 or by email at DevReview@metro.net. LACMTA looks forward to reviewing the Draft EIR. Please send it to the following address:

LACMTA Development Review
One Gateway Plaza MS 99-23-4
Los Angeles, CA 90012-2952

Sincerely,

Elizabeth Carvajal
Transportation Planning Manager

Attachments: Noise Easement Deed
Adjacent Construction Design Manual
Operating Systems Interface Section

RECORDING REQUESTED BY
AND WHEN RECORDED MAIL TO:

LOS ANGELES COUNTY METROPOLITAN
TRANSPORTATION AUTHORITY
Real Estate Department
Deputy Executive Officer - Real Estate
P: 213-922-2415 F: 213-922-2400
One Gateway Plaza, Mail Stop 99-18-4
Los Angeles, CA 90012-2932

Space Above Line for Recorder's Use

[Recordation of this Public Document is Exempt from all Recording Fees and Taxes Pursuant to Government Code Section 6103]

Public Agency - No Tax Statement

NOISE EASEMENT DEED

For valuable consideration, receipt of which is hereby acknowledged, **(Name of Owner)**, a _____ , for themselves, their heirs, administrators, executors, successors, assigns, tenants, and lessees do hereby grant, bargain, sell, and convey to the **LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY,** a public agency existing under the authority of the laws of the State of California ("Grantee"), its successors and assigns, for the use and benefit of the public and its employees, a perpetual, assignable easement in that certain real property in the City of Los Angeles, County of Los Angeles, State of California described in Exhibit "A" attached hereto and incorporated herein by this reference,

Said easement shall encompass and cover the entirety of the Grantors' Property having the same boundaries as the described Property and extending from the sub-surface upwards to the limits of the atmosphere of the earth, the right to cause in said easement area such noise, vibrations, fumes, dust, fuel particles, light, sonic disturbances, and all other effects that may be caused or may have been caused by the operation of public transit vehicles traveling along the Project right of way.

Grantor hereby waives all rights to protest, object to, make a claim or bring suit or action of any purpose, including or not limited to, property damage or personal injuries, against Grantee, its successors and assigns, for any necessary operating and maintenance activities and changes related to the Project which may conflict with Grantors' use of Grantors' property for residential and other purposes, and Grantors hereby grants an easement to the Grantee for such activities.

The granting of said Easement shall also establish the Grantors' right to further modify or develop the Property for any permitted use. However, Grantor's rights of development shall not interfere with the continued operation of Grantee's Project.

It is understood and agreed that these covenants and agreements shall be permanent, perpetual, will run with the land and that notice shall be made to and shall be binding upon all heirs, administrators, executors, successors, assigns, tenants and lessees of the Grantor. The Grantee is hereby expressly granted the right of third party enforcement of this easement.

IN WITNESS WHEREOF, the undersigned has caused its/their signature to be affixed this day of _____, 20___

By: _____
Name

By: _____
Name

(ATTACH NOTARY SEAL AND CERTIFICATE HERE.)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____ before me, _____,
Date *Here Insert Name and Title of the Officer*

personally appeared _____
Name(s) of Signer(s)

_____,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

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CERTIFICATE OF ACCEPTANCE

This is to certify that the interest in the real property conveyed by the foregoing Grant Deed from _____, a **California Limited Partnership**, ("Grantor") to **LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY,** a public agency existing under the authority of the laws of the State of California ("LACMTA"), is hereby accepted by the undersigned on behalf of the LACMTA pursuant to authority conferred by resolution of the Board of Directors of the LACMTA, and the Grantee hereby consents to the recordation of this Deed by its duly authorized officer.

Dated this ____ day of _____, 20__

By: _____
Velma C. Marshall
Deputy Executive Officer - Real Estate

ADJACENT CONSTRUCTION DESIGN MANUAL

1.0 INTRODUCTION

1.1 Parties planning construction over, under or adjacent to a Metropolitan Transportation Authority (MTA) facility or structure are advised to submit for review seven (7) copies of their drawings and four (4) copies of their calculations showing the relationship between their project and the MTA facilities, for MTA review. The purpose of the MTA review is to reduce the chance of conflict, damage, and unnecessary remedial measures for both MTA and the parties. Parties are defined as developers, agencies, municipalities, property owners or similar organizations proposing to perform or sponsor construction work near MTA facilities.

1.2 Sufficient drawings and details shall be submitted at each level of completion such as Preliminary, In-Progress, Pre-final and Final, etc. to facilitate the review of the effects that the proposed project may or may not have on the MTA facilities. An MTA review requires internal circulation of the construction drawings to concerned departments (usually includes Construction, Operations, Maintenance, and Real Estate). Parties shall be responsible for all costs related to drawing reviews by MTA. MTA costs shall be based upon the actual hours taken for review at the hourly rate of pay plus overhead charges. Drawings normally required for review are:

A. Site Plan

B. Drainage Area Maps and Drainage Calculations

C. Architectural drawings

D. Structural drawings and calculations

E. Civil Drawings

F. Utility Drawings

G. Sections showing Foundations and MTA Structures

H. Column Load Tables

I. Pertinent Drawings and calculations detailing an impact on MTA facilities

J. A copy of the Geotechnical Report.

K. Construction zone traffic safety and detour plans: Provide and regulate positive traffic guidance and definition for vehicular and pedestrian traffic adjacent to the construction site to ensure traffic safety and reduce adverse traffic circulation impact.

L. Drawings and calculations should be sent to:

MTA Third Party Administration (Permits Administration)
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, California 90012

1.3 If uncertainty exists on the possible impacts a project may have on the MTA facilities, and before submitting a formal letter requesting a review of a construction project adjacent to the Metro System, the party or his agent may contact the MTA Third Party Administrator (Permits). The Party shall review the complexity of the project, and receive an informal evaluation of the amount of detail required for the MTA review. In those cases, whereby it appears the project will present no risk to MTA, the Third Party Administrator (Permits) shall immediately route the design documents to Construction, Operations, Maintenance, and Real Estate departments for a preliminary evaluation. If it is then confirmed that MTA risk is not present, the Administrator shall process an approval letter to the party.

1.4 A period of 30 working days should be allowed for review of the drawings and calculations. Thirty (30) work days should be allowed for each successive review as required. It is noted that preliminary evaluations are usually produced within 5 working days.

1.5 The party shall reimburse the MTA for any technical review or support services costs incurred that are associated with his/her request for access to the Metro Rail System

1.6 The following items must be completed before starting any construction:

A. Each part of the project's design may be reviewed and approved by the MTA. The prime concern of the MTA is to determine the effect of the project on the MTA structure and its transit operations. A few of the other parts of a project to be considered are overhead protection, dust protection, dewatering, and temporary use of public space for construction activities.

B. Once the Party has received written acceptance of the design of a given project then the Party must notify MTA prior to the start of construction, in accordance with the terms of acceptance.

1.7 Qualified Seismic, Structural and Geotechnical Oversight

The design documents shall note the name of the responsible Structural Engineer and Geotechnical Engineer, licensed in the State of California.

2.0 REVIEW PROCEDURE

2.1 All portions of any proposed design that will have a direct impact on an MTA facility or structure will be reviewed to assure that the MTA facility or structure is not placed in risk at any time, and that the design meets all applicable codes and criteria. Any portion of the proposed design that is to form part of an MTA controlled area shall be designed to meet the MTA Design Criteria and Standards.

2.2 Permits, where required by the local jurisdiction, shall be the responsibility of the party. City of L.A. Dept. of Bldg. and Safety and the Bureau of Engineering permit review shall remain in effect. Party shall refer to MTA Third Party Administration policies and procedures, THD5 for additional information.

2.3 Monitoring of the temporary support of excavation structures for adjacent construction shall be required in all cases for excavations within the geotechnical zone of influence of MTA structures. The extent of the monitoring will vary from case to case.

2.4 Monitoring of the inside of MTA tunnels and structures shall be required when the adjacent

excavation will unload or load the MTA structure or tunnel. Monitoring of vertical and horizontal distortions will include use of extensometers, inclinometers, settlement reference points, tiltmeters, groundwater observation wells, tape extensometer anchor points and load cells, as appropriately required. Acceptable limits of movement will depend on groundwater conditions, soil types and also the length of service the stations and tunnels have gone through. Escorts will be required for the survey parties entering the Metro operating system in accordance with MTA Operating Rules and Procedures. An MTA account number will be established and the costs for the escort monitoring and surveying service will be billed directly to the party or his agent as in section 1.2.

2.5 The calculations submitted for review shall include the following:

A. A concise statement of the problem and the purpose of the calculation.

B. Input data, applicable criteria, clearly stated assumptions and justifying rationale.

C. References to articles, manuals and source material shall be furnished with the calculations.

D. Reference to pertinent codes and standards.

E. Sufficient sketches or drawing references for the work to be easily understood by an independent reviewer. Diagrams indicating data (such as loads and dimensions) shall be included along with adequate sketches of all details not considered standard by MTA.

F. The source or derivation of all equations shall be shown where they are introduced into the calculations.

G. Numerical calculations shall clearly indicate type of measurement unit used.

H. Identify results and conclusions.

I. Calculations shall be neat, orderly, and legible.

2.6 When computer programs are used to perform calculations, the following information shall accompany the calculation, including the following:

A. Program Name.

B. Program Abstract.

C. Program Purpose and Applications.

D. Complete descriptions of assumptions, capabilities and limitations.

E. Instructions for preparing problem data.

F. Instructions for problem execution.

G. List (and explanation) of program acronyms and error messages.

H. Description of deficiencies or uncorrected errors.

I. Description of output options and interpretations.

J. Sample problem(s), illustrating all input and output options and hardware execution statements. Typically, these problems shall be verified problems.

K. Computer printout of all supporting calculations.

L. The "User's Manual" shall also include a certification section. The certification section shall describe the methods and how they cover the permitted options and uses of the program.

2.7 Drawings shall be drawn, to scale, showing the location and relationship of proposed adjacent construction to existing MTA structures at various stages of construction along the entire adjacent alignment. The stresses and deflections induced in the existing MTA structures should be provided.

2.8 The short-term and long-term effects of the new loading due to the adjacent construction on the MTA structures shall be provided. The soil parameters and other pertinent geotechnical criteria contained in existing contract documents for the affected structure, plus any additional conditions shall be used to analyze the existing MTA structures.

2.9 MTA structures shall be analyzed for differential pressure loadings transferred from the adjacent construction site.

3.0 MECHANICAL CRITERIA

3.1 Existing services to MTA facilities, including chilled water and condenser water piping, potable and fire water, storm and sanitary sewer, piping, are not to be used, interrupted nor disturbed without written approval of MTA.

3.2 Surface openings of ventilation shafts, emergency exits serving MTA underground facilities, and ventilation system openings of surface and elevated facilities are not to be blocked or restricted in any manner. Construction dust shall be prevented from entering MTA facilities.

3.3 Hot or foul air, fumes, smoke, steam, etc., from adjacent new or temporary facilities are not to be discharged within 40 feet of existing MTA ventilation system intake shafts, station entrances or portals. Tunnel ventilation shafts are both intake and discharge structures.

3.4 Clear access for the fire department to the MTA fire department connections shall be maintained at all times. Construction signs shall be provided to identify the location of MTA fire department connections. No interruption to fire protection water service will be permitted at any time.

3.5 Modifications to existing MTA mechanical systems and equipment, including ventilation shafts, required by new connections into the MTA System, shall only be permitted with prior review and approval by MTA. If changes are made to MTA property as built drawings shall be provided reflecting these changes.

At the option of MTA, the adjacent construction party shall be required to perform the field tests necessary to verify the adequacy of the modified system and the equipment performance. This verification shall be performed within an agreed time period jointly determined by MTA and the Party on a case by case basis. Where a modification is approved, the party shall be held responsible to maintain original operating capacity of the equipment and the system impacted by the modification.

4.0 OPERATIONAL REQUIREMENTS

4.1 GENERAL

A. Normal construction practices must be augmented to insure adequate safety for the general public entering Metro Stations and riding on Metro Trains and Buses. Design of a building, structure, or facility shall take into account the special safety considerations required for the construction of the facility next to or around an operating transit system.

B. Projects which require working over or adjacent to MTA station entrances shall develop their construction procedures and sequences of work to meet the following minimum requirements:

1. Construction operations shall be planned, scheduled and carried out in a way that will afford the Metro patrons and the general public a clean, safe and orderly access and egress to the station entrance during revenue hours.

2. Construction activities which involve swinging a crane and suspended loads over pedestrian areas, MTA station entrances and escalators, tracks or Metro bus passenger areas shall not be performed during revenue hours. Specific periods or hours shall be granted on a case-by-case basis.

3. All cranes must be stored and secured facing away from energized tracks, when appropriate.

4. All activity must be coordinated through the MTA Track Allocation process in advance of work activity.

4.2 OVERHEAD PROTECTION - Station Entrances

A. Overhead protection from falling objects shall be provided over MTA facilities whenever there is possibility, due to the nature of a construction operation, that an object could fall in or around MTA station entrances, bus stops, elevators, or areas designed for public access to MTA facilities. Erection of the overhead protection for these areas shall be done during MTA non-revenue hours.

1. The design live load for all overhead protection shall be 150 pounds per square foot minimum. The design wind load on the temporary structures shall be 20 pounds per square foot, on the windward and leeward sides of the structure.

2. The overhead protection shall be constructed of fire rated materials. Materials and equipment shall not be stored on the completed shield. The roof of the shield shall be constructed and maintained watertight.

B. Lighting in public areas and around affected MTA facilities shall be provided under the overhead protection to maintain a minimum level of twenty-five (25) footcandles at the escalator treads or at the walking surface. The temporary lighting shall be maintained by the Party.

C. Wooden construction fencing shall be installed at the boundary of the areas with public access. The fencing shall be at least eight-feet high, and shall meet all applicable code requirements.

D. An unrestricted public access path shall be provided at the upper landing of the entrance escalator-way in accordance with the following:

1. A vertical clearance between the walking surface and the lowest projection of the shield shall be 8'-0".

2. A clear pedestrian runoff area extending beyond the escalator newel shall be provided, the least dimension of which shall be twenty (20) feet.

3. A fifteen (15) foot wide strip (other than the sidewalk) shall be maintained on the side of the escalator for circulation when the escalator is pointed away from a street corner.

4. A clear path from any MTA emergency exit to the public street shall be maintained at all times.

E. Temporary sidewalks or pedestrian ways, which will be in use more than 10 days, shall be7constructed of four (4") inch thick Portland cement concrete or four(4") inches of asphaltic concrete placed and finished by a machine.

4.3 OVERHEAD PROTECTION - Operating Right-of-Way Trackage

A. MTA Rail Operations Control Center shall be informed of any intent to work above, on, or under the MTA right-of-way. Crews shall be trained and special flagging operations shall be directed by MTA Rail Operations Control Center. The party shall provide competent persons to serve as Flaggers. These Flaggers shall be trained and certified by MTA Rail Operations prior to any work commencing. All costs incurred by MTA shall be paid by the party.

B. A construction project that will require work over, under or adjacent to the at grade and aerial MTA right-of-way should be aware that the operation of machinery, construction of scaffolding or any operation hazardous to the operation of the MTA facility shall require that the work be done during non-revenue hours and authorized through the MTA Track Allocation process.

C. MTA flagmen or inspectors from MTA Operations shall observe all augering, pile driving or other work that is judged to be hazardous. Costs associated with the flagman or inspector shall be borne by the Party.

D. The party shall request access rights or track rights to perform work during non-revenue hours. The request shall be made through the MTA Track Allocation process.-

4.4 OTHER METRO FACILITIES

A. Access and egress from the public streets to fan shafts, vent shafts and emergency exits must be maintained at all times. The shafts shall be protected from dust and debris. See

Exhibit A for details.

B. Any excavation in the vicinity of MTA power lines feeding the Metro System shall be through hand excavation and only after authorization has been obtained through the MTA Track Allocation process. MTA Rail Operations Control Center shall be informed before any operations commences near the MTA power system.

C. Flammable liquids shall not to be stored over or within 25 feet horizontally of MTA underground facilities. If installed within 25 to 100 feet horizontally of the structure, protective encasement of the tanks shall be required in accordance with NFPA STD 130. Existing underground tanks located within 100 feet horizontally of MTA facilities and scheduled to be abandoned are to be disposed of in accordance with Appendix C of NFPA STD 130. NFPA STD 130 shall also be applied to the construction of new fuel tanks.

D. Isolation of MTA Facilities from Blast

Subsurface areas of new adjacent private buildings where the public has access or that cannot be guaranteed as a secure area, such as parking garages and commercial storage and warehousing, will be treated as areas of potential explosion. NFPA 130, Standard for Fixed Guideway Transit Systems, life safety separation criteria will be applied that assumes such spaces contain Class I flammable, or Class II or Class III Combustible liquids. For structural and other considerations, isolation for blast will be treated the same as seismic separation, and the more restrictive shall be applied.

E. Any proposed facility that is located within 20 feet radius of an existing Metro facility will require a blast and explosion study and recommendations to be conducted by a specialist who is specialized in the area of blast force attenuation. This study must assess the effect that an explosion in the proposed non-Metro facility will have on the adjacent Metro facility and provide recommendations to prevent any catastrophic damage to the existing Metro facility. Metro must approve the qualifications of the proposed specialist prior to commencement of any work on this specialized study.

4.5 SAFETY REGULATIONS

A. Comply with Cal/OSHA Compressed Air Safety Orders Title 8, Division 1, Chapter 4, Subchapter 3. Comply with California Code of Regulations Title 8, Title 29 Code of Federal Regulations; and/or the Construction Safety and Health Manual (Part F) of the contract whichever is most stringent in regulating the safety conditions to be maintained in the work environment as determined by the Authority. The Party recognizes that government promulgated safety regulations are minimum standards and that additional safeguards may be required

B. Comply with the requirements of Chemical Hazards Safety and Health Plan, (per 29 CFR 1910.120 entitled, (Hazardous Waste Operations and Emergency Response) with respect to the handling of hazardous or contaminated wastes and mandated specialty raining and health screening.

C. Party and contractor personnel while within the operating MTA right-of-way shall

coordinate all safety rules and procedures with MTA Rail Operations Control Center.-

D. When support functions and electrical power outages are required, the approval MUST be obtained through the MTA Track Allocation procedure. Approval of the support functions and power outages must be obtained in writing prior to shutdown.

5.0 CORROSION

5.1 STRAY CURRENT PROTECTION

A. Because stray currents may be present in the area of the project, the Party shall investigate the site for stray currents and provide the means for mitigation when warranted.

B. Installers of facilities that will require a Cathodic Protection (CP) system must coordinate their CP proposals with MTA. Inquiries shall be routed to the Manager, Third Party Administration.

C. The Party is responsible for damage caused by its contractors to MTA corrosion test facilities in public right-of-way.

End of Section

SECTION 01 35 14

OPERATING SYSTEM INTERFACE

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Metro Rail Operations Instructions for Track Allocation/Work Permit Process.

1.02 RELATED SECTIONS

A. Section 01 35 23: Worksite Safety Requirements

B. Section 01 35 53: Worksite Security Requirements

1.03 REFERENCES

A. Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926 (FED/OSHA);

B. Title 8 California Code of Regulations (CAL/OSHA);

C. Title 26 California Code of Regulations (CAL/EPA);

1.04 QUALITY ASSURANCE (Not Used)

1.05 SUBMITTALS (Not Used)

1.06 DEFINITIONS

A. Metro Operating System: Facilities, equipment and installations that are essential for normal revenue operation, including the Metro trackway and equipment therein, traction power facilities, train control rooms, communications equipment, ventilation equipment, and other equipment and elements of infrastructure essential for normal revenue operation.

B. Revenue Hours: Hours during which passenger carrying trains operate as defined by the current schedule and which may be modified by Operations Control Center (OCC).

1.07 WORK ON EXISTING RIGHT OF WAY

A. In addition to any other requirements of the Contract Documents, construction of this Project will be coordinated with revenue service operations of the LA Metro's Rail Transit System (Metro Rail Operations Control Department). Metro Rail Operations operating conditions are in effect and rail vehicles will be in revenue service daily from approximately 3:30 a.m. continuous until approximately 1:30 a.m. the next day, seven

days a week. Contractor shall obtain and become familiar with the current "Daily Metro Rail Operations Schedule" and any revisions issued during the term of this Contract.

B. Contractor will cause all Work to be performed with regard to time, place and manner so that Metro Rail Operations scheduled revenue service is not disrupted unless expressly provided otherwise herein. All work performed by Contractor or its subcontractors of any tier in the vicinity of the existing track and facilities shall be in accordance with Metro Rail Operations Instructions for Track Allocation/Work Permit Process as outlined in Attachment A to this specification.

C. It is Contractor's responsibility to apply for and secure the Track Allocation/Work Permit for each and every shift of Limited or Full Access construction, as defined below. If Contractor fails to comply with this requirement, and/or if Contractor or its subcontractors of any tier violate the terms of the Track Allocation Permit, Metro will issue a Stop Work Order to Contractor. The Stop Work Order will be in effect until such time as a Track Permit is secured and/or the violation is corrected. Any delays or costs associated with this requirement shall be borne by Contractor. The Contractor will provide all safety measures and personnel required by Metro. This includes adhering to all wayside protection rules and requirements.

D. During hours of revenue service, Contractor and/or its subcontractors of any tier will be allowed Limited Access to any track area with Metro Rail Operations revenue service operations through the Project site. Limited Access construction is defined as work more than 10-feet from centerline of the operating track, or any work that includes equipment within 10-feet of the Overhead Contact System or Third Rail. Limited Access construction shall be coordinated daily with Metro Rail Operations through the Track Permit procedure. Contractor shall comply with National and State regulations and Metro Rules and Procedures at all times. Contractor personnel are forbidden to use cell phones within 10 feet of any active track. Violation may result in immediate and permanent removal of violating personnel from the Project.

E. During the hours when Metro Rail Operations is not in operation, approximately 1:30 a.m. to 3:30 a.m. daily, Contractor and/or its subcontractors of any tier may be permitted access to the existing track and facilities in the construction area, depending upon availability of resources and the needs of other work, such as train testing and maintenance. Any Work performed on the existing track structure and facilities during Non-Revenue hours will be restored by Contractor to complete operating conditions prior to the resumption of scheduled revenue service. Work shall be coordinated each and every time with Metro Rail Operations through the Track Allocation Permit procedures.

F. Contractor and its subcontractors, regardless of tier, shall not perform any Work that will require an unscheduled disruption of service at any time. All Work shall be performed with sufficient labor, materials, and standby equipment to ensure that unscheduled service disruptions do not occur.

1.08 SAFETY REQUIREMENTS

A. Comply with Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926 (FED/OSHA); Title 8 California Code of Regulations (CAL/OSHA); Title 26 California Code of Regulations (CAL/EPA); and any additional Project site rules Metro imposes

pertaining to safety, health, fire and environmental protection identified within the Project Safety Plan; trade association safety standards; and equipment and materials instructions including material safety data sheet, if any. In the event standards conflict, the standard providing the highest degree of protection will prevail.

B. Metro Safety training will be required for all Contractor personnel associated with the construction of any segment that requires Track Allocation/Work Permits. Contractor is solely responsible for compliance with all Federal Railroad Administration training requirements. Contractor shall take special precautions necessary to provide safe conditions for persons working in proximity to Metro's rail operations.

1.09 COOPERATION WITH METRO RAIL OPERATIONS

A. Metro Rail Operations staff will communicate directly with Contractor if conditions deemed to be an emergency exist. Under emergency conditions, life or property is in immediate danger of loss. Should an emergency condition occur, Contractor shall follow the directions of Metro Rail Operations staff without hesitation.

B. The application for issuance of Track Allocation/Work Permits where necessary to safe-out electrical equipment or overhead catenary, shall be coordinated directly between Contractor and Metro Rail Operations Control staff. Contractor shall maintain the Track Allocation/Work Permit documentation at the work site. Failure to produce the required documentation when requested will result in the cessation of Work until the documentation is produced. No exceptions will be allowed, and the time for completion will not be extended if Work is stopped for the foregoing reason.

C. Failure to complete the work within the allocated timeframe and hand the tracks back to Metro for safe revenue service is a serious violation of this Contract. Metro shall assign liquidated damages of up to $3,000 per hour to be compensated by the Contractor for bus-bridging service.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 35 14

SOUTHERN CALIFORNIA
ASSOCIATION of
GOVERNMENTS

Main Office

818 West 7th Street

12th Floor

Los Angeles, California

90017-3435

t (213) 236-1800

f (213) 236-1825

www.scag.ca.gov

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Transportation
Alan Wapner, San Bernardino Associated Governments

January 11, 2016

Mr. Bruno Naulls, Project Manager
City of Lynwood, Community Development Department
11330 Bullis Road
Lynwood, California 90262
Phone: (310) 603-0220
E-mail: bnaulls@lynwood.ca.us

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Lynwood Transit Area Strategic Plan [SCAG NO. IGR8709]

Dear Mr. Naulls,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Lynwood Transit Area Strategic Plan ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Lynwood Transit Area Strategic Plan in Los Angeles County. The proposed project includes a Strategic Plan that facilitates the development of a transit-oriented development district in the City of Lynwood, encompassing approximately 315 acres.

When available, please send environmental documentation to SCAG's *office in Los Angeles or by email to sunl@scag.ca.gov* providing, at a minimum, the full public comment period for review. If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Lijin Sun, Esq., Senior Regional Planner, at (213) 236-1882 or sunl@scag.ca.gov. Thank you.

Sincerely,

Ping Chang

Ping Chang
Program Manager II, Land Use and Environmental Planning

[1] SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

The Regional Council consists of 86 elected officials representing 191 cities, six counties, six County Transportation Commissions, one representative from the Transportation Corridor Agencies, one Tribal Government representative and one representative for the Air Districts within Southern California.

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COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LYNWOOD TRANSIT AREA STRATEGIC PLAN [SCAG NO. IGR8709]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

2012 RTP/SCS GOALS

The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012. The 2012 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see http://rtpscs.scag.ca.gov). The goals included in the 2012 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012 RTP/SCS are the following:

SCAG 2012 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize 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 (non-motorized transportation, such as bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and non-motorized 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*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012 RTP/SCS GOALS		
Goal		Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why; Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why; DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why; Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why; DEIR page number reference*
etc.		etc.

RTP/SCS STRATEGIES

To achieve the goals of the 2012 RTP/SCS, a wide range of strategies are included in SCS Chapter (starting on page 152) of the RTP/SCS focusing on four key areas: 1) Land Use Actions and Strategies; 2) Transportation Network Actions and Strategies; 3) Transportation Demand Management (TDM) Actions and Strategies and; 4) Transportation System Management (TSM) Actions and Strategies. If applicable to the proposed project, please refer to these strategies as guidance for considering the proposed project within the context of regional goals and policies. To access a listing of the strategies, please visit http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf (Tables 4.3 – 4.7, beginning on page 152).

REGIONAL GROWTH FORECASTS

At the time of this letter, the most recently adopted SCAG forecasts, at the jurisdictional level, consists of the 2020 and 2035 RTP/SCS population, household and employment forecasts. To view them, please visit http://scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf. The forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts		Adopted City of Lynwood Forecasts	
	Year 2020	**Year 2035**	**Year 2020**	**Year 2035**
Population	19,663,000	22,091,000	72,300	74,300
Households	6,458,000	7,325,000	15,300	15,700
Employment	8,414,000	9,441,000	13,800	14,500

MITIGATION

SCAG staff recommends that you review the SCAG 2012 RTP/SCS Final Program EIR Mitigation Measures for guidance, as appropriate. See Chapter 6 (beginning on page 143) at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf

As referenced in Chapter 6, a comprehensive list of example mitigation measures that may be considered as appropriate is included in Appendix G: *Examples of Measures that Could Reduce Impacts from Planning, Development and Transportation Projects.* Appendix G can be accessed at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/2012fPEIR_AppendixG_ExampleMeasures.pdf

Appendix B

Air Quality Model Results

Lynwood Transit Area Specific Plan

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Hotel	350.00	Room	11.67	508,200.00	0
Apartments High Rise	3,500.00	Dwelling Unit	56.45	3,500,000.00	10010
Regional Shopping Center	1,200.00	1000sqft	27.55	1,200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Arch Coating adjusted as painting would occur during the end of construction.

Grading - Developable acreage within plan area.

Architectural Coating - Assume compliance with SCAQMD Rule 1113 - low-VOC paint (150 g/L for nonflat coatings)

Vehicle Trips - Trip rate from Translutions, Inc. (April 2016) accounts for trip reduction. Default Sat and Sun trip rates also reduced.

Woodstoves - Compliance with SCAQMD Rule 445

Area Coating - Compliance with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Assumed compliance with SCAQMD Rule 403

Mobile Land Use Mitigation - VMT reducing measures included in trip reduction percent from Translutions, Inc.

Area Mitigation - Compliance with SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstructionPhase	NumDays	220.00	2,083.00
tblConstructionPhase	PhaseEndDate	10/27/2038	12/24/2032
tblConstructionPhase	PhaseEndDate	1/25/2030	11/1/2030
tblConstructionPhase	PhaseEndDate	10/28/2033	9/5/2031
tblConstructionPhase	PhaseStartDate	11/2/2030	1/1/2025
tblConstructionPhase	PhaseStartDate	3/10/2018	12/15/2018
tblConstructionPhase	PhaseStartDate	12/25/2032	11/4/2030
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00

tblFireplaces	NumberGas	2,975.00	0.00
tblFireplaces	NumberNoFireplace	350.00	0.00
tblFireplaces	NumberWood	175.00	0.00
tblGrading	AcresOfGrading	775.00	141.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	ST_TR	7.16	4.08
tblVehicleTrips	ST_TR	1.32	0.75
tblVehicleTrips	ST_TR	8.19	4.67
tblVehicleTrips	ST_TR	49.97	28.48
tblVehicleTrips	SU_TR	6.07	3.46
tblVehicleTrips	SU_TR	0.68	0.39
tblVehicleTrips	SU_TR	5.95	3.39
tblVehicleTrips	SU_TR	25.24	14.39
tblVehicleTrips	WD_TR	6.59	3.73
tblVehicleTrips	WD_TR	6.97	3.97
tblVehicleTrips	WD_TR	8.17	4.66
tblVehicleTrips	WD_TR	42.94	24.34
tblWoodstoves	NumberCatalytic	175.00	0.00
tblWoodstoves	NumberNoncatalytic	175.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.8031	9.0620	6.2409	8.3800e-003	1.0367	0.4315	1.4682	0.5287	0.3970	0.9257	0.0000	771.3204	771.3204	0.2296	0.0000	776.1418
2018	0.2478	2.0452	2.6696	5.3200e-003	1.2467	0.0848	1.3315	0.5850	0.0781	0.6632	0.0000	428.3733	428.3733	0.0578	0.0000	429.5862
2019	2.4880	12.0498	35.1459	0.0877	5.5302	0.3216	5.8518	1.4811	0.2996	1.7806	0.0000	6,485.4826	6,485.4826	0.3066	0.0000	6,491.9219
2020	2.3416	10.7897	33.3988	0.0880	5.5515	0.2902	5.8417	1.4868	0.2702	1.7570	0.0000	6,290.8463	6,290.8463	0.2951	0.0000	6,297.0433
2021	2.2052	9.4513	31.6807	0.0878	5.5303	0.2592	5.7896	1.4811	0.2413	1.7224	0.0000	6,201.2029	6,201.2029	0.2843	0.0000	6,207.1727
2022	2.0868	8.5728	30.0761	0.0874	5.5091	0.2376	5.7468	1.4754	0.2211	1.6966	0.0000	6,109.1331	6,109.1331	0.2745	0.0000	6,114.8982
2023	1.9559	7.3185	28.5950	0.0873	5.5092	0.2221	5.7313	1.4754	0.2066	1.6820	0.0000	6,038.9949	6,038.9949	0.2650	0.0000	6,044.5608
2024	1.8898	7.1388	27.7233	0.0884	5.5515	0.2130	5.7646	1.4868	0.1980	1.6848	0.0000	6,060.6600	6,060.6600	0.2620	0.0000	6,066.1627
2025	5.8927	7.3214	29.9930	0.1010	6.5114	0.2167	6.7280	1.7417	0.2017	1.9434	0.0000	6,784.9861	6,784.9861	0.2910	0.0000	6,791.0971
2026	5.8175	7.1238	28.9872	0.1010	6.5114	0.2131	6.7245	1.7417	0.1984	1.9401	0.0000	6,731.7411	6,731.7411	0.2845	0.0000	6,737.7163
2027	5.7588	7.0187	28.1436	0.1010	6.5114	0.2135	6.7248	1.7417	0.1987	1.9404	0.0000	6,685.5438	6,685.5438	0.2791	0.0000	6,691.4051
2028	5.6816	6.8892	27.2995	0.1006	6.4865	0.2122	6.6987	1.7350	0.1976	1.9326	0.0000	6,620.1076	6,620.1076	0.2732	0.0000	6,625.8442
2029	5.6484	6.8300	26.6525	0.1010	6.5114	0.2132	6.7246	1.7417	0.1985	1.9402	0.0000	6,610.7954	6,610.7954	0.2695	0.0000	6,616.4542
2030	5.3637	5.3430	22.6066	0.0879	5.6249	0.1428	5.7677	1.5043	0.1338	1.6380	0.0000	5,730.3955	5,730.3955	0.1816	0.0000	5,734.2082
2031	4.1535	0.9594	4.0869	0.0156	0.9956	0.0401	1.0357	0.2644	0.0395	0.3039	0.0000	981.2982	981.2982	0.0410	0.0000	982.1588
2032	3.9608	0.3207	2.5506	0.0127	0.9660	0.0110	0.9769	0.2566	0.0104	0.2669	0.0000	745.2969	745.2969	0.0296	0.0000	745.9187
Total	**56.2950**	**108.2342**	**365.8502**	**1.1610**	**75.5838**	**3.3225**	**78.9063**	**20.7273**	**3.0905**	**23.8177**	**0.0000**	**79,276.1778**	**79,276.1778**	**3.6244**	**0.0000**	**79,352.2902**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.8031	9.0620	6.2409	8.3800e-003	0.4822	0.4315	0.9137	0.2421	0.3970	0.6391	0.0000	771.3195	771.3195	0.2296	0.0000	776.1409
2018	0.2478	2.0452	2.6696	5.3200e-003	0.6922	0.0848	0.7770	0.2984	0.0781	0.3765	0.0000	428.3731	428.3731	0.0578	0.0000	429.5860
2019	2.4880	12.0498	35.1459	0.0877	5.5302	0.3216	5.8518	1.4811	0.2996	1.7806	0.0000	6,485.4823	6,485.4823	0.3066	0.0000	6,491.9216
2020	2.3416	10.7897	33.3988	0.0880	5.5515	0.2902	5.8417	1.4868	0.2702	1.7570	0.0000	6,290.8459	6,290.8459	0.2951	0.0000	6,297.0429
2021	2.2052	9.4513	31.6807	0.0878	5.5303	0.2592	5.7896	1.4811	0.2413	1.7224	0.0000	6,201.2025	6,201.2025	0.2843	0.0000	6,207.1724
2022	2.0868	8.5728	30.0761	0.0874	5.5091	0.2376	5.7468	1.4754	0.2211	1.6966	0.0000	6,109.1327	6,109.1327	0.2745	0.0000	6,114.8978
2023	1.9559	7.3185	28.5950	0.0873	5.5092	0.2221	5.7313	1.4754	0.2066	1.6820	0.0000	6,038.9945	6,038.9945	0.2650	0.0000	6,044.5605
2024	1.8898	7.1388	27.7233	0.0884	5.5515	0.2130	5.7646	1.4868	0.1980	1.6848	0.0000	6,060.6596	6,060.6596	0.2620	0.0000	6,066.1623
2025	5.8927	7.3214	29.9930	0.1010	6.5114	0.2167	6.7280	1.7417	0.2017	1.9434	0.0000	6,784.9857	6,784.9857	0.2910	0.0000	6,791.0967
2026	5.8175	7.1238	28.9872	0.1010	6.5114	0.2131	6.7245	1.7417	0.1984	1.9401	0.0000	6,731.7407	6,731.7407	0.2845	0.0000	6,737.7159
2027	5.7588	7.0187	28.1436	0.1010	6.5114	0.2135	6.7248	1.7417	0.1987	1.9404	0.0000	6,685.5434	6,685.5434	0.2791	0.0000	6,691.4047
2028	5.6816	6.8892	27.2994	0.1006	6.4865	0.2122	6.6987	1.7350	0.1976	1.9326	0.0000	6,620.1072	6,620.1072	0.2732	0.0000	6,625.8438
2029	5.6484	6.8300	26.6525	0.1010	6.5114	0.2132	6.7246	1.7417	0.1985	1.9402	0.0000	6,610.7950	6,610.7950	0.2695	0.0000	6,616.4538
2030	5.3637	5.3430	22.6066	0.0879	5.6249	0.1428	5.7677	1.5043	0.1338	1.6380	0.0000	5,730.3951	5,730.3951	0.1816	0.0000	5,734.2078
2031	4.1535	0.9594	4.0869	0.0156	0.9956	0.0401	1.0357	0.2644	0.0395	0.3039	0.0000	981.2979	981.2979	0.0410	0.0000	982.1585
2032	3.9608	0.3207	2.5506	0.0127	0.9660	0.0110	0.9769	0.2566	0.0104	0.2669	0.0000	745.2969	745.2969	0.0296	0.0000	745.9187
Total	**56.2950**	**108.2341**	**365.8502**	**1.1610**	**74.4748**	**3.3225**	**77.7973**	**20.1540**	**3.0905**	**23.2444**	**0.0000**	**79,276.1718**	**79,276.1718**	**3.6244**	**0.0000**	**79,352.2842**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.47**	**0.00**	**1.41**	**2.77**	**0.00**	**2.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	26.5404	0.4152	35.9966	1.9100e-003		0.2003	0.2003		0.2003	0.2003	0.0000	59.0165	59.0165	0.0563	0.0000	60.1982
Energy	0.3429	3.0148	1.8693	0.0187		0.2369	0.2369		0.2369	0.2369	0.0000	15,972.4497	15,972.4497	0.6433	0.1818	16,042.3291
Mobile	15.4391	38.8728	171.5391	0.7207	45.4323	1.0382	46.4705	12.1831	0.9581	13.1412	0.0000	47,010.6891	47,010.6891	1.2628	0.0000	47,037.2080
Waste						0.0000	0.0000		0.0000	0.0000	810.2648	0.0000	810.2648	47.8853	0.0000	1,815.8557
Water						0.0000	0.0000		0.0000	0.0000	158.3865	2,493.6779	2,652.0644	16.3824	0.4078	3,122.5240
Total	**42.3224**	**42.3027**	**209.4050**	**0.7414**	**45.4323**	**1.4754**	**46.9077**	**12.1831**	**1.3952**	**13.5783**	**968.6513**	**65,535.8332**	**66,504.4844**	**66.2301**	**0.5897**	**68,078.1149**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.6859	0.4152	35.9966	1.9100e-003		0.2003	0.2003		0.2003	0.2003	0.0000	59.0165	59.0165	0.0563	0.0000	60.1982
Energy	0.3429	3.0148	1.8693	0.0187		0.2369	0.2369		0.2369	0.2369	0.0000	15,972.4497	15,972.4497	0.6433	0.1818	16,042.3291
Mobile	15.4391	38.8728	171.5391	0.7207	45.4323	1.0382	46.4705	12.1831	0.9581	13.1412	0.0000	47,010.6891	47,010.6891	1.2628	0.0000	47,037.2080
Waste						0.0000	0.0000		0.0000	0.0000	810.2648	0.0000	810.2648	47.8853	0.0000	1,815.8557
Water						0.0000	0.0000		0.0000	0.0000	158.3865	2,493.6779	2,652.0644	16.3795	0.4072	3,122.2713
Total	**41.4678**	**42.3027**	**209.4050**	**0.7414**	**45.4323**	**1.4754**	**46.9077**	**12.1831**	**1.3952**	**13.5783**	**968.6513**	**65,535.8332**	**66,504.4844**	**66.2271**	**0.5891**	**68,077.8622**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.10**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	3/9/2018	5	310	
2	Building Construction	Building Construction	12/15/2018	11/1/2030	5	3100	
3	Architectural Coating	Architectural Coating	1/1/2025	12/24/2032	5	2083	
4	Paving	Paving	11/4/2030	9/5/2031	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 141

Acres of Paving: 0

Residential Indoor: 7,087,500; Residential Outdoor: 2,362,500; Non-Residential Indoor: 3,687,300; Non-Residential Outdoor: 1,229,100 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	3,432.00	777.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	686.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0082	0.0000	1.0082	0.5212	0.0000	0.5212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7929	9.0470	6.0847	8.0200e-003		0.4312	0.4312		0.3967	0.3967	0.0000	744.5610	744.5610	0.2281	0.0000	749.3517
Total	**0.7929**	**9.0470**	**6.0847**	**8.0200e-003**	**1.0082**	**0.4312**	**1.4394**	**0.5212**	**0.3967**	**0.9179**	**0.0000**	**744.5610**	**744.5610**	**0.2281**	**0.0000**	**749.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0102	0.0150	0.1562	3.6000e-004	0.0285	2.6000e-004	0.0288	7.5700e-003	2.4000e-004	7.8100e-003	0.0000	26.7594	26.7594	1.4600e-003	0.0000	26.7900
Total	**0.0102**	**0.0150**	**0.1562**	**3.6000e-004**	**0.0285**	**2.6000e-004**	**0.0288**	**7.5700e-003**	**2.4000e-004**	**7.8100e-003**	**0.0000**	**26.7594**	**26.7594**	**1.4600e-003**	**0.0000**	**26.7900**

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4537	0.0000	0.4537	0.2345	0.0000	0.2345	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7929	9.0470	6.0847	8.0200e-003		0.4312	0.4312		0.3967	0.3967	0.0000	744.5601	744.5601	0.2281	0.0000	749.3509
Total	**0.7929**	**9.0470**	**6.0847**	**8.0200e-003**	**0.4537**	**0.4312**	**0.8849**	**0.2345**	**0.3967**	**0.6313**	**0.0000**	**744.5601**	**744.5601**	**0.2281**	**0.0000**	**749.3509**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0102	0.0150	0.1562	3.6000e-004	0.0285	2.6000e-004	0.0288	7.5700e-003	2.4000e-004	7.8100e-003	0.0000	26.7594	26.7594	1.4600e-003	0.0000	26.7900
Total	**0.0102**	**0.0150**	**0.1562**	**3.6000e-004**	**0.0285**	**2.6000e-004**	**0.0288**	**7.5700e-003**	**2.4000e-004**	**7.8100e-003**	**0.0000**	**26.7594**	**26.7594**	**1.4600e-003**	**0.0000**	**26.7900**

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0082	0.0000	1.0082	0.5212	0.0000	0.5212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1322	1.4883	1.0577	1.5400e-003		0.0697	0.0697		0.0641	0.0641	0.0000	140.9040	140.9040	0.0439	0.0000	141.8252
Total	**0.1322**	**1.4883**	**1.0577**	**1.5400e-003**	**1.0082**	**0.0697**	**1.0779**	**0.5212**	**0.0641**	**0.5853**	**0.0000**	**140.9040**	**140.9040**	**0.0439**	**0.0000**	**141.8252**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7500e-003	2.6200e-003	0.0272	7.0000e-005	5.4800e-003	5.0000e-005	5.5300e-003	1.4600e-003	5.0000e-005	1.5000e-003	0.0000	4.9574	4.9574	2.6000e-004	0.0000	4.9629
Total	**1.7500e-003**	**2.6200e-003**	**0.0272**	**7.0000e-005**	**5.4800e-003**	**5.0000e-005**	**5.5300e-003**	**1.4600e-003**	**5.0000e-005**	**1.5000e-003**	**0.0000**	**4.9574**	**4.9574**	**2.6000e-004**	**0.0000**	**4.9629**

3.2 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4537	0.0000	0.4537	0.2345	0.0000	0.2345	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1322	1.4883	1.0577	1.5400e-003		0.0697	0.0697		0.0641	0.0641	0.0000	140.9039	140.9039	0.0439	0.0000	141.8250
Total	**0.1322**	**1.4883**	**1.0577**	**1.5400e-003**	**0.4537**	**0.0697**	**0.5234**	**0.2345**	**0.0641**	**0.2986**	**0.0000**	**140.9039**	**140.9039**	**0.0439**	**0.0000**	**141.8250**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7500e-003	2.6200e-003	0.0272	7.0000e-005	5.4800e-003	5.0000e-005	5.5300e-003	1.4600e-003	5.0000e-005	1.5000e-003	0.0000	4.9574	4.9574	2.6000e-004	0.0000	4.9629
Total	**1.7500e-003**	**2.6200e-003**	**0.0272**	**7.0000e-005**	**5.4800e-003**	**5.0000e-005**	**5.5300e-003**	**1.4600e-003**	**5.0000e-005**	**1.5000e-003**	**0.0000**	**4.9574**	**4.9574**	**2.6000e-004**	**0.0000**	**4.9629**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1279	0.0964	1.5000e-004		8.2200e-003	8.2200e-003		7.7300e-003	7.7300e-003	0.0000	13.0223	13.0223	3.1900e-003	0.0000	13.0893
Total	**0.0147**	**0.1279**	**0.0964**	**1.5000e-004**		**8.2200e-003**	**8.2200e-003**		**7.7300e-003**	**7.7300e-003**	**0.0000**	**13.0223**	**13.0223**	**3.1900e-003**	**0.0000**	**13.0893**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0329	0.3274	0.4613	9.3000e-004	0.0262	4.9300e-003	0.0312	7.4800e-003	4.5300e-003	0.0120	0.0000	82.3360	82.3360	6.1000e-004	0.0000	82.3488
Worker	0.0662	0.0989	1.0270	2.6300e-003	0.2068	1.8500e-003	0.2087	0.0549	1.7100e-003	0.0567	0.0000	187.1535	187.1535	9.8300e-003	0.0000	187.3600
Total	**0.0992**	**0.4263**	**1.4883**	**3.5600e-003**	**0.2331**	**6.7800e-003**	**0.2398**	**0.0624**	**6.2400e-003**	**0.0687**	**0.0000**	**269.4895**	**269.4895**	**0.0104**	**0.0000**	**269.7088**

3.3 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1279	0.0964	1.5000e-004		8.2200e-003	8.2200e-003		7.7300e-003	7.7300e-003	0.0000	13.0223	13.0223	3.1900e-003	0.0000	13.0892
Total	**0.0147**	**0.1279**	**0.0964**	**1.5000e-004**		**8.2200e-003**	**8.2200e-003**		**7.7300e-003**	**7.7300e-003**	**0.0000**	**13.0223**	**13.0223**	**3.1900e-003**	**0.0000**	**13.0892**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0329	0.3274	0.4613	9.3000e-004	0.0262	4.9300e-003	0.0312	7.4800e-003	4.5300e-003	0.0120	0.0000	82.3360	82.3360	6.1000e-004	0.0000	82.3488
Worker	0.0662	0.0989	1.0270	2.6300e-003	0.2068	1.8500e-003	0.2087	0.0549	1.7100e-003	0.0567	0.0000	187.1535	187.1535	9.8300e-003	0.0000	187.3600
Total	**0.0992**	**0.4263**	**1.4883**	**3.5600e-003**	**0.2331**	**6.7800e-003**	**0.2398**	**0.0624**	**6.2400e-003**	**0.0687**	**0.0000**	**269.4895**	**269.4895**	**0.0104**	**0.0000**	**269.7088**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5302**	**305.5302**	**0.0743**	**0.0000**	**307.0913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.7399	7.1624	10.5842	0.0221	0.6224	0.1111	0.7335	0.1775	0.1022	0.2797	0.0000	1,913.5057	1,913.5057	0.0142	0.0000	1,913.8035
Worker	1.4412	2.1515	22.3275	0.0621	4.9078	0.0428	4.9507	1.3035	0.0397	1.3432	0.0000	4,266.4468	4,266.4468	0.2181	0.0000	4,271.0271
Total	**2.1811**	**9.3138**	**32.9117**	**0.0842**	**5.5302**	**0.1539**	**5.6841**	**1.4811**	**0.1419**	**1.6230**	**0.0000**	**6,179.9524**	**6,179.9524**	**0.2323**	**0.0000**	**6,184.8306**

3.3 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5299**	**305.5299**	**0.0743**	**0.0000**	**307.0909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.7399	7.1624	10.5842	0.0221	0.6224	0.1111	0.7335	0.1775	0.1022	0.2797	0.0000	1,913.5057	1,913.5057	0.0142	0.0000	1,913.8035
Worker	1.4412	2.1515	22.3275	0.0621	4.9078	0.0428	4.9507	1.3035	0.0397	1.3432	0.0000	4,266.4468	4,266.4468	0.2181	0.0000	4,271.0271
Total	**2.1811**	**9.3138**	**32.9117**	**0.0842**	**5.5302**	**0.1539**	**5.6841**	**1.4811**	**0.1419**	**1.6230**	**0.0000**	**6,179.9524**	**6,179.9524**	**0.2323**	**0.0000**	**6,184.8306**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1514	302.1514	0.0736	0.0000	303.6973
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**	**0.0000**	**302.1514**	**302.1514**	**0.0736**	**0.0000**	**303.6973**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.7096	6.2878	10.3356	0.0221	0.6249	0.1019	0.7267	0.1783	0.0937	0.2720	0.0000	1,878.0426	1,878.0426	0.0140	0.0000	1,878.3357
Worker	1.3554	2.0020	20.8613	0.0624	4.9266	0.0426	4.9692	1.3085	0.0395	1.3480	0.0000	4,110.6523	4,110.6523	0.2075	0.0000	4,115.0104
Total	**2.0650**	**8.2898**	**31.1969**	**0.0845**	**5.5515**	**0.1444**	**5.6959**	**1.4868**	**0.1332**	**1.6199**	**0.0000**	**5,988.6949**	**5,988.6949**	**0.2215**	**0.0000**	**5,993.3460**

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1510	302.1510	0.0736	0.0000	303.6969
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**	**0.0000**	**302.1510**	**302.1510**	**0.0736**	**0.0000**	**303.6969**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.7096	6.2878	10.3356	0.0221	0.6249	0.1019	0.7267	0.1783	0.0937	0.2720	0.0000	1,878.0426	1,878.0426	0.0140	0.0000	1,878.3357
Worker	1.3554	2.0020	20.8613	0.0624	4.9266	0.0426	4.9692	1.3085	0.0395	1.3480	0.0000	4,110.6523	4,110.6523	0.2075	0.0000	4,115.0104
Total	**2.0650**	**8.2898**	**31.1969**	**0.0845**	**5.5515**	**0.1444**	**5.6959**	**1.4868**	**0.1332**	**1.6199**	**0.0000**	**5,988.6949**	**5,988.6949**	**0.2215**	**0.0000**	**5,993.3460**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2629	2.1582	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.0339	301.0339	0.0725	0.0000	302.5568
Total	**0.2471**	**2.2629**	**2.1582**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.0339**	**301.0339**	**0.0725**	**0.0000**	**302.5568**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6818	5.3266	10.0251	0.0220	0.6225	0.0924	0.7149	0.1776	0.0850	0.2626	0.0000	1,869.4374	1,869.4374	0.0140	0.0000	1,869.7313
Worker	1.2764	1.8618	19.4975	0.0622	4.9078	0.0423	4.9501	1.3035	0.0392	1.3427	0.0000	4,030.7317	4,030.7317	0.1978	0.0000	4,034.8846
Total	**1.9582**	**7.1884**	**29.5226**	**0.0843**	**5.5303**	**0.1346**	**5.6649**	**1.4811**	**0.1242**	**1.6053**	**0.0000**	**5,900.1690**	**5,900.1690**	**0.2118**	**0.0000**	**5,904.6159**

3.3 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2629	2.1582	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.0335	301.0335	0.0725	0.0000	302.5565
Total	**0.2471**	**2.2629**	**2.1582**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.0335**	**301.0335**	**0.0725**	**0.0000**	**302.5565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6818	5.3266	10.0251	0.0220	0.6225	0.0924	0.7149	0.1776	0.0850	0.2626	0.0000	1,869.4374	1,869.4374	0.0140	0.0000	1,869.7313
Worker	1.2764	1.8618	19.4975	0.0622	4.9078	0.0423	4.9501	1.3035	0.0392	1.3427	0.0000	4,030.7317	4,030.7317	0.1978	0.0000	4,034.8846
Total	**1.9582**	**7.1884**	**29.5226**	**0.0843**	**5.5303**	**0.1346**	**5.6649**	**1.4811**	**0.1242**	**1.6053**	**0.0000**	**5,900.1690**	**5,900.1690**	**0.2118**	**0.0000**	**5,904.6159**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2209	2.0197	2.1226	3.4900e-003		0.1047	0.1047		0.0986	0.0986	0.0000	299.9946	299.9946	0.0718	0.0000	301.5017
Total	**0.2209**	**2.0197**	**2.1226**	**3.4900e-003**		**0.1047**	**0.1047**		**0.0986**	**0.0986**	**0.0000**	**299.9946**	**299.9946**	**0.0718**	**0.0000**	**301.5017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6638	4.8171	9.7280	0.0219	0.6201	0.0910	0.7111	0.1769	0.0837	0.2606	0.0000	1,860.7419	1,860.7419	0.0143	0.0000	1,861.0412
Worker	1.2022	1.7360	18.2255	0.0620	4.8890	0.0419	4.9309	1.2985	0.0389	1.3374	0.0000	3,948.3966	3,948.3966	0.1885	0.0000	3,952.3553
Total	**1.8659**	**6.5531**	**27.9536**	**0.0839**	**5.5091**	**0.1329**	**5.6420**	**1.4754**	**0.1226**	**1.5980**	**0.0000**	**5,809.1385**	**5,809.1385**	**0.2028**	**0.0000**	**5,813.3965**

3.3 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2209	2.0197	2.1226	3.4900e-003		0.1047	0.1047		0.0986	0.0986	0.0000	299.9943	299.9943	0.0718	0.0000	301.5013
Total	**0.2209**	**2.0197**	**2.1226**	**3.4900e-003**		**0.1047**	**0.1047**		**0.0986**	**0.0986**	**0.0000**	**299.9943**	**299.9943**	**0.0718**	**0.0000**	**301.5013**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6638	4.8171	9.7280	0.0219	0.6201	0.0910	0.7111	0.1769	0.0837	0.2606	0.0000	1,860.7419	1,860.7419	0.0143	0.0000	1,861.0412
Worker	1.2022	1.7360	18.2255	0.0620	4.8890	0.0419	4.9309	1.2985	0.0389	1.3374	0.0000	3,948.3966	3,948.3966	0.1885	0.0000	3,952.3553
Total	**1.8659**	**6.5531**	**27.9536**	**0.0839**	**5.5091**	**0.1329**	**5.6420**	**1.4754**	**0.1226**	**1.5980**	**0.0000**	**5,809.1385**	**5,809.1385**	**0.2028**	**0.0000**	**5,813.3965**

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0980	300.0980	0.0713	0.0000	301.5949
Total	**0.2036**	**1.8606**	**2.1072**	**3.4900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**300.0980**	**300.0980**	**0.0713**	**0.0000**	**301.5949**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6159	3.8282	9.3674	0.0218	0.6201	0.0899	0.7100	0.1769	0.0827	0.2596	0.0000	1,851.9555	1,851.9555	0.0128	0.0000	1,852.2246
Worker	1.1363	1.6296	17.1204	0.0620	4.8890	0.0417	4.9307	1.2985	0.0387	1.3372	0.0000	3,886.9414	3,886.9414	0.1810	0.0000	3,890.7413
Total	**1.7523**	**5.4578**	**26.4878**	**0.0838**	**5.5092**	**0.1316**	**5.6407**	**1.4754**	**0.1214**	**1.5968**	**0.0000**	**5,738.8969**	**5,738.8969**	**0.1938**	**0.0000**	**5,742.9659**

3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0976	300.0976	0.0713	0.0000	301.5946
Total	**0.2036**	**1.8606**	**2.1072**	**3.4900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**300.0976**	**300.0976**	**0.0713**	**0.0000**	**301.5946**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6159	3.8282	9.3674	0.0218	0.6201	0.0899	0.7100	0.1769	0.0827	0.2596	0.0000	1,851.9555	1,851.9555	0.0128	0.0000	1,852.2246
Worker	1.1363	1.6296	17.1204	0.0620	4.8890	0.0417	4.9307	1.2985	0.0387	1.3372	0.0000	3,886.9414	3,886.9414	0.1810	0.0000	3,890.7413
Total	**1.7523**	**5.4578**	**26.4878**	**0.0838**	**5.5092**	**0.1316**	**5.6407**	**1.4754**	**0.1214**	**1.5968**	**0.0000**	**5,738.8969**	**5,738.8969**	**0.1938**	**0.0000**	**5,742.9659**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1920	1.7524	2.1135	3.5200e-003		0.0800	0.0800		0.0752	0.0752	0.0000	302.4646	302.4646	0.0714	0.0000	303.9643
Total	**0.1920**	**1.7524**	**2.1135**	**3.5200e-003**		**0.0800**	**0.0800**		**0.0752**	**0.0752**	**0.0000**	**302.4646**	**302.4646**	**0.0714**	**0.0000**	**303.9643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6093	3.8342	9.2322	0.0220	0.6249	0.0906	0.7156	0.1783	0.0834	0.2617	0.0000	1,870.3166	1,870.3166	0.0131	0.0000	1,870.5911
Worker	1.0885	1.5521	16.3776	0.0629	4.9266	0.0424	4.9690	1.3085	0.0393	1.3479	0.0000	3,887.8788	3,887.8788	0.1776	0.0000	3,891.6073
Total	**1.6978**	**5.3863**	**25.6098**	**0.0849**	**5.5515**	**0.1331**	**5.6846**	**1.4868**	**0.1227**	**1.6095**	**0.0000**	**5,758.1954**	**5,758.1954**	**0.1906**	**0.0000**	**5,762.1984**

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1920	1.7524	2.1135	3.5200e-003		0.0800	0.0800		0.0752	0.0752	0.0000	302.4642	302.4642	0.0714	0.0000	303.9639
Total	**0.1920**	**1.7524**	**2.1135**	**3.5200e-003**		**0.0800**	**0.0800**		**0.0752**	**0.0752**	**0.0000**	**302.4642**	**302.4642**	**0.0714**	**0.0000**	**303.9639**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6093	3.8342	9.2322	0.0220	0.6249	0.0906	0.7156	0.1783	0.0834	0.2617	0.0000	1,870.3166	1,870.3166	0.0131	0.0000	1,870.5911
Worker	1.0885	1.5521	16.3776	0.0629	4.9266	0.0424	4.9690	1.3085	0.0393	1.3479	0.0000	3,887.8788	3,887.8788	0.1776	0.0000	3,891.6073
Total	**1.6978**	**5.3863**	**25.6098**	**0.0849**	**5.5515**	**0.1331**	**5.6846**	**1.4868**	**0.1227**	**1.6095**	**0.0000**	**5,758.1954**	**5,758.1954**	**0.1906**	**0.0000**	**5,762.1984**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5968	3.7930	9.0435	0.0220	0.6225	0.0908	0.7133	0.1776	0.0835	0.2611	0.0000	1,863.2716	1,863.2716	0.0131	0.0000	1,863.5461
Worker	1.0329	1.4663	15.5171	0.0626	4.9078	0.0423	4.9501	1.3035	0.0392	1.3427	0.0000	3,822.8651	3,822.8651	0.1712	0.0000	3,826.4595
Total	**1.6297**	**5.2594**	**24.5606**	**0.0846**	**5.5304**	**0.1330**	**5.6634**	**1.4811**	**0.1227**	**1.6038**	**0.0000**	**5,686.1367**	**5,686.1367**	**0.1842**	**0.0000**	**5,690.0056**

3.3 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5968	3.7930	9.0435	0.0220	0.6225	0.0908	0.7133	0.1776	0.0835	0.2611	0.0000	1,863.2716	1,863.2716	0.0131	0.0000	1,863.5461
Worker	1.0329	1.4663	15.5171	0.0626	4.9078	0.0423	4.9501	1.3035	0.0392	1.3427	0.0000	3,822.8651	3,822.8651	0.1712	0.0000	3,826.4595
Total	**1.6297**	**5.2594**	**24.5606**	**0.0846**	**5.5304**	**0.1330**	**5.6634**	**1.4811**	**0.1227**	**1.6038**	**0.0000**	**5,686.1367**	**5,686.1367**	**0.1842**	**0.0000**	**5,690.0056**

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5782	3.6789	8.8757	0.0219	0.6226	0.0870	0.7095	0.1776	0.0800	0.2576	0.0000	1,862.8882	1,862.8882	0.0127	0.0000	1,863.1543
Worker	0.9858	1.3968	14.8187	0.0626	4.9078	0.0424	4.9503	1.3035	0.0394	1.3429	0.0000	3,778.8095	3,778.8095	0.1661	0.0000	3,782.2978
Total	**1.5640**	**5.0757**	**23.6943**	**0.0846**	**5.5304**	**0.1294**	**5.6598**	**1.4811**	**0.1194**	**1.6005**	**0.0000**	**5,641.6977**	**5,641.6977**	**0.1788**	**0.0000**	**5,645.4520**

3.3 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5782	3.6789	8.8757	0.0219	0.6226	0.0870	0.7095	0.1776	0.0800	0.2576	0.0000	1,862.8882	1,862.8882	0.0127	0.0000	1,863.1543
Worker	0.9858	1.3968	14.8187	0.0626	4.9078	0.0424	4.9503	1.3035	0.0394	1.3429	0.0000	3,778.8095	3,778.8095	0.1661	0.0000	3,782.2978
Total	**1.5640**	**5.0757**	**23.6943**	**0.0846**	**5.5304**	**0.1294**	**5.6598**	**1.4811**	**0.1194**	**1.6005**	**0.0000**	**5,641.6977**	**5,641.6977**	**0.1788**	**0.0000**	**5,645.4520**

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5722	3.6490	8.7829	0.0219	0.6226	0.0872	0.7098	0.1776	0.0802	0.2578	0.0000	1,863.0276	1,863.0276	0.0127	0.0000	1,863.2942
Worker	0.9418	1.3341	14.1930	0.0626	4.9078	0.0425	4.9504	1.3035	0.0395	1.3430	0.0000	3,740.1918	3,740.1918	0.1616	0.0000	3,743.5847
Total	**1.5140**	**4.9831**	**22.9758**	**0.0846**	**5.5304**	**0.1297**	**5.6601**	**1.4811**	**0.1197**	**1.6008**	**0.0000**	**5,603.2195**	**5,603.2195**	**0.1743**	**0.0000**	**5,606.8789**

3.3 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5722	3.6490	8.7829	0.0219	0.6226	0.0872	0.7098	0.1776	0.0802	0.2578	0.0000	1,863.0276	1,863.0276	0.0127	0.0000	1,863.2942
Worker	0.9418	1.3341	14.1930	0.0626	4.9078	0.0425	4.9504	1.3035	0.0395	1.3430	0.0000	3,740.1918	3,740.1918	0.1616	0.0000	3,743.5847
Total	**1.5140**	**4.9831**	**22.9758**	**0.0846**	**5.5304**	**0.1297**	**5.6601**	**1.4811**	**0.1197**	**1.6008**	**0.0000**	**5,603.2195**	**5,603.2195**	**0.1743**	**0.0000**	**5,606.8789**

3.3 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1770	1.6133	2.0867	3.4900e-003		0.0683	0.0683		0.0642	0.0642	0.0000	300.2471	300.2471	0.0705	0.0000	301.7269
Total	**0.1770**	**1.6133**	**2.0867**	**3.4900e-003**		**0.0683**	**0.0683**		**0.0642**	**0.0642**	**0.0000**	**300.2471**	**300.2471**	**0.0705**	**0.0000**	**301.7269**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5627	3.5999	8.6640	0.0219	0.6202	0.0863	0.7065	0.1769	0.0794	0.2563	0.0000	1,855.9146	1,855.9146	0.0126	0.0000	1,856.1789
Worker	0.8984	1.2727	13.5960	0.0624	4.8890	0.0425	4.9315	1.2985	0.0394	1.3379	0.0000	3,692.6533	3,692.6533	0.1569	0.0000	3,695.9490
Total	**1.4610**	**4.8726**	**22.2599**	**0.0842**	**5.5092**	**0.1288**	**5.6380**	**1.4755**	**0.1188**	**1.5942**	**0.0000**	**5,548.5679**	**5,548.5679**	**0.1695**	**0.0000**	**5,552.1279**

3.3 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1770	1.6133	2.0867	3.4900e-003		0.0683	0.0683		0.0642	0.0642	0.0000	300.2467	300.2467	0.0705	0.0000	301.7266
Total	**0.1770**	**1.6133**	**2.0867**	**3.4900e-003**		**0.0683**	**0.0683**		**0.0642**	**0.0642**	**0.0000**	**300.2467**	**300.2467**	**0.0705**	**0.0000**	**301.7266**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5627	3.5999	8.6640	0.0219	0.6202	0.0863	0.7065	0.1769	0.0794	0.2563	0.0000	1,855.9146	1,855.9146	0.0126	0.0000	1,856.1789
Worker	0.8984	1.2727	13.5960	0.0624	4.8890	0.0425	4.9315	1.2985	0.0394	1.3379	0.0000	3,692.6533	3,692.6533	0.1569	0.0000	3,695.9490
Total	**1.4610**	**4.8726**	**22.2599**	**0.0842**	**5.5092**	**0.1288**	**5.6380**	**1.4755**	**0.1188**	**1.5942**	**0.0000**	**5,548.5679**	**5,548.5679**	**0.1695**	**0.0000**	**5,552.1279**

3.3 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5584	3.5958	8.5996	0.0219	0.6226	0.0867	0.7094	0.1776	0.0798	0.2574	0.0000	1,863.1202	1,863.1202	0.0127	0.0000	1,863.3859
Worker	0.8614	1.2212	13.1031	0.0626	4.9078	0.0427	4.9505	1.3035	0.0396	1.3431	0.0000	3,677.8183	3,677.8183	0.1536	0.0000	3,681.0432
Total	**1.4197**	**4.8170**	**21.7026**	**0.0846**	**5.5304**	**0.1294**	**5.6598**	**1.4811**	**0.1194**	**1.6005**	**0.0000**	**5,540.9385**	**5,540.9385**	**0.1662**	**0.0000**	**5,544.4291**

3.3 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5584	3.5958	8.5996	0.0219	0.6226	0.0867	0.7094	0.1776	0.0798	0.2574	0.0000	1,863.1202	1,863.1202	0.0127	0.0000	1,863.3859
Worker	0.8614	1.2212	13.1031	0.0626	4.9078	0.0427	4.9505	1.3035	0.0396	1.3431	0.0000	3,677.8183	3,677.8183	0.1536	0.0000	3,681.0432
Total	**1.4197**	**4.8170**	**21.7026**	**0.0846**	**5.5304**	**0.1294**	**5.6598**	**1.4811**	**0.1194**	**1.6005**	**0.0000**	**5,540.9385**	**5,540.9385**	**0.1662**	**0.0000**	**5,544.4291**

3.3 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1428	0.8670	1.7664	3.3800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	286.5696	286.5696	0.0115	0.0000	286.8111
Total	**0.1428**	**0.8670**	**1.7664**	**3.3800e-003**		**0.0162**	**0.0162**		**0.0162**	**0.0162**	**0.0000**	**286.5696**	**286.5696**	**0.0115**	**0.0000**	**286.8111**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4635	3.0040	7.1625	0.0184	0.5224	0.0729	0.5953	0.1490	0.0671	0.2161	0.0000	1,563.3248	1,563.3248	0.0106	0.0000	1,563.5480
Worker	0.6903	0.9795	10.5864	0.0526	4.1181	0.0358	4.1538	1.0938	0.0332	1.1269	0.0000	3,064.9550	3,064.9550	0.1257	0.0000	3,067.5947
Total	**1.1538**	**3.9835**	**17.7489**	**0.0710**	**4.6405**	**0.1087**	**4.7491**	**1.2428**	**0.1002**	**1.3430**	**0.0000**	**4,628.2797**	**4,628.2797**	**0.1363**	**0.0000**	**4,631.1427**

3.3 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1428	0.8670	1.7664	3.3800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	286.5692	286.5692	0.0115	0.0000	286.8108
Total	**0.1428**	**0.8670**	**1.7664**	**3.3800e-003**		**0.0162**	**0.0162**		**0.0162**	**0.0162**	**0.0000**	**286.5692**	**286.5692**	**0.0115**	**0.0000**	**286.8108**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4635	3.0040	7.1625	0.0184	0.5224	0.0729	0.5953	0.1490	0.0671	0.2161	0.0000	1,563.3248	1,563.3248	0.0106	0.0000	1,563.5480
Worker	0.6903	0.9795	10.5864	0.0526	4.1181	0.0358	4.1538	1.0938	0.0332	1.1269	0.0000	3,064.9550	3,064.9550	0.1257	0.0000	3,067.5947
Total	**1.1538**	**3.9835**	**17.7489**	**0.0710**	**4.6405**	**0.1087**	**4.7491**	**1.2428**	**0.1002**	**1.3430**	**0.0000**	**4,628.2797**	**4,628.2797**	**0.1363**	**0.0000**	**4,631.1427**

3.4 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2065	0.2931	3.1016	0.0125	0.9810	8.4500e-003	0.9894	0.2606	7.8400e-003	0.2684	0.0000	764.1275	764.1275	0.0342	0.0000	764.8459
Total	**0.2065**	**0.2931**	**3.1016**	**0.0125**	**0.9810**	**8.4500e-003**	**0.9894**	**0.2606**	**7.8400e-003**	**0.2684**	**0.0000**	**764.1275**	**764.1275**	**0.0342**	**0.0000**	**764.8459**

3.4 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2065	0.2931	3.1016	0.0125	0.9810	8.4500e-003	0.9894	0.2606	7.8400e-003	0.2684	0.0000	764.1275	764.1275	0.0342	0.0000	764.8459
Total	**0.2065**	**0.2931**	**3.1016**	**0.0125**	**0.9810**	**8.4500e-003**	**0.9894**	**0.2606**	**7.8400e-003**	**0.2684**	**0.0000**	**764.1275**	**764.1275**	**0.0342**	**0.0000**	**764.8459**

3.4 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1971	0.2792	2.9620	0.0125	0.9810	8.4800e-003	0.9895	0.2606	7.8700e-003	0.2684	0.0000	755.3215	755.3215	0.0332	0.0000	756.0187
Total	**0.1971**	**0.2792**	**2.9620**	**0.0125**	**0.9810**	**8.4800e-003**	**0.9895**	**0.2606**	**7.8700e-003**	**0.2684**	**0.0000**	**755.3215**	**755.3215**	**0.0332**	**0.0000**	**756.0187**

3.4 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1971	0.2792	2.9620	0.0125	0.9810	8.4800e-003	0.9895	0.2606	7.8700e-003	0.2684	0.0000	755.3215	755.3215	0.0332	0.0000	756.0187
Total	**0.1971**	**0.2792**	**2.9620**	**0.0125**	**0.9810**	**8.4800e-003**	**0.9895**	**0.2606**	**7.8700e-003**	**0.2684**	**0.0000**	**755.3215**	**755.3215**	**0.0332**	**0.0000**	**756.0187**

3.4 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1882	0.2667	2.8369	0.0125	0.9810	8.5000e-003	0.9895	0.2606	7.8900e-003	0.2684	0.0000	747.6025	747.6025	0.0323	0.0000	748.2806
Total	**0.1882**	**0.2667**	**2.8369**	**0.0125**	**0.9810**	**8.5000e-003**	**0.9895**	**0.2606**	**7.8900e-003**	**0.2684**	**0.0000**	**747.6025**	**747.6025**	**0.0323**	**0.0000**	**748.2806**

3.4 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1882	0.2667	2.8369	0.0125	0.9810	8.5000e-003	0.9895	0.2606	7.8900e-003	0.2684	0.0000	747.6025	747.6025	0.0323	0.0000	748.2806
Total	**0.1882**	**0.2667**	**2.8369**	**0.0125**	**0.9810**	**8.5000e-003**	**0.9895**	**0.2606**	**7.8900e-003**	**0.2684**	**0.0000**	**747.6025**	**747.6025**	**0.0323**	**0.0000**	**748.2806**

3.4 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.1489	0.2352	3.9000e-004		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003	0.0000	33.1923	33.1923	1.8100e-003	0.0000	33.2303
Total	**3.8640**	**0.1489**	**0.2352**	**3.9000e-004**		**6.7000e-003**	**6.7000e-003**		**6.7000e-003**	**6.7000e-003**	**0.0000**	**33.1923**	**33.1923**	**1.8100e-003**	**0.0000**	**33.2303**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1796	0.2544	2.7176	0.0125	0.9772	8.4900e-003	0.9857	0.2596	7.8800e-003	0.2674	0.0000	738.1003	738.1003	0.0314	0.0000	738.7590
Total	**0.1796**	**0.2544**	**2.7176**	**0.0125**	**0.9772**	**8.4900e-003**	**0.9857**	**0.2596**	**7.8800e-003**	**0.2674**	**0.0000**	**738.1003**	**738.1003**	**0.0314**	**0.0000**	**738.7590**

3.4 Architectural Coating - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.1489	0.2352	3.9000e-004		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003	0.0000	33.1923	33.1923	1.8100e-003	0.0000	33.2303
Total	**3.8640**	**0.1489**	**0.2352**	**3.9000e-004**		**6.7000e-003**	**6.7000e-003**		**6.7000e-003**	**6.7000e-003**	**0.0000**	**33.1923**	**33.1923**	**1.8100e-003**	**0.0000**	**33.2303**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1796	0.2544	2.7176	0.0125	0.9772	8.4900e-003	0.9857	0.2596	7.8800e-003	0.2674	0.0000	738.1003	738.1003	0.0314	0.0000	738.7590
Total	**0.1796**	**0.2544**	**2.7176**	**0.0125**	**0.9772**	**8.4900e-003**	**0.9857**	**0.2596**	**7.8800e-003**	**0.2674**	**0.0000**	**738.1003**	**738.1003**	**0.0314**	**0.0000**	**738.7590**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1722	0.2441	2.6191	0.0125	0.9810	8.5300e-003	0.9895	0.2606	7.9100e-003	0.2685	0.0000	735.1350	735.1350	0.0307	0.0000	735.7796
Total	**0.1722**	**0.2441**	**2.6191**	**0.0125**	**0.9810**	**8.5300e-003**	**0.9895**	**0.2606**	**7.9100e-003**	**0.2685**	**0.0000**	**735.1350**	**735.1350**	**0.0307**	**0.0000**	**735.7796**

3.4 Architectural Coating - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3581
Total	**3.8788**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1722	0.2441	2.6191	0.0125	0.9810	8.5300e-003	0.9895	0.2606	7.9100e-003	0.2685	0.0000	735.1350	735.1350	0.0307	0.0000	735.7796
Total	**0.1722**	**0.2441**	**2.6191**	**0.0125**	**0.9810**	**8.5300e-003**	**0.9895**	**0.2606**	**7.9100e-003**	**0.2685**	**0.0000**	**735.1350**	**735.1350**	**0.0307**	**0.0000**	**735.7796**

3.4 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3200	33.3200	1.3500e-003	0.0000	33.3483
Total	**3.8736**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3200**	**33.3200**	**1.3500e-003**	**0.0000**	**33.3483**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1644	0.2333	2.5219	0.0125	0.9810	8.5200e-003	0.9895	0.2606	7.9000e-003	0.2685	0.0000	730.1252	730.1252	0.0299	0.0000	730.7540
Total	**0.1644**	**0.2333**	**2.5219**	**0.0125**	**0.9810**	**8.5200e-003**	**0.9895**	**0.2606**	**7.9000e-003**	**0.2685**	**0.0000**	**730.1252**	**730.1252**	**0.0299**	**0.0000**	**730.7540**

3.4 Architectural Coating - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3199	33.3199	1.3500e-003	0.0000	33.3482
Total	**3.8736**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3199**	**33.3199**	**1.3500e-003**	**0.0000**	**33.3482**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1644	0.2333	2.5219	0.0125	0.9810	8.5200e-003	0.9895	0.2606	7.9000e-003	0.2685	0.0000	730.1252	730.1252	0.0299	0.0000	730.7540
Total	**0.1644**	**0.2333**	**2.5219**	**0.0125**	**0.9810**	**8.5200e-003**	**0.9895**	**0.2606**	**7.9000e-003**	**0.2685**	**0.0000**	**730.1252**	**730.1252**	**0.0299**	**0.0000**	**730.7540**

3.4 Architectural Coating - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3200	33.3200	1.3500e-003	0.0000	33.3483
Total	**3.8736**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3200**	**33.3200**	**1.3500e-003**	**0.0000**	**33.3483**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1569	0.2231	2.4348	0.0125	0.9810	8.5200e-003	0.9895	0.2606	7.9100e-003	0.2685	0.0000	727.2123	727.2123	0.0294	0.0000	727.8287
Total	**0.1569**	**0.2231**	**2.4348**	**0.0125**	**0.9810**	**8.5200e-003**	**0.9895**	**0.2606**	**7.9100e-003**	**0.2685**	**0.0000**	**727.2123**	**727.2123**	**0.0294**	**0.0000**	**727.8287**

3.4 Architectural Coating - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.8565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3199	33.3199	1.3500e-003	0.0000	33.3482
Total	**3.8736**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3199**	**33.3199**	**1.3500e-003**	**0.0000**	**33.3482**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1569	0.2231	2.4348	0.0125	0.9810	8.5200e-003	0.9895	0.2606	7.9100e-003	0.2685	0.0000	727.2123	727.2123	0.0294	0.0000	727.8287
Total	**0.1569**	**0.2231**	**2.4348**	**0.0125**	**0.9810**	**8.5200e-003**	**0.9895**	**0.2606**	**7.9100e-003**	**0.2685**	**0.0000**	**727.2123**	**727.2123**	**0.0294**	**0.0000**	**727.8287**

3.4 Architectural Coating - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7974					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1100	0.2310	3.8000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	32.8093	32.8093	1.3300e-003	0.0000	32.8372
Total	**3.8142**	**0.1100**	**0.2310**	**3.8000e-004**		**2.6100e-003**	**2.6100e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**32.8093**	**32.8093**	**1.3300e-003**	**0.0000**	**32.8372**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1466	0.2107	2.3196	0.0124	0.9660	8.3600e-003	0.9743	0.2566	7.7600e-003	0.2643	0.0000	712.4876	712.4876	0.0283	0.0000	713.0815
Total	**0.1466**	**0.2107**	**2.3196**	**0.0124**	**0.9660**	**8.3600e-003**	**0.9743**	**0.2566**	**7.7600e-003**	**0.2643**	**0.0000**	**712.4876**	**712.4876**	**0.0283**	**0.0000**	**713.0815**

3.4 Architectural Coating - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7974					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1100	0.2310	3.8000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	32.8093	32.8093	1.3300e-003	0.0000	32.8372
Total	**3.8142**	**0.1100**	**0.2310**	**3.8000e-004**		**2.6100e-003**	**2.6100e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**32.8093**	**32.8093**	**1.3300e-003**	**0.0000**	**32.8372**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1466	0.2107	2.3196	0.0124	0.9660	8.3600e-003	0.9743	0.2566	7.7600e-003	0.2643	0.0000	712.4876	712.4876	0.0283	0.0000	713.0815
Total	**0.1466**	**0.2107**	**2.3196**	**0.0124**	**0.9660**	**8.3600e-003**	**0.9743**	**0.2566**	**7.7600e-003**	**0.2643**	**0.0000**	**712.4876**	**712.4876**	**0.0283**	**0.0000**	**713.0815**

3.5 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0285	0.1466	0.3259	5.8000e-004		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003	0.0000	49.5320	49.5320	2.3200e-003	0.0000	49.5808
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0285**	**0.1466**	**0.3259**	**5.8000e-004**		**6.7900e-003**	**6.7900e-003**		**6.7900e-003**	**6.7900e-003**	**0.0000**	**49.5320**	**49.5320**	**2.3200e-003**	**0.0000**	**49.5808**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	8.2000e-004	8.8700e-003	4.0000e-005	3.4500e-003	3.0000e-005	3.4800e-003	9.2000e-004	3.0000e-005	9.4000e-004	0.0000	2.5691	2.5691	1.1000e-004	0.0000	2.5713
Total	**5.8000e-004**	**8.2000e-004**	**8.8700e-003**	**4.0000e-005**	**3.4500e-003**	**3.0000e-005**	**3.4800e-003**	**9.2000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**2.5691**	**2.5691**	**1.1000e-004**	**0.0000**	**2.5713**

3.5 Paving - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0285	0.1466	0.3259	5.8000e-004		6.7900e-003	6.7900e-003		6.7900e-003	6.7900e-003	0.0000	49.5320	49.5320	2.3200e-003	0.0000	49.5807
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0285**	**0.1466**	**0.3259**	**5.8000e-004**		**6.7900e-003**	**6.7900e-003**		**6.7900e-003**	**6.7900e-003**	**0.0000**	**49.5320**	**49.5320**	**2.3200e-003**	**0.0000**	**49.5807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	8.2000e-004	8.8700e-003	4.0000e-005	3.4500e-003	3.0000e-005	3.4800e-003	9.2000e-004	3.0000e-005	9.4000e-004	0.0000	2.5691	2.5691	1.1000e-004	0.0000	2.5713
Total	**5.8000e-004**	**8.2000e-004**	**8.8700e-003**	**4.0000e-005**	**3.4500e-003**	**3.0000e-005**	**3.4800e-003**	**9.2000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**2.5691**	**2.5691**	**1.1000e-004**	**0.0000**	**2.5713**

3.5 Paving - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1206	0.6212	1.3812	2.4400e-003		0.0288	0.0288		0.0288	0.0288	0.0000	209.9215	209.9215	9.8400e-003	0.0000	210.1281
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1206**	**0.6212**	**1.3812**	**2.4400e-003**		**0.0288**	**0.0288**		**0.0288**	**0.0288**	**0.0000**	**209.9215**	**209.9215**	**9.8400e-003**	**0.0000**	**210.1281**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3400e-003	3.3300e-003	0.0363	1.9000e-004	0.0146	1.3000e-004	0.0148	3.8900e-003	1.2000e-004	4.0000e-003	0.0000	10.8445	10.8445	4.4000e-004	0.0000	10.8537
Total	**2.3400e-003**	**3.3300e-003**	**0.0363**	**1.9000e-004**	**0.0146**	**1.3000e-004**	**0.0148**	**3.8900e-003**	**1.2000e-004**	**4.0000e-003**	**0.0000**	**10.8445**	**10.8445**	**4.4000e-004**	**0.0000**	**10.8537**

3.5 Paving - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1206	0.6212	1.3812	2.4400e-003		0.0288	0.0288		0.0288	0.0288	0.0000	209.9212	209.9212	9.8400e-003	0.0000	210.1279
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1206**	**0.6212**	**1.3812**	**2.4400e-003**		**0.0288**	**0.0288**		**0.0288**	**0.0288**	**0.0000**	**209.9212**	**209.9212**	**9.8400e-003**	**0.0000**	**210.1279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3400e-003	3.3300e-003	0.0363	1.9000e-004	0.0146	1.3000e-004	0.0148	3.8900e-003	1.2000e-004	4.0000e-003	0.0000	10.8445	10.8445	4.4000e-004	0.0000	10.8537
Total	**2.3400e-003**	**3.3300e-003**	**0.0363**	**1.9000e-004**	**0.0146**	**1.3000e-004**	**0.0148**	**3.8900e-003**	**1.2000e-004**	**4.0000e-003**	**0.0000**	**10.8445**	**10.8445**	**4.4000e-004**	**0.0000**	**10.8537**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.4391	38.8728	171.5391	0.7207	45.4323	1.0382	46.4705	12.1831	0.9581	13.1412	0.0000	47,010.6891	47,010.6891	1.2628	0.0000	47,037.2080
Unmitigated	15.4391	38.8728	171.5391	0.7207	45.4323	1.0382	46.4705	12.1831	0.9581	13.1412	0.0000	47,010.6891	47,010.6891	1.2628	0.0000	47,037.2080

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	13,055.00	14,280.00	12110.00	44,747,604	44,747,604
General Light Industry	2,977.50	562.50	292.50	9,958,880	9,958,880
Hotel	1,631.00	1,634.50	1186.50	3,741,516	3,741,516
Regional Shopping Center	29,208.00	34,176.00	17268.00	61,018,154	61,018,154
Total	46,871.50	50,653.00	30,857.00	119,466,154	119,466,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491908	0.059855	0.185077	0.131229	0.044940	0.007356	0.019164	0.046757	0.003019	0.003347	0.004084	0.000506	0.002760

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12,579.3413	12,579.3413	0.5782	0.1196	12,628.5708
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12,579.3413	12,579.3413	0.5782	0.1196	12,628.5708
NaturalGas Mitigated	0.3429	3.0148	1.8693	0.0187		0.2369	0.2369		0.2369	0.2369	0.0000	3,393.1083	3,393.1083	0.0650	0.0622	3,413.7582
NaturalGas Unmitigated	0.3429	3.0148	1.8693	0.0187		0.2369	0.2369		0.2369	0.2369	0.0000	3,393.1083	3,393.1083	0.0650	0.0622	3,413.7582

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.41075e+007	0.0761	0.6915	0.5809	4.1500e-003		0.0526	0.0526		0.0526	0.0526	0.0000	752.8299	752.8299	0.0144	0.0138	757.4115
Hotel	1.27152e+007	0.0686	0.6233	0.5236	3.7400e-003		0.0474	0.0474		0.0474	0.0474	0.0000	678.5296	678.5296	0.0130	0.0124	682.6590
Regional Shopping Center	2.04e+006	0.0110	0.1000	0.0840	6.0000e-004		7.6000e-003	7.6000e-003		7.6000e-003	7.6000e-003	0.0000	108.8622	108.8622	2.0900e-003	2.0000e-003	109.5247
Apartments High Rise	3.47218e+007	0.1872	1.5999	0.6808	0.0102		0.1294	0.1294		0.1294	0.1294	0.0000	1,852.8867	1,852.8867	0.0355	0.0340	1,864.1630
Total		**0.3429**	**3.0148**	**1.8693**	**0.0187**		**0.2369**	**0.2369**		**0.2369**	**0.2369**	**0.0000**	**3,393.1083**	**3,393.1083**	**0.0650**	**0.0622**	**3,413.7582**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.41075e+007	0.0761	0.6915	0.5809	4.1500e-003		0.0526	0.0526		0.0526	0.0526	0.0000	752.8299	752.8299	0.0144	0.0138	757.4115
Hotel	1.27152e+007	0.0686	0.6233	0.5236	3.7400e-003		0.0474	0.0474		0.0474	0.0474	0.0000	678.5296	678.5296	0.0130	0.0124	682.6590
Regional Shopping Center	2.04e+006	0.0110	0.1000	0.0840	6.0000e-004		7.6000e-003	7.6000e-003		7.6000e-003	7.6000e-003	0.0000	108.8622	108.8622	2.0900e-003	2.0000e-003	109.5247
Apartments High Rise	3.47218e+007	0.1872	1.5999	0.6808	0.0102		0.1294	0.1294		0.1294	0.1294	0.0000	1,852.8867	1,852.8867	0.0355	0.0340	1,864.1630
Total		**0.3429**	**3.0148**	**1.8693**	**0.0187**		**0.2369**	**0.2369**		**0.2369**	**0.2369**	**0.0000**	**3,393.1083**	**3,393.1083**	**0.0650**	**0.0622**	**3,413.7582**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.23969e+007	3,547.5709	0.1631	0.0337	3,561.4544
General Light Industry	9.0375e+006	2,586.2333	0.1189	0.0246	2,596.3545
Hotel	4.3197e+006	1,236.1551	0.0568	0.0118	1,240.9928
Regional Shopping Center	1.8204e+007	5,209.3821	0.2395	0.0495	5,229.7691
Total		**12,579.3413**	**0.5782**	**0.1196**	**12,628.5708**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.23969e+007	3,547.5709	0.1631	0.0337	3,561.4544
General Light Industry	9.0375e+006	2,586.2333	0.1189	0.0246	2,596.3545
Hotel	4.3197e+006	1,236.1551	0.0568	0.0118	1,240.9928
Regional Shopping Center	1.8204e+007	5,209.3821	0.2395	0.0495	5,229.7691
Total		**12,579.3413**	**0.5782**	**0.1196**	**12,628.5708**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.6859	0.4152	35.9966	1.9100e-003		0.2003	0.2003		0.2003	0.2003	0.0000	59.0165	59.0165	0.0563	0.0000	60.1982
Unmitigated	26.5404	0.4152	35.9966	1.9100e-003		0.2003	0.2003		0.2003	0.2003	0.0000	59.0165	59.0165	0.0563	0.0000	60.1982

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.9324					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.5300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0781	0.4152	35.9966	1.9100e-003		0.2003	0.2003		0.2003	0.2003	0.0000	59.0165	59.0165	0.0563	0.0000	60.1982
Total	**26.5404**	**0.4152**	**35.9966**	**1.9100e-003**		**0.2003**	**0.2003**		**0.2003**	**0.2003**	**0.0000**	**59.0165**	**59.0165**	**0.0563**	**0.0000**	**60.1982**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.0778					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.5300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0781	0.4152	35.9966	1.9100e-003		0.2003	0.2003		0.2003	0.2003	0.0000	59.0165	59.0165	0.0563	0.0000	60.1982
Total	**25.6859**	**0.4152**	**35.9966**	**1.9100e-003**		**0.2003**	**0.2003**		**0.2003**	**0.2003**	**0.0000**	**59.0165**	**59.0165**	**0.0563**	**0.0000**	**60.1982**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,652.0644	16.3795	0.4072	3,122.2713
Unmitigated	2,652.0644	16.3824	0.4078	3,122.5240

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	228.039 / 143.764	1,379.1310	7.4907	0.1879	1,594.6796
General Light Industry	173.438 / 0	701.2829	5.6812	0.1396	863.8602
Hotel	8.87837 / 0.986486	39.0354	0.2910	7.1800e-003	47.3701
Regional Shopping Center	88.887 / 54.4791	532.6150	2.9196	0.0732	616.6141
Total		**2,652.0644**	**16.3824**	**0.4078**	**3,122.5240**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	228.039 / 143.764	1,379.1310	7.4894	0.1876	1,594.5642
General Light Industry	173.438 / 0	701.2829	5.6801	0.1394	863.7724
Hotel	8.87837 / 0.986486	39.0354	0.2909	7.1600e-003	47.3657
Regional Shopping Center	88.887 / 54.4791	532.6150	2.9190	0.0731	616.5691
Total		**2,652.0644**	**16.3795**	**0.4072**	**3,122.2713**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	810.2648	47.8853	0.0000	1,815.8557
Unmitigated	810.2648	47.8853	0.0000	1,815.8557

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	1610	326.8155	19.3142	0.0000	732.4145
General Light Industry	930	188.7816	11.1567	0.0000	423.0717
Hotel	191.63	38.8992	2.2989	0.0000	87.1755
Regional Shopping Center	1260	255.7686	15.1155	0.0000	573.1940
Total		**810.2648**	**47.8853**	**0.0000**	**1,815.8557**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	1610	326.8155	19.3142	0.0000	732.4145
General Light Industry	930	188.7816	11.1567	0.0000	423.0717
Hotel	191.63	38.8992	2.2989	0.0000	87.1755
Regional Shopping Center	1260	255.7686	15.1155	0.0000	573.1940
Total		**810.2648**	**47.8853**	**0.0000**	**1,815.8557**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Greenhouse Gas Emission Worksheet

N20 Mobile Emissions Lynwood Transit Area Specific Plan

From URBEMIS 2007 Vehicle Fleet Mix Output:

Annual VMT: 119,466,154

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	46.0%	0.04	0.0184	0.04	0.0184
Light Truck < 3750 lbs	10.3%	0.05	0.00515	0.06	0.00618
Light Truck 3751-5750 lbs	23.2%	0.05	0.0116	0.06	0.01392
Med Truck 5751-8500 lbs	12.2%	0.12	0.01464	0.2	0.0244
Lite-Heavy Truck 8501-10,000 lbs	2.1%	0.12	0.00252	0.2	0.0042
Lite-Heavy Truck 10,001-14,000 lbs	0.5%	0.09	0.00045	0.125	0.000625
Med-Heavy Truck 14,001-33,000 lbs	1.0%	0.06	0.0006	0.05	0.0005
Heavy-Heavy Truck 33,001-60,000 lbs	2.9%	0.06	0.00174	0.05	0.00145
Other Bus	0.1%	0.06	0.00006	0.05	0.00005
Urban Bus	0.1%	0.06	0.00006	0.05	0.00005
Motorcycle	1.1%	0.09	0.00099	0.01	0.00011
School Bus	0.1%	0.06	0.00006	0.05	0.00005
Motor Home	0.4%	0.09	0.00036	0.125	0.0005
Total	**100.0%**		**0.05663**		**0.070435**

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21	GWP
N2O	310	GWP
1 ton (short, US) =	0.90718474	metric ton

Annual Mobile Emissions:

	Total Emissions		Total CO2e units	
N20 Emissions:	8.4146	metric tons N2O	**2,608.53**	metric tons CO2e
		Project Total:	***2,608.53***	***metric tons CO2e***

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.
** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
*** From URBEMIS 2007 results for mobile sources

Lynwood Transit Area Specific Plan

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Hotel	350.00	Room	11.67	508,200.00	0
Apartments High Rise	3,500.00	Dwelling Unit	56.45	3,500,000.00	10010
Regional Shopping Center	1,200.00	1000sqft	27.55	1,200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Arch Coating adjusted as painting would occur during the end of construction.

Grading - Developable acreage within plan area.

Architectural Coating - Assume compliance with SCAQMD Rule 1113 - low-VOC paint (150 g/L for nonflat coatings)

Vehicle Trips - Trip rate from Translutions, Inc. (April 2016) accounts for trip reduction. Default Sat and Sun trip rates also reduced.

Woodstoves - Compliance with SCAQMD Rule 445

Area Coating - Compliance with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Assumed compliance with SCAQMD Rule 403

Mobile Land Use Mitigation - VMT reducing measures included in trip reduction percent from Translutions, Inc.

Area Mitigation - Compliance with SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstructionPhase	NumDays	220.00	2,083.00
tblConstructionPhase	PhaseEndDate	10/27/2038	12/24/2032
tblConstructionPhase	PhaseEndDate	1/25/2030	11/1/2030
tblConstructionPhase	PhaseEndDate	10/28/2033	9/5/2031
tblConstructionPhase	PhaseStartDate	11/2/2030	1/1/2025
tblConstructionPhase	PhaseStartDate	3/10/2018	12/15/2018
tblConstructionPhase	PhaseStartDate	12/25/2032	11/4/2030
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00

tblFireplaces	NumberGas	2,975.00	0.00
tblFireplaces	NumberNoFireplace	350.00	0.00
tblFireplaces	NumberWood	175.00	0.00
tblGrading	AcresOfGrading	775.00	141.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	ST_TR	7.16	4.08
tblVehicleTrips	ST_TR	1.32	0.75
tblVehicleTrips	ST_TR	8.19	4.67
tblVehicleTrips	ST_TR	49.97	28.48
tblVehicleTrips	SU_TR	6.07	3.46
tblVehicleTrips	SU_TR	0.68	0.39
tblVehicleTrips	SU_TR	5.95	3.39
tblVehicleTrips	SU_TR	25.24	14.39
tblVehicleTrips	WD_TR	6.59	3.73
tblVehicleTrips	WD_TR	6.97	3.97
tblVehicleTrips	WD_TR	8.17	4.66
tblVehicleTrips	WD_TR	42.94	24.34
tblWoodstoves	NumberCatalytic	175.00	0.00
tblWoodstoves	NumberNoncatalytic	175.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1792	69.6934	48.0621	0.0646	6.7280	3.3192	10.0472	3.4216	3.0537	6.4753	0.0000	6,549.9745	6,549.9745	1.9468	0.0000	6,590.8567
2018	20.6746	96.0433	284.3828	0.6958	43.2100	2.7900	45.9330	11.5534	2.5668	14.0902	0.0000	58,285.4589	58,285.4589	2.7307	0.0000	58,342.8038
2019	19.0677	88.0246	265.3860	0.6931	43.2108	2.4612	45.6721	11.5537	2.2926	13.8463	0.0000	56,384.0963	56,384.0963	2.5885	0.0000	56,438.4541
2020	17.8876	78.5246	250.8052	0.6929	43.2118	2.2123	45.4241	11.5541	2.0603	13.6144	0.0000	54,475.8530	54,475.8530	2.4814	0.0000	54,527.9633
2021	16.9211	69.0177	238.4629	0.6937	43.2119	1.9841	45.1960	11.5541	1.8471	13.4013	0.0000	53,900.3059	53,900.3059	2.3995	0.0000	53,950.6959
2022	16.0821	62.8112	227.1312	0.6935	43.2120	1.8257	45.0376	11.5541	1.6989	13.2530	0.0000	53,298.5904	53,298.5904	2.3260	0.0000	53,347.4365
2023	15.0742	53.6736	215.7141	0.6926	43.2121	1.7065	44.9185	11.5542	1.5871	13.1412	0.0000	52,683.4927	52,683.4927	2.2456	0.0000	52,730.6504
2024	14.4578	51.9710	207.5040	0.6965	43.2121	1.6239	44.8360	11.5541	1.5092	13.0633	0.0000	52,468.3945	52,468.3945	2.2031	0.0000	52,514.6601
2025	45.2362	53.3980	227.1247	0.7995	50.8800	1.6582	52.5382	13.5877	1.5436	15.1313	0.0000	59,045.0194	59,045.0194	2.4563	0.0000	59,096.6007
2026	44.6552	52.0116	219.3342	0.7994	50.8801	1.6307	52.5108	13.5877	1.5183	15.1061	0.0000	58,577.9900	58,577.9900	2.4016	0.0000	58,628.4242
2027	44.1971	51.2911	212.7721	0.7994	50.8803	1.6334	52.5137	13.5878	1.5208	15.1086	0.0000	58,172.7942	58,172.7942	2.3558	0.0000	58,222.2660
2028	43.7646	50.5815	207.0044	0.7994	50.8805	1.6300	52.5105	13.5879	1.5177	15.1056	0.0000	57,822.3124	57,822.3124	2.3145	0.0000	57,870.9175
2029	43.3335	49.9979	201.1858	0.7994	50.8807	1.6312	52.5118	13.5879	1.5188	15.1067	0.0000	57,517.7823	57,517.7823	2.2743	0.0000	57,565.5435
2030	42.8216	44.6704	196.1777	0.8033	50.8807	1.2231	52.1038	13.5880	1.1417	14.7297	0.0000	57,593.7429	57,593.7429	1.7507	0.0000	57,630.5085
2031	32.3029	9.3757	37.6281	0.1329	7.8355	0.4104	8.2459	2.0780	0.4056	2.4836	0.0000	9,432.2040	9,432.2040	0.3866	0.0000	9,440.3232
2032	30.8570	2.3017	21.0427	0.1033	7.6679	0.0854	7.7532	2.0336	0.0807	2.1142	0.0000	6,660.2324	6,660.2324	0.2540	0.0000	6,665.5664
Total	**453.5124**	**883.3871**	**3,059.7177**	**9.9595**	**629.9943**	**27.8253**	**657.7526**	**169.9379**	**25.8628**	**195.7708**	**0.0000**	**752,868.2438**	**752,868.2438**	**33.1156**	**0.0000**	**753,563.6709**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1792	69.6934	48.0621	0.0646	3.1506	3.3192	6.4698	1.5723	3.0537	4.6260	0.0000	6,549.9745	6,549.9745	1.9468	0.0000	6,590.8567
2018	20.6746	96.0433	284.3828	0.6958	43.2100	2.7900	45.9330	11.5534	2.5668	14.0902	0.0000	58,285.4589	58,285.4589	2.7307	0.0000	58,342.8038
2019	19.0677	88.0246	265.3860	0.6931	43.2108	2.4612	45.6721	11.5537	2.2926	13.8463	0.0000	56,384.0963	56,384.0963	2.5885	0.0000	56,438.4541
2020	17.8876	78.5246	250.8052	0.6929	43.2118	2.2123	45.4241	11.5541	2.0603	13.6144	0.0000	54,475.8530	54,475.8530	2.4814	0.0000	54,527.9633
2021	16.9211	69.0177	238.4629	0.6937	43.2119	1.9841	45.1960	11.5541	1.8471	13.4013	0.0000	53,900.3059	53,900.3059	2.3995	0.0000	53,950.6959
2022	16.0821	62.8112	227.1312	0.6935	43.2120	1.8257	45.0376	11.5541	1.6989	13.2530	0.0000	53,298.5903	53,298.5903	2.3260	0.0000	53,347.4365
2023	15.0742	53.6736	215.7141	0.6926	43.2121	1.7065	44.9185	11.5542	1.5871	13.1412	0.0000	52,683.4927	52,683.4927	2.2456	0.0000	52,730.6504
2024	14.4578	51.9710	207.5040	0.6965	43.2121	1.6239	44.8360	11.5541	1.5092	13.0633	0.0000	52,468.3945	52,468.3945	2.2031	0.0000	52,514.6601
2025	45.2362	53.3980	227.1247	0.7995	50.8800	1.6582	52.5382	13.5877	1.5436	15.1313	0.0000	59,045.0194	59,045.0194	2.4563	0.0000	59,096.6007
2026	44.6552	52.0116	219.3342	0.7994	50.8801	1.6307	52.5108	13.5877	1.5183	15.1061	0.0000	58,577.9900	58,577.9900	2.4016	0.0000	58,628.4242
2027	44.1971	51.2911	212.7721	0.7994	50.8803	1.6334	52.5137	13.5878	1.5208	15.1086	0.0000	58,172.7942	58,172.7942	2.3558	0.0000	58,222.2660
2028	43.7646	50.5815	207.0044	0.7994	50.8805	1.6300	52.5105	13.5879	1.5177	15.1056	0.0000	57,822.3124	57,822.3124	2.3145	0.0000	57,870.9175
2029	43.3335	49.9979	201.1858	0.7994	50.8807	1.6312	52.5118	13.5879	1.5188	15.1067	0.0000	57,517.7823	57,517.7823	2.2743	0.0000	57,565.5435
2030	42.8216	44.6704	196.1777	0.8033	50.8807	1.2231	52.1038	13.5880	1.1417	14.7297	0.0000	57,593.7429	57,593.7429	1.7507	0.0000	57,630.5085
2031	32.3029	9.3757	37.6281	0.1329	7.8355	0.4104	8.2459	2.0780	0.4056	2.4836	0.0000	9,432.2040	9,432.2040	0.3866	0.0000	9,440.3232
2032	30.8570	2.3017	21.0427	0.1033	7.6679	0.0854	7.7532	2.0336	0.0807	2.1142	0.0000	6,660.2324	6,660.2324	0.2540	0.0000	6,665.5664
Total	**453.5124**	**883.3871**	**3,059.7177**	**9.9595**	**626.4168**	**27.8253**	**654.1751**	**168.0887**	**25.8628**	**193.9215**	**0.0000**	**752,868.2438**	**752,868.2438**	**33.1156**	**0.0000**	**753,563.6709**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.57**	**0.00**	**0.54**	**1.09**	**0.00**	**0.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	148.1442	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575
Energy	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113
Mobile	100.0358	235.4760	1,064.9628	4.7890	297.8539	6.6755	304.5294	79.7422	6.1601	85.9023		343,318.8813	343,318.8813	8.9534		343,506.9034
Total	**250.0587**	**255.3170**	**1,363.1784**	**4.9067**	**297.8539**	**9.5756**	**307.4295**	**79.7422**	**9.0602**	**88.8024**	**0.0000**	**364,333.9024**	**364,333.9024**	**9.8425**	**0.3757**	**364,657.0722**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	143.4619	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575
Energy	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113
Mobile	100.0358	235.4760	1,064.9628	4.7890	297.8539	6.6755	304.5294	79.7422	6.1601	85.9023		343,318.8813	343,318.8813	8.9534		343,506.9034
Total	**245.3763**	**255.3170**	**1,363.1784**	**4.9067**	**297.8539**	**9.5756**	**307.4295**	**79.7422**	**9.0602**	**88.8024**	**0.0000**	**364,333.9024**	**364,333.9024**	**9.8425**	**0.3757**	**364,657.0722**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	3/9/2018	5	310	
2	Building Construction	Building Construction	12/15/2018	11/1/2030	5	3100	
3	Architectural Coating	Architectural Coating	1/1/2025	12/24/2032	5	2083	
4	Paving	Paving	11/4/2030	9/5/2031	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 141

Acres of Paving: 0

Residential Indoor: 7,087,500; Residential Outdoor: 2,362,500; Non-Residential Indoor: 3,687,300; Non-Residential Outdoor: 1,229,100 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	3,432.00	777.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	686.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5044	0.0000	6.5044	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**6.5044**	**3.3172**	**9.8216**	**3.3623**	**3.0518**	**6.4141**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0801	0.1014	1.2570	2.9100e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		236.6055	236.6055	0.0124		236.8652
Total	**0.0801**	**0.1014**	**1.2570**	**2.9100e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**236.6055**	**236.6055**	**0.0124**		**236.8652**

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9270	0.0000	2.9270	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**2.9270**	**3.3172**	**6.2442**	**1.5130**	**3.0518**	**4.5649**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0801	0.1014	1.2570	2.9100e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		236.6055	236.6055	0.0124		236.8652
Total	**0.0801**	**0.1014**	**1.2570**	**2.9100e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**236.6055**	**236.6055**	**0.0124**		**236.8652**

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5044	0.0000	6.5044	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**6.5044**	**2.7880**	**9.2925**	**3.3623**	**2.5650**	**5.9273**		**6,212.8042**	**6,212.8042**	**1.9341**		**6,253.4209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0721	0.0920	1.1422	2.9100e-003	0.2236	1.9600e-003	0.2255	0.0593	1.8100e-003	0.0611		227.9472	227.9472	0.0115		228.1884
Total	**0.0721**	**0.0920**	**1.1422**	**2.9100e-003**	**0.2236**	**1.9600e-003**	**0.2255**	**0.0593**	**1.8100e-003**	**0.0611**		**227.9472**	**227.9472**	**0.0115**		**228.1884**

3.2 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9270	0.0000	2.9270	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650	0.0000	6,212.8041	6,212.8041	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**2.9270**	**2.7880**	**5.7150**	**1.5130**	**2.5650**	**4.0780**	**0.0000**	**6,212.8041**	**6,212.8041**	**1.9341**		**6,253.4209**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0721	0.0920	1.1422	2.9100e-003	0.2236	1.9600e-003	0.2255	0.0593	1.8100e-003	0.0611		227.9472	227.9472	0.0115		228.1884
Total	**0.0721**	**0.0920**	**1.1422**	**2.9100e-003**	**0.2236**	**1.9600e-003**	**0.2255**	**0.0593**	**1.8100e-003**	**0.0611**		**227.9472**	**227.9472**	**0.0115**		**228.1884**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.6391	56.9899	70.8467	0.1704	4.8483	0.8921	5.7404	1.3797	0.8206	2.2003		16,559.7879	16,559.7879	0.1209		16,562.3263
Worker	12.3668	15.7926	196.0034	0.4987	38.3617	0.3366	38.6983	10.1737	0.3114	10.4851		39,115.7321	39,115.7321	1.9711		39,157.1258
Total	**18.0059**	**72.7824**	**266.8501**	**0.6690**	**43.2100**	**1.2287**	**44.4387**	**11.5534**	**1.1320**	**12.6854**		**55,675.5199**	**55,675.5199**	**2.0920**		**55,719.4521**

3.3 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.6391	56.9899	70.8467	0.1704	4.8483	0.8921	5.7404	1.3797	0.8206	2.2003		16,559.7879	16,559.7879	0.1209		16,562.3263
Worker	12.3668	15.7926	196.0034	0.4987	38.3617	0.3366	38.6983	10.1737	0.3114	10.4851		39,115.7321	39,115.7321	1.9711		39,157.1258
Total	**18.0059**	**72.7824**	**266.8501**	**0.6690**	**43.2100**	**1.2287**	**44.4387**	**11.5534**	**1.1320**	**12.6854**		**55,675.5199**	**55,675.5199**	**2.0920**		**55,719.4521**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.3521	52.5797	68.2792	0.1696	4.8492	0.8480	5.6971	1.3800	0.7801	2.1601		16,220.1736	16,220.1736	0.1182		16,222.6557
Worker	11.3640	14.4799	179.9864	0.4968	38.3617	0.3282	38.6899	10.1737	0.3042	10.4779		37,583.1610	37,583.1610	1.8424		37,621.8505
Total	**16.7161**	**67.0595**	**248.2656**	**0.6663**	**43.2109**	**1.1762**	**44.3870**	**11.5537**	**1.0843**	**12.6380**		**53,803.3345**	**53,803.3345**	**1.9606**		**53,844.5062**

3.3 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.3521	52.5797	68.2792	0.1696	4.8492	0.8480	5.6971	1.3800	0.7801	2.1601		16,220.1736	16,220.1736	0.1182		16,222.6557
Worker	11.3640	14.4799	179.9864	0.4968	38.3617	0.3282	38.6899	10.1737	0.3042	10.4779		37,583.1610	37,583.1610	1.8424		37,621.8505
Total	**16.7161**	**67.0595**	**248.2656**	**0.6663**	**43.2109**	**1.1762**	**44.3870**	**11.5537**	**1.0843**	**12.6380**		**53,803.3345**	**53,803.3345**	**1.9606**		**53,844.5062**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.1200	46.0159	66.2412	0.1694	4.8501	0.7747	5.6248	1.3804	0.7127	2.0931		15,858.9454	15,858.9454	0.1158		15,861.3762
Worker	10.6563	13.4248	167.7556	0.4967	38.3617	0.3248	38.6865	10.1737	0.3012	10.4749		36,074.4277	36,074.4277	1.7463		36,111.0991
Total	**15.7763**	**59.4406**	**233.9968**	**0.6661**	**43.2118**	**1.0995**	**44.3113**	**11.5541**	**1.0139**	**12.5679**		**51,933.3731**	**51,933.3731**	**1.8620**		**51,972.4753**

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.1200	46.0159	66.2412	0.1694	4.8501	0.7747	5.6248	1.3804	0.7127	2.0931		15,858.9454	15,858.9454	0.1158		15,861.3762
Worker	10.6563	13.4248	167.7556	0.4967	38.3617	0.3248	38.6865	10.1737	0.3012	10.4749		36,074.4277	36,074.4277	1.7463		36,111.0991
Total	**15.7763**	**59.4406**	**233.9968**	**0.6661**	**43.2118**	**1.0995**	**44.3113**	**11.5541**	**1.0139**	**12.5679**		**51,933.3731**	**51,933.3731**	**1.8620**		**51,972.4753**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.9488	39.1421	64.3386	0.1693	4.8502	0.7054	5.5556	1.3804	0.6490	2.0294		15,846.8121	15,846.8121	0.1165		15,849.2586
Worker	10.0792	12.5354	157.5867	0.4977	38.3617	0.3238	38.6855	10.1737	0.3003	10.4740		35,510.7121	35,510.7121	1.6704		35,545.7912
Total	**15.0280**	**51.6774**	**221.9253**	**0.6669**	**43.2119**	**1.0292**	**44.2411**	**11.5541**	**0.9493**	**12.5034**		**51,357.5242**	**51,357.5242**	**1.7869**		**51,395.0498**

3.3 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**	**0.0000**	**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.9488	39.1421	64.3386	0.1693	4.8502	0.7054	5.5556	1.3804	0.6490	2.0294		15,846.8121	15,846.8121	0.1165		15,849.2586
Worker	10.0792	12.5354	157.5867	0.4977	38.3617	0.3238	38.6855	10.1737	0.3003	10.4740		35,510.7121	35,510.7121	1.6704		35,545.7912
Total	**15.0280**	**51.6774**	**221.9253**	**0.6669**	**43.2119**	**1.0292**	**44.2411**	**11.5541**	**0.9493**	**12.5034**		**51,357.5242**	**51,357.5242**	**1.7869**		**51,395.0498**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**		**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.8492	35.5388	62.7517	0.1691	4.8503	0.6977	5.5480	1.3804	0.6419	2.0223		15,833.7774	15,833.7774	0.1190		15,836.2771
Worker	9.5337	11.7360	148.0519	0.4976	38.3617	0.3223	38.6839	10.1737	0.2989	10.4726		34,921.0633	34,921.0633	1.5985		34,954.6308
Total	**14.3829**	**47.2748**	**210.8036**	**0.6667**	**43.2120**	**1.0200**	**44.2319**	**11.5541**	**0.9408**	**12.4949**		**50,754.8407**	**50,754.8407**	**1.7175**		**50,790.9079**

3.3 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**	**0.0000**	**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.8492	35.5388	62.7517	0.1691	4.8503	0.6977	5.5480	1.3804	0.6419	2.0223		15,833.7774	15,833.7774	0.1190		15,836.2771
Worker	9.5337	11.7360	148.0519	0.4976	38.3617	0.3223	38.6839	10.1737	0.2989	10.4726		34,921.0633	34,921.0633	1.5985		34,954.6308
Total	**14.3829**	**47.2748**	**210.8036**	**0.6667**	**43.2120**	**1.0200**	**44.2319**	**11.5541**	**0.9408**	**12.4949**		**50,754.8407**	**50,754.8407**	**1.7175**		**50,790.9079**

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	**1.5661**	**14.3126**	**16.2093**	**0.0268**		**0.6967**	**0.6967**		**0.6557**	**0.6557**		**2,544.6262**	**2,544.6262**	**0.6044**		**2,557.3191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4933	28.3407	60.2497	0.1683	4.8504	0.6889	5.5393	1.3805	0.6338	2.0143		15,759.2853	15,759.2853	0.1069		15,761.5295
Worker	9.0148	11.0203	139.2551	0.4975	38.3617	0.3208	38.6825	10.1737	0.2976	10.4713		34,379.5812	34,379.5812	1.5343		34,411.8018
Total	**13.5081**	**39.3610**	**199.5048**	**0.6658**	**43.2121**	**1.0098**	**44.2218**	**11.5542**	**0.9314**	**12.4856**		**50,138.8665**	**50,138.8665**	**1.6412**		**50,173.3313**

3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	**1.5661**	**14.3126**	**16.2093**	**0.0268**		**0.6967**	**0.6967**		**0.6557**	**0.6557**	**0.0000**	**2,544.6262**	**2,544.6262**	**0.6044**		**2,557.3191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4933	28.3407	60.2497	0.1683	4.8504	0.6889	5.5393	1.3805	0.6338	2.0143		15,759.2853	15,759.2853	0.1069		15,761.5295
Worker	9.0148	11.0203	139.2551	0.4975	38.3617	0.3208	38.6825	10.1737	0.2976	10.4713		34,379.5812	34,379.5812	1.5343		34,411.8018
Total	**13.5081**	**39.3610**	**199.5048**	**0.6658**	**43.2121**	**1.0098**	**44.2218**	**11.5542**	**0.9314**	**12.4856**		**50,138.8665**	**50,138.8665**	**1.6412**		**50,173.3313**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
Total	**1.4653**	**13.3774**	**16.1332**	**0.0268**		**0.6106**	**0.6106**		**0.5744**	**0.5744**		**2,545.1154**	**2,545.1154**	**0.6009**		**2,557.7349**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4203	28.1740	58.9942	0.1686	4.8504	0.6897	5.5401	1.3804	0.6345	2.0149		15,793.9193	15,793.9193	0.1082		15,796.1913
Worker	8.5722	10.4196	132.3766	0.5010	38.3617	0.3237	38.6854	10.1737	0.3003	10.4740		34,129.3597	34,129.3597	1.4940		34,160.7339
Total	**12.9926**	**38.5936**	**191.3708**	**0.6696**	**43.2121**	**1.0134**	**44.2255**	**11.5541**	**0.9348**	**12.4890**		**49,923.2791**	**49,923.2791**	**1.6022**		**49,956.9252**

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	**1.4653**	**13.3774**	**16.1332**	**0.0268**		**0.6106**	**0.6106**		**0.5744**	**0.5744**	**0.0000**	**2,545.1154**	**2,545.1154**	**0.6009**		**2,557.7349**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4203	28.1740	58.9942	0.1686	4.8504	0.6897	5.5401	1.3804	0.6345	2.0149		15,793.9193	15,793.9193	0.1082		15,796.1913
Worker	8.5722	10.4196	132.3766	0.5010	38.3617	0.3237	38.6854	10.1737	0.3003	10.4740		34,129.3597	34,129.3597	1.4940		34,160.7339
Total	**12.9926**	**38.5936**	**191.3708**	**0.6696**	**43.2121**	**1.0134**	**44.2255**	**11.5541**	**0.9348**	**12.4890**		**49,923.2791**	**49,923.2791**	**1.6022**		**49,956.9252**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.3528	27.9831	58.0464	0.1686	4.8505	0.6931	5.5437	1.3805	0.6377	2.0182		15,794.7153	15,794.7153	0.1086		15,796.9963
Worker	8.1667	9.8841	126.0267	0.5010	38.3617	0.3238	38.6855	10.1737	0.3004	10.4741		33,689.0767	33,689.0767	1.4458		33,719.4379
Total	**12.5195**	**37.8671**	**184.0731**	**0.6696**	**43.2122**	**1.0170**	**44.2291**	**11.5542**	**0.9381**	**12.4923**		**49,483.7920**	**49,483.7920**	**1.5544**		**49,516.4341**

3.3 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.3528	27.9831	58.0464	0.1686	4.8505	0.6931	5.5437	1.3805	0.6377	2.0182		15,794.7153	15,794.7153	0.1086		15,796.9963
Worker	8.1667	9.8841	126.0267	0.5010	38.3617	0.3238	38.6855	10.1737	0.3004	10.4741		33,689.0767	33,689.0767	1.4458		33,719.4379
Total	**12.5195**	**37.8671**	**184.0731**	**0.6696**	**43.2122**	**1.0170**	**44.2291**	**11.5542**	**0.9381**	**12.4923**		**49,483.7920**	**49,483.7920**	**1.5544**		**49,516.4341**

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.2180	27.1562	56.9310	0.1686	4.8506	0.6641	5.5147	1.3805	0.6110	1.9915		15,791.4811	15,791.4811	0.1052		15,793.6903
Worker	7.7948	9.4177	120.4637	0.5009	38.3617	0.3251	38.6868	10.1737	0.3016	10.4753		33,302.5432	33,302.5432	1.4031		33,332.0081
Total	**12.0128**	**36.5739**	**177.3946**	**0.6695**	**43.2123**	**0.9892**	**44.2015**	**11.5542**	**0.9126**	**12.4668**		**49,094.0242**	**49,094.0242**	**1.5083**		**49,125.6984**

3.3 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.2180	27.1562	56.9310	0.1686	4.8506	0.6641	5.5147	1.3805	0.6110	1.9915		15,791.4811	15,791.4811	0.1052		15,793.6903
Worker	7.7948	9.4177	120.4637	0.5009	38.3617	0.3251	38.6868	10.1737	0.3016	10.4753		33,302.5432	33,302.5432	1.4031		33,332.0081
Total	**12.0128**	**36.5739**	**177.3946**	**0.6695**	**43.2123**	**0.9892**	**44.2015**	**11.5542**	**0.9126**	**12.4668**		**49,094.0242**	**49,094.0242**	**1.5083**		**49,125.6984**

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1787	26.9403	56.3499	0.1686	4.8508	0.6658	5.5166	1.3806	0.6126	1.9931		15,792.6623	15,792.6623	0.1054		15,794.8764
Worker	7.4458	8.9972	115.4789	0.5009	38.3617	0.3259	38.6876	10.1737	0.3024	10.4761		32,963.8627	32,963.8627	1.3647		32,992.5216
Total	**11.6245**	**35.9375**	**171.8288**	**0.6695**	**43.2124**	**0.9917**	**44.2042**	**11.5543**	**0.9150**	**12.4692**		**48,756.5250**	**48,756.5250**	**1.4701**		**48,787.3980**

3.3 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1787	26.9403	56.3499	0.1686	4.8508	0.6658	5.5166	1.3806	0.6126	1.9931		15,792.6623	15,792.6623	0.1054		15,794.8764
Worker	7.4458	8.9972	115.4789	0.5009	38.3617	0.3259	38.6876	10.1737	0.3024	10.4761		32,963.8627	32,963.8627	1.3647		32,992.5216
Total	**11.6245**	**35.9375**	**171.8288**	**0.6695**	**43.2124**	**0.9917**	**44.2042**	**11.5543**	**0.9150**	**12.4692**		**48,756.5250**	**48,756.5250**	**1.4701**		**48,787.3980**

3.3 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1269	26.6851	55.7950	0.1686	4.8510	0.6615	5.5125	1.3806	0.6086	1.9892		15,792.8776	15,792.8776	0.1049		15,795.0813
Worker	7.1285	8.6185	111.1345	0.5009	38.3617	0.3267	38.6884	10.1737	0.3031	10.4768		32,671.5868	32,671.5868	1.3307		32,699.5319
Total	**11.2554**	**35.3036**	**166.9295**	**0.6694**	**43.2127**	**0.9882**	**44.2009**	**11.5543**	**0.9117**	**12.4660**		**48,464.4644**	**48,464.4644**	**1.4357**		**48,494.6132**

3.3 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1269	26.6851	55.7950	0.1686	4.8510	0.6615	5.5125	1.3806	0.6086	1.9892		15,792.8776	15,792.8776	0.1049		15,795.0813
Worker	7.1285	8.6185	111.1345	0.5009	38.3617	0.3267	38.6884	10.1737	0.3031	10.4768		32,671.5868	32,671.5868	1.3307		32,699.5319
Total	**11.2554**	**35.3036**	**166.9295**	**0.6694**	**43.2127**	**0.9882**	**44.2009**	**11.5543**	**0.9117**	**12.4660**		**48,464.4644**	**48,464.4644**	**1.4357**		**48,494.6132**

3.3 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.0839	26.5555	55.1971	0.1685	4.8512	0.6625	5.5136	1.3807	0.6095	1.9902		15,793.4507	15,793.4507	0.1051		15,795.6571
Worker	6.8051	8.2401	106.7835	0.5009	38.3617	0.3269	38.6885	10.1737	0.3033	10.4770		32,417.3094	32,417.3094	1.2971		32,444.5490
Total	**10.8890**	**34.7956**	**161.9806**	**0.6694**	**43.2128**	**0.9893**	**44.2021**	**11.5544**	**0.9127**	**12.4671**		**48,210.7601**	**48,210.7601**	**1.4022**		**48,240.2061**

3.3 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.0839	26.5555	55.1971	0.1685	4.8512	0.6625	5.5136	1.3807	0.6095	1.9902		15,793.4507	15,793.4507	0.1051		15,795.6571
Worker	6.8051	8.2401	106.7835	0.5009	38.3617	0.3269	38.6885	10.1737	0.3033	10.4770		32,417.3094	32,417.3094	1.2971		32,444.5490
Total	**10.8890**	**34.7956**	**161.9806**	**0.6694**	**43.2128**	**0.9893**	**44.2021**	**11.5544**	**0.9127**	**12.4671**		**48,210.7601**	**48,210.7601**	**1.4022**		**48,240.2061**

3.3 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.0421	26.4415	54.7783	0.1685	4.8512	0.6635	5.5147	1.3807	0.6104	1.9911		15,793.6246	15,793.6246	0.1052		15,795.8337
Worker	6.4945	7.8797	102.9019	0.5009	38.3617	0.3264	38.6881	10.1737	0.3029	10.4766		32,197.9942	32,197.9942	1.2654		32,224.5681
Total	**10.5366**	**34.3212**	**157.6803**	**0.6694**	**43.2129**	**0.9899**	**44.2028**	**11.5544**	**0.9133**	**12.4677**		**47,991.6188**	**47,991.6188**	**1.3706**		**48,020.4017**

3.3 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.0421	26.4415	54.7783	0.1685	4.8512	0.6635	5.5147	1.3807	0.6104	1.9911		15,793.6246	15,793.6246	0.1052		15,795.8337
Worker	6.4945	7.8797	102.9019	0.5009	38.3617	0.3264	38.6881	10.1737	0.3029	10.4766		32,197.9942	32,197.9942	1.2654		32,224.5681
Total	**10.5366**	**34.3212**	**157.6803**	**0.6694**	**43.2129**	**0.9899**	**44.2028**	**11.5544**	**0.9133**	**12.4677**		**47,991.6188**	**47,991.6188**	**1.3706**		**48,020.4017**

3.4 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.6324	1.9757	25.1907	0.1001	7.6679	0.0647	7.7326	2.0336	0.0601	2.0936		6,733.8889	6,733.8889	0.2890		6,739.9576
Total	**1.6324**	**1.9757**	**25.1907**	**0.1001**	**7.6679**	**0.0647**	**7.7326**	**2.0336**	**0.0601**	**2.0936**		**6,733.8889**	**6,733.8889**	**0.2890**		**6,739.9576**

3.4 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.6324	1.9757	25.1907	0.1001	7.6679	0.0647	7.7326	2.0336	0.0601	2.0936		6,733.8889	6,733.8889	0.2890		6,739.9576
Total	**1.6324**	**1.9757**	**25.1907**	**0.1001**	**7.6679**	**0.0647**	**7.7326**	**2.0336**	**0.0601**	**2.0936**		**6,733.8889**	**6,733.8889**	**0.2890**		**6,739.9576**

3.4 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.5581	1.8825	24.0787	0.1001	7.6679	0.0650	7.7329	2.0336	0.0603	2.0939		6,656.6272	6,656.6272	0.2805		6,662.5168
Total	**1.5581**	**1.8825**	**24.0787**	**0.1001**	**7.6679**	**0.0650**	**7.7329**	**2.0336**	**0.0603**	**2.0939**		**6,656.6272**	**6,656.6272**	**0.2805**		**6,662.5168**

3.4 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.5581	1.8825	24.0787	0.1001	7.6679	0.0650	7.7329	2.0336	0.0603	2.0939		6,656.6272	6,656.6272	0.2805		6,662.5168
Total	**1.5581**	**1.8825**	**24.0787**	**0.1001**	**7.6679**	**0.0650**	**7.7329**	**2.0336**	**0.0603**	**2.0939**		**6,656.6272**	**6,656.6272**	**0.2805**		**6,662.5168**

3.4 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4883	1.7984	23.0823	0.1001	7.6679	0.0652	7.7330	2.0336	0.0604	2.0940		6,588.9306	6,588.9306	0.2728		6,594.6590
Total	**1.4883**	**1.7984**	**23.0823**	**0.1001**	**7.6679**	**0.0652**	**7.7330**	**2.0336**	**0.0604**	**2.0940**		**6,588.9306**	**6,588.9306**	**0.2728**		**6,594.6590**

3.4 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4883	1.7984	23.0823	0.1001	7.6679	0.0652	7.7330	2.0336	0.0604	2.0940		6,588.9306	6,588.9306	0.2728		6,594.6590
Total	**1.4883**	**1.7984**	**23.0823**	**0.1001**	**7.6679**	**0.0652**	**7.7330**	**2.0336**	**0.0604**	**2.0940**		**6,588.9306**	**6,588.9306**	**0.2728**		**6,594.6590**

3.4 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4249	1.7227	22.2139	0.1001	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,530.5095	6,530.5095	0.2660		6,536.0953
Total	**1.4249**	**1.7227**	**22.2139**	**0.1001**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,530.5095**	**6,530.5095**	**0.2660**		**6,536.0953**

3.4 Architectural Coating - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4249	1.7227	22.2139	0.1001	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,530.5095	6,530.5095	0.2660		6,536.0953
Total	**1.4249**	**1.7227**	**22.2139**	**0.1001**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,530.5095**	**6,530.5095**	**0.2660**		**6,536.0953**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.3602	1.6471	21.3443	0.1001	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,479.6836	6,479.6836	0.2593		6,485.1284
Total	**1.3602**	**1.6471**	**21.3443**	**0.1001**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,479.6836**	**6,479.6836**	**0.2593**		**6,485.1284**

3.4 Architectural Coating - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.3602	1.6471	21.3443	0.1001	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,479.6836	6,479.6836	0.2593		6,485.1284
Total	**1.3602**	**1.6471**	**21.3443**	**0.1001**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,479.6836**	**6,479.6836**	**0.2593**		**6,485.1284**

3.4 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2981	1.5750	20.5684	0.1001	7.6679	0.0653	7.7331	2.0336	0.0605	2.0941		6,435.8462	6,435.8462	0.2529		6,441.1578
Total	**1.2981**	**1.5750**	**20.5684**	**0.1001**	**7.6679**	**0.0653**	**7.7331**	**2.0336**	**0.0605**	**2.0941**		**6,435.8462**	**6,435.8462**	**0.2529**		**6,441.1578**

3.4 Architectural Coating - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2981	1.5750	20.5684	0.1001	7.6679	0.0653	7.7331	2.0336	0.0605	2.0941		6,435.8462	6,435.8462	0.2529		6,441.1578
Total	**1.2981**	**1.5750**	**20.5684**	**0.1001**	**7.6679**	**0.0653**	**7.7331**	**2.0336**	**0.0605**	**2.0941**		**6,435.8462**	**6,435.8462**	**0.2529**		**6,441.1578**

3.4 Architectural Coating - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2382	1.5065	19.8765	0.1003	7.6679	0.0653	7.7332	2.0336	0.0606	2.0941		6,410.5959	6,410.5959	0.2479		6,415.8028
Total	**1.2382**	**1.5065**	**19.8765**	**0.1003**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0941**		**6,410.5959**	**6,410.5959**	**0.2479**		**6,415.8028**

3.4 Architectural Coating - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2382	1.5065	19.8765	0.1003	7.6679	0.0653	7.7332	2.0336	0.0606	2.0941		6,410.5959	6,410.5959	0.2479		6,415.8028
Total	**1.2382**	**1.5065**	**19.8765**	**0.1003**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0941**		**6,410.5959**	**6,410.5959**	**0.2479**		**6,415.8028**

3.4 Architectural Coating - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1743	1.4454	19.2450	0.1003	7.6679	0.0651	7.7329	2.0336	0.0604	2.0939		6,378.7843	6,378.7843	0.2426		6,383.8792
Total	**1.1743**	**1.4454**	**19.2450**	**0.1003**	**7.6679**	**0.0651**	**7.7329**	**2.0336**	**0.0604**	**2.0939**		**6,378.7843**	**6,378.7843**	**0.2426**		**6,383.8792**

3.4 Architectural Coating - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1743	1.4454	19.2450	0.1003	7.6679	0.0651	7.7329	2.0336	0.0604	2.0939		6,378.7843	6,378.7843	0.2426		6,383.8792
Total	**1.1743**	**1.4454**	**19.2450**	**0.1003**	**7.6679**	**0.0651**	**7.7329**	**2.0336**	**0.0604**	**2.0939**		**6,378.7843**	**6,378.7843**	**0.2426**		**6,383.8792**

3.5 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234		2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**		**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0284	0.0344	0.4498	2.1900e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		140.7255	140.7255	5.5300e-003		140.8416
Total	**0.0284**	**0.0344**	**0.4498**	**2.1900e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**140.7255**	**140.7255**	**5.5300e-003**		**140.8416**

3.5 Paving - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234	0.0000	2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**	**0.0000**	**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0284	0.0344	0.4498	2.1900e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		140.7255	140.7255	5.5300e-003		140.8416
Total	**0.0284**	**0.0344**	**0.4498**	**2.1900e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**140.7255**	**140.7255**	**5.5300e-003**		**140.8416**

3.5 Paving - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234		2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**		**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0329	0.4346	2.1900e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		140.1734	140.1734	5.4200e-003		140.2872
Total	**0.0271**	**0.0329**	**0.4346**	**2.1900e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**140.1734**	**140.1734**	**5.4200e-003**		**140.2872**

3.5 Paving - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234	0.0000	2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**	**0.0000**	**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0271	0.0329	0.4346	2.1900e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		140.1734	140.1734	5.4200e-003		140.2872
Total	**0.0271**	**0.0329**	**0.4346**	**2.1900e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**140.1734**	**140.1734**	**5.4200e-003**		**140.2872**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	100.0358	235.4760	1,064.9628	4.7890	297.8539	6.6755	304.5294	79.7422	6.1601	85.9023		343,318.8813	343,318.8813	8.9534		343,506.9034
Unmitigated	100.0358	235.4760	1,064.9628	4.7890	297.8539	6.6755	304.5294	79.7422	6.1601	85.9023		343,318.8813	343,318.8813	8.9534		343,506.9034

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	13,055.00	14,280.00	12110.00	44,747,604	44,747,604
General Light Industry	2,977.50	562.50	292.50	9,958,880	9,958,880
Hotel	1,631.00	1,634.50	1186.50	3,741,516	3,741,516
Regional Shopping Center	29,208.00	34,176.00	17268.00	61,018,154	61,018,154
Total	46,871.50	50,653.00	30,857.00	119,466,154	119,466,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491908	0.059855	0.185077	0.131229	0.044940	0.007356	0.019164	0.046757	0.003019	0.003347	0.004084	0.000506	0.002760

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113
NaturalGas Unmitigated	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	38650.7	0.4168	3.7893	3.1830	0.0227		0.2880	0.2880		0.2880	0.2880		4,547.1394	4,547.1394	0.0872	0.0834	4,574.8125
Hotel	34836.1	0.3757	3.4153	2.8689	0.0205		0.2596	0.2596		0.2596	0.2596		4,098.3607	4,098.3607	0.0786	0.0751	4,123.3026
Regional Shopping Center	5589.04	0.0603	0.5480	0.4603	3.2900e-003		0.0416	0.0416		0.0416	0.0416		657.5343	657.5343	0.0126	0.0121	661.5359
Apartments High Rise	95128.2	1.0259	8.7667	3.7305	0.0560		0.7088	0.7088		0.7088	0.7088		11,191.5504	11,191.5504	0.2145	0.2052	11,259.6603
Total		**1.8787**	**16.5192**	**10.2426**	**0.1025**		**1.2980**	**1.2980**		**1.2980**	**1.2980**		**20,494.5847**	**20,494.5847**	**0.3928**	**0.3757**	**20,619.3113**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	38.6507	0.4168	3.7893	3.1830	0.0227		0.2880	0.2880		0.2880	0.2880		4,547.1394	4,547.1394	0.0872	0.0834	4,574.8125
Hotel	34.8361	0.3757	3.4153	2.8689	0.0205		0.2596	0.2596		0.2596	0.2596		4,098.3607	4,098.3607	0.0786	0.0751	4,123.3026
Regional Shopping Center	5.58904	0.0603	0.5480	0.4603	3.2900e-003		0.0416	0.0416		0.0416	0.0416		657.5343	657.5343	0.0126	0.0121	661.5359
Apartments High Rise	95.1282	1.0259	8.7667	3.7305	0.0560		0.7088	0.7088		0.7088	0.7088		11,191.5504	11,191.5504	0.2145	0.2052	11,259.6603
Total		**1.8787**	**16.5192**	**10.2426**	**0.1025**		**1.2980**	**1.2980**		**1.2980**	**1.2980**		**20,494.5847**	**20,494.5847**	**0.3928**	**0.3757**	**20,619.3113**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	143.4619	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575
Unmitigated	148.1442	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.5472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	117.9724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6247	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021		520.4364	520.4364	0.4962		530.8575
Total	**148.1442**	**3.3218**	**287.9730**	**0.0153**		**1.6021**	**1.6021**		**1.6021**	**1.6021**	**0.0000**	**520.4364**	**520.4364**	**0.4962**	**0.0000**	**530.8575**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	16.8649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	117.9724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6247	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021		520.4364	520.4364	0.4962		530.8575
Total	**143.4619**	**3.3218**	**287.9730**	**0.0153**		**1.6021**	**1.6021**		**1.6021**	**1.6021**	**0.0000**	**520.4364**	**520.4364**	**0.4962**	**0.0000**	**530.8575**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Lynwood Transit Area Specific Plan

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Hotel	350.00	Room	11.67	508,200.00	0
Apartments High Rise	3,500.00	Dwelling Unit	56.45	3,500,000.00	10010
Regional Shopping Center	1,200.00	1000sqft	27.55	1,200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Arch Coating adjusted as painting would occur during the end of construction.

Grading - Developable acreage within plan area.

Architectural Coating - Assume compliance with SCAQMD Rule 1113 - low-VOC paint (150 g/L for nonflat coatings)

Vehicle Trips - Trip rate from Translutions, Inc. (April 2016) accounts for trip reduction. Default Sat and Sun trip rates also reduced.

Woodstoves - Compliance with SCAQMD Rule 445

Area Coating - Compliance with SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Assumed compliance with SCAQMD Rule 403

Mobile Land Use Mitigation - VMT reducing measures included in trip reduction percent from Translutions, Inc.

Area Mitigation - Compliance with SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstructionPhase	NumDays	220.00	2,083.00
tblConstructionPhase	PhaseEndDate	10/27/2038	12/24/2032
tblConstructionPhase	PhaseEndDate	1/25/2030	11/1/2030
tblConstructionPhase	PhaseEndDate	10/28/2033	9/5/2031
tblConstructionPhase	PhaseStartDate	11/2/2030	1/1/2025
tblConstructionPhase	PhaseStartDate	3/10/2018	12/15/2018
tblConstructionPhase	PhaseStartDate	12/25/2032	11/4/2030
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00

tblFireplaces	NumberGas	2,975.00	0.00
tblFireplaces	NumberNoFireplace	350.00	0.00
tblFireplaces	NumberWood	175.00	0.00
tblGrading	AcresOfGrading	775.00	141.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblVehicleTrips	ST_TR	7.16	4.08
tblVehicleTrips	ST_TR	1.32	0.75
tblVehicleTrips	ST_TR	8.19	4.67
tblVehicleTrips	ST_TR	49.97	28.48
tblVehicleTrips	SU_TR	6.07	3.46
tblVehicleTrips	SU_TR	0.68	0.39
tblVehicleTrips	SU_TR	5.95	3.39
tblVehicleTrips	SU_TR	25.24	14.39
tblVehicleTrips	WD_TR	6.59	3.73
tblVehicleTrips	WD_TR	6.97	3.97
tblVehicleTrips	WD_TR	8.17	4.66
tblVehicleTrips	WD_TR	42.94	24.34
tblWoodstoves	NumberCatalytic	175.00	0.00
tblWoodstoves	NumberNoncatalytic	175.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1822	69.7044	47.9806	0.0645	6.7280	3.3192	10.0472	3.4216	3.0537	6.4753	0.0000	6,536.6761	6,536.6761	1.9468	0.0000	6,577.5583
2018	21.6460	99.1345	287.7543	0.6663	43.2100	2.7900	45.9417	11.5534	2.5668	14.0982	0.0000	55,945.9766	55,945.9766	2.7345	0.0000	56,003.4005
2019	19.9564	90.8369	269.1638	0.6636	43.2108	2.4692	45.6800	11.5537	2.2999	13.8536	0.0000	54,130.6066	54,130.6066	2.5923	0.0000	54,185.0449
2020	18.7200	81.0341	255.0227	0.6634	43.2118	2.2190	45.4308	11.5541	2.0665	13.6205	0.0000	52,307.6013	52,307.6013	2.4854	0.0000	52,359.7943
2021	17.7026	71.2705	243.0501	0.6641	43.2119	1.9898	45.2016	11.5541	1.8523	13.4064	0.0000	51,761.0086	51,761.0086	2.4036	0.0000	51,811.4850
2022	16.8231	64.8920	231.7999	0.6639	43.2120	1.8312	45.0432	11.5541	1.7040	13.2581	0.0000	51,190.1511	51,190.1511	2.3303	0.0000	51,239.0870
2023	15.7846	55.3939	220.5195	0.6630	43.2121	1.7119	44.9239	11.5542	1.5921	13.1462	0.0000	50,602.9619	50,602.9619	2.2499	0.0000	50,650.2094
2024	15.1338	53.6106	212.2462	0.6666	43.2121	1.6293	44.8414	11.5541	1.5141	13.0683	0.0000	50,396.5818	50,396.5818	2.2074	0.0000	50,442.9373
2025	45.9421	55.1755	229.9200	0.7638	50.8800	1.6636	52.5436	13.5877	1.5485	15.1363	0.0000	56,612.7925	56,612.7925	2.4605	0.0000	56,664.4638
2026	45.3365	53.6917	222.3095	0.7637	50.8801	1.6361	52.5162	13.5877	1.5233	15.1110	0.0000	56,169.4393	56,169.4393	2.4059	0.0000	56,219.9636
2027	44.8580	52.9040	215.9358	0.7637	50.8803	1.6388	52.5190	13.5878	1.5257	15.1135	0.0000	55,784.7629	55,784.7629	2.3601	0.0000	55,834.3250
2028	44.4074	52.1319	210.3530	0.7637	50.8805	1.6354	52.5159	13.5879	1.5226	15.1105	0.0000	55,451.8566	55,451.8566	2.3188	0.0000	55,500.5520
2029	43.9594	51.4905	204.6646	0.7636	50.8807	1.6365	52.5172	13.5879	1.5237	15.1116	0.0000	55,162.1228	55,162.1228	2.2787	0.0000	55,209.9745
2030	43.4357	46.1082	199.8499	0.7675	50.8807	1.2284	52.1092	13.5880	1.1466	14.7346	0.0000	55,250.5852	55,250.5852	1.7551	0.0000	55,287.4413
2031	32.3492	9.5348	35.8596	0.1270	7.8355	0.4104	8.2459	2.0780	0.4056	2.4836	0.0000	9,056.9251	9,056.9251	0.3866	0.0000	9,065.0443
2032	30.8990	2.4504	19.3497	0.0975	7.6679	0.0854	7.7532	2.0336	0.0807	2.1142	0.0000	6,294.4968	6,294.4968	0.2540	0.0000	6,299.8309
Total	**463.1361**	**909.3641**	**3,105.7791**	**9.5260**	**629.9943**	**27.8940**	**657.8300**	**169.9379**	**25.9260**	**195.8420**	**0.0000**	**722,654.5452**	**722,654.5452**	**33.1698**	**0.0000**	**723,351.1119**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1822	69.7044	47.9806	0.0645	3.1506	3.3192	6.4698	1.5723	3.0537	4.6260	0.0000	6,536.6761	6,536.6761	1.9468	0.0000	6,577.5583
2018	21.6460	99.1345	287.7543	0.6663	43.2100	2.7900	45.9417	11.5534	2.5668	14.0982	0.0000	55,945.9766	55,945.9766	2.7345	0.0000	56,003.4005
2019	19.9564	90.8369	269.1638	0.6636	43.2108	2.4692	45.6800	11.5537	2.2999	13.8536	0.0000	54,130.6066	54,130.6066	2.5923	0.0000	54,185.0448
2020	18.7200	81.0341	255.0227	0.6634	43.2118	2.2190	45.4308	11.5541	2.0665	13.6205	0.0000	52,307.6013	52,307.6013	2.4854	0.0000	52,359.7943
2021	17.7026	71.2705	243.0501	0.6641	43.2119	1.9898	45.2016	11.5541	1.8523	13.4064	0.0000	51,761.0086	51,761.0086	2.4036	0.0000	51,811.4850
2022	16.8231	64.8920	231.7999	0.6639	43.2120	1.8312	45.0432	11.5541	1.7040	13.2581	0.0000	51,190.1511	51,190.1511	2.3303	0.0000	51,239.0870
2023	15.7846	55.3939	220.5195	0.6630	43.2121	1.7119	44.9239	11.5542	1.5921	13.1462	0.0000	50,602.9619	50,602.9619	2.2499	0.0000	50,650.2094
2024	15.1338	53.6106	212.2462	0.6666	43.2121	1.6293	44.8414	11.5541	1.5141	13.0683	0.0000	50,396.5818	50,396.5818	2.2074	0.0000	50,442.9373
2025	45.9421	55.1755	229.9200	0.7638	50.8800	1.6636	52.5436	13.5877	1.5485	15.1363	0.0000	56,612.7925	56,612.7925	2.4605	0.0000	56,664.4638
2026	45.3365	53.6917	222.3095	0.7637	50.8801	1.6361	52.5162	13.5877	1.5233	15.1110	0.0000	56,169.4393	56,169.4393	2.4059	0.0000	56,219.9636
2027	44.8580	52.9040	215.9358	0.7637	50.8803	1.6388	52.5190	13.5878	1.5257	15.1135	0.0000	55,784.7629	55,784.7629	2.3601	0.0000	55,834.3250
2028	44.4074	52.1319	210.3530	0.7637	50.8805	1.6354	52.5159	13.5879	1.5226	15.1105	0.0000	55,451.8566	55,451.8566	2.3188	0.0000	55,500.5520
2029	43.9594	51.4905	204.6646	0.7636	50.8807	1.6365	52.5172	13.5879	1.5237	15.1116	0.0000	55,162.1228	55,162.1228	2.2787	0.0000	55,209.9745
2030	43.4357	46.1082	199.8499	0.7675	50.8807	1.2284	52.1092	13.5880	1.1466	14.7346	0.0000	55,250.5852	55,250.5852	1.7551	0.0000	55,287.4413
2031	32.3492	9.5348	35.8596	0.1270	7.8355	0.4104	8.2459	2.0780	0.4056	2.4836	0.0000	9,056.9251	9,056.9251	0.3866	0.0000	9,065.0443
2032	30.8990	2.4504	19.3497	0.0975	7.6679	0.0854	7.7532	2.0336	0.0807	2.1142	0.0000	6,294.4968	6,294.4968	0.2540	0.0000	6,299.8309
Total	**463.1361**	**909.3641**	**3,105.7791**	**9.5260**	**626.4168**	**27.8940**	**654.2526**	**168.0887**	**25.9260**	**193.9927**	**0.0000**	**722,654.5452**	**722,654.5452**	**33.1698**	**0.0000**	**723,351.1118**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.57**	**0.00**	**0.54**	**1.09**	**0.00**	**0.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	148.1442	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575
Energy	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113
Mobile	105.1331	245.6727	1,114.5918	4.5823	297.8539	6.7016	304.5554	79.7422	6.1841	85.9263		329,790.4018	329,790.4018	8.9787		329,978.9545
Total	**255.1560**	**265.5137**	**1,412.8074**	**4.7001**	**297.8539**	**9.6017**	**307.4556**	**79.7422**	**9.0842**	**88.8264**	**0.0000**	**350,805.4229**	**350,805.4229**	**9.8678**	**0.3757**	**351,129.1234**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	143.4619	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575
Energy	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113
Mobile	105.1331	245.6727	1,114.5918	4.5823	297.8539	6.7016	304.5554	79.7422	6.1841	85.9263		329,790.4018	329,790.4018	8.9787		329,978.9545
Total	**250.4736**	**265.5137**	**1,412.8074**	**4.7001**	**297.8539**	**9.6017**	**307.4556**	**79.7422**	**9.0842**	**88.8264**	**0.0000**	**350,805.4229**	**350,805.4229**	**9.8678**	**0.3757**	**351,129.1234**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	3/9/2018	5	310	
2	Building Construction	Building Construction	12/15/2018	11/1/2030	5	3100	
3	Architectural Coating	Architectural Coating	1/1/2025	12/24/2032	5	2083	
4	Paving	Paving	11/4/2030	9/5/2031	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 141

Acres of Paving: 0

Residential Indoor: 7,087,500; Residential Outdoor: 2,362,500; Non-Residential Indoor: 3,687,300; Non-Residential Outdoor: 1,229,100 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	3,432.00	777.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	686.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5044	0.0000	6.5044	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**6.5044**	**3.3172**	**9.8216**	**3.3623**	**3.0518**	**6.4141**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.1124	1.1755	2.7400e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		223.3071	223.3071	0.0124		223.5668
Total	**0.0831**	**0.1124**	**1.1755**	**2.7400e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**223.3071**	**223.3071**	**0.0124**		**223.5668**

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9270	0.0000	2.9270	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**2.9270**	**3.3172**	**6.2442**	**1.5130**	**3.0518**	**4.5649**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.1124	1.1755	2.7400e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		223.3071	223.3071	0.0124		223.5668
Total	**0.0831**	**0.1124**	**1.1755**	**2.7400e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**223.3071**	**223.3071**	**0.0124**		**223.5668**

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5044	0.0000	6.5044	3.3623	0.0000	3.3623			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**6.5044**	**2.7880**	**9.2925**	**3.3623**	**2.5650**	**5.9273**		**6,212.8042**	**6,212.8042**	**1.9341**		**6,253.4209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0746	0.1021	1.0635	2.7400e-003	0.2236	1.9600e-003	0.2255	0.0593	1.8100e-003	0.0611		215.1183	215.1183	0.0115		215.3596
Total	**0.0746**	**0.1021**	**1.0635**	**2.7400e-003**	**0.2236**	**1.9600e-003**	**0.2255**	**0.0593**	**1.8100e-003**	**0.0611**		**215.1183**	**215.1183**	**0.0115**		**215.3596**

3.2 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9270	0.0000	2.9270	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650	0.0000	6,212.8041	6,212.8041	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**2.9270**	**2.7880**	**5.7150**	**1.5130**	**2.5650**	**4.0780**	**0.0000**	**6,212.8041**	**6,212.8041**	**1.9341**		**6,253.4209**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0746	0.1021	1.0635	2.7400e-003	0.2236	1.9600e-003	0.2255	0.0593	1.8100e-003	0.0611		215.1183	215.1183	0.0115		215.3596
Total	**0.0746**	**0.1021**	**1.0635**	**2.7400e-003**	**0.2236**	**1.9600e-003**	**0.2255**	**0.0593**	**1.8100e-003**	**0.0611**		**215.1183**	**215.1183**	**0.0115**		**215.3596**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.1689	58.3622	87.7225	0.1692	4.8483	0.9009	5.7492	1.3797	0.8286	2.2083		16,421.7299	16,421.7299	0.1246		16,424.3472
Worker	12.8084	17.5115	182.4991	0.4703	38.3617	0.3366	38.6983	10.1737	0.3114	10.4851		36,914.3078	36,914.3078	1.9711		36,955.7016
Total	**18.9773**	**75.8737**	**270.2216**	**0.6395**	**43.2100**	**1.2374**	**44.4474**	**11.5534**	**1.1400**	**12.6934**		**53,336.0377**	**53,336.0377**	**2.0958**		**53,380.0488**

3.3 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.1689	58.3622	87.7225	0.1692	4.8483	0.9009	5.7492	1.3797	0.8286	2.2083		16,421.7299	16,421.7299	0.1246		16,424.3472
Worker	12.8084	17.5115	182.4991	0.4703	38.3617	0.3366	38.6983	10.1737	0.3114	10.4851		36,914.3078	36,914.3078	1.9711		36,955.7016
Total	**18.9773**	**75.8737**	**270.2216**	**0.6395**	**43.2100**	**1.2374**	**44.4474**	**11.5534**	**1.1400**	**12.6934**		**53,336.0377**	**53,336.0377**	**2.0958**		**53,380.0488**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.8445	53.8171	84.9490	0.1684	4.8492	0.8559	5.7051	1.3800	0.7874	2.1674		16,084.1816	16,084.1816	0.1220		16,086.7442
Worker	11.7603	16.0548	167.0945	0.4685	38.3617	0.3282	38.6899	10.1737	0.3042	10.4779		35,465.6632	35,465.6632	1.8424		35,504.3528
Total	**17.6048**	**69.8719**	**252.0435**	**0.6368**	**43.2109**	**1.1841**	**44.3950**	**11.5537**	**1.0916**	**12.6453**		**51,549.8448**	**51,549.8448**	**1.9644**		**51,591.0970**

3.3 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.8445	53.8171	84.9490	0.1684	4.8492	0.8559	5.7051	1.3800	0.7874	2.1674		16,084.1816	16,084.1816	0.1220		16,086.7442
Worker	11.7603	16.0548	167.0945	0.4685	38.3617	0.3282	38.6899	10.1737	0.3042	10.4779		35,465.6632	35,465.6632	1.8424		35,504.3528
Total	**17.6048**	**69.8719**	**252.0435**	**0.6368**	**43.2109**	**1.1841**	**44.3950**	**11.5537**	**1.0916**	**12.6453**		**51,549.8448**	**51,549.8448**	**1.9644**		**51,591.0970**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.5841	47.0705	82.7533	0.1682	4.8501	0.7813	5.6314	1.3804	0.7188	2.0992		15,725.6447	15,725.6447	0.1197		15,728.1582
Worker	11.0247	14.8797	155.4610	0.4684	38.3617	0.3248	38.6865	10.1737	0.3012	10.4749		34,039.4767	34,039.4767	1.7463		34,076.1481
Total	**16.6087**	**61.9502**	**238.2143**	**0.6366**	**43.2118**	**1.1062**	**44.3179**	**11.5541**	**1.0200**	**12.5741**		**49,765.1214**	**49,765.1214**	**1.8659**		**49,804.3063**

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.5841	47.0705	82.7533	0.1682	4.8501	0.7813	5.6314	1.3804	0.7188	2.0992		15,725.6447	15,725.6447	0.1197		15,728.1582
Worker	11.0247	14.8797	155.4610	0.4684	38.3617	0.3248	38.6865	10.1737	0.3012	10.4749		34,039.4767	34,039.4767	1.7463		34,076.1481
Total	**16.6087**	**61.9502**	**238.2143**	**0.6366**	**43.2118**	**1.1062**	**44.3179**	**11.5541**	**1.0200**	**12.5741**		**49,765.1214**	**49,765.1214**	**1.8659**		**49,804.3063**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.3849	40.0414	80.7147	0.1681	4.8502	0.7111	5.5613	1.3804	0.6542	2.0346		15,713.4963	15,713.4963	0.1206		15,716.0292
Worker	10.4246	13.8888	145.7978	0.4693	38.3617	0.3238	38.6855	10.1737	0.3003	10.4740		33,504.7305	33,504.7305	1.6704		33,539.8096
Total	**15.8095**	**53.9303**	**226.5125**	**0.6373**	**43.2119**	**1.0349**	**44.2468**	**11.5541**	**0.9545**	**12.5086**		**49,218.2268**	**49,218.2268**	**1.7911**		**49,255.8388**

3.3 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**	**0.0000**	**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.3849	40.0414	80.7147	0.1681	4.8502	0.7111	5.5613	1.3804	0.6542	2.0346		15,713.4963	15,713.4963	0.1206		15,716.0292
Worker	10.4246	13.8888	145.7978	0.4693	38.3617	0.3238	38.6855	10.1737	0.3003	10.4740		33,504.7305	33,504.7305	1.6704		33,539.8096
Total	**15.8095**	**53.9303**	**226.5125**	**0.6373**	**43.2119**	**1.0349**	**44.2468**	**11.5541**	**0.9545**	**12.5086**		**49,218.2268**	**49,218.2268**	**1.7911**		**49,255.8388**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**		**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.2628	36.3576	78.7131	0.1679	4.8503	0.7032	5.5535	1.3804	0.6470	2.0274		15,700.5504	15,700.5504	0.1233		15,703.1398
Worker	9.8612	12.9980	136.7592	0.4692	38.3617	0.3223	38.6839	10.1737	0.2989	10.4726		32,945.8510	32,945.8510	1.5985		32,979.4186
Total	**15.1240**	**49.3556**	**215.4723**	**0.6371**	**43.2120**	**1.0255**	**44.2374**	**11.5541**	**0.9459**	**12.5000**		**48,646.4014**	**48,646.4014**	**1.7218**		**48,682.5584**

3.3 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**	**0.0000**	**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.2628	36.3576	78.7131	0.1679	4.8503	0.7032	5.5535	1.3804	0.6470	2.0274		15,700.5504	15,700.5504	0.1233		15,703.1398
Worker	9.8612	12.9980	136.7592	0.4692	38.3617	0.3223	38.6839	10.1737	0.2989	10.4726		32,945.8510	32,945.8510	1.5985		32,979.4186
Total	**15.1240**	**49.3556**	**215.4723**	**0.6371**	**43.2120**	**1.0255**	**44.2374**	**11.5541**	**0.9459**	**12.5000**		**48,646.4014**	**48,646.4014**	**1.7218**		**48,682.5584**

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	**1.5661**	**14.3126**	**16.2093**	**0.0268**		**0.6967**	**0.6967**		**0.6557**	**0.6557**		**2,544.6262**	**2,544.6262**	**0.6044**		**2,557.3191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.8918	28.8818	75.8945	0.1671	4.8504	0.6943	5.5447	1.3805	0.6388	2.0193		15,626.0330	15,626.0330	0.1111		15,628.3670
Worker	9.3268	12.1995	128.4157	0.4691	38.3617	0.3208	38.6825	10.1737	0.2976	10.4713		32,432.3027	32,432.3027	1.5343		32,464.5233
Total	**14.2185**	**41.0813**	**204.3102**	**0.6362**	**43.2121**	**1.0152**	**44.2272**	**11.5542**	**0.9364**	**12.4905**		**48,058.3357**	**48,058.3357**	**1.6455**		**48,092.8903**

3.3 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	**1.5661**	**14.3126**	**16.2093**	**0.0268**		**0.6967**	**0.6967**		**0.6557**	**0.6557**	**0.0000**	**2,544.6262**	**2,544.6262**	**0.6044**		**2,557.3191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.8918	28.8818	75.8945	0.1671	4.8504	0.6943	5.5447	1.3805	0.6388	2.0193		15,626.0330	15,626.0330	0.1111		15,628.3670
Worker	9.3268	12.1995	128.4157	0.4691	38.3617	0.3208	38.6825	10.1737	0.2976	10.4713		32,432.3027	32,432.3027	1.5343		32,464.5233
Total	**14.2185**	**41.0813**	**204.3102**	**0.6362**	**43.2121**	**1.0152**	**44.2272**	**11.5542**	**0.9364**	**12.4905**		**48,058.3357**	**48,058.3357**	**1.6455**		**48,092.8903**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
Total	**1.4653**	**13.3774**	**16.1332**	**0.0268**		**0.6106**	**0.6106**		**0.5744**	**0.5744**		**2,545.1154**	**2,545.1154**	**0.6009**		**2,557.7349**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.8013	28.7043	74.2591	0.1674	4.8504	0.6951	5.5455	1.3804	0.6395	2.0199		15,660.6533	15,660.6533	0.1125		15,663.0152
Worker	8.8673	11.5289	121.8539	0.4723	38.3617	0.3237	38.6854	10.1737	0.3003	10.4740		32,190.8131	32,190.8131	1.4940		32,222.1872
Total	**13.6686**	**40.2332**	**196.1130**	**0.6397**	**43.2121**	**1.0188**	**44.2309**	**11.5541**	**0.9398**	**12.4939**		**47,851.4664**	**47,851.4664**	**1.6065**		**47,885.2024**

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	**1.4653**	**13.3774**	**16.1332**	**0.0268**		**0.6106**	**0.6106**		**0.5744**	**0.5744**	**0.0000**	**2,545.1154**	**2,545.1154**	**0.6009**		**2,557.7349**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.8013	28.7043	74.2591	0.1674	4.8504	0.6951	5.5455	1.3804	0.6395	2.0199		15,660.6533	15,660.6533	0.1125		15,663.0152
Worker	8.8673	11.5289	121.8539	0.4723	38.3617	0.3237	38.6854	10.1737	0.3003	10.4740		32,190.8131	32,190.8131	1.4940		32,222.1872
Total	**13.6686**	**40.2332**	**196.1130**	**0.6397**	**43.2121**	**1.0188**	**44.2309**	**11.5541**	**0.9398**	**12.4939**		**47,851.4664**	**47,851.4664**	**1.6065**		**47,885.2024**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.7208	28.5032	73.0454	0.1674	4.8505	0.6985	5.5490	1.3805	0.6427	2.0231		15,661.4375	15,661.4375	0.1129		15,663.8085
Worker	8.4484	10.9320	115.8560	0.4722	38.3617	0.3238	38.6855	10.1737	0.3004	10.4741		31,773.0996	31,773.0996	1.4458		31,803.4608
Total	**13.1691**	**39.4352**	**188.9014**	**0.6396**	**43.2122**	**1.0223**	**44.2345**	**11.5542**	**0.9431**	**12.4973**		**47,434.5371**	**47,434.5371**	**1.5587**		**47,467.2693**

3.3 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.7208	28.5032	73.0454	0.1674	4.8505	0.6985	5.5490	1.3805	0.6427	2.0231		15,661.4375	15,661.4375	0.1129		15,663.8085
Worker	8.4484	10.9320	115.8560	0.4722	38.3617	0.3238	38.6855	10.1737	0.3004	10.4741		31,773.0996	31,773.0996	1.4458		31,803.4608
Total	**13.1691**	**39.4352**	**188.9014**	**0.6396**	**43.2122**	**1.0223**	**44.2345**	**11.5542**	**0.9431**	**12.4973**		**47,434.5371**	**47,434.5371**	**1.5587**		**47,467.2693**

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.5759	27.6428	71.7332	0.1673	4.8506	0.6695	5.5200	1.3805	0.6159	1.9964		15,658.1930	15,658.1930	0.1095		15,660.4923
Worker	8.0644	10.4125	110.6069	0.4722	38.3617	0.3251	38.6868	10.1737	0.3016	10.4753		31,406.3068	31,406.3068	1.4031		31,435.7717
Total	**12.6403**	**38.0553**	**182.3401**	**0.6395**	**43.2123**	**0.9946**	**44.2068**	**11.5542**	**0.9176**	**12.4718**		**47,064.4998**	**47,064.4998**	**1.5126**		**47,096.2641**

3.3 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.5759	27.6428	71.7332	0.1673	4.8506	0.6695	5.5200	1.3805	0.6159	1.9964		15,658.1930	15,658.1930	0.1095		15,660.4923
Worker	8.0644	10.4125	110.6069	0.4722	38.3617	0.3251	38.6868	10.1737	0.3016	10.4753		31,406.3068	31,406.3068	1.4031		31,435.7717
Total	**12.6403**	**38.0553**	**182.3401**	**0.6395**	**43.2123**	**0.9946**	**44.2068**	**11.5542**	**0.9176**	**12.4718**		**47,064.4998**	**47,064.4998**	**1.5126**		**47,096.2641**

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.5292	27.4172	71.0020	0.1673	4.8508	0.6712	5.5219	1.3806	0.6175	1.9980		15,659.3650	15,659.3650	0.1097		15,661.6693
Worker	7.7045	9.9440	105.9044	0.4722	38.3617	0.3259	38.6876	10.1737	0.3024	10.4761		31,084.7352	31,084.7352	1.3647		31,113.3941
Total	**12.2337**	**37.3612**	**176.9063**	**0.6395**	**43.2124**	**0.9971**	**44.2095**	**11.5543**	**0.9199**	**12.4741**		**46,744.1002**	**46,744.1002**	**1.4744**		**46,775.0634**

3.3 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.5292	27.4172	71.0020	0.1673	4.8508	0.6712	5.5219	1.3806	0.6175	1.9980		15,659.3650	15,659.3650	0.1097		15,661.6693
Worker	7.7045	9.9440	105.9044	0.4722	38.3617	0.3259	38.6876	10.1737	0.3024	10.4761		31,084.7352	31,084.7352	1.3647		31,113.3941
Total	**12.2337**	**37.3612**	**176.9063**	**0.6395**	**43.2124**	**0.9971**	**44.2095**	**11.5543**	**0.9199**	**12.4741**		**46,744.1002**	**46,744.1002**	**1.4744**		**46,775.0634**

3.3 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4710	27.1513	70.3300	0.1673	4.8510	0.6668	5.5178	1.3806	0.6135	1.9941		15,659.5718	15,659.5718	0.1092		15,661.8659
Worker	7.3775	9.5221	101.8116	0.4721	38.3617	0.3267	38.6884	10.1737	0.3031	10.4768		30,807.1139	30,807.1139	1.3307		30,835.0591
Total	**11.8485**	**36.6734**	**172.1416**	**0.6395**	**43.2127**	**0.9936**	**44.2062**	**11.5543**	**0.9166**	**12.4710**		**46,466.6858**	**46,466.6858**	**1.4400**		**46,496.9250**

3.3 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4710	27.1513	70.3300	0.1673	4.8510	0.6668	5.5178	1.3806	0.6135	1.9941		15,659.5718	15,659.5718	0.1092		15,661.8659
Worker	7.3775	9.5221	101.8116	0.4721	38.3617	0.3267	38.6884	10.1737	0.3031	10.4768		30,807.1139	30,807.1139	1.3307		30,835.0591
Total	**11.8485**	**36.6734**	**172.1416**	**0.6395**	**43.2127**	**0.9936**	**44.2062**	**11.5543**	**0.9166**	**12.4710**		**46,466.6858**	**46,466.6858**	**1.4400**		**46,496.9250**

3.3 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4198	27.0160	69.5568	0.1673	4.8512	0.6678	5.5189	1.3807	0.6144	1.9951		15,660.1380	15,660.1380	0.1094		15,662.4348
Worker	7.0467	9.1003	97.7153	0.4721	38.3617	0.3269	38.6885	10.1737	0.3033	10.4770		30,565.1739	30,565.1739	1.2971		30,592.4135
Total	**11.4666**	**36.1163**	**167.2721**	**0.6394**	**43.2128**	**0.9946**	**44.2075**	**11.5544**	**0.9176**	**12.4720**		**46,225.3119**	**46,225.3119**	**1.4065**		**46,254.8483**

3.3 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.4198	27.0160	69.5568	0.1673	4.8512	0.6678	5.5189	1.3807	0.6144	1.9951		15,660.1380	15,660.1380	0.1094		15,662.4348
Worker	7.0467	9.1003	97.7153	0.4721	38.3617	0.3269	38.6885	10.1737	0.3033	10.4770		30,565.1739	30,565.1739	1.2971		30,592.4135
Total	**11.4666**	**36.1163**	**167.2721**	**0.6394**	**43.2128**	**0.9946**	**44.2075**	**11.5544**	**0.9176**	**12.4720**		**46,225.3119**	**46,225.3119**	**1.4065**		**46,254.8483**

3.3 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.3729	26.8969	69.0588	0.1673	4.8512	0.6688	5.5200	1.3807	0.6153	1.9960		15,660.3057	15,660.3057	0.1095		15,662.6053
Worker	6.7307	8.6985	94.0608	0.4721	38.3617	0.3264	38.6881	10.1737	0.3029	10.4766		30,356.2830	30,356.2830	1.2654		30,382.8568
Total	**11.1036**	**35.5954**	**163.1196**	**0.6394**	**43.2129**	**0.9953**	**44.2081**	**11.5544**	**0.9182**	**12.4726**		**46,016.5886**	**46,016.5886**	**1.3749**		**46,045.4621**

3.3 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.3729	26.8969	69.0588	0.1673	4.8512	0.6688	5.5200	1.3807	0.6153	1.9960		15,660.3057	15,660.3057	0.1095		15,662.6053
Worker	6.7307	8.6985	94.0608	0.4721	38.3617	0.3264	38.6881	10.1737	0.3029	10.4766		30,356.2830	30,356.2830	1.2654		30,382.8568
Total	**11.1036**	**35.5954**	**163.1196**	**0.6394**	**43.2129**	**0.9953**	**44.2081**	**11.5544**	**0.9182**	**12.4726**		**46,016.5886**	**46,016.5886**	**1.3749**		**46,045.4621**

3.4 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.6887	2.1851	23.1577	0.0944	7.6679	0.0647	7.7326	2.0336	0.0601	2.0936		6,350.9168	6,350.9168	0.2890		6,356.9855
Total	**1.6887**	**2.1851**	**23.1577**	**0.0944**	**7.6679**	**0.0647**	**7.7326**	**2.0336**	**0.0601**	**2.0936**		**6,350.9168**	**6,350.9168**	**0.2890**		**6,356.9855**

3.4 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.6887	2.1851	23.1577	0.0944	7.6679	0.0647	7.7326	2.0336	0.0601	2.0936		6,350.9168	6,350.9168	0.2890		6,356.9855
Total	**1.6887**	**2.1851**	**23.1577**	**0.0944**	**7.6679**	**0.0647**	**7.7326**	**2.0336**	**0.0601**	**2.0936**		**6,350.9168**	**6,350.9168**	**0.2890**		**6,356.9855**

3.4 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.6119	2.0813	22.1085	0.0944	7.6679	0.0650	7.7329	2.0336	0.0603	2.0939		6,277.6010	6,277.6010	0.2805		6,283.4905
Total	**1.6119**	**2.0813**	**22.1085**	**0.0944**	**7.6679**	**0.0650**	**7.7329**	**2.0336**	**0.0603**	**2.0939**		**6,277.6010**	**6,277.6010**	**0.2805**		**6,283.4905**

3.4 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.6119	2.0813	22.1085	0.0944	7.6679	0.0650	7.7329	2.0336	0.0603	2.0939		6,277.6010	6,277.6010	0.2805		6,283.4905
Total	**1.6119**	**2.0813**	**22.1085**	**0.0944**	**7.6679**	**0.0650**	**7.7329**	**2.0336**	**0.0603**	**2.0939**		**6,277.6010**	**6,277.6010**	**0.2805**		**6,283.4905**

3.4 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.5400	1.9876	21.1685	0.0944	7.6679	0.0652	7.7330	2.0336	0.0604	2.0940		6,213.3241	6,213.3241	0.2728		6,219.0526
Total	**1.5400**	**1.9876**	**21.1685**	**0.0944**	**7.6679**	**0.0652**	**7.7330**	**2.0336**	**0.0604**	**2.0940**		**6,213.3241**	**6,213.3241**	**0.2728**		**6,219.0526**

3.4 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.5400	1.9876	21.1685	0.0944	7.6679	0.0652	7.7330	2.0336	0.0604	2.0940		6,213.3241	6,213.3241	0.2728		6,219.0526
Total	**1.5400**	**1.9876**	**21.1685**	**0.0944**	**7.6679**	**0.0652**	**7.7330**	**2.0336**	**0.0604**	**2.0940**		**6,213.3241**	**6,213.3241**	**0.2728**		**6,219.0526**

3.4 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4746	1.9033	20.3505	0.0944	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,157.8322	6,157.8322	0.2660		6,163.4180
Total	**1.4746**	**1.9033**	**20.3505**	**0.0944**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,157.8322**	**6,157.8322**	**0.2660**		**6,163.4180**

3.4 Architectural Coating - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4746	1.9033	20.3505	0.0944	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,157.8322	6,157.8322	0.2660		6,163.4180
Total	**1.4746**	**1.9033**	**20.3505**	**0.0944**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,157.8322**	**6,157.8322**	**0.2660**		**6,163.4180**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4085	1.8190	19.5317	0.0944	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,109.4724	6,109.4724	0.2593		6,114.9172
Total	**1.4085**	**1.8190**	**19.5317**	**0.0944**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,109.4724**	**6,109.4724**	**0.2593**		**6,114.9172**

3.4 Architectural Coating - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**29.7228**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.4085	1.8190	19.5317	0.0944	7.6679	0.0653	7.7332	2.0336	0.0606	2.0942		6,109.4724	6,109.4724	0.2593		6,114.9172
Total	**1.4085**	**1.8190**	**19.5317**	**0.0944**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0942**		**6,109.4724**	**6,109.4724**	**0.2593**		**6,114.9172**

3.4 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.3454	1.7387	18.8012	0.0944	7.6679	0.0653	7.7331	2.0336	0.0605	2.0941		6,067.7186	6,067.7186	0.2529		6,073.0302
Total	**1.3454**	**1.7387**	**18.8012**	**0.0944**	**7.6679**	**0.0653**	**7.7331**	**2.0336**	**0.0605**	**2.0941**		**6,067.7186**	**6,067.7186**	**0.2529**		**6,073.0302**

3.4 Architectural Coating - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.3454	1.7387	18.8012	0.0944	7.6679	0.0653	7.7331	2.0336	0.0605	2.0941		6,067.7186	6,067.7186	0.2529		6,073.0302
Total	**1.3454**	**1.7387**	**18.8012**	**0.0944**	**7.6679**	**0.0653**	**7.7331**	**2.0336**	**0.0605**	**2.0941**		**6,067.7186**	**6,067.7186**	**0.2529**		**6,073.0302**

3.4 Architectural Coating - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2835	1.6622	18.1459	0.0945	7.6679	0.0653	7.7332	2.0336	0.0606	2.0941		6,043.3472	6,043.3472	0.2479		6,048.5541
Total	**1.2835**	**1.6622**	**18.1459**	**0.0945**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0941**		**6,043.3472**	**6,043.3472**	**0.2479**		**6,048.5541**

3.4 Architectural Coating - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2835	1.6622	18.1459	0.0945	7.6679	0.0653	7.7332	2.0336	0.0606	2.0941		6,043.3472	6,043.3472	0.2479		6,048.5541
Total	**1.2835**	**1.6622**	**18.1459**	**0.0945**	**7.6679**	**0.0653**	**7.7332**	**2.0336**	**0.0606**	**2.0941**		**6,043.3472**	**6,043.3472**	**0.2479**		**6,048.5541**

3.4 Architectural Coating - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2163	1.5942	17.5519	0.0945	7.6679	0.0651	7.7329	2.0336	0.0604	2.0939		6,013.0488	6,013.0488	0.2426		6,018.1436
Total	**1.2163**	**1.5942**	**17.5519**	**0.0945**	**7.6679**	**0.0651**	**7.7329**	**2.0336**	**0.0604**	**2.0939**		**6,013.0488**	**6,013.0488**	**0.2426**		**6,018.1436**

3.4 Architectural Coating - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**29.6827**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2163	1.5942	17.5519	0.0945	7.6679	0.0651	7.7329	2.0336	0.0604	2.0939		6,013.0488	6,013.0488	0.2426		6,018.1436
Total	**1.2163**	**1.5942**	**17.5519**	**0.0945**	**7.6679**	**0.0651**	**7.7329**	**2.0336**	**0.0604**	**2.0939**		**6,013.0488**	**6,013.0488**	**0.2426**		**6,018.1436**

3.5 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234		2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**		**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0380	0.4111	2.0600e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		132.6761	132.6761	5.5300e-003		132.7922
Total	**0.0294**	**0.0380**	**0.4111**	**2.0600e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**132.6761**	**132.6761**	**5.5300e-003**		**132.7922**

3.5 Paving - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234	0.0000	2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**	**0.0000**	**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0380	0.4111	2.0600e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		132.6761	132.6761	5.5300e-003		132.7922
Total	**0.0294**	**0.0380**	**0.4111**	**2.0600e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**132.6761**	**132.6761**	**5.5300e-003**		**132.7922**

3.5 Paving - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234		2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**		**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0281	0.0363	0.3968	2.0700e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		132.1432	132.1432	5.4200e-003		132.2570
Total	**0.0281**	**0.0363**	**0.3968**	**2.0700e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**132.1432**	**132.1432**	**5.4200e-003**		**132.2570**

3.5 Paving - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3549	6.9800	15.5192	0.0275		0.3234	0.3234		0.3234	0.3234	0.0000	2,599.9866	2,599.9866	0.1219		2,602.5460
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3549**	**6.9800**	**15.5192**	**0.0275**		**0.3234**	**0.3234**		**0.3234**	**0.3234**	**0.0000**	**2,599.9866**	**2,599.9866**	**0.1219**		**2,602.5460**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0281	0.0363	0.3968	2.0700e-003	0.1677	1.4300e-003	0.1691	0.0445	1.3200e-003	0.0458		132.1432	132.1432	5.4200e-003		132.2570
Total	**0.0281**	**0.0363**	**0.3968**	**2.0700e-003**	**0.1677**	**1.4300e-003**	**0.1691**	**0.0445**	**1.3200e-003**	**0.0458**		**132.1432**	**132.1432**	**5.4200e-003**		**132.2570**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	105.1331	245.6727	1,114.5918	4.5823	297.8539	6.7016	304.5554	79.7422	6.1841	85.9263		329,790.4018	329,790.4018	8.9787		329,978.9545
Unmitigated	105.1331	245.6727	1,114.5918	4.5823	297.8539	6.7016	304.5554	79.7422	6.1841	85.9263		329,790.4018	329,790.4018	8.9787		329,978.9545

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	13,055.00	14,280.00	12110.00	44,747,604	44,747,604
General Light Industry	2,977.50	562.50	292.50	9,958,880	9,958,880
Hotel	1,631.00	1,634.50	1186.50	3,741,516	3,741,516
Regional Shopping Center	29,208.00	34,176.00	17268.00	61,018,154	61,018,154
Total	46,871.50	50,653.00	30,857.00	119,466,154	119,466,154

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491908	0.059855	0.185077	0.131229	0.044940	0.007356	0.019164	0.046757	0.003019	0.003347	0.004084	0.000506	0.002760

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113
NaturalGas Unmitigated	1.8787	16.5192	10.2426	0.1025		1.2980	1.2980		1.2980	1.2980		20,494.5847	20,494.5847	0.3928	0.3757	20,619.3113

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	38650.7	0.4168	3.7893	3.1830	0.0227		0.2880	0.2880		0.2880	0.2880		4,547.1394	4,547.1394	0.0872	0.0834	4,574.8125
Hotel	34836.1	0.3757	3.4153	2.8689	0.0205		0.2596	0.2596		0.2596	0.2596		4,098.3607	4,098.3607	0.0786	0.0751	4,123.3026
Regional Shopping Center	5589.04	0.0603	0.5480	0.4603	3.2900e-003		0.0416	0.0416		0.0416	0.0416		657.5343	657.5343	0.0126	0.0121	661.5359
Apartments High Rise	95128.2	1.0259	8.7667	3.7305	0.0560		0.7088	0.7088		0.7088	0.7088		11,191.5504	11,191.5504	0.2145	0.2052	11,259.6603
Total		**1.8787**	**16.5192**	**10.2426**	**0.1025**		**1.2980**	**1.2980**		**1.2980**	**1.2980**		**20,494.5847**	**20,494.5847**	**0.3928**	**0.3757**	**20,619.3113**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	38.6507	0.4168	3.7893	3.1830	0.0227		0.2880	0.2880		0.2880	0.2880		4,547.1394	4,547.1394	0.0872	0.0834	4,574.8125
Hotel	34.8361	0.3757	3.4153	2.8689	0.0205		0.2596	0.2596		0.2596	0.2596		4,098.3607	4,098.3607	0.0786	0.0751	4,123.3026
Regional Shopping Center	5.58904	0.0603	0.5480	0.4603	3.2900e-003		0.0416	0.0416		0.0416	0.0416		657.5343	657.5343	0.0126	0.0121	661.5359
Apartments High Rise	95.1282	1.0259	8.7667	3.7305	0.0560		0.7088	0.7088		0.7088	0.7088		11,191.5504	11,191.5504	0.2145	0.2052	11,259.6603
Total		**1.8787**	**16.5192**	**10.2426**	**0.1025**		**1.2980**	**1.2980**		**1.2980**	**1.2980**		**20,494.5847**	**20,494.5847**	**0.3928**	**0.3757**	**20,619.3113**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	143.4619	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575
Unmitigated	148.1442	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021	0.0000	520.4364	520.4364	0.4962	0.0000	530.8575

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.5472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	117.9724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6247	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021		520.4364	520.4364	0.4962		530.8575
Total	**148.1442**	**3.3218**	**287.9730**	**0.0153**		**1.6021**	**1.6021**		**1.6021**	**1.6021**	**0.0000**	**520.4364**	**520.4364**	**0.4962**	**0.0000**	**530.8575**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	16.8649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	117.9724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6247	3.3218	287.9730	0.0153		1.6021	1.6021		1.6021	1.6021		520.4364	520.4364	0.4962		530.8575
Total	**143.4619**	**3.3218**	**287.9730**	**0.0153**		**1.6021**	**1.6021**		**1.6021**	**1.6021**	**0.0000**	**520.4364**	**520.4364**	**0.4962**	**0.0000**	**530.8575**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix C

Noise Impact Model Results

<Organization?> 2 May 2016
<Analysis By?> TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			Ldn	Ldn		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	Ldn	Calculated	Goal	Calculated
							Sub'l Inc					minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Noise Measurement 5	1	1	0.0	73.5	66	73.5	10	Snd Lvl	73.5	0.0	8	-8.0
Noise Measurement 6	5	1	0.0	76.1	66	76.1	10	Snd Lvl	76.1	0.0	8	-8.0
Noise Measurement 3	7	1	0.0	75.7	66	75.7	10	Snd Lvl	75.7	0.0	8	-8.0
Noise Measurement 2	9	1	0.0	76.8	66	76.8	10	Snd Lvl	76.8	0.0	8	-8.0
Noise Measurement 1	11	1	0.0	76.9	66	76.9	10	Snd Lvl	76.9	0.0	8	-8.0
Noise Measurement 4	20	1	0.0	79.2	66	79.2	10	Snd Lvl	79.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	6	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

2 May 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier Ldn Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Ldn	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Noise Measurement 5	1	1	0.0	73.7	66	73.7	10	Snd Lvl	73.7	0.0	8	-8.0
Noise Measurement 6	5	1	0.0	76.3	66	76.3	10	Snd Lvl	76.3	0.0	8	-8.0
Noise Measurement 3	7	1	0.0	75.9	66	75.9	10	Snd Lvl	75.9	0.0	8	-8.0
Noise Measurement 2	9	1	0.0	77.0	66	77.0	10	Snd Lvl	77.0	0.0	8	-8.0
Noise Measurement 1	11	1	0.0	77.1	66	77.1	10	Snd Lvl	77.1	0.0	8	-8.0
Noise Measurement 4	20	1	0.0	79.4	66	79.4	10	Snd Lvl	79.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	6	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Table C: Existing (2014) and Existing Plus Project Freeway Volumes

	Segment	Existing (2015) Volume	Project Trips	Existing + Project Volume
1	105 West of Long Beach	205,000	8,388	213,388
2	105 East of Long Beach	196,000	10,065	206,065

Table D: 2040 and 2040 Plus Project Freeway Volumes

	Segment	2040 Volume	Project Trips	2040 + Project Volume
1	105 West of Long Beach	176,897	8,388	185,285
2	105 East of Long Beach	168,297	10,065	178,362

* There is a reduction in traffic volumes between 2008 and 2035 per the SCAG SCS Model

<Organization?>
<Analysis By?>

2 May 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier Ldn Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Ldn	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Noise Measurement 5	1	1	0.0	73.1	66	73.1	10	Snd Lvl	73.1	0.0	8	-8.0
Noise Measurement 6	5	1	0.0	75.8	66	75.8	10	Snd Lvl	75.8	0.0	8	-8.0
Noise Measurement 3	7	1	0.0	75.8	66	75.8	10	Snd Lvl	75.8	0.0	8	-8.0
Noise Measurement 2	9	1	0.0	76.6	66	76.6	10	Snd Lvl	76.6	0.0	8	-8.0
Noise Measurement 1	11	1	0.0	76.5	66	76.5	10	Snd Lvl	76.5	0.0	8	-8.0
Noise Measurement 4	20	1	0.0	79.2	66	79.2	10	Snd Lvl	79.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	6	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 2 May 2016
<Analysis By?> TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier Ldn Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Ldn	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Noise Measurement 5	1	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0
Noise Measurement 6	5	1	0.0	75.6	66	75.6	10	Snd Lvl	75.6	0.0	8	-8.0
Noise Measurement 3	7	1	0.0	75.5	66	75.5	10	Snd Lvl	75.5	0.0	8	-8.0
Noise Measurement 2	9	1	0.0	76.4	66	76.4	10	Snd Lvl	76.4	0.0	8	-8.0
Noise Measurement 1	11	1	0.0	76.3	66	76.3	10	Snd Lvl	76.3	0.0	8	-8.0
Noise Measurement 4	20	1	0.0	79.1	66	79.1	10	Snd Lvl	79.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	6	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Table A: Project Trip Distribution & Assignment

	Roadway Segment	Distribution %	2-Way Project Traffic Volume
1	Long Beach Blvd. North of Norton Ave.	5%	1,678
2	Long Beach Blvd. South of Josephine St.	5%	1,678
3	Alameda St. North of Fernwood Avenue	5%	1,678
4	Alameda St. South of Lynwood Road	5%	1,678
5	State St. North of Oakwood Ave.	5%	1,678
6	State St. South of Redwood Ave.	5%	1,678
7	Imperial Highway West of Alameda St.	5%	1,678
8	Imperial Highway East of California Ave.	10%	3,355
	I-105 WB	25%	8,388
	I-105 EB	30%	10,065

Table B: Existing and Existing Plus Project Conditions

	Segment	Lanes	Existing (2015)		Project	Existing + Project	
			Volume	LOS	Trips	Volume	LOS
1	Long Beach Blvd. North of Norton Ave.	4-D	35,231	E	1,678	36,909	F
2	Long Beach Blvd. South of Josephine St.	4-D	33,442	E	1,678	35,120	E
3	Alameda St. North of Fernwood Avenue	4-D	28,446	C	1,678	30,124	D
4	Alameda St. South of Lynwood Road	4-D	23,555	A	1,678	25,233	B
5	State St. North of Oakwood Ave.	4-D	12,574	A	1,678	14,252	A
6	State St. South of Redwood Ave.	4-D	14,012	A	1,678	15,690	A
7	Imperial Highway West of Alameda St.	6-D	40,366	B	1,678	42,044	C
8	Imperial Highway East of California Ave.	4-D	29,318	C	3,355	32,673	D

Table C: 2040 and 2040 Plus Project Conditions

	Segment	Lanes	2040		Project	2040 + Project	
			Volume	LOS	Trips	Volume	LOS
1	Long Beach Blvd. North of Norton Ave.	4-D	34,673	E	1,678	36,351	F
2	Long Beach Blvd. South of Josephine St.	4-D	34,048	E	1,678	35,726	E
3	Alameda St. North of Fernwood Avenue	4-D	28,544	C	1,678	30,222	D
4	Alameda St. South of Lynwood Road	4-D	24,725	B	1,678	26,403	B
5	State St. North of Oakwood Ave.	4-D	10,785	A	1,678	12,463	A
6	State St. South of Redwood Ave.	4-D	14,760	A	1,678	16,438	A
7	Imperial Highway West of Alameda St.	6-D	41,698	C	1,678	43,376	C
8	Imperial Highway East of California Ave.	4-D	29,112	C	3,355	32,467	D

Appendix D

Traffic Impact Assessment

LYNWOOD TRANSIT AREA SPECIFIC PLAN

TRAFFIC IMPACT ANALYSIS

JUNE 7, 2016

PREPARED FOR:

Michael R. Kodama Planning Consultants

2740 West Magnolia Boulevard, Suite 103
Burbank, California 91505

PREPARED BY:

translutions, inc.

17632 Irvine Boulevard, Suite 200
Tustin, California 92780
(949) 656-3131

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1.0 INTRODUCTION

This report presents the methodology, findings and conclusions of the Traffic Impact Analysis (TIA) conducted for the Lynwood Transit Area Specific Plan.

The City of Lynwood is preparing the "Lynwood Transit Area Specific Plan" in coordination and with assistance by the Los Angeles County Metropolitan Transit Authority (LA Metro) transit oriented communities program. The Specific Plan Area is bounded by the LA Metro Green Line-Long Beach Transit Station Area, the 1-105 Freeway, portions of Long Beach Boulevard, Imperial Highway, and Alameda Street Industrial Park. The goal of the Specific Plan is to capture development opportunities, ease transit connections, provide transportation options and develop a more sustainable and pedestrian-oriented Lynwood.

The Specific Plan will propose recommendations that improve neighborhood access to bus and rail transit services, encourage bicycle use, and increase pedestrian mobility and safety. Additionally, it will offer useful tools to improve mobility, create housing opportunities proximate to Metro's rail system, promote economic growth through business attraction and retention, and identify public infrastructure investments to support new development projects.

The Lynwood Transit Area Specific Plan generally includes a one-half mile radius around the Green Line Long Beach Station and Alameda Street/Imperial Highway Corridor. These three facilities have significant regional transit service, augmented by the City of Lynwood local transit bus service (the Lynwood Breeze). Each one-half mile radius contains significant transit-oriented development opportunity sites.

The Lynwood Transit Area Specific Plan emphasizes a multi-modal transportation system that can meet the demands of the current and planned land uses, with the caveat that all future projects will require a project specific traffic analysis that addresses the demands of the future project. This study establishes acceptable levels of service (LOS) and, according to local criteria, recommends improvements to maintain acceptable levels of service (LOS) at major intersections within the City. The development of alternative travel modes such as transit, walking, and biking are also accommodated in the proposed network. In addition, this study also establishes the baseline for use of potential impacts on Vehicle Miles Traveled (VMT), serving the overall goal to reduce greenhouse gas emissions which is proposed by the Governor's Office of Planning and Research (OPR) to replace level of service (LOS) for transportation impacts under the California Environmental Quality Act (CEQA).

1.1 Purpose of the TIA and Study Objectives

The primary objective of this report is to analyze the existing and future circulation system for the City of Lynwood in the vicinity of the Lynwood Transit Area Specific Plan. This report also intends to satisfy the requirements for the disclosure of potential program level impacts and mitigation measures per the California Environmental Quality Act (CEQA). The TIA is also sensitive to requirements of the Los Angeles County Congestion Management Plan (CMP). It should be noted that this evaluation is a program level analysis to identify high level impacts and mitigation measures. Specific impacts at intersections and local streets will be identified as specific projects are proposed as parts of the area or individual development projects. This effort is a "Specific Plan" which is intended to identify potential development envelopes and opportunities presented by this transit rich area.

1.2 Project Location & Study Area

Lynwood is an incorporated municipality in the southern portion of the Los Angeles Basin. Located at the intersection of two major freeways, I-105 and I-710, the City is strategically situated along the Alameda rail corridor that connects the Ports of Long Beach and Los Angeles to the rest of the Los Angeles, Orange County, the Inland Empire and the nation beyond. Lynwood is also located just a few miles east of Los Angeles International Airport, another major hub for international cargo trade.

Bordered by the cities of South Gate to the north and Compton to the south, Lynwood was initially developed as a suburb of Los Angeles. The construction of the Century Freeway (I-105) connecting Los Angeles International Airport to the city of Norwalk, bisected Lynwood in two. As part of the entitlements allowing construction of the Century Freeway, provisions were made for a new rail transit corridor in the freeway median. The Los Angeles County Metropolitan Transportation Authority's (LA Metro) Green Line was completed in 1995, connecting Redondo Beach to Norwalk. The Long Beach Boulevard Rail Station is located in the center median of the Century Freeway at the interchange with Long Beach Boulevard. Figure 1 shows the location Station as one of the key transit features of the proposed Transit Oriented Communities project area.

The Lynwood Transit Specific Plan Area ("Plan Area") encompasses approximately 315 acres made up of transit, commercial, industrial and residential development, containing approximately 141 developable acres. The boundaries of the Plan Area were intended to capture opportunity sites within a ½ mile of the Metro Green Line Station and within a ½ mile of the junction of the Alameda Street and Imperial Highway bus corridors.

This report analyzes the following perimeter roadway segments for traffic operations:

1. Long Beach Boulevard north of Norton Avenue
2. Long Beach Boulevard south of Josephine Street
3. Alameda Street north of Imperial Highway
4. Alameda Street south of 119th Street
5. State Street north of Oakwood Avenue
6. State Street south of Redwood Avenue
7. Imperial Highway west of Alameda Street
8. Imperial Highway east of California Avenue

Figure 2 shows the locations of the roadway segments analyzed as part of the TIA.

This report also analyzes traffic conditions at six intersections. The selection of intersections analyzed is based on the proposed roadway geometric changes to the study area. The intersections analyzed for the existing condition are shown on Figure 3 and listed below:

1. Long Beach Boulevard/I-105 WB Slip On Ramp
2. Long Beach Boulevard/I-105 WB Off Ramp
3. Long Beach Boulevard/I-105 WB Loop On Ramp
4. Long Beach Boulevard/I-105 EB Loop On Ramp
5. Long Beach Boulevard/I-105 EB Off Ramp
6. Long Beach Boulevard/I-105 EB Slip On Ramp

The TIA analyzes a development scenario promoting future development strategically located near this transit rich community. In addition, this report also evaluated a scenario in which the ramps for Long Beach Boulevard and I-105

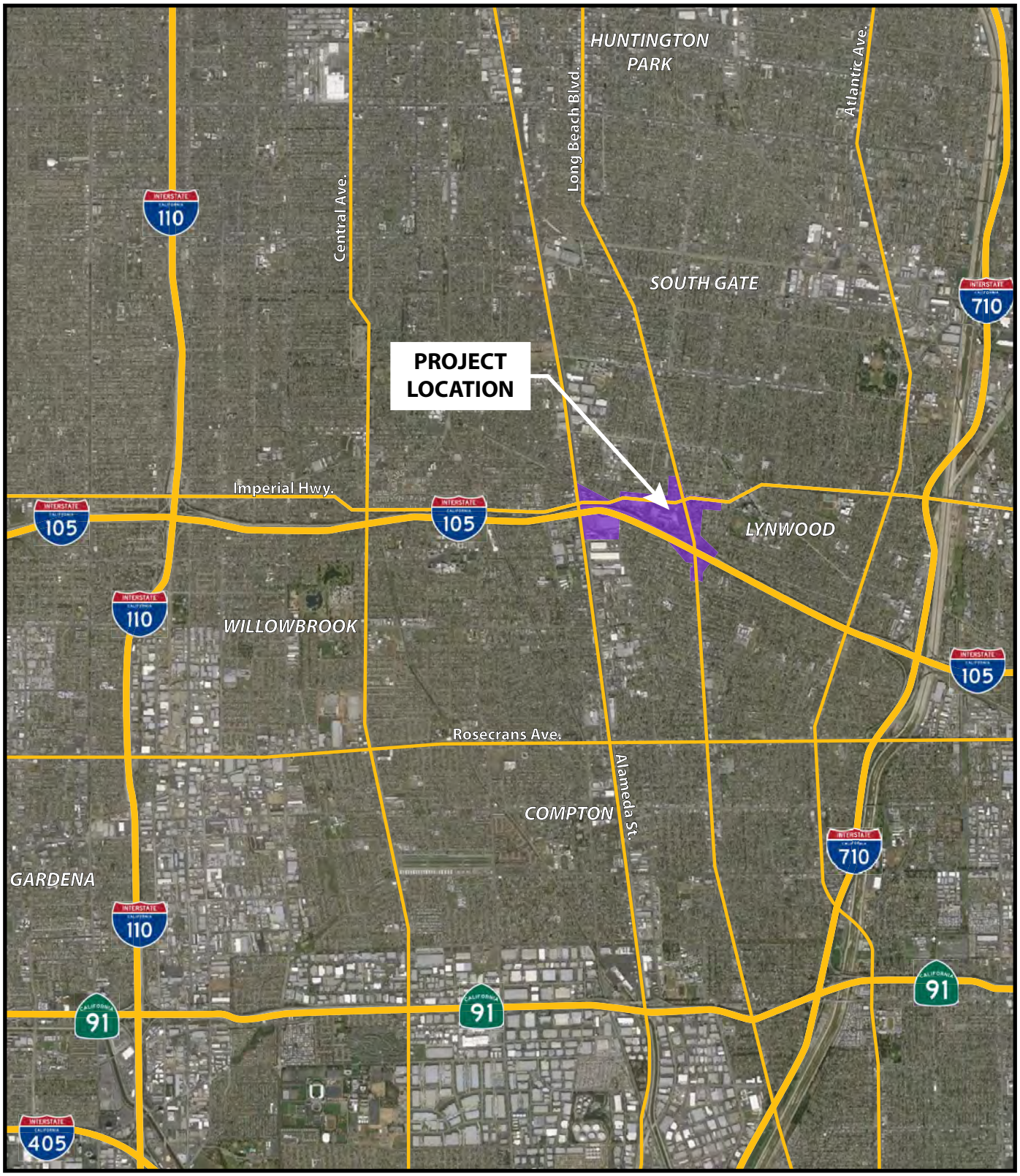

FIGURE 1

N

NO SCALE

LEGEND

Plan Area

Lynwood Transit Area Specific Plan
Regional Project Location

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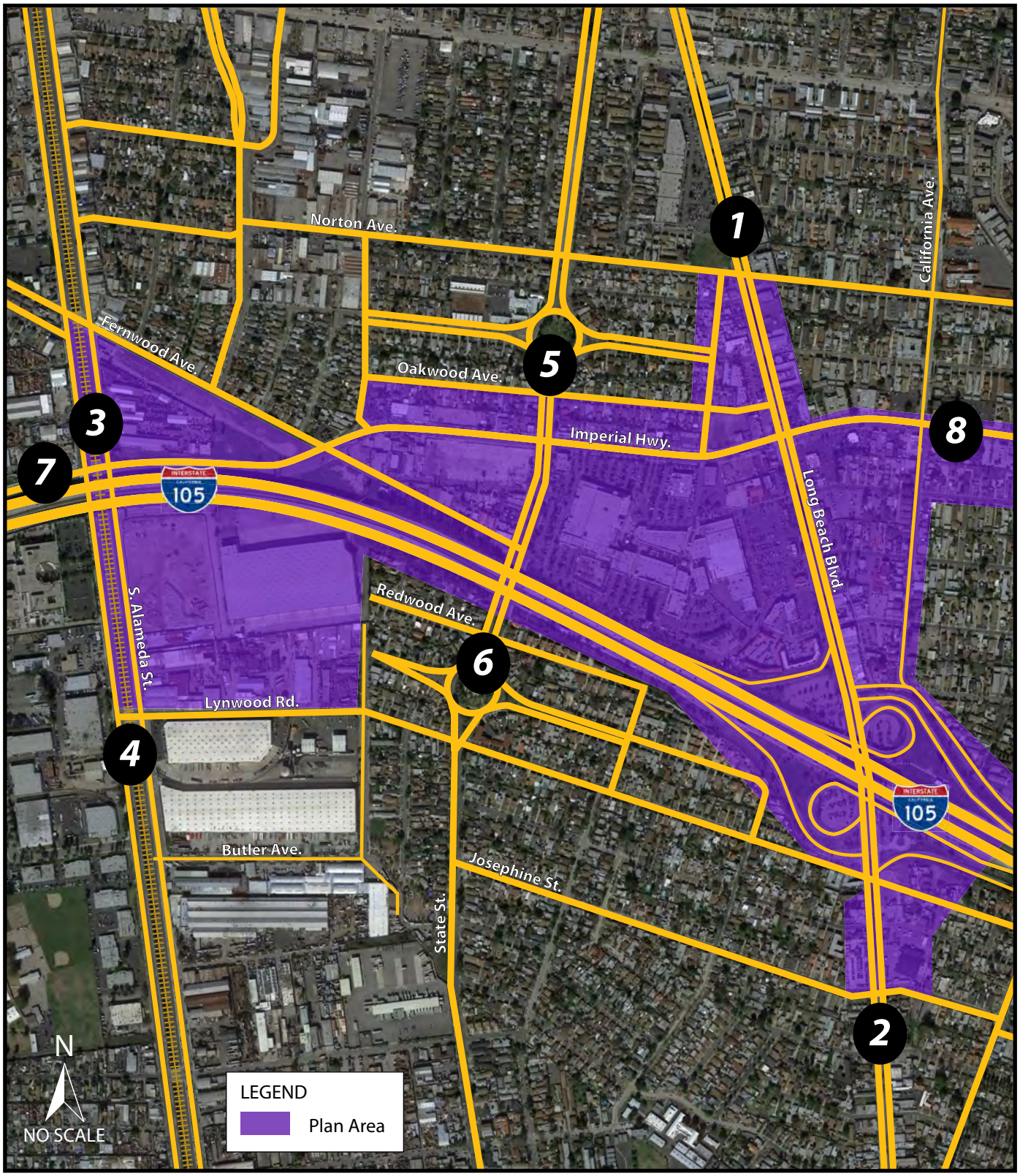

FIGURE 3

1	Long Beach Blvd. North of Norton Ave.	5	State St. North of Oakwood Ave.
2	Long Beach Blvd. South of Josephine St.	6	State St. South of Redwood Ave.
3	Alameda St. North of Imperial Highway	7	Imperial Highway West of Alameda St.
4	Alameda St. South of 119th St.	8	Imperial Highway East of California Ave.

Lynwood Transit Area Specific Plan
Roadway Segments

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FIGURE 3

Lynwood Transit Area Specific Plan
Study Intersections

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were reconfigured to be improve bicycle and pedestrian safety and access to the Green Line station. These changes represent the Project.

1.3 Analysis Scenarios

This study analyzes Existing No Project and Year 2040 with the proposed Project conditions. This TIA analyzes weekday conditions based on daily traffic. It should be noted that this evaluation is a program level analysis to identify high level impacts and mitigation measures. Specific impacts at intersections and local streets will be identified as specific projects are proposed as parts of the area or individual development projects are proposed. This effort is a "Specific Plan" which is intended to identify potential development envelopes and opportunities presented by this transit rich area.

To better understand the implications of the proposed re-configuration of the I-105/Long Beach Boulevard interchange to develop improved bicycle and pedestrian access to the rail transit station, the analysis also evaluates project impacts during the a.m. and p.m. peak hours. This analysis is focused along Long Beach Boulevard, and specifically focuses on the interchange influence area. Additional analysis of the interchange area under 2040 conditions where the interchange is reconfigured to improve pedestrian connectivity by eliminating free right turns is also conducted. The a.m. peak hour is the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m.

2.0 DEFINITIONS, PROCEDURES, AND THRESHOLDS

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream, and is generally expressed in terms of such measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A representing excellent (free-flow) conditions and LOS F representing extreme congestion. The 2010 Transportation Research Board Highway Capacity Manual (HCM) is the national and local standard to evaluate LOS. It is particularly useful in this TIA since it is receptive to signal timing and corridor wide analyses to maximize traffic flow. In addition, HCM analysis procedures also include safe pedestrian crossing times in the programming of signal phasing, thereby ensuring that the time required by pedestrians to cross major roadways is satisfied. Therefore, HCM procedures have been used to evaluate levels of service. This section discusses the LOS definitions, procedures, and thresholds used in this report. In addition to LOS as a measure of the operational conditions, Vehicle Miles Traveled (VMT) are analyzed in the existing and future condition. This form of analysis counts the aggregate number of miles traveled by motor vehicles that are generated by or attracted to the project. Trip length is also captured and the benefits coordinating new development with transit and active transportation alternatives are reflected as a reduction in motor vehicle travel.

2.1 Vehicular Levels of Service

The analysis of traffic operations at intersections was conducted according to the Highway Capacity Manual 2010 (HCM2010) delay methodologies, which is described in the Highway Capacity Manual (Transportation Research Board, Washington, D.C., December 2010). Under the HCM methodology, LOS for signalized intersections is based on the average delay experienced by vehicles traveling through an intersection, whereas for unsignalized intersections, the LOS is based on the worst approach where the minor leg has a shared lane and on the worst movement where the minor leg has dedicated turn lanes. Table A presents a brief description of each level of service letter grade, as well as the range of delays associated with each grade.

Table A: Intersection Automobile Mode LOS Criteria

LOS	Description of Drivers' Perception and Traffic Operation	Delay in Seconds	
		Unsignalized	Signalized
A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤ 10	≤ 10
B	This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	> 10 and ≤ 15	> 10 and ≤ 20
C	This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 15 and ≤ 25	> 20 and ≤ 35
D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	> 25 and ≤ 35	> 35 and ≤ 55
E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	> 35 and ≤ 50	> 55 and ≤ 80
F	This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 50	> 80

Source: *Highway Capacity Manual, 2010*

2.2 Non-automobile Modes

Historically, the HCM has used a single performance measure as the basis for defining LOS. In crafting a "multimodal" definition of LOS research documented in the HCM indicates that travelers consider a wide variety of factors in assessing the quality of transportation service provided to them. Some of these factors can be described as performance measures (e.g., speed) and others can be described as basic descriptors of the intersection character (e.g., crosswalk width). The methodology for evaluating each mode provides a procedure for mathematically combining these factors into a score. This score is then used to determine the LOS that is provided. However, these scores ignore other qualitative factors such as vehicle speed, sidewalk width, urban design features, presence/absence of curbs, pedestrian safety, lighting, etc. In addition, there are no thresholds for pedestrian and bicycle operations under CEQA or the CMP. A multi-modal LOS has not been adopted by the City of Lynwood as well and should be a next step in the adoption of the Specific Plan.

2.3 Levels of Service Thresholds

The CMP standard level of service for intersections is LOS E. However, local jurisdictions are allowed to use a stricter LOS standard. The City of Lynwood uses LOS C as the minimum level of service standard for traffic operations for non-peak periods and LOS D for peak periods. Consistent with the CEQA requirement to identify "proportional" measures of impact a two-tiered test has been utilized. For the roadway segment analysis, the CMP threshold of volume-to-capacity (v/c) increase of 0.02 has been used to identify project impacts at locations where the projected LOS is worse than LOS C.

2.4 Vehicle Miles Traveled

The Governor's Office of Policy and Research (OPR) has proposed new guidelines to evaluate potential transportation impacts under CEQA. OPR's proposed policy is as a result of Senate Bill 743 (SB-743). The intent the

proposed guidelines is to replace the existing metrics for evaluating CEQA transportation impacts based on level of service, with Vehicle Miles Traveled (VMT).

VMT as defined as the amount and distance of automobile travel attributable to a project. A development project that results in vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The proposed guidelines have not yet been approved by the Natural Resources Agency (NRA), and does not currently specify thresholds of significance. The OPR, under its most recent (January 20, 2016) guidance sets a threshold of 15% less than existing VMT as the threshold of significance. However, Lead Agencies can adopt their own thresholds as under CEQA, the onus of guidance is passed to lead agencies who determine reasonable thresholds based on other public agencies or experts supported by substantial evidence.

3.0 REGIONAL PLANS AND PROGRAMS

Circulation is a regional issue and local circulation is always linked with the regional system. Transportation analyses are therefore conducted in cognizance of the regional circulation planning process. The following plans and programs related to the General Plan:

3.1 County of Los Angeles Congestion Management Program

All urbanized areas within the state of California are required to have a Congestion Management Agency (CMA), whose primary responsibility is to put programs in place to keep traffic operations satisfactory by assisting in the coordination of land use, air quality and transportation planning among the local jurisdictions and to prepare a Congestion Management Program (CMP). The Los Angeles County Metro (Metro) is the CMA for Los Angeles County, and reports annual findings to the Southern California Association of Governments (SCAG) for a finding of regional consistency.

3.2 SCAG Regional Transportation Plan

The Regional Transportation Plan (RTP) is a component of the Regional Comprehensive Plan and Guide prepared by SCAG to address regional issues, goals, objectives, and policies for the Southern California region until 2040. The RTP is periodically updated by SCAG to address changing conditions in the five-county SCAG region (Los Angeles, Riverside, San Bernardino, Orange, and Kern Counties), and is developed with participation from local agencies throughout the region. The RTP sets broad goals for the region and provides strategies to reduce congestion and increase mobility options. On April 7, 2016, the SCAG Regional Council adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*. The SCS is a newly required element of the RTP. The SCS will integrate land use and transportation strategies that will achieve the emissions reduction targets set by the California Air Resources Board (CARB).

3.3 California Complete Streets Act

The California Complete Streets Act (2008) requires *"that the legislative body of a city or county, upon any substantive revision of the circulation element of the general plan, modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users [including] motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation…."* This provision of the law went into effect on January 1, 2011. The law also required the Governor's Office of Planning and Research to amend its guidelines for the development of circulation elements so as to assist cities and counties in meeting the requirement.

3.4 Caltrans Complete Streets Implementation Action Plan

State and federal laws require Caltrans and local agencies to promote and facilitate increased bicycling and walking. The California Vehicle Code (CVC) and Streets and Highways Code identify the rights of bicyclists and pedestrians, and establish legislative intent that people of all ages using all types of mobility devices are able to travel on roads. Caltrans manuals and guidance outline statutory requirements, planning policy, and project delivery procedures to facilitate multimodal travel, which includes connectivity to public transit for bicyclists and pedestrians. A complete street matches the needs of travelers to the uses surrounding a street. It provides safe travel for people using any legal mode of travel, including bicycling, walking, riding transit, and driving. As part of the Complete Streets Implementation Action Plan, Caltrans encourages local agencies to include bicycle, pedestrian, and transit elements in regional and local planning documents, including general plans, transportation plans, and circulation elements.

3.5 Caltrans Complete Intersections

The Caltrans Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicycles and Pedestrians, published in 2010, provides direction on implementing aspects of the Caltrans' Complete Streets policy to help develop sustainable transportation systems for all users. This resource discusses the common issues associated with interchanges that do not easily accommodate pedestrians and bicycles, and suggests basic treatments to accommodate them. One of the suggestions is to "Reconstruct ramps to intersect crossroad at 90–degree angle with as low a radius as possible. Bring under stop or signal control if warranted." The suggestions in this reference discourage free flow loop on-ramps as these can lead to pedestrian, vehicular conflict due to limited visibility, lack of direct control as opposed to yield movements only for vehicles, provision of inadequate bicycle facilities, and an unclear best path of travel.

3.6 Proposed CEQA Metrics

The presumption included in the approach recommended by OPR is that projects within the TASP will meet the sustainable goals of:

- 15 % reduction in VMT for residential projects
- 15 % reduction in VMT for office projects
- Maintain existing VMT for retail projects

The analysis will focus on VMT, pedestrian safety, bicycle safety, and transit usage, but since levels of significance are not yet certified by the NRA, LOS for roadways are also disclosed, but mitigation measures (if necessary) will be related to VMT.

The OPR has release the following thresholds for determination of significant impacts:

1. Recommended threshold for residential projects: A project exceeding both
    - Existing city household VMT per capita (minus 15 percent) and
    - Existing regional household VMT per capita (minus 15 percent) may indicate a significant transportation impact
2. Recommended threshold for office projects: A project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact.
3. Recommended threshold for retail projects: A net increase in the total existing VMT may indicate a significant transportation impact

3.7 Caltrans Strategic Management Plan

The Caltrans Strategic Management Plan (2015) outlines the Caltrans goal of increasing non-auto modes by 2020. The goal is to triple bicycle, double pedestrian, and double transit. An additional goal is to achieve a 15% reduction in statewide per capita VMT.

3.8 City of Lynwood General Plan

The City of Lynwood General Plan provides the framework for the growth and development of the city. There are nine citywide elements: Land Use (2003), Circulation (2003), Infrastructure/Public Services (2003), Community Design (2003), Economic (2003), Public Health and Safety (2003), Noise (2003) and Open Space (2003) Housing (2013). These elements contain goals, policies, and actions that apply to all incorporated area within the City of Lynwood.

3.9 California Senate Bill No. 743 (SB-743)

The bill made several changes to the California Environmental Quality Act (CEQA) for projects located in areas served by transit (i.e. transit-oriented development or TOD). Those changes direct the Governor's Office of Planning and Research to develop new approaches for analyzing the transportation impacts under CEQA. SB 743 also creates a new exemption for certain projects that are consistent with a Specific Plan and, under some circumstances, eliminates the need to evaluate aesthetic and parking impacts of a project.

4.0 PROJECT DESCRIPTION

The proposed Project involves the adoption of the Lynwood Transit Area Specific Plan ("Specific Plan"). The Specific Plan is consistent with policies of the City of Lynwood General Plan (2002), the Long Beach Boulevard Specific Plan (2006), and the California Sustainable Communities and Climate Protection Act of 2008 (SB 375) Transit Priority Project Requirements.

The proposed Specific Plan includes policies and development standards to guide future transit-oriented development within the approximately 315-acre project area, which generally encompasses properties located along Long Beach Boulevard, from Virginia Avenue to Norton Avenue; Imperial Highway, from Alameda Street to Martin Luther King Boulevard; the Plaza Mexico shopping center; the Long Beach Boulevard Green Line Station and Long Beach Boulevard/I-105 Freeway Ramps; the industrial uses located along Alameda Street, just south and north of the I-105 Freeway; St. Francis Medical Center; and existing residential and commercial uses located along Beechwood Avenue, Sanborn Avenue, Mulford Avenue, and California Avenue (Figure 1). The Specific Plan concentrates and prioritizes development within key opportunity sites, along major roadway corridors, existing industrial and hospital districts, and existing neighborhoods within the project area. In addition, the Specific Plan is intended to facilitate transit-oriented community design by promoting complete streets, expanded transit services, and enhanced pedestrian and bicycle linkages throughout the project area.

Full implementation of the proposed Specific Plan within the 25-year planning horizon envisions an increase density and intensity of existing land uses, adding up to: (1) 3,500 multi-family units, (2) 1.2 million square feet of new commercial development, (3) 750,000 square feet of industrial development, and (4) other related ancillary improvements. Figure 4 shows the conceptual land use plan for the project.

The objectives of the proposed Specific Plan include:

- Promote Transit-Oriented Development Near the Metro Green Line Station -Expand on the accessibility of the Green Line Station and the energy at Plaza Mexico by creating a dynamic transit district with a distinctive identity -- an active and attractive hub where people come to live, shop, work and play.

- Allow for Flexibility in Land Uses - Provide a framework for approval of incremental development projects on a single concept plan that offers defined ranges of flexibility to accommodate market changes.
- Consolidate Uses and Create New Development Sites - Identify sites most suitable for assembly and revitalization.
- Enhance Pedestrian Comfort and Safety - Increase facilities, add connections, and multiply opportunities to safely and conveniently get around the area on "complete" streets by foot, bike, and public transit.
- Enhance Recreational Opportunities- Increase landscaped areas, parks, open space, and trails that are supportive of the public life of the community. Facilitate security and well-being for the Specific Plan Area's residents, employees, and visitors through increased activity, better walkability, controls on cars and drivers, and better design and wayfinding.
- Improve and Facilitate Additional Housing - A variety of housing types should be provided which are compatible with existing housing types and neighborhoods within the community. A diverse mix of ownership and rental housing, and market rate, affordable, and workforce housing should be maintained.
- Create a Sustainable Community - Ensure public health, safety and welfare by providing and maintaining sustainable facilities to ensure a balance between development and the environment. Continue to make certain that public services and facilities adequately support new development.

The National Association of City Transportation Officials (NACTO) Urban Street Design Guide states that lane widths of 10 feet are appropriate in urban areas and have a positive impact on a street's safety without impacting traffic operations. For designated truck or transit routes, one travel lane of 11 feet may be used in each direction. In select cases, narrower travel lanes (9–9.5 feet) can be effective as through lanes in conjunction with a turn lane. Planned roadway improvements within the Plan Area will reduce travel lane widths where feasible to allow for expanded sidewalks and bicycle facilities. Travel lane and turn lane width minimization is acceptable provided that the overall right-of-way width is retained to ensure safe vehicular travel throughout Plan Area. At intersections, careful design will ensure that vehicles, bicycles, and pedestrians can coexist without conflicts. The Specific Plan also recommends improvements that emphasize non-vehicular travel modes, and ensure that pedestrians, bicycles and transit providers are prioritized and conflicts between these modes are minimized.

4.1 Project Trips

The trip generation for the proposed project is based on the trip generation rates included in the Institute of Transportation Engineers' (ITE) Trip Generation, 9th Edition. In addition, due to the transit oriented nature of the project, and because the project builds in TDM features, reductions in trip generation have been taken. The CMP allows a transit reduction of up to 25% based on the location of the project. In addition, the CMP also allows internalization of trips. Calculation of internal trips was based on the ITE Trip Generation Handbook as well as based on outputs from the California Emissions Estimator Model (CalEEMod) under land use diversity. The internal trip capture rates in the ITE Trip Generation model is based on surveys conducted in Florida, whereas the internal trip capture rates used in CalEEMod are based on land use diversity reductions from data collected by the Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Center for Clean Air Policy (CCAP). Although the CalEEMod outputs show that internal trip reductions will be approximately 25%, an internal trip capture rate of 18% has been applied to present a conservative analysis. The project is forecast to generate 1,894 trips during the a.m. peak hour, 2,975 trips during the p.m. peak hour, and 33,550 daily trips. Appendix A shows the detailed trip generation calculations. CalEEMod Runs are also included in Appendix A.

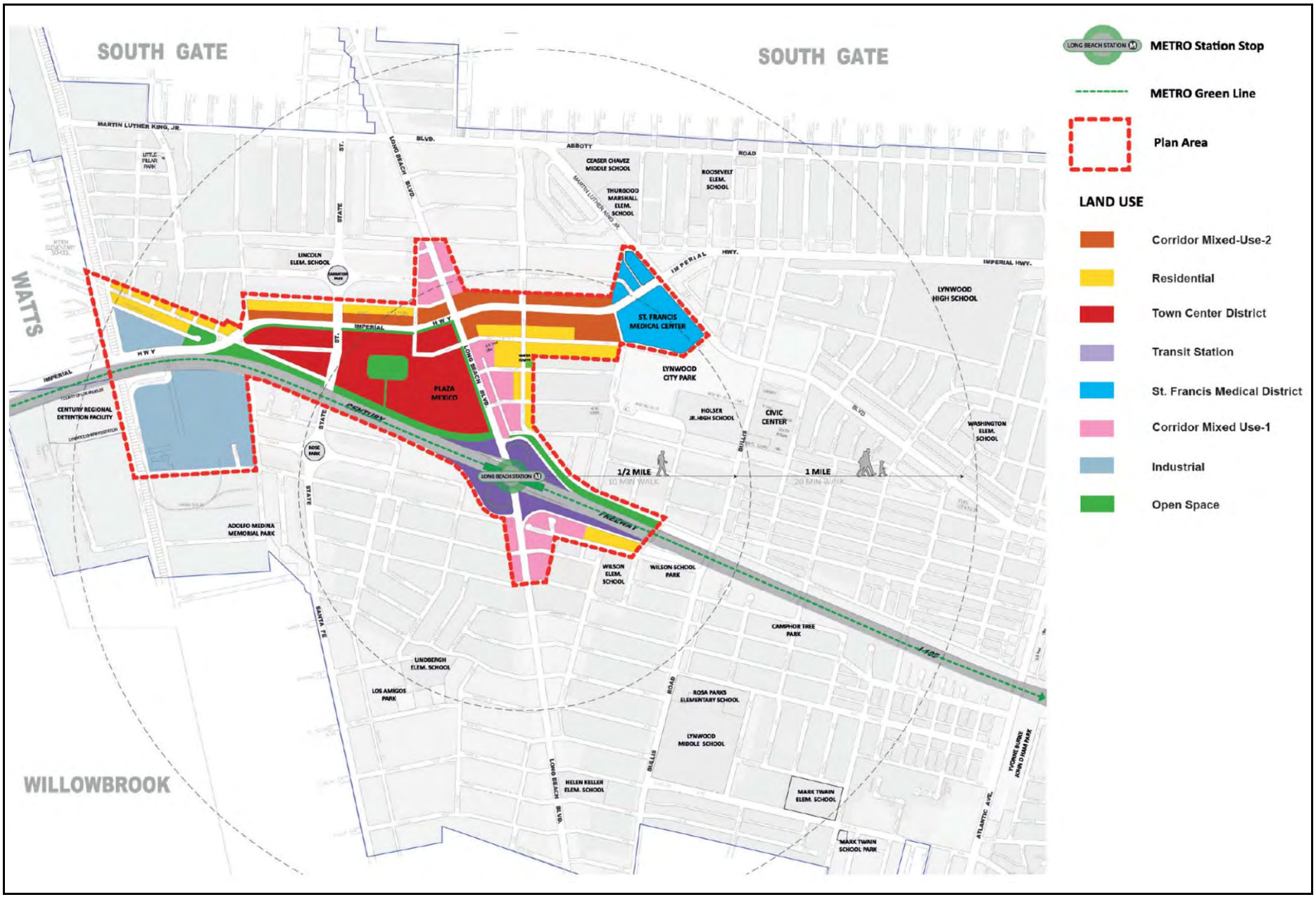

FIGURE 4

Lynwood Transit Area Specific Plan
Conceptual Land Use Plan

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C:\Dropbox\Tsols\Projects\Lynwood\Analysis\Z40 Land Use Plan (6/7/2016)

5.0 ANALYSIS METHODOLOGY

Forecast traffic volumes at study intersections were developed based on discussion with City staff and use the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan (RTP) model as the basis. This section discusses the methodology used to develop traffic volumes used in the analysis.

5.1 Existing Traffic Volumes

Existing traffic volumes are based on peak hour intersection turn movement counts conducted in 2015. Therefore, this report uses Year 2015 as the "Existing Conditions" scenario. Appendix B includes the count sheets.

5.2 Year 2040 Traffic Volumes

Future traffic volume forecasts were developed using a two-step process. The current volumes were developed based on Year 2015 counts and the 2012 SCAG RTP model. The model numbers were post processed using National Cooperative Highway Research Program Report 255 (NCHRP-255) methodologies.

The SCAG model includes transit improvements as well as other SCS initiatives in the area, and therefore, traffic volumes at several locations were observed to reduce in 2040 from the existing (2010) conditions. This is consistent to planned improvements anticipated to be constructed by Metro or other agencies, and is in accordance to the SCAG Sustainable Communities Strategies (SCS).

The future traffic volume forecasts were then developed by overlaying the potential traffic changes related to the Lynwood Transit Area Specific Plan on the current volumes. The trip generation for the areas where proposed land use designations are changing was calculated based on rates included in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 9th Edition.

5.3 Existing VMT

Consistent to the OPR's recommendation, existing per capita VMT numbers were developed based on trips to and from the Traffic Analysis Zones (TAZs) included within the City of Lynwood from the California Statewide Travel Demand Model (CSTDM). This model is operated by Caltrans and is consistent with the SCAG RTP model.

5.4 2040 VMT

Year 2040 VMT was calculated based on trips to and from the TAZs included for 2040 in the CSTDM.

6.0 EXISTING CONDITIONS

This section discusses the existing transportation conditions in the study area.

6.1 Existing Roadway Conditions

As stated earlier, regional access to the City is provided by the I-105 and I-710. Major roadways within the City are discussed below:

Interstate 105 is an East-West Freeway across the southern portion of the project site. This east-west roadway has three general purpose lanes and one high-occupancy vehicle lane in each direction. There is an interchange with Interstate 710 to the east of the project site and an interchange with Interstate 110 to the west of the project site.

Interstate 105 crosses over a number of cross streets within the City of Lynwood and within the limits of the project site.

Long Beach Boulevard is a North-South six and four lane roadway with parking permitted on the northbound side of the street north of the I-105 interchange. This arterial stretches from the City of Long Beach through Huntington Park. Long Beach Boulevard also includes an interchange with Interstate 105 within the project limits.

Alameda Street is a North-South roadway located along the western limits of the project site. It is two lanes in each direction with a painted median and adjacent to three rail lines. Alameda Street also crosses under Interstate 105 within the project limits.

State Street is a North-South roadway that is located in the center of the project limits. It crosses under Interstate 105 within the project limits and a roundabout exists on either side of Interstate 105, a roundabout with Flower Street and a roundabout with Los Flores Boulevard. State Street is two lanes in each direction with a raised median and parking permissible on both sides of the street within the project limits.

Imperial Highway is an East-West four lane roadway within the project limits. Within the limits of the City of Lynwood, Imperial Highway is either two or three lanes in each direction with some areas allowing parking. Imperial Highway begins at the border of Anaheim and Orange and terminates at Dockweiler State Beach in Los Angeles.

6.2 Existing Transit Service

Public transportation services in Lynwood include Metro bus transit service and the Metro Rail system. These services are further described below.

Fixed Route Bus Service: In the City of Lynwood, public bus transportation is provided by Metro which provides the city with links to the region. These systems include Metro routes 60, 120, 251, 252, 260, and 612. The Lynwood Trolley/Breeze also provides service through portions of the Plan Area through the Purple, Red, and Blue Lines.

Rail Service: The Metro Rail system runs through Lynwood, which is part of Metro's overall transportation strategy to greatly improve mobility in Los Angeles County and throughout the surrounding southern California area. The Long Beach Boulevard Metro Green Line Station is located within the project area. The Green Line connects to Redondo Beach to the west, and Norwalk to the east. Metro rail cars are equipped with designated space for bicycles. The Green Line also connects to the Metro Blue Line via the Willowbrook/Rosa Parks station, which is the next stop on the Green Line to the west. The Blue Line connects to Downtown Los Angeles and to Long Beach.

6.3 Existing Pedestrian & Bicycle Facilities

Pedestrian circulation in the area is primarily provided via sidewalks. Most roadways within the City have sidewalks on either side. Very little formal bicycle striping or signage exists in the city. On many roadways, right-of-way is not available for striped bicycle lanes without removing on-street parking or widening the roadway. Imperial Highway and Long Beach Boulevard generally have sufficient curb-to-curb widths to allow striping od designated bicycle lanes, though in some areas, road diets and narrowing of travel lanes might be required. An existing bicycle path exists along the eastern side of I-710 in the vicinity of the project. There are no bicycle lanes within the project limits.

The focal point of the Plan Area is the Green Line rail station. Based on information provided by the community, the station is difficult to access, is inhospitable to a large number of transit users, and at times unsafe throughout the day.

The local community has also expressed concerns over the high speed of vehicle traffic on roadways and the lack of pedestrian and bicycle amenities along roadways and at most intersections. The Lynwood community also expressed concerns about the lack of crosswalks, clear roadway and pedestrian markings, and poor lighting.

6.4 Existing Levels of Service

An intersection level of service analysis was conducted for existing conditions to determine current circulation system performance. Existing traffic volumes at study intersections are shown in Figure 5Figure 5. Detailed volume development worksheets are included in Appendix C. The existing automobile levels of service for the study area intersections are summarized in Table B. Level of service calculation worksheets are contained in Appendix D. As shown in Table B, all study area intersections operate at satisfactory levels of service in the existing conditions.

Table B: Existing Intersections Levels of Service

		AM Peak Hour		PM Peak Hour	
Intersection	Control	Delay	LOS	Delay	LOS
1. Long Beach Blvd/I-105 WB Slip On Ramp	Free		A		A
2. Long Beach Blvd/I-105 WB Off Ramp	Signal	11.9	B	17.2	B
3. Long Beach Blvd/I-105 WB Loop On Ramp	Free	0.4	A	0.4	A
4. Long Beach Blvd/I-105 EB Loop On Ramp	Free	0.4	A	0.4	A
5. Long Beach Blvd/I-105 EB Off Ramp	Signal	8.8	A	7.3	A
6. Long Beach Blvd/I-105 EB Slip On Ramp	Free		A		A

A level of service analysis was also conducted for roadway segments in the vicinity of the project site. Table YY shows the levels of service for roadway segments included in the analysis. As shown on Table YY, all study area roadway segments with the exception of Long Beach Boulevard within the study limits operate at acceptable levels of service (better than LOS D).

Table C: Existing Roadway Segments Levels of Service

		Roadway	Existing (2015)		
Segment	Lanes	Capacity	Volume	V/C	LOS
1. Long Beach Blvd. North of Norton Ave.	4-D	36,000	35,231	0.979	E*
2. Long Beach Blvd. South of Josephine St.	4-D	36,000	33,442	0.929	E*
3. Alameda St. North of Fernwood Avenue	4-D	36,000	28,446	0.790	C
4. Alameda St. South of Lynwood Road	4-D	36,000	23,555	0.654	A
5. State St. North of Oakwood Ave.	4-D	36,000	12,574	0.349	A
6. State St. South of Redwood Ave.	4-D	36,000	14,012	0.389	A
7. Imperial Highway West of Alameda St.	6-D	54,000	40,366	0.748	B
8. Imperial Highway East of California Ave.	4-D	36,000	29,318	0.814	C

* Operates at worse than LOS D.

6.5 Existing VMT

An estimate of base VMT for the City of Lynwood was made using data from the CSTDM. Based on the CSTDM, the Year 2010 Per Capita VMT for residential uses is 13.85 miles per day, and for non-residential uses is 39 miles per day. The project occupies parts of TAZs 4281, 4262, 4286, 4278, 4293, and 4294. The weighted average existing per capita VMT for the project TAZs is 13.16 miles per day for residential uses and 39.01 miles per day for non-residential uses. Based on the OPR's threshold, based on the existing VMT, the project will have an impact if the per capita residential VMT is greater than 11.77 miles per day or if the non-residential VMT is greater than 32.96 miles per day. Appendix E includes the outputs from the CSTDM and other VMT calculations.

1 LB Blvd/I-105 WB Slip On Ramp

585(588) ↰
1375(1309) ↓
1850(2182) →

2 LB Blvd/I-105 WB Off Ramp

34(14) ↰
1323(1279) ↓
735(1024) ↱
20(12) ←
206(372) ↲
6(24) ↳
9(14) ↳
47(53) ↱
1109(1134) →

3 LB Blvd/I-105 WB Loop On Ramp

1538(1665) ↓
1218(1172) →
393(351) ↱

4 LB Blvd/I-105 EB Loop On Ramp

1002(672) ↰
627(1047) ↓
1610(1523) →

5 LB Blvd/I-105 EB Off Ramp

605(979) ↓
55(62) ↳
20(35) ↱
1(0) ↲
612(404) ↳
0(3) →
384(262) ↳
1(0) ↱
941(1028) →
29(11) ↱

6 LB Blvd/I-105 EB Slip On Ramp

967(1246) ↓
963(1046) →
497(434) ↱

FIGURE 5

XX(YY) AM(PM) Trips

Lynwood Transit Area Specific Plan
Existing Peak Hour Traffic Volumes

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7.0 EXISTING PLUS PROJECT CONDITIONS

This section discusses the existing plus project transportation conditions in the study area.

The Specific Plan provides the vision and recommendations for all travel mode types: automobile, bicycle, pedestrian, and public transit. It addresses transportation demand management (TDM) and parking. In addition, the Specific Plan provides guidelines for access and circulation improvements based on the "Complete Streets" to design the street network to accommodate all users (pedestrians, bicycles, buses, automobiles, and trucks) safely and efficiently. Concepts and improvements related to all transit modes are as follows:

- Motor Vehicles. The Plan Area is largely automobile oriented with limited bicycle facilities, although sideways are present on both sides of the streets. The focus of this Plan is on improving circulation and access for pedestrians, bicycles, and transit users, but without an undue impact on automobile travel. The Specific Plan would involve intersection and roadway improvements that ensure safe and adequate vehicular circulation and access. The proposed Specific Plan outlines parking management and TDM strategies to reduce traffic and the Plan Area's overall automobile trip generation in comparison with more traditional suburban developments. Strategies to reduce traffic include implementing intelligent transportation system (ITS) technologies such as traffic signal timing, communication, and synchronization improvements. Parking strategies include establishing a parking benefit district (PBD), encouraging shared parking, establishing parking in-lieu fee program, and monitoring parking demand and supply.

- Bicycles. The Lynwood Bicycle and Pedestrian Transportation Plan includes a bike path west of Long Beach Avenue along Fernwood Avenue, but this path then turns northwards before connecting to Sanborn Avenue across Long Beach Boulevard. The plan also includes a bike path along Fernwood Avenue east of Long Beach Boulevard; however, the bike path abruptly ends before it reaches either California Avenue or Long Beach Avenue. Reconfiguring of the freeway onramp could allow for a new bikeway alongside the freeway's north side to cross a signalized Long Beach Boulevard intersection near the Green Line station, eliminating a longer detour.

- Pedestrians. Overall, the pedestrian facilities in the Plan Area and the surrounding neighborhoods are typical of a residential area, not conducive to a walkable commercial area. Pedestrian circulation within and surrounding the Plan Area is provided via sidewalks and marked crosswalks. The proposed Specific Plan's vision for the pedestrian environment is to create high quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates increased pedestrian activity throughout the Plan Area. The improved pedestrian circulation system envisioned by the Specific Plan would also involve: reducing pedestrian crossing distances, implementing landscaping and street furniture improvements, and improving pedestrian crossings.

- Transit. Transit and bus service operated by Metro would continue to provide transit service to the Plan Area. The proposed Specific Plan's long term vision for the Plan Area is to improve bus stops to enhanced efficiency and effectiveness of transit services. This may involve providing rider amenities, such as shelters, real time updates, trash cans, and benches at stops within the Plan Area.

7.1 Existing Plus Project Levels of Service

An intersection level of service analysis was conducted for existing plus project conditions to determine circulation system performance. Existing plus project traffic volumes at study intersections are shown in Figure 6. Detailed volume development worksheets are included in Appendix C. The existing automobile levels of service for the study area intersections are summarized in Table D. Level of service calculation worksheets are contained in Appendix D. As shown in Table D, all study area intersections operate at satisfactory levels of service in the existing conditions.

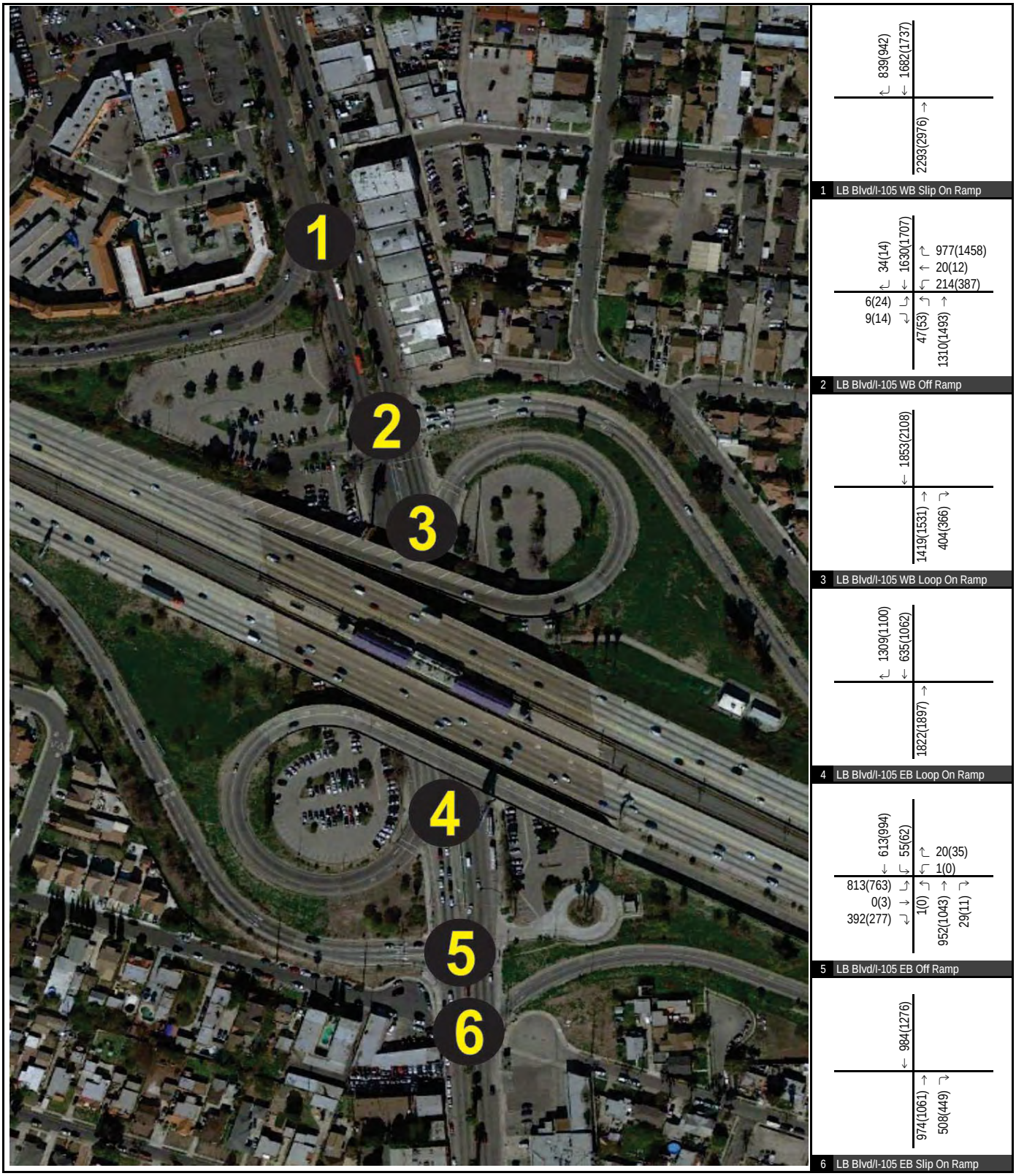

FIGURE 6

XX(YY) AM(PM) Trips

Lynwood Transit Area Specific Plan
Existing Plus Project Peak Hour Traffic Volumes

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Table D: Existing Plus Project Intersections Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Long Beach Blvd/I-105 WB Slip On Ramp	Free		A		A
2. Long Beach Blvd/I-105 WB Off Ramp	Signal	16.9	B	29.3	C
3. Long Beach Blvd/I-105 WB Loop On Ramp	Free	0.4	A	0.2	A
4. Long Beach Blvd/I-105 EB Loop On Ramp	Free	0.5	A	0.5	A
5. Long Beach Blvd/I-105 EB Off Ramp	Signal	9.9	A	10	A
6. Long Beach Blvd/I-105 EB Slip On Ramp	Free		A		A

A level of service analysis was also conducted for roadway segments in the vicinity of the project site. Table E shows the levels of service for roadway segments included in the analysis. As shown on Table E, all study roadway segments with the exception of Long Beach Boulevard operate at acceptable levels of service (better than LOS D). Based on the CMP, the project will have a significant impact at four roadway segments included in the analysis.

Table E: Existing Plus Project Roadway Segments Levels of Service

Segment	Lanes	Roadway Capacity	2040 + Project			V/C Change	Significant Impact**
			Volume	V/C	LOS		
1. Long Beach Blvd. North of Norton Ave.	4-D	36,000	36,909	1.025	F*	0.047	Yes
2. Long Beach Blvd. South of Josephine St.	4-D	36,000	35,120	0.976	E*	0.047	Yes
3. Alameda St. North of Fernwood Avenue	4-D	36,000	30,124	0.837	D*	0.047	Yes
4. Alameda St. South of Lynwood Road	4-D	36,000	25,233	0.701	B	0.047	No
5. State St. North of Oakwood Ave.	4-D	36,000	14,252	0.396	A	0.047	No
6. State St. South of Redwood Ave.	4-D	36,000	15,690	0.436	A	0.047	No
7. Imperial Highway West of Alameda St.	6-D	54,000	42,044	0.779	C	0.031	No
8. Imperial Highway East of California Ave.	4-D	36,000	32,673	0.908	D*	0.093	Yes

* Operates at worse than LOS C.
** Based on Los Angeles County CMP, an increase in V/C of greater than 2% is considered a significant impact.

7.2 Existing Plus Project VMT

The project will implement TDM strategies to fully utilize the potential of the project site. The project site has excellent transit opportunities, and the project design will enhance pedestrian and bicycle connectivity as well as improve transit accessibility. The project parameters were modeled into the California Emissions Estimator Model (CalEEMod) to identify the efficacy of each project parameter. Table F lists the project design parameters and resulting VMT reductions resulting from each measure.

Table F: VMT Reductions from Project Design Features (Year 2010)

TDM Measure	Unmitigated	Mitigated	% Reduction
10% Parking Reduction	195,477,946	185,704,049	5.00%
Pedestrian Enhancements & Traffic Calming	195,477,946	185,704,049	5.00%
Increase Density	195,477,946	191,260,315	2.16%
Increase Land Use Diversity	195,477,946	145,766,092	25.43%
Affordable Housing	195,477,946	180,230,667	7.80%
Transit Adjacency	195,477,946	119,688,946	38.77%
Net Reduction	195,477,946	101,462,865	48.09%

As discussed earlier, the required reduction in VMT from existing VMT for the TAZ was calculated at 10.52% for residential uses and 15.52% for non-residential uses. The project achieves a reduction of over 48% for each land use component of the project. After application of TDM and land use strategies, the per capita project VMT for residential uses is forecast to be 6.83 miles per day and for the non-retail uses, the per capita VMT is forecast to be 20.25 miles per day. Therefore, the project will have a less than significant impact under the proposed metrics to evaluate transportation impacts under SB-743.

8.0 YEAR 2040 CONDITIONS

This section discusses year 2040 transportation conditions in the study area.

8.1 Year 2040 Roadway Conditions

Improvements are planned to the freeway system in the area. There are plans to convert the High Occupancy Vehicles (HOV) lanes on the I-110 freeway from Artesia Transit Center to Adams Boulevard. On I-710, there are plans to reconstruct the interchanges at I-5, I-405, SR-91, and I-105 as part of the I-710 Corridor Program proposing 4 truck lanes and 10 general purpose lanes. Express/High Occupancy Toll () lanes are planned on the I-105 freeway between I-405 and I-605.

8.2 Year 2040 Transit Service

Transit and bus service operated by Metro would continue to provide transit service to the Plan Area. In addition, the Green Line will be extended to the Los Angeles International Airport (LAX). Metro is also conducting a review of the South Bay Metro Green Line Extension that will examine options for extending rail service into the South Bay. The proposed Specific Plan's long term vision for the Plan Area is to improve bus stops to enhanced efficiency and effectiveness of transit services. This may involve providing rider amenities, such as shelters, real time updates, trash cans, and benches at stops within the Plan Area.

8.3 Year 2040 Pedestrian & Bicycle Facilities

Overall, the pedestrian facilities in the Plan Area and the surrounding neighborhoods are typical of a residential area, not conducive to a walkable commercial area. Pedestrian circulation within and surrounding the Plan Area is provided via sidewalks and marked crosswalks. The proposed Specific Plan's vision for the pedestrian environment is to create high quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates increased pedestrian activity throughout the Plan Area. The improved pedestrian circulation system envisioned by the Specific Plan would also involve: reducing pedestrian crossing distances, implementing landscaping and street furniture improvements, and improving pedestrian crossings.

The Lynwood Bicycle and Pedestrian Transportation Plan includes a bike path west of Long Beach Avenue along Fernwood Avenue, but this path then turns northwards before connecting to Sanborn Avenue across Long Beach Boulevard. The plan also includes a bike path along Fernwood Avenue east of Long Beach Boulevard; however, the bike path abruptly ends before it reaches either California Avenue or Long Beach Avenue. Reconfiguring of the freeway onramp could allow for a new bikeway alongside the freeway's north side to cross a signalized Long Beach Boulevard intersection near the Green Line station, eliminating a longer detour.

8.4 Year 2040 Intersections Levels of Service

An intersection level of service analysis was conducted for year 2040 conditions to determine circulation system performance. Year 2040 traffic volumes at study intersections are shown in Figure 7. Detailed volume development worksheets are included in Appendix C. Year 2040 levels of service for the study area intersections are summarized in Table G. Level of service calculation worksheets are contained in Appendix D. As shown in Table G, all study area intersections are forecast to operate at satisfactory levels of service.

Table G: Year 2040 Intersections Levels of Service

		AM Peak Hour		PM Peak Hour	
Intersection	Control	Delay	LOS	Delay	LOS
1. Long Beach Blvd/I-105 WB Slip On Ramp	Free		A		A
2. Long Beach Blvd/I-105 WB Off Ramp	Signal	10.2	B	14.5	B
3. Long Beach Blvd/I-105 WB Loop On Ramp	Free	0.4	A	0.4	A
4. Long Beach Blvd/I-105 EB Loop On Ramp	Free	0.4	A	0.4	A
5. Long Beach Blvd/I-105 EB Off Ramp	Signal	7.6	A	6.8	A
6. Long Beach Blvd/I-105 EB Slip On Ramp	Free		A		A

A level of service analysis was also conducted for roadway segments in the vicinity of the project site. Table H shows the levels of service for roadway segments included in the analysis. As shown on Table H, all study roadway segments with the exception of Long Beach Boulevard are forecast to operate at acceptable levels of service (better than LOS D).

Table H: Year 2040 Roadway Segments Levels of Service

		Roadway	Existing (2015)		
Segment	Lanes	Capacity	Volume	V/C	LOS
1. Long Beach Blvd. North of Norton Ave.	4-D	36,000	34,673	0.963	E*
2. Long Beach Blvd. South of Josephine St.	4-D	36,000	34,048	0.946	E*
3. Alameda St. North of Fernwood Avenue	4-D	36,000	28,544	0.793	C
4. Alameda St. South of Lynwood Road	4-D	36,000	24,725	0.687	B
5. State St. North of Oakwood Ave.	4-D	36,000	10,785	0.300	A
6. State St. South of Redwood Ave.	4-D	36,000	14,760	0.410	A
7. Imperial Highway West of Alameda St.	6-D	54,000	41,698	0.772	C
8. Imperial Highway East of California Ave.	4-D	36,000	29,112	0.809	C

* Operates at worse than LOS D.

8.5 2040 VMT

An estimate of year 2040 VMT for the City of Lynwood was made using data from the CSTDM. Based on the CSTDM, the Year 2040 Per Capita VMT for residential uses is 12.76 miles per day, and for non-residential uses is 37.29 miles per day. The weighted average year 2040 per capita VMT for the project TAZs is 12.22 miles per day for residential uses and 38.07 miles per day for non-residential uses. Based on the OPR's threshold, based on year 2040 VMT, the project will have an impact if the per capita residential VMT is greater than 10.85 miles per day or if the non-residential VMT is greater than 31.7 miles per day.

1 LB Blvd/I-105 WB Slip On Ramp

508(320)
1320(1325)
1732(2038)

2 LB Blvd/I-105 WB Off Ramp

31(14)
1289(1311)
579(908)
17(10)
184(362)
6(23)
9(14)
53(54)
1147(1107)

3 LB Blvd/I-105 WB Loop On Ramp

1482(1687)
1200(1161)
262(293)

4 LB Blvd/I-105 EB Loop On Ramp

789(332)
681(1339)
1575(1443)

5 LB Blvd/I-105 EB Off Ramp

674(1165)
51(67)
16(32)
1(0)
536(380)
0(1)
294(103)
1(0)
1022(1032)
25(5)

6 LB Blvd/I-105 EB Slip On Ramp

995(1223)
0(1)
1024(993)
406(409)

FIGURE 7

XX(YY) AM(PM) Trips

Lynwood Transit Area Specific Plan
Year 2040 Peak Hour Traffic Volumes

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9.0 YEAR 2040 PLUS PROJECT CONDITIONS

As stated under Existing Plus Project conditions, the Specific Plan focuses on multimodal transportation and accommodates automobile, bicycle, pedestrian, and public transit modes, as well as TDM and parking management strategies. The project related improvements under 2040 conditions are anticipated to be similar to those under existing plus project conditions.

9.1 Year 2040 Plus Project Levels of Service

An intersection level of service analysis was conducted for 2040 plus project conditions to determine circulation system performance. Existing plus project traffic volumes at study intersections are shown in Figure 8. Detailed volume development worksheets are included in Appendix C. The existing automobile levels of service for the study area intersections are summarized in Table I. Level of service calculation worksheets are contained in Appendix D. As shown in Table I, all study intersections are forecast to operate at satisfactory levels of service under year 2040 conditions.

Table I: Year 2040 Plus Project Intersections Levels of Service

			AM Peak Hour		PM Peak Hour	
	Intersection	Control	Delay	LOS	Delay	LOS
1.	Long Beach Blvd/I-105 WB Slip On Ramp	Free		A		A
2.	Long Beach Blvd/I-105 WB Off Ramp	Signal	14	B	25.6	C
3.	Long Beach Blvd/I-105 WB Loop On Ramp	Free	0.4	A	0.3	A
4.	Long Beach Blvd/I-105 EB Loop On Ramp	Free	0.5	A	0.3	A
5.	Long Beach Blvd/I-105 EB Off Ramp	Signal	8.8	A	8.9	A
6.	Long Beach Blvd/I-105 EB Slip On Ramp	Free		A		A

A level of service analysis was also conducted for roadway segments in the vicinity of the project site. Table J shows the levels of service for roadway segments included in the analysis. As shown on Table J, all study roadway segments with the exception of Long Beach Boulevard is forecast to operate at acceptable levels of service (better than LOS D). However, based on the CMP, the project will have a significant impact at four roadway segments included in the analysis.

Table J: Year 2040 Plus Project Roadway Segments Levels of Service

			Roadway	2040 + Project			V/C	Significant
	Segment	Lanes	Capacity	Volume	V/C	LOS	Change	Impact**
1.	Long Beach Blvd. North of Norton Ave.	4-D	36,000	36,351	1.010	F*	0.047	Yes
2.	Long Beach Blvd. South of Josephine St.	4-D	36,000	35,726	0.992	E*	0.047	Yes
3.	Alameda St. North of Fernwood Avenue	4-D	36,000	30,222	0.840	D*	0.047	Yes
4.	Alameda St. South of Lynwood Road	4-D	36,000	26,403	0.733	B	0.047	No
5.	State St. North of Oakwood Ave.	4-D	36,000	12,463	0.346	A	0.047	No
6.	State St. South of Redwood Ave.	4-D	36,000	16,438	0.457	A	0.047	No
7.	Imperial Highway West of Alameda St.	6-D	54,000	43,376	0.803	C	0.031	No
8.	Imperial Highway East of California Ave.	4-D	36,000	32,467	0.902	D*	0.093	Yes

* Operates at worse than LOS C.
** Based on Los Angeles County CMP, an increase in V/C of greater than 2% is considered a significant impact.

1 LB Blvd/I-105 WB Slip On Ramp

762(674)
1627(1753)
2175(2832)

2 LB Blvd/I-105 WB Off Ramp

31(14)
1596(1739)
821(1342)
17(10)
192(377)
6(23)
9(14)
53(54)
1348(1466)

3 LB Blvd/I-105 WB Loop On Ramp

1797(2130)
1401(1520)
273(308)

4 LB Blvd/I-105 EB Loop On Ramp

1096(760)
689(1354)
1787(1817)

5 LB Blvd/I-105 EB Off Ramp

682(1180)
51(67)
16(32)
1(0)
737(739)
0(1)
302(118)
1(0)
1033(1047)
25(5)

6 LB Blvd/I-105 EB Slip On Ramp

1012(1253)
0(1)
1035(1008)
417(424)

FIGURE 8

XX(YY) AM(PM) Trips

Lynwood Transit Area Specific Plan
Year 2040 Plus Project Peak Hour Traffic Volumes

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9.2 Year 2040 Plus Project VMT

As stated earlier, the required reduction in VMT from baseline VMT for the TAZ was calculated at 10.52% for residential uses and 15.52% for non-residential uses. The project achieves a reduction of over 48% for each land use component of the project. After application of TDM and land use strategies, the per capita project VMT under 2040 conditions for residential uses is forecast to be 6.34 miles per day and for the non-retail uses, the per capita VMT is forecast to be 19.76 miles per day. Therefore, the project will have a less than significant impact under the proposed CEQA metrics to evaluate transportation impacts under SB-743.

10.0 INTERCHANGE ANALYSIS

The Long Beach Boulevard/I-105 interchange allows for free right turns for on-ramp traffic, and presents a barrier to pedestrians and bicycles, creating a divide between the northern and southern parts of the City. One of the items discussed in the Specific Plan is the reconfiguration of the interchange to eliminate free right turns and make the area more pedestrian and bicycle friendly. The proposed geometrics for the interchange include the following modifications:

- Remove the westbound slip on ramp to the I-105 freeway
- Remove Park & Ride driveway from the west leg of the westbound off ramp to a location near the existing westbound slip on ramp
- Realign westbound loop on ramp nearer to the westbound off ramp to form one signalized intersection
- Realign eastbound loop on ramp and the eastbound slip on ramp with the eastbound off ramp
- Remove bus parking lot and Park & Ride access to approximately 100' north of the eastbound slip on ramp.

Figure 9 shows the conceptual design of the proposed interchange. An analysis was conducted to identify traffic operations at the ramp termini to evaluate if the proposed design would result in acceptable automobile levels of service under 2040 conditions. Table K shows the results of this analysis. As seen in Table K, all analysis intersections operate at acceptable levels of service (LOS) except the bus parking access where the delay for the westbound left turn operates at LOS E.

Table K: Year 2040 with Project with Interchange Modification Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Long Beach Blvd/Park & Ride Access	TWSC	34.4	D	36.9	E
2. Long Beach Blvd/I-105 WB Ramps	Signal	21.1	C	39.3	D
3. Long Beach Blvd/Bus and Park & Ride Access	TWSC	30.6	D	33.7	D
4. Long Beach Blvd/I-105 EB Ramps	Signal	42.6	D	17.1	B

11.0 SUMMARY & CONCLUSIONS

The proposed Specific Plan is forecast to generate maximum of 1,894 trips during the a.m. peak hour, 2,975 trips during the p.m. peak hour, and 33,550 daily trips.

Under all analysis scenarios (existing, existing plus project, year 2040 without project, and year 2040 plus project), all study intersections operate at satisfactory levels of service. All roadway segments with the exception of Long Beach Boulevard north of Norton Avenue and Long Beach Boulevard south of Josephine Street also operate at satisfactory conditions. However, based on the project trips added to the network, and the current CMP guidelines, the project is anticipated to have significant impacts at all analysis roadway segments. To offset project impacts, lane additions

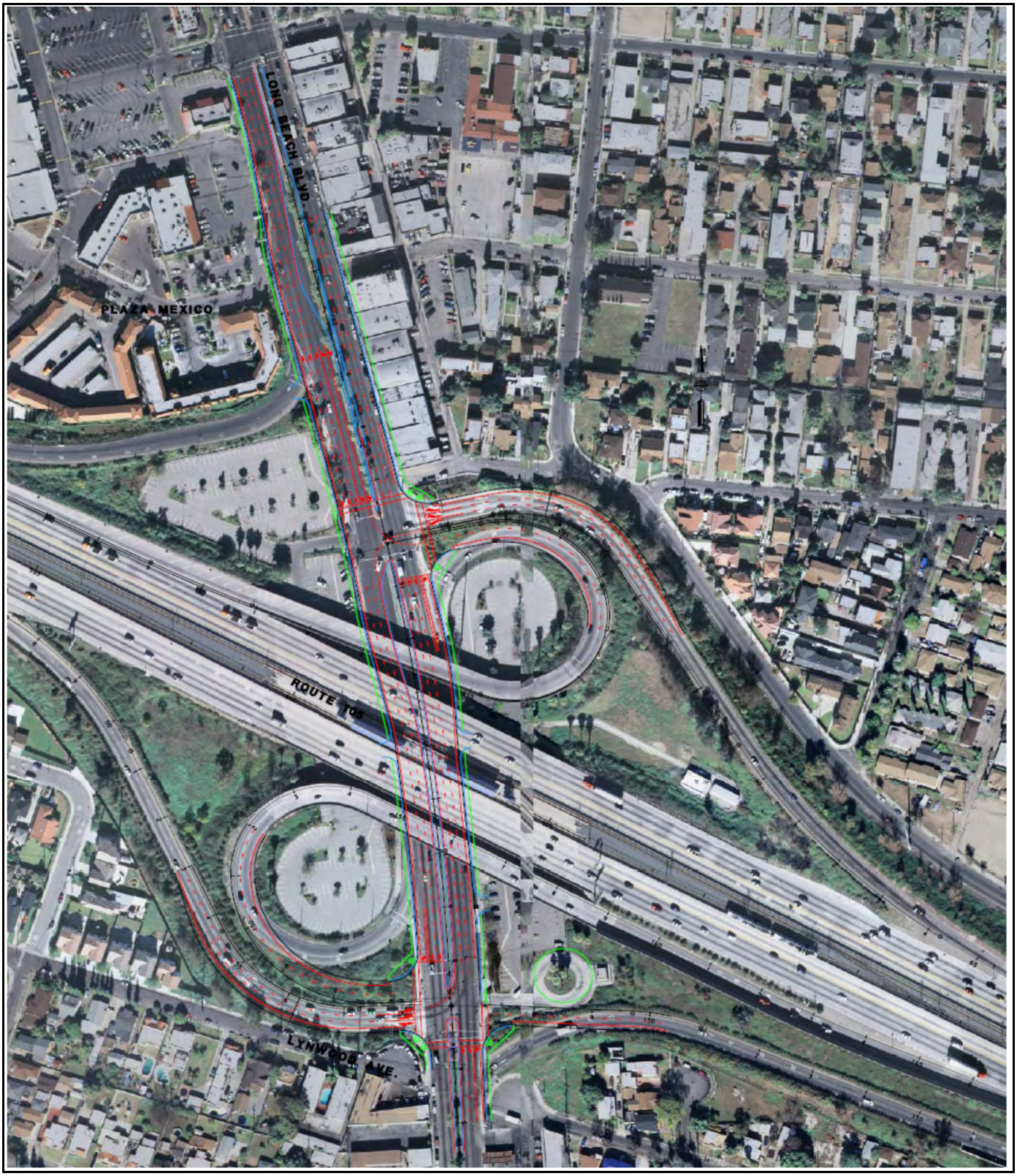

FIGURE 9

Lynwood Transit Area Specific Plan
Proposed Interchange Design

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C:\Dropbox\Tsols\Projects\Lynwood\Analysis\Z30 Interchange (6/7/2016)

would be required on all roadway segments included in the analysis. Lane additions in the area are not feasible, and therefore, the project will implement TDM strategies to further reduce project trips.

Year 2010 Per Capita VMT for residential uses in the City of Lynwood is 13.85 miles per day for residential uses, and for non-residential uses is 39 miles per day. After application of TDM and land use strategies, the per capita project VMT for residential uses is forecast to be 6.83 miles per day and for the non-retail uses, the per capita VMT is forecast to be 20.25 miles per day. Since the project VMT will be less than 85% of the City VMT, under the proposed CEQA metrics pursuant to SB-743, the project will have a less than significant impact.

APPENDIX A:
TRIP GENERATION & CalEEMod MODEL RUNS

Appendix A - Trip Generation

Land Use	Multi-Family units	Comm. Square Footage	Ltd. Indust. Square Footage	Hotel Units	Other Use Square Footage	Land Use	Rate			Gross Trips			Pass By		
							AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
Plaza Mexico – 59.7 ac. Retail, Marketplace, Cinema		543,684				Shopping Center	0.96	3.71	42.70	522	2,017	23,215	24%	34%	24%
Patel Hotel Site				350		Hotel	0.53	0.60	8.17	186	210	2,860			
Plaza Mexico - Church					8,717	Church	0.56	0.55	9.11	5	5	79			
Plaza Mexico - Residential	2,515					Apartment	0.51	0.62	6.55	1,283	1,559	16,473			
Northgate Mixed Use – 1.8 ac of commercial (southeast of SR 105 & Long Beach Blvd)		35,000				Shopping Center	0.96	3.71	42.70	34	130	1,495	24%	34%	24%
Northgate Market – Residential (1.0ac @ 60 du/ac)	60					Apartment	0.51	0.62	6.55	31	37	393			
Downtown Residential 1 (DR-1) – 5.8 acres @ 15 du/ac (Outside Plaza Mexico)	87					Apartment	0.51	0.62	6.55	44	54	570			
Downtown Residential 2 (DR-2) – 2.0 ac. @ 15 due/ac (east of LBB)	30					Apartment	0.51	0.62	6.55	15	19	197			
Mixed Use 1 (MU-1) -23.4 ac @ FAR 0.20 east of LBB)		203860				Shopping Center	0.96	3.71	42.70	196	756	8,705	24%	34%	24%
Mixed Use 1 (MU-1) - (23.4 ac outside Plaza Mexico @ 30 du/ac)	702					Apartment	0.51	0.62	6.55	358	435	4,598			
Mixed Use 2 (MU-2) – (2.0 ac @ FAR 0.20 west of Northgate)		17424				Shopping Center	0.96	3.71	42.70	17	65	744	24%	34%	24%
Mixed Use 2 (MU-2) – (2.0 ac @ 30 du/acre)	60					Apartment	0.51	0.62	6.55	31	37	393			
Mixed Use 3 (MU-3) – (4.4 acres north of Plaza Mexico @ FAR 0.20)		38332				Shopping Center	0.96	3.71	42.70	37	142	1,637	24%	34%	24%
Mixed Use 3 (MU-3) – (4.4 acres north of Plaza Mexico @ 30 DU/acre)	132					Apartment	0.51	0.62	6.55	67	82	865			
Limited Industrial (34.8 ac @ FAR 0.5)			750,000			General Light Industrial	0.92	0.97	6.97	690	728	5,228			
Open Space/Recreation – 8.2 acres															
GRAND TOTAL	3,586	1,258,302	750,000	350	8,717							TRIP GENERATION TOTAL			
												Transit Trips (25%)			
												Internal Trip Credits (18%)			
												NET TRIP GENERATION			

Appendix A - Trip Generation

Land Use	Net Trips								Net New Trips			
	AM	PM	Daily	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
Plaza Mexico – 59.7 ac. Retail, Marketplace, Cinema	397	1,331	17,643	62%	38%	48%	52%	246.14	150.86	638.88	692.12
Patel Hotel Site	186	210	2,860	59%	41%	51%	49%	109.74	76.26	107.1	102.9
Plaza Mexico - Church	5	5	79	62%	38%	48%	52%	3.1	1.9	2.4	2.6
Plaza Mexico - Residential	1,283	1,559	16,473	20%	80%	65%	35%	256.6	1026.4	1013.35	545.65
Northgate Mixed Use – 1.8 ac of commercial (southeast of SR 105 & Long Beach Blvd)	26	86	1,136	62%	38%	48%	52%	16.12	9.88	41.28	44.72
Northgate Market – Residential (1.0ac @ 60 du/ac)	31	37	393	20%	80%	65%	35%	6.2	24.8	24.05	12.95
Downtown Residential 1 (DR-1) – 5.8 acres @ 15 du/ac (Outside Plaza Mexico)	44	54	570	20%	80%	65%	35%	8.8	35.2	35.1	18.9
Downtown Residential 2 (DR-2) – 2.0 ac. @ 15 due/ac (east of LBB)	15	19	197	20%	80%	65%	35%	3	12	12.35	6.65
Mixed Use 1 (MU-1) -23.4 ac @ FAR 0.20 east of LBB)	149	499	6,616	62%	38%	48%	52%	92.38	56.62	239.52	259.48
Mixed Use 1 (MU-1) - (23.4 ac outside Plaza Mexico @ 30 du/ac)	358	435	4,598	20%	80%	65%	35%	71.6	286.4	282.75	152.25
Mixed Use 2 (MU-2) – (2.0 ac @ FAR 0.20 west of Northgate)	13	43	565	62%	38%	48%	52%	8.06	4.94	20.64	22.36
Mixed Use 2 (MU-2) – (2.0 ac @ 30 du/acre)	31	37	393	20%	80%	65%	35%	6.2	24.8	24.05	12.95
Mixed Use 3 (MU-3) – (4.4 acres north of Plaza Mexico @ FAR 0.20)	28	94	1,244	62%	38%	48%	52%	17.36	10.64	45.12	48.88
Mixed Use 3 (MU-3) – (4.4 acres north of Plaza Mexico @ 30 DU/acre)	67	82	865	20%	80%	65%	35%	13.4	53.6	53.3	28.7
Limited Industrial (34.8 ac @ FAR 0.5)	690	728	5,228	88%	12%	12%	88%	607.2	82.8	87.36	640.64
Open Space/Recreation – 8.2 acres								0	0	0	0
GRAND TOTAL	3,323	5,219	58,860					1,466	1,857	2,627	2,592
	(831)	(1,305)	(14,715)	25%			Transit Trips (25%)	(366)	(464)	(657)	(648)
	(598)	(939)	(10,595)	18%			Internal Trip Credits (18%)	(264)	(334)	(473)	(467)
	1,894	2,975	33,550				NET TRIP GENERATION	836	1,059	1,497	1,477

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81
tblVehicleEF	HHD	2.26	1.89

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	80,840,774
General Light Industry	5,227.50	990.00	510.00	17,483,788	17,483,788
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	97,153,384
Total	84,627.10	79,564.69	47,984.09	195,477,946	195,477,946

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81
tblVehicleEF	HHD	2.26	1.89

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	49.2283	125.3506	507.7754	1.0358	68.2914	1.6559	69.9473	18.2891	1.5222	19.8113	0.0000	82,835.0791	82,835.0791	3.6348	0.0000	82,911.4091
Unmitigated	50.4114	134.0498	536.3695	1.1201	74.0688	1.7858	75.8546	19.8363	1.6416	21.4779	0.0000	89,593.4473	89,593.4473	3.9075	0.0000	89,675.5049

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	74,535,193
General Light Industry	5,227.50	990.00	510.00	17,483,788	16,120,053
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	89,575,420
Total	84,627.10	79,564.69	47,984.09	195,477,946	180,230,667

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.00		0.00		0
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	50.0842	131.6435	528.4600	1.0968	72.4707	1.7499	74.2205	19.4083	1.6086	21.0169	0.0000	87,723.9791	87,723.9791	3.8321	0.0000	87,804.4524
Unmitigated	50.4114	134.0498	536.3695	1.1201	74.0688	1.7858	75.8546	19.8363	1.6416	21.4779	0.0000	89,593.4473	89,593.4473	3.9075	0.0000	89,675.5049

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	79,096,554
General Light Industry	5,227.50	990.00	510.00	17,483,788	17,106,558
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	95,057,203
Total	84,627.10	79,564.69	47,984.09	195,477,946	191,260,315

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81
tblVehicleEF	HHD	2.26	1.89

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	46.5540	105.6872	443.1420	0.8450	55.2324	1.3624	56.5948	14.7918	1.2524	16.0441	0.0000	67,558.6304	67,558.6304	3.0183	0.0000	67,622.0139
Unmitigated	50.4114	134.0498	536.3695	1.1201	74.0688	1.7858	75.8546	19.8363	1.6416	21.4779	0.0000	89,593.4473	89,593.4473	3.9075	0.0000	89,675.5049

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	60,282,215
General Light Industry	5,227.50	990.00	510.00	17,483,788	13,037,499
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	72,446,378
Total	84,627.10	79,564.69	47,984.09	195,477,946	145,766,092

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81
tblVehicleEF	HHD	2.26	1.89

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	49.6530	128.4734	518.0400	1.0660	70.3653	1.7026	72.0679	18.8445	1.5651	20.4096	0.0000	85,261.1600	85,261.1600	3.7327	0.0000	85,339.5461
Unmitigated	50.4114	134.0498	536.3695	1.1201	74.0688	1.7858	75.8546	19.8363	1.6416	21.4779	0.0000	89,593.4473	89,593.4473	3.9075	0.0000	89,675.5049

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	76,798,735
General Light Industry	5,227.50	990.00	510.00	17,483,788	16,609,599
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	92,295,715
Total	84,627.10	79,564.69	47,984.09	195,477,946	185,704,049

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81
tblVehicleEF	HHD	2.26	1.89

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	49.6530	128.4734	518.0400	1.0660	70.3653	1.7026	72.0679	18.8445	1.5651	20.4096	0.0000	85,261.1600	85,261.1600	3.7327	0.0000	85,339.5461
Unmitigated	50.4114	134.0498	536.3695	1.1201	74.0688	1.7858	75.8546	19.8363	1.6416	21.4779	0.0000	89,593.4473	89,593.4473	3.9075	0.0000	89,675.5049

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	76,798,735
General Light Industry	5,227.50	990.00	510.00	17,483,788	16,609,599
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	92,295,715
Total	84,627.10	79,564.69	47,984.09	195,477,946	185,704,049

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

Lynwood TASP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	750.00	1000sqft	17.22	750,000.00	0
Apartments Low Rise	3,586.00	Dwelling Unit	224.13	3,586,000.00	10256
Strip Mall	1,258.30	1000sqft	28.89	1,258,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2014
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.78	2.81
tblVehicleEF	HHD	2.26	1.89

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	43.1163	80.4104	360.0576	0.5999	38.4454	0.9852	39.4306	10.2960	0.9054	11.2015	0.0000	47,921.1921	47,921.1921	2.2258	0.0000	47,967.9332
Unmitigated	50.4114	134.0498	536.3695	1.1201	74.0688	1.7858	75.8546	19.8363	1.6416	21.4779	0.0000	89,593.4473	89,593.4473	3.9075	0.0000	89,675.5049

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	23,631.74	25,675.76	21767.02	80,840,774	41,960,419
General Light Industry	5,227.50	990.00	510.00	17,483,788	9,074,964
Strip Mall	55,767.86	52,898.93	25707.07	97,153,384	50,427,483
Total	84,627.10	79,564.69	47,984.09	195,477,946	101,462,865

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

APPENDIX B:
TRAFFIC COUNTS

Prepared by NDS/ATD

VOLUME

Long Beach Blvd N/O Norton Ave

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_001

DAILY TOTALS	NB	SB	EB	WB	Total
	17,623	17,608	0	0	35,231

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	62		63						125		12:00	246		240						486	
00:15	63		49						112		12:15	218		239						457	
00:30	62		34						96		12:30	282		226						508	
00:45	54	241	40	186					94	427	12:45	249	995	215	920					464	1915
01:00	42		29						71		13:00	260		241						501	
01:15	44		30						74		13:15	259		266						525	
01:30	34		31						65		13:30	260		265						525	
01:45	35	155	24	114					59	269	13:45	256	1035	253	1025					509	2060
02:00	31		40						71		14:00	267		232						499	
02:15	38		27						65		14:15	284		281						565	
02:30	29		27						56		14:30	250		297						547	
02:45	44	142	38	132					82	274	14:45	278	1079	246	1056					524	2135
03:00	34		30						64		15:00	293		258						551	
03:15	28		41						69		15:15	278		261						539	
03:30	27		55						82		15:30	276		241						517	
03:45	33	122	54	180					87	302	15:45	288	1135	248	1008					536	2143
04:00	33		80						113		16:00	306		292						598	
04:15	52		104						156		16:15	280		264						544	
04:30	56		140						196		16:30	299		308						607	
04:45	51	192	130	454					181	646	16:45	301	1186	233	1097					534	2283
05:00	51		145						196		17:00	286		269						555	
05:15	86		209						295		17:15	302		276						578	
05:30	91		255						346		17:30	294		257						551	
05:45	121	349	217	826					338	1175	17:45	283	1165	246	1048					529	2213
06:00	114		236						350		18:00	284		260						544	
06:15	129		235						364		18:15	254		247						501	
06:30	139		254						393		18:30	300		237						537	
06:45	163	545	230	955					393	1500	18:45	308	1146	260	1004					568	2150
07:00	146		220						366		19:00	241		220						461	
07:15	295		269						564		19:15	285		264						549	
07:30	240		302						542		19:30	272		216						488	
07:45	276	957	263	1054					539	2011	19:45	239	1037	218	918					457	1955
08:00	234		261						495		20:00	224		233						457	
08:15	258		205						463		20:15	254		219						473	
08:30	233		193						426		20:30	223		224						447	
08:45	256	981	209	868					465	1849	20:45	214	915	193	869					407	1784
09:00	235		201						436		21:00	196		185						381	
09:15	193		203						396		21:15	182		168						350	
09:30	246		217						463		21:30	162		163						325	
09:45	216	890	218	839					434	1729	21:45	174	714	132	648					306	1362
10:00	214		186						400		22:00	131		127						258	
10:15	231		230						461		22:15	114		115						229	
10:30	225		209						434		22:30	109		91						200	
10:45	214	884	218	843					432	1727	22:45	128	482	87	420					215	902
11:00	223		201						424		23:00	97		64						161	
11:15	220		208						428		23:15	92		57						149	
11:30	232		225						457		23:30	93		71						164	
11:45	252	927	242	876					494	1803	23:45	67	349	76	268					143	617
TOTALS		6385		7327						13712	TOTALS		11238		10281						21519
SPLIT %		46.6%		53.4%						38.9%	SPLIT %		52.2%		47.8%						61.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	17,623	17,608	0	0	35,231

AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	16:30	15:45			15:45
AM Pk Volume	1045	1095			2140	PM Pk Volume	1188	1112			2285
Pk Hr Factor	0.886	0.906			0.949	Pk Hr Factor	0.983	0.903			0.941
7 - 9 Volume	1938	1922	0	0	3860	4 - 6 Volume	2351	2145	0	0	4496
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	16:30	16:00			16:00
7 - 9 Pk Volume	1045	1095	0	0	2140	4 - 6 Pk Volume	1188	1097	0	0	2283
Pk Hr Factor	0.886	0.906	0.000	0.000	0.949	Pk Hr Factor	0.983	0.890	0.000	0.000	0.940

Prepared by NDS/ATD

VOLUME

Long Beach Blvd S/O Josephine St

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_002

DAILY TOTALS	NB	SB	EB	WB	Total
	18,042	15,400	0	0	33,442

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	49		81						130		12:00	226		194						420	
00:15	46		75						121		12:15	252		198						450	
00:30	58		75						133		12:30	226		213						439	
00:45	48	201	55	286					103	487	12:45	225	929	207	812					432	1741
01:00	48		47						95		13:00	227		220						447	
01:15	39		45						84		13:15	265		222						487	
01:30	43		43						86		13:30	228		249						477	
01:45	32	162	42	177					74	339	13:45	248	968	240	931					488	1899
02:00	31		46						77		14:00	228		252						480	
02:15	31		44						75		14:15	251		248						499	
02:30	37		43						80		14:30	270		239						509	
02:45	42	141	37	170					79	311	14:45	258	1007	234	973					492	1980
03:00	54		33						87		15:00	320		258						578	
03:15	47		27						74		15:15	271		249						520	
03:30	71		25						96		15:30	285		230						515	
03:45	61	233	25	110					86	343	15:45	285	1161	270	1007					555	2168
04:00	57		33						90		16:00	281		239						520	
04:15	92		37						129		16:15	271		248						519	
04:30	155		63						218		16:30	272		240						512	
04:45	98	402	62	195					160	597	16:45	281	1105	227	954					508	2059
05:00	166		58						224		17:00	303		253						556	
05:15	178		82						260		17:15	281		265						546	
05:30	243		71						314		17:30	292		253						545	
05:45	235	822	84	295					319	1117	17:45	270	1146	257	1028					527	2174
06:00	213		87						300		18:00	297		281						578	
06:15	242		109						351		18:15	262		251						513	
06:30	262		126						388		18:30	264		242						506	
06:45	246	963	112	434					358	1397	18:45	259	1082	246	1020					505	2102
07:00	267		140						407		19:00	232		266						498	
07:15	262		126						388		19:15	240		229						469	
07:30	256		186						442		19:30	224		224						448	
07:45	239	1024	233	685					472	1709	19:45	235	931	220	939					455	1870
08:00	242		200						442		20:00	233		197						430	
08:15	292		190						482		20:15	212		247						459	
08:30	254		191						445		20:30	191		223						414	
08:45	213	1001	163	744					376	1745	20:45	158	794	219	886					377	1680
09:00	189		156						345		21:00	185		197						382	
09:15	192		146						338		21:15	167		198						365	
09:30	177		171						348		21:30	144		181						325	
09:45	182	740	191	664					373	1404	21:45	150	646	204	780					354	1426
10:00	230		174						404		22:00	151		172						323	
10:15	200		173						373		22:15	144		100						244	
10:30	222		158						380		22:30	109		108						217	
10:45	210	862	168	673					378	1535	22:45	111	515	102	482					213	997
11:00	206		179						385		23:00	89		108						197	
11:15	214		197						411		23:15	103		103						206	
11:30	200		192						392		23:30	80		106						186	
11:45	235	855	186	754					421	1609	23:45	80	352	84	401					164	753
TOTALS		7406		5187						12593	TOTALS		10636		10213						20849
SPLIT %		58.8%		41.2%						37.7%	SPLIT %		51.0%		49.0%						62.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	18,042	15,400	0	0	33,442

AM Peak Hour	06:30	07:45			07:45	PM Peak Hour	15:00	17:15			17:15
AM Pk Volume	1037	814			1841	PM Pk Volume	1161	1056			2196
Pk Hr Factor	0.971	0.873			0.955	Pk Hr Factor	0.907	0.940			0.950
7 - 9 Volume	2025	1429	0	0	3454	4 - 6 Volume	2251	1982	0	0	4233
7 - 9 Peak Hour	07:30	07:45			07:45	4 - 6 Peak Hour	16:45	17:00			17:00
7 - 9 Pk Volume	1029	814	0	0	1841	4 - 6 Pk Volume	1157	1028	0	0	2174
Pk Hr Factor	0.881	0.873	0.000	0.000	0.955	Pk Hr Factor	0.955	0.970	0.000	0.000	0.978

Prepared by NDS/ATD

VOLUME

Alameda St N/O Fernwood Ave/Santa Ana Blvd

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_003

DAILY TOTALS	NB	SB	EB	WB	Total
	13,331	15,115	0	0	28,446

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	40		35						75		12:00	201		210						411	
00:15	49		23						72		12:15	185		198						383	
00:30	33		33						66		12:30	204		185						389	
00:45	27	149	25	116					52	265	12:45	186	776	205	798					391	1574
01:00	23		25						48		13:00	182		198						380	
01:15	29		22						51		13:15	221		205						426	
01:30	36		17						53		13:30	218		217						435	
01:45	33	121	20	84					53	205	13:45	196	817	214	834					410	1651
02:00	27		13						40		14:00	184		241						425	
02:15	25		16						41		14:15	213		183						396	
02:30	19		25						44		14:30	215		228						443	
02:45	22	93	18	72					40	165	14:45	220	832	247	899					467	1731
03:00	30		26						56		15:00	221		266						487	
03:15	30		19						49		15:15	216		287						503	
03:30	31		30						61		15:30	211		279						490	
03:45	36	127	42	117					78	244	15:45	215	863	301	1133					516	1996
04:00	33		21						54		16:00	227		266						493	
04:15	45		50						95		16:15	191		265						456	
04:30	60		75						135		16:30	217		281						498	
04:45	50	188	66	212					116	400	16:45	237	872	267	1079					504	1951
05:00	54		86						140		17:00	234		308						542	
05:15	87		104						191		17:15	212		309						521	
05:30	143		215						358		17:30	237		260						497	
05:45	153	437	141	546					294	983	17:45	233	916	278	1155					511	2071
06:00	151		124						275		18:00	219		260						479	
06:15	175		166						341		18:15	191		264						455	
06:30	228		205						433		18:30	208		266						474	
06:45	196	750	194	689					390	1439	18:45	205	823	221	1011					426	1834
07:00	202		230						432		19:00	172		206						378	
07:15	236		316						552		19:15	169		169						338	
07:30	214		323						537		19:30	153		181						334	
07:45	202	854	278	1147					480	2001	19:45	128	622	170	726					298	1348
08:00	216		265						481		20:00	112		159						271	
08:15	191		228						419		20:15	76		136						212	
08:30	181		179						360		20:30	80		147						227	
08:45	202	790	197	869					399	1659	20:45	101	369	131	573					232	942
09:00	200		163						363		21:00	88		120						208	
09:15	194		193						387		21:15	97		104						201	
09:30	184		185						369		21:30	85		106						191	
09:45	210	788	187	728					397	1516	21:45	74	344	84	414					158	758
10:00	191		157						348		22:00	51		73						124	
10:15	171		174						345		22:15	53		77						130	
10:30	191		188						379		22:30	48		63						111	
10:45	161	714	195	714					356	1428	22:45	42	194	55	268					97	462
11:00	199		183						382		23:00	35		47						82	
11:15	181		201						382		23:15	41		45						86	
11:30	174		215						389		23:30	28		32						60	
11:45	189	743	172	771					361	1514	23:45	45	149	36	160					81	309
TOTALS		5754		6065						11819	TOTALS		7577		9050						16627
SPLIT %		48.7%		51.3%						41.5%	SPLIT %		45.6%		54.4%						58.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	13,331	15,115	0	0	28,446

AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	16:45	16:30			17:00
AM Pk Volume	868	1182			2050	PM Pk Volume	920	1165			2071
Pk Hr Factor	0.919	0.915			0.928	Pk Hr Factor	0.970	0.943			0.955
7 - 9 Volume	1644	2016	0	0	3660	4 - 6 Volume	1788	2234	0	0	4022
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	16:45	16:30			17:00
7 - 9 Pk Volume	868	1182	0	0	2050	4 - 6 Pk Volume	920	1165	0	0	2071
Pk Hr Factor	0.919	0.915	0.000	0.000	0.928	Pk Hr Factor	0.970	0.943	0.000	0.000	0.955

Prepared by NDS/ATD

VOLUME

Alameda St S/O Lynwood Rd

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_004

DAILY TOTALS	NB	SB	EB	WB	Total
	12,113	11,442	0	0	23,555

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	32		33						65		12:00	164		148						312	
00:15	30		24						54		12:15	160		180						340	
00:30	32		25						57		12:30	166		150						316	
00:45	19	113	30	112					49	225	12:45	162	652	152	630					314	1282
01:00	11		15						26		13:00	132		163						295	
01:15	21		23						44		13:15	183		179						362	
01:30	20		11						31		13:30	179		182						361	
01:45	23	75	12	61					35	136	13:45	150	644	181	705					331	1349
02:00	17		10						27		14:00	161		139						300	
02:15	17		13						30		14:15	183		174						357	
02:30	9		11						20		14:30	205		158						363	
02:45	15	58	17	51					32	109	14:45	226	775	176	647					402	1422
03:00	14		23						37		15:00	210		211						421	
03:15	15		12						27		15:15	210		215						425	
03:30	25		17						42		15:30	208		186						394	
03:45	20	74	21	73					41	147	15:45	252	880	235	847					487	1727
04:00	19		22						41		16:00	248		197						445	
04:15	34		38						72		16:15	246		230						476	
04:30	44		47						91		16:30	236		202						438	
04:45	39	136	61	168					100	304	16:45	240	970	210	839					450	1809
05:00	53		62						115		17:00	236		232						468	
05:15	82		101						183		17:15	233		219						452	
05:30	131		123						254		17:30	229		199						428	
05:45	124	390	108	394					232	784	17:45	223	921	206	856					429	1777
06:00	129		85						214		18:00	196		172						368	
06:15	152		115						267		18:15	178		175						353	
06:30	183		164						347		18:30	187		201						388	
06:45	195	659	153	517					348	1176	18:45	174	735	169	717					343	1452
07:00	183		142						325		19:00	141		141						282	
07:15	230		185						415		19:15	143		152						295	
07:30	190		218						408		19:30	131		123						254	
07:45	205	808	227	772					432	1580	19:45	111	526	118	534					229	1060
08:00	195		199						394		20:00	125		110						235	
08:15	158		177						335		20:15	117		88						205	
08:30	156		154						310		20:30	95		86						181	
08:45	155	664	163	693					318	1357	20:45	95	432	91	375					186	807
09:00	141		131						272		21:00	78		98						176	
09:15	173		167						340		21:15	90		87						177	
09:30	154		155						309		21:30	87		83						170	
09:45	158	626	155	608					313	1234	21:45	91	346	54	322					145	668
10:00	156		117						273		22:00	65		64						129	
10:15	140		137						277		22:15	63		75						138	
10:30	155		120						275		22:30	65		53						118	
10:45	160	611	150	524					310	1135	22:45	51	244	56	248					107	492
11:00	154		138						292		23:00	42		47						89	
11:15	147		145						292		23:15	47		38						85	
11:30	149		157						306		23:30	35		36						71	
11:45	163	613	158	598					321	1211	23:45	37	161	30	151					67	312
TOTALS		4827		4571						9398	TOTALS		7286		6871						14157
SPLIT %		51.4%		48.6%						39.9%	SPLIT %		51.5%		48.5%						60.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,113	11,442	0	0	23,555

AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	15:45	16:15			15:45
AM Pk Volume	820	829			1649	PM Pk Volume	982	874			1846
Pk Hr Factor	0.891	0.913			0.954	Pk Hr Factor	0.974	0.942			0.948
7 - 9 Volume	1472	1465	0	0	2937	4 - 6 Volume	1891	1695	0	0	3586
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	16:00	16:15			16:15
7 - 9 Pk Volume	820	829	0	0	1649	4 - 6 Pk Volume	970	874	0	0	1832
Pk Hr Factor	0.891	0.913	0.000	0.000	0.954	Pk Hr Factor	0.978	0.942	0.000	0.000	0.962

Prepared by NDS/ATD

VOLUME

State St N/O Oakwood Ave

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_005

DAILY TOTALS	NB	SB	EB	WB	Total
	6,286	6,288	0	0	12,574

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	11		8						19		12:00	59		87						146	
00:15	4		11						15		12:15	52		83						135	
00:30	10		6						16		12:30	75		57						132	
00:45	5	30	8	33					13	63	12:45	79	265	91	318					170	583
01:00	6		3						9		13:00	86		82						168	
01:15	7		7						14		13:15	83		85						168	
01:30	4		2						6		13:30	77		83						160	
01:45	6	23	3	15					9	38	13:45	101	347	85	335					186	682
02:00	1		4						5		14:00	87		74						161	
02:15	6		3						9		14:15	89		77						166	
02:30	2		7						9		14:30	108		101						209	
02:45	4	13	3	17					7	30	14:45	143	427	156	408					299	835
03:00	1		4						5		15:00	156		111						267	
03:15	5		3						8		15:15	128		124						252	
03:30	5		8						13		15:30	181		125						306	
03:45	1	12	8	23					9	35	15:45	177	642	100	460					277	1102
04:00	4		6						10		16:00	160		106						266	
04:15	13		10						23		16:15	155		108						263	
04:30	8		21						29		16:30	194		104						298	
04:45	11	36	23	60					34	96	16:45	176	685	116	434					292	1119
05:00	11		15						26		17:00	165		108						273	
05:15	13		33						46		17:15	174		104						278	
05:30	25		76						101		17:30	172		131						303	
05:45	22	71	65	189					87	260	17:45	177	688	119	462					296	1150
06:00	29		57						86		18:00	176		123						299	
06:15	25		85						110		18:15	167		99						266	
06:30	40		138						178		18:30	129		112						241	
06:45	67	161	150	430					217	591	18:45	108	580	107	441					215	1021
07:00	108		146						254		19:00	97		79						176	
07:15	109		180						289		19:15	92		82						174	
07:30	115		155						270		19:30	74		79						153	
07:45	97	429	156	637					253	1066	19:45	78	341	77	317					155	658
08:00	92		138						230		20:00	65		59						124	
08:15	88		132						220		20:15	53		55						108	
08:30	63		109						172		20:30	46		54						100	
08:45	63	306	68	447					131	753	20:45	51	215	61	229					112	444
09:00	38		53						91		21:00	42		54						96	
09:15	54		58						112		21:15	50		45						95	
09:30	52		62						114		21:30	44		35						79	
09:45	44	188	58	231					102	419	21:45	28	164	40	174					68	338
10:00	53		58						111		22:00	28		31						59	
10:15	57		71						128		22:15	19		18						37	
10:30	70		66						136		22:30	30		19						49	
10:45	44	224	52	247					96	471	22:45	28	105	18	86					46	191
11:00	67		61						128		23:00	31		19						50	
11:15	63		74						137		23:15	23		15						38	
11:30	58		45						103		23:30	16		13						29	
11:45	59	247	57	237					116	484	23:45	17	87	11	58					28	145
TOTALS		1740		2566						4306	TOTALS		4546		3722						8268
SPLIT %		40.4%		59.6%						34.2%	SPLIT %		55.0%		45.0%						65.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,286	6,288	0	0	12,574

AM Peak Hour	07:00	07:00			07:00	PM Peak Hour	16:30	14:45			17:15
AM Pk Volume	429	637			1066	PM Pk Volume	709	516			1176
Pk Hr Factor	0.933	0.885			0.922	Pk Hr Factor	0.914	0.827			0.970
7 - 9 Volume	735	1084	0	0	1819	4 - 6 Volume	1373	896	0	0	2269
7 - 9 Peak Hour	07:00	07:00			07:00	4 - 6 Peak Hour	16:30	17:00			17:00
7 - 9 Pk Volume	429	637	0	0	1066	4 - 6 Pk Volume	709	462	0	0	1150
Pk Hr Factor	0.933	0.885	0.000	0.000	0.922	Pk Hr Factor	0.914	0.882	0.000	0.000	0.949

Prepared by NDS/ATD

VOLUME

State St S/O Redwood Ave

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_006

DAILY TOTALS	NB	SB	EB	WB	Total
	7,256	6,756	0	0	14,012

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	11		14						25		12:00	88		73						161	
00:15	13		18						31		12:15	105		95						200	
00:30	8		7						15		12:30	100		65						165	
00:45	8	40	8	47					16	87	12:45	107	400	86	319					193	719
01:00	8		8						16		13:00	92		81						173	
01:15	7		7						14		13:15	88		103						191	
01:30	3		4						7		13:30	90		100						190	
01:45	7	25	3	22					10	47	13:45	93	363	98	382					191	745
02:00	1		3						4		14:00	97		107						204	
02:15	6		1						7		14:15	107		98						205	
02:30	3		7						10		14:30	136		103						239	
02:45	3	13	2	13					5	26	14:45	163	503	138	446					301	949
03:00	3		5						8		15:00	155		131						286	
03:15	5		5						10		15:15	127		164						291	
03:30	5		4						9		15:30	154		123						277	
03:45	2	15	6	20					8	35	15:45	154	590	125	543					279	1133
04:00	6		6						12		16:00	165		144						309	
04:15	11		10						21		16:15	174		166						340	
04:30	14		21						35		16:30	166		133						299	
04:45	17	48	21	58					38	106	16:45	184	689	134	577					318	1266
05:00	24		15						39		17:00	170		144						314	
05:15	22		21						43		17:15	182		130						312	
05:30	40		53						93		17:30	159		160						319	
05:45	26	112	45	134					71	246	17:45	169	680	162	596					331	1276
06:00	40		36						76		18:00	158		157						315	
06:15	39		56						95		18:15	172		136						308	
06:30	59		71						130		18:30	141		124						265	
06:45	104	242	70	233					174	475	18:45	117	588	151	568					268	1156
07:00	136		67						203		19:00	113		127						240	
07:15	140		98						238		19:15	100		118						218	
07:30	140		121						261		19:30	81		111						192	
07:45	133	549	126	412					259	961	19:45	74	368	101	457					175	825
08:00	118		123						241		20:00	70		105						175	
08:15	115		110						225		20:15	55		86						141	
08:30	94		81						175		20:30	53		66						119	
08:45	99	426	58	372					157	798	20:45	60	238	84	341					144	579
09:00	60		58						118		21:00	56		73						129	
09:15	76		57						133		21:15	57		62						119	
09:30	84		57						141		21:30	41		51						92	
09:45	90	310	57	229					147	539	21:45	37	191	50	236					87	427
10:00	77		62						139		22:00	27		35						62	
10:15	76		79						155		22:15	23		29						52	
10:30	88		50						138		22:30	19		29						48	
10:45	74	315	63	254					137	569	22:45	23	92	25	118					48	210
11:00	98		79						177		23:00	28		25						53	
11:15	98		82						180		23:15	27		23						50	
11:30	77		67						144		23:30	16		25						41	
11:45	94	367	61	289					155	656	23:45	21	92	17	90					38	182
TOTALS		2462		2083						4545	TOTALS		4794		4673						9467
SPLIT %		54.2%		45.8%						32.4%	SPLIT %		50.6%		49.4%						67.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,256	6,756	0	0	14,012

AM Peak Hour	07:00	07:30			07:15	PM Peak Hour	16:30	17:30			17:15
AM Pk Volume	549	480			999	PM Pk Volume	702	615			1277
Pk Hr Factor	0.980	0.952			0.957	Pk Hr Factor	0.954	0.949			0.965
7 - 9 Volume	975	784	0	0	1759	4 - 6 Volume	1369	1173	0	0	2542
7 - 9 Peak Hour	07:00	07:30			07:15	4 - 6 Peak Hour	16:30	17:00			17:00
7 - 9 Pk Volume	549	480	0	0	999	4 - 6 Pk Volume	702	596	0	0	1276
Pk Hr Factor	0.980	0.952	0.000	0.000	0.957	Pk Hr Factor	0.954	0.920	0.000	0.000	0.964

Prepared by NDS/ATD

VOLUME

Imperial Hwy W/O Alameda St

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,213	20,153	40,366

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			49		61		110		12:00			252		287		539	
00:15			45		34		79		12:15			265		262		527	
00:30			42		44		86		12:30			250		250		500	
00:45			34	170	29	168	63	338	12:45			296	1063	265	1064	561	2127
01:00			31		26		57		13:00			256		232		488	
01:15			31		33		64		13:15			295		260		555	
01:30			19		15		34		13:30			291		258		549	
01:45			28	109	32	106	60	215	13:45			312	1154	249	999	561	2153
02:00			24		16		40		14:00			317		262		579	
02:15			26		15		41		14:15			298		264		562	
02:30			38		29		67		14:30			304		286		590	
02:45			30	118	18	78	48	196	14:45			418	1337	286	1098	704	2435
03:00			29		28		57		15:00			373		301		674	
03:15			30		27		57		15:15			419		329		748	
03:30			29		38		67		15:30			402		353		755	
03:45			35	123	51	144	86	267	15:45			430	1624	301	1284	731	2908
04:00			50		35		85		16:00			424		323		747	
04:15			52		59		111		16:15			364		275		639	
04:30			76		78		154		16:30			437		330		767	
04:45			79	257	74	246	153	503	16:45			434	1659	288	1216	722	2875
05:00			50		96		146		17:00			447		328		775	
05:15			86		145		231		17:15			445		320		765	
05:30			110		288		398		17:30			444		321		765	
05:45			161	407	270	799	431	1206	17:45			420	1756	313	1282	733	3038
06:00			150		297		447		18:00			388		307		695	
06:15			163		338		501		18:15			399		276		675	
06:30			171		380		551		18:30			387		286		673	
06:45			187	671	426	1441	613	2112	18:45			343	1517	265	1134	608	2651
07:00			222		413		635		19:00			291		237		528	
07:15			273		524		797		19:15			236		220		456	
07:30			287		547		834		19:30			201		218		419	
07:45			259	1041	420	1904	679	2945	19:45			187	915	241	916	428	1831
08:00			261		427		688		20:00			207		212		419	
08:15			272		403		675		20:15			171		205		376	
08:30			228		357		585		20:30			150		237		387	
08:45			199	960	284	1471	483	2431	20:45			147	675	182	836	329	1511
09:00			209		275		484		21:00			129		158		287	
09:15			185		220		405		21:15			142		151		293	
09:30			229		215		444		21:30			144		130		274	
09:45			242	865	226	936	468	1801	21:45			136	551	126	565	262	1116
10:00			220		235		455		22:00			125		96		221	
10:15			198		218		416		22:15			126		94		220	
10:30			216		252		468		22:30			230		85		315	
10:45			235	869	242	947	477	1816	22:45			227	708	82	357	309	1065
11:00			240		237		477		23:00			203		80		283	
11:15			231		213		444		23:15			200		67		267	
11:30			240		233		473		23:30			193		47		240	
11:45			230	941	228	911	458	1852	23:45			127	723	57	251	184	974
TOTALS				6531		9151		15682	TOTALS				13682		11002		24684
SPLIT %				41.6%		58.4%		38.8%	SPLIT %				55.4%		44.6%		61.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,213	20,153	40,366

AM Peak Hour			07:15	07:15	07:15	PM Peak Hour			16:45	15:15	17:00
AM Pk Volume			1080	1918	2998	PM Pk Volume			1770	1306	3038
Pk Hr Factor			0.941	0.877	0.899	Pk Hr Factor			0.990	0.925	0.980
7 - 9 Volume	0	0	2001	3375	5376	4 - 6 Volume	0	0	3415	2498	5913
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	1080	1918	2998	4 - 6 Pk Volume	0	0	1770	1282	3038
Pk Hr Factor	0.000	0.000	0.941	0.877	0.899	Pk Hr Factor	0.000	0.000	0.990	0.977	0.980

Prepared by NDS/ATD

VOLUME

Imperial Hwy E/O California Ave

Day: Thursday
Date: 4/23/2015

City: Lynwood
Project #: CA15_5223_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,846	14,472	29,318

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			48		40		88		12:00			193		176		369	
00:15			41		22		63		12:15			231		189		420	
00:30			30		20		50		12:30			213		191		404	
00:45			31	150	14	96	45	246	12:45			230	867	166	722	396	1589
01:00			21		18		39		13:00			210		186		396	
01:15			22		16		38		13:15			195		172		367	
01:30			13		19		32		13:30			222		191		413	
01:45			16	72	18	71	34	143	13:45			212	839	188	737	400	1576
02:00			6		10		16		14:00			251		184		435	
02:15			16		8		24		14:15			210		182		392	
02:30			17		14		31		14:30			260		192		452	
02:45			16	55	18	50	34	105	14:45			277	998	239	797	516	1795
03:00			15		19		34		15:00			262		285		547	
03:15			14		22		36		15:15			267		270		537	
03:30			22		16		38		15:30			264		238		502	
03:45			22	73	24	81	46	154	15:45			257	1050	229	1022	486	2072
04:00			25		23		48		16:00			258		231		489	
04:15			41		32		73		16:15			282		239		521	
04:30			47		43		90		16:30			226		252		478	
04:45			42	155	39	137	81	292	16:45			275	1041	218	940	493	1981
05:00			42		63		105		17:00			240		223		463	
05:15			57		87		144		17:15			257		191		448	
05:30			75		135		210		17:30			261		251		512	
05:45			65	239	181	466	246	705	17:45			293	1051	215	880	508	1931
06:00			79		220		299		18:00			277		227		504	
06:15			113		226		339		18:15			285		186		471	
06:30			151		279		430		18:30			301		209		510	
06:45			152	495	238	963	390	1458	18:45			285	1148	206	828	491	1976
07:00			172		246		418		19:00			214		175		389	
07:15			187		297		484		19:15			210		143		353	
07:30			230		345		575		19:30			176		165		341	
07:45			271	860	264	1152	535	2012	19:45			199	799	145	628	344	1427
08:00			209		347		556		20:00			186		162		348	
08:15			253		325		578		20:15			189		138		327	
08:30			223		292		515		20:30			133		146		279	
08:45			200	885	213	1177	413	2062	20:45			127	635	134	580	261	1215
09:00			187		219		406		21:00			119		124		243	
09:15			181		178		359		21:15			114		110		224	
09:30			159		191		350		21:30			106		105		211	
09:45			187	714	189	777	376	1491	21:45			105	444	113	452	218	896
10:00			176		171		347		22:00			89		90		179	
10:15			189		184		373		22:15			75		75		150	
10:30			179		160		339		22:30			131		62		193	
10:45			174	718	164	679	338	1397	22:45			101	396	77	304	178	700
11:00			210		175		385		23:00			116		60		176	
11:15			196		173		369		23:15			108		67		175	
11:30			205		201		406		23:30			92		32		124	
11:45			172	783	185	734	357	1517	23:45			63	379	40	199	103	578
TOTALS				5199		6383		11582	TOTALS				9647		8089		17736
SPLIT %				44.9%		55.1%		39.5%	SPLIT %				54.4%		45.6%		60.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,846	14,472	29,318

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			17:45	14:45	14:45
AM Pk Volume			963	1281	2244	PM Pk Volume			1156	1032	2102
Pk Hr Factor			0.888	0.923	0.971	Pk Hr Factor			0.960	0.905	0.961
7 - 9 Volume	0	0	1745	2329	4074	4 - 6 Volume	0	0	2092	1820	3912
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	16:00	16:00
7 - 9 Pk Volume	0	0	963	1281	2244	4 - 6 Pk Volume	0	0	1051	940	1981
Pk Hr Factor	0.000	0.000	0.888	0.923	0.971	Pk Hr Factor	0.000	0.000	0.897	0.933	0.951

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Long Beach Blvd(SB) and I-105 WB On Ramp , Lynwood

Date: 4/23/2015

Day: Thursday

Project #: 15-5224-001

City: Lynwood

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Long Beach Blvd(SB))

Lanes	1	3	0		
AM	583	1354	0	0	AM
NOON	0	0	0	0	NOON
PM	583	1295	0	0	PM

Eastbound Approach (I-105 WB On Ramp)

	AM	NOON	PM
	583	0	583
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
AM	NOON	PM	

CONTROL

No Control

Northbound Approach

AM	1354	0	0	0	AM
NOON	0	0	0	0	NOON
PM	1295	0	0	0	PM
		0	0	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1937	0	AM
	0	0	NOON
	1878	0	PM

West Leg AM	West Leg NOON	West Leg PM		East Leg AM	East Leg NOON	East Leg PM
583	0	583		0	0	0
0	0	0		0	0	0

	South Leg	
AM	1354	0
NOON	0	0
PM	1295	0

Total Volume Per Leg

	North Leg
AM	1937
NOON	0
PM	1878

West Leg AM	West Leg NOON	West Leg PM		East Leg AM	East Leg NOON	East Leg PM
583	0	583		0	0	0

	South Leg
AM	1354
NOON	0
PM	1295

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

City: Lynwood

Day: Thursday

Date: 4/23/2015

TOTALS

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
7:00 AM	0	0	0	0	281	131	0	0	0	0	0	0	412
7:15 AM	0	0	0	0	366	180	0	0	0	0	0	0	546
7:30 AM	0	0	0	0	350	159	0	0	0	0	0	0	509
7:45 AM	0	0	0	0	339	125	0	0	0	0	0	0	464
8:00 AM	0	0	0	0	299	119	0	0	0	0	0	0	418
8:15 AM	0	0	0	0	269	114	0	0	0	0	0	0	383
8:30 AM	0	0	0	0	266	133	0	0	0	0	0	0	399
8:45 AM	0	0	0	0	237	104	0	0	0	0	0	0	341
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2407	1065	0	0	0	0	0	0	3472
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	69.33%	30.67%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	1354	583	0	0	0	0	0	0	1937
PEAK HR FACTOR :	0.000			0.887			0.000			0.000			0.887

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

City: Lynwood

TOTALS

PM

Day: Thursday

Date: 4/23/2015

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
4:00 PM	0	0	0	0	323	168	0	0	0	0	0	0	491
4:15 PM	0	0	0	0	287	135	0	0	0	0	0	0	422
4:30 PM	0	0	0	0	307	128	0	0	0	0	0	0	435
4:45 PM	0	0	0	0	280	122	0	0	0	0	0	0	402
5:00 PM	0	0	0	0	349	163	0	0	0	0	0	0	512
5:15 PM	0	0	0	0	319	143	0	0	0	0	0	0	462
5:30 PM	0	0	0	0	318	148	0	0	0	0	0	0	466
5:45 PM	0	0	0	0	309	129	0	0	0	0	0	0	438
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2492	1136	0	0	0	0	0	0	3628
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	68.69%	31.31%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1295	583	0	0	0	0	0	0	1878
PEAK HR FACTOR :		0.000			0.917			0.000			0.000		0.917

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

Day: Thursday

Cars

City: Lynwood

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
7:00 AM	0	0	0	0	275	128	0	0	0	0	0	0	403
7:15 AM	0	0	0	0	357	179	0	0	0	0	0	0	536
7:30 AM	0	0	0	0	345	159	0	0	0	0	0	0	504
7:45 AM	0	0	0	0	333	125	0	0	0	0	0	0	458
8:00 AM	0	0	0	0	291	118	0	0	0	0	0	0	409
8:15 AM	0	0	0	0	263	113	0	0	0	0	0	0	376
8:30 AM	0	0	0	0	259	129	0	0	0	0	0	0	388
8:45 AM	0	0	0	0	227	100	0	0	0	0	0	0	327
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2350	1051	0	0	0	0	0	0	3401
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	69.10%	30.90%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	1326	581	0	0	0	0	0	0	1907
PEAK HR FACTOR :		0.000			0.889			0.000			0.000		0.889

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
4:00 PM	0	0	0	0	317	168	0	0	0	0	0	0	485
4:15 PM	0	0	0	0	279	134	0	0	0	0	0	0	413
4:30 PM	0	0	0	0	300	125	0	0	0	0	0	0	425
4:45 PM	0	0	0	0	273	120	0	0	0	0	0	0	393
5:00 PM	0	0	0	0	344	161	0	0	0	0	0	0	505
5:15 PM	0	0	0	0	310	141	0	0	0	0	0	0	451
5:30 PM	0	0	0	0	314	146	0	0	0	0	0	0	460
5:45 PM	0	0	0	0	306	129	0	0	0	0	0	0	435
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2443	1124	0	0	0	0	0	0	3567
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	68.49%	31.51%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1274	577	0	0	0	0	0	0	1851
PEAK HR FACTOR :		0.000			0.916			0.000			0.000		0.916

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
7:00 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
7:15 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
8:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	5	1	0	0	0	0	0	0	6
8:45 AM	0	0	0	0	5	2	0	0	0	0	0	0	7
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	35	3	0	0	0	0	0	0	38
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	92.11%	7.89%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	15	0	0	0	0	0	0	0	15
PEAK HR FACTOR :	0.000			0.625			0.000			0.000			0.889

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	4	1	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	3	1	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	5	1	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
5:15 PM	0	0	0	0	5	2	0	0	0	0	0	0	7
5:30 PM	0	0	0	0	3	1	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	29	6	0	0	0	0	0	0	35
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	82.86%	17.14%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	15	3	0	0	0	0	0	0	18
PEAK HR FACTOR :	0.000			0.643			0.000			0.000			0.916

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

Day: Thursday

City: Lynwood

2 Axle+ Trucks

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
7:00 AM	0	0	0	0	1	3	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	5	1	0	0	0	0	0	0	6
7:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	5	1	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	2	3	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	5	2	0	0	0	0	0	0	7
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	22	11	0	0	0	0	0	0	33
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	66.67%	33.33%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	13	2	0	0	0	0	0	0	15
PEAK HR FACTOR :	0.000			0.625			0.000			0.000			0.889

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-001

Day: Thursday

City: Lynwood

2 Axle+ Trucks

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	3	1	0	0	0	0	0	0	
4:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	4	2	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	2	1	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	1	2	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	20	6	0	0	0	0	0	0	26
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	76.92%	23.08%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	6	3	0	0	0	0	0	0	9
PEAK HR FACTOR :	0.000			0.563			0.000			0.000			0.916

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Long Beach Blvd and I-105 WB Off Ramp , Lynwood

Date: 4/23/2015

Day: Thursday

Project #: 15-5224-002

City: Lynwood

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Long Beach Blvd)

	Lanes 0	3	0		
AM	34	1303	0	1819	AM
NOON	0	0	0	0	NOON
PM	14	1262	0	2160	PM

Eastbound Approach (I-105 WB Off Ramp)

Lanes	AM	NOON	PM
	101	0	78
0	6	0	24
1	0	0	0
0	9	0	13

Westbound Approach

AM	NOON	PM	Lanes
725	0	1017	1.5
20	0	11	0.5
201	0	368	1
0	0	0	

Northbound Approach

AM	1513	47	1088	0	AM
NOON	0	0	0	0	NOON
PM	1643	53	1119	0	PM
		1	3	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1337	1819	AM
	0	0	NOON
	1276	2160	PM

West Leg	AM	NOON	PM
	101	0	78
	15	0	37

East Leg	AM	NOON	PM
	946	0	1396
	0	0	0

	South Leg	
AM	1513	1135
NOON	0	0
PM	1643	1172

Total Volume Per Leg

	North Leg
AM	3156
NOON	0
PM	3436

West Leg	AM	NOON	PM
	116	0	115

East Leg	AM	NOON	PM
	946	0	1396

	South Leg
AM	2648
NOON	0
PM	2815

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
7:00 AM	36	203	0	1	280	9	1	0	2	35	0	146	713
7:15 AM	17	263	0	0	364	12	2	0	4	44	3	178	887
7:30 AM	11	263	0	0	338	7	2	0	2	47	7	186	863
7:45 AM	15	275	0	0	330	9	1	0	2	68	6	215	921
8:00 AM	4	287	0	0	271	6	1	0	1	42	4	146	762
8:15 AM	11	325	0	0	281	3	0	0	1	41	8	142	812
8:30 AM	8	282	0	0	263	8	0	0	3	54	8	172	798
8:45 AM	9	256	0	0	233	6	0	0	2	41	4	163	714
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	111	2154	0	1	2360	60	7	0	17	372	40	1348	6470
APPROACH %'s :	4.90%	95.10%	0.00%	0.04%	97.48%	2.48%	29.17%	0.00%	70.83%	21.14%	2.27%	76.59%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	47	1088	0	0	1303	34	6	0	9	201	20	725	3433
PEAK HR FACTOR :		0.975			0.889			0.625			0.818		0.932

UTURNS			
NB	SB	EB	WB
28	1		
13	0		
7	0		
13	0		
2	0		
9	0		
6	0		
6	0		
NB	SB	EB	WB
84	1	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

City: Lynwood

TOTALS

PM

Day: Thursday

Date: 4/23/2015

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5					
4:00 PM	9	237	0	0	303	1	2	0	2	90	5	266	915	7		0	
4:15 PM	8	231	0	0	312	0	7	0	2	82	3	234	879	7		0	
4:30 PM	13	255	0	0	304	4	2	0	1	70	8	185	842	7		0	
4:45 PM	13	256	0	0	279	2	4	0	4	105	4	285	952	9		0	
5:00 PM	17	283	0	0	324	6	8	0	4	82	0	234	958	14		0	
5:15 PM	15	292	0	0	338	2	6	0	2	86	5	249	995	8		0	
5:30 PM	8	288	0	0	321	4	6	0	3	95	2	249	976	6		1	
5:45 PM	9	242	0	0	302	4	9	0	2	76	0	262	906	9		0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	92	2084	0	0	2483	23	44	0	20	686	27	1964	7423	67	0	1	0
APPROACH %'s :	4.23%	95.77%	0.00%	0.00%	99.08%	0.92%	68.75%	0.00%	31.25%	25.63%	1.01%	73.37%					
PEAK HR START TIME :	445 PM												TOTAL				
PEAK HR VOL :	53	1119	0	0	1262	14	24	0	13	368	11	1017	3881				
PEAK HR FACTOR :		0.954			0.938			0.771			0.886		0.975				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
7:00 AM	36	196	0	1	273	9	1	0	2	35	0	142	695
7:15 AM	17	255	0	0	355	12	2	0	4	42	3	177	867
7:30 AM	11	253	0	0	333	7	2	0	2	47	7	184	846
7:45 AM	15	269	0	0	326	9	1	0	2	68	6	211	907
8:00 AM	4	280	0	0	262	6	1	0	1	39	4	143	740
8:15 AM	11	318	0	0	274	3	0	0	1	38	7	140	792
8:30 AM	8	272	0	0	256	8	0	0	3	54	7	167	775
8:45 AM	9	250	0	0	224	6	0	0	2	40	4	160	695
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	111	2093	0	1	2303	60	7	0	17	363	38	1324	6317
APPROACH %'s :	5.04%	94.96%	0.00%	0.04%	97.42%	2.54%	29.17%	0.00%	70.83%	21.04%	2.20%	76.75%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	47	1057	0	0	1276	34	6	0	9	196	20	715	3360
PEAK HR FACTOR :		0.972			0.892			0.625			0.817		0.926

UTURNS	NB	SB	EB	WB
7:00 AM	28	1		
7:15 AM	13	0		
7:30 AM	7	0		
7:45 AM	13	0		
8:00 AM	2	0		
8:15 AM	9	0		
8:30 AM	6	0		
8:45 AM	6	0		
TOTAL VOLUMES :	84	1	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
4:00 PM	9	232	0	0	297	1	2	0	2	89	5	260	897
4:15 PM	8	226	0	0	305	0	7	0	2	82	3	234	867
4:30 PM	13	246	0	0	296	4	2	0	1	69	3	182	816
4:45 PM	13	250	0	0	272	2	4	0	4	105	3	284	937
5:00 PM	17	279	0	0	319	6	8	0	4	81	0	232	946
5:15 PM	15	286	0	0	329	2	6	0	2	85	5	249	979
5:30 PM	8	283	0	0	317	4	6	0	2	93	2	245	960
5:45 PM	9	239	0	0	299	4	9	0	2	76	0	259	897
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	92	2041	0	0	2434	23	44	0	19	680	21	1945	7299
APPROACH %'s :	4.31%	95.69%	0.00%	0.00%	99.06%	0.94%	69.84%	0.00%	30.16%	25.70%	0.79%	73.51%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	53	1098	0	0	1237	14	24	0	12	364	10	1010	3822
PEAK HR FACTOR :		0.956			0.945			0.750			0.883		0.976

UTURNS

	NB	SB	EB	WB
4:00 PM	7		0	
4:15 PM	7		0	
4:30 PM	7		0	
4:45 PM	9		0	
5:00 PM	14		0	
5:15 PM	8		0	
5:30 PM	6		1	
5:45 PM	9		0	
TOTAL	NB	SB	EB	WB
	67	0	1	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

Day: Thursday

Buses

City: Lynwood

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
7:00 AM	0	4	0	0	5	0	0	0	0	0	0	1	10
7:15 AM	0	6	0	0	4	0	0	0	0	0	0	0	10
7:30 AM	0	6	0	0	2	0	0	0	0	0	0	0	8
7:45 AM	0	5	0	0	4	0	0	0	0	0	0	0	9
8:00 AM	0	4	0	0	5	0	0	0	0	0	0	0	9
8:15 AM	0	6	0	0	5	0	0	0	0	0	0	0	11
8:30 AM	0	6	0	0	5	0	0	0	0	0	0	1	12
8:45 AM	0	4	0	0	5	0	0	0	0	0	0	0	9
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	41	0	0	35	0	0	0	0	0	0	2	78
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	21	0	0	15	0	0	0	0	0	0	0	36
PEAK HR FACTOR :	0.875			0.750			0.000			0.000			0.926

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
4:00 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
4:15 PM	0	5	0	0	4	0	0	0	0	0	0	0	9
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	0	6
4:45 PM	0	2	0	0	5	0	0	0	0	0	0	0	7
5:00 PM	0	3	0	0	4	0	0	0	0	0	0	0	7
5:15 PM	0	5	0	0	5	0	0	0	0	0	0	0	10
5:30 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
5:45 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	25	0	0	29	0	0	0	0	0	0	0	54
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	12	0	0	17	0	0	0	0	0	0	0	29
PEAK HR FACTOR :	0.600			0.850			0.000			0.000			0.976

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

City: Lynwood

2 Axle+ Trucks

AM

Day: Thursday

Date: 4/23/2015

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
7:00 AM	0	3	0	0	2	0	0	0	0	0	0	3	8
7:15 AM	0	2	0	0	5	0	0	0	0	2	0	1	10
7:30 AM	0	4	0	0	3	0	0	0	0	0	0	2	9
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	4	5
8:00 AM	0	3	0	0	4	0	0	0	0	3	0	3	13
8:15 AM	0	1	0	0	2	0	0	0	0	3	1	2	9
8:30 AM	0	4	0	0	2	0	0	0	0	0	1	4	11
8:45 AM	0	2	0	0	4	0	0	0	0	1	0	3	10
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	20	0	0	22	0	0	0	0	9	2	22	75
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	27.27%	6.06%	66.67%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	10	0	0	12	0	0	0	0	5	0	10	37
PEAK HR FACTOR :	0.625			0.600			0.000			0.625			0.926

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-002

Day: Thursday

2 Axle+ Trucks

City: Lynwood

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 WB Off Ramp			I-105 WB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	1	0	1	0.5	1.5	
4:00 PM	0	2	0	0	4	0	0	0	0	1	0	6	13
4:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
4:30 PM	0	6	0	0	5	0	0	0	0	1	5	3	20
4:45 PM	0	4	0	0	2	0	0	0	0	0	1	1	8
5:00 PM	0	1	0	0	1	0	0	0	0	1	0	2	5
5:15 PM	0	1	0	0	4	0	0	0	0	1	0	0	6
5:30 PM	0	3	0	0	1	0	0	0	1	2	0	4	11
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	3	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	18	0	0	20	0	0	0	1	6	6	19	70
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	19.35%	19.35%	61.29%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	9	0	0	8	0	0	0	1	4	1	7	30
PEAK HR FACTOR :	0.563			0.500			0.250			0.500			0.976

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Long Beach Blvd(NB) and I-105 WB On Ramp , Lynwood

Date: 4/23/2015

Day: Thursday

Project #: 15-5224-003

City: Lynwood

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Long Beach Blvd(NB))

Lanes	0	3	0		
AM	0	0	0	1199	AM
NOON	0	0	0	0	NOON
PM	0	0	0	1160	PM

Eastbound Approach (I-105 WB On Ramp)

Lanes	AM	NOON	PM
	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
390	0	346	

CONTROL: No Control

Northbound Approach

AM	0	0	1199	390	AM
NOON	0	0	0	0	NOON
PM	0	0	1160	346	PM
		1	3	2	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	1199	AM
	0	0	NOON
	0	1160	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	0	0	0
0	0	0	390	0	346
			AM	NOON	PM

	South Leg	
AM	0	1589
NOON	0	0
PM	0	1506

Total Volume Per Leg

North Leg
1199 AM
0 NOON
1160 PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	390	0	346
			AM	NOON	PM

South Leg	
AM	1589
NOON	0
PM	1506

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

City: Lynwood

Day: Thursday

Date: 4/23/2015

TOTALS

AM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
7:00 AM	0	255	122	0	0	0	0	0	0	0	0	0	377
7:15 AM	0	269	128	0	0	0	0	0	0	0	0	0	397
7:30 AM	0	281	95	0	0	0	0	0	0	0	0	0	376
7:45 AM	0	302	99	0	0	0	0	0	0	0	0	0	401
8:00 AM	0	270	88	0	0	0	0	0	0	0	0	0	358
8:15 AM	0	346	108	0	0	0	0	0	0	0	0	0	454
8:30 AM	0	272	98	0	0	0	0	0	0	0	0	0	370
8:45 AM	0	271	76	0	0	0	0	0	0	0	0	0	347
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2266	814	0	0	0	0	0	0	0	0	0	3080
APPROACH %'s :	0.00%	73.57%	26.43%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	1199	390	0	0	0	0	0	0	0	0	0	1589
PEAK HR FACTOR :		0.875			0.000			0.000			0.000		0.875

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

City: Lynwood

TOTALS

PM

Day: Thursday

Date: 4/23/2015

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
4:00 PM	0	244	96	0	0	0	0	0	0	0	0	0	340
4:15 PM	0	226	85	0	0	0	0	0	0	0	0	0	311
4:30 PM	0	285	89	0	0	0	0	0	0	0	0	0	374
4:45 PM	0	251	87	0	0	0	0	0	0	0	0	0	338
5:00 PM	0	305	94	0	0	0	0	0	0	0	0	0	399
5:15 PM	0	302	82	0	0	0	0	0	0	0	0	0	384
5:30 PM	0	295	84	0	0	0	0	0	0	0	0	0	379
5:45 PM	0	258	86	0	0	0	0	0	0	0	0	0	344
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2166	703	0	0	0	0	0	0	0	0	0	2869
APPROACH %'s :	0.00%	75.50%	24.50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1160	346	0	0	0	0	0	0	0	0	0	1506
PEAK HR FACTOR :		0.944			0.000			0.000			0.000		0.944

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

Day: Thursday

Cars

City: Lynwood

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
7:00 AM	0	247	121	0	0	0	0	0	0	0	0	0	368
7:15 AM	0	261	126	0	0	0	0	0	0	0	0	0	387
7:30 AM	0	272	93	0	0	0	0	0	0	0	0	0	365
7:45 AM	0	296	98	0	0	0	0	0	0	0	0	0	394
8:00 AM	0	262	88	0	0	0	0	0	0	0	0	0	350
8:15 AM	0	340	108	0	0	0	0	0	0	0	0	0	448
8:30 AM	0	262	97	0	0	0	0	0	0	0	0	0	359
8:45 AM	0	265	73	0	0	0	0	0	0	0	0	0	338
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2205	804	0	0	0	0	0	0	0	0	0	3009
APPROACH %'s :	0.00%	73.28%	26.72%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	1170	387	0	0	0	0	0	0	0	0	0	1557
PEAK HR FACTOR :		0.869			0.000			0.000			0.000		0.869

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
4:00 PM	0	239	95	0	0	0	0	0	0	0	0	0	334
4:15 PM	0	221	84	0	0	0	0	0	0	0	0	0	305
4:30 PM	0	275	89	0	0	0	0	0	0	0	0	0	364
4:45 PM	0	246	86	0	0	0	0	0	0	0	0	0	332
5:00 PM	0	301	93	0	0	0	0	0	0	0	0	0	394
5:15 PM	0	296	80	0	0	0	0	0	0	0	0	0	376
5:30 PM	0	290	83	0	0	0	0	0	0	0	0	0	373
5:45 PM	0	255	84	0	0	0	0	0	0	0	0	0	339
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2123	694	0	0	0	0	0	0	0	0	0	2817
APPROACH %'s :	0.00%	75.36%	24.64%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1142	340	0	0	0	0	0	0	0	0	0	1482
PEAK HR FACTOR :		0.940			0.000			0.000			0.000		0.940

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
7:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
7:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
7:30 AM	0	6	1	0	0	0	0	0	0	0	0	0	7
7:45 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
8:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	6	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	6	0	0	0	0	0	0	0	0	0	0	6
8:45 AM	0	4	1	0	0	0	0	0	0	0	0	0	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	41	2	0	0	0	0	0	0	0	0	0	43
APPROACH %'s :	0.00%	95.35%	4.65%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	21	1	0	0	0	0	0	0	0	0	0	22
PEAK HR FACTOR :		0.786			0.000			0.000			0.000		0.869

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
4:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	2	1	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	25	3	0	0	0	0	0	0	0	0	0	28
APPROACH %'s :	0.00%	89.29%	10.71%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	12	3	0	0	0	0	0	0	0	0	0	15
PEAK HR FACTOR :	0.750			0.000			0.000			0.000			0.940

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

Day: Thursday

City: Lynwood

2 Axle+ Trucks

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
7:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	3	2	0	0	0	0	0	0	0	0	0	5
7:30 AM	0	3	1	0	0	0	0	0	0	0	0	0	4
7:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	4	1	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	2	2	0	0	0	0	0	0	0	0	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	20	8	0	0	0	0	0	0	0	0	0	28
APPROACH %'s :	0.00%	71.43%	28.57%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	8	2	0	0	0	0	0	0	0	0	0	10
PEAK HR FACTOR :	0.625			0.000			0.000			0.000			0.869

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-003

City: Lynwood

2 Axle+ Trucks

Day: Thursday

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(NB)			Long Beach Blvd(NB)			I-105 WB On Ramp			I-105 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	2	0	3	0	0	0	0	0	0	0	
4:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	7	0	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	3	1	0	0	0	0	0	0	0	0	0	4
5:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	1	2	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	18	6	0	0	0	0	0	0	0	0	0	24
APPROACH %'s :	0.00%	75.00%	25.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	6	3	0	0	0	0	0	0	0	0	0	9
PEAK HR FACTOR :	0.750			0.000			0.000			0.000			0.940

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Long Beach Blvd(SB) and I-105 EB On Ramp , Lynwood

Date: 4/23/2015

Day: Thursday

Project #: 15-5224-004

City: Lynwood

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Long Beach Blvd(SB))

Lanes	2	2	0		
AM	993	615	0	0	AM
NOON	0	0	0	0	NOON
PM	666	1033	0	0	PM

Eastbound Approach (I-105 EB On Ramp)

	AM	NOON	PM
	993	0	666
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
AM	NOON	PM	

Northbound Approach

AM	615	0	0	0	AM
NOON	0	0	0	0	NOON
PM	1033	0	0	0	PM
		0	0	0	Lanes

CONTROL

No Control

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1608	0	AM
	0	0	NOON
	1699	0	PM

West Leg	AM	NOON	PM
	993	0	666
	0	0	0

East Leg	AM	NOON	PM
	0	0	0
	0	0	0

	South Leg	
AM	615	0
NOON	0	0
PM	1033	0

Total Volume Per Leg

North Leg	
1608	AM
0	NOON
1699	PM

West Leg	AM	NOON	PM
	993	0	666

East Leg	AM	NOON	PM
	0	0	0

South Leg	
AM	615
NOON	0
PM	1033

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
7:00 AM	0	0	0	0	128	225	0	0	0	0	0	0	353
7:15 AM	0	0	0	0	134	293	0	0	0	0	0	0	427
7:30 AM	0	0	0	0	156	253	0	0	0	0	0	0	409
7:45 AM	0	0	0	0	197	222	0	0	0	0	0	0	419
8:00 AM	0	0	0	0	143	179	0	0	0	0	0	0	322
8:15 AM	0	0	0	0	156	172	0	0	0	0	0	0	328
8:30 AM	0	0	0	0	160	171	0	0	0	0	0	0	331
8:45 AM	0	0	0	0	126	156	0	0	0	0	0	0	282
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	1200	1671	0	0	0	0	0	0	2871
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	41.80%	58.20%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	615	993	0	0	0	0	0	0	1608
PEAK HR FACTOR :		0.000			0.941			0.000			0.000		0.941

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
4:00 PM	0	0	0	0	255	156	0	0	0	0	0	0	411
4:15 PM	0	0	0	0	259	159	0	0	0	0	0	0	418
4:30 PM	0	0	0	0	233	161	0	0	0	0	0	0	394
4:45 PM	0	0	0	0	255	157	0	0	0	0	0	0	412
5:00 PM	0	0	0	0	260	171	0	0	0	0	0	0	431
5:15 PM	0	0	0	0	247	190	0	0	0	0	0	0	437
5:30 PM	0	0	0	0	271	148	0	0	0	0	0	0	419
5:45 PM	0	0	0	0	253	150	0	0	0	0	0	0	403
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2033	1292	0	0	0	0	0	0	3325
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	61.14%	38.86%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1033	666	0	0	0	0	0	0	1699
PEAK HR FACTOR :		0.000			0.972			0.000			0.000		0.972

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

Cars

City: Lynwood

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
7:00 AM	0	0	0	0	124	224	0	0	0	0	0	0	348
7:15 AM	0	0	0	0	126	289	0	0	0	0	0	0	415
7:30 AM	0	0	0	0	153	250	0	0	0	0	0	0	403
7:45 AM	0	0	0	0	193	221	0	0	0	0	0	0	414
8:00 AM	0	0	0	0	136	174	0	0	0	0	0	0	310
8:15 AM	0	0	0	0	148	169	0	0	0	0	0	0	317
8:30 AM	0	0	0	0	154	170	0	0	0	0	0	0	324
8:45 AM	0	0	0	0	120	153	0	0	0	0	0	0	273
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	1154	1650	0	0	0	0	0	0	2804
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	41.16%	58.84%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	596	984	0	0	0	0	0	0	1580
PEAK HR FACTOR :		0.000			0.952			0.000			0.000		0.952

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
4:00 PM	0	0	0	0	250	152	0	0	0	0	0	0	402
4:15 PM	0	0	0	0	254	157	0	0	0	0	0	0	411
4:30 PM	0	0	0	0	227	158	0	0	0	0	0	0	385
4:45 PM	0	0	0	0	250	155	0	0	0	0	0	0	405
5:00 PM	0	0	0	0	256	170	0	0	0	0	0	0	426
5:15 PM	0	0	0	0	240	188	0	0	0	0	0	0	428
5:30 PM	0	0	0	0	266	146	0	0	0	0	0	0	412
5:45 PM	0	0	0	0	250	150	0	0	0	0	0	0	400
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	1993	1276	0	0	0	0	0	0	3269
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	60.97%	39.03%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1012	659	0	0	0	0	0	0	1671
PEAK HR FACTOR :		0.000			0.976			0.000			0.000		0.976

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
7:00 AM	0	0	0	0	4	1	0	0	0	0	0	0	5
7:15 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
8:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	34	1	0	0	0	0	0	0	35
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	97.14%	2.86%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	14	1	0	0	0	0	0	0	15
PEAK HR FACTOR :	0.000			0.750			0.000			0.000			0.952

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
4:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	4	1	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
5:15 PM	0	0	0	0	4	1	0	0	0	0	0	0	5
5:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	28	2	0	0	0	0	0	0	30
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	93.33%	6.67%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	15	2	0	0	0	0	0	0	17
PEAK HR FACTOR :	0.000			0.850			0.000			0.000			0.976

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

City: Lynwood

2 Axle+ Trucks

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	4	4	0	0	0	0	0	0	8
7:30 AM	0	0	0	0	1	3	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	2	5	0	0	0	0	0	0	7
8:15 AM	0	0	0	0	3	3	0	0	0	0	0	0	6
8:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	1	3	0	0	0	0	0	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	12	20	0	0	0	0	0	0	32
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	37.50%	62.50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	5	8	0	0	0	0	0	0	13
PEAK HR FACTOR :	0.000			0.406			0.000			0.000			0.952

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-004

Day: Thursday

2 Axle+ Trucks

City: Lynwood

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd(SB)			Long Beach Blvd(SB)			I-105 EB On Ramp			I-105 EB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	2	2	0	0	0	0	0	0	
4:00 PM	0	0	0	0	2	4	0	0	0	0	0	0	6
4:15 PM	0	0	0	0	1	2	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	3	1	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	2	2	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	12	14	0	0	0	0	0	0	26
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	46.15%	53.85%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	6	5	0	0	0	0	0	0	11
PEAK HR FACTOR :	0.000			0.688			0.000			0.000			0.976

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Long Beach Blvd and I-105 EB Off Ramp , Lynwood

Date: 4/23/2015

Day: Thursday

Project #: 15-5224-005

City: Lynwood

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Long Beach Blvd)

Lanes	0	2	1		
AM	0	596	49	1552	AM
NOON	0	0	0	0	NOON
PM	0	971	56	1446	PM

Eastbound Approach (I-105 EB Off Ramp)

Lanes	AM	NOON	PM
	1	0	0
1.5	606	0	404
0.5	0	0	3
1	383	0	260

Westbound Approach

Lanes	AM	NOON	PM
0	16	0	30
1	0	0	0
0	1	0	0
	78	0	70

Northbound Approach

Lanes	0	3	0	
AM	980	1	930	29	AM
NOON	0	0	0	0	NOON
PM	1231	0	1012	11	PM

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	645	0	1027
	1552	0	1446
West Leg	1	0	0
	989	0	667
East Leg	17	0	30
	78	0	70
South Leg	980	0	1231
	960	0	1023

Total Volume Per Leg

	AM	NOON	PM
North Leg	2197	0	2473
West Leg	990	0	667
East Leg	95	0	100
South Leg	1940	0	2254

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
7:00 AM	0	225	9	14	114	0	130	1	59	1	0	6	559
7:15 AM	0	222	8	15	118	0	159	0	70	0	0	6	598
7:30 AM	0	217	10	7	142	0	156	0	94	0	0	2	628
7:45 AM	1	220	10	11	187	0	151	0	103	0	0	7	690
8:00 AM	0	240	2	12	129	0	135	0	100	0	0	5	623
8:15 AM	0	253	7	19	138	0	164	0	86	1	0	2	670
8:30 AM	1	235	3	11	155	0	130	1	64	0	0	6	606
8:45 AM	0	186	2	8	119	0	145	1	66	0	0	6	533
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	1798	51	97	1102	0	1170	3	642	2	0	40	4907
APPROACH %'s :	0.11%	97.14%	2.76%	8.09%	91.91%	0.00%	64.46%	0.17%	35.37%	4.76%	0.00%	95.24%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	930	29	49	596	0	606	0	383	1	0	16	2611
PEAK HR FACTOR :		0.923			0.814			0.973			0.607		0.946

UTURNS			
NB	SB	EB	WB
0	3		
0	10		
0	4		
1	6		
0	5		
0	4		
0	5		
0	3		
NB	SB	EB	WB
1	40	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
4:00 PM	0	264	2	12	245	0	92	1	62	0	0	4	682
4:15 PM	0	219	3	11	242	0	90	0	54	0	0	7	626
4:30 PM	0	263	1	10	219	0	76	1	65	1	0	3	639
4:45 PM	0	251	1	13	251	0	98	0	53	0	0	3	670
5:00 PM	0	253	3	21	235	0	109	1	76	0	0	9	707
5:15 PM	0	261	3	10	234	0	102	2	71	0	0	8	691
5:30 PM	0	247	4	12	251	0	95	0	60	0	0	10	679
5:45 PM	0	242	8	11	245	0	73	1	53	0	0	6	639
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2000	25	100	1922	0	735	6	494	1	0	50	5333
APPROACH %'s :	0.00%	98.77%	1.23%	4.95%	95.05%	0.00%	59.51%	0.49%	40.00%	1.96%	0.00%	98.04%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	1012	11	56	971	0	404	3	260	0	0	30	2747
PEAK HR FACTOR :		0.969			0.973			0.897			0.750		0.971

UTURNS

NB	SB	EB	WB
	7		
	4		
	4		
	6		
	8		
	3		
	6		
	6		
NB	SB	EB	WB
0	44	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
7:00 AM	0	224	9	12	112	0	125	1	59	1	0	3	546
7:15 AM	0	218	8	12	114	0	155	0	70	0	0	3	580
7:30 AM	0	212	10	5	140	0	154	0	94	0	0	0	615
7:45 AM	1	217	10	8	186	0	150	0	102	0	0	4	678
8:00 AM	0	237	2	9	125	0	132	0	100	0	0	3	608
8:15 AM	0	249	7	16	133	0	163	0	86	1	0	1	656
8:30 AM	0	232	3	8	153	0	127	1	63	0	0	1	588
8:45 AM	0	180	2	4	116	0	145	1	63	0	0	2	513
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	1769	51	74	1079	0	1151	3	637	2	0	17	4784
APPROACH %'s :	0.05%	97.14%	2.80%	6.42%	93.58%	0.00%	64.27%	0.17%	35.57%	10.53%	0.00%	89.47%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	915	29	38	584	0	599	0	382	1	0	8	2557
PEAK HR FACTOR :		0.923			0.802			0.973			0.563		0.943

UTURNS			
NB	SB	EB	WB
0	3		
0	10		
0	4		
1	6		
0	5		
0	4		
0	5		
0	3		
NB	SB	EB	WB
1	40	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

City: Lynwood

Cars

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
4:00 PM	0	260	2	11	241	0	91	1	62	0	0	2	670
4:15 PM	0	216	3	7	241	0	89	0	52	0	0	3	611
4:30 PM	0	258	1	8	215	0	74	1	63	1	0	1	622
4:45 PM	0	243	1	12	248	0	98	0	52	0	0	3	657
5:00 PM	0	250	3	16	235	0	109	1	75	0	0	5	694
5:15 PM	0	258	3	8	229	0	102	2	71	0	0	5	678
5:30 PM	0	243	4	9	249	0	95	0	60	0	0	8	668
5:45 PM	0	240	8	9	244	0	73	1	53	0	0	5	633
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1968	25	80	1902	0	731	6	488	1	0	32	5233
APPROACH %'s :	0.00%	98.75%	1.25%	4.04%	95.96%	0.00%	59.67%	0.49%	39.84%	3.03%	0.00%	96.97%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	994	11	45	961	0	404	3	258	0	0	21	2697
PEAK HR FACTOR :		0.963			0.967			0.899			0.656		0.972

UTURNS			
NB	SB	EB	WB
	7		
	4		
	4		
	6		
	8		
	3		
	6		
	6		
NB	SB	EB	WB
0	44	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

Buses

City: Lynwood

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
7:00 AM	0	1	0	2	2	0	1	0	0	0	0	3	9
7:15 AM	0	2	0	3	0	0	1	0	0	0	0	3	9
7:30 AM	0	3	0	2	1	0	1	0	0	0	0	2	9
7:45 AM	0	1	0	3	1	0	1	0	1	0	0	3	10
8:00 AM	0	2	0	3	2	0	0	0	0	0	0	2	9
8:15 AM	0	3	0	2	3	0	1	0	0	0	0	1	10
8:30 AM	1	0	0	3	1	0	2	0	0	0	0	4	11
8:45 AM	0	2	0	4	2	0	0	0	1	0	0	4	13
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	14	0	22	12	0	7	0	2	0	0	22	80
APPROACH %'s :	6.67%	93.33%	0.00%	64.71%	35.29%	0.00%	77.78%	0.00%	22.22%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	9	0	10	7	0	3	0	1	0	0	8	38
PEAK HR FACTOR :	0.750			0.850			0.500			0.667			0.943

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

City: Lynwood

Buses

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
4:00 PM	0	1	0	1	2	0	1	0	0	0	0	2	7
4:15 PM	0	2	0	3	1	0	0	0	0	0	0	4	10
4:30 PM	0	0	0	2	1	0	0	0	1	0	0	2	6
4:45 PM	0	2	0	1	2	0	0	0	1	0	0	0	6
5:00 PM	0	1	0	5	0	0	0	0	0	0	0	4	10
5:15 PM	0	1	0	2	2	0	0	0	0	0	0	3	8
5:30 PM	0	1	0	3	0	0	0	0	0	0	0	2	6
5:45 PM	0	2	0	2	1	0	0	0	0	0	0	1	6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	10	0	19	9	0	1	0	2	0	0	18	59
APPROACH %'s :	0.00%	100.00%	0.00%	67.86%	32.14%	0.00%	33.33%	0.00%	66.67%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	5	0	11	4	0	0	0	1	0	0	9	30
PEAK HR FACTOR :	0.625			0.750			0.250			0.563			0.972

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

City: Lynwood

2 Axle+ Trucks

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
7:00 AM	0	0	0	0	0	0	4	0	0	0	0	0	4
7:15 AM	0	2	0	0	4	0	3	0	0	0	0	0	9
7:30 AM	0	2	0	0	1	0	1	0	0	0	0	0	4
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	1	0	0	2	0	3	0	0	0	0	0	6
8:15 AM	0	1	0	1	2	0	0	0	0	0	0	0	4
8:30 AM	0	3	0	0	1	0	1	0	1	0	0	1	7
8:45 AM	0	4	0	0	1	0	0	0	2	0	0	0	7
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	15	0	1	11	0	12	0	3	0	0	1	43
APPROACH %'s :	0.00%	100.00%	0.00%	8.33%	91.67%	0.00%	80.00%	0.00%	20.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	6	0	1	5	0	4	0	0	0	0	0	16
PEAK HR FACTOR :	0.750			0.500			0.333			0.000			0.943

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-005

Day: Thursday

2 Axle+ Trucks

City: Lynwood

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB Off Ramp			I-105 EB Off Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.5	0.5	1	0	1	0	
4:00 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
4:15 PM	0	1	0	1	0	0	1	0	2	0	0	0	5
4:30 PM	0	5	0	0	3	0	2	0	1	0	0	0	11
4:45 PM	0	6	0	0	1	0	0	0	0	0	0	0	7
5:00 PM	0	2	0	0	0	0	0	0	1	0	0	0	3
5:15 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
5:30 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	22	0	1	11	0	3	0	4	0	0	0	41
APPROACH %'s :	0.00%	100.00%	0.00%	8.33%	91.67%	0.00%	42.86%	0.00%	57.14%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	13	0	0	6	0	0	0	1	0	0	0	20
PEAK HR FACTOR :	0.542			0.500			0.250			0.000			0.972

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Long Beach Blvd and I-105 EB On Ramp_Lynwood Rd , Lynwood

Date: 4/23/2015

Day: Thursday

Project #: 15-5224-006

City: Lynwood

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Long Beach Blvd)

	Lanes 0	2	0		
AM	0	957	0	952	AM
NOON	0	0	0	0	NOON
PM	0	1236	0	1033	PM

Eastbound Approach (I-105 EB On Ramp_Lynwood Rd)

Lanes	AM	NOON	PM
	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
0	0	1	0
0	0	0	0
0	0	0	0
497	0	423	

CONTROL: No Control

Northbound Approach

AM	957	0	952	497	AM
NOON	0	0	0	0	NOON
PM	1236	0	1032	423	PM
		0	3	2	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	957	952	AM
	0	0	NOON
	1236	1033	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
0	0	0		0	0	1
0	0	0		497	0	423

	South Leg	
AM	957	1449
NOON	0	0
PM	1236	1455

Total Volume Per Leg

	North Leg
AM	1909
NOON	0
PM	2269

West Leg AM	NOON	PM		East Leg AM	NOON	PM
0	0	0		497	0	424

	South Leg
AM	2406
NOON	0
PM	2691

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
7:00 AM	0	227	145	0	175	0	0	0	0	0	0	0	547
7:15 AM	0	238	154	0	191	0	0	0	0	0	0	0	583
7:30 AM	0	225	141	0	232	0	0	0	0	0	0	0	598
7:45 AM	0	242	110	0	300	0	0	0	0	0	0	0	652
8:00 AM	0	247	92	0	234	0	0	0	0	0	0	0	573
8:15 AM	0	244	114	0	221	0	0	0	0	0	0	0	579
8:30 AM	0	243	112	0	220	0	0	0	0	0	0	0	575
8:45 AM	0	195	89	0	186	0	0	0	0	0	0	0	470
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1861	957	0	1759	0	0	0	0	0	0	0	4577
APPROACH %'s :	0.00%	66.04%	33.96%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	952	497	0	957	0	0	0	0	0	0	0	2406
PEAK HR FACTOR :		0.924			0.798			0.000			0.000		0.923

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006

Day: Thursday

City: Lynwood

Date: 4/23/2015

TOTALS

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
4:00 PM	0	272	126	0	305	0	0	0	0	0	0	0	703
4:15 PM	0	230	105	0	298	0	0	0	0	0	0	0	633
4:30 PM	0	253	106	0	283	0	0	0	0	0	0	0	642
4:45 PM	0	254	114	0	307	0	0	0	0	0	0	1	676
5:00 PM	0	265	120	0	310	0	0	0	0	0	0	0	695
5:15 PM	0	258	86	0	313	0	0	0	0	0	0	0	657
5:30 PM	0	255	103	0	306	0	0	0	0	0	0	0	664
5:45 PM	0	253	117	0	293	0	0	0	0	0	0	0	663
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2040	877	0	2415	0	0	0	0	0	0	1	5333
APPROACH %'s :	0.00%	69.93%	30.07%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	1032	423	0	1236	0	0	0	0	0	0	1	2692
PEAK HR FACTOR :		0.945			0.987			0.000			0.250		0.968

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006 | **Day:** Thursday

City: Lynwood | **Date:** 4/23/2015

Cars

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
7:00 AM	0	225	145	0	174	0	0	0	0	0	0	0	544
7:15 AM	0	235	154	0	187	0	0	0	0	0	0	0	576
7:30 AM	0	220	141	0	229	0	0	0	0	0	0	0	590
7:45 AM	0	238	110	0	298	0	0	0	0	0	0	0	646
8:00 AM	0	245	92	0	230	0	0	0	0	0	0	0	567
8:15 AM	0	240	111	0	216	0	0	0	0	0	0	0	567
8:30 AM	0	237	110	0	217	0	0	0	0	0	0	0	564
8:45 AM	0	191	88	0	180	0	0	0	0	0	0	0	459
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1831	951	0	1731	0	0	0	0	0	0	0	4513
APPROACH %'s :	0.00%	65.82%	34.18%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	938	497	0	944	0	0	0	0	0	0	0	2379
PEAK HR FACTOR :		0.922			0.792			0.000			0.000		0.921

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006 | **Day:** Thursday

City: Lynwood | **Date:** 4/23/2015

Cars

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
4:00 PM	0	268	125	0	301	0	0	0	0	0	0	0	694
4:15 PM	0	226	104	0	295	0	0	0	0	0	0	0	625
4:30 PM	0	248	104	0	277	0	0	0	0	0	0	0	629
4:45 PM	0	247	110	0	303	0	0	0	0	0	0	0	660
5:00 PM	0	263	117	0	309	0	0	0	0	0	0	0	689
5:15 PM	0	255	83	0	308	0	0	0	0	0	0	0	646
5:30 PM	0	251	102	0	304	0	0	0	0	0	0	0	657
5:45 PM	0	251	115	0	292	0	0	0	0	0	0	0	658
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2009	860	0	2389	0	0	0	0	0	0	0	5258
APPROACH %'s :	0.00%	70.02%	29.98%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	1016	412	0	1224	0	0	0	0	0	0	0	2652
PEAK HR FACTOR :		0.939			0.990			0.000			0.000		0.962

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006 | **Day:** Thursday

City: Lynwood | **Date:** 4/23/2015

Buses

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
7:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
7:30 AM	0	3	0	0	1	0	0	0	0	0	0	0	4
7:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
8:15 AM	0	3	1	0	3	0	0	0	0	0	0	0	7
8:30 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
8:45 AM	0	1	0	0	3	0	0	0	0	0	0	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	15	1	0	14	0	0	0	0	0	0	0	30
APPROACH %'s :	0.00%	93.75%	6.25%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	7	0	0	6	0	0	0	0	0	0	0	13
PEAK HR FACTOR :	0.583			0.750			0.000			0.000			0.921

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006 | **Day:** Thursday

City: Lynwood | **Date:** 4/23/2015

Buses

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
4:00 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
4:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
4:30 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	10	0	0	11	0	0	0	0	0	0	0	21
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	4	0	0	5	0	0	0	0	0	0	0	9
PEAK HR FACTOR :	1.000			0.417			0.000			0.000			0.962

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006

Day: Thursday

2 Axle+ Trucks

City: Lynwood

Date: 4/23/2015

AM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	2	0	0	3	0	0	0	0	0	0	0	5
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
7:45 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
8:15 AM	0	1	2	0	2	0	0	0	0	0	0	0	5
8:30 AM	0	4	2	0	2	0	0	0	0	0	0	0	8
8:45 AM	0	3	1	0	3	0	0	0	0	0	0	0	7
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	15	5	0	14	0	0	0	0	0	0	0	34
APPROACH %'s :	0.00%	75.00%	25.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	7	0	0	7	0	0	0	0	0	0	0	14
PEAK HR FACTOR :	0.583			0.583			0.000			0.000			0.921

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5224-006

Day: Thursday

City: Lynwood

2 Axle+ Trucks

Date: 4/23/2015

PM

NS/EW Streets:	Long Beach Blvd			Long Beach Blvd			I-105 EB On Ramp_Lynwood Rd			I-105 EB On Ramp_Lynwood Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	2	0	2	0	0	0	0	0	0	0	
4:00 PM	0	3	1	0	2	0	0	0	0	0	0	0	6
4:15 PM	0	2	1	0	2	0	0	0	0	0	0	0	5
4:30 PM	0	4	2	0	4	0	0	0	0	0	0	0	10
4:45 PM	0	6	4	0	1	0	0	0	0	0	0	1	12
5:00 PM	0	1	3	0	1	0	0	0	0	0	0	0	5
5:15 PM	0	2	3	0	3	0	0	0	0	0	0	0	8
5:30 PM	0	3	1	0	2	0	0	0	0	0	0	0	6
5:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	21	17	0	15	0	0	0	0	0	0	1	54
APPROACH %'s :	0.00%	55.26%	44.74%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	12	11	0	7	0	0	0	0	0	0	1	31
PEAK HR FACTOR :	0.575			0.583			0.000			0.250			0.962

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

APPENDIX C:
VOLUME DEVELOPMENT WORKSHEETS

Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)

	AM Peak Hour						PM Peak Hour					
	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume
1 . LB Blvd/I-105 WB Slip On Ramp												
NBL	0	0	0	0	0	0	0	0	0	0	0	0
NBT	1,778	21	20	0	72	1,850	2,132	12	16	0	50	2,182
NBR	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0
SBT	1,326	15	13	0	49	1,375	1,274	15	6	0	35	1,309
SBR	581	0	2	0	4	585	577	3	3	0	11	588
EBL	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0	0	0
North Leg												
Approach	1,907	15	15	0	53	1,960	1,851	18	9	0	46	1,897
Departure	1,778	21	20	0	72	1,850	2,132	12	16	0	50	2,182
Total	3,685	36	35	0	125	3,810	3,983	30	25	0	96	4,079
South Leg												
Approach	1,778	21	20	0	72	1,850	2,132	12	16	0	50	2,182
Departure	1,326	15	13	0	49	1,375	1,274	15	6	0	35	1,309
Total	3,104	36	33	0	121	3,225	3,406	27	22	0	85	3,491
East Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
West Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	581	0	2	0	4	585	577	3	3	0	11	588
Total	581	0	2	0	4	585	577	3	3	0	11	588
Total Approaches												
Approach	3,685	36	35	0	125	3,810	3,983	30	25	0	96	4,079
Departure	3,685	36	35	0	125	3,810	3,983	30	25	0	96	4,079
Total	7,370	72	70	0	250	7,620	7,966	60	50	0	192	8,158

Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)

	AM Peak Hour						PM Peak Hour					
	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume
2 . LB Blvd/I-105 WB Off Ramp												
NBL	47	0	0	0	0	47	53	0	0	0	0	53
NBT	1,057	21	10	0	52	1,109	1,098	12	9	0	36	1,134
NBR	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0
SBT	1,276	15	12	0	47	1,323	1,237	17	8	0	42	1,279
SBR	34	0	0	0	0	34	14	0	0	0	0	14
EBL	6	0	0	0	0	6	24	0	0	0	0	24
EBT	0	0	0	0	0	0	0	0	0	0	0	0
EBR	9	0	0	0	0	9	12	0	1	0	2	14
WBL	196	0	5	0	10	206	364	0	4	0	8	372
WBT	20	0	0	0	0	20	10	0	1	0	2	12
WBR	715	0	10	0	20	735	1,010	0	7	0	14	1,024
North Leg												
Approach	1,310	15	12	0	47	1,357	1,251	17	8	0	42	1,293
Departure	1,778	21	20	0	72	1,850	2,132	12	16	0	50	2,182
Total	3,088	36	32	0	119	3,207	3,383	29	24	0	92	3,475
South Leg												
Approach	1,104	21	10	0	52	1,156	1,151	12	9	0	36	1,187
Departure	1,481	15	17	0	57	1,538	1,613	17	13	0	52	1,665
Total	2,585	36	27	0	109	2,694	2,764	29	22	0	88	2,852
East Leg												
Approach	931	0	15	0	30	961	1,384	0	12	0	24	1,408
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	931	0	15	0	30	961	1,384	0	12	0	24	1,408
West Leg												
Approach	15	0	0	0	0	15	36	0	1	0	2	38
Departure	101	0	0	0	0	101	77	0	1	0	2	79
Total	116	0	0	0	0	116	113	0	2	0	4	117
Total Approaches												
Approach	3,360	36	37	0	129	3,489	3,822	29	30	0	104	3,926
Departure	3,360	36	37	0	129	3,489	3,822	29	30	0	104	3,926
Total	6,720	72	74	0	258	6,978	7,644	58	60	0	208	7,852

Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)

	AM Peak Hour						PM Peak Hour					
	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume
3 . LB Blvd/I-105 WB Loop On Ramp												
NBL	0	0	0	0	0	0	0	0	0	0	0	0
NBT	1,170	21	8	0	48	1,218	1,142	12	6	0	30	1,172
NBR	387	1	2	0	6	393	340	3	3	0	11	351
SBL	0	0	0	0	0	0	0	0	0	0	0	0
SBT	1,481	15	17	0	57	1,538	1,613	17	13	0	52	1,665
SBR	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0	0	0
North Leg												
Approach	1,481	15	17	0	57	1,538	1,613	17	13	0	52	1,665
Departure	1,170	21	8	0	48	1,218	1,142	12	6	0	30	1,172
Total	2,651	36	25	0	105	2,756	2,755	29	19	0	82	2,837
South Leg												
Approach	1,557	22	10	0	54	1,611	1,482	15	9	0	41	1,523
Departure	1,481	15	17	0	57	1,538	1,613	17	13	0	52	1,665
Total	3,038	37	27	0	111	3,149	3,095	32	22	0	93	3,188
East Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	387	1	2	0	6	393	340	3	3	0	11	351
Total	387	1	2	0	6	393	340	3	3	0	11	351
West Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Total Approaches												
Approach	3,038	37	27	0	111	3,149	3,095	32	22	0	93	3,188
Departure	3,038	37	27	0	111	3,149	3,095	32	22	0	93	3,188
Total	6,076	74	54	0	222	6,298	6,190	64	44	0	186	6,376

Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)

	AM Peak Hour						PM Peak Hour					
	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume
4 . LB Blvd/I-105 EB Loop On Ramp												
NBL	0	0	0	0	0	0	0	0	0	0	0	0
NBT	1,557	22	10	0	53	1,610	1,482	15	9	0	41	1,523
NBR	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0
SBT	596	14	5	0	31	627	1,012	15	6	0	35	1,047
SBR	984	1	8	0	18	1,002	659	2	5	0	13	672
EBL	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0	0	0
North Leg												
Approach	1,580	15	13	0	49	1,629	1,671	17	11	0	48	1,719
Departure	1,557	22	10	0	53	1,610	1,482	15	9	0	41	1,523
Total	3,137	37	23	0	102	3,239	3,153	32	20	0	89	3,242
South Leg												
Approach	1,557	22	10	0	53	1,610	1,482	15	9	0	41	1,523
Departure	596	14	5	0	31	627	1,012	15	6	0	35	1,047
Total	2,153	36	15	0	84	2,237	2,494	30	15	0	76	2,570
East Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
West Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	984	1	8	0	18	1,002	659	2	5	0	13	672
Total	984	1	8	0	18	1,002	659	2	5	0	13	672
Total Approaches												
Approach	3,137	37	23	0	102	3,239	3,153	32	20	0	89	3,242
Departure	3,137	37	23	0	102	3,239	3,153	32	20	0	89	3,242
Total	6,274	74	46	0	204	6,478	6,306	64	40	0	178	6,484

Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)

	AM Peak Hour						PM Peak Hour					
	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume
5 . LB Blvd/I-105 EB Off Ramp												
NBL	1	0	0	0	0	1	0	0	0	0	0	0
NBT	915	9	6	0	26	941	994	5	13	0	34	1,028
NBR	29	0	0	0	0	29	11	0	0	0	0	11
SBL	38	10	1	0	17	55	45	11	0	0	17	62
SBT	584	7	5	0	21	605	961	4	6	0	18	979
SBR	0	0	0	0	0	0	0	0	0	0	0	0
EBL	599	3	4	0	13	612	404	0	0	0	0	404
EBT	0	0	0	0	0	0	3	0	0	0	0	3
EBR	382	1	0	0	2	384	258	1	1	0	4	262
WBL	1	0	0	0	0	1	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0
WBR	8	8	0	0	12	20	21	9	0	0	14	35
North Leg												
Approach	622	17	6	0	38	660	1,006	15	6	0	35	1,041
Departure	1,522	20	10	0	51	1,573	1,419	14	13	0	48	1,467
Total	2,144	37	16	0	89	2,233	2,425	29	19	0	83	2,508
South Leg												
Approach	945	9	6	0	26	971	1,005	5	13	0	34	1,039
Departure	967	8	5	0	23	990	1,219	5	7	0	22	1,241
Total	1,912	17	11	0	49	1,961	2,224	10	20	0	56	2,280
East Leg												
Approach	9	8	0	0	12	21	21	9	0	0	14	35
Departure	67	10	1	0	17	84	59	11	0	0	17	76
Total	76	18	1	0	29	105	80	20	0	0	31	111
West Leg												
Approach	981	4	4	0	15	996	665	1	1	0	4	669
Departure	1	0	0	0	0	1	0	0	0	0	0	0
Total	982	4	4	0	15	997	665	1	1	0	4	669
Total Approaches												
Approach	2,557	38	16	0	91	2,648	2,697	30	20	0	87	2,784
Departure	2,557	38	16	0	91	2,648	2,697	30	20	0	87	2,784
Total	5,114	76	32	0	182	5,296	5,394	60	40	0	174	5,568

Table C-1 - Existing Peak Hour Volumes
(Intersections With Classification Counts)

	AM Peak Hour						PM Peak Hour					
	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume	Pass. Veh.	Trucks 2 Axle	3 Axle	4 Axle	PCE	Total PCE Volume
6 . LB Blvd/I-105 EB Slip On Ramp												
NBL	0	0	0	0	0	0	0	0	0	0	0	0
NBT	938	7	7	0	25	963	1,016	4	12	0	30	1,046
NBR	497	0	0	0	0	497	412	0	11	0	22	434
SBL	0	0	0	0	0	0	0	0	0	0	0	0
SBT	944	6	7	0	23	967	1,224	5	7	0	22	1,246
SBR	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	1	0	2	2
North Leg												
Approach	944	6	7	0	23	967	1,224	5	7	0	22	1,246
Departure	938	7	7	0	25	963	1,016	4	13	0	32	1,048
Total	1,882	13	14	0	48	1,930	2,240	9	20	0	54	2,294
South Leg												
Approach	1,435	7	7	0	25	1,460	1,428	4	23	0	52	1,480
Departure	944	6	7	0	23	967	1,224	5	7	0	22	1,246
Total	2,379	13	14	0	48	2,427	2,652	9	30	0	74	2,726
East Leg												
Approach	0	0	0	0	0	0	0	0	1	0	2	2
Departure	497	0	0	0	0	497	412	0	11	0	22	434
Total	497	0	0	0	0	497	412	0	12	0	24	436
West Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Total Approaches												
Approach	2,379	13	14	0	48	2,427	2,652	9	31	0	76	2,728
Departure	2,379	13	14	0	48	2,427	2,652	9	31	0	76	2,728
Total	4,758	26	28	0	96	4,854	5,304	18	62	0	152	5,456

Table C-2 - Existing Peak Hour Truck Percentages
(Intersections With Classification Counts)

	AM Peak Hour				PM Peak Hour			
	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %
1 . LB Blvd/I-105 WB Slip On Ramp								
NBL	0	0	0		0	0	0	
NBT	1,778	41	1,819		2,132	28	2,160	
NBR	0	0	0		0	0	0	
SBL	0	0	0		0	0	0	
SBT	1,326	28	1,354		1,274	21	1,295	
SBR	581	2	583		577	6	583	
EBL	0	0	0		0	0	0	
EBT	0	0	0		0	0	0	
EBR	0	0	0		0	0	0	
WBL	0	0	0		0	0	0	
WBT	0	0	0		0	0	0	
WBR	0	0	0		0	0	0	
North Leg								
Approach	1,907	30	1,937	1.5%	1,851	27	1,878	1.4%
Departure	1,778	41	1,819	2.3%	2,132	28	2,160	1.3%
Total	3,685	71	3,756	1.9%	3,983	55	4,038	1.4%
South Leg								
Approach	1,778	41	1,819	2.3%	2,132	28	2,160	1.3%
Departure	1,326	28	1,354	2.1%	1,274	21	1,295	1.6%
Total	3,104	69	3,173	2.2%	3,406	49	3,455	1.4%
East Leg								
Approach	0	0	0	0.0%	0	0	0	0.0%
Departure	0	0	0	0.0%	0	0	0	0.0%
Total	0	0	0	0.0%	0	0	0	0.0%
West Leg								
Approach	0	0	0	0.0%	0	0	0	0.0%
Departure	581	2	583	0.3%	577	6	583	1.0%
Total	581	2	583	0.3%	577	6	583	1.0%
Total Approaches								
Approach	3,685	71	3,756		3,983	55	4,038	
Departure	3,685	71	3,756		3,983	55	4,038	
Total	7,370	142	7,512	1.9%	7,966	110	8,076	1.4%

Table C-2 - Existing Peak Hour Truck Percentages
(Intersections With Classification Counts)

	AM Peak Hour				PM Peak Hour			
	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %
2 . LB Blvd/I-105 WB Off Ramp								
NBL	47	0	47		53	0	53	
NBT	1,057	31	1,088		1,098	21	1,119	
NBR	0	0	0		0	0	0	
SBL	0	0	0		0	0	0	
SBT	1,276	27	1,303		1,237	25	1,262	
SBR	34	0	34		14	0	14	
EBL	6	0	6		24	0	24	
EBT	0	0	0		0	0	0	
EBR	9	0	9		12	1	13	
WBL	196	5	201		364	4	368	
WBT	20	0	20		10	1	11	
WBR	715	10	725		1,010	7	1,017	
North Leg								
Approach	1,310	27	1,337		1,251	25	1,276	
Departure	1,778	41	1,819		2,132	28	2,160	
Total	3,088	68	3,156	2.2%	3,383	53	3,436	1.5%
South Leg								
Approach	1,104	31	1,135		1,151	21	1,172	
Departure	1,481	32	1,513		1,613	30	1,643	
Total	2,585	63	2,648	2.4%	2,764	51	2,815	1.8%
East Leg								
Approach	931	15	946		1,384	12	1,396	
Departure	0	0	0		0	0	0	
Total	931	15	946	1.6%	1,384	12	1,396	0.9%
West Leg								
Approach	15	0	15		36	1	37	
Departure	101	0	101		77	1	78	
Total	116	0	116	0.0%	113	2	115	1.7%
Total Approaches								
Approach	3,360	73	3,433		3,822	59	3,881	
Departure	3,360	73	3,433		3,822	59	3,881	
Total	6,720	146	6,866	2.1%	7,644	118	7,762	1.5%

Table C-2 - Existing Peak Hour Truck Percentages
(Intersections With Classification Counts)

	AM Peak Hour				PM Peak Hour			
	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %
3 . LB Blvd/I-105 WB Loop On Ramp								
NBL	0	0	0		0	0	0	
NBT	1,170	29	1,199		1,142	18	1,160	
NBR	387	3	390		340	6	346	
SBL	0	0	0		0	0	0	
SBT	1,481	32	1,513		1,613	30	1,643	
SBR	0	0	0		0	0	0	
EBL	0	0	0		0	0	0	
EBT	0	0	0		0	0	0	
EBR	0	0	0		0	0	0	
WBL	0	0	0		0	0	0	
WBT	0	0	0		0	0	0	
WBR	0	0	0		0	0	0	
North Leg								
Approach	1,481	32	1,513		1,613	30	1,643	
Departure	1,170	29	1,199		1,142	18	1,160	
Total	2,651	61	2,712	2.2%	2,755	48	2,803	1.7%
South Leg								
Approach	1,557	32	1,589		1,482	24	1,506	
Departure	1,481	32	1,513		1,613	30	1,643	
Total	3,038	64	3,102	2.1%	3,095	54	3,149	1.7%
East Leg								
Approach	0	0	0		0	0	0	
Departure	387	3	390		340	6	346	
Total	387	3	390	0.8%	340	6	346	1.7%
West Leg								
Approach	0	0	0		0	0	0	
Departure	0	0	0		0	0	0	
Total	0	0	0	0.0%	0	0	0	0.0%
Total Approaches								
Approach	3,038	64	3,102		3,095	54	3,149	
Departure	3,038	64	3,102		3,095	54	3,149	
Total	6,076	128	6,204	2.1%	6,190	108	6,298	1.7%

Table C-2 - Existing Peak Hour Truck Percentages
(Intersections With Classification Counts)

	AM Peak Hour				PM Peak Hour			
	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %
4 . LB Blvd/I-105 EB Loop On Ramp								
NBL	0	0	0		0	0	0	
NBT	1,557	32	1,589		1,482	24	1,506	
NBR	0	0	0		0	0	0	
SBL	0	0	0		0	0	0	
SBT	596	19	615		1,012	21	1,033	
SBR	984	9	993		659	7	666	
EBL	0	0	0		0	0	0	
EBT	0	0	0		0	0	0	
EBR	0	0	0		0	0	0	
WBL	0	0	0		0	0	0	
WBT	0	0	0		0	0	0	
WBR	0	0	0		0	0	0	
North Leg								
Approach	1,580	28	1,608		1,671	28	1,699	
Departure	1,557	32	1,589		1,482	24	1,506	
Total	3,137	60	3,197	1.9%	3,153	52	3,205	1.6%
South Leg								
Approach	1,557	32	1,589		1,482	24	1,506	
Departure	596	19	615		1,012	21	1,033	
Total	2,153	51	2,204	2.3%	2,494	45	2,539	1.8%
East Leg								
Approach	0	0	0		0	0	0	
Departure	0	0	0		0	0	0	
Total	0	0	0	0.0%	0	0	0	0.0%
West Leg								
Approach	0	0	0		0	0	0	
Departure	984	9	993		659	7	666	
Total	984	9	993	0.9%	659	7	666	1.1%
Total Approaches								
Approach	3,137	60	3,197		3,153	52	3,205	
Departure	3,137	60	3,197		3,153	52	3,205	
Total	6,274	120	6,394	1.9%	6,306	104	6,410	1.6%

Table C-2 - Existing Peak Hour Truck Percentages
(Intersections With Classification Counts)

	AM Peak Hour				PM Peak Hour			
	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %
5 . LB Blvd/I-105 EB Off Ramp								
NBL	1	0	1		0	0	0	
NBT	915	15	930		994	18	1,012	
NBR	29	0	29		11	0	11	
SBL	38	11	49		45	11	56	
SBT	584	12	596		961	10	971	
SBR	0	0	0		0	0	0	
EBL	599	7	606		404	0	404	
EBT	0	0	0		3	0	3	
EBR	382	1	383		258	2	260	
WBL	1	0	1		0	0	0	
WBT	0	0	0		0	0	0	
WBR	8	8	16		21	9	30	
North Leg								
Approach	622	23	645		1,006	21	1,027	
Departure	1,522	30	1,552		1,419	27	1,446	
Total	2,144	53	2,197	2.4%	2,425	48	2,473	1.9%
South Leg								
Approach	945	15	960		1,005	18	1,023	
Departure	967	13	980		1,219	12	1,231	
Total	1,912	28	1,940	1.4%	2,224	30	2,254	1.3%
East Leg								
Approach	9	8	17		21	9	30	
Departure	67	11	78		59	11	70	
Total	76	19	95	20.0%	80	20	100	20.0%
West Leg								
Approach	981	8	989		665	2	667	
Departure	1	0	1		0	0	0	
Total	982	8	990	0.8%	665	2	667	0.3%
Total Approaches								
Approach	2,557	54	2,611		2,697	50	2,747	
Departure	2,557	54	2,611		2,697	50	2,747	
Total	5,114	108	5,222	2.1%	5,394	100	5,494	1.8%

Table C-2 - Existing Peak Hour Truck Percentages
(Intersections With Classification Counts)

	AM Peak Hour				PM Peak Hour			
	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %	Passenger Vehicles	Total Trucks	Total Vehicle Volume	Truck %
6 . LB Blvd/I-105 EB Slip On Ramp								
NBL	0	0	0		0	0	0	
NBT	938	14	952		1,016	16	1,032	
NBR	497	0	497		412	11	423	
SBL	0	0	0		0	0	0	
SBT	944	13	957		1,224	12	1,236	
SBR	0	0	0		0	0	0	
EBL	0	0	0		0	0	0	
EBT	0	0	0		0	0	0	
EBR	0	0	0		0	0	0	
WBL	0	0	0		0	0	0	
WBT	0	0	0		0	0	0	
WBR	0	0	0		0	1	1	
North Leg								
Approach	944	13	957		1,224	12	1,236	
Departure	938	14	952		1,016	17	1,033	
Total	1,882	27	1,909	1.4%	2,240	29	2,269	1.3%
South Leg								
Approach	1,435	14	1,449		1,428	27	1,455	
Departure	944	13	957		1,224	12	1,236	
Total	2,379	27	2,406	1.1%	2,652	39	2,691	1.4%
East Leg								
Approach	0	0	0		0	1	1	
Departure	497	0	497		412	11	423	
Total	497	0	497	0.0%	412	12	424	2.8%
West Leg								
Approach	0	0	0		0	0	0	
Departure	0	0	0		0	0	0	
Total	0	0	0	0.0%	0	0	0	0.0%
Total Approaches								
Approach	2,379	27	2,406		2,652	40	2,692	
Departure	2,379	27	2,406		2,652	40	2,692	
Total	4,758	54	4,812	1.1%	5,304	80	5,384	1.5%

Table C-3 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Project Trips	Existing Plus Project	Existing Without Project	Project Trips	Existing Plus Project
1 . Long Beach Blvd/I-105 WB Slip On Ramp						
NBL	0	0	0	0	0	0
NBT	1,850	443	2,293	2,182	794	2,976
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	1,375	307	1,682	1,309	428	1,737
SBR	585	254	839	588	354	942
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,960	561	2,521	1,897	782	2,679
Departure	1,850	443	2,293	2,182	794	2,976
Total	3,810	1,004	4,814	4,079	1,576	5,655
South Leg						
Approach	1,850	443	2,293	2,182	794	2,976
Departure	1,375	307	1,682	1,309	428	1,737
Total	3,225	750	3,975	3,491	1,222	4,713
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	585	254	839	588	354	942
Total	585	254	839	588	354	942
Total Approaches						
Approach	3,810	1,004	4,814	4,079	1,576	5,655
Departure	3,810	1,004	4,814	4,079	1,576	5,655
Total	7,620	2,008	9,628	8,158	3,152	11,310

Table C-3 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Project Trips	Existing Plus Project	Existing Without Project	Project Trips	Existing Plus Project
2 Long Beach Blvd/I-105 WB Off Ramp						
NBL	47	0	47	53	0	53
NBT	1,109	201	1,310	1,134	359	1,493
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	1,323	307	1,630	1,279	428	1,707
SBR	34	0	34	14	0	14
EBL	6	0	6	24	0	24
EBT	0	0	0	0	0	0
EBR	9	0	9	14	0	14
WBL	206	8	214	372	15	387
WBT	20	0	20	12	0	12
WBR	735	242	977	1,024	434	1,458
North Leg						
Approach	1,357	307	1,664	1,293	428	1,721
Departure	1,850	443	2,293	2,182	793	2,975
Total	3,207	750	3,957	3,475	1,221	4,696
South Leg						
Approach	1,156	201	1,357	1,187	359	1,546
Departure	1,538	315	1,853	1,665	443	2,108
Total	2,694	516	3,210	2,852	802	3,654
East Leg						
Approach	961	250	1,211	1,408	449	1,857
Departure	0	0	0	0	0	0
Total	961	250	1,211	1,408	449	1,857
West Leg						
Approach	15	0	15	38	0	38
Departure	101	0	101	79	0	79
Total	116	0	116	117	0	117
Total Approaches						
Approach	3,489	758	4,247	3,926	1,236	5,162
Departure	3,489	758	4,247	3,926	1,236	5,162
Total	6,978	1,516	8,494	7,852	2,472	10,324

Table C-3 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Project Trips	Existing Plus Project	Existing Without Project	Project Trips	Existing Plus Project
3 Long Beach Blvd/I-105 WB Loop On Ramp						
NBL	0	0	0	0	0	0
NBT	1,218	201	1,419	1,172	359	1,531
NBR	393	11	404	351	15	366
SBL	0	0	0	0	0	0
SBT	1,538	315	1,853	1,665	443	2,108
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,538	315	1,853	1,665	443	2,108
Departure	1,218	201	1,419	1,172	359	1,531
Total	2,756	516	3,272	2,837	802	3,639
South Leg						
Approach	1,611	212	1,823	1,523	374	1,897
Departure	1,538	315	1,853	1,665	443	2,108
Total	3,149	527	3,676	3,188	817	4,005
East Leg						
Approach	0	0	0	0	0	0
Departure	393	11	404	351	15	366
Total	393	11	404	351	15	366
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	3,149	527	3,676	3,188	817	4,005
Departure	3,149	527	3,676	3,188	817	4,005
Total	6,298	1,054	7,352	6,376	1,634	8,010

Table C-3 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Project Trips	Existing Plus Project	Existing Without Project	Project Trips	Existing Plus Project
4 Long Beach Blvd/I-105 EB Loop On Ramp						
NBL	0	0	0	0	0	0
NBT	1,610	212	1,822	1,523	374	1,897
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	627	8	635	1,047	15	1,062
SBR	1,002	307	1,309	672	428	1,100
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,629	315	1,944	1,719	443	2,162
Departure	1,610	212	1,822	1,523	374	1,897
Total	3,239	527	3,766	3,242	817	4,059
South Leg						
Approach	1,610	212	1,822	1,523	374	1,897
Departure	627	8	635	1,047	15	1,062
Total	2,237	220	2,457	2,570	389	2,959
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	1,002	307	1,309	672	428	1,100
Total	1,002	307	1,309	672	428	1,100
Total Approaches						
Approach	3,239	527	3,766	3,242	817	4,059
Departure	3,239	527	3,766	3,242	817	4,059
Total	6,478	1,054	7,532	6,484	1,634	8,118

Table C-3 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Project Trips	Existing Plus Project	Existing Without Project	Project Trips	Existing Plus Project
5 Long Beach Blvd/I-105 EB Off Ramp						
NBL	1	0	1	0	0	0
NBT	941	11	952	1,028	15	1,043
NBR	29	0	29	11	0	11
SBL	55	0	55	62	0	62
SBT	605	8	613	979	15	994
SBR	0	0	0	0	0	0
EBL	612	201	813	404	359	763
EBT	0	0	0	3	0	3
EBR	384	8	392	262	15	277
WBL	1	0	1	0	0	0
WBT	0	0	0	0	0	0
WBR	20	0	20	35	0	35
North Leg						
Approach	660	8	668	1,041	15	1,056
Departure	1,573	212	1,785	1,467	374	1,841
Total	2,233	220	2,453	2,508	389	2,897
South Leg						
Approach	971	11	982	1,039	15	1,054
Departure	990	16	1,006	1,241	30	1,271
Total	1,961	27	1,988	2,280	45	2,325
East Leg						
Approach	21	0	21	35	0	35
Departure	84	0	84	76	0	76
Total	105	0	105	111	0	111
West Leg						
Approach	996	209	1,205	669	374	1,043
Departure	1	0	1	0	0	0
Total	997	209	1,206	669	374	1,043
Total Approaches						
Approach	2,648	228	2,876	2,784	404	3,188
Departure	2,648	228	2,876	2,784	404	3,188
Total	5,296	456	5,752	5,568	808	6,376

Table C-3 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing Without Project	Project Trips	Existing Plus Project	Existing Without Project	Project Trips	Existing Plus Project
6 Long Beach Blvd/I-105 EB Slip On Ramp						
NBL	0	0	0	0	0	0
NBT	963	11	974	1,046	15	1,061
NBR	497	11	508	434	15	449
SBL	0	0	0	0	0	0
SBT	967	17	984	1,246	30	1,276
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0		0	0
North Leg						
Approach	967	17	984	1,246	30	1,276
Departure	963	11	974	1,046	15	1,061
Total	1,930	28	1,958	2,292	45	2,337
South Leg						
Approach	1,460	22	1,482	1,480	30	1,510
Departure	967	17	984	1,246	30	1,276
Total	2,427	39	2,466	2,726	60	2,786
East Leg						
Approach	0	0	0	0	0	0
Departure	497	11	508	434	15	449
Total	497	11	508	434	15	449
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	2,427	39	2,466	2,726	60	2,786
Departure	2,427	39	2,466	2,726	60	2,786
Total	4,854	78	4,932	5,452	120	5,572

Table C-4 - Forecast Link Volume Worksheet
Year 2040 Background Conditions

1 Long Beach Blvd/I-105 WB Slip On Ramp

AM Peak Hour

		Existing 2015 Volume (Total Vehicle)		Existing 2015 Link Volume	Base Yr. Modeled Pk. Per. Volume	Fut. Yr. Modeled Pk. Per. Volume	Base to Future Year Pk. Per. Change	Base to Future Year Pk. Hr. Change	2015 to 2040 Link Vol Growth[1]	Forecast 2040 Link Volume
Northbound	Left	0	Approach	1,819	4,892	4,837	-55	-21	-19	1,800
	Through	1,819	Departure	1,354	4,072	3,975	-97	-37	-34	1,320
	Right	0								
Southbound	Left	0	Approach	1,937	4,479	3,976	-503	-191	-177	1,760
	Through	1,354	Departure	1,819	4,819	4,571	-248	-94	-87	1,732
	Right	583								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	583	480	267	-213	-81	-75	508
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								

PM Peak Hour

Northbound	Left	0	Approach	2,160	7,365	6,894	-471	-132	-122	2,038
	Through	2,160	Departure	1,295	6,242	6,359	117	33	30	1,325
	Right	0								
Southbound	Left	0	Approach	1,878	7,990	7,094	-896	-251	-232	1,646
	Through	1,295	Departure	2,160	7,365	6,894	-471	-132	-122	2,038
	Right	583								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	583	1,748	735	-1,013	-284	-263	320
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								

Modeled base year (2008) to modeled future year (2035) conditions represent 27 years of traffic growth. Since it is 25 years from 2015 to 2040 the growth represents 92.59 % of the growth between 2008 and 2035 model years. Also the a.m. peak hour is 38% of the peak period and the p.m. peak hour is 28 percent of the peak period.

Table C-4 - Forecast Link Volume Worksheet
Year 2040 Background Conditions

		Existing 2015 Volume (Total Vehicle)		Existing 2015 Link Volume	Base Yr. Modeled Pk. Per. Volume	Fut. Yr. Modeled Pk. Per. Volume	Base to Future Year Pk. Per. Change	Base to Future Year Pk. Hr. Change	2015 to 2040 Link Vol Growth[1]	Forecast 2040 Link Volume
2 Long Beach Blvd/I-105 WB Off Ramp										
AM Peak Hour										
Northbound	Left	47	Approach	1,135	2,770	3,093	323	123	114	1,249
	Through	1,088	Departure	1,513	4,258	4,137	-121	-46	-43	1,470
	Right	0								
Southbound	Left	0	Approach	1,337	4,072	3,975	-97	-37	-34	1,303
	Through	1,303	Departure	1,819	4,892	4,837	-55	-21	-19	1,800
	Right	34								
Eastbound	Left	6	Approach	15	0	0	0	0	0	15
	Through	0	Departure	101	0	0	0	0	0	101
	Right	9								
Westbound	Left	201	Approach	946	2,308	1,906	-402	-153	-141	805
	Through	20	Departure	0	0	0	0	0	0	0
	Right	725								
PM Peak Hour										
Northbound	Left	53	Approach	1,172	3,934	3,897	-37	-10	-10	1,162
	Through	1,119	Departure	1,643	6,486	6,594	108	30	28	1,671
	Right	0								
Southbound	Left	0	Approach	1,276	6,242	6,359	117	33	30	1,306
	Through	1,262	Departure	2,160	7,365	6,894	-471	-132	-122	2,038
	Right	14								
Eastbound	Left	24	Approach	37	0	0	0	0	0	37
	Through	0	Departure	78	0	0	0	0	0	78
	Right	13								
Westbound	Left	368	Approach	1,396	3,675	3,232	-443	-124	-115	1,281
	Through	11	Departure	0	0	0	0	0	0	0
	Right	1,017								

Modeled base year (2008) to modeled future year (2035) conditions represent 27 years of traffic growth. Since it is 25 years from 2015 to 2040 the growth represents 92.59 % of the growth between 2008 and 2035 model years. Also the a.m. peak hour is 38% of the peak period and the p.m. peak hour is 28 percent of the peak period.

Table C-4 - Forecast Link Volume Worksheet
Year 2040 Background Conditions

		Existing 2015 Volume (Total Vehicle)		Existing 2015 Link Volume	Base Yr. Modeled Pk. Per. Volume	Fut. Yr. Modeled Pk. Per. Volume	Base to Future Year Pk. Per. Change	Base to Future Year Pk. Hr. Change	2015 to 2040 Link Vol Growth[1]	Forecast 2040 Link Volume
3 Long Beach Blvd/I-105 WB Loop On Ramp										
AM Peak Hour										
Northbound	Left	0	Approach	1,589	3,647	3,605	-42	-16	-15	1,574
	Through	1,199	Departure	1,513	4,258	4,137	-121	-46	-43	1,470
	Right	390								
Southbound	Left	0	Approach	1,513	4,258	4,137	-121	-46	-43	1,470
	Through	1,513	Departure	1,199	2,770	3,093	323	123	114	1,313
	Right	0								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	390	877	512	-365	-139	-128	262
	Right	0								
PM Peak Hour										
Northbound	Left	0	Approach	1,506	5,070	4,830	-240	-67	-62	1,444
	Through	1,160	Departure	1,643	6,486	6,594	108	30	28	1,671
	Right	346								
Southbound	Left	0	Approach	1,643	6,486	6,594	108	30	28	1,671
	Through	1,643	Departure	1,160	3,934	3,897	-37	-10	-10	1,150
	Right	0								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	346	1,136	932	-204	-57	-53	293
	Right	0								

Modeled base year (2008) to modeled future year (2035) conditions represent 27 years of traffic growth. Since it is 25 years from 2015 to 2040 the growth represents 92.59 % of the growth between 2008 and 2035 model years. Also the a.m. peak hour is 38% of the peak period and the p.m. peak hour is 28 percent of the peak period.

Table C-4 - Forecast Link Volume Worksheet
Year 2040 Background Conditions

		Existing 2015 Volume (Total Vehicle)		Existing 2015 Link Volume	Base Yr. Modeled Pk. Per. Volume	Fut. Yr. Modeled Pk. Per. Volume	Base to Future Year Pk. Per. Change	Base to Future Year Pk. Hr. Change	2015 to 2040 Link Vol Growth[1]	Forecast 2040 Link Volume
4 Long Beach Blvd/I-105 EB Loop On Ramp										
AM Peak Hour										
Northbound	Left	0	Approach	1,589	3,629	3,587	-42	-16	-15	1,574
	Through	1,589	Departure	615	2,722	3,034	312	119	110	725
	Right	0								
Southbound	Left	0	Approach	1,608	4,258	4,137	-121	-46	-43	1,565
	Through	615	Departure	1,589	3,647	3,605	-42	-16	-15	1,574
	Right	993								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	993	1,518	1,084	-434	-165	-153	840
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								
PM Peak Hour										
Northbound	Left	0	Approach	1,506	5,046	4,805	-241	-67	-62	1,444
	Through	1,506	Departure	1,033	5,074	5,843	769	215	199	1,232
	Right	0								
Southbound	Left	0	Approach	1,699	6,486	6,594	108	30	28	1,727
	Through	1,033	Departure	1,506	5,070	4,830	-240	-67	-62	1,444
	Right	666								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	666	1,387	0	-1,387	-388	-360	306
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	726	726	203	188	188
	Right	0								

Modeled base year (2008) to modeled future year (2035) conditions represent 27 years of traffic growth. Since it is 25 years from 2015 to 2040 the growth represents 92.59 % of the growth between 2008 and 2035 model years. Also the a.m. peak hour is 38% of the peak period and the p.m. peak hour is 28 percent of the peak period.

Table C-4 - Forecast Link Volume Worksheet
Year 2040 Background Conditions

		Existing 2015 Volume (Total Vehicle)		Existing 2015 Link Volume	Base Yr. Modeled Pk. Per. Volume	Fut. Yr. Modeled Pk. Per. Volume	Base to Future Year Pk. Per. Change	Base to Future Year Pk. Hr. Change	2015 to 2040 Link Vol Growth[1]	Forecast 2040 Link Volume
5 Long Beach Blvd/I-105 EB Off Ramp										
AM Peak Hour										
Northbound	Left	1	Approach	960	3,409	3,587	178	68	63	1,023
	Through	930	Departure	980	3,697	3,741	44	17	15	995
	Right	29								
Southbound	Left	49	Approach	645	2,722	3,034	312	119	110	755
	Through	596	Departure	1,552	3,629	3,587	-42	-16	-15	1,537
	Right	0								
Eastbound	Left	606	Approach	989	1,195	707	-488	-185	-172	817
	Through	0	Departure	1	0	0	0	0	0	1
	Right	383								
Westbound	Left	1	Approach	17	0	0	0	0	0	17
	Through	0	Departure	78	0	0	0	0	0	78
	Right	16								
PM Peak Hour										
Northbound	Left	0	Approach	1,023	5,046	4,805	-241	-67	-62	961
	Through	1,012	Departure	1,231	6,946	6,913	-33	-9	-9	1,222
	Right	11								
Southbound	Left	56	Approach	1,027	5,074	5,843	769	215	199	1,226
	Through	971	Departure	1,446	5,046	4,805	-241	-67	-62	1,384
	Right	0								
Eastbound	Left	404	Approach	667	1,872	1,070	-802	-225	-208	459
	Through	3	Departure	0	0	0	0	0	0	0
	Right	260								
Westbound	Left	0	Approach	30	0	0	0	0	0	30
	Through	0	Departure	70	0	0	0	0	0	70
	Right	30								

Modeled base year (2008) to modeled future year (2035) conditions represent 27 years of traffic growth. Since it is 25 years from 2015 to 2040 the growth represents 92.59 % of the growth between 2008 and 2035 model years. Also the a.m. peak hour is 38% of the peak period and the p.m. peak hour is 28 percent of the peak period.

Table C-4 - Forecast Link Volume Worksheet
Year 2040 Background Conditions

6 Long Beach Blvd/I-105 EB Slip On Ramp

AM Peak Hour

		Existing 2015 Volume (Total Vehicle)		Existing 2015 Link Volume	Base Yr. Modeled Pk. Per. Volume	Fut. Yr. Modeled Pk. Per. Volume	Base to Future Year Pk. Per. Change	Base to Future Year Pk. Hr. Change	2015 to 2040 Link Vol Growth[1]	Forecast 2040 Link Volume
Northbound	Left	0	Approach	1,449	4,088	4,217	129	49	45	1,494
	Through	952	Departure	957	2,985	3,241	256	97	90	1,047
	Right	497								
Southbound	Left	0	Approach	957	3,697	3,741	44	17	15	972
	Through	957	Departure	952	3,409	3,587	178	68	63	1,015
	Right	0								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								
Westbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	497	1,391	1,131	-260	-99	-91	406
	Right	0								

PM Peak Hour

Northbound	Left	0	Approach	1,455	5,958	5,933	-25	-7	-6	1,449
	Through	1,032	Departure	1,236	5,902	6,137	235	66	61	1,297
	Right	423								
Southbound	Left	0	Approach	1,236	6,946	6,913	-33	-9	-9	1,227
	Through	1,236	Departure	1,033	5,046	4,805	-241	-67	-62	971
	Right	0								
Eastbound	Left	0	Approach	0	0	0	0	0	0	0
	Through	0	Departure	0	0	0	0	0	0	0
	Right	0								
Westbound	Left	0	Approach	1	0	0	0	0	0	1
	Through	0	Departure	423	1,956	1,903	-53	-15	-14	409
	Right	1								

Modeled base year (2008) to modeled future year (2035) conditions represent 27 years of traffic growth. Since it is 25 years from 2015 to 2040 the growth represents 92.59 % of the growth between 2008 and 2035 model years. Also the a.m. peak hour is 38% of the peak period and the p.m. peak hour is 28 percent of the peak period.

Table C-5 - Calculation of Future Turning Movement Volumes
(Based on NCHRP 255)

	Approach Direction		Traffic Counts	Forecast Future Year Link Volume		Forecast TM Volume
1	Long Beach Blvd/I-105 WB Slip On Ramp					
	A.M. Peak Hour					
	Northbound	Left	0	Approach	1,800	Left	0
		Through	1,819	Departure	1,320	Through	1,732
		Right	0			Right	0
	Southbound	Left	0	Approach	1,760	Left	0
		Through	1,354	Departure	1,732	Through	1,320
		Right	583			Right	508
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	508	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0
	P.M. Peak Hour					
	Northbound	Left	0	Approach	2,038	Left	0
		Through	2,160	Departure	1,325	Through	2,038
		Right	0			Right	0
	Southbound	Left	0	Approach	1,646	Left	0
		Through	1,295	Departure	2,038	Through	1,325
		Right	583			Right	320
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	320	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0

Table C-5 - Calculation of Future Turning Movement Volumes
(Based on NCHRP 255)

	Approach Direction		Traffic Counts	Forecast Future Year Link Volume		Forecast TM Volume	
2	Long Beach Blvd/I-105 WB Off Ramp						
	A.M. Peak Hour						
	Northbound	Left	47	Approach	1,249	Left	53
		Through	1,088	Departure	1,470	Through	1,192
		Right	0			Right	0
	Southbound	Left	0	Approach	1,303	Left	0
		Through	1,303	Departure	1,800	Through	1,277
		Right	34			Right	31
	Eastbound	Left	6	Approach	15	Left	6
		Through	0	Departure	101	Through	0
		Right	9			Right	9
	Westbound	Left	201	Approach	805	Left	184
		Through	20	Departure	0	Through	17
		Right	725			Right	602
	P.M. Peak Hour						
	Northbound	Left	53	Approach	1,162	Left	54
		Through	1,119	Departure	1,671	Through	1,106
		Right	0			Right	0
	Southbound	Left	0	Approach	1,306	Left	0
		Through	1,262	Departure	2,038	Through	1,295
		Right	14			Right	14
	Eastbound	Left	24	Approach	37	Left	23
		Through	0	Departure	78	Through	0
		Right	13			Right	14
	Westbound	Left	368	Approach	1,281	Left	362
		Through	11	Departure	0	Through	10
		Right	1,017			Right	908

Table C-5 - Calculation of Future Turning Movement Volumes
(Based on NCHRP 255)

	Approach Direction		Traffic Counts	Forecast Future Year Link Volume		Forecast TM Volume	
3	Long Beach Blvd/I-105 WB Loop On Ramp						
	A.M. Peak Hour						
	Northbound	Left	0	Approach	1,574	Left	0
		Through	1,199	Departure	1,470	Through	1,313
		Right	390			Right	262
	Southbound	Left	0	Approach	1,470	Left	0
		Through	1,513	Departure	1,313	Through	1,470
		Right	0			Right	0
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	262	Through	0
		Right	0			Right	0
	P.M. Peak Hour						
	Northbound	Left	0	Approach	1,444	Left	0
		Through	1,160	Departure	1,671	Through	1,150
		Right	346			Right	293
	Southbound	Left	0	Approach	1,671	Left	0
		Through	1,643	Departure	1,150	Through	1,671
		Right	0			Right	0
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	293	Through	0
		Right	0			Right	0

Table C-5 - Calculation of Future Turning Movement Volumes
(Based on NCHRP 255)

	Approach Direction		Traffic Counts	Forecast Future Year Link Volume		Forecast TM Volume	
4	Long Beach Blvd/I-105 EB Loop On Ramp						
	A.M. Peak Hour						
	Northbound	Left	0	Approach	1,574	Left	0
		Through	1,589	Departure	725	Through	1,574
		Right	0			Right	0
	Southbound	Left	0	Approach	1,565	Left	0
		Through	615	Departure	1,574	Through	725
		Right	993			Right	840
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	840	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0
	P.M. Peak Hour						
	Northbound	Left	0	Approach	1,444	Left	0
		Through	1,506	Departure	1,232	Through	1,444
		Right	0			Right	0
	Southbound	Left	0	Approach	1,727	Left	0
		Through	1,033	Departure	1,444	Through	1,232
		Right	666			Right	306
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	306	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	188	Through	0
		Right	0			Right	0

Table C-5 - Calculation of Future Turning Movement Volumes
(Based on NCHRP 255)

	Approach Direction		Traffic Counts	Forecast Future Year Link Volume		Forecast TM Volume	
5	Long Beach Blvd/I-105 EB Off Ramp						
	A.M. Peak Hour						
	Northbound	Left	1	Approach	1,023	Left	1
		Through	930	Departure	995	Through	998
		Right	29			Right	25
	Southbound	Left	49	Approach	755	Left	53
		Through	596	Departure	1,537	Through	700
		Right	0			Right	0
	Eastbound	Left	606	Approach	817	Left	523
		Through	0	Departure	1	Through	0
		Right	383			Right	294
	Westbound	Left	1	Approach	17	Left	1
		Through	0	Departure	78	Through	0
		Right	16			Right	16
	P.M. Peak Hour						
	Northbound	Left	0	Approach	961	Left	0
		Through	1,012	Departure	1,222	Through	989
		Right	11			Right	5
	Southbound	Left	56	Approach	1,226	Left	64
		Through	971	Departure	1,384	Through	1,120
		Right	0			Right	0
	Eastbound	Left	404	Approach	459	Left	364
		Through	3	Departure	0	Through	1
		Right	260			Right	103
	Westbound	Left	0	Approach	30	Left	0
		Through	0	Departure	70	Through	0
		Right	30			Right	31

Table C-5 - Calculation of Future Turning Movement Volumes
(Based on NCHRP 255)

	Approach Direction		Traffic Counts	Forecast Future Year Link Volume		Forecast TM Volume	
6	Long Beach Blvd/I-105 EB Slip On Ramp						
	A.M. Peak Hour						
	Northbound	Left	0	Approach	1,494	Left	0
		Through	952	Departure	1,047	Through	1,015
		Right	497			Right	406
	Southbound	Left	0	Approach	972	Left	0
		Through	957	Departure	1,015	Through	1,047
		Right	0			Right	0
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	0	Left	0
		Through	0	Departure	406	Through	0
		Right	0			Right	0
	P.M. Peak Hour						
	Northbound	Left	0	Approach	1,449	Left	0
		Through	1,032	Departure	1,297	Through	970
		Right	423			Right	409
	Southbound	Left	0	Approach	1,227	Left	0
		Through	1,236	Departure	971	Through	1,297
		Right	0			Right	0
	Eastbound	Left	0	Approach	0	Left	0
		Through	0	Departure	0	Through	0
		Right	0			Right	0
	Westbound	Left	0	Approach	1	Left	0
		Through	0	Departure	409	Through	0
		Right	1			Right	1

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Table C-6 Balanced Volumes
To Maintain Consistent Flow of Vehicles

	A.M. Peak Hour Volumes			P.M. Peak Hour Volumes		
	PCE Volume	Adjust.	Balanced Volume	PCE Volume	Adjust.	Balanced Volume
1 Long Beach Blvd/I-105 WB Slip On Ramp						
NBL	0	0	0	0	0	0
NBT	1,732	0	1,732	2,038	0	2,038
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	1,320	0	1,320	1,325	0	1,325
SBR	508	0	508	320	0	320
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,828	0	1,828	1,645	0	1,645
Departure	1,732	0	1,732	2,038	0	2,038
Total	3,560	0	3,560	3,683	0	3,683
South Leg						
Approach	1,732	0	1,732	2,038	0	2,038
Departure	1,320	0	1,320	1,325	0	1,325
Total	3,052	0	3,052	3,363	0	3,363
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	508	0	508	320	0	320
Total	508	0	508	320	0	320
Total Approaches						
Approach	3,560	0	3,560	3,683	0	3,683
Departure	3,560	0	3,560	3,683	0	3,683
Total	7,120	0	7,120	7,366	0	7,366

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Table C-6 Balanced Volumes
To Maintain Consistent Flow of Vehicles

	A.M. Peak Hour Volumes			P.M. Peak Hour Volumes		
	PCE Volume	Adjust.	Balanced Volume	PCE Volume	Adjust.	Balanced Volume
2 Long Beach Blvd/I-105 WB Off Ramp						
NBL	53	0	53	54	0	54
NBT	1,192	-45	1,147	1,106	1	1,107
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	1,277	12	1,289	1,295	16	1,311
SBR	31	0	31	14	0	14
EBL	6	0	6	23	0	23
EBT	0	0	0	0	0	0
EBR	9	0	9	14	0	14
WBL	184	0	184	362	0	362
WBT	17	0	17	10	0	10
WBR	602	-23	579	908	0	908
North Leg						
Approach	1,308	12	1,320	1,309	16	1,325
Departure	1,800	-68	1,732	2,037	1	2,038
Total	3,108	-56	3,052	3,346	17	3,363
South Leg						
Approach	1,245	-45	1,200	1,160	1	1,161
Departure	1,470	12	1,482	1,671	16	1,687
Total	2,715	-33	2,682	2,831	17	2,848
East Leg						
Approach	803	-23	780	1,280	0	1,280
Departure	0	0	0	0	0	0
Total	803	-23	780	1,280	0	1,280
West Leg						
Approach	15	0	15	37	0	37
Departure	101	0	101	78	0	78
Total	116	0	116	115	0	115
Total Approaches						
Approach	3,371	-56	3,315	3,786	17	3,803
Departure	3,371	-56	3,315	3,786	17	3,803
Total	6,742	-112	6,630	7,572	34	7,606

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Table C-6 Balanced Volumes
To Maintain Consistent Flow of Vehicles

	A.M. Peak Hour Volumes			P.M. Peak Hour Volumes		
	PCE Volume	Adjust.	Balanced Volume	PCE Volume	Adjust.	Balanced Volume
3 Long Beach Blvd/I-105 WB Loop On Ramp						
NBL	0	0	0	0	0	0
NBT	1,313	-113	1,200	1,150	11	1,161
NBR	262	0	262	293	0	293
SBL	0	0	0	0	0	0
SBT	1,470	12	1,482	1,671	16	1,687
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,470	12	1,482	1,671	16	1,687
Departure	1,313	-113	1,200	1,150	11	1,161
Total	2,783	-101	2,682	2,821	27	2,848
South Leg						
Approach	1,575	-113	1,462	1,443	11	1,454
Departure	1,470	12	1,482	1,671	16	1,687
Total	3,045	-101	2,944	3,114	27	3,141
East Leg						
Approach	0	0	0	0	0	0
Departure	262	0	262	293	0	293
Total	262	0	262	293	0	293
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	3,045	-101	2,944	3,114	27	3,141
Departure	3,045	-101	2,944	3,114	27	3,141
Total	6,090	-202	5,888	6,228	54	6,282

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Table C-6 Balanced Volumes
To Maintain Consistent Flow of Vehicles

	A.M. Peak Hour Volumes			P.M. Peak Hour Volumes		
	PCE Volume	Adjust.	Balanced Volume	PCE Volume	Adjust.	Balanced Volume
4 Long Beach Blvd/I-105 EB Loop On Ramp						
NBL	0	0	0	0	0	0
NBT	1,574	1	1,575	1,444	-1	1,443
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	725	-44	681	1,232	107	1,339
SBR	840	-51	789	306	26	332
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,565	-95	1,470	1,538	133	1,671
Departure	1,574	1	1,575	1,444	-1	1,443
Total	3,139	-94	3,045	2,982	132	3,114
South Leg						
Approach	1,574	1	1,575	1,444	-1	1,443
Departure	725	-44	681	1,232	107	1,339
Total	2,299	-43	2,256	2,676	106	2,782
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	840	-51	789	306	26	332
Total	840	-51	789	306	26	332
Total Approaches						
Approach	3,139	-94	3,045	2,982	132	3,114
Departure	3,139	-94	3,045	2,982	132	3,114
Total	6,278	-188	6,090	5,964	264	6,228

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Table C-6 Balanced Volumes
To Maintain Consistent Flow of Vehicles

	A.M. Peak Hour Volumes			P.M. Peak Hour Volumes		
	PCE Volume	Adjust.	Balanced Volume	PCE Volume	Adjust.	Balanced Volume
5 Long Beach Blvd/I-105 EB Off Ramp						
NBL	1	0	1	0	0	0
NBT	998	24	1,022	989	43	1,032
NBR	25	0	25	5	0	5
SBL	53	-2	51	64	3	67
SBT	700	-26	674	1,120	45	1,165
SBR	0	0	0	0	0	0
EBL	523	13	536	364	16	380
EBT	0	0	0	1	0	1
EBR	294	0	294	103	0	103
WBL	1	0	1	0	0	0
WBT	0	0	0	0	0	0
WBR	16	0	16	31	1	32
North Leg						
Approach	753	-28	725	1,184	48	1,232
Departure	1,537	37	1,574	1,384	60	1,444
Total	2,290	9	2,299	2,568	108	2,676
South Leg						
Approach	1,024	24	1,048	994	43	1,037
Departure	995	-26	969	1,223	45	1,268
Total	2,019	-2	2,017	2,217	88	2,305
East Leg						
Approach	17	0	17	31	1	32
Departure	78	-2	76	70	3	73
Total	95	-2	93	101	4	105
West Leg						
Approach	817	13	830	468	16	484
Departure	1	0	1	0	0	0
Total	818	13	831	468	16	484
Total Approaches						
Approach	2,611	9	2,620	2,677	108	2,785
Departure	2,611	9	2,620	2,677	108	2,785
Total	5,222	18	5,240	5,354	216	5,570

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Table C-6 Balanced Volumes
To Maintain Consistent Flow of Vehicles

	A.M. Peak Hour Volumes			P.M. Peak Hour Volumes		
	PCE Volume	Adjust.	Balanced Volume	PCE Volume	Adjust.	Balanced Volume
6 Long Beach Blvd/I-105 EB Slip On Ramp						
NBL	0	0	0	0	0	0
NBT	1,015	9	1,024	970	23	993
NBR	406	0	406	409	0	409
SBL	0	0	0	0	0	0
SBT	1,047	-52	995	1,297	-74	1,223
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	1	0	1
North Leg						
Approach	1,047	-52	995	1,297	-74	1,223
Departure	1,015	9	1,024	971	23	994
Total	2,062	-43	2,019	2,268	-51	2,217
South Leg						
Approach	1,421	9	1,430	1,379	23	1,402
Departure	1,047	-52	995	1,297	-74	1,223
Total	2,468	-43	2,425	2,676	-51	2,625
East Leg						
Approach	0	0	0	1	0	1
Departure	406	0	406	409	0	409
Total	406	0	406	410	0	410
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	2,468	-43	2,425	2,677	-51	2,626
Departure	2,468	-43	2,425	2,677	-51	2,626
Total	4,936	-86	4,850	5,354	-102	5,252

Table C-7 - Year 2035 Peak Hour PCE Volume Summary

	2040 W/O Project	Project Trips	2040 With Project	2040 W/O Project	Project Trips	2040 With Project
1 . Long Beach Blvd/I-105 WB Slip On Ramp						
NBL	0	0	0	0	0	0
NBT	1,732	443	2,175	2,038	794	2,832
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	1,320	307	1,627	1,325	428	1,753
SBR	508	254	762	320	354	674
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,828	561	2,389	1,645	782	2,427
Departure	1,732	443	2,175	2,038	794	2,832
Total	3,560	1,004	4,564	3,683	1,576	5,259
South Leg						
Approach	1,732	443	2,175	2,038	794	2,832
Departure	1,320	307	1,627	1,325	428	1,753
Total	3,052	750	3,802	3,363	1,222	4,585
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	508	254	762	320	354	674
Total	508	254	762	320	354	674
Total Approaches						
Approach	3,560	1,004	4,564	3,683	1,576	5,259
Departure	3,560	1,004	4,564	3,683	1,576	5,259
Total	7,120	2,008	9,128	7,366	3,152	10,518

Table C-7 - Year 2035 Peak Hour PCE Volume Summary

	2040 W/O Project	Project Trips	2040 With Project	2040 W/O Project	Project Trips	2040 With Project
2 . Long Beach Blvd/I-105 WB Off Ramp						
NBL	53	0	53	54	0	54
NBT	1,147	201	1,348	1,107	359	1,466
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	1,289	307	1,596	1,311	428	1,739
SBR	31	0	31	14	0	14
EBL	6	0	6	23	0	23
EBT	0	0	0	0	0	0
EBR	9	0	9	14	0	14
WBL	184	8	192	362	15	377
WBT	17	0	17	10	0	10
WBR	579	242	821	908	434	1,342
North Leg						
Approach	1,320	307	1,627	1,325	428	1,753
Departure	1,732	443	2,175	2,038	793	2,831
Total	3,052	750	3,802	3,363	1,221	4,584
South Leg						
Approach	1,200	201	1,401	1,161	359	1,520
Departure	1,482	315	1,797	1,687	443	2,130
Total	2,682	516	3,198	2,848	802	3,650
East Leg						
Approach	780	250	1,030	1,280	449	1,729
Departure	0	0	0	0	0	0
Total	780	250	1,030	1,280	449	1,729
West Leg						
Approach	15	0	15	37	0	37
Departure	101	0	101	78	0	78
Total	116	0	116	115	0	115
Total Approaches						
Approach	3,315	758	4,073	3,803	1,236	5,039
Departure	3,315	758	4,073	3,803	1,236	5,039
Total	6,630	1,516	8,146	7,606	2,472	10,078

Table C-7 - Year 2035 Peak Hour PCE Volume Summary

	2040 W/O Project	Project Trips	2040 With Project	2040 W/O Project	Project Trips	2040 With Project
3 . Long Beach Blvd/I-105 WB Loop On Ramp						
NBL	0	0	0	0	0	0
NBT	1,200	201	1,401	1,161	359	1,520
NBR	262	11	273	293	15	308
SBL	0	0	0	0	0	0
SBT	1,482	315	1,797	1,687	443	2,130
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,482	315	1,797	1,687	443	2,130
Departure	1,200	201	1,401	1,161	359	1,520
Total	2,682	516	3,198	2,848	802	3,650
South Leg						
Approach	1,462	212	1,674	1,454	374	1,828
Departure	1,482	315	1,797	1,687	443	2,130
Total	2,944	527	3,471	3,141	817	3,958
East Leg						
Approach	0	0	0	0	0	0
Departure	262	11	273	293	15	308
Total	262	11	273	293	15	308
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	2,944	527	3,471	3,141	817	3,958
Departure	2,944	527	3,471	3,141	817	3,958
Total	5,888	1,054	6,942	6,282	1,634	7,916

Table C-7 - Year 2035 Peak Hour PCE Volume Summary

	2040 W/O Project	Project Trips	2040 With Project	2040 W/O Project	Project Trips	2040 With Project
4 . Long Beach Blvd/I-105 EB Loop On Ramp						
NBL	0	0	0	0	0	0
NBT	1,575	212	1,787	1,443	374	1,817
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	681	8	689	1,339	15	1,354
SBR	789	307	1,096	332	428	760
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	1,470	315	1,785	1,671	443	2,114
Departure	1,575	212	1,787	1,443	374	1,817
Total	3,045	527	3,572	3,114	817	3,931
South Leg						
Approach	1,575	212	1,787	1,443	374	1,817
Departure	681	8	689	1,339	15	1,354
Total	2,256	220	2,476	2,782	389	3,171
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	789	307	1,096	332	428	760
Total	789	307	1,096	332	428	760
Total Approaches						
Approach	3,045	527	3,572	3,114	817	3,931
Departure	3,045	527	3,572	3,114	817	3,931
Total	6,090	1,054	7,144	6,228	1,634	7,862

Table C-7 - Year 2035 Peak Hour PCE Volume Summary

	2040 W/O Project	Project Trips	2040 With Project	2040 W/O Project	Project Trips	2040 With Project
5 . Long Beach Blvd/I-105 EB Off Ramp						
NBL	1	0	1	0	0	0
NBT	1,022	11	1,033	1,032	15	1,047
NBR	25	0	25	5	0	5
SBL	51	0	51	67	0	67
SBT	674	8	682	1,165	15	1,180
SBR	0	0	0	0	0	0
EBL	536	201	737	380	359	739
EBT	0	0	0	1	0	1
EBR	294	8	302	103	15	118
WBL	1	0	1	0	0	0
WBT	0	0	0	0	0	0
WBR	16	0	16	32	0	32
North Leg						
Approach	725	8	733	1,232	15	1,247
Departure	1,574	212	1,786	1,444	374	1,818
Total	2,299	220	2,519	2,676	389	3,065
South Leg						
Approach	1,048	11	1,059	1,037	15	1,052
Departure	969	16	985	1,268	30	1,298
Total	2,017	27	2,044	2,305	45	2,350
East Leg						
Approach	17	0	17	32	0	32
Departure	76	0	76	73	0	73
Total	93	0	93	105	0	105
West Leg						
Approach	830	209	1,039	484	374	858
Departure	1	0	1	0	0	0
Total	831	209	1,040	484	374	858
Total Approaches						
Approach	2,620	228	2,848	2,785	404	3,189
Departure	2,620	228	2,848	2,785	404	3,189
Total	5,240	456	5,696	5,570	808	6,378

Table C-7 - Year 2035 Peak Hour PCE Volume Summary

	2040 W/O Project	Project Trips	2040 With Project	2040 W/O Project	Project Trips	2040 With Project
6 . Long Beach Blvd/I-105 EB Slip On Ramp						
NBL	0	0	0	0	0	0
NBT	1,024	11	1,035	993	15	1,008
NBR	406	11	417	409	15	424
SBL	0	0	0	0	0	0
SBT	995	17	1,012	1,223	30	1,253
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	1	0	1
North Leg						
Approach	995	17	1,012	1,223	30	1,253
Departure	1,024	11	1,035	994	15	1,009
Total	2,019	28	2,047	2,217	45	2,262
South Leg						
Approach	1,430	22	1,452	1,402	30	1,432
Departure	995	17	1,012	1,223	30	1,253
Total	2,425	39	2,464	2,625	60	2,685
East Leg						
Approach	0	0	0	1	0	1
Departure	406	11	417	409	15	424
Total	406	11	417	410	15	425
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	2,425	39	2,464	2,626	60	2,686
Departure	2,425	39	2,464	2,626	60	2,686
Total	4,850	78	4,928	5,252	120	5,372

APPENDIX D:
LEVEL OF SERVICE WORKSHEETS

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	1819	1354	583
Future Vol, veh/h	0	0	0	1819	1354	583
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1977	1472	634

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2263	736	-	0	-	0
Stage 1	1472	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Critical Hdwy	6.44	7.14	-	-	-	-
Critical Hdwy Stg 1	7.34	-	-	-	-	-
Critical Hdwy Stg 2	6.74	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	43	310	0	-	-	0
Stage 1	93	-	0	-	-	0
Stage 2	317	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	43	310	-	-	-	-
Mov Cap-2 Maneuver	43	-	-	-	-	-
Stage 1	93	-	-	-	-	-
Stage 2	317	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	9	201	20	725	47	1088	0	0	1303	34
Future Volume (veh/h)	6	0	9	201	20	725	47	1088	0	0	1303	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	7	0	10	218	0	803	51	1183	0	0	1416	37
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	210	39	210	586	0	995	259	2572	0	0	2578	67
Arrive On Green	0.31	0.00	0.31	0.31	0.00	0.31	0.51	0.51	0.00	0.00	0.51	0.51
Sat Flow, veh/h	344	124	670	1399	0	3167	365	5253	0	0	5264	133
Grp Volume(v), veh/h	17	0	0	218	0	803	51	1183	0	0	942	511
Grp Sat Flow(s),veh/h/ln	1139	0	0	1399	0	1583	365	1695	0	0	1695	1839
Q Serve(g_s), s	0.0	0.0	0.0	5.9	0.0	11.6	5.6	7.5	0.0	0.0	9.5	9.5
Cycle Q Clear(g_c), s	0.3	0.0	0.0	6.2	0.0	11.6	15.1	7.5	0.0	0.0	9.5	9.5
Prop In Lane	0.41		0.59	1.00		1.00	1.00		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	459	0	0	586	0	995	259	2572	0	0	1715	930
V/C Ratio(X)	0.04	0.00	0.00	0.37	0.00	0.81	0.20	0.46	0.00	0.00	0.55	0.55
Avail Cap(c_a), veh/h	516	0	0	664	0	1172	259	2572	0	0	1715	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.97	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	0.0	13.9	0.0	15.8	13.6	8.0	0.0	0.0	8.5	8.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	3.7	1.6	0.6	0.0	0.0	1.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.5	0.0	5.5	0.7	3.6	0.0	0.0	4.6	5.3
LnGrp Delay(d),s/veh	11.9	0.0	0.0	14.2	0.0	19.4	15.3	8.5	0.0	0.0	9.7	10.8
LnGrp LOS	B			B		B	B	A			A	B
Approach Vol, veh/h		17			1021			1234			1453	
Approach Delay, s/veh		11.9			18.3			8.8			10.1	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		29.8		20.2		29.8		20.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		18.5		22.5		18.5
Max Q Clear Time (g_c+I1), s		17.1		2.3		11.5		13.6
Green Ext Time (p_c), s		5.1		4.1		10.0		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1199	390	0	1513
Future Volume (veh/h)	0	0	1199	390	0	1513
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1303	424	0	1645
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1303	424	0	1645
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.2
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.2
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.26	0.30	0.00	0.36
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.95	0.95	0.00	0.79
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.5	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.2	0.0	1.0
LnGrp Delay(d),s/veh			0.1	0.5	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1727			1645
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.2		
Green Ext Time (p_c), s		29.6				27.9		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1589	615	993
Future Volume (veh/h)	0	0	0	1589	615	993
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1727	668	1079
Adj No. of Lanes			0	3	2	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	3306	2810
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	3725	3167
Grp Volume(v), veh/h			0	1727	668	1079
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	2.3	0.0	0.0
Cycle Q Clear(g_c), s			0.0	2.3	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	3306	2810
V/C Ratio(X)			0.00	0.38	0.20	0.38
Avail Cap(c_a), veh/h			0	4513	3306	2810
HCM Platoon Ratio			1.00	1.00	1.67	1.67
Upstream Filter(I)			0.00	0.82	0.96	0.96
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.1	0.4
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.0	0.1	0.1
LnGrp Delay(d),s/veh			0.0	0.6	0.1	0.4
LnGrp LOS				A	A	A
Approach Vol, veh/h				1727	1747	
Approach Delay, s/veh				0.6	0.3	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		4.3				2.0		
Green Ext Time (p_c), s		27.5				29.3		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	606	0	383	1	0	16	1	930	29	49	596	0
Future Volume (veh/h)	606	0	383	1	0	16	1	930	29	49	596	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1900	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	659	0	416	1	0	17	1	1011	32	53	648	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	1247	0	524	90	23	495	81	2305	73	401	1659	0
Arrive On Green	0.33	0.00	0.33	0.33	0.00	0.33	0.94	0.94	0.94	0.47	0.47	0.00
Sat Flow, veh/h	2781	0	1583	18	70	1495	1	4916	155	539	3632	0
Grp Volume(v), veh/h	659	0	416	18	0	0	383	317	344	53	648	0
Grp Sat Flow(s),veh/h/ln	1390	0	1583	1583	0	0	1862	1543	1668	539	1770	0
Q Serve(g_s), s	8.9	0.0	10.7	0.0	0.0	0.0	0.0	1.0	1.0	2.7	5.4	0.0
Cycle Q Clear(g_c), s	9.2	0.0	10.7	0.3	0.0	0.0	1.0	1.0	1.0	3.7	5.4	0.0
Prop In Lane	1.00		1.00	0.06		0.94	0.00		0.09	1.00		0.00
Lane Grp Cap(c), veh/h	1247	0	524	608	0	0	953	723	782	401	1659	0
V/C Ratio(X)	0.53	0.00	0.79	0.03	0.00	0.00	0.40	0.44	0.44	0.13	0.39	0.00
Avail Cap(c_a), veh/h	1438	0	633	714	0	0	953	723	782	401	1659	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.00
Uniform Delay (d), s/veh	13.1	0.0	13.7	10.2	0.0	0.0	0.8	0.8	0.8	7.6	7.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	5.7	0.0	0.0	0.0	1.3	1.9	1.8	0.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	5.5	0.2	0.0	0.0	0.6	0.6	0.7	0.5	2.8	0.0
LnGrp Delay(d),s/veh	13.5	0.0	19.4	10.2	0.0	0.0	2.0	2.7	2.6	8.3	8.4	0.0
LnGrp LOS	B		B	B			A	A	A	A	A	
Approach Vol, veh/h		1075			18			1044			701	
Approach Delay, s/veh		15.8			10.2			2.4			8.4	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.6		19.4		25.6		19.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		3.0		12.7		7.4		2.3
Green Ext Time (p_c), s		9.7		2.2		7.5		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	952	497	0	957	0	0
Future Vol, veh/h	952	497	0	957	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1035	540	0	1040	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	787
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	287
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	2160	1295	583
Future Vol, veh/h	0	0	0	2160	1295	583
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2348	1408	634

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2347	704	-	0	-	0
Stage 1	1408	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Critical Hdwy	6.44	7.14	-	-	-	-
Critical Hdwy Stg 1	7.34	-	-	-	-	-
Critical Hdwy Stg 2	6.74	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	38	325	0	-	-	0
Stage 1	103	-	0	-	-	0
Stage 2	257	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	38	325	-	-	-	-
Mov Cap-2 Maneuver	38	-	-	-	-	-
Stage 1	103	-	-	-	-	-
Stage 2	257	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	13	368	11	1017	53	1119	0	0	1262	14
Future Volume (veh/h)	24	0	13	368	11	1017	53	1119	0	0	1262	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	26	0	14	400	0	1113	58	1216	0	0	1372	15
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	269	25	94	665	0	1172	242	2288	0	0	2334	26
Arrive On Green	0.37	0.00	0.37	0.37	0.00	0.37	0.45	0.45	0.00	0.00	0.45	0.45
Sat Flow, veh/h	405	66	254	1394	0	3167	388	5253	0	0	5354	57
Grp Volume(v), veh/h	40	0	0	400	0	1113	58	1216	0	0	897	490
Grp Sat Flow(s),veh/h/ln	726	0	0	1394	0	1583	388	1695	0	0	1695	1853
Q Serve(g_s), s	0.0	0.0	0.0	11.7	0.0	17.1	6.6	8.6	0.0	0.0	9.9	9.9
Cycle Q Clear(g_c), s	0.7	0.0	0.0	12.4	0.0	17.1	16.5	8.6	0.0	0.0	9.9	9.9
Prop In Lane	0.65		0.35	1.00		1.00	1.00		0.00	0.00		0.03
Lane Grp Cap(c), veh/h	387	0	0	665	0	1172	242	2288	0	0	1526	834
V/C Ratio(X)	0.10	0.00	0.00	0.60	0.00	0.95	0.24	0.53	0.00	0.00	0.59	0.59
Avail Cap(c_a), veh/h	387	0	0	665	0	1172	242	2288	0	0	1526	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.97	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	13.7	0.0	15.3	16.4	9.9	0.0	0.0	10.3	10.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.5	0.0	15.8	2.3	0.9	0.0	0.0	1.7	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	5.1	0.0	10.0	0.8	4.1	0.0	0.0	5.0	5.7
LnGrp Delay(d),s/veh	10.3	0.0	0.0	15.3	0.0	31.1	18.7	10.8	0.0	0.0	12.0	13.3
LnGrp LOS	B			B		C	B	B			B	B
Approach Vol, veh/h		40			1513			1274			1387	
Approach Delay, s/veh		10.3			26.9			11.2			12.4	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		23.0		27.0		23.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		18.5		22.5		18.5
Max Q Clear Time (g_c+I1), s		18.5		2.7		11.9		19.1
Green Ext Time (p_c), s		3.8		6.6		9.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1160	346	0	1643
Future Volume (veh/h)	0	0	1160	346	0	1643
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1261	376	0	1786
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1261	376	0	1786
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.4
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.4
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.25	0.27	0.00	0.40
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.96	0.96	0.00	0.71
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.4	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.2	0.0	1.1
LnGrp Delay(d),s/veh			0.1	0.4	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1637			1786
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.4		
Green Ext Time (p_c), s		29.9				28.0		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1506	1033	666
Future Volume (veh/h)	0	0	0	1506	1033	666
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1637	1011	799
Adj No. of Lanes			0	3	2	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	3306	2810
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	3725	3167
Grp Volume(v), veh/h			0	1637	1011	799
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s			0.0	2.1	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	3306	2810
V/C Ratio(X)			0.00	0.36	0.31	0.28
Avail Cap(c_a), veh/h			0	4513	3306	2810
HCM Platoon Ratio			1.00	1.00	2.00	2.00
Upstream Filter(I)			0.00	0.88	0.94	0.94
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.2	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.0	0.1	0.1
LnGrp Delay(d),s/veh			0.0	0.6	0.2	0.2
LnGrp LOS				A	A	A
Approach Vol, veh/h				1637	1810	
Approach Delay, s/veh				0.6	0.2	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		4.1				2.0		
Green Ext Time (p_c), s		27.8				29.5		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	3	260	0	0	30	0	1012	11	56	971	0
Future Volume (veh/h)	404	3	260	0	0	30	0	1012	11	56	971	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	441	0	283	0	0	33	0	1100	12	61	1055	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	969	0	400	0	0	400	0	2838	31	436	1937	0
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.25	0.00	1.00	1.00	0.55	0.55	0.00
Sat Flow, veh/h	2741	0	1583	0	0	1583	0	5354	57	505	3632	0
Grp Volume(v), veh/h	441	0	283	0	0	33	0	719	393	61	1055	0
Grp Sat Flow(s),veh/h/ln	1370	0	1583	0	0	1583	0	1695	1853	505	1770	0
Q Serve(g_s), s	6.6	0.0	7.3	0.0	0.0	0.7	0.0	0.0	0.0	2.8	8.7	0.0
Cycle Q Clear(g_c), s	7.3	0.0	7.3	0.0	0.0	0.7	0.0	0.0	0.0	2.8	8.7	0.0
Prop In Lane	1.00		1.00	0.00		1.00	0.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	969	0	400	0	0	400	0	1855	1014	436	1937	0
V/C Ratio(X)	0.46	0.00	0.71	0.00	0.00	0.08	0.00	0.39	0.39	0.14	0.54	0.00
Avail Cap(c_a), veh/h	1373	0	633	0	0	633	0	1855	1014	436	1937	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	15.6	0.0	15.3	0.0	0.0	12.8	0.0	0.0	0.0	5.2	6.6	0.0
Incr Delay (d2), s/veh	0.3	0.0	2.3	0.0	0.0	0.1	0.0	0.6	1.1	0.6	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	3.4	0.0	0.0	0.3	0.0	0.2	0.3	0.5	4.4	0.0
LnGrp Delay(d),s/veh	16.0	0.0	17.6	0.0	0.0	12.9	0.0	0.6	1.1	5.9	7.6	0.0
LnGrp LOS	B		B			B		A	A	A	A	
Approach Vol, veh/h		724			33			1112			1116	
Approach Delay, s/veh		16.6			12.9			0.8			7.5	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		29.1		15.9		29.1		15.9
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		2.0		9.3		10.7		2.7
Green Ext Time (p_c), s		12.7		2.1		6.4		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	1032	423	0	1236	0	0
Future Vol, veh/h	1032	423	0	1236	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1122	460	0	1343	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	791
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	285
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	285
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	2262	1661	837
Future Vol, veh/h	0	0	0	2262	1661	837
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2459	1805	910

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2788	903	-	0	-	0
Stage 1	1805	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	35	241	0	-	-	0
Stage 1	76	-	0	-	-	0
Stage 2	292	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	35	241	-	-	-	-
Mov Cap-2 Maneuver	35	-	-	-	-	-
Stage 1	76	-	-	-	-	-
Stage 2	292	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	9	209	20	967	47	1289	0	0	1610	34
Future Volume (veh/h)	6	0	9	209	20	967	47	1289	0	0	1610	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	7	0	10	227	0	1066	51	1401	0	0	1750	37
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	212	39	215	660	0	1162	189	2304	0	0	2322	49
Arrive On Green	0.37	0.00	0.37	0.37	0.00	0.37	0.45	0.45	0.00	0.00	0.45	0.45
Sat Flow, veh/h	302	107	585	1399	0	3167	264	5253	0	0	5293	108
Grp Volume(v), veh/h	17	0	0	227	0	1066	51	1401	0	0	1157	630
Grp Sat Flow(s),veh/h/ln	994	0	0	1399	0	1583	264	1695	0	0	1695	1844
Q Serve(g_s), s	0.0	0.0	0.0	5.7	0.0	16.1	8.5	10.4	0.0	0.0	14.2	14.2
Cycle Q Clear(g_c), s	0.3	0.0	0.0	6.0	0.0	16.1	22.7	10.4	0.0	0.0	14.2	14.2
Prop In Lane	0.41		0.59	1.00		1.00	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	467	0	0	660	0	1162	189	2304	0	0	1536	835
V/C Ratio(X)	0.04	0.00	0.00	0.34	0.00	0.92	0.27	0.61	0.00	0.00	0.75	0.75
Avail Cap(c_a), veh/h	469	0	0	664	0	1172	189	2304	0	0	1536	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.95	0.95	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	0.0	0.0	11.9	0.0	15.1	21.3	10.3	0.0	0.0	11.4	11.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	11.3	3.3	1.1	0.0	0.0	3.5	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.4	0.0	8.8	0.9	5.0	0.0	0.0	7.3	8.6
LnGrp Delay(d),s/veh	10.2	0.0	0.0	12.2	0.0	26.4	24.6	11.5	0.0	0.0	14.8	17.6
LnGrp LOS	B			B		C	C	B			B	B
Approach Vol, veh/h		17			1293			1452			1787	
Approach Delay, s/veh		10.2			23.9			11.9			15.8	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.2		22.8		27.2		22.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		18.5		22.5		18.5
Max Q Clear Time (g_c+I1), s		24.7		2.3		16.2		18.1
Green Ext Time (p_c), s		0.0		5.5		6.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1400	401	0	1828
Future Volume (veh/h)	0	0	1400	401	0	1828
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1522	436	0	1987
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1522	436	0	1987
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.9
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.31	0.31	0.00	0.44
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.93	0.93	0.00	0.59
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.5	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.2	0.0	1.2
LnGrp Delay(d),s/veh			0.1	0.5	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1958			1987
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.9		
Green Ext Time (p_c), s		31.7				29.1		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1801	623	1300
Future Volume (veh/h)	0	0	0	1801	623	1300
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1958	677	1413
Adj No. of Lanes			0	3	2	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	3306	2810
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	3725	3167
Grp Volume(v), veh/h			0	1958	677	1413
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s			0.0	2.8	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	3306	2810
V/C Ratio(X)			0.00	0.43	0.20	0.50
Avail Cap(c_a), veh/h			0	4513	3306	2810
HCM Platoon Ratio			1.00	1.00	1.67	1.67
Upstream Filter(I)			0.00	0.74	0.93	0.93
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.1	0.6
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.2	0.1	0.2
LnGrp Delay(d),s/veh			0.0	0.6	0.1	0.6
LnGrp LOS				A	A	A
Approach Vol, veh/h				1958	2090	
Approach Delay, s/veh				0.6	0.4	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		4.8				2.0		
Green Ext Time (p_c), s		28.9				31.4		

Intersection Summary	
HCM 2010 Ctrl Delay	0.5
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	807	0	391	1	0	16	1	941	29	49	604	0
Future Volume (veh/h)	807	0	391	1	0	16	1	941	29	49	604	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1900	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	877	0	425	1	0	17	1	1023	32	53	657	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	1353	0	585	92	25	552	80	2117	66	363	1523	0
Arrive On Green	0.37	0.00	0.37	0.37	0.00	0.37	0.86	0.86	0.86	0.43	0.43	0.00
Sat Flow, veh/h	2781	0	1583	19	69	1493	1	4918	154	533	3632	0
Grp Volume(v), veh/h	877	0	425	18	0	0	388	321	348	53	657	0
Grp Sat Flow(s),veh/h/ln	1390	0	1583	1581	0	0	1862	1543	1668	533	1770	0
Q Serve(g_s), s	12.6	0.0	10.4	0.0	0.0	0.0	0.0	2.2	2.2	3.1	5.8	0.0
Cycle Q Clear(g_c), s	12.9	0.0	10.4	0.3	0.0	0.0	2.2	2.2	2.2	5.3	5.8	0.0
Prop In Lane	1.00		1.00	0.06		0.94	0.00		0.09	1.00		0.00
Lane Grp Cap(c), veh/h	1353	0	585	669	0	0	882	664	718	363	1523	0
V/C Ratio(X)	0.65	0.00	0.73	0.03	0.00	0.00	0.44	0.48	0.48	0.15	0.43	0.00
Avail Cap(c_a), veh/h	1438	0	633	715	0	0	882	664	718	363	1523	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	13.0	0.0	12.2	9.0	0.0	0.0	1.9	1.9	1.9	9.6	9.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	3.8	0.0	0.0	0.0	1.6	2.5	2.3	0.8	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	5.1	0.1	0.0	0.0	1.3	1.3	1.3	0.5	3.0	0.0
LnGrp Delay(d),s/veh	13.9	0.0	16.1	9.1	0.0	0.0	3.5	4.4	4.3	10.4	9.8	0.0
LnGrp LOS	B		B	A			A	A	A	B	A	
Approach Vol, veh/h		1302			18			1056			710	
Approach Delay, s/veh		14.6			9.1			4.1			9.9	
Approach LOS		B			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.9		21.1		23.9		21.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		4.2		14.9		7.8		2.3
Green Ext Time (p_c), s		9.2		1.7		7.3		4.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	963	508	0	974	0	0
Future Vol, veh/h	963	508	0	974	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1047	552	0	1059	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	799
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	282
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	282
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	2954	1723	937
Future Vol, veh/h	0	0	0	2954	1723	937
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	3211	1873	1018

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3157	936	-	0	-	0
Stage 1	1873	-	-	-	-	-
Stage 2	1284	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	21	229	0	-	-	0
Stage 1	69	-	0	-	-	0
Stage 2	200	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	21	229	-	-	-	-
Mov Cap-2 Maneuver	21	-	-	-	-	-
Stage 1	69	-	-	-	-	-
Stage 2	200	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	13	383	11	1451	53	1478	0	0	1690	14
Future Volume (veh/h)	24	0	13	383	11	1451	53	1478	0	0	1690	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	26	0	14	416	0	1585	58	1607	0	0	1837	15
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	218	15	85	804	0	1611	100	1926	0	0	1971	16
Arrive On Green	0.51	0.00	0.51	0.51	0.00	0.51	0.76	0.76	0.00	0.00	0.38	0.38
Sat Flow, veh/h	282	30	168	1394	0	3167	248	5253	0	0	5371	42
Grp Volume(v), veh/h	40	0	0	416	0	1585	58	1607	0	0	1197	655
Grp Sat Flow(s),veh/h/ln	480	0	0	1394	0	1583	248	1695	0	0	1695	1855
Q Serve(g_s), s	0.0	0.0	0.0	15.4	0.0	39.4	3.2	16.7	0.0	0.0	27.1	27.1
Cycle Q Clear(g_c), s	0.9	0.0	0.0	16.4	0.0	39.4	30.3	16.7	0.0	0.0	27.1	27.1
Prop In Lane	0.65		0.35	1.00		1.00	1.00		0.00	0.00		0.02
Lane Grp Cap(c), veh/h	318	0	0	804	0	1611	100	1926	0	0	1284	703
V/C Ratio(X)	0.13	0.00	0.00	0.52	0.00	0.98	0.58	0.83	0.00	0.00	0.93	0.93
Avail Cap(c_a), veh/h	318	0	0	804	0	1611	100	1926	0	0	1284	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	0.0	0.0	13.6	0.0	19.3	24.6	8.0	0.0	0.0	23.9	23.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.6	0.0	18.6	21.2	4.2	0.0	0.0	13.4	20.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	6.5	0.0	21.1	1.8	7.9	0.0	0.0	15.0	17.9
LnGrp Delay(d),s/veh	10.1	0.0	0.0	14.2	0.0	37.9	45.8	12.3	0.0	0.0	37.2	44.8
LnGrp LOS	B			B		D	D	B			D	D
Approach Vol, veh/h		40			2001			1665			1852	
Approach Delay, s/veh		10.1			33.0			13.4			39.9	
Approach LOS		B			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.8		45.2		34.8		45.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		30.3		40.7		30.3		40.7
Max Q Clear Time (g_c+I1), s		32.3		2.9		29.1		41.4
Green Ext Time (p_c), s		0.0		14.1		1.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1519	361	0	2086
Future Volume (veh/h)	0	0	1519	361	0	2086
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1651	392	0	2267
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	1.00
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1651	392	0	2267
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s			0.0	0.0	0.0	0.0
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.33	0.28	0.00	0.50
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	2.00
Upstream Filter(I)			0.92	0.92	0.00	0.32
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.2	0.5	0.0	0.1
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.2	0.0	0.1
LnGrp Delay(d),s/veh			0.2	0.5	0.0	0.1
LnGrp LOS			A	A		A
Approach Vol, veh/h			2043			2267
Approach Delay, s/veh			0.2			0.1
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				2.0		
Green Ext Time (p_c), s		32.5				32.5		

Intersection Summary	
HCM 2010 Ctrl Delay	0.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1880	1048	1094
Future Volume (veh/h)	0	0	0	1880	1048	1094
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	2043	1139	1189
Adj No. of Lanes			0	3	2	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	3306	2810
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	3725	3167
Grp Volume(v), veh/h			0	2043	1139	1189
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s			0.0	3.0	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	3306	2810
V/C Ratio(X)			0.00	0.45	0.34	0.42
Avail Cap(c_a), veh/h			0	4513	3306	2810
HCM Platoon Ratio			1.00	1.00	1.67	1.67
Upstream Filter(I)			0.00	0.76	0.90	0.90
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.3	0.4
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.2	0.1	0.2
LnGrp Delay(d),s/veh			0.0	0.7	0.3	0.4
LnGrp LOS				A	A	A
Approach Vol, veh/h				2043	2328	
Approach Delay, s/veh				0.7	0.3	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		5.0				2.0		
Green Ext Time (p_c), s		29.4				32.2		

Intersection Summary	
HCM 2010 Ctrl Delay	0.5
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	763	3	275	0	0	30	0	1027	11	56	986	0
Future Volume (veh/h)	763	3	275	0	0	30	0	1027	11	56	986	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	831	0	299	0	0	33	0	1116	12	61	1072	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	1296	0	585	0	0	585	0	2233	24	348	1524	0
Arrive On Green	0.37	0.00	0.37	0.00	0.00	0.37	0.00	0.86	0.86	0.43	0.43	0.00
Sat Flow, veh/h	2741	0	1583	0	0	1583	0	5355	56	497	3632	0
Grp Volume(v), veh/h	831	0	299	0	0	33	0	729	399	61	1072	0
Grp Sat Flow(s),veh/h/ln	1370	0	1583	0	0	1583	0	1695	1853	497	1770	0
Q Serve(g_s), s	12.6	0.0	6.6	0.0	0.0	0.6	0.0	2.4	2.4	3.9	11.1	0.0
Cycle Q Clear(g_c), s	13.2	0.0	6.6	0.0	0.0	0.6	0.0	2.4	2.4	6.3	11.1	0.0
Prop In Lane	1.00		1.00	0.00		1.00	0.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	1296	0	585	0	0	585	0	1460	798	348	1524	0
V/C Ratio(X)	0.64	0.00	0.51	0.00	0.00	0.06	0.00	0.50	0.50	0.18	0.70	0.00
Avail Cap(c_a), veh/h	1379	0	633	0	0	633	0	1460	798	348	1524	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	13.4	0.0	11.0	0.0	0.0	9.1	0.0	1.9	1.9	9.9	10.5	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.7	0.0	0.0	0.0	0.0	1.2	2.2	1.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	2.9	0.0	0.0	0.3	0.0	1.1	1.5	0.6	5.9	0.0
LnGrp Delay(d),s/veh	14.3	0.0	11.7	0.0	0.0	9.2	0.0	3.2	4.2	10.9	13.0	0.0
LnGrp LOS	B		B			A		A	A	B	B	
Approach Vol, veh/h		1130			33			1128			1133	
Approach Delay, s/veh		13.6			9.2			3.5			12.9	
Approach LOS		B			A			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.9		21.1		23.9		21.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		4.4		15.2		13.1		2.6
Green Ext Time (p_c), s		11.2		1.4		4.4		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	1047	438	0	1266	0	0
Future Vol, veh/h	1047	438	0	1266	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1138	476	0	1376	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	807
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	279
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	279
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	1732	1320	508
Future Vol, veh/h	0	0	0	1732	1320	508
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1883	1435	552

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2188	717	-	0	-	0
Stage 1	1435	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	74	319	0	-	-	0
Stage 1	130	-	0	-	-	0
Stage 2	387	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	74	319	-	-	-	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	130	-	-	-	-	-
Stage 2	387	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	9	184	17	579	53	1147	0	0	1289	31
Future Volume (veh/h)	6	0	9	184	17	579	53	1147	0	0	1289	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	7	0	10	200	0	641	58	1247	0	0	1401	34
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	200	39	196	524	0	854	285	2799	0	0	2811	68
Arrive On Green	0.27	0.00	0.27	0.27	0.00	0.27	0.55	0.55	0.00	0.00	0.55	0.55
Sat Flow, veh/h	365	143	726	1399	0	3167	371	5253	0	0	5275	124
Grp Volume(v), veh/h	17	0	0	200	0	641	58	1247	0	0	930	505
Grp Sat Flow(s),veh/h/ln	1234	0	0	1399	0	1583	371	1695	0	0	1695	1841
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	9.3	5.7	7.3	0.0	0.0	8.5	8.5
Cycle Q Clear(g_c), s	0.4	0.0	0.0	6.0	0.0	9.3	14.2	7.3	0.0	0.0	8.5	8.5
Prop In Lane	0.41		0.59	1.00		1.00	1.00		0.00	0.00		0.07
Lane Grp Cap(c), veh/h	434	0	0	524	0	854	285	2799	0	0	1866	1013
V/C Ratio(X)	0.04	0.00	0.00	0.38	0.00	0.75	0.20	0.45	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	546	0	0	664	0	1172	285	2799	0	0	1866	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.97	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	15.5	0.0	16.7	11.4	6.7	0.0	0.0	7.0	7.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	1.8	1.6	0.5	0.0	0.0	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.4	0.0	4.2	0.7	3.5	0.0	0.0	4.1	4.7
LnGrp Delay(d),s/veh	13.5	0.0	0.0	15.9	0.0	18.5	12.9	7.2	0.0	0.0	7.9	8.7
LnGrp LOS	B			B		B	B	A			A	A
Approach Vol, veh/h		17			841			1305			1435	
Approach Delay, s/veh		13.5			17.9			7.5			8.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		32.0		18.0		32.0		18.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		18.5		22.5		18.5
Max Q Clear Time (g_c+I1), s		16.2		2.4		10.5		11.3
Green Ext Time (p_c), s		5.9		3.2		10.9		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	10.2
HCM 2010 LOS	B

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1200	262	0	1482
Future Volume (veh/h)	0	0	1200	262	0	1482
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1304	285	0	1611
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1304	285	0	1611
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.1
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.26	0.20	0.00	0.36
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.95	0.95	0.00	0.82
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.3	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.1	0.0	1.0
LnGrp Delay(d),s/veh			0.1	0.3	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1589			1611
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.1		
Green Ext Time (p_c), s		29.0				27.4		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1575	681	789
Future Volume (veh/h)	0	0	0	1575	681	789
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1712	740	858
Adj No. of Lanes			0	3	2	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	3306	2810
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	3725	3167
Grp Volume(v), veh/h			0	1712	740	858
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	2.3	0.0	0.0
Cycle Q Clear(g_c), s			0.0	2.3	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	3306	2810
V/C Ratio(X)			0.00	0.38	0.22	0.31
Avail Cap(c_a), veh/h			0	4513	3306	2810
HCM Platoon Ratio			1.00	1.00	1.67	1.67
Upstream Filter(I)			0.00	0.82	0.96	0.96
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.2	0.3
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.0	0.1	0.1
LnGrp Delay(d),s/veh			0.0	0.6	0.2	0.3
LnGrp LOS				A	A	A
Approach Vol, veh/h				1712	1598	
Approach Delay, s/veh				0.6	0.2	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		4.3				2.0		
Green Ext Time (p_c), s		27.0				28.7		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	536	0	294	1	0	16	1	1022	25	51	674	0
Future Volume (veh/h)	536	0	294	1	0	16	1	1022	25	51	674	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1900	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	583	0	320	1	0	17	1	1111	27	55	733	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	1114	0	448	90	20	424	80	2562	62	415	1829	0
Arrive On Green	0.28	0.00	0.28	0.28	0.00	0.28	1.00	1.00	1.00	0.52	0.52	0.00
Sat Flow, veh/h	2781	0	1583	18	70	1497	1	4957	120	492	3632	0
Grp Volume(v), veh/h	583	0	320	18	0	0	418	346	376	55	733	0
Grp Sat Flow(s),veh/h/ln	1390	0	1583	1585	0	0	1862	1543	1674	492	1770	0
Q Serve(g_s), s	8.1	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	2.7	5.7	0.0
Cycle Q Clear(g_c), s	8.4	0.0	8.2	0.4	0.0	0.0	0.0	0.0	0.0	2.7	5.7	0.0
Prop In Lane	1.00		1.00	0.06		0.94	0.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	1114	0	448	533	0	0	1043	797	865	415	1829	0
V/C Ratio(X)	0.52	0.00	0.71	0.03	0.00	0.00	0.40	0.43	0.43	0.13	0.40	0.00
Avail Cap(c_a), veh/h	1438	0	633	713	0	0	1043	797	865	415	1829	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.00
Uniform Delay (d), s/veh	14.5	0.0	14.5	11.7	0.0	0.0	0.0	0.0	0.0	5.9	6.6	0.0
Incr Delay (d2), s/veh	0.4	0.0	2.2	0.0	0.0	0.0	1.1	1.7	1.6	0.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	3.8	0.2	0.0	0.0	0.3	0.4	0.4	0.4	2.9	0.0
LnGrp Delay(d),s/veh	14.9	0.0	16.7	11.7	0.0	0.0	1.1	1.7	1.6	6.6	7.3	0.0
LnGrp LOS	B		B	B			A	A	A	A	A	
Approach Vol, veh/h		903			18			1139			788	
Approach Delay, s/veh		15.6			11.7			1.5			7.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.8		17.2		27.8		17.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		2.0		10.4		7.7		2.4
Green Ext Time (p_c), s		11.1		2.3		7.9		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.6
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	1024	406	0	995	0	0
Future Vol, veh/h	1024	406	0	995	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1113	441	0	1082	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	777
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	291
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	291
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	2038	1325	320
Future Vol, veh/h	0	0	0	2038	1325	320
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2215	1440	348

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2326	720	-	0	-	0
Stage 1	1440	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	62	318	0	-	-	0
Stage 1	129	-	0	-	-	0
Stage 2	329	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	62	318	-	-	-	-
Mov Cap-2 Maneuver	62	-	-	-	-	-
Stage 1	129	-	-	-	-	-
Stage 2	329	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	14	362	10	908	54	1107	0	0	1311	14
Future Volume (veh/h)	23	0	14	362	10	908	54	1107	0	0	1311	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	25	0	15	393	0	994	59	1203	0	0	1425	15
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	272	26	109	648	0	1132	240	2352	0	0	2400	25
Arrive On Green	0.36	0.00	0.36	0.36	0.00	0.36	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h	434	73	304	1393	0	3167	369	5253	0	0	5356	55
Grp Volume(v), veh/h	40	0	0	393	0	994	59	1203	0	0	931	509
Grp Sat Flow(s),veh/h/ln	811	0	0	1393	0	1583	369	1695	0	0	1695	1853
Q Serve(g_s), s	0.0	0.0	0.0	11.6	0.0	14.7	7.0	8.3	0.0	0.0	10.2	10.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	12.3	0.0	14.7	17.2	8.3	0.0	0.0	10.2	10.2
Prop In Lane	0.62		0.37	1.00		1.00	1.00		0.00	0.00		0.03
Lane Grp Cap(c), veh/h	407	0	0	648	0	1132	240	2352	0	0	1568	857
V/C Ratio(X)	0.10	0.00	0.00	0.61	0.00	0.88	0.25	0.51	0.00	0.00	0.59	0.59
Avail Cap(c_a), veh/h	416	0	0	665	0	1172	240	2352	0	0	1568	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.97	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	0.0	0.0	14.2	0.0	15.0	16.3	9.5	0.0	0.0	10.0	10.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.5	0.0	7.7	2.4	0.8	0.0	0.0	1.7	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	5.1	0.0	7.6	0.9	4.0	0.0	0.0	5.0	5.8
LnGrp Delay(d),s/veh	10.7	0.0	0.0	15.7	0.0	22.7	18.7	10.2	0.0	0.0	11.6	13.0
LnGrp LOS	B			B		C	B	B			B	B
Approach Vol, veh/h		40			1387			1262			1440	
Approach Delay, s/veh		10.7			20.7			10.6			12.1	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.6		22.4		27.6		22.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		18.5		22.5		18.5
Max Q Clear Time (g_c+I1), s		19.2		2.8		12.2		16.7
Green Ext Time (p_c), s		3.1		5.9		9.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1161	293	0	1687
Future Volume (veh/h)	0	0	1161	293	0	1687
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1262	318	0	1834
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1262	318	0	1834
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.5
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.25	0.23	0.00	0.41
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.96	0.96	0.00	0.70
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.4	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.1	0.0	1.1
LnGrp Delay(d),s/veh			0.1	0.4	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1580			1834
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.5		
Green Ext Time (p_c), s		30.0				28.0		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1443	1339	332
Future Volume (veh/h)	0	0	0	1443	1339	332
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1568	1455	361
Adj No. of Lanes			0	3	3	1
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	4960	1405
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	5588	1583
Grp Volume(v), veh/h			0	1568	1455	361
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s			0.0	2.0	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	4960	1405
V/C Ratio(X)			0.00	0.35	0.29	0.26
Avail Cap(c_a), veh/h			0	4513	4960	1405
HCM Platoon Ratio			1.00	1.00	2.00	2.00
Upstream Filter(I)			0.00	0.89	0.94	0.94
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.1	0.4
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.0	0.1	0.2
LnGrp Delay(d),s/veh			0.0	0.6	0.1	0.4
LnGrp LOS				A	A	A
Approach Vol, veh/h				1568	1816	
Approach Delay, s/veh				0.6	0.2	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		4.0				2.0		
Green Ext Time (p_c), s		28.1				29.7		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	1	103	0	0	32	0	1032	5	67	1165	0
Future Volume (veh/h)	380	1	103	0	0	32	0	1032	5	67	1165	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	414	0	112	0	0	35	0	1122	5	73	1266	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	915	0	372	0	0	372	0	2953	13	441	2000	0
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.23	0.00	1.00	1.00	0.57	0.57	0.00
Sat Flow, veh/h	2736	0	1583	0	0	1583	0	5393	23	498	3632	0
Grp Volume(v), veh/h	414	0	112	0	0	35	0	728	399	73	1266	0
Grp Sat Flow(s),veh/h/ln	1368	0	1583	0	0	1583	0	1695	1859	498	1770	0
Q Serve(g_s), s	6.3	0.0	2.6	0.0	0.0	0.8	0.0	0.0	0.0	3.4	10.9	0.0
Cycle Q Clear(g_c), s	7.1	0.0	2.6	0.0	0.0	0.8	0.0	0.0	0.0	3.4	10.9	0.0
Prop In Lane	1.00		1.00	0.00		1.00	0.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	915	0	372	0	0	372	0	1916	1050	441	2000	0
V/C Ratio(X)	0.45	0.00	0.30	0.00	0.00	0.09	0.00	0.38	0.38	0.17	0.63	0.00
Avail Cap(c_a), veh/h	1367	0	633	0	0	633	0	1916	1050	441	2000	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	16.2	0.0	14.2	0.0	0.0	13.5	0.0	0.0	0.0	5.0	6.6	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.4	0.0	0.0	0.1	0.0	0.6	1.0	0.8	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.2	0.0	0.0	0.4	0.0	0.2	0.3	0.5	5.5	0.0
LnGrp Delay(d),s/veh	16.6	0.0	14.6	0.0	0.0	13.6	0.0	0.6	1.0	5.8	8.1	0.0
LnGrp LOS	B		B			B		A	A	A	A	
Approach Vol, veh/h		526			35			1127			1339	
Approach Delay, s/veh		16.2			13.6			0.7			8.0	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		29.9		15.1		29.9		15.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		2.0		9.1		12.9		2.8
Green Ext Time (p_c), s		13.5		1.5		4.7		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	6.8
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	993	409	0	1223	0	0
Future Vol, veh/h	993	409	0	1223	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1079	445	0	1329	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	762
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	298
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	298
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1161	293	0	1687
Future Volume (veh/h)	0	0	1161	293	0	1687
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1262	318	0	1834
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1262	318	0	1834
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.5
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.25	0.23	0.00	0.41
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.96	0.96	0.00	0.70
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.4	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.1	0.0	1.1
LnGrp Delay(d),s/veh			0.1	0.4	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1580			1834
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.5		
Green Ext Time (p_c), s		30.0				28.0		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	2175	1627	762
Future Vol, veh/h	0	0	0	2175	1627	762
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2364	1768	828

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2714	884	-	0	-	0
Stage 1	1768	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	38	248	0	-	-	0
Stage 1	80	-	0	-	-	0
Stage 2	305	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	38	248	-	-	-	-
Mov Cap-2 Maneuver	38	-	-	-	-	-
Stage 1	80	-	-	-	-	-
Stage 2	305	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	9	192	17	821	53	1348	0	0	1596	31
Future Volume (veh/h)	6	0	9	192	17	821	53	1348	0	0	1596	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	7	0	10	209	0	904	58	1465	0	0	1735	34
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	213	39	215	619	0	1069	203	2454	0	0	2477	49
Arrive On Green	0.34	0.00	0.34	0.34	0.00	0.34	0.48	0.48	0.00	0.00	0.48	0.48
Sat Flow, veh/h	329	116	636	1399	0	3167	269	5253	0	0	5302	101
Grp Volume(v), veh/h	17	0	0	209	0	904	58	1465	0	0	1145	624
Grp Sat Flow(s),veh/h/ln	1081	0	0	1399	0	1583	269	1695	0	0	1695	1845
Q Serve(g_s), s	0.0	0.0	0.0	5.4	0.0	13.2	10.8	10.5	0.0	0.0	13.2	13.2
Cycle Q Clear(g_c), s	0.3	0.0	0.0	5.7	0.0	13.2	24.0	10.5	0.0	0.0	13.2	13.2
Prop In Lane	0.41		0.59	1.00		1.00	1.00		0.00	0.00		0.05
Lane Grp Cap(c), veh/h	467	0	0	619	0	1069	203	2454	0	0	1636	890
V/C Ratio(X)	0.04	0.00	0.00	0.34	0.00	0.85	0.29	0.60	0.00	0.00	0.70	0.70
Avail Cap(c_a), veh/h	498	0	0	664	0	1172	203	2454	0	0	1636	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.96	0.96	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	0.0	0.0	12.8	0.0	15.4	19.5	9.4	0.0	0.0	10.1	10.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	5.5	3.4	1.0	0.0	0.0	2.5	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.3	0.0	6.6	1.0	5.0	0.0	0.0	6.6	7.7
LnGrp Delay(d),s/veh	11.1	0.0	0.0	13.2	0.0	20.9	22.9	10.4	0.0	0.0	12.6	14.7
LnGrp LOS	B			B		C	C	B			B	B
Approach Vol, veh/h		17			1113			1523			1769	
Approach Delay, s/veh		11.1			19.4			10.9			13.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.6		21.4		28.6		21.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		18.5		22.5		18.5
Max Q Clear Time (g_c+I1), s		26.0		2.3		15.2		15.2
Green Ext Time (p_c), s		0.0		4.6		7.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1401	273	0	1797
Future Volume (veh/h)	0	0	1401	273	0	1797
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1523	297	0	1953
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			4960	1405	0	4513
Arrive On Green			1.00	1.00	0.00	0.89
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1523	297	0	1953
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	2.8
Cycle Q Clear(g_c), s			0.0	0.0	0.0	2.8
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			4960	1405	0	4513
V/C Ratio(X)			0.31	0.21	0.00	0.43
Avail Cap(c_a), veh/h			4960	1405	0	4513
HCM Platoon Ratio			2.00	2.00	1.00	1.00
Upstream Filter(I)			0.93	0.93	0.00	0.63
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.4
Incr Delay (d2), s/veh			0.1	0.3	0.0	0.2
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.1	0.0	1.2
LnGrp Delay(d),s/veh			0.1	0.3	0.0	0.6
LnGrp LOS			A	A		A
Approach Vol, veh/h			1820			1953
Approach Delay, s/veh			0.2			0.6
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		2.0				4.8		
Green Ext Time (p_c), s		31.4				28.9		

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1787	689	1096
Future Volume (veh/h)	0	0	0	1787	689	1096
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1942	749	1191
Adj No. of Lanes			0	3	2	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4513	3306	2810
Arrive On Green			0.00	0.89	1.00	1.00
Sat Flow, veh/h			0	5421	3725	3167
Grp Volume(v), veh/h			0	1942	749	1191
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s			0.0	2.8	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4513	3306	2810
V/C Ratio(X)			0.00	0.43	0.23	0.42
Avail Cap(c_a), veh/h			0	4513	3306	2810
HCM Platoon Ratio			1.00	1.00	1.67	1.67
Upstream Filter(I)			0.00	0.74	0.93	0.93
Uniform Delay (d), s/veh			0.0	0.4	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.2	0.1	0.4
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	1.2	0.1	0.2
LnGrp Delay(d),s/veh			0.0	0.6	0.1	0.4
LnGrp LOS				A	A	A
Approach Vol, veh/h				1942	1940	
Approach Delay, s/veh				0.6	0.3	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.0				40.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		35.5				35.5		
Max Q Clear Time (g_c+I1), s		4.8				2.0		
Green Ext Time (p_c), s		28.6				31.0		

Intersection Summary	
HCM 2010 Ctrl Delay	0.5
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	737	0	302	1	0	16	1	1033	25	51	682	0
Future Volume (veh/h)	737	0	302	1	0	16	1	1033	25	51	682	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1900	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	801	0	328	1	0	17	1	1123	27	55	741	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	1295	0	552	91	24	521	80	2239	54	360	1598	0
Arrive On Green	0.35	0.00	0.35	0.35	0.00	0.35	0.90	0.90	0.90	0.45	0.45	0.00
Sat Flow, veh/h	2781	0	1583	19	69	1496	1	4959	119	487	3632	0
Grp Volume(v), veh/h	801	0	328	18	0	0	422	350	380	55	741	0
Grp Sat Flow(s),veh/h/ln	1390	0	1583	1584	0	0	1862	1543	1674	487	1770	0
Q Serve(g_s), s	11.4	0.0	7.7	0.0	0.0	0.0	0.0	1.8	1.8	3.4	6.5	0.0
Cycle Q Clear(g_c), s	11.7	0.0	7.7	0.3	0.0	0.0	1.8	1.8	1.8	5.2	6.5	0.0
Prop In Lane	1.00		1.00	0.06		0.94	0.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	1295	0	552	637	0	0	921	696	756	360	1598	0
V/C Ratio(X)	0.62	0.00	0.59	0.03	0.00	0.00	0.46	0.50	0.50	0.15	0.46	0.00
Avail Cap(c_a), veh/h	1438	0	633	716	0	0	921	696	756	360	1598	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	13.3	0.0	12.0	9.7	0.0	0.0	1.3	1.3	1.3	8.8	8.6	0.0
Incr Delay (d2), s/veh	0.7	0.0	1.2	0.0	0.0	0.0	1.6	2.6	2.4	0.9	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	3.5	0.1	0.0	0.0	1.0	1.0	1.0	0.5	3.3	0.0
LnGrp Delay(d),s/veh	14.0	0.0	13.2	9.7	0.0	0.0	2.9	3.9	3.7	9.7	9.5	0.0
LnGrp LOS	B		B	A			A	A	A	A	A	
Approach Vol, veh/h		1129			18			1151			796	
Approach Delay, s/veh		13.8			9.7			3.5			9.5	
Approach LOS		B			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		24.8		20.2		24.8		20.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		3.8		13.7		8.5		2.3
Green Ext Time (p_c), s		10.2		1.9		7.4		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	1035	417	0	1012	0	0
Future Vol, veh/h	1035	417	0	1012	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1125	453	0	1100	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	789
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	286
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	286
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	0	0	2832	1753	674
Future Vol, veh/h	0	0	0	2832	1753	674
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	3078	1905	733

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3136	953	-	0	-	0
Stage 1	1905	-	-	-	-	-
Stage 2	1231	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	22	223	0	-	-	0
Stage 1	65	-	0	-	-	0
Stage 2	214	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	22	223	-	-	-	-
Mov Cap-2 Maneuver	22	-	-	-	-	-
Stage 1	65	-	-	-	-	-
Stage 2	214	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	14	377	10	1342	54	1466	0	0	1739	14
Future Volume (veh/h)	23	0	14	377	10	1342	54	1466	0	0	1739	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	25	0	15	410	0	1466	59	1593	0	0	1890	15
Adj No. of Lanes	0	1	0	1	0	2	1	3	0	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	215	15	99	764	0	1544	98	2097	0	0	2146	17
Arrive On Green	0.49	0.00	0.49	0.49	0.00	0.49	0.82	0.82	0.00	0.00	0.41	0.41
Sat Flow, veh/h	308	30	203	1393	0	3167	235	5253	0	0	5372	41
Grp Volume(v), veh/h	40	0	0	410	0	1466	59	1593	0	0	1231	674
Grp Sat Flow(s),veh/h/ln	541	0	0	1393	0	1583	235	1695	0	0	1695	1855
Q Serve(g_s), s	0.0	0.0	0.0	17.7	0.0	39.8	6.9	13.2	0.0	0.0	30.2	30.2
Cycle Q Clear(g_c), s	1.1	0.0	0.0	18.8	0.0	39.8	37.1	13.2	0.0	0.0	30.2	30.2
Prop In Lane	0.62		0.37	1.00		1.00	1.00		0.00	0.00		0.02
Lane Grp Cap(c), veh/h	329	0	0	764	0	1544	98	2097	0	0	1398	765
V/C Ratio(X)	0.12	0.00	0.00	0.54	0.00	0.95	0.60	0.76	0.00	0.00	0.88	0.88
Avail Cap(c_a), veh/h	332	0	0	773	0	1566	98	2097	0	0	1398	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	0.0	16.5	0.0	22.0	25.4	5.8	0.0	0.0	24.4	24.4
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	12.7	23.1	2.5	0.0	0.0	8.2	13.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	7.4	0.0	20.0	2.1	6.1	0.0	0.0	15.6	18.3
LnGrp Delay(d),s/veh	12.3	0.0	0.0	17.3	0.0	34.7	48.5	8.3	0.0	0.0	32.6	38.2
LnGrp LOS	B			B		C	D	A			C	D
Approach Vol, veh/h		40			1876			1652			1905	
Approach Delay, s/veh		12.3			30.8			9.7			34.6	
Approach LOS		B			C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		41.6		48.4		41.6		48.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		36.5		44.5		36.5		44.5
Max Q Clear Time (g_c+I1), s		39.1		3.1		32.2		41.8
Green Ext Time (p_c), s		0.0		12.8		4.3		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1520	308	0	2130
Future Volume (veh/h)	0	0	1520	308	0	2130
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	0	1863
Adj Flow Rate, veh/h			1652	335	0	2315
Adj No. of Lanes			3	1	0	3
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			2	2	0	2
Cap, veh/h			5309	1504	0	4831
Arrive On Green			1.00	1.00	0.00	1.00
Sat Flow, veh/h			5588	1583	0	5421
Grp Volume(v), veh/h			1652	335	0	2315
Grp Sat Flow(s),veh/h/ln			1863	1583	0	1695
Q Serve(g_s), s			0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s			0.0	0.0	0.0	0.0
Prop In Lane				1.00	0.00	
Lane Grp Cap(c), veh/h			5309	1504	0	4831
V/C Ratio(X)			0.31	0.22	0.00	0.48
Avail Cap(c_a), veh/h			5309	1504	0	4831
HCM Platoon Ratio			2.00	2.00	1.00	2.00
Upstream Filter(I)			1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.2	0.3	0.0	0.3
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.1	0.0	0.2
LnGrp Delay(d),s/veh			0.2	0.3	0.0	0.3
LnGrp LOS			A	A		A
Approach Vol, veh/h			1987			2315
Approach Delay, s/veh			0.2			0.3
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		90.0				90.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		85.5				85.5		
Max Q Clear Time (g_c+I1), s		2.0				2.0		
Green Ext Time (p_c), s		77.9				77.9		

Intersection Summary	
HCM 2010 Ctrl Delay	0.3
HCM 2010 LOS	A

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1817	1354	760
Future Volume (veh/h)	0	0	0	1817	1354	760
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			0	1863	1863	1863
Adj Flow Rate, veh/h			0	1975	1849	574
Adj No. of Lanes			0	3	3	1
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			0	2	2	2
Cap, veh/h			0	4831	5309	1504
Arrive On Green			0.00	1.00	1.00	1.00
Sat Flow, veh/h			0	5421	5588	1583
Grp Volume(v), veh/h			0	1975	1849	574
Grp Sat Flow(s),veh/h/ln			0	1695	1863	1583
Q Serve(g_s), s			0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s			0.0	0.0	0.0	0.0
Prop In Lane			0.00			1.00
Lane Grp Cap(c), veh/h			0	4831	5309	1504
V/C Ratio(X)			0.00	0.41	0.35	0.38
Avail Cap(c_a), veh/h			0	4831	5309	1504
HCM Platoon Ratio			1.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.2	0.7
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.1	0.1	0.3
LnGrp Delay(d),s/veh			0.0	0.3	0.2	0.7
LnGrp LOS				A	A	A
Approach Vol, veh/h				1975	2423	
Approach Delay, s/veh				0.3	0.3	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		90.0				90.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		85.5				85.5		
Max Q Clear Time (g_c+I1), s		2.0				2.0		
Green Ext Time (p_c), s		77.7				77.7		

Intersection Summary	
HCM 2010 Ctrl Delay	0.3
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	9	0	2169	2349	31
Future Vol, veh/h	0	9	0	2169	2349	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	0	2358	2553	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1293	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	132	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	132	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.4	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	132	-	-
HCM Lane V/C Ratio	-	0.074	-	-
HCM Control Delay (s)	-	34.4	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	192	821	1348	273	762	1596
Future Volume (veh/h)	192	821	1348	273	762	1596
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	209	892	1465	297	828	1735
Adj No. of Lanes	1	2	3	1	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	399	1359	1747	900	904	3369
Arrive On Green	0.22	0.22	0.34	0.34	0.26	0.66
Sat Flow, veh/h	1774	2787	5253	1583	3442	5253
Grp Volume(v), veh/h	209	892	1465	297	828	1735
Grp Sat Flow(s),veh/h/ln	1774	1393	1695	1583	1721	1695
Q Serve(g_s), s	8.3	18.0	21.3	8.0	18.7	14.0
Cycle Q Clear(g_c), s	8.3	18.0	21.3	8.0	18.7	14.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	399	1359	1747	900	904	3369
V/C Ratio(X)	0.52	0.66	0.84	0.33	0.92	0.51
Avail Cap(c_a), veh/h	399	1359	1747	900	925	3369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	15.4	24.2	9.2	28.6	6.9
Incr Delay (d2), s/veh	1.2	1.2	5.0	1.0	13.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	7.5	10.7	5.5	10.5	6.6
LnGrp Delay(d),s/veh	28.5	16.6	29.2	10.2	42.0	7.5
LnGrp LOS	C	B	C	B	D	A
Approach Vol, veh/h	1101		1762			2563
Approach Delay, s/veh	18.8		26.0			18.6
Approach LOS	B		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	25.5	32.0				57.5		22.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	21.5	27.0				53.0		18.0
Max Q Clear Time (g_c+I1), s	20.7	23.3				16.0		20.0
Green Ext Time (p_c), s	0.3	3.7				33.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	15	1	0	16	0	1605	79	0	1737	51
Future Vol, veh/h	0	0	15	1	0	16	0	1605	79	0	1737	51
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	1	0	17	0	1745	86	0	1888	55

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	972	2500	3688	872	-	0	0	-	-	0
Stage 1	-	-	-	1745	1745	-	-	-	-	-	-	-
Stage 2	-	-	-	755	1943	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	6.99	6.54	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	3.67	4.02	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	217	21	5	294	0	-	-	0	-	-
Stage 1	0	0	-	88	139	-	0	-	-	0	-	-
Stage 2	0	0	-	342	110	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	217	19	5	294	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	19	5	-	-	-	-	-	-	-
Stage 1	-	-	-	88	139	-	-	-	-	-	-	-
Stage 2	-	-	-	316	110	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.9	30.6	0	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	217	159	-	-
HCM Lane V/C Ratio	-	-	0.075	0.116	-	-
HCM Control Delay (s)	-	-	22.9	30.6	-	-
HCM Lane LOS	-	-	C	D	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	737	0	302	0	0	0	0	947	406	0	657	1096
Future Volume (veh/h)	737	0	302	0	0	0	0	947	406	0	657	1096
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	801	0	328				0	1029	441	0	714	1191
Adj No. of Lanes	2	0	1				0	2	1	0	2	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	939	0	419				0	2249	1006	0	2249	1006
Arrive On Green	0.26	0.00	0.26				0.00	0.64	0.64	0.00	0.64	0.64
Sat Flow, veh/h	3548	0	1583				0	3632	1583	0	3632	1583
Grp Volume(v), veh/h	801	0	328				0	1029	441	0	714	1191
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	0	1770	1583
Q Serve(g_s), s	19.3	0.0	17.3				0.0	13.4	12.7	0.0	8.3	57.2
Cycle Q Clear(g_c), s	19.3	0.0	17.3				0.0	13.4	12.7	0.0	8.3	57.2
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	939	0	419				0	2249	1006	0	2249	1006
V/C Ratio(X)	0.85	0.00	0.78				0.00	0.46	0.44	0.00	0.32	1.18
Avail Cap(c_a), veh/h	1084	0	484				0	2249	1006	0	2249	1006
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	30.7				0.0	8.4	8.3	0.0	7.5	16.4
Incr Delay (d2), s/veh	6.0	0.0	7.2				0.0	0.7	1.4	0.0	0.4	92.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.0	8.4				0.0	6.6	5.9	0.0	4.1	60.0
LnGrp Delay(d),s/veh	37.5	0.0	37.9				0.0	9.1	9.7	0.0	7.9	109.4
LnGrp LOS	D		D					A	A		A	F
Approach Vol, veh/h		1129						1470			1905	
Approach Delay, s/veh		37.6						9.3			71.3	
Approach LOS		D						A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		61.7		28.3		61.7		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		53.5		27.5		53.5		
Max Q Clear Time (g_c+I1), s		15.4		21.3		59.2		
Green Ext Time (p_c), s		31.3		2.5		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	42.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	739	1	118	0	0	32	0	1047	5	67	1180	0
Future Volume (veh/h)	739	1	118	0	0	32	0	1047	5	67	1180	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	804	0	128	0	0	35	0	1138	5	73	1283	0
Adj No. of Lanes	2	0	1	0	1	0	0	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	1071	0	551	0	0	551	0	2885	13	351	1954	0
Arrive On Green	0.35	0.00	0.35	0.00	0.00	0.35	0.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	2736	0	1583	0	0	1583	0	5394	23	490	3632	0
Grp Volume(v), veh/h	804	0	128	0	0	35	0	738	405	73	1283	0
Grp Sat Flow(s),veh/h/ln	1368	0	1583	0	0	1583	0	1695	1859	490	1770	0
Q Serve(g_s), s	25.0	0.0	5.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	26.3	0.0	5.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	0.00		1.00	0.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	1071	0	551	0	0	551	0	1872	1026	351	1954	0
V/C Ratio(X)	0.75	0.00	0.23	0.00	0.00	0.06	0.00	0.39	0.39	0.21	0.66	0.00
Avail Cap(c_a), veh/h	1290	0	677	0	0	677	0	1872	1026	351	1954	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	28.3	0.0	20.8	0.0	0.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.2	0.0	0.0	0.0	0.0	0.6	1.1	1.3	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	2.3	0.0	0.0	0.6	0.0	0.2	0.3	0.1	0.4	0.0
LnGrp Delay(d),s/veh	30.4	0.0	21.0	0.0	0.0	19.6	0.0	0.6	1.1	1.3	1.6	0.0
LnGrp LOS	C		C			B		A	A	A	A	
Approach Vol, veh/h		932			35			1143			1356	
Approach Delay, s/veh		29.1			19.6			0.8			1.6	
Approach LOS		C			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.2		35.8		54.2		35.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		42.5		38.5		42.5		38.5
Max Q Clear Time (g_c+I1), s		2.0		28.3		2.0		3.3
Green Ext Time (p_c), s		28.7		3.0		28.7		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Notes

Intersection	
Int Delay, s/veh	0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Traffic Vol, veh/h	1008	424	0	1253	0	0
Future Vol, veh/h	1008	424	0	1253	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1096	461	0	1362	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	778
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	291
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	291
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	14	0	2809	2399	14
Future Vol, veh/h	0	14	0	2809	2399	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	0	3053	2608	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1311	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	128	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	128	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.9	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	128	-	-
HCM Lane V/C Ratio	-	0.119	-	-
HCM Control Delay (s)	-	36.9	-	-
HCM Lane LOS	-	E	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	377	1342	1466	308	674	1739
Future Volume (veh/h)	377	1342	1466	308	674	1739
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	410	1459	1593	335	733	1890
Adj No. of Lanes	1	2	3	1	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	399	1302	1851	932	834	3369
Arrive On Green	0.22	0.22	0.36	0.36	0.24	0.66
Sat Flow, veh/h	1774	2787	5253	1583	3442	5253
Grp Volume(v), veh/h	410	1459	1593	335	733	1890
Grp Sat Flow(s),veh/h/ln	1774	1393	1695	1583	1721	1695
Q Serve(g_s), s	18.0	18.0	23.2	8.8	16.4	16.0
Cycle Q Clear(g_c), s	18.0	18.0	23.2	8.8	16.4	16.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	399	1302	1851	932	834	3369
V/C Ratio(X)	1.03	1.12	0.86	0.36	0.88	0.56
Avail Cap(c_a), veh/h	399	1302	1851	932	925	3369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	21.3	23.6	8.6	29.2	7.3
Incr Delay (d2), s/veh	52.2	64.9	5.5	1.1	9.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.5	26.0	11.7	6.2	8.8	7.6
LnGrp Delay(d),s/veh	83.2	86.2	29.1	9.7	38.2	7.9
LnGrp LOS	F	F	C	A	D	A
Approach Vol, veh/h	1869		1928			2623
Approach Delay, s/veh	85.5		25.7			16.4
Approach LOS	F		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.9	33.6				57.5		22.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	21.5	27.0				53.0		18.0
Max Q Clear Time (g_c+I1), s	18.4	25.2				18.0		20.0
Green Ext Time (p_c), s	1.0	1.8				32.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	37	0	0	32	0	1742	59	0	2049	67
Future Vol, veh/h	0	0	37	0	0	32	0	1742	59	0	2049	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	40	0	0	35	0	1893	64	0	2227	73

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1150	2784	4193	947	-	0	0	-	-	0
Stage 1	-	-	-	1893	1893	-	-	-	-	-	-	-
Stage 2	-	-	-	891	2300	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	6.99	6.54	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	3.67	4.02	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	165	13	2	262	0	-	-	0	-	-
Stage 1	0	0	-	71	117	-	0	-	-	0	-	-
Stage 2	0	0	-	282	72	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	165	10	2	262	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	10	2	-	-	-	-	-	-	-
Stage 1	-	-	-	71	117	-	-	-	-	-	-	-
Stage 2	-	-	-	213	72	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.7	20.8	0	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	165	262	-	-
HCM Lane V/C Ratio	-	-	0.244	0.133	-	-
HCM Control Delay (s)	-	-	33.7	20.8	-	-
HCM Lane LOS	-	-	D	C	-	-
HCM 95th %tile Q(veh)	-	-	0.9	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	739	1	118	0	0	0	0	1062	409	0	1326	760
Future Volume (veh/h)	739	1	118	0	0	0	0	1062	409	0	1326	760
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	804	0	128				0	1154	445	0	1441	826
Adj No. of Lanes	2	0	1				0	2	1	0	2	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	928	0	414				0	2260	1011	0	2260	1011
Arrive On Green	0.26	0.00	0.26				0.00	0.64	0.64	0.00	0.64	0.64
Sat Flow, veh/h	3548	0	1583				0	3632	1583	0	3632	1583
Grp Volume(v), veh/h	804	0	128				0	1154	445	0	1441	826
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	0	1770	1583
Q Serve(g_s), s	19.5	0.0	5.8				0.0	15.7	12.7	0.0	22.3	35.5
Cycle Q Clear(g_c), s	19.5	0.0	5.8				0.0	15.7	12.7	0.0	22.3	35.5
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	928	0	414				0	2260	1011	0	2260	1011
V/C Ratio(X)	0.87	0.00	0.31				0.00	0.51	0.44	0.00	0.64	0.82
Avail Cap(c_a), veh/h	1084	0	484				0	2260	1011	0	2260	1011
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	26.7				0.0	8.7	8.2	0.0	9.9	12.3
Incr Delay (d2), s/veh	6.8	0.0	0.4				0.0	0.8	1.4	0.0	1.4	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	0.0	2.6				0.0	7.8	5.8	0.0	11.2	29.9
LnGrp Delay(d),s/veh	38.5	0.0	27.1				0.0	9.5	9.6	0.0	11.3	19.6
LnGrp LOS	D		C					A	A		B	B
Approach Vol, veh/h		932						1599			2267	
Approach Delay, s/veh		36.9						9.6			14.3	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		62.0		28.0		62.0		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		53.5		27.5		53.5		
Max Q Clear Time (g_c+I1), s		17.7		21.5		37.5		
Green Ext Time (p_c), s		32.6		2.1		15.3		

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

APPENDIX E:
VMT DOCUMENTATION

FIGURE B-1

Lynwood Transit Area Specific Plan
California Statewide Travel Demand Model TAZs

translutions
the transportation solutions company...

C:\Dropbox\Tsols\Projects\Lynwood\Analysis\z40_cstdm taz (6/7/2016)

2010 Project VMT (Unmitigated)

	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6
TAZ Number:	4281	4262	4286	4278	4293	4294
City:	Lynwood					
County:	Los Angeles					
Region:	SCAG					

Year 2010 VMT Information (for TAZ)

Residential Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	Project TAZs	City
1 Residential VMT	106,742	33,061	144,231	98,632	106,134	150,313	639,114	1,112,076
2 VMT - Home Based (HB)	81,917	25,725	110,650	75,761	80,646	115,126	489,825	855,705
3 Population	7,649	4,262	10,654	7,834	7,595	10,588	48,582	80,305
4 Per Capita VMT	13.96	7.76	13.54	12.59	13.97	14.20	13.16	13.85
5 Per Capita VMT - HB Trips	10.71	6.04	10.39	9.67	10.62	10.87	10.08	10.66

Employment Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	Project TAZs	
1 Employment VMT	89,912	111,608	6,115	23,735	228,052	14,811	474,232	546,631
2 HBWVMT	37,843	45,942	2,340	10,385	103,536	6,651	206,696	239,177
3 No. of Employees	2,369	2,654	135	581	6,021	397	12,157	14,099
4 VMTperEmp	37.95	42.05	45.30	40.85	37.88	37.31	39.01	38.77
5 HBWVMTperEmp	15.97	17.31	17.33	17.87	17.20	16.75	17.00	16.96

2010 City VMT

	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9
TAZ Number:	4281	4262	4286	4278	4293	4296	4287	4294	4295
City:	Lynwood								
County:	Los Angeles								
Region:	SCAG								

Year 2010 VMT Information (for TAZ)

Residential Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9	City
1 Residential VMT	106,742	33,061	144,231	98,632	106,134	130,722	161,065	150,313	181,175	1,112,076
2 VMT - Home Based (HB)	81,917	25,725	110,650	75,761	80,646	100,080	125,837	115,126	139,963	855,705
3 Population	7,649	4,262	10,654	7,834	7,595	8,922	10,754	10,588	12,047	80,305
4 Per Capita VMT	13.96	7.76	13.54	12.59	13.97	14.65	14.98	14.20	15.04	13.85
5 Per Capita VMT - HB Trips	10.71	6.04	10.39	9.67	10.62	11.22	11.70	10.87	11.62	10.66

Employment Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9	City
1 Employment VMT	89,912	111,608	6,115	23,735	228,052	35,760	23,365	14,811	13,273	546,631
2 HBWVMT	37,843	45,942	2,340	10,385	103,536	16,501	10,714	6,651	5,266	239,177
3 No. of Employees	2,369	2,654	135	581	6,021	960	624	397	358	14,099
4 VMTperEmp	37.95	42.05	45.30	40.85	37.88	37.25	37.44	37.31	37.08	38.77
5 HBWVMTperEmp	15.97	17.31	17.33	17.87	17.20	17.19	17.17	16.75	14.71	16.96

2040 Project VMT (Unmitigated)

	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6
TAZ Number:	4281	4262	4286	4278	4293	4294
City:	Lynwood					
County:	Los Angeles					
Region:	SCAG					

Year 2010 VMT Information (for TAZ)

Residential Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9	Project TAZs	City
1 Residential VMT	145,734	27,260	109,436	82,270	116,613	152,291				633,603	1,102,328
2 VMT - Home Based (HB)	110,623	21,333	84,782	62,922	88,642	116,498				484,800	847,138
3 Population	12,398	2,228	9,389	7,634	9,254	10,941				51,844	86,378
4 Per Capita VMT	11.75	12.24	11.66	10.78	12.60	13.92				12.22	12.76
5 Per Capita VMT - HB Trips	8.92	9.57	9.03	8.24	9.58	10.65				9.35	9.81

Employment Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9	Project TAZs	
1 Employment VMT	218,692	84,848	53,164	54,454	70,774	40,624				522,556	686,355
2 HBWVMT	99,317	37,569	22,480	25,354	32,640	19,213				236,574	311,641
3 No. of Employees	5,365	2,078	1,206	1,669	2,243	1,164				13,725	18,406
4 VMTperEmp	40.76	40.83	44.08	32.63	31.55	34.90				38.07	37.29
5 HBWVMTperEmp	18.51	18.08	18.64	15.19	14.55	16.51				17.24	16.93

2010 City VMT

	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9
TAZ Number:	4281	4262	4286	4278	4293	4296	4287	4294	4295
City:	Lynwood								
County:	Los Angeles								
Region:	SCAG								

Year 2010 VMT Information (for TAZ)

Residential Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9	City
1 Residential VMT	145,734	27,260	109,436	82,270	116,613	143,120	147,871	152,291	177,733	1,102,328
2 VMT - Home Based (HB)	110,623	21,333	84,782	62,922	88,642	109,293	115,073	116,498	137,974	847,138
3 Population	12,398	2,228	9,389	7,634	9,254	11,051	10,934	10,941	12,549	86,378
4 Per Capita VMT	11.75	12.24	11.66	10.78	12.60	12.95	13.52	13.92	14.16	12.76
5 Per Capita VMT - HB Trips	8.92	9.57	9.03	8.24	9.58	9.89	10.52	10.65	10.99	9.81

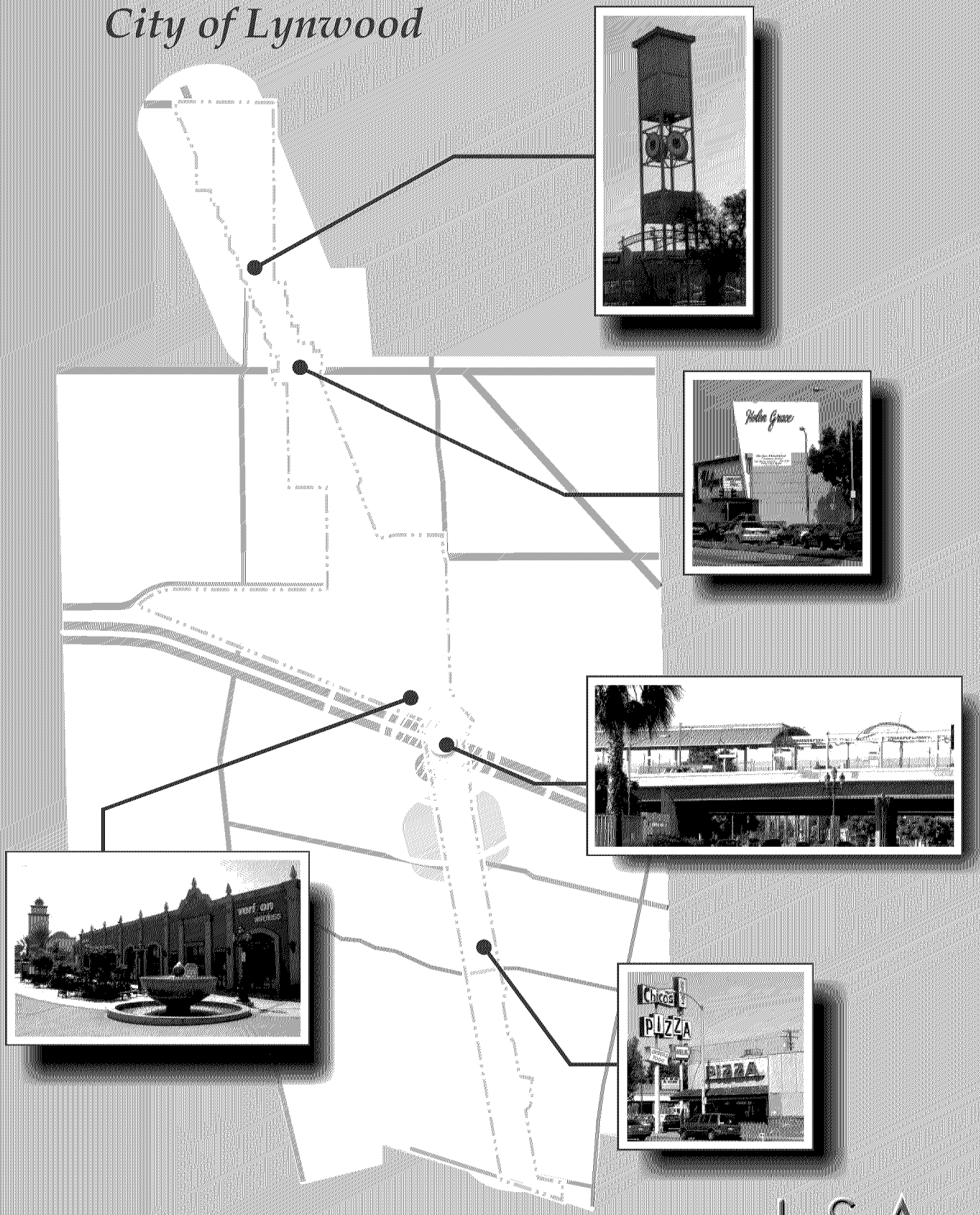
Employment Uses	TAZ1	TAZ2	TAZ3	TAZ4	TAZ5	TAZ6	TAZ7	TAZ8	TAZ9	City
1 Employment VMT	218,692	84,848	53,164	54,454	70,774	75,789	68,586	40,624	19,424	686,355
2 HBWVMT	99,317	37,569	22,480	25,354	32,640	35,503	31,212	19,213	8,352	311,641
3 No. of Employees	5,365	2,078	1,206	1,669	2,243	2,313	1,809	1,164	559	18,406
4 VMTperEmp	40.76	40.83	44.08	32.63	31.55	32.77	37.91	34.90	34.75	37.29
5 HBWVMTperEmp	18.51	18.08	18.64	15.19	14.55	15.35	17.25	16.51	14.94	16.93

Appendix E

Long Beach Boulevard Specific Plan

Long Beach Boulevard Specific Plan

City of Lynwood



LSA

November, 2006

LONG BEACH BOULEVARD SPECIFIC PLAN

Specific Plan
November 2006

Prepared for:

City of Lynwood
11330 Bullis Road
Lynwood, California 90262

Prepared by:

Land Use & Specific Plan Preparation

LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, California 92507
www.lsa-assoc.com

Architectural Design Guidelines

Danielian Associates
Sixty Corporate Park
Irvine, CA 92606
www.danielian.com

Landscape Design

IMA Design
2500 Michelson Drive, Suite 125
Irvine, CA 92612
www.imadesign.com

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

The City of Lynwood is one of the Gateway Cities in the County of Los Angeles. The City has 73,212 residents residing over the 4.9 square miles area. It is located between two freeways, Interstate 710 and Interstate 105. Long Beach Boulevard is a primary commercial corridor in the City of Lynwood.

Long Beach Boulevard is the major north-south thoroughfare in the County and stretches about 2.3 miles within the City of Lynwood. The Boulevard has been undergoing significant investments; these include the Green Line light rail on Interstate 105 (I-105) in 1995; the 36-acre open air village retail center (Plaza de Mexico) in 2000; Long Beach Pluma Shopping Center and other retail developments along the northern parts. The Boulevard also has several small businesses and ethnic markets. It is characterized by heavy pedestrian and vehicle traffic. Issues of concern along the Boulevard include graffiti, crime, and run-down buildings that are of poor architecture quality in a state of disrepair.

The City has identified a need to set forth a framework to guide all development, with emphasis on design, development standards, and right-of-way improvements along the Boulevard. This Specific Plan focuses on Long Beach Boulevard for this purpose.

1.2 INTENT AND PURPOSE OF THE SPECIFIC PLAN

The project area, shown in Figures 1.1 and 1.2, is part of the Redevelopment project area in the City of Lynwood. It is poised for major new developments along the Boulevard, particularly in the vicinity of the intersection with I-105.

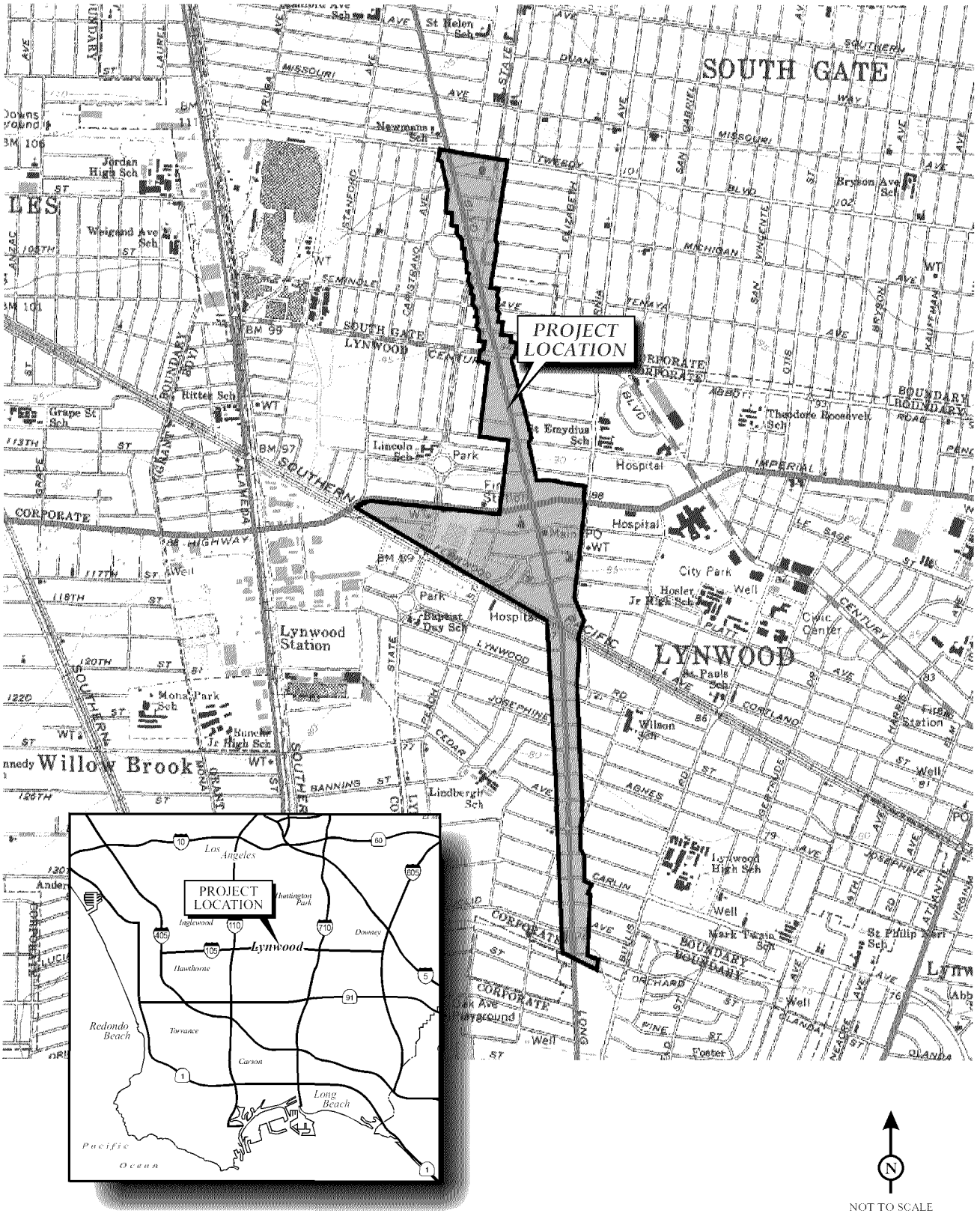
The objectives for new development in the project area are:

- To revitalize the Boulevard;
- Increase the transit use;
- Instill downtown presence on the Boulevard; and
- Provide a base for economic vitality for the future.

The City's intent is to achieve a high-quality, aesthetically attractive urban area with land uses that are conducive to the presence of transit along I-105 and the numerous small, local markets that are also vital to the community.

This Specific Plan identifies key issues, creates a land use development program based on sound planning principles, and establishes design guidelines for architecture and landscaping along Long Beach Boulevard. The Specific Plan provides direction to investors, developers, City and the Agency by establishing a framework for the visual quality desired by the City for establishing downtown presence along Long Beach Boulevard. The land use standards are set with a level of flexibility to address the changing demands of the real estate market.

Figure 1.1: Project Location



LSA

REVITALIZATION AREA PROJECT BOUNDARY

Figure 1.2: Project Location Aerial

0 1,000 2,000

FEET

1.3 AUTHORITY AND SCOPE

Government Code Section 65450, et seq. authorizes cities and counties to adopt specific plans to implement their general plans, which include text and graphics addressing the following:

- The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
- The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area and needed to support the land uses described in the plan.
- Any and all development and design standards, including criteria for architectural, streetscape and landscape design.
- A program of implementation measures including regulations, programs, public works projects, and financing measures to implement all of the above.
- The relationship of the specific plan to the general plan.

In addition, the specific plan may address other subjects that, in the judgment of the planning agency, are necessary or desirable for implementation of the general plan. State law permits a specific plan to be prepared, adopted, or amended in the same manner as a general plan, except that a specific plan may be adopted by resolution or by ordinance, and may be amended as often as is deemed necessary by the legislative body and must be consistent with a city's general plan.

1.4 CONSISTENCY WITH GENERAL PLAN GOALS, OBJECTIVES, AND POLICIES

Specific plans must be compatible with goals and policies of the adopted General Plans of local jurisdictions (California Government Code Section 65454). In this case, the City of Lynwood General Plan (adopted in 2003) is the governing document.

The City of Lynwood's General Plan designates the Long Beach Boulevard Redevelopment Project area "A" with commercial, multi-family, single family, public facility and Specific Plan Area land uses.

The Long Beach Boulevard Specific Plan is consistent with the goals of the General Plan, while allowing implementing development solutions in the project area.

The Specific Plan pays special attention to the following General Plan goals and policies:

1.4.1 COMMUNITY DESIGN ELEMENT

The Community Design Element envisions new development within the Specific Plan area to be attractive, safe, well-designed, and well-integrated with adjacent neighborhoods, while identifying proper corridors, gateways, and nodes. Such identified corridors will present unique opportunities for enhancing the City's urban design image.

Goal No. 1. Encourage physical development that enhances the positive image of the City as a balanced residential community.

Goal No. 2. Define urban design components that provide a unique visual character for the City and distinguish the City from its neighboring communities.

Goal No. 3. Develop innovative strategies for bridging the physical separation of the City created by I-105 such as, but not limited to, continuous and consistent sidewalk design, lighting for safety, and art.

In the process of developing generalized urban design goals for the City of Lynwood, specific policies were formulated to further refine and provide substantive recommendations in support of the community design goals articulated above. The policies, which accompany these goals, are as follows:

Policy No. 1: Formulate general design guidelines for residential and commercial properties to ensure that new construction and renovation of existing structures achieve a high level of architectural and site design quality.

Policy No. 2: Develop design guidelines, which facilitate the creation and identification of distinct neighborhoods throughout the City.

Policy No. 3: Develop street median landscape standards to enhance the streetscape.

Policy No. 4: Ensure that signage is visually attractive, compatible within the neighborhood setting and provides a high quality image for the City.

1.4.2 Economic Element

The Specific Plan correlates with the General Plan to strengthen the existing businesses along Long Beach Boulevard through the use of revitalization and programs such as, but not limited to, Community Development Block Grant (CDBG) incentives. Tools to enhance the local market include infrastructure improvements, balanced accessibility for vehicles, bicycles, and pedestrians, appropriate façade treatments, streetscapes, and proper signage. Both plans share the goal of eliminating blight and enhancing the economic and social well being of Lynwood. The Specific Plan complies with the General Plan's goals and policies as follows:

Policy ED-1.2: Local Economic Development. The community shall strive to diversify its local business makeup so that it avoids dependence on one segment of the local economy to provide employment, revenues, and retail outlets for the citizenry.

1.4.3 Circulation Element

The Circulation Element of the City's General Plan addresses the City's plan to widen certain streets, relocate some parking, and provide a system of pedestrian walkways and bike lanes. The Specific Plan will provide for an attractive well-connected street and pedestrian system that accommodates the needs of all users, including pedestrians and cyclists, and strengthens the access to the Green Line light rail on I-105. The Specific Plan focuses on following goals and policies from the General Plan:

Policy CIR-1.5: Pedestrian-Friendly Systems. Establish street sections in residential neighborhoods and certain commercial areas that, while accommodating vehicular traffic, give preference to pedestrian users.

Goal CIR-2. Accommodate alternatives to private automobile transportation that meet the need of all City residents.

Goal CIR-3. Promote a regional transportation system that serves existing and future travel between Lynwood and other population and employment centers within the region.

Goal CIR-4. Provide an adequate supply of private off-street and public parking to meet the needs of residents and visitors to the City.

Policy CIR-4.2: Public/Private Parking Facilities. Provide joint-use and public parking facilities where needed by special assessment districts or other mechanisms.

1.4.4 Land Use Element

The Land Use Element of the Specific Plan provides a range of land uses to accommodate the living, working, shopping and recreational needs of the City's growing population with a diversity of uses that will promote economic growth. Land uses also take advantage of the Specific Plan area's unique condition of being well-served by regional transit systems and the mixed-use nature of the area. The Specific Plan complies with the General Plan's goals and policies as follows:

Goal LU-2: To plan for a range of commercial sites within the Planning Area to serve the needs of those living, working, and visiting Lynwood. These commercial areas will provide a range of commercial opportunities in line with the needs of the above groups, and will continue to develop Lynwood as a retail center for the area.

Goal LU-6: Provide a framework that could encourage the combination of commercial, medium/high density residential, and active and passive open space uses within a specific area to create a vibrant village atmosphere dominated by pedestrian-oriented land uses.

1.4.5 Infrastructure and Public Services

The Specific Plan complies with the City General Plan's goal as follows:

Goal DW-1: Provide for the planning and funding mechanism to construct, expand, and maintain water facilities (transmission, storage, distribution, and treatment) needed to meet current and future demand.

As the market conditions have changed, a high amount of development is on the forefront for the City's near future. This Specific Plan will provide the City the opportunity to develop a logical mix of uses at a manageable scale and design quality suited for the community while capitalizing on the demand for more commercial uses.

The City of Lynwood designates the project area Specific Plan, and designates the Long Beach Boulevard Specific Plan as the adopted Specific Plan.

1.5 RELATIONSHIP TO REDEVELOPMENT PLAN

The City of Lynwood adopted the amended Redevelopment Plan in 1998. The Specific Plan follows the boundaries of the Redevelopment Project area "A." To accommodate residential development proposed at that time and to maintain the direction for development of commercial uses, the Redevelopment Project Area "A" Plan was amended to expand the project boundaries, include specific land uses, limitations on type, size, and height of the buildings, open space, provide the legal description of the project boundary, and the Proposed Public Improvement/ Projects List.

As market conditions and quality of land uses have evolved over the last few decades, so has the City's direction for this site. The Specific Plan Area provides the City the opportunity to develop a favorable and flexible mix of uses at a manageable scale and design quality desired by the market and community. To further that mission, this Specific Plan will remain compatible with future goals and provisions outlined in the amended Redevelopment Plan for Redevelopment Project "A."

The direction set forth in this Specific Plan concurs with the objectives set forth in the amended Redevelopment Plan.

The purpose of this Specific Plan is to provide the energy and authority for the highly anticipated revitalization and upgrade of the Long Beach Boulevard corridor. The primary policies set forth in this Specific Plan are as follows:

1. *Initiate specified land use changes in the area and eliminate unfavorable land uses by:*
   - Reducing the number of parcels in the Project Area by possible land assembly and re-subdivision of land area.
   - Utilizing long-term planning and agency resources.
   - Conforming to the Redevelopment Plan and the implementation plans of the Agency.
   - Providing a relationship of proposed developments to the surrounding community, quality, configuration, appearance, and servicing the needs of the community that will enhance the City's integrity.
   - Contribution of the proposed development to the tax base of the community.
2. *Permit commercial uses that include, but are not limited to, neighborhood commercial, highway commercial, general commercial, and supporting vehicle parking facilities.*
   - Other land uses permitted within the Project boundaries are industrial park and manufacturing, public uses, including semi-public, institutional, and nonprofit uses. The land coverage permitted is as specified in the zoning ordinance.
3. *Enhance the open space and intersperse with other uses in any area by maintenance, establishment, and/or enlargement of such land use.*
   - The approximate amount of open space to be provided in the project area expansion is the total of all areas that will be in the public

rights-of-way, the public ground, the space around buildings, and all other outdoor areas not permitted though limits on land covered by this Plan to be covered by buildings and are permitted under the City's General Plan.

4. *Propose public improvement projects for arterials, sidewalks, lighting, utilities, and landscape.*
   - The Redevelopment Plan authorizes installation, construction, reconstruction, redesign, or reuse of streets, sidewalks, gutters, parking lots, bridges, streetlights, signalization on streets, water distribution system, natural gas, electrical, and telephone distribution systems, parks, plazas, playgrounds, and other public landscaped areas.
   - Arterial improvements include widening, resurfacing, improved signalization, and channelization. General improvements to sidewalks, lighting, under-grounding of utilities.
   - Street and alleys may be widened, altered, abandoned, or closed as necessary for property development in the project area.
   - Proposed and new development shall provide a balance between adequate pedestrian and vehicular access, vehicular parking, and delivery loading docks with similar needs of existing developments.

1.6 PRINCIPLES OF PLANNING

The Specific Plan land use planning program is developed for the purpose of achieving all the objectives highlighted earlier.

In order to maintain and increase the vitality of the corridor and its importance to the City, the following principles of planning are implemented in this Plan.

- Transit-Oriented Development ;
  - Mixed uses,
  - Pedestrian connections, and
  - Multiple housing;
- Live-work housing; and
- Small business retention.

Small business retention is key to an area that is characterized by many local businesses. Many of these businesses epitomize the investment and innovation of the local residents for products and services that are of value to the community. The fine-grained nature of the local economy is further reinforced in the development of retail and commercial in all parts of the project area.

Based on the existing diversity, density, and Green Line light rail, transit-oriented development is another one of the fundamental principles for planning along the Boulevard. Transit-Oriented Development (TOD) along Long Beach Boulevard will generate the mix of uses and density to meet the needs of the community while leveraging the transit use.

1.6.1 TRANSIT-ORIENTED DEVELOPMENT

TOD refers to any community that efficiently relies on bus or rail transit systems as its primary source of travel.

Multiple-family housing and mixed-use projects creating an environment safe for pedestrians are primary hallmarks of TOD.

It involves higher densities, reduced parking requirements, planned pedestrian walkways, a pedestrian-accessible transit station, a variety of services, and buildings oriented toward street activity. TOD enables planning at a single site location as well as at a regional level and arranges land uses that support the transit system.

According to the California Department of Transportation (Caltrans) Study, "Factors for Success in California" (May 2002), TOD has been described as "moderate to higher density development, located within an easy walk of a major transit stop, generally with a mix of residential, employment and shopping opportunities designed for pedestrians without excluding the auto. TOD can be new construction or redevelopment of one or more buildings whose design and orientation facilitate transit use." TOD is not limited to large or small communities and can be accommodated in several different settings.

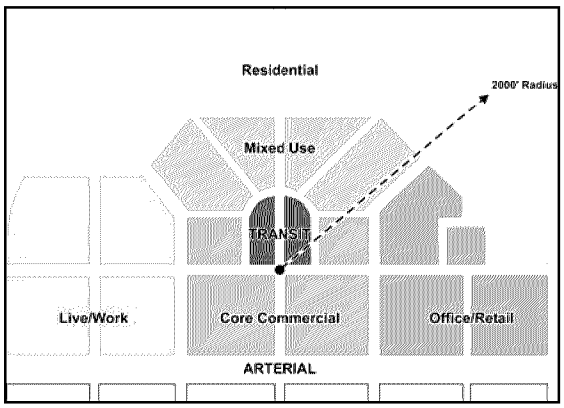


Figure 1.3: TOD Diagram

It is expected that California will continue to adopt TOD principles in several of its existing communities over the next 20 years as a result of the increase in population, increased demand for additional housing around public transit, increase in traffic congestion, and the desire for walkable districts. Adoption of TOD principles are already in place in surrounding jurisdictions, including, but not limited to, Los Angeles, San Diego, Pasadena, and Glendale.

1.6.2 Benefits of TOD

The beneficial effects of TOD range from individual to regional scales. Typical design features of TOD have, in several existing cases, improved neighborhood commercial quality, increased retail activity, increased sale tax revenues, increased transit ridership, reduced crime, enhanced public safety, and increased property values. In terms of housing opportunities, the adoption of higher densities in a TOD district creates the potential for diverse housing types and affordability.

TOD offers other economic benefits for the community such as direct financial savings that would accrue to taxpayers and commuters from a more efficient use of a working transportation system, thereby increasing household disposable income through the following factors:

Reduced auto ownership. TOD and smart land use planning can give twice as many households access to frequent transit service compared to the status quo, increasing transit patronage. As a result, Lynwood residents would own fewer cars, resulting in huge cost savings, since car ownership is the main reason that transportation spending is the second-largest expense for California households

after housing. The American Automobile Association estimates that the cost of owning a car is $7,456 (excluding fuel costs, which are covered in the next paragraph). If only 30 percent of the City's workforce population used the transit system as its primary means of transportation, *the combined financial savings to these residents would be $53.9 million per year.*

Reduced gasoline costs. The lower levels of driving that can be achieved with TOD go beyond just helping to reduce congestion. It also reduces the amount of gasoline that Lynwood residents would have to buy. Households with limited income can be negatively impacted by gasoline price increases, which are approximately 4 percent, according to www.transact.org. Working families making less than the national median income tend to be hardest hit by rising gas prices.

A two or more person household that owns one car and does not use transit spends an average of $1,311 on gasoline a year. That same household, if its members are heavy transit users, spends an average of $609 on gasoline a year; a savings of $702 annually (www.transact.org).

In a TOD district, Lynwood residents would drive significantly fewer miles, save money on gasoline, and save wear and tear on their vehicles. Drivers in the Los Angeles area waste over half a gallon of gas a day due to traffic congestion (www.bestplaces.net). In the Los Angeles area, 18.4 percent ($9,162) of household expenditures is spent on transportation (www.transact.org)

Small increase in spending on transit fares. An estimate of how much more money Lynwood residents would spend on transit fares is needed to capture fully the direct transportation costs of a TOD future. Not all of this would necessarily be an additional cost. When transit agencies need additional revenue, they often seek additional taxpayer funding. Greater fare revenue reduces the need for operating subsidies.

In addition, TOD improves the quality of the living environment by reducing traffic congestion and commute times, thereby improving air and water quality and providing walkable neighborhoods for residents and consumer activity. Table 1.A summarizes the benefits of TOD and characterizes the public and private impacts.

1.6.3 TOD Concerns

Although TOD may have several beneficial outcomes, there are also concerns related to planning for its success. Typical concerns include the design of the transit system and how it relates to the surrounding community; local community concerns; compatibility with surrounding zone designations; perceived high cost for developing TOD districts; and limitations in public financing. Such concerns, if not addressed, can cause the failure of a transit district. In the City of Lynwood, concerns include the surrounding zones adjacent to the TOD district, as well as the high costs involved in development of the TOD.

Adjacent to the Specific Plan area are existing single-family and multifamily residential uses whose concerns include the impacts of an increase in density, noise, and activity. A further concern is

Table 1.A – Benefits of Transit-Oriented Development

Public	Private
• Revitalize declining communities • Create opportunity for diverse housing • Increase use of transit system • Decrease traffic congestion • Improve commute times • Improve environmental and health concerns, such as air and water quality • Sustain a revenue source for transit agencies • Produce sales tax revenues • Create positive local and regional communication • Reduce crime • Decrease time spent in autos • Decrease expenditures spent on roadway services • Increase public safety	• Can increase household disposable income • Increase property values • Improve commercial sales and activity • Improve foot traffic for retailers • Decrease transportation/commuting costs for residents and workers • Provide access to a more diverse workforce • Improvements for pedestrians and transit riders do not come at the expense of automobile access • Co-location of employment with other uses (such as daycare) increases the attractiveness of workplace to prospective employees • Can provide mobility choices • Improves the overall physical health of the community and its residents

providing consistency and harmony between the proposed and existing uses.

1.6.4 Major Challenges to Creating High-Performing TOD

- Finding a common definition or agreement on the goals and outcomes;
- Balancing the tension between the requirements of making a project a successful place and making a successful transportation node;
- Reducing complexity, time, uncertainty, and costs;
- Creating a supportive regulatory and policy environment;
- Acknowledging that more than transit is needed to drive real estate investments; and
- Convincing investors that TOD is an asset class.

1.6.5 Major Reasons for TOD Failures

- A land use focus on only office and commercial uses;
- Lacking the pedestrian connectivity that makes riding transit an easy and appealing alternative;
- Lack of "placemaking" elements, such as plazas and streetscape improvements; and
- Failure of the transit system to provide the regional connectivity that would make it a viable transportation option for residents.

The Los Angeles area ranks highest in the country for the average number of residents per transit zone at 6,557.

Table 1.B – Journey to Work (Percentage of Employed Population in Transit Zones)

Metropolitan Area	Workers who Ride ALL Modes of Transit	Workers who Ride the Rail System	Workers who Ride the Bus	Transit Riders who Walk to Stations	Existing Stations
Washington	30%	22%	8%	10%	169
Chicago	25%	14%	11%	6%	418
Los Angeles	16%	2%	14%	5%	124
Cleveland	13%	3%	10%	6%	50

Source: *Hidden in Plain Sight: Capturing The Demand for Housing Near Transit*, April 2005.

However, the transit system provides some of the poorest coverage with only 0.8 station per 100,000 residents. Although the transit system in Los Angeles is small relative to the size of the overall region, its transit zones are densely inhabited and, therefore, have the potential to serve a significant number of people. The density in the City of Lynwood is 14,941 residents per square mile. Due to the limited fixed rail system in the Los Angeles area, a smaller percentage of people use the rail transit compared to other metro areas with transit, even if they live close to a station as seen in Table 1.B. This explains why density alone is not enough for a successful TOD district; the system also needs regional connectivity and a sufficient number of transit stations.

Green Line on I-105 perpendicular to Long Beach Boulevard

Only 16 percent of residents of transit zones in the Los Angeles area ride all modes of transit to work. Of that number, 14 percent are using buses; therefore, the rail system receives only a small share of the transit trips.

1.6.6 Mixed Uses

Mixed uses within the Specific Plan include first-floor commercial or retail activity and upper floors of residential units. Mixed uses within TOD districts provide a consistent form of activity and utilize transit system operations. The mixed-use component creates an opportunity for diverse housing and living environments. Pedestrian-oriented streetscapes will enhance the commercial corridor creating a friendly and inviting atmosphere. Residents located within the mixed-use units will have easy access to the transit system and ground-floor commercial uses.

1.6.7 Live and Work

TOD districts include a variety of services and land uses. Live and work housing is a type of development that provides an environment where an individual can occupy a residential unit within the same building as his or her work, where

walking is an option, and where public transportation is the primary choice. Typical neighborhoods include pedestrian-friendly walkways, walking access to adjacent districts, pedestrian safety, foot traffic, and local and regional public transit.

1.6.8 Steps toward Implementation

The idea of building around a transit system is slowly emerging in the United States. The desire to live near a transit system has become appealing to many commuters tired of congested traffic and long hours of travel. Implementation of TOD enables individuals to choose a type of travel and provides a variety of mobility. In addition, recognizing that development around transit systems requires planning for success and sustainability. Table 1.C summarizes the basic steps to creating a successful TOD district. Additional measures to ensure the success of TOD include:

Limit Development Type for TOD. Within a ¼ mile walk of a transit station, create development that generates and supports ridership, and avoid big-box retailers.

Appropriate Residential Densities for TOD. According to the study, *The New Transit Town: Best Practices for Transit-Oriented Development*, the TOD type "Urban Neighborhood" should have a minimum housing density of 20 units per acre. The "Urban Downtown" should have a minimum housing density of 60 units per acre.

The current urban characteristics of Lynwood are somewhere in between these two TOD types. Currently, the residential density for Lynwood is 4.2 for the transit zone (see Table 1.D). The Lynwood Zoning Code currently allows for a maximum of 18 units per acre. The study, *Hidden in Plain Sight: Capturing the Demand for Housing near Transit* suggests that "demand for higher-density housing in transit zones (in this case, the Los Angles area) could far outstrip the supply of this kind of housing." There is a clear need to increase the number of housing units and maximum densities within the transit zone to accommodate the market demand for housing. Thus, the land use plan proposes densities in mixed uses.

Table 1.C – Planning for TOD Success

• Achieve a vision rather than a plan
• Create a destination rather than a project
• Optimal Transit System Design
• Promote and encourage transit ridership
• Create Community Partnership
• Design retail development market-driven as opposed to transit driven
• Adopt mixed uses and live/work districts
• Provide incentives for individuals to live around transit
• Have efficient parking through shared parking and reduced parking incentives; set maximum parking limits for residential developments rather than minimum parking requirements
• Plan for bicycle lanes within a one-mile radius of transit stations

Table 1.C – Planning for TOD Success

• Coordination between local regional and State organizations
• Provide financial and other incentives
• Encourage commercial attention

Table 1.D – Transit Zones Characteristics

	Lynwood Transit Zone*	Typical Urban Neighborhood	Typical Urban Downtown
Average Miles to Major City	5.0	6.0	5.0
Average Residential Density	4.2	8.5	31.4
Average Block Size (Acres)	1.6	7.2	3.9
Average Year Housing Built	1954	1954	1950

* Includes Census Tract 5402.03 and 5405.01

2.0 EXISTING SITE CONDITIONS

2.1 SITE AREA DESCRIPTION

The Long Beach Boulevard Specific Plan area is a linear, 2.37-mile, north-south aligned project site covering approximately 140 acres in the City of Lynwood. It is one of the major transportation corridors in Lynwood and includes blocks facing Long Beach Boulevard between Tweedy Boulevard to the north and Orchard Street to the south. It is generally one block deep as seen in Figure 2.1. Typical of major corridors of urban cities, Long Beach Boulevard is busy with vehicular traffic. There is also significant pedestrian movement.

Long Beach Boulevard intersects Century Freeway (I-105) as seen in Figure 2.1. The Metro "Green Line" runs along the center of I-105 and across and above grade over Long Beach Boulevard.

The project site has buildings ranging in age from the 1930s to some current construction. Most of the adjacent buildings are retail-commercial, motels, restaurants, strip malls, and a large retail center that is fairly new. Single-family homes and multiple-family homes are scattered among other uses. There are few public facility uses and one elementary (public) school in the southern part of the project area.

Long Beach Boulevard is full of people and is active most times of the day. Mom-and-Pop stores have given way to ethnic markets, mainly Latino markets. Graffiti is highly visible indicating some gang activity. Sidewalks are busy and not consistent through the corridor. Other issues seen in the Redevelopment Project area are crime, prostitution, and lack of adequate parking. These issues are more acute along the southern part of the Boulevard.

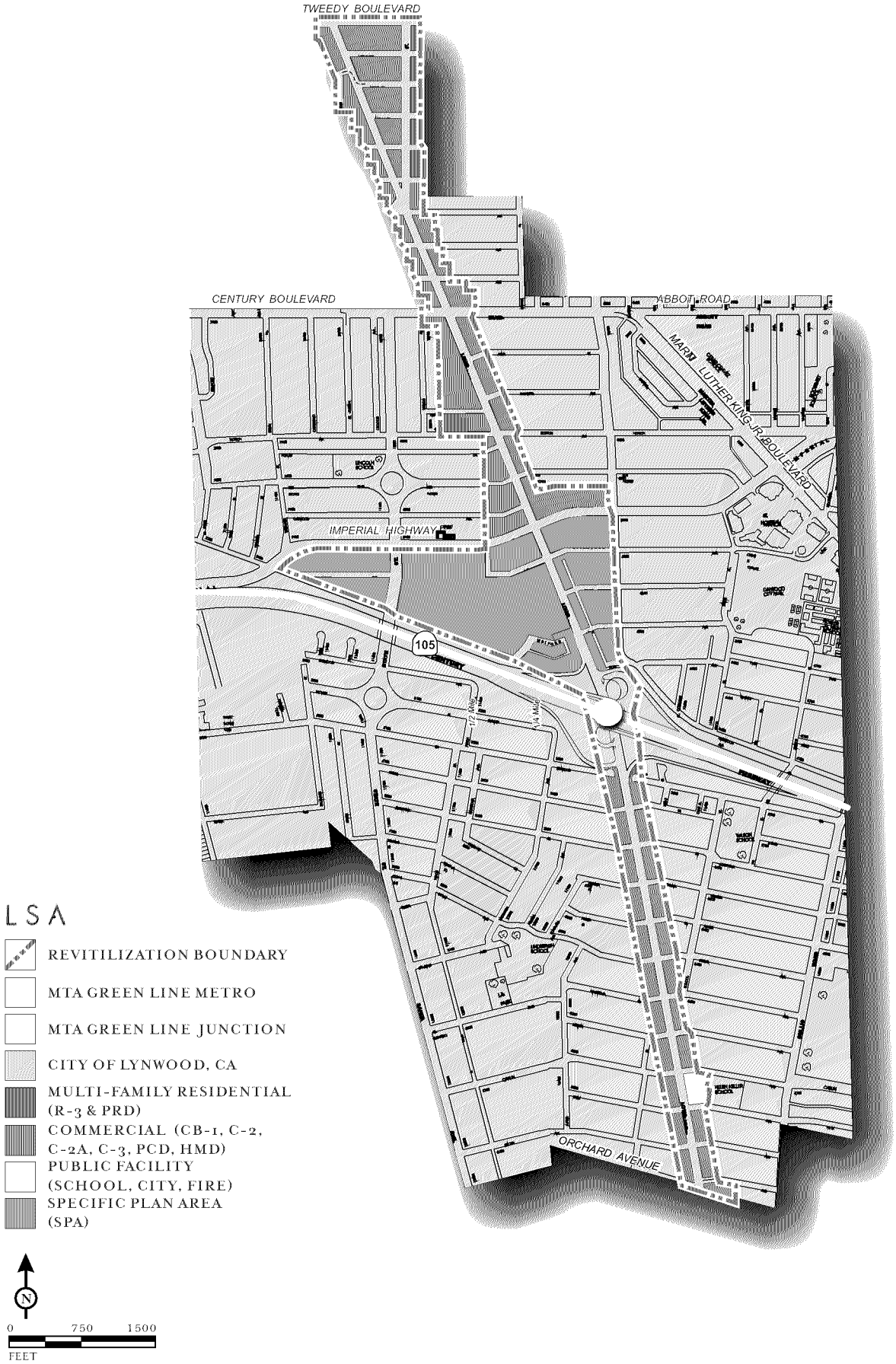
Despite these problems, major developments such as Plaza Mexico are harbingers of the changing real estate markets. Long Beach Boulevard is poised to see several new developments that will involve tear-down and rebuild with new businesses.

Plaza Mexico (Source: City of Lynwood website)

2.2 CURRENT LAND USE AND ZONING

A dataset of 556 parcels was analyzed for the current land uses and zoning. This detailed parcel dataset is provided in Appendix B.

Figure 2.1: Current Land Use



2.2.1 Current Land Use Designation

According to parcel data supplied by the City of Lynwood and Los Angeles County, the Long Beach Boulevard Specific Plan project area contains a diverse number of land uses as seen in Table 2.A and Figure 2.1–Current Land Use.

Table 2.A – Current Land Use Designation

Land Use	Acres	% of Total Acres
Single-Family	0.537	0.4
Multifamily	17.565	12.7
Commercial	109.889	79.6
Public Facility	4.293	3.1
Industrial	6.220	4.5
TOTAL	**137.967**	**100.0**

Commercial uses along Long Beach Boulevard account for 390 parcels or 70 percent of the total number in the project area. Multifamily residential is the second largest land use, with 115 parcels and covering 17.5 acres. Under the City's 2004 General Plan Map, the Specific Plan Area (SPA) covers 116 parcels located north of I-105 of which 59 parcels are currently residential and commercial/industrial uses.

The block of parcels between Carlin Avenue and Palm Avenue, along Long Beach Boulevard has a General Plan Map Land Use for "Public Facility," with a recently constructed public elementary school on 4.3 acres.

Four detail land use plans shown in Figures 2.3 through 2.5 start at north of the project site and progress through the Boulevard. They illustrate the current land uses and a summary.

2.2.2 Zoning Designation

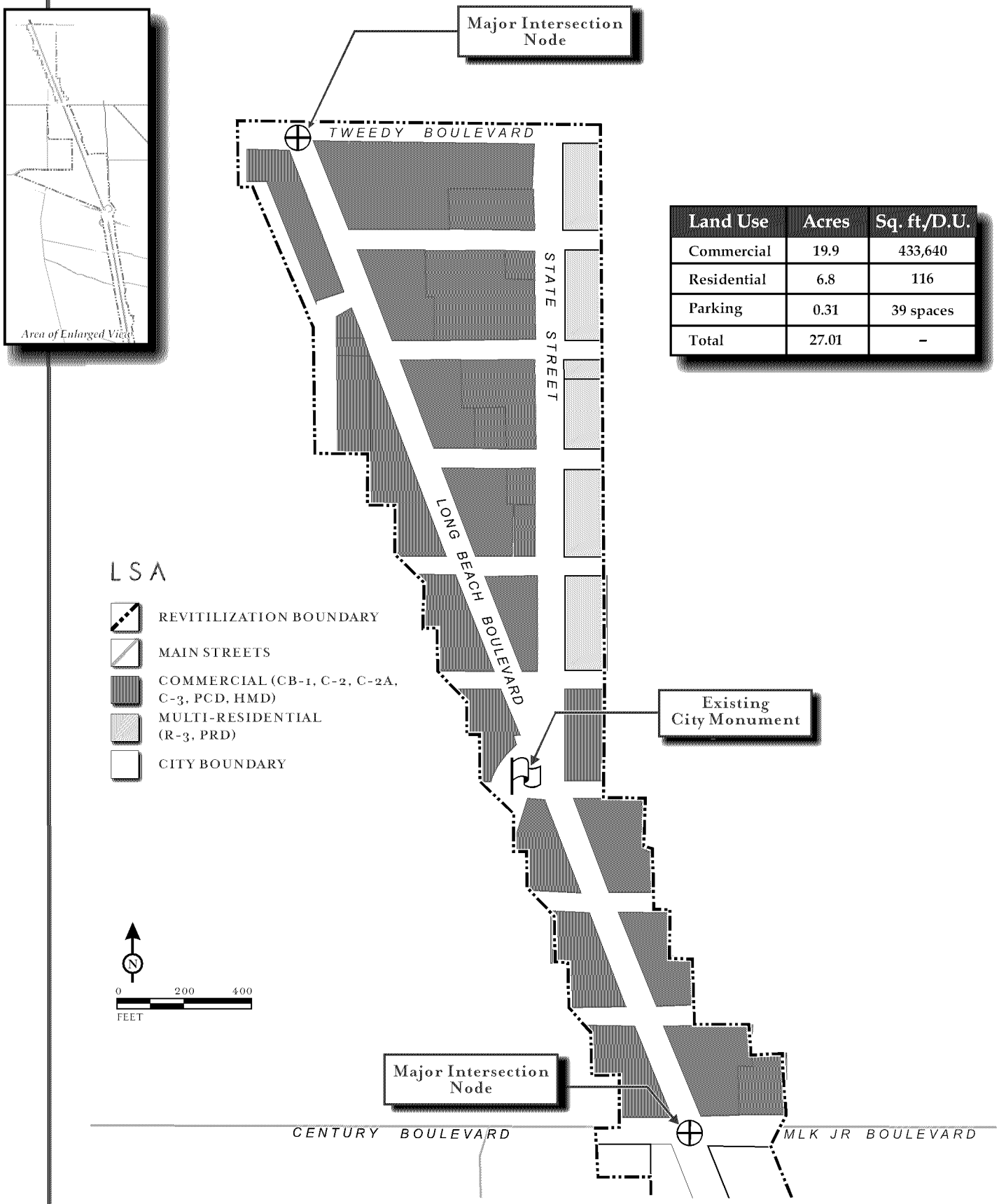
According to parcel data supplied by the City of Lynwood, the project area's zoning designations are listed below in Table 2.B. Figure 2.6–Current Zoning Plan illustrates the zoning over the project area.

Table 2.B – Zoning Designations

Zoning Designation	Acres	%
R-1: Single-Family	0.537	0.3
R-3: Multifamily	17.565	12.7
P-1: Parking	4.967	3.6
CB-1: Planned Business	32.662	23.7
C-2: Light Commercial	11.249	8.2
C-2A: Medium Commercial	44.324	32.1
C-3: Heavy Commercial	20.443	14.8
M: Manufacturing	6.220	4.5
TOTAL	**137.967**	**100.0**

- *Commercial Zones*
  - **Zone CB-1:** Planned Business is mostly located in the Lynwood Towne Center, and one block at the corner of Long Beach Boulevard and Orchard Avenue, accounting for 70 parcels or 12.6 percent of the total number in the planning area. The Planned Business (CB-1) district provides locations where daytime, service-oriented businesses may locate to allow for the efficient interaction of complementary service industries. Professional offices, including medical offices and clinics, represent the primary permitted uses. Minor support uses may include small restaurants, cafes, retail shops, and child daycare centers.

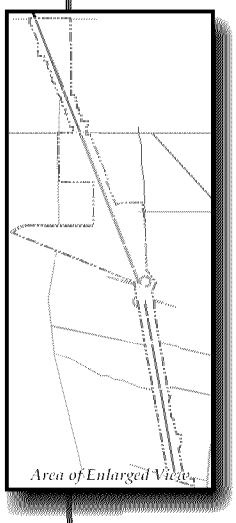
Figure 2.2: Existing Downtown Village I Land Use Plan

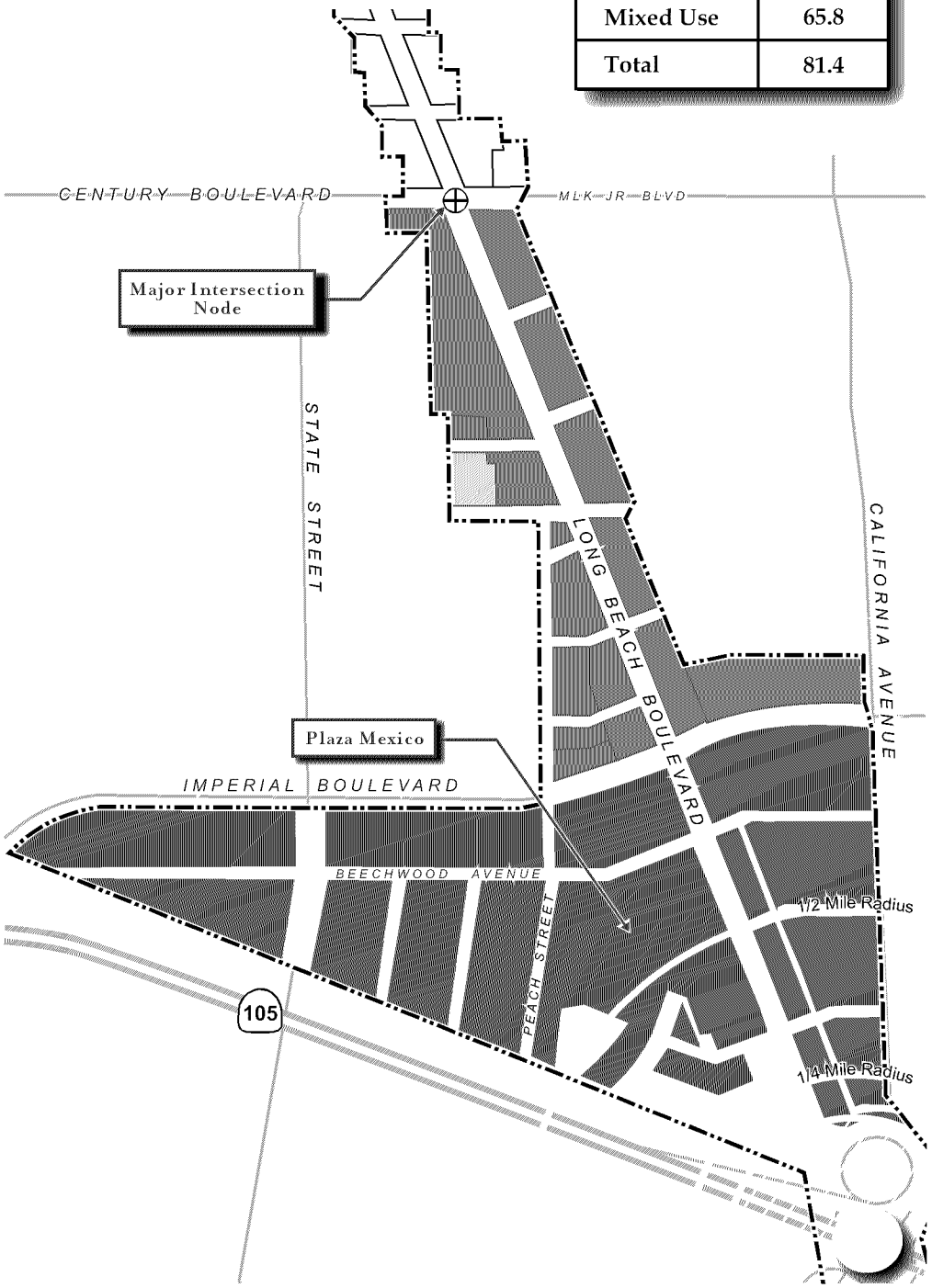


Land Use	Acres	Sq. ft./D.U.
Commercial	19.9	433,640
Residential	6.8	116
Parking	0.31	39 spaces
Total	27.01	–

Figure 2.3: Existing Downtown Village II Land Use Plan

Land Use	Acres
Commercial	15.6
Mixed Use	65.8
Total	81.4





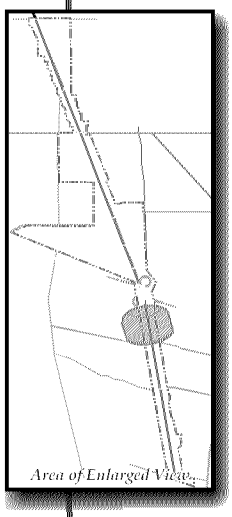
LSA

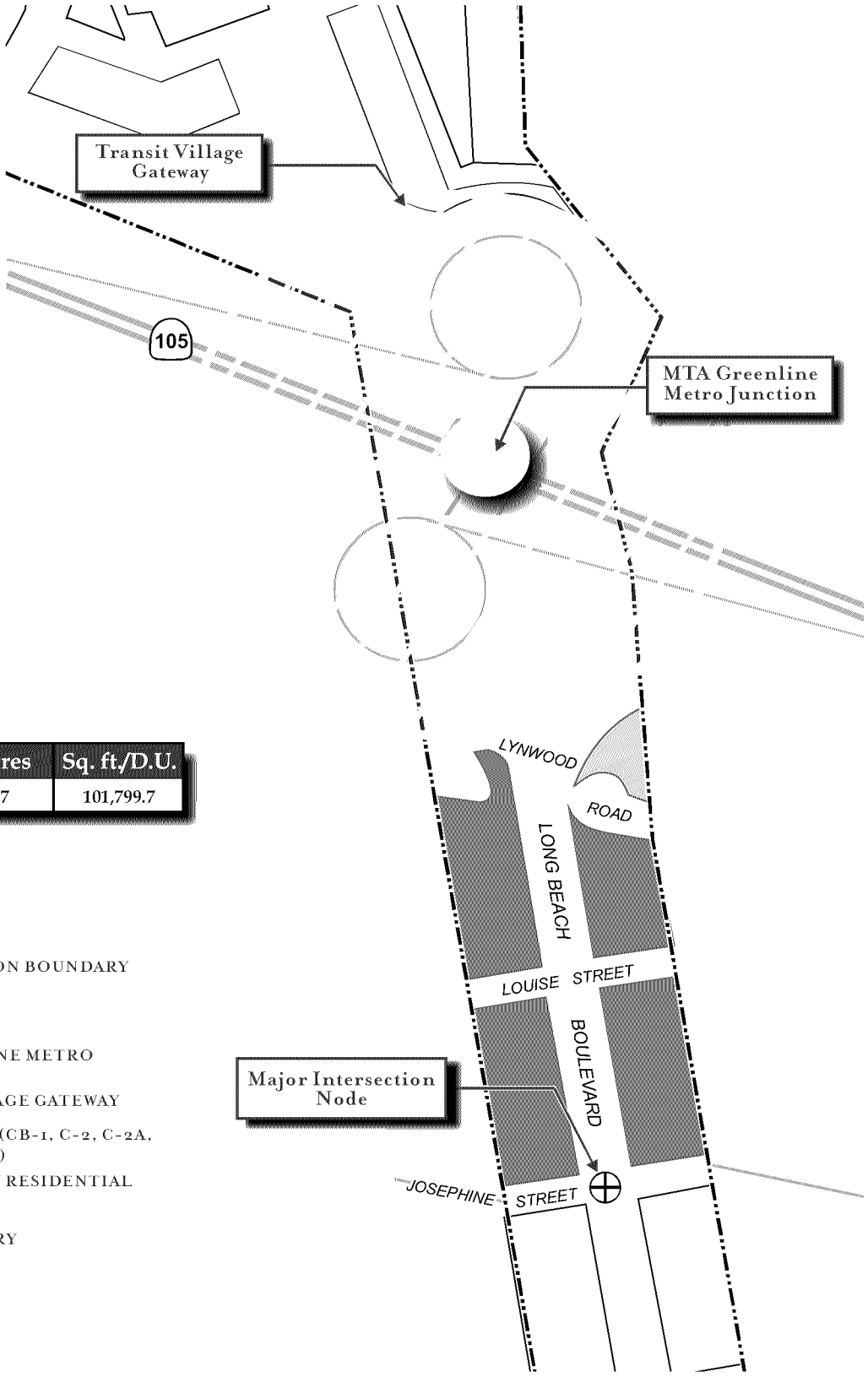
- REVITILIZATION BOUNDARY
- MAIN STREETS
- MTA GREEN LINE METRO
- TRANSIT VILLAGE GATEWAY
- COMMERCIAL (CB-1, C-2, C-2A, C-3, PCD, HMD)
- SPECIFIC PLAN AREA (SPA)
- MULTI-FAMILY RESIDENTIAL (R-3 & PRD)
- CITY BOUNDARY

N

0 350 700
FEET

Figure 2.4: Existing Village III-Transit Village Land Use Plan





Land Use	Acres	Sq. ft./D.U.
Commercial	4.7	101,799.7

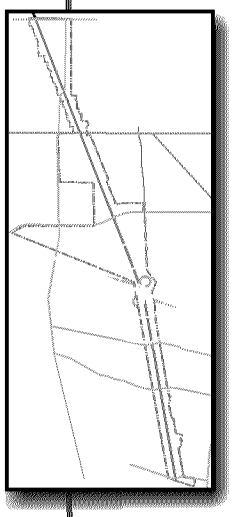
LSA

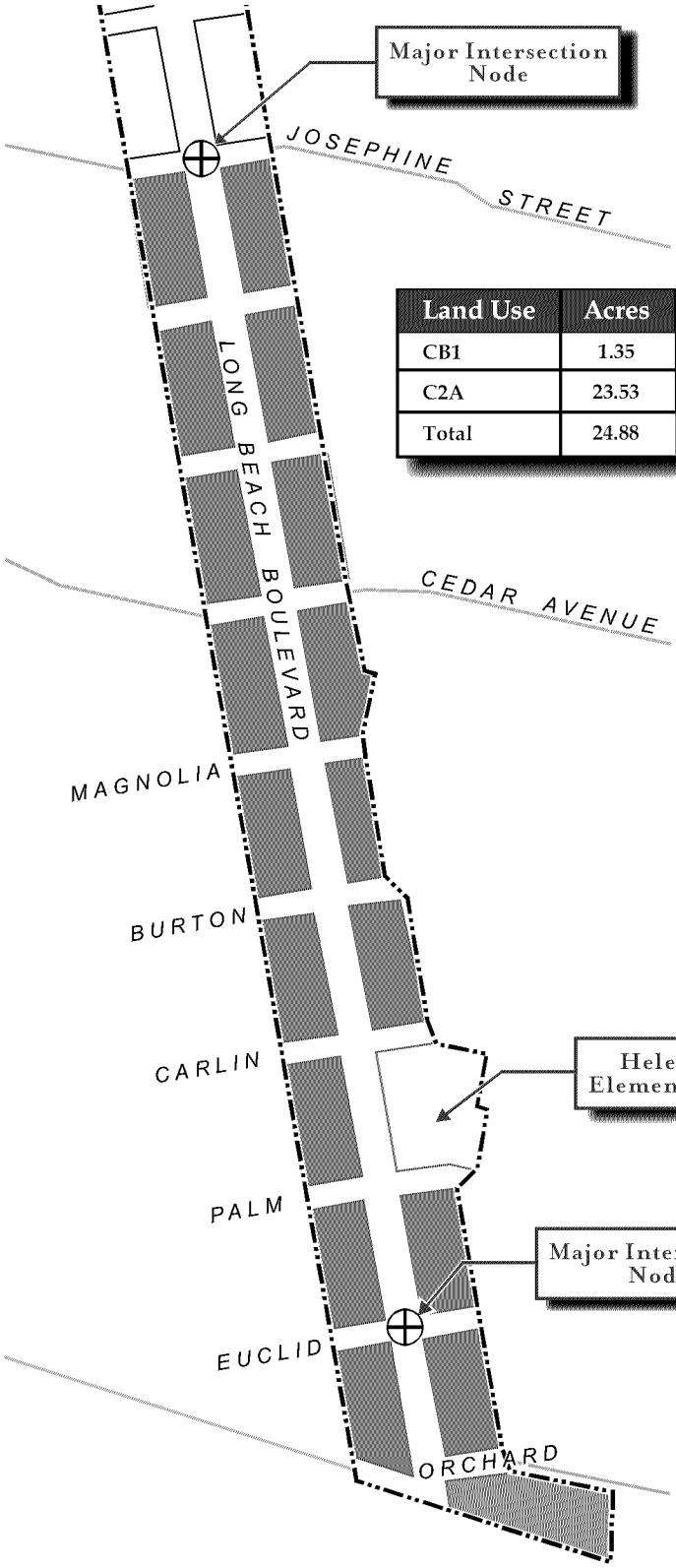
- REVITILIZATION BOUNDARY
- MAIN STREETS
- MTA GREEN LINE METRO
- TRANSIT VILLAGE GATEWAY
- COMMERCIAL (CB-1, C-2, C-2A, C-3, PCD, HMD)
- MULTI-FAMILY RESIDENTIAL (R-3 & PRD)
- CITY BOUNDARY

N

0 150 300
FEET

Figure 2.5: Existing Village IV-Business Village Land Use Plan





Land Use	Acres	Sq. ft./D.U.
CB1	1.35	29,403
C2A	23.53	512,483
Total	24.88	541,886

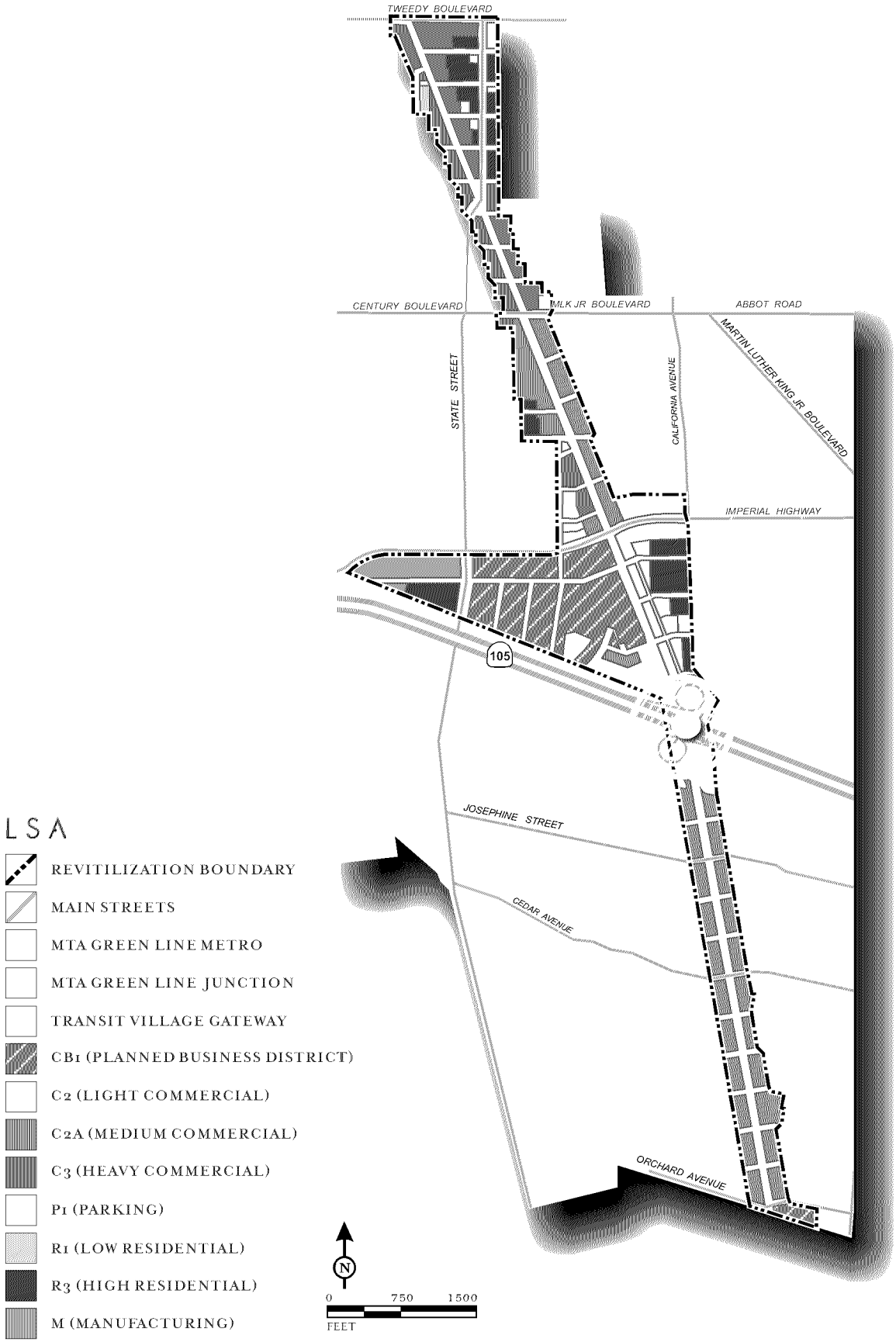
LSA

- REVITILIZATION BOUNDARY
- MAIN STREETS
- COMMERCIAL (CB-1, C-2, C-2A, C-3, PCD, HMD)
- TOWNHOUSE & CLUSTER (R-2)
- PUBLIC FACILITY (SCHOOL, CITY, FIRE)
- CITY BOUNDARY

N

0 250 500
FEET

Figure 2.6: Current Zoning Plan



- **Zone C-2:** Light Commercial is located north of I-105 and accounts for 57 parcels. The Light Commercial (C-2) district provides for a limited range of smaller-scale business activities, which serve the needs of residents who live nearby. Typical businesses include, but are not limited to, food and drug stores, childcare, clothing stores, neighborhood-serving convenience stores, and professional and business offices.
- **Zone C-2A:** One hundred seventy-eight (178) parcels are designated medium commercial zone. This zone accounts for 32 percent of the total project area. The Medium Commercial (C-2A) zone provides for retail centers serving communitywide needs that include, but are not limited to the manufacture of bakery goods; manufacture of ceramic products; manufacture of musical instruments, toys, and novelties; motels and hotels; and places of worship.
- **Zone C-3:** Heavy Commercial is located along Long Beach Boulevard, between Imperial Highway and Tweedy Boulevard to the north. Ninety-two (92) parcels are located within the heavy commercial zone. It provides retail centers that serve communitywide needs and neighborhood needs. The C-3 zone provides for commercial areas that include, but are not limited to, large retail uses such as big-box stores, furniture stores, and appliance and home electronics retailers; movie theaters; service commercial businesses; professional business offices; and restaurants. It also provides for a wide range of smaller-scale business activities, which serve the needs of residents who live nearby. Typical businesses include but are not limited to, food and drug stores, childcare, clothing stores, and neighborhood-serving convenience stores.

- *Residential Zones*
  - **Zone R-1:** Single-family residential is located within one block (total of six parcels) between Wisconsin and Michigan Avenues. R-1 densities may range up to 7 units per gross acre.
  - **Zone R-3:** Multifamily is located north of I-105, mostly on the west side of Long Beach Boulevard with 115 parcels (20.7% of project area). The High Residential density allows multifamily developments of apartments, condominiums, town homes, stacked flats, single-family attached units, and multistory senior housing. This designation is designed to serve as a transition from single-family to commercial and industrial land uses. Densities may range up to 18 units per gross acre (maximum of 1 unit per 2,420 square feet of gross property area).
- *Manufacturing Zone*
  - **Zone M:** Manufacturing is located between Imperial Highway and I-105, west of State Street, accounting for 16 parcels or 3 percent of the total number in the planning area. All of the parcels fall under the SPA overlay from the City's General Plan Map.

- *Specific Plans*
  - **Zone SPA:** The Specific Plan Area is a land use designation on the City's General Plan Map that is intended to allow for a mix of residential and commercial land uses. Residential density shall be the same as allowed under the R-3 designation, and commercial intensity shall follow what is specified for the Commercial designations. This SPA overlay covers current commercial, manufacturing and multifamily designations.
- *Parking District*
  - **Zone P-1:** The Parking district may be combined with all other zones within the City and shall be applied in conformance with a plot or site plan approved as part of any application for discretionary approval or to any municipal or district parking lots established within the City. Uses permitted include off-street parking lots, parking structures, and accessory and sign uses as permitted in the zone with which the P-1 Zone is combined. Outside displays are prohibited.
- *Mixed Uses*
  - Residential intensity shall be the same as allowed under the R-3 designations. The commercial intensity shall comply with that specified for the Commercial designations.

The following zoning designations do not currently exist within the project area: Residential Two Family (R-2) and Hospital/Medical/Dental Zone (HMD).

There are some inconsistencies between the City's General Plan and Zoning Plan. There are also some inconsistencies between current property type uses and the current zoning. There are a few parcels within the project area that are either partly in the project boundary or are split between two to three different zoning designations. Property types were taken from the online Los Angeles County Assessor map website. Table 2.C shows how each zone is further organized by property type.

2.3 DEMOGRAPHIC ANALYSIS

2.3.1 POPULATION

The population for the City of Lynwood in 2000 was 69,899 (U.S. Census 2000) and housing units totaled 14,987. Average density for *population* in the City is 13,980 residents per square mile and the average density for *housing units* is 3,090 per square mile.

The Hispanic/Latino population is the largest group at 33,606 (82 %). The white population is 1,116 (3%), the black/African American population is 4,442 (14%), and the other population, including the Asian and Pacific Islander and multi-racial populations, is 768 (1%).

2.3.2 HOUSING TENURE

Renter occupancy is more prevalent than home ownership in the project area. According to Assessor's data, 121 parcels or 22 percent of the total in the planning area are identified as residential, of which 115 are zoned multifamily.

Table 2.C – Zoning and Property Type

Zoning Designation	Total Acres	# of Parcels	Property Type for Parcels					
			SFR	MFR	Com/Indus	Vacant	Other	Blank
R-1: Single Family	0.537	6	6	0	0	0	0	0
R-2: Multifamily	17.565	115	36	65	2	6	5	0
P-1: Parking	4.967	29	8	14	1	3	2	0
CB-1: Planned Business	32.662	70	0	0	20	34	7	9
C-2: Light Commercial	11.249	50	3	2	41	3	3	0
C-2A: Medium Commercial	44.324	178	27	17	103	17	4	9
C-3: Heavy Commercial	20.443	92	1	7	74	7	1	3
M: Manufacturing	6.220	16	1	1	13	1	0	0
TOTAL	**137.967**	**556**	**82**	**106**	**254**	**71**	**22**	**21**

This information on the tenure of parcels in the project area corresponds with data available from the U.S. Census. According to Census data, the tracts that fall within the project area contain 8,105 housing units that are occupied by owners or renters (96%), and 337 housing units that are vacant (4%). Of the total number of occupied housing units, approximately 38 percent are owner-occupied. See Table 2.D.

Table 2.D – Housing Tenure

Total Number of Housing Units	Owner-Occupied	Renter-Occupied
8,105	3,075	5,030
100%	38%	62%

2.3.3 Economics

The local market in Lynwood is generally composed of households with low to moderate income with a significant incidence of Hispanic families. The City's median household income was $ 35,888 in 1999 dollars (U.S. Census 2000).

The total workforce living in the City of Lynwood is 20,272 (U.S. Census 2000). The Census tracts surrounding the Project area have a median household income of $34,110 with about 13,344 people in the labor force. About 40 percent (7,693) of population age 25 and older have less than 9th grade education level, which typically corresponds to low-income employment or unemployment.

2.4 SITE CONSTRAINTS

2.4.1 Block Depth

Most of the parcels located within the project area lack adequate depth. Some parcels have irregular and/or un-developable shapes. A typical parcel along Long Beach Boulevard is 140 feet deep and 50 feet wide; however, the depth of a parcel along Long Beach Boulevard can be as small as 72 feet.

This old building has incoherent exteriors and an unattractive roof fence.

2.4.2 BUILT STOCK

The project area has 10,578 standing structures, of which 2,764 (26%) contain 3 to 9 units. About 66 percent of the structures in the project area were built between 1940 and 1969, and roughly only 3 percent are less than 15 years old. The great number of older structures represents an enormous challenge in updating building façades to create a compatible and fluid street character.

Inadequate pedestrian crosswalks; no stripped crosswalk.

2.4.3 SIDEWALKS

There is a significant lack of good sidewalks in the project area. Existing sidewalks are unsafe, deteriorated, and end abruptly. They lack landscaping and other sidewalk elements.

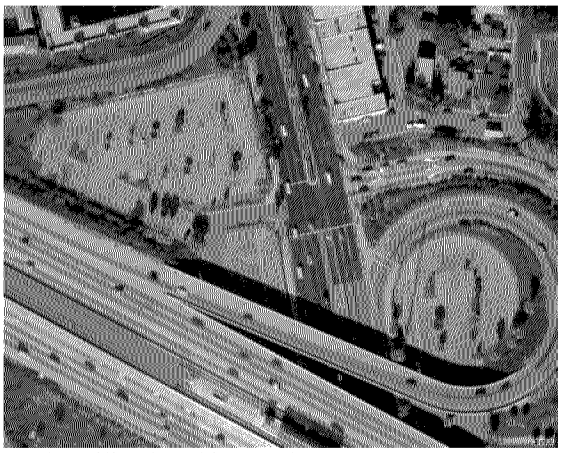
2.4.4 PARKING

Long Beach Boulevard has a lack of parking along the northern portion of the corridor and a surplus of parking around the freeway.

One of the other issues facing the users of the businesses and services in the Project area is that parking spaces are not necessarily located near the uses.

The City has identified that the current parking spaces are inadequate at most places. This is the case with strip malls located at the major intersections, such as Imperial Highway, and mid-block businesses along Long Beach Boulevard.

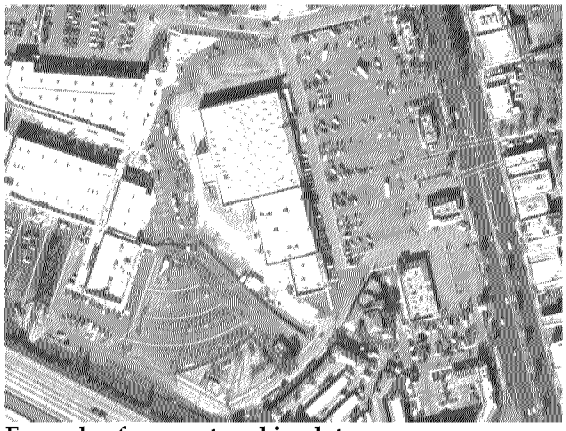
Paradoxically, parking under the part cloverleaf and under I-105 is only marginally utilized at most times. There is huge number of parking spaces available at the transit station as seen in the aerial photograph below.



Underutilized parking under I-105.

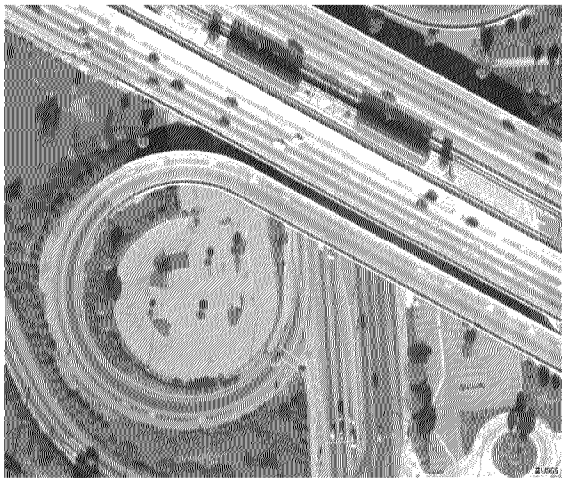
Underutilized parking exists, particularly in the designated parking lots under I-105 for the MTA ridership, which are

currently untenanted resulting in concern for public safety and constraints within the Specific Plan development. Another underutilized parking lot is just north of Pluma Street on the west side of Long Beach Boulevard. The parking lot serves a relatively large shopping center, but has many vacant spots. An aerial view of a parking lot north of I-105 and west of Court Street shows it to be completely empty as seen in the picture below.



Example of a vacant parking lot.

It is envisaged that the implementation of this Specific Plan will result in frequent use of the parking lot under I-105 and other lots due to the increase in development.



This aerial photograph of the parking lot below the freeway illustrates the typical underutilized conditions near the intersection.

2.4.5 Social Problems

Graffiti and litter are found throughout the project area. This seems to relate to the location of liquor stores, pawn shops, low-budget motels, and cash checking stores. There is a moderate to high amount of prostitution, theft, disorderly conduct, vagrancy, non-aggravated assaults, and drug activity within the City and the project area.

Graffiti on a storefront.

2.4.6 Transit Access

Access to the transit stop is not at grade and has poor design-lighting and visibility. There are psychological and real barriers to "walkability" as Long Beach Boulevard is a wide, busy road with an incomplete sidewalk network.

Pedestrian crossing and off-ramp.

Transit station and the freeway overpass view from Long Beach Boulevard.

Parking and access to the Green Line located under I-105.

Transit Station Crime and Safety. A 1997 study[1] conducted by UCLA professor, Anastasia Loukaitou Sideris, et al. looked at the incidence of crime on the Green Line and some of the factors related to the physical layout and access to the stations. Along the Green Line, the Long Beach Transit Station has the second-highest incidences of crimes including petty theft, disorderly conduct, vagrancy, non-aggravated assaults, drug violations, but not serious crimes such as murder. The report also showed the locations of crimes committed within the stations. For Long Beach (Lynwood), 30 crimes were committed at the elevator/stairs, 19 on the platform, and 10 occurred in the parking lot. According to this study, the main influencing factors for high crime were the following:

- Minimal visibility from their surroundings.
- Long walking time from the parking lot to the platform.
- Large parking lots with no pedestrian activity.
- Dark, desolate parking areas under the freeway.
- Poor maintenance and abundance of graffiti and litter.
- Close proximity to certain land uses (bars, liquor stores, taverns, check cashing stores).
- Having only residential uses in the station neighborhood.
- Neighborhoods with littered sidewalks and deteriorating building stock.
- High population density in the station neighborhood (9,352 population).
- Overcrowding (average of 4.6 persons per household).
- Low-income neighborhoods (39% with income less than $25,000).
- Higher concentration of youths (49% of population 24 years and under).
- Higher percentage of population with less than high school education (20%).

The report also identified conditions to help mitigate the area's crime rate:

[1] "The Geography of Transit Crime: Documentation and Evaluation of Crime Incidence on and around the Green Line Stations in Los Angeles."

- Appropriate station and parking lot design with no entrapment spots or hiding places.
- Smaller, well-lit lots that integrate well to the surrounding area.
- Open convenience stores and ticket machines in the parking lot.
- Use of graffiti and vandal-resistant materials.
- Good maintenance, cleanliness, well-kept area.
- Mixed use with office or light industrial uses.
- Surveillance and security guards/ police.
- Security Audit by transit authorities.
- Adequate lighting.
- Good building stock.

2.5 TRANSPORTATION

The existing transportation system in the City of Lynwood includes regional and local connections.

2.5.1 THE CIRCULATION NETWORK

Regional and national access to the City of Lynwood is provided by I-105 and the Long Beach Freeway (I-710). The major arterial street layout in Lynwood supports the regional access from the adjacent freeways. Similar to a typical grid pattern, arterial streets run north/south and east/west. The arterials are typically paved to 50 feet within an 80-foot right-of-way but may expand paved to 70 feet within a 100-foot right-of-way.

The Specific Plan Area lies along Long Beach Boulevard, which runs north and south through the center portion of the City. It is one of the key arterials in the City and provides six to four lanes of travel. Additional key arterials include Martin Luther King Jr. Boulevard, Imperial Highway, Alameda Street, and Atlantic Avenue.

2.5.2 THE TRANSIT NETWORK

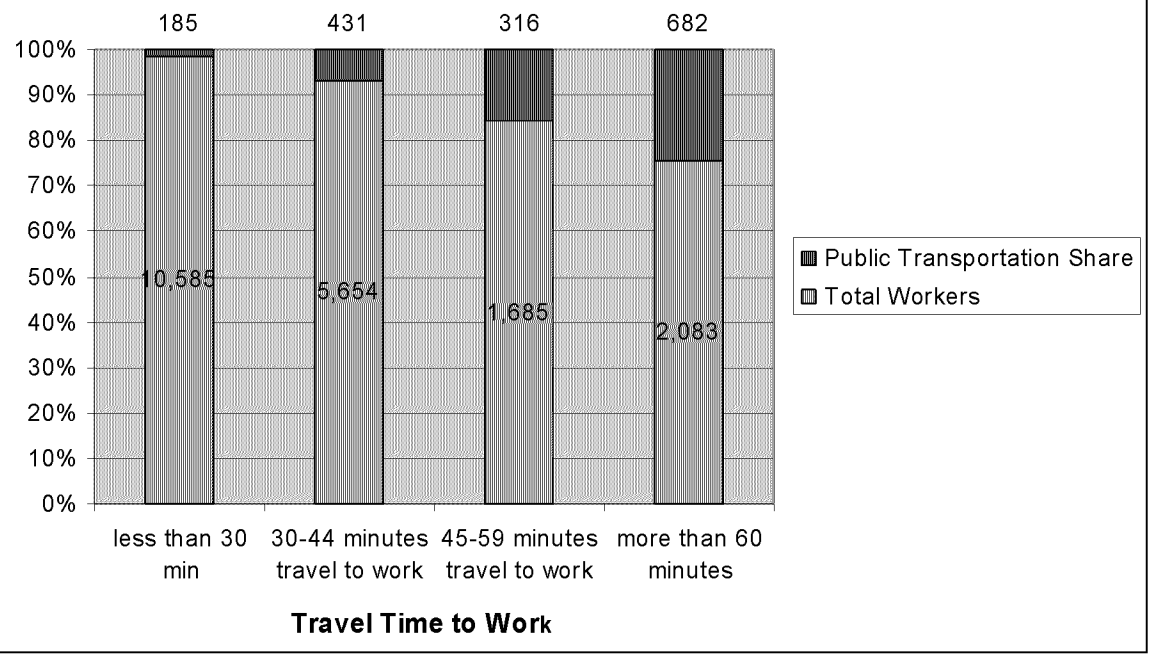
The City of Lynwood has three major components of transit service: The Metro Green Line, Metro Bus Lines, and local trolley and Dial-a-Ride.

The Metro Green Line is a light rail that starts west of Studebaker Road in Norwalk and covers about 17 miles along the median of I-105. It has 14 existing stations and serves Los Angeles, Los Angeles International Airport (LAX), Hawthorne, El Segundo, Norwalk, Downey, Lynwood, Redondo Beach, Inglewood, and connects to the Metro Blue Line (which travels from Long Beach to Downtown Los Angeles).

The Metro Buses in the City of Lynwood service around 26 communities in southeast Los Angeles County. The following routes intercept the City of Lynwood and provide regional service for residents and visitors of the community.

- **Line 60:** Travels from Downtown Los Angeles to Downtown Long Beach and operates 24 hours per day.
- **Line 251:** Avenue 26 and North Figueroa Street, connects to Cypress Park and Lincoln Heights.
- **Line 622:** Aviation Green Line Station. Service in early a.m. only.

Figure 2.7: **Public Transportation use with travel time**



- **Line 360:** Connects to downtown Los Angeles Monday through Friday. Service during rush hour is limited.
- **Line 751:** Connects the City of Lynwood to Lincoln Heights.
- **Line 252:** Provides connection to Boyle Heights and the City of Lynwood; stop is located at Soto and Marengo.

Local service in the City of Lynwood includes a Dial-a-Ride system and the Lynwood Trolley Company. The trolley includes four routes that service residential and local business areas:

- Route A referred to as the central loop;
- Route B covers the eastern area of the City;
- Route C services the outer loop; and
- Route D includes the Imperial Highway segment.

2.5.3 Current Modes of Transportation

Travel time to work and the use of public transportation is best illustrated in Figure 2.7 based on data from U.S. Census 2000. As the travel time increases (distance from Lynwood), the reliance on public transportation is higher, with the caveat that it takes more travel time to use transit if one is working near downtown Los Angeles. A total of 1,614 (8%) of the 20,007 workers (who work outside the home) use some mode of public transportation.

In the Census tracts surrounding the project site, 9 percent of the residents use public transportation, as seen in Table 2.E. Of the total public transit users, 4 percent use the rail system and 94 percent use the bus or trolley bus.

Table 2.E – Means of Transportation To Work

Mode of Transportation	Amount	Percentage
Vehicle	9,386	85%
Motorcycle	14	< 1%
Public Transportation	950	9%
Bicycle	64	1%
Walk	343	3%
Other Means	118	1%
Work at Home	157	1%
TOTAL	**11,032**	**100%**

2.5.4 Street Character

Long Beach Boulevard is primarily a north-south orientation. Traffic is heavy and pedestrian safety is limited. The Boulevard can be described as inconsistent in its physical appearance.

An example of newer development along Long Beach Boulevard.

Several areas combine newer developments with older segments and the difference is striking.

Existing pedestrian crossings are sparse, making it difficult for individuals to cross Long Beach Boulevard due to the distance between crossings and existing light protection.

An example of an older segment of the Boulevard.

Mature street trees exist along sections of the Long Beach Boulevard project site. In addition, there are medians with various and/or little vegetation. Medians within the project site exist primarily around areas closest to I-105 off-ramps.

2.6 PUBLIC INFRA-STRUCTURE

2.6.1 Streets, Lighting, and Public Landscape

Long Beach Boulevard lacks consistent median design, public landscape, and lighting along the corridor. The island median seen in the following picture occurs between I-105 and Martin Luther King Jr. Boulevard. There are no island medians between Beachwood and Oakwood Avenue.

Existing median conditions, just north of I-105 approaching Martin Luther King Jr. Boulevard.

Existing streetscape with uniform lighting that is auto-oriented and not pedestrian-friendly.

Located along the northern portion of Long Beach Boulevard, this block shows no landscaping.

There is no landscape buffer between the parking lot and the sidewalk. The small palm tree seems misplaced and awkward.

South of I-105, the island median is consistent from the off-ramp to Burton Avenue.

Streetlights along Long Beach Boulevard are consistent and spaced well; however, they are not scaled to pedestrians or the numerous one-story buildings.

Landscape along most of the Boulevard includes various plant palettes, but there are no consistent themes along the sidewalks. There are good examples that exist where landscape is used to separate properties, offer a buffer between parking lots and the sidewalk, or as corner treatments. A few areas have either used landscape in a detracting manner or lack landscaping.

2.6.2 Gas and Electricity

Electricity is provided to the project area by Southern California Edison. The electric supply is sufficient to service the future needs of the City.

The Southern California Gas Company supplies natural gas to the project area through a fixed transmission and distribution area. Several major natural gas mains pass through Lynwood.

Available natural gas supplies are sufficient to meet the existing needs of the proposed project.

2.6.3 Storm Drainage and Sewer

Sewage disposal service is provided to the project area by the City of Lynwood Public Works Department. City lines carry sewage to Los Angeles County trunk lines, which transport sewage to the Joint Water Pollution Control Plant in the City of Carson. Most of the properties in the City are served by sewer. The only area on septic tanks is the industrial area located north of I-105 and west of Long Beach Boulevard.

The City's storm drain system consists of five major north to south drainage facilities. These include the following:

- The State Street system serves the drainage area generally west of Long Beach Boulevard.
- The Bullis Street system drains the area generally east of Long Beach Boulevard and several blocks east of Bullis Road.
- The eastern system consists of three drains that cut from the northwest to the southeast and enter the Los Angeles River.

2.6.4 Water Supply

The water supply to the project area is provided by the City of Lynwood Public Services Department and Park Water Co. The primary source of water comes from groundwater aquifers. The City owns and operates six active wells and one 3 million-gallon reservoir. In addition, there is a 16-inch Metropolitan Water District (MWD) feeder to the reservoir. According to the City's General Plan, the City pumps about 5,500 acre-feet per year from the MWD feeder line. When the reservoir falls to four feet, the MWD feeder automatically activates. Water lines are located throughout the City ranging from 6 to 16 inches in diameter. As of 2002, the City was found to have had an adequate water supply to serve its population.

2.6.5 Cable, Internet, and Telephone

Telephone service to the project area is provided by SBC, now joined with AT&T. SBC|AT&T coordinates the installation of its facilities with other utility companies in order to run its cables alongside other company lines in the same trench or on the same pole. Unless a plant facility is needed, SBC|AT&T will provide the funds to supply telephone service to the site directly, or a reimbursement agreement with the developer will be prepared. The City requires that all new improvements be placed underground. SBC|AT&T also has the ability to provide high-speed Internet access for computers using lines to a fiber-optic network.

Long-distance telephone service to the project area is offered by SBC|AT&T, as well as MCI, U.S. Sprint and other competing companies.

AT&T Broadband, AT&T|DISH Network, and AT&T Yahoo! provide television service to the project area by cable and satellite. AT&T has lines extended throughout the area, and service extensions are provided as development occurs.

2.7 MARKET CONDITIONS

2.7.1 EMPLOYMENT AND POPULATION GROWTH

Employment growth in Lynwood is forecast to exceed household growth by a slim margin, maintaining a healthy jobs-housing balance. Over the next 20 years, the City's population will increase by approximately 6,477 new residents (9%), while the employment growth increases by 2,656 new jobs (18%). The growth rates for the City are lower than Los Angeles County as a whole, suggesting a slow-growth development for housing; however, employment growth shows the City is only 4.4 percent behind the County. These figures suggest that the City needs a wide range of housing types to attract the local workers to find residence within the city limits. See Table 2.F.

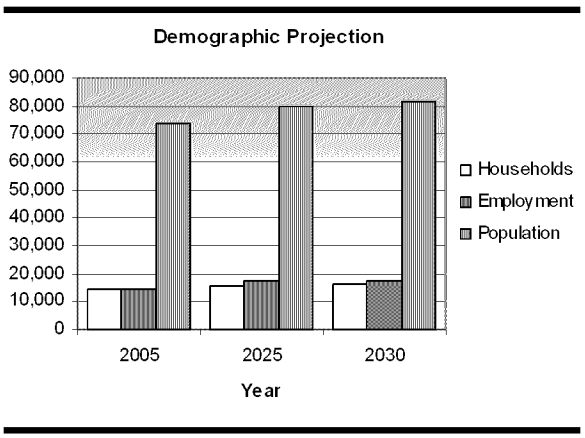
2.7.2 REAL ESTATE

There is a strong need for redevelopment in Lynwood due to numerous old buildings, run-down shopping centers, and discontinuous and disjointed development. Existing and proposed retail shopping centers are likely to meet current demand as well as additional demand in the foreseeable future term. Overall, the area is not competitively located with regard to the development of a regional serving retail center. Future commercial retail and mixed-use developments will likely serve the local residents, nearby employees, and commuters.

Table 2.F – Demographic Projections

Year	Population	Households	Jobs
2000	70,161	14,406	14,416
2005	73,544	14,517	14,561
2010	75,067	14,688	16,052
2015	76,755	15,085	16,467
2020	78,424	15,489	16,863
2025	80,021	15,893	17,217
2030	81,551	16,298	17,535

Source: 2004 RTP Growth Forecast-SCAG



3.0 LAND USE PLAN

3.1 INTRODUCTION

Long Beach Boulevard is a regional corridor starting in Los Angeles, passing through South Gate, Lynwood, Compton, Paramount, Carson and ending in Long Beach. The future of Long Beach Boulevard in Lynwood is envisioned as a viable mixed use, medium-intensity corridor within the region as well as a downtown main street for the City.

The focus of the land use plan is to make efficient use of the land and promote and utilize the MTA Green Line Metro station, while creating an aesthetically pleasing built form and improving the safety and vitality of Lynwood. The land use plan provides for the retention, protection, and commercial use of existing structures with a variety of community-serving uses within the Long Beach Boulevard area.

The proposed land uses, development standards, and design guidelines are intended to be tools for transition of the Boulevard from a well used but physically run-down strip to a vibrant, community-serving commercial center surrounded by a mix of uses. These employment-generating uses have been designed to capitalize on the site's proximity to the MTA Green Line Metro station.

Long Beach Boulevard provides the opportunity for rapid public commuter transportation to accommodate residents of all income levels, and a mix of land uses and intensity supported by a thriving, dense community in the region.

3.2 PROJECT GOALS & OBJECTIVES

The primary goal of the project is to create a revitalized medium-intensity corridor that functions as a downtown for the City.

The following objectives underlie the land use concept plan:

- To capture regional traffic along Long Beach Boulevard and link with surrounding neighborhoods by creating an attractive mixed-use development that is as a destination as well as a neighborhood-serving complex.
- To apply principles of transit-oriented development to the central portion of project area.
- To develop the Boulevard with a streetscape design theme that creates a sense of place and positive identity.
- To provide attractive public spaces to serve visitors and residents.
- To develop a street design with pedestrian paths and bike paths that contributes to a system of fully connected network.
- To encourage the presence of people in public spaces at most times for safety and vitality.
- To instill the "town center" as a venue for special community events as a means of generating continued interest in the businesses and housing opportunities located here.
- To provide a framework for approval of incremental development projects on a single concept plan that offers

defined ranges of flexibility to accommodate market changes.

- To let the market shape conducive development with varying mixed-uses.
- To accomplish the balance between development guidance and flexibility responding to the opportunities related to this site through the adoption of a specific plan.

3.3 PROJECT POLICIES

The Long Beach Boulevard Specific Plan establishes a land use plan and framework of standards and guidelines for the purpose of revitalization of the corridor. This Specific Plan approaches the Boulevard as an entity that is part of a larger corridor as well as its desired function as a downtown for the City of Lynwood.

Five major policies that are the guidance to revitalize the corridor are:

1. Establishment of four villages with distinct functions and focus;
2. Transit-oriented development around Metro Green Line
3. Combination of land uses, particularly mixed uses;
4. Strong architectural and landscape character; and
5. Pedestrian connectivity to transit.

3.3.1 ESTABLISHMENT OF VILLAGES

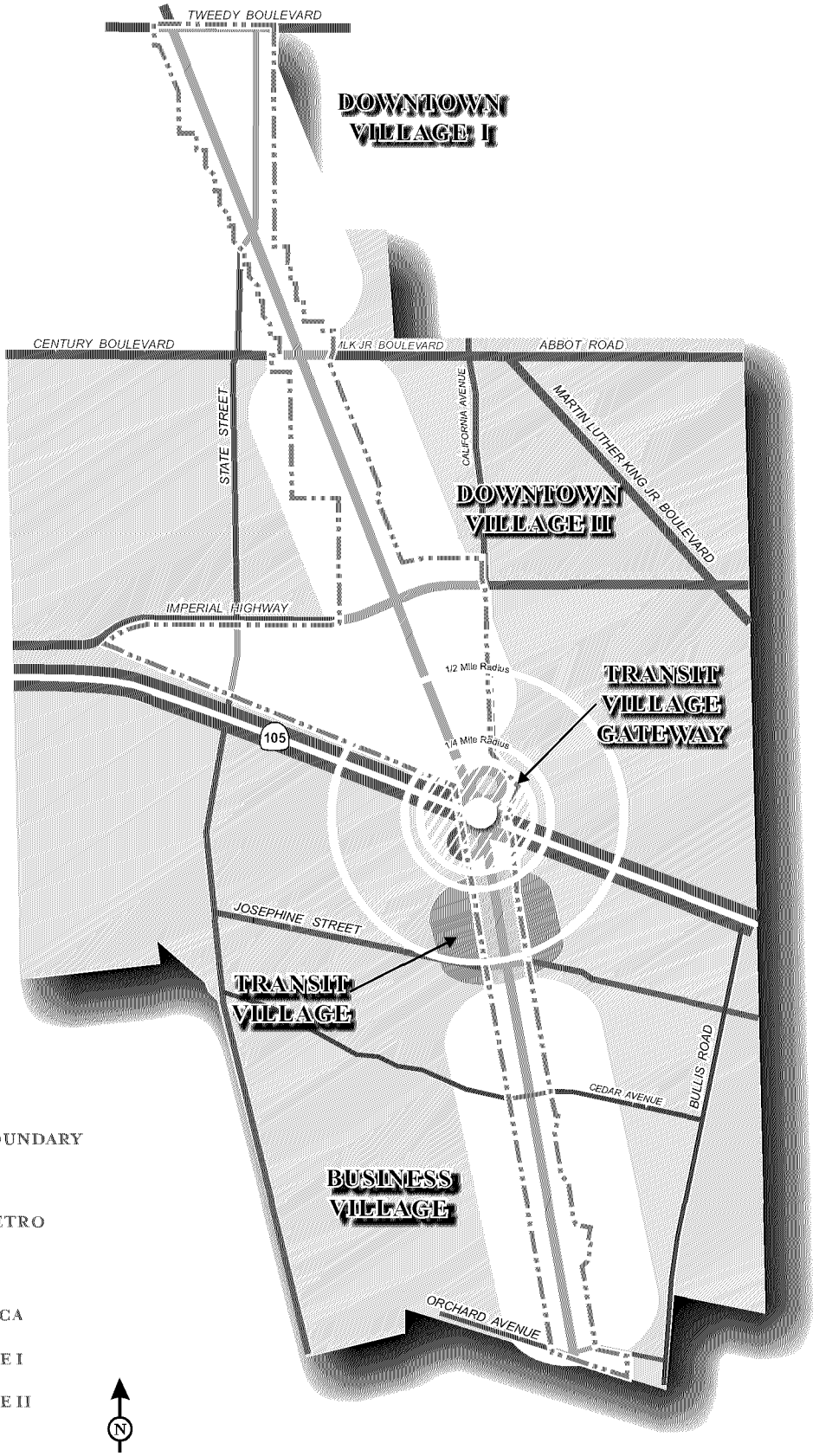
The proposed land use plan arranges the 2.3-mile long Boulevard into four villages based on the existing land uses, major transportation corridors, and TOD radius size. Figure 3.1, Conceptual Village Location Plan illustrates the four distinct villages and their relationship to I-105.

The proposed Downtown Village I, covering 27 acres, is aimed at supporting the numerous existing small businesses between Tweedy Boulevard and Martin Luther King Jr. Boulevard. No changes in the land uses are proposed in this village; however, the architectural and landscape design guidelines will guide the developments in this village. The existing small businesses are part of the local economy and cater to regular/daily retail needs of the community. At all times, it is a vibrant area with heavy movement of people and vehicles. It is clearly an important part of the City's small business economy.

Plaza Mexico has many pedestrian-friendly elements such as scaled-down lighting, landscape, fountains, and proper signage.

Proposed Downtown Village II–Mixed-Use Village is a key area between Martin Luther King Jr. Boulevard and the interchange of I-105 and Long Beach Boulevard. This 81-acre village underwent major change with the addition of Plaza Mexico, a 36-acre, retail development set within open air plazas with Mexican themes and catering to the demand in the region. The proposed mixed-use district over the Specific Plan Area (see the

Figure 3.1: Conceptual Village Location Plan



LSA

- REVITILIZATION BOUNDARY
- MAIN STREETS
- MTA GREEN LINE METRO
- TRANSIT VILLAGE GATEWAY
- CITY OF LYNWOOD, CA
- DOWNTOWN VILLAGE I
- DOWNTOWN VILLAGE II
- TRANSIT VILLAGE
- BUSINESS VILLAGE

General Plan map) establishes the mixed-use focus for the City with emphasis on walkability and a combination of retail, office, civic, and residential uses set amidst a pedestrian-oriented layout. The development standards for this village provide for the creation of an internal "Main Street." The development envisaged in this village provides for ground-level pedestrian-oriented businesses and second level/third level offices or residential units. This would create a highly livable district with convenience of the transit nearby. The synergy created by the land use mix within Village II is aimed to reinforce the use of the MTA Metro Green Line on I-105 and Long Beach Boulevard.

Village III–Transit Village at the south of the intersection of I-105 and Long Beach Boulevard is set within the 0.5-mile radius of the Metro Green Line station and comprises approximately 5 acres. The land uses envisioned in this village are supportive of the transit station. They include childcare facilities, a library, and clinics among other uses that have a natural synergy with the transit needs. The Specific Plan proposes that transit-serving and neighborhood-serving commercial uses be a priority in this village.

The proposed architectural and landscape design guidelines for Downtown Village II–Mixed-Use Village and Village III-Transit Village are consistent. Visually, these two villages will establish continuity along the intersection of I-105 with Long Beach Boulevard. TOD criteria guide the establishment of standards in Village II and Village III.

Village IV–Business Village, at the southernmost end of the Specific Plan area, covers approximately 25 acres. The existing medium commercial zone north of Burton Avenue and south of Josephine Street is proposed as a mixed-use land use with retail and commercial uses.

Live/work mixed use developments are envisioned south of Burton Avenue and north of Orchard Avenue. The introduction of these developments will bring business and professionals who need work space and housing in close proximity to Long Beach Boulevard, I-105, and the Metro Green Line station. This district implements live/work development guidelines for this village.

The architectural and landscape design guidelines are intended to propel a conscious development for attracting small professional offices that would revitalize this part of Long Beach Boulevard.

3.3.2 Transit-Oriented Development (TOD)

California State Department of Transportation defines TOD as a moderate to higher density development, located within an easy walk of any major transit stop, generally with a mix of residential, employment, and shopping opportunities designed for pedestrians without excluding the automobile. TOD can be new construction or redevelopment of one of more buildings whose design and orientation facilitate transit use.

As described in Chapter 1.0, the salient features of transit oriented development are mixed-use projects with higher intensity and pedestrian and bicycle connectivity. Such development encourages an appropriate mixture and density of activity around the transportation center, and promotes alternative modes of transportation. It

decreases automobile-dependency and mitigates the effects of congestion and pollution.

Transit-oriented development assists in achieving the following:

- Encourages people to walk, ride a bicycle, or use transit;
- Allows for a mix of uses to create an environment that engages people at the pedestrian scale;
- Achieves a compact pattern of development that is more conducive to walking and bicycling;
- Provides a high level of amenities such as attractive landscaping, benches, bicycle racks, and public art elements that create a comfortable environment for pedestrians, bicyclists, and other users;
- Maintains an adequate level of parking and access for automobiles;
- Creates fine-grained detail in architectural and urban form that provides interest and complexity at the level of the pedestrian and bicyclist;
- Encourages uses that allow safe round-the-clock activity around transit stations;
- Provides sufficient density of employees, residents, and recreational users to support transit; and
- Generates a relatively high percentage of trip riders serviceable by transit.

The proposed Downtown Village II and Transit Village around Metro Green Line demonstrate these policies for land uses and architectural and landscape guidelines.

3.3.3 Combination of Land Uses

This is fundamental to the successful development of Long Beach Boulevard as a medium-intensity corridor. Four proposed land use categories are commercial (15.5%), residential (4.9%), public facility (3.1%), and mixed use (76.5%).

Mixed use is the main land use category. In response to the different villages and their focus for future development, mixed use is further defined into two categories. These are:

- Retail/Commercial/Residential; and
- Live/Work.

To better understand the concept, the following section explains the characteristics of these uses, their application, examples, and outcomes related to the mixed use.

1. Retail/Commercial/Residential Mixed Use. Retail/Commercial/Residential mixed use can be utilized for a single building or an entire development over many parcels. Buildings such as older warehouses, big-box stores, industrial buildings, or any underutilized, run-down buildings are key structures to convert to this type of mixed use. Typical mixed-use projects include having a mix of specialty retail, restaurants, cafés, offices, and residential uses. Current examples of mixed-use projects can be found in Long Beach, Brea, Fullerton, Anaheim, Santa Ana, Pasadena, Davis, Emeryville, and Huntington Beach, California. There are over 302 cities/counties in California that have zoning ordinances allowing mixed use.

An important element for designing mixed-use buildings is the public space for

interaction. To foster a safe community setting, the design of the public space along the building entries can be the difference between an uninvolved structure and a fully functioning place where people cross paths and socialize. The layout should shape open spaces such as an atrium, plaza, or courtyard between the buildings along an entry path that encourages casual interaction; places where it is comfortable to have a meal or socialize. Long Beach Boulevard workers and residents would be able to live, work, and shop in the same neighborhood, thereby reducing commute time and pollution, and contributing to community safety as a result of moderately intense uses.

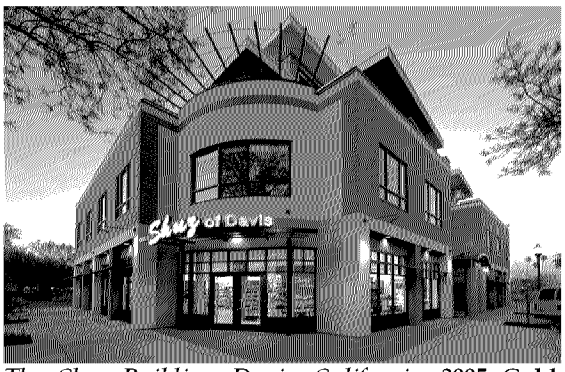
Within mixed use projects, the retail/commercial and residential proportion varies for TOD projects across California. The retail/commercial component is as low as 5 percent in some projects (e.g., Villages of La Mesa-Amaya Trolley Station at La Mesa) to 88 percent (e.g., Gateway Plaza-Union Metro Station at Los Angeles). The residential component varies from 7 percent (e.g., Gateway Plaza-Union Metro Station at Los Angeles) to 91 percent (e.g., the Crossings-San Antonio Caltrans Station at Mountain View).

The retail/commercial/ residential mixed-use areas are planned in Downtown Village II for the blocks between Martin Luther King Jr. Boulevard and I-105. Based on the existing land, it is estimated that there may be up to 81 acres available for this type of mixed use in the Downtown Village II, or roughly 59 percent of the entire Specific Plan area.

The retail/commercial/residential mixed-use areas are also planned in the Transit Village for the blocks between I-105 and Josephine Street, and the upper portion of the Business Village, which will include blocks down to Burton Avenue. Based on the existing land, it is estimated that there may be up to 16 acres available for this type of mixed use in the Transit Village and part of the Business Village or roughly 12 percent of the entire Specific Plan area.

The mixed-use buildings require enhanced attention to architectural quality because of the balance between professional office, retail shopping and housing. The architectural design guidelines explained in Chapter 4.0 provide details on balancing public space necessary for retail with office design.

Current Mixed Use Examples:



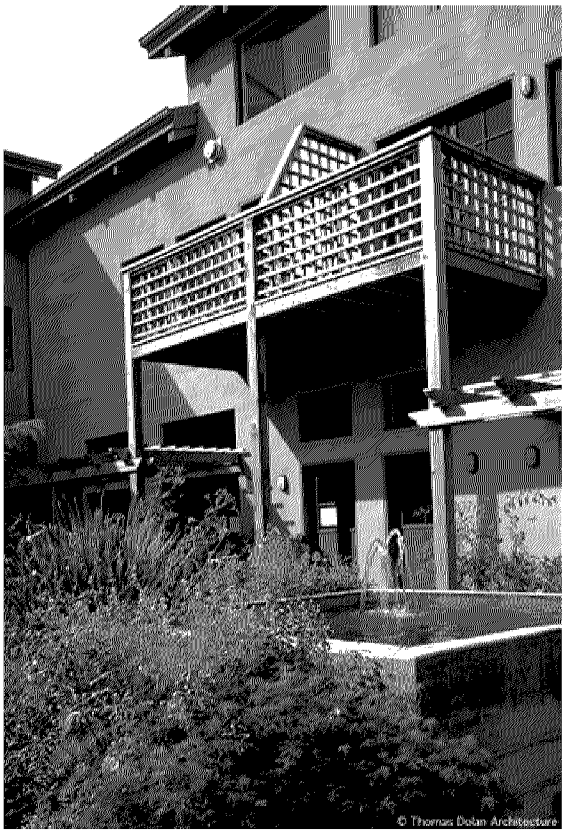
The Chen Building, Davis, California. **2005 Gold Nugget Award Winner for Best Mixed Use Project. Builder: Walsh & Forester, Inc. Developer: Aggie Enterprises, Inc. Architect: McCandless & Associates Architects, Inc. Source: www.goldnuggetawards.com**

A mixed-use building in Santa Ana has a restaurant on the first floor with apartments above. Source: "A Tool Kit for Mixed-Use and In-fill Development for Western Riverside County and Orange County," 2004.

Downtown Fullerton has revitalized historical buildings with a mix of uses next to its transportation center. The City has also utilized surface parking lots in key downtown locations to develop mixed-use luxury apartments and cafes. Source: www.ci.fullerton.ca.us.

***The Prado, Valencia, California.* 2004 Gold Nugget Awards Grand Award for Best Mixed Use Project—Builder/Developer: The Hanover Company. Architect: Thomas P. Cox Architects, Inc. Source: www.goldnuggetawards.com.**

2. Live/Work Units. Live/work units are part of a small-scale mixed-use alternative. In the past, they have been used for small artist and craftsman operations, where the resident has a workshop or studio on the premises. Buildings such as older warehouses, industrial buildings or any underutilized buildings are key structures to convert to a live/work product. Live/work structures can also be designed for middle class professionals. Current examples of live/work units can be found in Long Beach, Pomona, Ontario, Corona, Santa Ana, Newport Beach, Ladera Ranch, and Oakland, California. There are about 84 cities/counties in California that have zoning ordinances allowing live/work (sometimes called artists' lofts) arrangements.



Sample courtyard for live/work units in Oakland. Source: www.live-work.com.

Live/work units can either have a predominant use of residential or commercial activity. If the unit is predominantly residential, then employees and walk-in trade are not usually permitted. The units that are more commercial-oriented may have more noise, odors, or other impacts, as well as employees, walk-in trade, or sales. Designing the common spaces with the unit entries opening onto each other will further increase the opportunities for casual interactions.

Proprietors would be able to live above their shops or offices, thereby reducing commute time and pollution, and adding security round the clock for the local neighborhood.

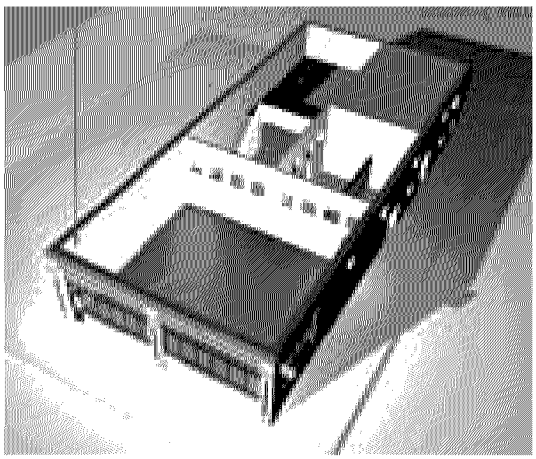
The live/work units are planned in the Business Village for the blocks between Burton Avenue and Orchard Avenue along Long Beach Boulevard, not including the recently constructed Helen Keller Elementary school. Based on the existing block sizes, it is estimated that there may be up to 13 live/work units built per block giving a total of 91 live/work units for the Business Village.

Live/work units also require enhanced attention to architectural quality because of the delicate balance between life and work. The architecture design guidelines are explained in more detail in Chapter 4.0.

Live/work units are finely detailed inside to differentiate the living space and provide parking for unit owners and guests.

Current Live/Work Examples:

East Village Lofts, Santa Ana, California. **Santa Ana Artists Village, an eight-block neighborhood of former urban blight has been transformed into a vibrant downtown community with 40 live/work units using a three-story urban loft style, sold at market prices in 2003. Source: www.goldnuggetawards.com.**



Interplayce, Oakland, California. **The vacant boarded-up 1920s retail building at the ground level has been renovated into a 1,400-square foot dance studio with apartments in the back. New windows glazed with art glass allow daylight into the studio while preserving the dancers' privacy. Source: www.live-work.com.**

3.3.4 Architectural Design and Landscape Guidelines

The architectural character is defined by proposed land use and development standards and its resulting scale and form of structures. Two major architectural styles recommended are Spanish Colonial and Italianate. They are further explained in Chapter 4.0.

Long Beach Boulevard is strongly identified by a unified streetscape design with uniform sidewalk and planting palette. In order to further define villages, major intersections have additional landscape features including sign monuments. Landscape details are provided in Chapter 5.0.

3.3.5 Pedestrian Connectivity and Safety

The sidewalks and crosswalks along Long Beach Boulevard will be improved to provide for a safer and more comfortable pedestrian environment and to establish the conditions conducive to pedestrian-oriented development. Specific intersections have been identified as needing additional crosswalks as illustrated in Figure 3.2 Pedestrian Pathways and Crosswalks.

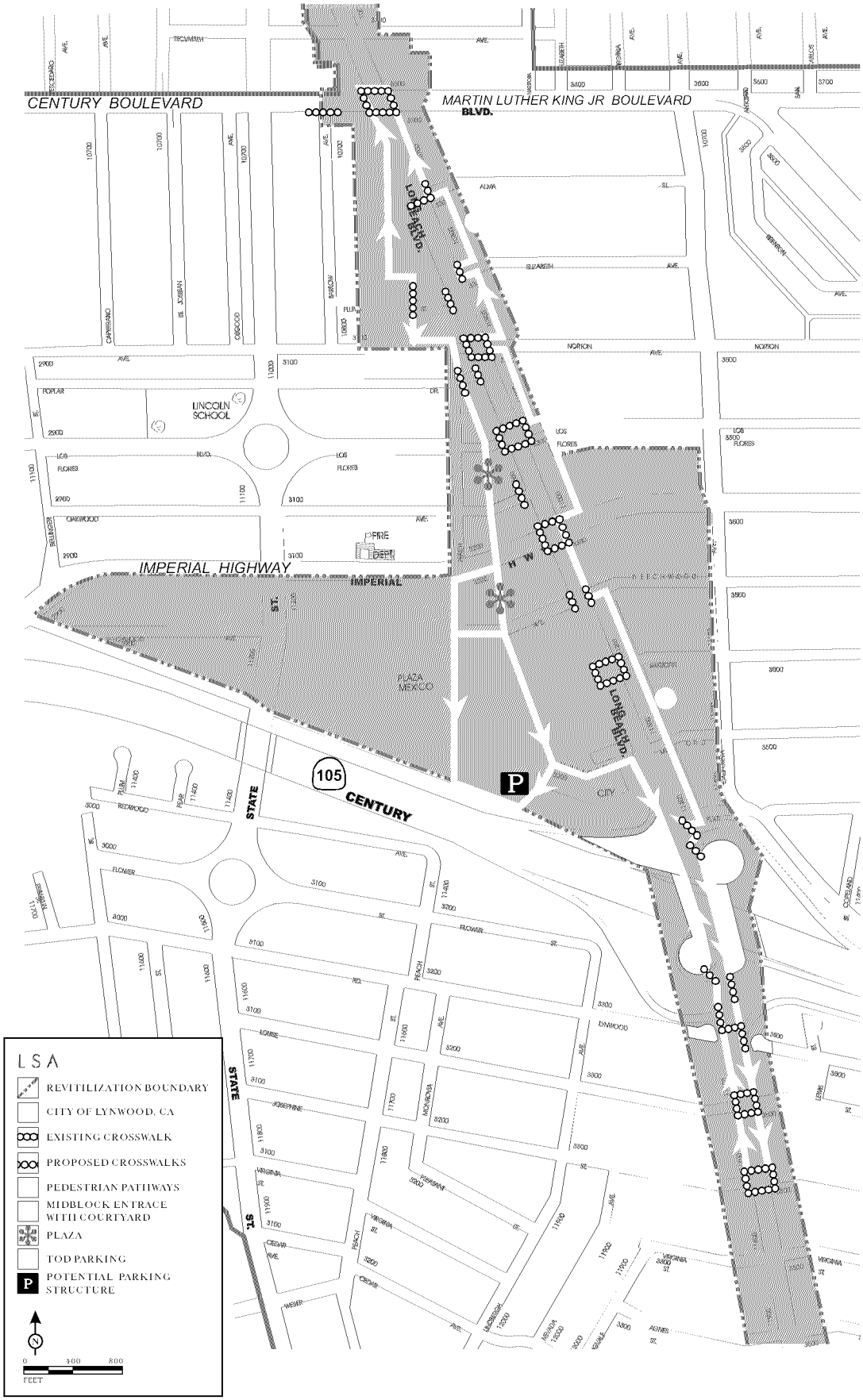
A system of enhanced pedestrian pathways is proposed through the blocks on both sides of Long Beach Boulevard connecting from Martin Luther King Jr. Boulevard to Josephine Street, which, over time, would be improved and developed with more pedestrian-oriented uses. Developments should include the pedestrian pathways with courtyards and/or plazas as identified in Figure 3.2 as conceptual locations for pedestrian paths.

Long Beach Boulevard and its busy intersections should be designed with traffic-calming elements such as traffic-calming circles in the intersections and pedestrian bulb outs at the corners. Chapter 5.0 further defines street elements that ensure pedestrian visibility and safety.

Table 3.A – Proposed Land Use Summary

Proposed Land Use Category	Acres	No. of Parcels	FAR	Square Feet	Maximum DU/AC	Maximum DUs
Commercial	20.22	89	0.5	440,391		
Public (School)	4.29	20				
Sub-Total Commercial/School	**24.51**	**109**		**440,391**		
Single-Family	.54	6			7	4
Multifamily	6.24	47			18	112
Sub-Total Residential	**6.78**	**53**				**116**
Mixed Uses				@ 75% acres for retail/commercial		@ 25% acres for residential
Retail / Commercial / Residential [Village II]	81.40	270	0.7	1,861,537	30	610
Retail / Commercial/Residential [Village III & Village IV]	17.33	72	0.7		30	130
Live / Work [Village IV]	7.93	43				91
Sub-Total Mixed Use	**106.66**	**385**		**2,257,857**		**831**
TOTAL	**137.95**	**547**		**2,698,248**		**947**

Figure 3.2: Pedestrian Pathways and Crosswalks



3.4 PROJECT DESCRIPTION

3.4.1 PROPOSED LAND USE

Two key elements defining the Long Beach Boulevard proposed Land Use Plan are:

1. The combination of land uses, particularly mixed uses; and
2. Strong pedestrian connectivity.

The total project area is 137.6 acres and incorporates about 547 parcels as seen in Table 3.A-Proposed Land Use Summary.

As enumerated in Table 3.A, Proposed Land Use Summary, the land uses are not changed in proposed Downtown Village I.

The proposed land use adheres to the existing land uses, density, and floor area ratio in 22.6 percent (31.3 acres) of the project site. The commercial uses in this portion of the project will generate 440,391 square feet of built space and 116 residential units.

Table 3.A-Proposed Land Use Summary enumerates mixed uses in the villages in the Specific Plan. Mixed uses are proposed for 77.4 percent (106.6 acres) of the project site. The proposed maximum floor area ratio is 0.7 and maximum allowable density for residential ranges is 30 dwelling units per acre.

For the purpose of summary, it is assumed that retail/commercial component will be built for 75 percent of the site and residential for the remaining 25 percent. Thus, 2.25 million square feet of retail/commercial and 831 dwelling units will be generated from all the mixed uses.

Overall in the total project area, there will be 947 dwelling units and 2.7 million square feet of retail/commercial built space along Long Beach Boulevard.

The four main types of land uses proposed in the Long Beach Boulevard Specific Plan (not including parking) are Commercial, Residential, Public Facility, and Mixed Uses.

Commercial. Commercial (non-mixed use) includes CB-1: Controlled Business, C-2: Light Commercial, and C-3: Heavy Commercial. Commercial land use is found in Downtown Village I and one block in Village IV-Business Village as detailed later in this section. Commercial land uses comprise 14.6 percent of the total project area.

Residential. Residential (non-mixed use) includes R-1: Single-Family Residential and R-3: Multifamily Residential located in Downtown Village I only. Residential land uses make up 4.9 percent of the total project area.

Public Facility. School is the only land use in this category within the Specific Plan and is located in Village IV-Business Village. This elementary school is built on 4.29 acres, 3.1 percent of the total project area.

Mixed Uses. A total of 77.4 percent of the total project area is proposed as mixed use. There are two categories of mixed uses, organized by villages:

- Retail/Commercial/Residential;
- Live/Work as described earlier.

3.5 VILLAGES–LAND USE PLAN

As discussed above, the project area is organized by villages. This section details the land use plan by each village for existing setting, proposed changes in land use designation and zoning, development standards including parking, and the outcome.

A poor layout shopping center on the southwest corner of Tweedy Boulevard and Long Beach Boulevard; no landscape buffer between the sidewalk and the parking lot; the "No Cruising Zone" sign posted on the light pole indicates a certain traffic issue.

This commercial building is in the construction phase. The architectural style is appropriate; however, the building seems cut off from the public.

Helen Grace chocolate store is a popular Lynwood icon that has been open since 1956 on the corner of Martin Luther King, Jr. Boulevard and Long Beach Boulevard; the sign is a city landmark.

3.5.1 Downtown Village I: Existing Businesses

Downtown Village I, between Tweedy Boulevard to the north and Martin Luther King Jr. Boulevard to the south, is a combination of small businesses and some established larger businesses, ranging from neighborhood retail and motels to the larger Helen Grace Chocolate factory and store. The Specific Plan proposes to retain and strengthen these businesses. Existing and proposed land uses remain the same. See Figure 3.3 Proposed Downtown Village I Land Use Plan.

The focus in this village is on revitalization, encouraging businesses to renovate their existing buildings and construct new buildings in keeping with the architectural and landscape design guidelines specified for this village.

Existing Setting. This 27-acre village is mainly zoned C-3: Heavy Commercial with some R-3: High Residential, C-2: Light Commercial, and P-1: Parking (Table 3.B).

Table 3.B – Existing Land Use in Downtown Village I

Land Use	Acres
Commercial	19.91
Residential	6.78
Parking	0.31
Total	**27.00**

Current maximum density for all commercial land uses is a Floor Area Ratio (FAR) of 2:1 and 18 dwelling units per acre for Multifamily Residential under the City's General Plan. These are not being amended in this Specific Plan.

The Plan recommends implementing a façade improvement program and sidewalk standards that support pedestrian-friendly sidewalks. The architectural design guidelines and landscape design guidelines establish the desired visual environment for tear down-rebuild and/or infill development. Further, the open space is being increased from 7 percent to 10 percent.

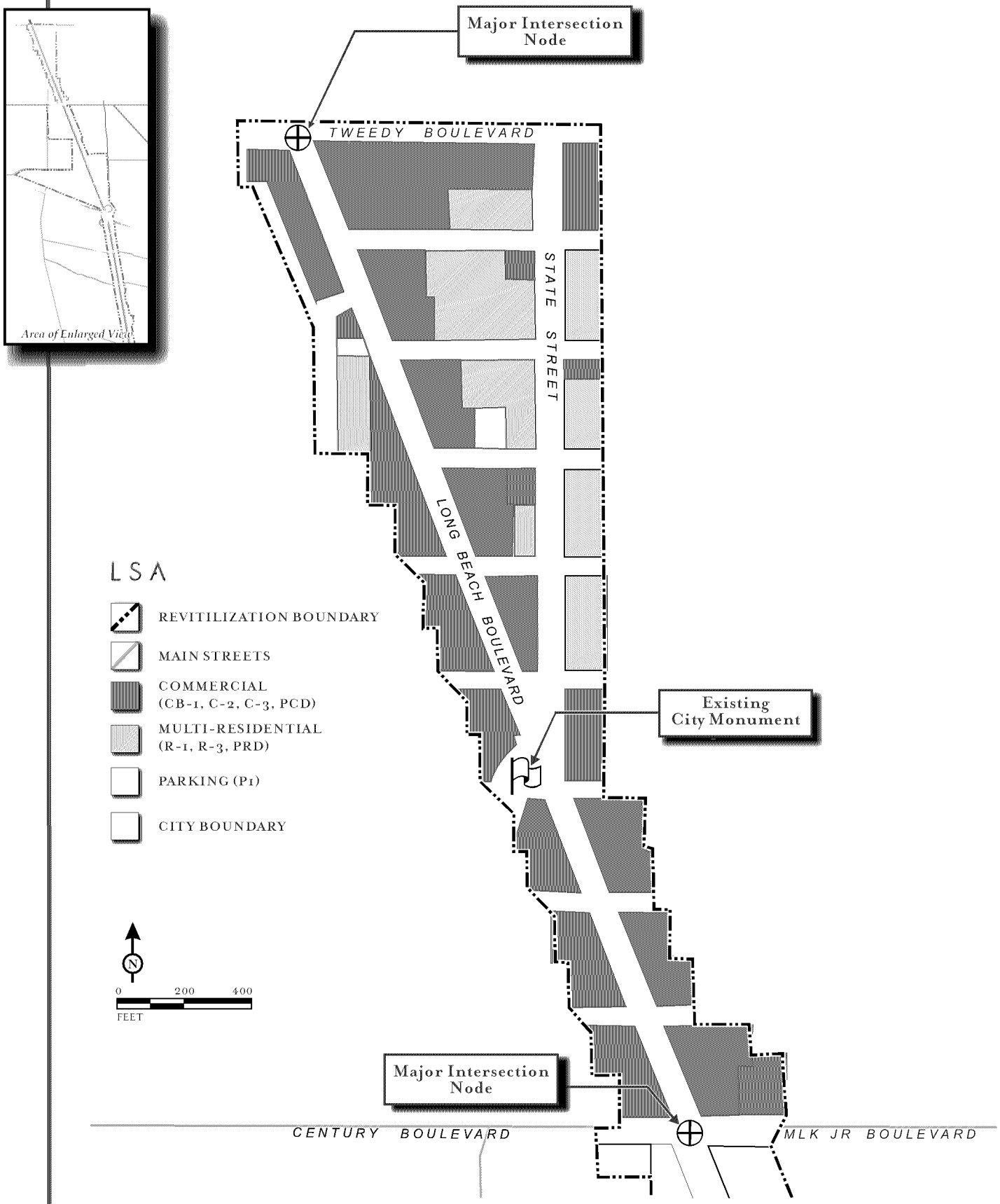
Zoning Change. As shown in Table 3.B, currently there are 19.91 acres zoned for Commercial and 6.78 acres zoned for Residential. No zoning changes other than open space requirement are proposed in this village.

Development Standards. The development standards for this village will be amended from the existing standards for the front and rear setbacks; and courtyard and patio requirements (open space).

Development standards for Downtown Village I are enumerated below:

- Maximum Floor Area Ratio: Current maximum permitted of 2:1.
- Allowable Dwelling Units: Current maximum permitted of 18 dwelling units per acre.
- Dwelling Units: Permitted on second story and above.
- Lot Size: No minimum acreage, parcel consolidation recommended.
- Building Height: 75 feet maximum.
- Existing Landscape Area requirement: 7 percent of the site area.
- Courtyard and Patio requirement: Additional 3 percent to the above 7 percent for a total of 10 percent.

Figure 3.3: Proposed Downtown Village I Land Use Plan



- Front Setback: Current requirement of 10 feet minimum, unless additional setback is required to develop a sidewalk of 18 feet.
- Side Street Setbacks: Current requirement of 10 feet minimum.
- Rear Setback: 5 feet minimum.

Existing Parking Code. The parking codes and requirements for Downtown Village I are enumerated below:

- Retail/Commercial component:
  - 1 space per 300 square feet of retail.
  - 1 space per 400 square feet of commercial.
  - 1 space per 100 square feet of restaurant.
- Multi-tenant retail/commercial:
  - 1 space per 100 square feet.
- Residential component:
  - Tandem parking permitted in garages.

Parking Requirements. Parking requirements shall remain the same as the current zoning.

Proposed Setting. This village will include the Spanish Colonial architectural style complementary to Downtown Village II. The arrangement of the commercial and residential uses within this village will place destinations within a reasonable walk, bike ride, or transit trip for local residents. It is necessary to provide appropriate landscape buffers, and creative design solutions, such as courtyard units. These are further detailed in Chapter 4.0 Architectural Design Guidelines. Chapter 5.0 specifies the Landscape Design guidelines for the Boulevard in general and specific to Downtown Village I.

3.5.2 Downtown Village II: Mixed Use Area

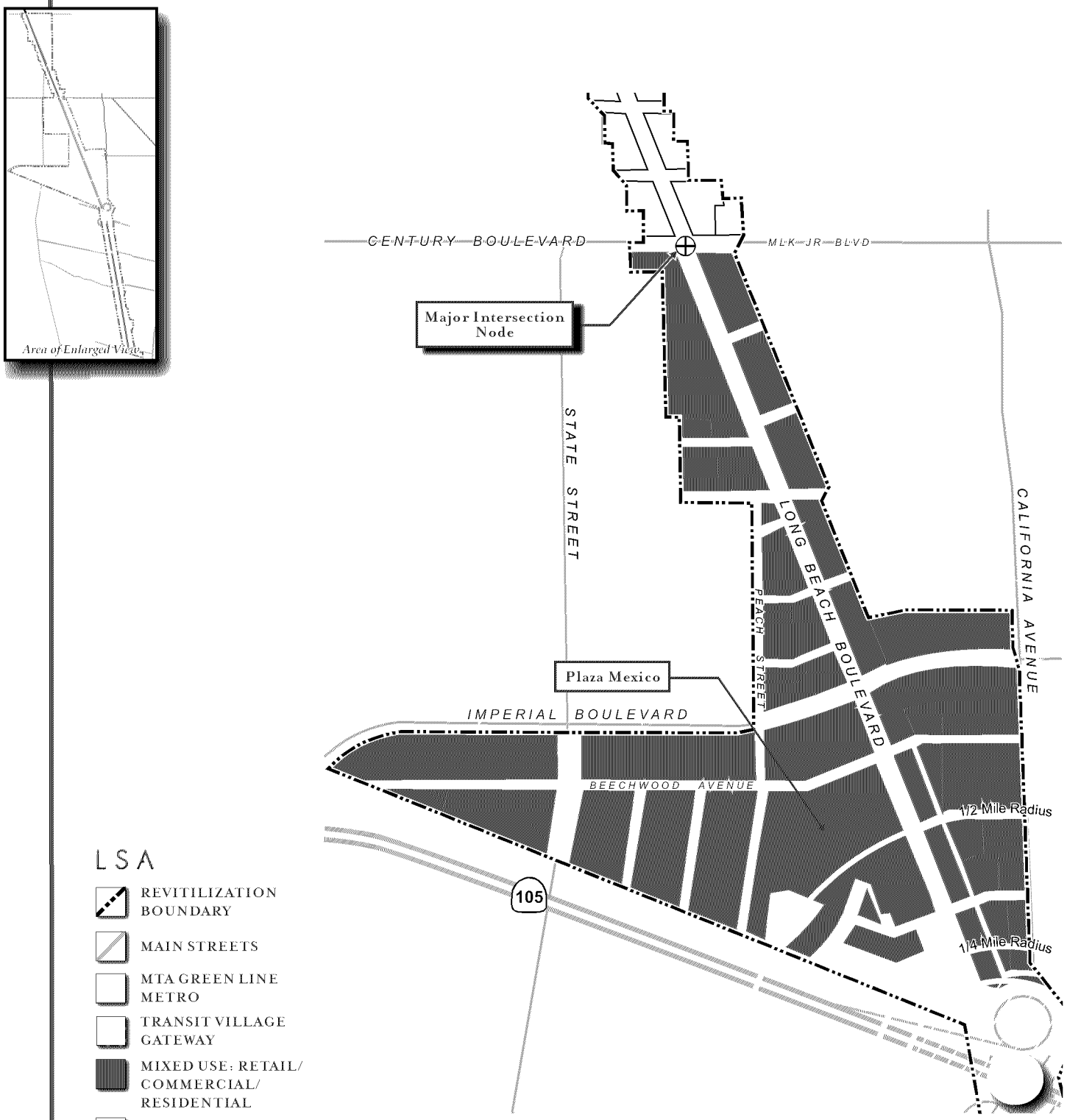
The Downtown Village II is proposed as a mixed land use. It is bounded by Martin Luther King Jr. Boulevard to the north, I-105 to the south, California Avenue at the eastern section, and Bellinger Street to the west. Downtown Village II has a focus on mixed-use development with retail, commercial, civic, and residential uses adjacent to the transit-oriented area comprising a half-mile radius from the Green Line on I-105 as illustrated in Figure 3.4 Proposed Downtown Village II Land Use Plan. The proximity to transit is a vital element, as it has spurred developers' interest in mixed-use projects along Long Beach Boulevard.

This village is likely to be a mid-term plan with emphasis on land uses that do not currently exist in the Specific Plan area, namely mixed use. Mixed use relates directly to TOD as it involves medium to high densities, planned pedestrian walkways, and multiple uses (particularly uses supporting transit ridership such as retail, child care, book stores, coffee shops, and amenities that improve public safety). Mixed uses within and adjacent to TOD create constant activity in diverse uses and housing.

The combination of ground-level pedestrian-oriented business, second-floor office space, and residential uses will create a highly livable area for the residents of the City, shoppers, and people who work on Long Beach Boulevard.

Many of these recommendations will ensure the area's success in becoming a safe and viable downtown for the City of Lynwood. The opportunities created in the

Figure 3.4: Proposed Downtown Village II Land Use Plan



village are also intended to capture some of the regional traffic on the corridor.

To the west of Long Beach Boulevard in Village II is Plaza Mexico, a 36-acre retail center built with an open air Mexican theme. This is the single largest development on the Boulevard in the City. Other parcels within this village would require parcel consolidation in order to propel mixed-use projects.

The Downtown Village II is envisioned to accommodate buildings that have restaurants, bookstores, shops with street fronts and smaller offices, and with residential uses in the vicinity of the Green Line. Specific uses that are civic in nature are recommended to be located in this village, namely, two police substations and a small City history museum. One police substation location is recommended just north of Plaza Mexico, and the second location near the Green Line station south of the freeway in Village III-Transit Village. As an example, a City history museum is envisioned to be about 1,000–2,000 square feet and positioned across from the existing U.S. Postal Service building or within any of the new mixed-use developments.

A parking structure built near Plaza Mexico will help to reduce the need for large surface parking, thereby allowing more land to be used for retail and commercial uses. The synergy created by mixing of uses will energize the pedestrian realm of Long Beach Boulevard while adding to the economic vitality of this area. The mixed uses will support the transit-oriented half-mile core of Long Beach Boulevard and I-105.

Existing Setting. The total acreage within the Downtown Village II is 81.40 acres, which is currently zoned R3: Residential High Density, P1: Parking, C2: Light Commercial, C2A: Medium Commercial; C3: Heavy Commercial, and CB-1: Planned Business.

A typical retail on the corner of Long Beach Boulevard and Imperial Highway.

The current maximum density for commercial land uses is 2:1 FAR, and for Multifamily Residential it is 18 dwelling units per acre. The commercial designations in the Downtown Village II include a major retail component known as Lynwood's Towne Center. This center serves the consumer needs of the community and surrounding jurisdictions. Lynwood's Towne Center will continue to play a crucial role in the proposed Specific Plan and contribute to the anticipated increased revenue. The existing Downtown Village II includes the zoning designations shown in Table 3.C.

Table 3.C – Existing Land Use in Downtown Village II

Land Use	Acres
Commercial	59.21
Residential	11.32
Manufacturing	6.22
Parking	4.65
Total	**81.40**

The Plan recommends implementing mixed-use overlay/zoning over this village. The architectural design guidelines, landscape design guidelines, and site-specific recommendations establish the framework for the mixed-use projects that will revitalize the area over the coming years.

Zoning Change. At least 36 acres have already been built recently with the development of Plaza Mexico. Current zoning designation is mostly CB-1, Controlled Business with other commercial categories. The General Plan designation is Downtown Mixed Use. Zone changes will be required in this village to Mixed Use: Retail/ Commercial/Residential. Additional changes for design guidelines, permitted uses, and development standards will enhance current and future businesses. Further, the open space is being increased from 7 percent to 10 percent.

Development Standards. The development standards for the mixed use trigger some critical amendments to existing standards.

Since this mix of uses is a market-driven issue, the Specific Plan does not specify the proportion mix. This will encourage developers to propose market-driven projects.

Development standards for Village II are enumerated below:

- Maximum Floor Area Ratio: 0.7 of the lot size.
- Maximum Allowable Dwelling Units: 30 dwelling units/acre.
- Dwelling Units: Permitted on second story and above.
- Lot Size: No minimum acreage, parcel consolidation recommended.
- Building Height: 190 feet maximum.
- Existing Landscape Area Requirement: 7 percent of the site area.
- Courtyard and Patio Requirement: 3 percent in addition to the above 7 percent for a total of 10 percent.
- Front Setback: Current requirement of 10 feet minimum will be increased on parcel basis to accommodate an 18-foot sidewalk.
- Side Street Setbacks: Current requirement of 10 feet minimum.
- Rear Setback: 5 feet minimum.

Existing Parking Code. The parking codes and requirements for Downtown Village II are enumerated below:

- Retail/Commercial component:
  - 1 space per 300 square feet of retail.
  - 1 space per 400 square feet of commercial.
  - 1 space per 100 square feet of restaurant.
- Multi-tenant retail/commercial:
  - 1 space per 100 square feet.
- Residential component:
  - Tandem parking permitted in garages.

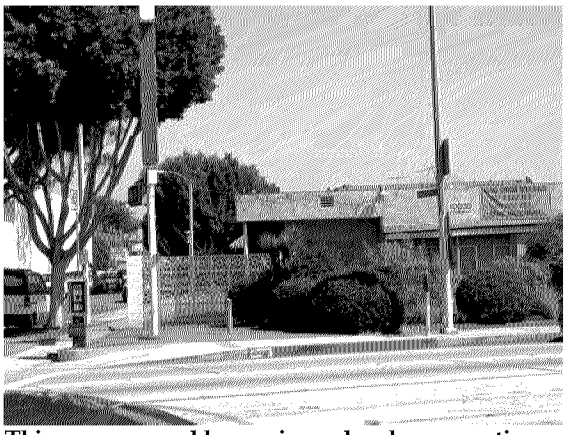
Parking Requirements. Parking requirements need to be tailored to the land use mix for specific development projects. Demographic and locational factors and the evolving nature of transit ridership directly impact parking requirements for projects. It is recommended that proponents of mixed-use projects do a

parking demand analysis based on the land use mix and the generation rates in the context of the transit location.

The shared parking reductions and minimum requirements for mixed uses in transit areas have spurred many jurisdictions to amend their parking codes. As an example, the San Diego Municipal Code has reduced minimum parking requirements for nonresidential uses in transit areas to 85 percent of the minimum requirement for developments outside transit areas. Residential parking requirements in the transit area (very low income areas) have been reduced from 2 spaces per dwelling unit to 1.5 parking spaces per dwelling unit.

This building is located by the freeway off-ramp and is the entrance into the Downtown Village II; the "Lynwood" sign is hard to see and identify; the business phone number is larger than the address number.

Proposed Setting. This village will include the Italianate architectural style complementary to the Downtown Village I. The arrangement of the mixed uses within this village will place designations within a short walk, bike ride, or transit trip for local residents. Mixed-use buildings will have "vertical mixing" with ground-floor retail and upper-level housing and/or offices. It is necessary to provide appropriate landscape buffers and creative design solutions such as courtyard units. These are further detailed in Chapter 4, Architectural Design Guidelines. Chapter 5 specifies the Landscape Design guidelines for Long Beach Boulevard in general and specific to Downtown Village II.

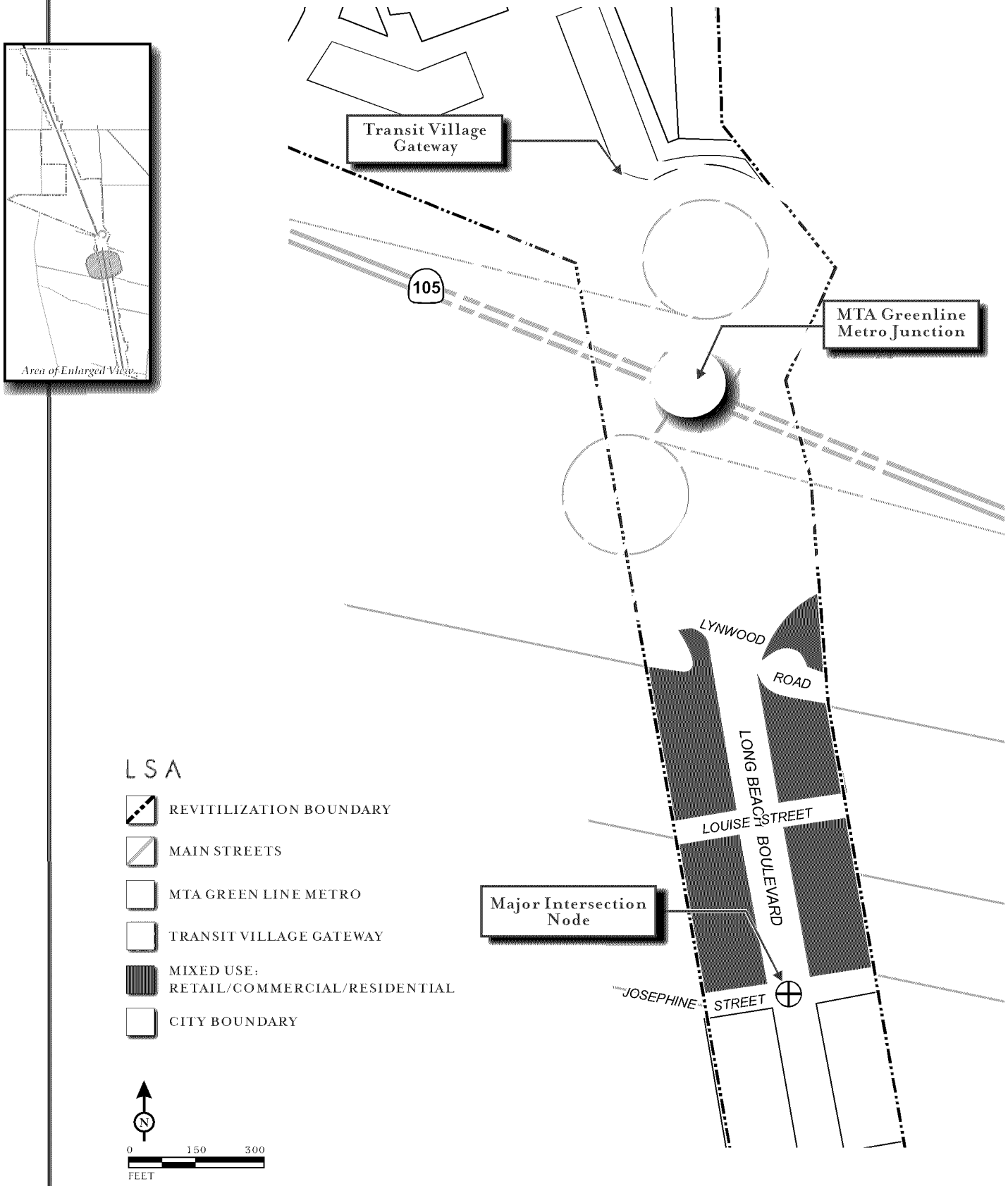


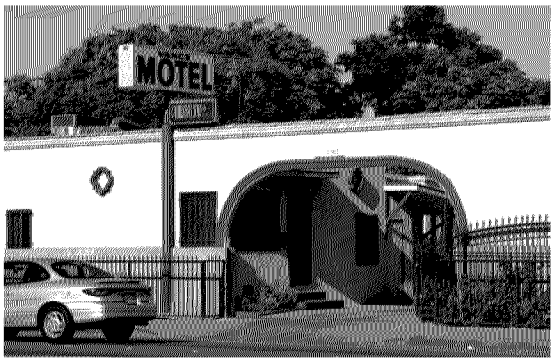
This corner parcel has an irregular shape, creating a site design challenge; temporary signs on this building are detracting; the landscape is too large for the building scale and hides the business.

3.5.3 Village III: Transit Village

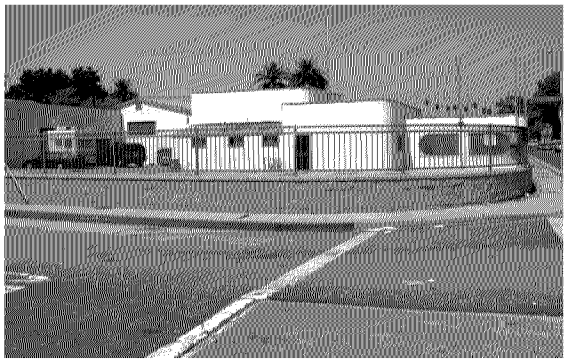
The Transit Village is a five-block, 4.67-acre village making it the smallest of the four sub-areas within the Specific Plan. Its objective is to accommodate a variety of commercial and public uses with emphasis on uses that support the transit system. Starting at the intersection of I-105 and Long Beach Boulevard and ending at Josephine Street, it is within 0.5 mile of the Green Line station, about 10 minutes on foot. The parcels lend themselves to nearby transit-related development. The five block location is found on Figure 3.5 Proposed Village III-Transit Village Land Use Plan.

Figure 3.5: Proposed Village III-Transit Village Land Use Plan





A typical motel along Long Beach Boulevard; the gates are not welcoming and convey the appearance of an unsafe area.



Rundown street with oil stains and patchwork paving; the building does not relate to the corner and there is no landscaping.

Single-story retail uses face most of Long Beach Boulevard in this area; non-matching, albeit good trees in the median; streetlights are not pedestrian scale.

Street has a pedestrian crossing sign, but no crosswalk; the building façade to the left has two different color paints, possibly because of graffiti cleanup; and the street median is devoid of any landscape.

Currently, the parcels have freeway-oriented uses such as a U-Haul depot, gas stations, and auto repair shops. From these blocks, the built character of Long Beach Boulevard steadily declines. It is critical for the regeneration purpose to target this village with projects that support transit and complement the land use development along the Boulevard.

Recommended land uses include retail/restaurants, food courts of various ethnic varieties, commercial uses, small offices, a police substation, and even parking structures should there be increased ridership on the Green Line. It is anticipated that development projects on these sites develop concurrently with projects in Downtown Village II.

Most of the land under the freeway area includes underutilized paved parking lots that provide a unique opportunity to expand appropriate village uses (see aerial photo on pages 22 and 25 in Chapter 2.0). Ideal uses include, but are not limited to, a Farmer's Market, various music/play events, and a skate park. Pedestrian walkways and sidewalks should safely connect this area to the adjacent villages to promote local businesses, safety, and easier access to the Green Line station.

Existing Setting. The 12 parcels currently located in the Transit Village are zoned for Medium Commercial (C-2A) use as shown in Table 3.D. In addition, the current maximum density for all commercial land uses within the City of Lynwood is 2:1 FAR and maximum allowable height of 75 feet. The C-2A zone allows for a retail center that will serve communitywide needs.

Table 3.D – Existing Land Uses for Village III-Transit Village

Land Use	Acres
Commercial	4.67
Total	**4.67**

Zoning Change. Within the proposed Transit Village, zoning will need to be altered to include an increase in FAR for commercial uses with a maximum of 0.7. Development of light commercial/retail with residential will alter the existing zoning to Retail/Commercial/Residential Mixed Use with additional customized uses so that the proposed uses can be accommodated within this district. Further changes for design guidelines and development standards will enhance the current and future businesses.

Development Standards. The development standards for this village will have a few changes to the existing standards such as FAR, permitted land uses, and rear building setbacks. The open space is being increased from 7 percent to 10 percent.

Development standards for the Transit Village are enumerated below:

- Maximum Floor Area Ratio: 0.7 of the lot size.
- Dwelling Units: 30 dwelling units/acre.
- Lot Size: No minimum acreage, parcel consolidation recommended.
- Building Height: no maximum.
- Existing Landscape Area Requirement: 7 percent of the site area.
- Courtyard and Patio Requirement: 3 percent in addition to the above 7 percent for a total of 10 percent.

- Front Setback: Current requirement of 10 feet minimum.
- Side Street Setbacks: Current requirement of 10 feet minimum.
- Rear Setback: 5 feet minimum.

Existing Parking Code. The parking codes and requirements for the Transit Village are enumerated below:

- Retail/Commercial component:
  - 1 space per 300 square feet of retail.
  - 1 space per 400 square feet of commercial.
  - 1 space per 100 square feet of restaurant.
- Multi-tenant retail/commercial:
  - 1 space per 100 square feet.
- Residential component:
  - Tandem parking permitted in garages.

Parking Requirements. Parking requirements need to be tailored to the land use mix for specific development projects. It is recommended that proponents of development projects do a parking demand analysis based on the land use mix and the generation rates in the context of the transit location.

Proposed Setting. Introduction of Italianate architecture style and design will merge the Transit Village with the Business Village. This distinct architectural style will produce a featured destination that will attract regional visitors and provide the community with an individual service. The intent of the Transit Village is to recapture underutilized lands, such as surface parking lots and vacant parcels, for a range of services. Other project goals include job-creation for the community and an increase in sales tax revenue. In addition to commercial redevelopment, improvement of streets and sidewalks, public safety, and community expression is anticipated with the development of the Transit Village.

3.5.4 Village IV: Business Village

The Business Village is envisioned to provide improved commercial and office uses and live/work unit opportunities that can integrate into the existing commercial uses along Long Beach Boulevard.

The Business Village is adjacent to the Transit Village, creating an opportunity for the employees and consumers to use the Metro Rail. Pedestrian-friendly streets are highly encouraged to make the village successful. The boundaries of this village are Josephine Street to the north and Orchard Avenue to the south, and only include parcels facing Long Beach Boulevard as illustrated in Figure 3.6 Proposed Village IV-Business Village Land Use Plan.

Existing Setting. Currently, 103 parcels in the Business Village are zoned C-2A Medium Commercial; 4 parcels are zoned CB-1: Planned Business; and 20 parcels are zoned PF: Public Facilities (school). The current maximum FAR of C-2A is 2:1 with a height limitation of 75 feet according to the City's General Plan. The maximum FAR of CB-1 is 2:1 with a height limitation of 190 feet. The total acreage within the Business Village is 24.88 acres as shown in Table 3.E.

Figure 3.6: Proposed Village IV-Business Village Land Use Plan

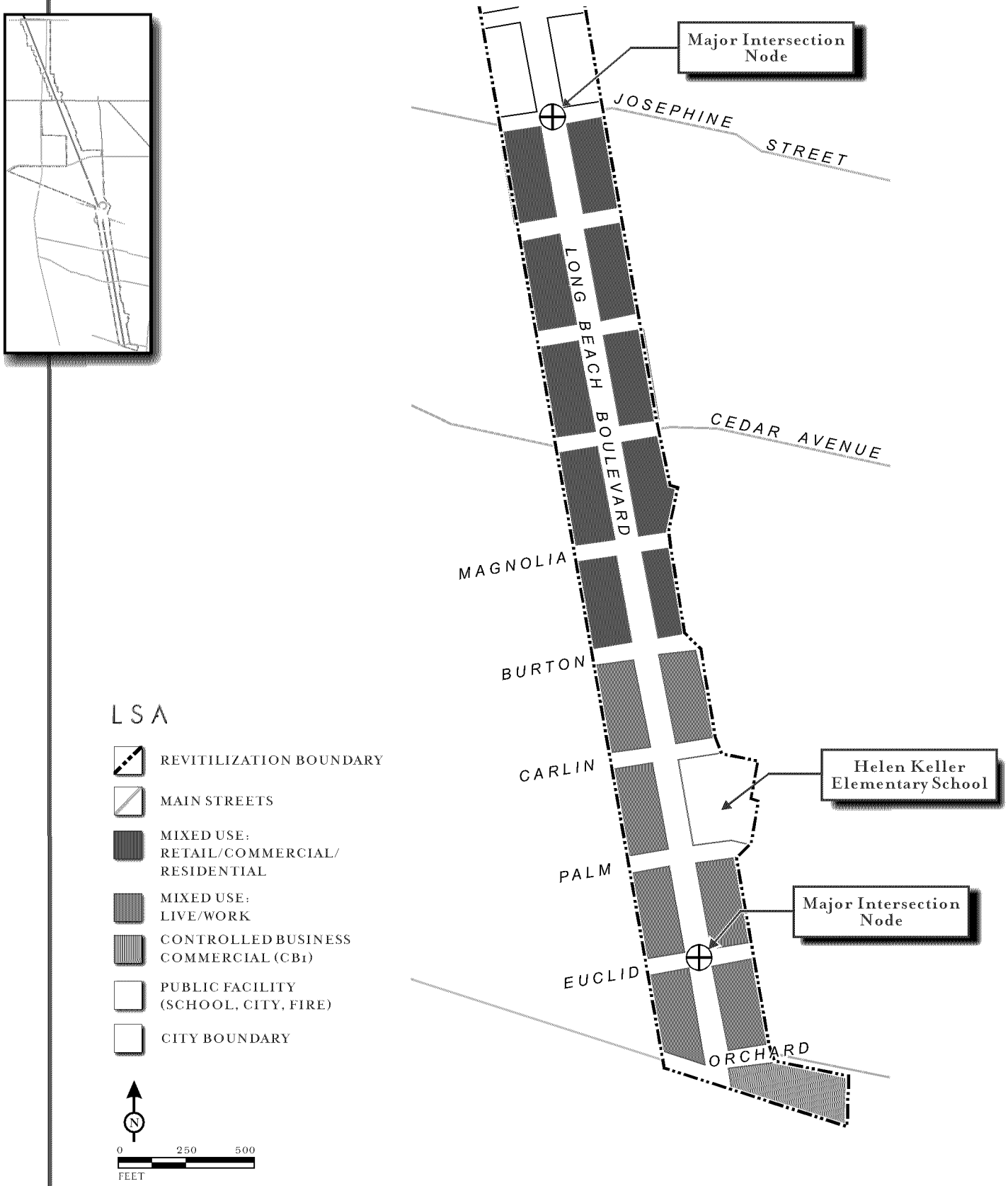


Table 3.E – Existing Land Uses for Village IV-Business Village

Land Use	Acres
Commercial	20.59
School	4.29
Total	**24.88**

Zoning Change. Zoning will need to be changed within the proposed Business Village to accommodate two mixed uses; (1) Retail/Commercial/Residential and (2) Live/work. There is an increase in Floor Area Ratio to 0.7 for Medium Commercial and Controlled Business uses. Street blocks between Josephine Street and Burton Avenue will be rezoned to Retail/Commercial/Residential mixed use. Street blocks between Burton Avenue and Orchard Avenue will be Live/Work mixed use. Additional changes for design guidelines, permitted uses, and development standards will enhance the current and future businesses and incorporate new live/work units south of Burton Avenue into the Business Village.

Development Standards. The development standards for this village will have a few changes to the existing standards. Open space requirement increases to 10 percent from the existing 7 percent.

Recommended development standards for the Business Village are enumerated below:

- Maximum Floor Area Ratio: 0.7 of the lot size.
- Allowable Dwelling Units: 30 dwelling units permitted.
- Dwelling Units: Permitted on second story and above for live/work units.
- Lot Size: No minimum acreage.
- Building Height: no maximum.
- Existing Landscape Area Requirement: 7 percent of the site area.
- Courtyard and Patio Requirement: 3 percent in addition to the above 7 percent for a total of 10 percent.
- Front Setback: Current requirement of 10 feet minimum.
- Side Street Setbacks: Current requirement of 10 feet minimum.
- Rear Setback: 5 feet minimum.

The following supplemental development standards are applicable to live/work units:

1. There is no limit on the number of live/work units in a project. A use permit will be required upon approval from the Planning Commission or person(s) in charge of processing.
2. Units must be a minimum of 1,400 square feet total, with a project average of 1,700 square feet. The living area may not exceed 70 percent of the total square footage and must be at least 460 square feet (not including bathroom or closet, which can be considered work space). Office space/work area must be at least 20 percent of the unit's living area. Up to 25 percent of work area can be dual-purpose.
3. The office working areas are required to have either separate and/or shared entries on the lowest level of the unit. Each unit shall be provided a primary entry from common areas such as hallways, corridors, and/or exterior portions of the building, such as courtyards, breezeways, parking areas, and public spaces.

4. Storage of hazardous material necessary for work activities in live/work occupancies may be stored in controlled areas per the current Uniform Building Code used by the City of Lynwood.
5. Occupations that include flammable liquids, welding, open-flame work, or similar hazardous operations are not permitted in live/work occupancies.
6. .The residential portion of the live/work unit shall only be occupied by the individual whose professional occupation is established in the same unit and his or her family.
7. No retail sales shall occur in a live/work space except for the products of the occupant's primary business.
8. Noise levels generated by live/work spaces shall conform to the requirements of the City of Lynwood Municipal Code for residential use.
9. All units must have kitchens and bathrooms that comply with the residential building code.
10. A minimum of 7 percent of the site shall be used for landscape and 3 percent of each unit's square footage should be combined to be used in community facilities such as pools, spas, clubhouses, atriums, courtyards, barbeques, and shade structures.
11. Delivery zones will be designated to accommodate delivery trucks such as UPS and FedEx.
12. Work areas of the units shall be oriented toward the street, especially at ground level, where building entries, plazas, and windows should front onto the street.
13. Units are allowed to have a mezzanine or mezzanine floor that is an intermediate floor placed within a room. A mezzanine normally must not exceed one-third of the area of the room into which it opens. It also must have 7-foot vertical clearance at all points above and below it; otherwise it is considered a story.
14. Occupancy limits shall be a maximum of two occupants per 400 square feet with a maximum of 6 occupants.

The following uses are permitted for live/work units:

- Apparel, including custom tailoring and sales of apparel, clothing, and other sewing products made on the premises.
- Artists and craft/sculpture products, sales galleries, studios, and custom furniture.
- Office including creative/tech-based offices and services.
- Office including professional offices and services.
- Photographer/photography studios.
- Spas and personal care including nail salons and hair salons.

Existing Parking Code. The parking codes and requirements for the Business Village are enumerated below:

- Retail/Commercial component:
  - 1 space per 300 square feet of retail.
  - 1 space per 400 square feet of commercial.
  - 1 space per 100 square feet of restaurant.

- Multi-tenant retail/commercial:
  - 1 space per 100 square feet.
- Residential component:
  - Tandem parking permitted in garages.

Parking Requirements. Parking requirements need to be tailored to the land use mix for specific development projects. It is recommended that proponents of mixed-use projects do a parking demand analysis based on the land use mix and the generation rates in the context of the transit location.

Proposed Setting. Introduction of Spanish Colonial architecture style and design will merge the Business Village with the Transit Village. This distinct architectural style will produce a featured destination that will attract regional visitors and provide the community with an individual service. The 24.88-acre Business Village is bounded by Josephine Street to the north and Orchard Avenue to the south. The intent of the Business Village is to revitalize, rehabilitate, and/or recapture under-utilized lands, such as surface parking lots and vacant parcels or buildings that will produce retail, office, and live/work units to complement Downtown Lynwood's emergence as a vibrant, multicultural urban village. Other goals of the project include job-creation for the community, reduced commuting, and an increase in sales tax revenue. In addition to commercial redevelopment, improvement of streets and sidewalks, public safety, and community expression are anticipated with the development of the Business Village.

Current Redevelopment Projects. There is only one project actively under consideration with the City's Redevelopment Agency in the Business Village, which may include mixed use, retail and office development.

3.6 GENERAL PROVISION

A. **Relationship to the Lynwood Zoning Ordinance.** This Specific Plan augments the development regulations and standards of the Lynwood Zoning Ordinance. When an issue, condition, or situation occurs, which is not covered or provided for in the Specific Plan, the regulations of the Zoning Ordinance that are most applicable to the issue, condition, or situation shall apply. In the event that the provisions of the Specific Plan are in conflict with the Zoning Ordinance, the provisions of the Specific Plan shall prevail.

B. **Interpretation.** The Community Planning Director or his or her designee shall have the responsibility of interpreting the provisions of the Specific Plan, except that the Community Planning Director may refer the matter to the Planning Commission. All such interpretations shall be in written form and permanently maintained. Any person aggrieved by such an interpretation may make a formal request in writing to the Community Planning Director that such interpretation be reviewed by the Planning Commission. Such appeal is subject to applicable fees and processing requirements.

C. **Enforcement.** The City shall enforce the provision of this Specific Plan and all the applicable codes of all governmental agencies and jurisdictions in such matters including, but not limited to, building, mechanical, fire, and electrical codes pertaining to

drainage, wastewater, public utilities, subdivisions, and grading.

D. **Definitions.** Words, phrases, and terms not specifically defined herein shall have the same definition as provided in the City of Lynwood Zoning Ordinance. Definitions of words, phrases, and terms as used in this Specific Plan are included in the Glossary in the Appendix.

3.6.1 Customized Uses

Each village area is defined in precise terms to ensure that the range of permitted and conditionally permitted uses respects the intent of the plan and the conditions encountered in each area of the site. Table 3.F outlines the permitted (P), conditionally permitted (C), and prohibited (N) uses within the Long Beach Boulevard Specific Plan. This list was derived from existing zoning regulations to allow greater or lesser flexibility in some areas of use and to customize land use requirements in response to site characteristics, potentials, and limitations. This tailored use list is specifically aimed at stimulating investment that will evolve into a pattern of uniformly higher value and quality than has prevailed in the past. The prohibited uses figure significantly in the sub-areas so as to avoid potential conflicts between uses within and adjacent to the site.

3.6.2 Determination of Unlisted Uses

The Planning Director, upon written request, or the Planning Commission, upon referral by the Planning Director, shall be allowed to determine whether a use not specifically listed as a use that is principally permitted or conditionally permitted in the Specific Plan area should be given such designation based upon a similarity to uses already allowed.

3.6.3 Setbacks and Build-to Lines

The standards established for each village shall apply to new non-residential and mixed-use development within the Specific Plan area. Setbacks are measured from the property line. Where ground-level retail uses are present, setbacks may be increased up to 12 feet for outdoor seating or sales (e.g., product display). Features such as overhangs, porticos, balconies, loggias, arcades, covered (non-enclosed) bicycle parking, pergolas, and similar architectural features placed on the front (street-facing) side of the building shall be allowed within the setback.

The standards established in each village shall apply to new residential development within the Specific Plan area. Features such as front porches, overhangs, porticos, balconies, loggias, arcades, covered (non-enclosed) bicycle parking, pergolas, and similar architectural features placed on the front (street-facing) side of the building shall be allowed within the setback.

3.6.4 Lot and Dwelling Size

New multiple-family development shall maintain a minimum lot area of 20,000 square feet. Not withstanding the minimum lot area requirement, a new development shall be allowed a minimum net lot area of 1,250 square feet per unit.

Table 3.F – Customized Use List

Use Category	Downtown Village I	Downtown Village II	Transit Village	Business Village
RESIDENTIAL				
Assisted Living	N	C	N	N
Boarding, rooming and lodging facilities	N	C	N	N
Duplex	P	P	N	N
Mobile Home Park	N	N	N	N
Multiple-Family	P	P	N	N
Residential Care facilities (nursing home, rest home, convalescent home, or elderly congregate care)	N	C	N	N
Residential Housing for the Elderly	C	C	N	N
Single-Family Attached	P	P	N	N
Single-Family Detached	P	N	N	N
COMMERCIAL SERVICES AND RETAIL				
Ambulance service	N	N	N	N
Animal sales and services	P	P	N	N
Auto/recreational rentals/sales, new and used	P	N	N	N
Banks and Savings and Loans	P	P	P	P
Boarding, rooming and lodging facilities	C	C	C	C
Catering Services	P	P	N	P
Cemetery	N	N	N	N
Children's Day Care Services	C	C	C	N
Funeral and mortuary services	P	N	N	N
Grooming, indoor only	P	P	P	P
Massage parlors, escort service	N	N	N	N
Nurseries	C	N	N	N
Pawn Shops/Check Cashing	C	N	N	N
Personal Services	P	P	P	P
Recycling facilities	N	N	N	N
Retail Sales & Service	P	P	P	P
Retail sales and supply	P	P	P	P
Secondhand stores	C	N	N	N
Self Service Car Wash	N	N	N	N
Service Stations	P	N	N	N
Storage	N	N	N	N
Swap meets	C	N	N	N
Tattoo parlors	N	N	N	N

Table 3.F – Customized Use List

Use Category	Downtown Village I	Downtown Village II	Transit Village	Business Village
Vehicle equipment sales	C	C	N	N
Vehicle repair facilities	C	C	N	N
Veterinary services	P	P	N	C
COMMERCIAL RECREATION/ENTERTAINMENT				
Adult Businesses	N	N	N	N
Amusement arcades	C	C	C	C
Bowling alleys	C	C	N	N
Dance halls	C	C	N	N
Golf Courses	N	N	N	N
Gyms, fitness centers < 2,000 square feet	P	P	P	P
Gyms, fitness centers > 2,000 square feet	P	P	N	N
Indoor sports/recreation	P	P	N	N
Live theater venues	C	C	C	N
Movie theaters	C	C	C	N
Pool/billiard halls	C	C	N	N
Tennis, swimming clubs	C	C	N	N
COMMUNITY AND HUMAN SERVICES				
Drug abuse and alcohol recovery centers	N	N	N	N
Emergency shelters	N	N	N	N
Hospitals, Medical Clinics	N	N	N	N
Public utility/communication facilities	N	N	N	N
Schools, public/vocational/trade	C	C	N	C
Transitional housing	N	N	N	N
Educational facilities	P	P	N	C
Facilities for the mentally disordered, handicapped, dependent, or neglected persons	N	N	N	N
EATING AND DRINKING				
Bar, cocktail lounge, tavern	C	C	C	N
Bona-fide restaurant	P	P	C	C
Dinner Theatre	C	C	N	N
Drive through	C	C	N	N
Food court in/out door	P	P	P	P
Live entertainment/dancing (incidental)	C	C	C	N
Nightclub	N	C	N	N
Take out only	C	C	N	C
With fast food or take out	P	C	N	N

Table 3.F – Customized Use List

Use Category	Downtown Village I	Downtown Village II	Transit Village	Business Village
FOOD AND BEVERAGE SALES				
Food markets, grocery stores	C	C	N	C
Food, mini-mart convenience stores	C	C	C	C
Liquor and wine stores	C	C	N	N
Supermarket	C	C	N	N
MIXED USE				
Live/Work	N	N	N	P
Lofts	P	P	C	P
Mixed Uses, vertical/horizontal	C	P	P	P
PROFESSIONAL OFFICE				
Administrative and other offices	P	P	P	P
Medical/Dental, massage therapy, and chiropractic	P	P	N	P
Real Estate, Insurance	P	P	N	P
Temporary Office Uses	C	C	N	C
TOURIST SERVICES				
Bed and breakfast	C	C	N	C
Hotel and motel	C	C	N	N
Recreational vehicle park	N	N	N	N
Single-room occupancy	N	N	N	N
Ticket agency	P	P	P	P
Travel agency	P	P	P	P
TEMPORARY AND INTERIM USES				
Outdoor Uses (except plaza-related uses)	C	C	C	C
Outdoor vendor carts	N	N	N	N
Christmas Tree, Pumpkin, similar lots	C	C	N	N
Parking Lot Sales	N	C	N	N
Street/Craft Fair Farmers Markets	C	C	N	N

Table Notes:

P = Permitted C = Conditional Use Permit N = Not Permitted

1. Existing non-conforming uses shall be subject to the provision of Chapter 25-15.2 of the City of Lynwood Zoning Ordinance.
2. Since Downtown Village II provides the greatest level of flexibility of all the Villages identified in the Specific plan, it will be especially important to ensure that any development or combination of uses in this area meets with the intent of the Specific Plan. The findings identified in the Infrastructure, Implementation, and Maintenance Plan of the Long Beach Boulevard Specific Plan shall be used to confirm that uses proposed consist of the appropriate mix and are compatible with uses permitted in and adjacent to Downtown Village II.

3.6.5 DENSITY

Density can be the result of many people wanting to be in the same geographic area. There are three main factors that make a place special and desirable by offering the type of vibrant street life not found in many typical American cities. Two prerequisites for urban vitality are a pedestrian-friendly streetscape and a mix of uses. The third essential component is density. Shops, restaurants, and cultural institutions cannot survive without a critical mass of people nearby to support them. As residential density increases above certain thresholds, these services and amenities become viable. Population density is a key determinant of transit viability and the likely success of TOD projects. Current population within one mile of the intersection of I-105 and Long Beach Boulevard is 43,000 according to the City's official website.

New non-residential and mixed-use development within the Specific Plan area shall achieve minimum FARs as stated in the Table 3.A and in each village development standard. New residential uses within the Specific Plan area shall achieve densities according to Table 3.A and in each village development standard.

Density Bonus Program. "Density Bonus" means a minimum density increase of at least 25 percent over the otherwise Maximum Residential Density.

For all new development and the conversion or alteration of existing development, density bonuses shall conform to State density bonus law (Government Code Section 65915). Section 65915, as amended by Chapter 842, Statutes of 1989, required all cities and counties to adopt density bonus ordinances. The law provides that local governments shall grant density bonuses of at least 25 percent, plus an additional incentive(s) or equivalent financial incentives, to housing developers who agree to construct at least: 20 percent of the units affordable to lower income households, 10 percent of the units affordable to very low-income households, or at least 50 percent senior citizen housing. Condos are eligible if at least 20 percent of units are restricted to households of moderate income. The City may offer an Equivalent Financial Incentive in lieu of granting a Density Bonus and an Additional Incentive(s). The value of the Equivalent Financial Incentive shall equal at least the land cost per dwelling unit savings that would result from a Density Bonus and must contribute significantly to the economic feasibility of providing the Target Units pursuant to this chapter. The law applies to developments of five or more units.

3.6.6 BUILDING HEIGHT

For all new development and the vertical alteration of existing development, building heights within the Specific Plan area shall conform to the development standards set for each village.

3.6.7 LOT COVERAGE

New development within the Specific Plan area shall achieve lot coverage of not more than that defined in the development standards for each village.

Features such as front porches, overhangs, porticos, balconies, loggias, arcades, covered (non-enclosed) bicycle parking, pergolas, and similar architectural features placed on the front (street-facing) side of

the building shall be exempt from the lot coverage requirement.

3.6.8 Building Frontage and Façades

In order to support the pedestrian-oriented environment within the Specific Plan area, building frontages onto streets and open spaces shall be maximized.

Minimum requirements for windows and openings are detailed in Chapter 4.0, Architectural Design Guidelines.

3.6.9 Building Entry

If a building is adjacent to a transit street or a major pedestrian access way, at least one main building entry shall be oriented to the adjacent transit street and/or major pedestrian access way. A pedestrian way shall be provided from the building entry to the transit street or major pedestrian access way.

To allow for their use, residential porches shall have a minimum clear depth of six feet and shall be a minimum of 50 square feet.

3.6.10 Residential Amenities

All multiple-family developments with four or more dwelling units shall provide usable common open space for passive and active recreational uses. Usable open space areas shall not include public or private rights-of-way; vehicular parking areas; areas adjacent to or between structures less than 15 feet apart; required building setback areas, private patios or yards; or areas having a slope greater than 3:1. Usable open space can include roof decks accessible to all residents in the development.

Within multiple-family residential projects, a minimum of 100 square feet of usable private open space shall be provided.

All common open space associated with multiple-family developments with four or more dwelling units shall include, at a minimum, 7 percent of the site for landscape and 3 percent of each unit's square footage to be combined for community facilities uses (e.g., pools, spas, clubhouses, atriums, courtyards, barbeques, and shade structures).

Additional amenities may include, but are not limited to, tot lots with play equipment, benches, and court game facilities. The types of amenities shall be dependent upon the nature of development and shall be approved by the reviewing authority. Further details and conceptual photos of courtyards are in Chapter 4.0 Architectural Design Guidelines.

All new development within the Specific Plan area shall incorporate an element of public art equivalent to 1 percent of total building cost. Guidelines for incorporating public art are included in Chapter 4.0 Architectural Design Guidelines.

3.6.11 Sign Regulations

New signage within the Specific Plan area shall conform to the standards stated herein and with the requirements established by Subsection 25-33.4 (sign standards by zoning district) of the City's Municipal Code and City Ordinance Numbers 1972 §17-122; 1025, §11; 1506, §2.

In the event of a conflict between the standards given herein and City's Municipal Code and Zoning Ordinances, the TOD standards shall prevail.

Signage shall not reduce clear sidewalk width to less than 8 feet. Opaque signage shall not reduce permeability of street-fronting windows to less than the minimum clear window requirement within Chapter 4.0 Architectural Design Guidelines.

General Sign Standards. One address number no more than 6 inches vertical shall be attached to the building in proximity to the principal entrance or at a mailbox.

Non-residential corner buildings shall have their addresses attached to the building, clearly visible from the intersection, and have 12-inch vertical lettering.

One blade sign for each separate business entrance may be permanently installed perpendicular to the façade. Such a sign shall not exceed a total of 6 square feet unless otherwise approved by the Planning Director.

Further details for building signage are in Chapter 4.0 Architectural Design Guidelines.

3.6.12 Parking Requirements Per Land Use Type

For new development within the Specific Plan area, the number of required parking spaces (on-street and off-street) shall be based on a parking demand analysis, especially for shared parking proposals. Parking space calculations resulting in a small fraction shall require a whole space.

Additional Innovative Measures. No parking is required for uses under 2,500 square feet if parking is available within 600 feet.

Allow curbside parking spaces and shared spaces within 600 feet to be counted in the requirement to allow further reductions in off-street parking for mixed-use projects and those with good transit access.

Curb parking along residential uses will count toward visitor parking requirements only. The minimum linear frontage is 22 feet per parallel parking stall and 9 feet for head-in and angled parking.

Off-Street Parking. Off-street parking shall be located to the rear and/or interior of a lot such that its visibility from a street shall be minimized.

At-grade, aboveground, or belowground parking structures shall be permitted. At-grade parking structures shall have a minimum frontage as outlined in Chapter 4.0 Architectural Design Guidelines.

Surface parking lots shall be placed between the structure and a side or rear lot line. Where a lot fronts onto two or more streets, parking shall be located accordingly:

- Along the street with the least amount of commercial activity; or
- Along the street with least amount of pedestrian activity if the lot is located along two or more commercial streets with equal amounts of commercial activity.

A wall or fence between 4 and 6 feet in height shall separate parking lots from abutting residential uses with landscaping as stated in the Landscape Plan. Walls and fences shall take on the character of residential uses.

Podium parking used in any development shall be partially submerged with the above-grade height not to exceed 5 feet. Landscaping shall be used to screen exposed openings.

Garages associated with single-family residential uses, whether attached or detached, shall be set back at least 10 feet behind the primary front façades of the buildings they serve. The primary front façade shall comprise at least 50 percent of the overall width of the primary residence and the 10-foot setback shall not be measured from projections such as bay windows and porches, but from the façade of the wall which encloses the building.

Parking structures, including structures developed in conjunction with the Transit Center shall adhere to the same setbacks, frontage, and height requirements as buildings within their respective neighborhood zones.

Parking structures in commercial and mixed-use areas fronting on a street shall include ground-floor uses to create a pedestrian-supportive interface with the abutting sidewalk. If a use cannot be provided, appropriate landscaping shall be used as screening.

Bicycle parking will primarily be on the sidewalks along the side streets that connect to Long Beach Boulevard.

3.6.13 Location of Vehicle Access

Conflicts between pedestrians and vehicles entering and exiting parking lots shall be minimized. Access from pedestrian-oriented streets shall be avoided unless no other reasonable access is available, such as in lots with a single-street frontage and no alley.

Where alleys are present, driveways leading to parking lots, and loading and service areas shall be accessed from the alley. Lots with more than one street frontage and no alley shall locate vehicular access along the street with the least amount of pedestrian activity. All loading and service drives shall be of a depth that prevents loading and service vehicles from obstructing the sidewalk and roadway.

Access driveways shall not dominate the street frontage, and driveway widths shall be minimized to reduce their presence along the street.

Where feasible, driveways shall be consolidated within the single lot and shared with adjacent properties to minimize their encroachment upon sidewalks.

Shared driveway agreements shall be utilized where possible for shared parking, and loading and service areas.

To avoid encroaching upon sidewalks and creating uneven pedestrian surfaces, driveway slopes shall be located between the roadside edge of the sidewalk and the curb.

Loading and Service Area Location. Loading, service, and refuse areas shall be located at the interior of the lot and screened from view with walls, trellises,

planting, berms, or by integration into the design of the building.

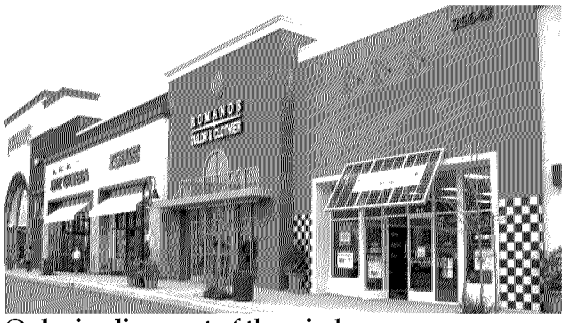
Walls shall not exceed 6 feet in height. Solid walls shall be landscaped to soften their appearance and shall be made of finished materials to match the primary building. Decorative elements, variation in materials, and articulation shall be used.

4.0 ARCHITECTURAL DESIGN GUIDELINES

4.1 DOWNTOWN VILLAGE I – SMALL BUSINESSES AND VILLAGE IV- BUSINESS VILLAGE

◘ SPANISH COLONIAL ◘

These design guidelines apply to new construction and the façade improvement of the existing small businesses located in Downtown Village I.



Order in alignment of the windows.

4.1.1 ARCHITECTURAL STYLES

The architectural style recommended for the buildings in Village I is Spanish Colonial.

Spanish Colonial Style. Spanish colonization of California from mid-eighteenth through early nineteenth century gave rise to a new exotic and ornate architectural style. In 1769, the King of Spain, in order to firm up his claims on California, assigned people to build missions. These missions were built with Spanish architectural ideals and details influenced by Moorish, Gothic, and Renaissance architectural styles. The different Spanish architectural styles developed later, taking their cue from these early Spanish missionaries and Spanish Colonial buildings and adding their own regional flavors. Identifying features of this style include low-pitched roofs, asymmetrical façades, thick stucco walls with recessed openings, arched window openings, and elaborate grille and tile work.

4.1.2 MASSING AND ARTICULATION

- ***Varied and Articulated Buildings***

1. The base of the building should establish a human scale for the pedestrians and visually join the building to the ground.
2. The main body of the building shall be architecturally subdivided into segments to reduce the height and bulk. This can be achieved through variation of roof height, wall breaks, vertical and horizontal projections, color, and material.
3. The top of the building should be a sloped roof or enhanced parapet wall according to the architectural style of the buildings.
4. Varied massing and multi-planed roofs are required to achieve varied building articulation.
5. Window header height shall be maintained to unify the different building masses and convey a harmonious street scene.
6. Building corners at major intersections shall be architecturally emphasized and have tower-like elements higher than the rest of the building.

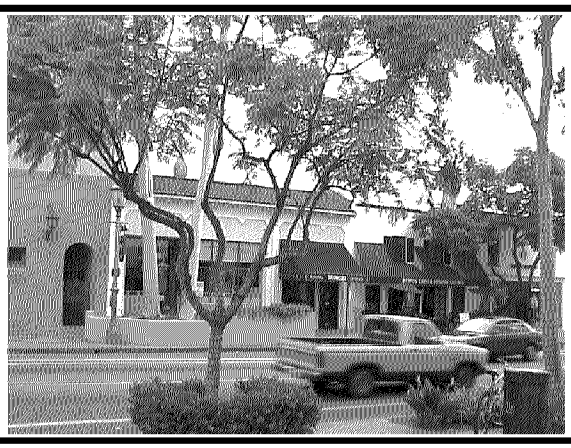
- ***Building Walls***

1. Building surfaces more than 30 feet in length should be relieved by

providing horizontal or vertical changes to provide visual interest.

2. Long blank walls shall be avoided. Blank building wall areas more than 150 square feet shall be treated architecturally with stucco recesses, balconies, railings, shutters, corbels, pilasters, tile insets, or other three-dimensional elements acceptable architectural projections.
3. In order to incorporate interactive pedestrian streetscape façades, 70 percent of the first story for retail/commercial walls shall have glazing with windows, entrances, or openings.
4. The building floors are required to be articulated with the use of recessed entries, insets, canopies, awnings, arcades, trellis, balconies, recessed windows, corbels, etc.
5. All building façades visible from public streets and public areas shall be architecturally treated.

Recessed openings.



Articulated façade.

Architecturally treated side elevation.

4.1.3 Street Façades

1. The main entrances for businesses shall be oriented toward Long Beach Boulevard. The main entry shall provide a "sense of entry" to that business. Secondary entries shall enter from a building parking area or connecting pedestrian pathways.
2. Retail and commercial uses are encouraged to decorate their storefronts with different materials and colors original to the architectural style.
3. Windows and doors shall be placed to facilitate natural surveillance.
4. The glass façade of businesses, such as doors, windows, and display glass, may not be boarded or covered by paint, large banners, or other large opaque materials.

4.1.4 Rear or Side Elevations

1. Rear and side elevations with secondary entrances to the retail, office, or residential units shall be architecturally treated.
2. Service and storage areas shall be screened.
3. Business signage and lighting shall be provided to identify the businesses for the patrons.
4. Awnings, display windows, and other architectural elements shall be used to enhance the elevation and appeal to the customers.
5. Side and rear elevations facing residential areas shall be complementary to that use in its architectural details, lighting, signage, etc. The businesses shall not have light spillage onto adjoining parcels.
6. Loading and unloading in the service areas shall be located away from the main and public view streets and residences whenever feasible and well screened.
7. Mechanical units shall be concealed from public view by landscaping or, if roof mounted, by decorative parapets and/or other architectural elements.

4.1.5 Courtyards

1. Plazas and courtyards are encouraged to be incorporated in the buildings.
2. Environmental factors such as sun, prevailing winds, and humidity shall

be considered while designing courtyards and plazas in order to provide proper ventilation to the buildings.

3. Shops, restaurants, offices, and other active spaces should open to the courtyard instead of blank walls.
4. Courtyards and plazas should be designed in a way that is accessible from the main street and have an unimpeded line of sight from the public right-of-way.

A courtyard.

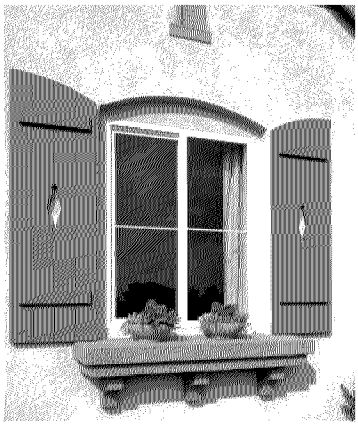
4.1.6 Spanish Colonial Architectural Elements

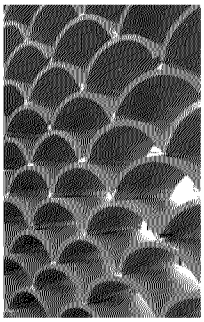
1. The roof shall be low-pitched.
2. The roof materials shall be fire-resistant using concrete, clay 'S,' or barrel tile.
3. Main gable roofs shall have roof pitches of 3:12 to 4:12.
4. The roof overhangs shall be 12" to 18" wide with exposed wood rafter tails.
5. Exposed rafter tails, notched or rolled stucco fascia is recommended.
6. Decorative gable end vents are required for gables facing the main streets.
7. One or more prominent arches shall be placed above doors or principal windows.
8. Entry elements in the form of colonnaded arcades with elaborate masonry arches supporting the roof are recommended. Columns supporting the porches can also be of heavy timber often with a bracket above or square Greek revival columns.
9. Juliet balconies with wrought iron railing and brackets are encouraged.
10. The cantilevered balconies can be supported by exposed wood, precast concrete, or stucco corbels.
11. The railing for the balconies shall be of wood or metal.
12. Windows shall have simple trims with header and sill; variations of sill including sloping and sculpted stucco sill are recommended.
13. Feature windows and doors shall be recessed to convey a thick wall appearance.

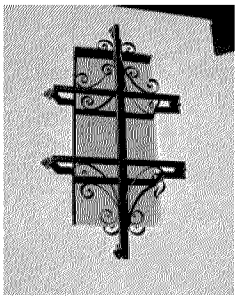
For awning, projections, building signage, garages, and building lighting, please refer to 4.2 Village II and Village III design guidelines.

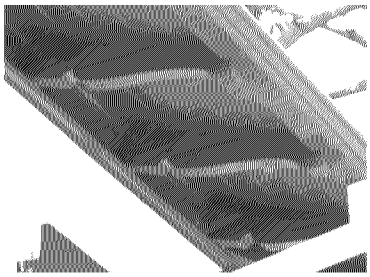
- *Materials and Color*

1. Stucco on the exterior wall shall be smooth to light sand finish or light dash finish.
2. Walls shall use stucco, wood, and wood-like materials.
3. The main stucco color shall be of light earth tone colors per attached color palette.
4. Roofs shall be terracotta to brown hues per attached color palette.
5. Bright accent colors and tile colors are encouraged.









Spanish Colonial Color Palette
(The following SHERMAN WILLIAMS or equal colors should be used)

FASCIA/TRIM/WOOD ACCENTS
6062-6108
6076-6101
6083-6087
6089-6090
6095-6097
6102-6104
6109-6111
2806-2808
7008
7009
7012

STUCCO (FIELD COLOR)
6053
6059/6060
6067
6077-6078
6084-6087
6105-6108
6117/6123
6121
2022
2805
2803
7006
7008
7009
7012

ACCENT COLORS
(WROUGHT IRON/SHUTTERS/ENTRY/MULLIONS)
2837
2843
2810
2811
2803
2802
2801
6229
6222
6214
6215
6181
6139
6132
6118
6027

ROOF ('S' TILE)
Terracotta Blends
Brown Blends
Tan/Terracotta Blends
Brown/Terracotta Blends
Red/Terracotta Blends
Tan/Brown/Terracotta Blends

4.2 DOWNTOWN VILLAGE II & VILLAGE III – TRANSIT VILLAGE

ITALIANATE

The mixed-used buildings in the Long Beach Boulevard Specific Plan are multistory buildings that contain both retail/commercial and residential uses within Downtown Village II, while Village III – Transit Village includes a mixed use of only retail and commercial.

4.2.1 ARCHITECTURAL STYLES

The architectural style recommended for the buildings in Downtown Village II and Village III – Transit Village is Italianate, reflecting the history and culture of the City. This style is visually compatible with Spanish Colonial in Downtown Village I and, when adjacent, creates a diverse and visually interesting street scene.

Italianate Style. The Italianate style began as part of the picturesque movement, a shift away from a more formal direction in art and architecture. The new period style generated classic informality, with traditional towers, as models for Italian-style villas.

The identifying features of this style include low-pitched mostly hipped roof, overhanging eaves with decorative brackets underneath, tall windows sometimes with an arched or curved top, horizontal belt courses, corner quoins, pediment entry elements, and feature tower elements.

Varied architectural styles.

4.2.2 MASSING AND ARTICULATION

- *Varied and Articulated Buildings*

1. The buildings shall have clear distinct base, main body, and top sections. The base should establish a human scale for pedestrians and visually join the building to the ground. The base shall be defined by a change of material, color, or architectural elements such as arcades and/or projecting structural elements. The base shall be visually divided from the main body with the help of a horizontal belt course, awnings, and series of openings, projections, or cornices. The main body of the building shall be

architecturally divided to reduce the height and mass. The top of the building shall be a sloped roof, cornice, or treated parapet wall according to the architectural style of the buildings.

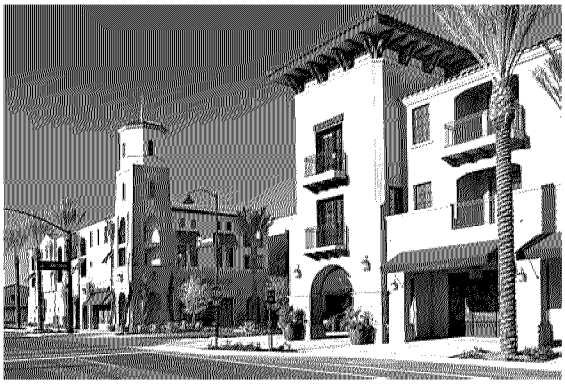
2. Varied multilevel rooflines defined by tops of parapets or eaves are required to achieve vertical building articulation.
3. The main pedestrian entrance for the upper stories shall be clearly visible from the main street. It shall be architecturally treated with recessed entry, private courtyard, lobby, vestibule, or other architectural entry treatment.
4. Header heights shall be maintained to unify the different building masses and convey a harmonious street scene.
5. Building corners at major intersections shall be architecturally emphasized and have tower-like elements higher than the rest of the building.

Façade Improvement

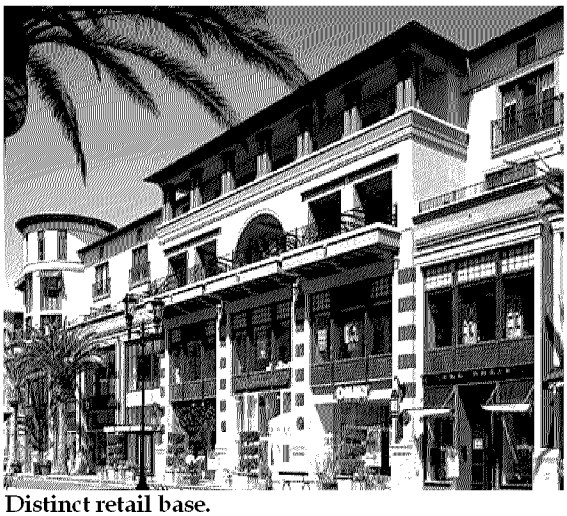
Building façades have great influence on the overall character of Long Beach Boulevard. Enhancing the building façade will also improve the image of the business and provide a sense of community pride for the inhabitants.

Any building façade improvement within the Long Beach Boulevard Specific Plan should follow the design guidelines of its respective village.

Articulated building façade.



Varied roof heights and building massing.



Distinct retail base.

Elevation

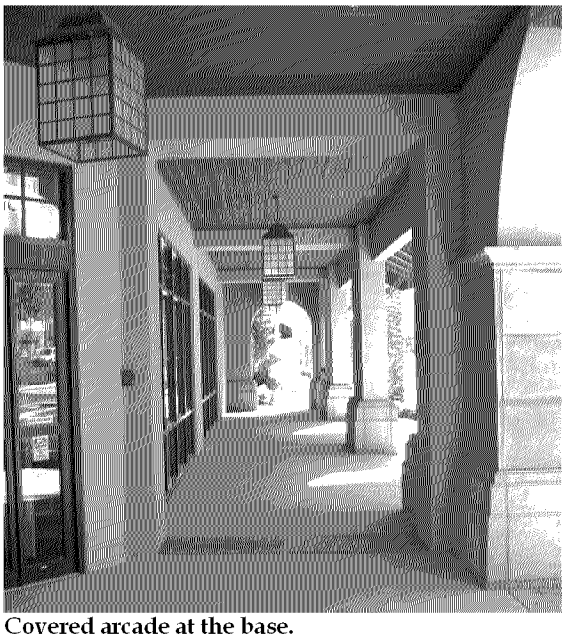
- *Building Walls*

1. Long blank walls shall be avoided. In order to achieve an interactive pedestrian streetscape, 70 percent of the first-story façade wall shall have glazing, either with windows, entrances, or openings. Blank building wall areas more than 300 square feet shall be treated architecturally with balconies, railings, shutters, corbels, pilasters, tile insets, or other three-dimensional acceptable architectural projections. Façades shall be architecturally subdivided into 25′ to 50′ vertical modules to create a traditional "Main Street" appearance.
2. The first-floor businesses are required to be articulated with the use of recessed entries, insets, canopies, awnings, arcades, etc. On the residential units above, architectural features such as balconies, porches, corbelled projections, wrought iron window balconies, and other three-dimensional architectural elements shall be provided to achieve building wall articulation.
3. Individual wall mechanical units are allowed but need to be flush to the exterior with decorative grille and have dimensional trim finished the same as the surrounding architecture.
4. All building façades shall be architecturally treated.

Covered patio area

Residential balcony projections.

Residential entrance from the main street.



Covered arcade at the base.

4.2.3 Storefronts

1. The main store entrance shall be oriented toward Long Beach Boulevard.
2. Retail and commercial uses are encouraged to decorate their storefronts with different materials and colors original to the architectural style.
3. Windows and doors shall be placed to facilitate natural surveillance.
4. The glass façades of the businesses, such as doors, windows, and display glass, may not be boarded or covered by paint, large banners, or other large opaque materials.

4.2.4 Rear or Side Elevations

The rear and side elevations shall face the side streets, parking areas, or the residential areas.

1. Rear and side elevations, considered as secondary entrances to the retail or residential units, shall be architecturally treated.
2. Service and storage areas shall be well screened and sited. Loading areas shall be located away from the main and public view streets whenever feasible and well screened.
3. Business signage and lighting shall be provided for the patrons to identify the stores.
4. Awnings, display windows, and other architectural elements should be used to enhance the elevation and appeal to the customers.
5. Side and rear elevations facing residential areas shall be complementary to that use in its

architectural details, lighting, signage, etc.

6. Mechanical units shall be concealed from public view by landscaping or, if roof-mounted, by decorative parapets and/or other architectural elements.

Articulated building façades.

Articulated rear elevation.

Service street elevation.

Building courtyard-private open space with projecting balconies overhead.

4.2.5 Courtyards

1. Internal building courtyards are required to be incorporated into the building design.
2. Courtyards shall be private or semipublic gathering spaces serving as common open area for the residential complex, restaurant outdoor dining, or urban informal gathering space.
3. The building courtyards can be formal gardens or urban spaces surrounded with loggias for shaded seating and set with fountains and lush landscaping elements.
4. Environmental factors such as sun, prevailing winds, and humidity shall be considered while designing courtyards in order to provide proper ventilation to the buildings.

Rich vegetation within a courtyard to add shade and privacy.

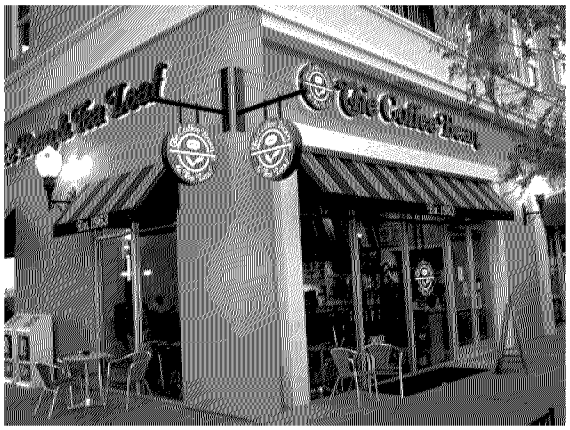
Public courtyard/plaza area.

Building courtyard/Private open space.

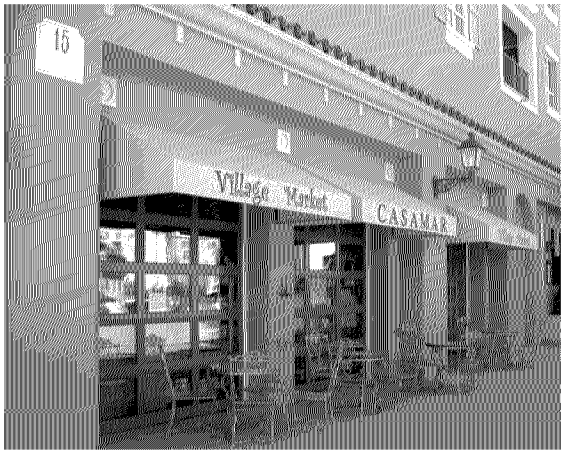
4.2.6 Awnings and Projections

1. The size of the awnings and canopies shall be proportional to the building. Long continuous awnings and/or canopies are discouraged.
2. The first-floor awnings and/or canopies must be between 8′ and 10′ above the surface where they project and can project a maximum of 5′ into the right-of-way.
3. The style of the awning and/or canopy shall complement the style of the architecture of the building. The storefront awning should be fabric mounted over a metal structure or frame or permanent architectural awning material derived from the building architecture to which it is attached.

4. Internally illuminated awnings and canopies with or without signage should not be used.



Storefront building awnings.



Building awning providing shade to outdoor seating.

4.2.7 Building Signage

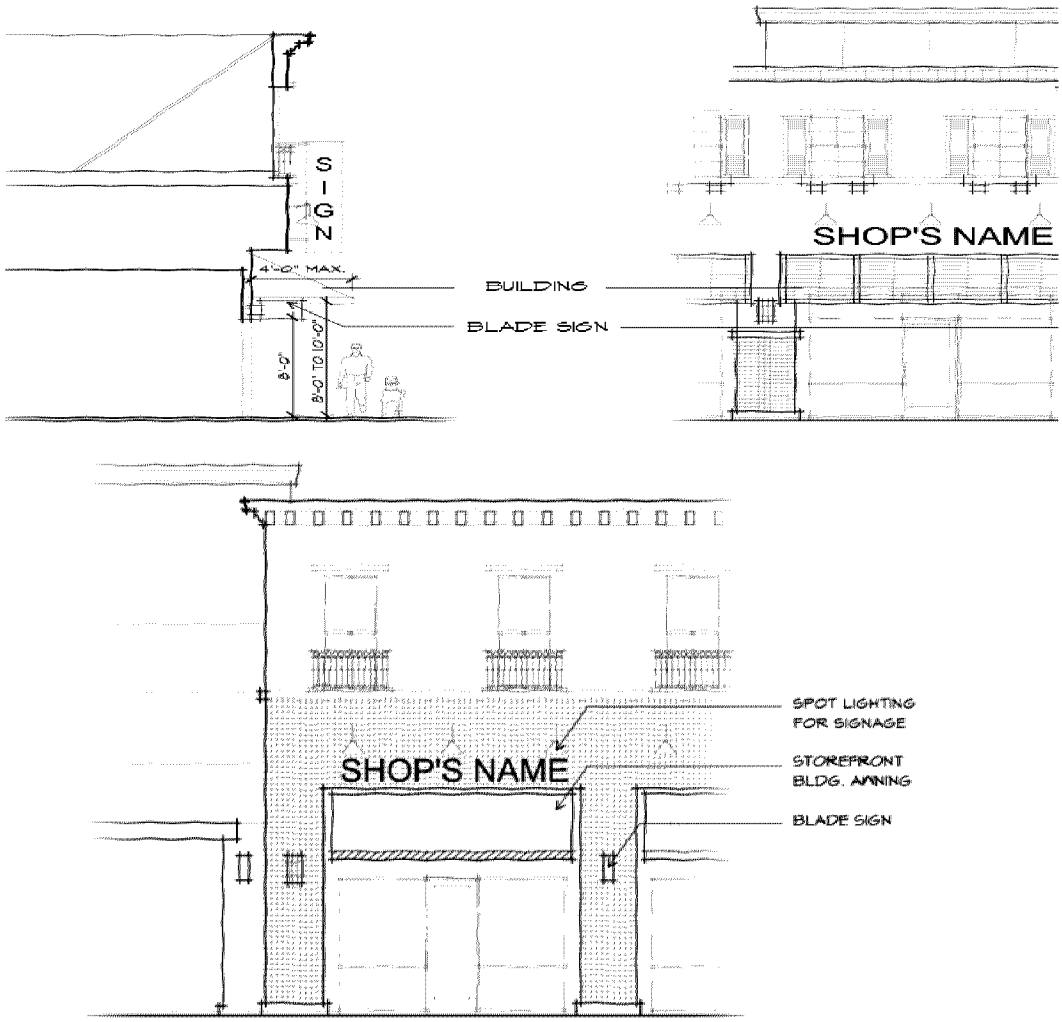
Building signage on Long Beach Boulevard shall be pedestrian-oriented and shall be proportional to the building size. The signage shall create interest and contribute to the lively "Main Street" experience.

1. The signage shall be architecturally compatible to the building style.
2. Illuminated box signs, roof signs, and pole signs are not allowed.

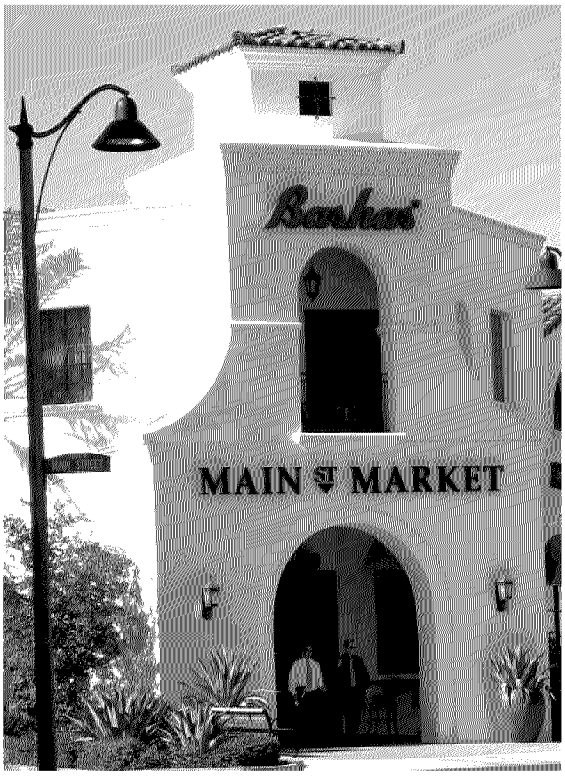
Storefront oriented toward "Main Street."

3. Building-mounted marquee signage intended for the motorists should be designed as part of the architectural façade of that building. It should not obscure or hide architectural features of the building.

Pedestrian-oriented blade signs.



4. Building-mounted marquee signage intended for the motorists should be designed as part of the architectural façade of that building. It should not obscure or hide architectural features of the building.
5. Blade signs must provide 8′ clearance from the finished grade level and can project a maximum of 2′-6″ from the face of a building wall to the front of the sign.
6. The structural supports for the signage should match the architecture of the building to which it is attached.
7. Signage is not allowed on the sloping portion of the building awning or canopies.
8. Cloth and paper signs are not allowed. Signs must be made of permanent materials such as metal, wood, ceramic, stone, etc. and shall complement the material and style of the building.
9. Window signage cannot be more than 2 square feet.
10. Individual backlit letters are permitted for signage.



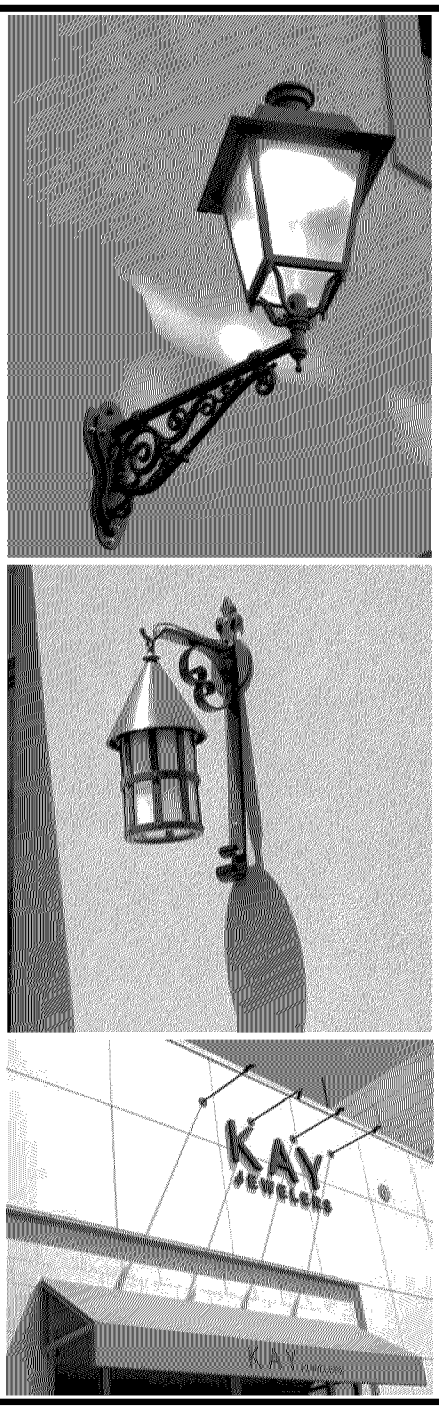
Building signage.

11. A comprehensive signage program shall be submitted to the City of Lynwood for approval.

4.2.8 Building Lighting

The main purpose of building lighting is to provide safety and illumination around the building.

1. The lighting design shall be compatible to the architectural style of the building and shall be integrated with the architectural design of structures.
2. There should be no sky globe effect or light spillage onto other properties.
3. Building signs illuminated above or below by spotlights are permitted.
4. Flashing or blinking lights are not permitted.



Building lighting.

4.2.9 Garages

1. Podium parking and parking entrances facing streets shall be architecturally treated.

2. Garage entrances shall be recessed from the façade of the building.
3. Vehicular entrances for the podium parking structure shall be architecturally treated and make an entry statement for the vehicles.

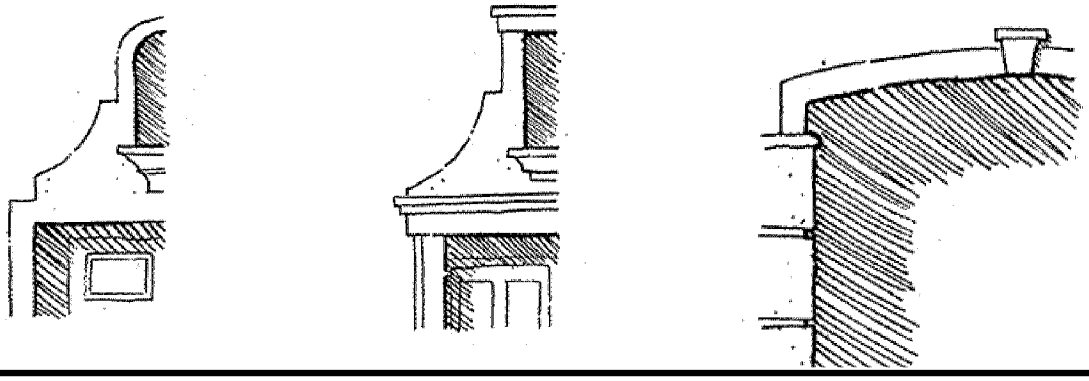
4.2.10 Italianate Architectural Elements

1. The roof shall be flat or low-pitched with concrete flat clay tile, concrete 'S,' or clay tile.
2. The eaves shall have an overhang of 12" to 36".
3. Eaves with decorative brackets detailing underneath are recommended.
4. Arched arcade elements at the commercial front and covered balconies are recommended to enhance the architectural style of the building.
5. The windows shall be typically tall and narrow proportionally for the residential and business uses, which form the main body of the buildings.
6. Windows can be in pair or triple configurations.
7. Window sashes shall be most commonly with one or two-pane glazing.
8. Some feature windows shall be arched above and have U-shaped crowns, often with brackets.
9. Rectangular windows shall have simple window trims or pediment crowns.
10. Door tops shall be in same shape as the windows with large-pane glazing.
11. Entry porches shall be covered, commonly supported by square posts with beveled corners.

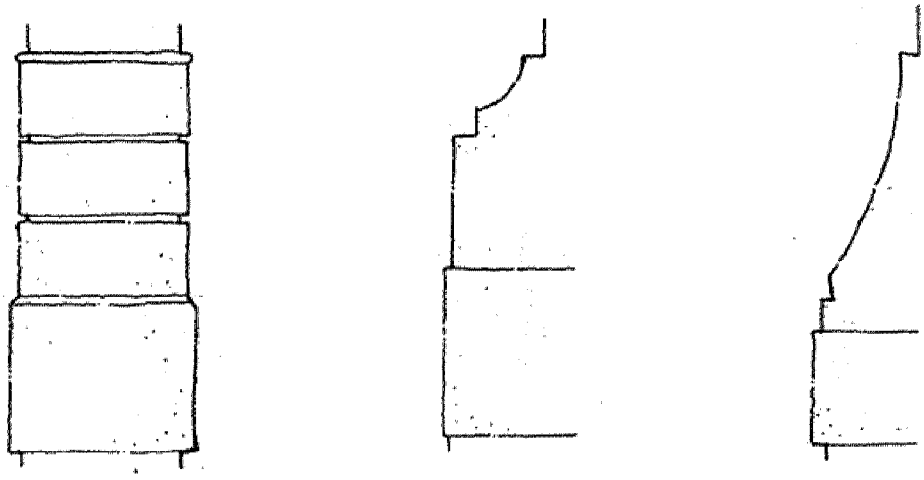
- ***Materials and Colors***

1. Walls shall be of stucco with stone or precast concrete accent elements.
2. The stucco shall be light-colored, off-white to medium hues.
3. Roof fascias, windows, and door trim shall be of stucco, stone, cast concrete, or wood
4. Fascia shall match the stucco color or be a lighter or darker version of the stucco color.
5. Sloped roof shall have flat or 'S' tile roof. The roof tiles shall be terracotta, red, brown, or grey blends.
6. Balconies shall have decorative wrought iron railing, concrete precast balusters, or stone balusters.
7. Precast elements are recommended for entries to residential complexes, parking structures, and other commercial entrances.

Architectural elements.



Entry elements



Pilasters with quoins

Italianate–Color Palette
(The following SHERMAN WILLIAMS or equal colors should be used.)

FASCIA/TRIM/WOOD ACCENTS
7004
7012
7029
7036
7050
6112/6113
6126/6127
6133/6134
6140/6141
6154/6155

STUCCO/PRECAST CONCRETE ELEMENTS (FIELD COLOR)
7029
7036
7050
6058-6060
6113-6116
6127-6130
6134-6137
141-6143
6155-6157
6169-6171
6162-6164

ACCENT COLORS
(WROUGHT IRON/SHUTTERS/ENTRY/MULLIONS)
2802
2811
2819
6006
6034
6076
6090
6118
6124
6153
6174
6207
6215
6243
6265
6327
6990
7076

ROOF ('S' TILE)
Terracotta Blends
Brown Blends
Grey Blends
Brown/Terracotta Blends
Brown/Green Blends
Tan/Brown/Terracotta Blends

5.0 CIRCULATION AND LANDSCAPE PLAN

5.1 CIRCULATION PLAN

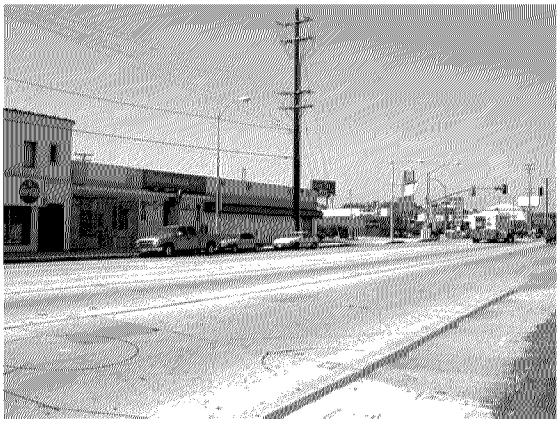
5.1.1 VISION FOR LONG BEACH BOULEVARD

The vision for the circulation and landscape plan for Long Beach Boulevard is to link the corridor integrally within the City and create a vibrant and viable downtown.

5.1.2 EXISTING CONDITIONS

As described previously, Long Beach Boulevard presents myriad street conditions, both for traffic and pedestrian movement. It exhibits typical conditions of a major thoroughfare of a built-out city. It absorbs regional traffic as well as local traffic within the cities.

Long Beach Boulevard, under the maintenance of City of Lynwood Public Works Department, is a busy street. The width of the Boulevard ranges from 82 feet to 110 feet along the 30 blocks within the City. The sidewalk space is approximately 9–10 feet wide on most blocks.

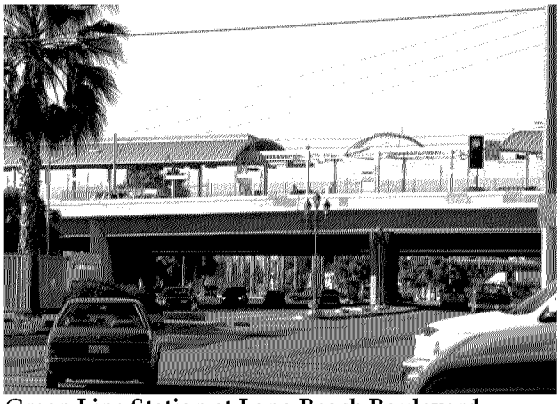


Current Street Condition

Busy Intersection

5.1.3 METRO GREEN LINE

The addition of a Green Line station in 1995 on Interstate 105 brings access to transit for the population in the corridor. The east-west Green Line has 14 stations that connect LAX to communities from Norwalk to El Segundo. It is a corridor with a high level of activity and the addition of transit investment was the harbinger for the real estate changes that have been ongoing in the last few years. The Green Line and its existing synergy with the land uses along Long Beach Boulevard are critical in setting the land use programmatic development for transit-oriented development (TOD).



Green Line Station at Long Beach Boulevard

5.1.4 Circulation Development Objectives

In keeping with the goals of the project and also principles of TOD, the Circulation Plan aims to create a pedestrian-oriented environment while maintaining the vehicular traffic on Long Beach Boulevard by providing:

- Space for pedestrians and bicyclists within a highly active urban thoroughfare;
- Buffers to protect pedestrians and bicyclists from traffic; and
- Safe pedestrian crossings at the street crosswalks, particularly for access to the transit station.

Besides the sidewalk along the Boulevard, the proposed plan emphasizes the creation of pedestrian ways with "civic" spaces, such as plazas in Downtown Village II and Village III-Transit Village. This is illustrated in previously referenced Figure 3.6 and is intended to become a pedestrian network away from the Boulevard.

5.1.5 Circulation Plan Elements

The circulation plan advocates uniform sidewalk width and travel lanes along the length of the Boulevard.

Angled parking is to be provided along the Boulevard, designed amidst landscape planters. Angled parking in clusters of 5 to 7 stalls is recommended.

There are exposed utility lines along parts of the Boulevard. Under-grounding of utilities is to be undertaken in such instances.

The City has identified a need to prepare and implement a signage package that includes design for street names, color scheme, and logos. Further, traffic poles and other appurtenances will also be redesigned as part of the Circulation Plan.

5.2 LANDSCAPE PLAN

5.2.1 Landscape Concept

Long Beach Boulevard is envisioned to have a consistent streetscape design with emphasis on major intersections in order to create a memorable corridor with distinct identity.

5.2.2 Landscape Development Objectives

Based on the primary goal of maintaining a visual cohesiveness and unity on the Boulevard, the landscape plan embodies following objectives:

- Providing an identity plant palette along the Boulevard;
- Marking the entrance and major intersections with enhanced landscape elements;
- Recommending a well-designed sidewalk; and
- Embodying local cultural elements in public art.

5.2.3 Landscape Plan Elements

The circulation and landscape elements are planned cohesively and are described in the following section as streetscape elements.

5.3 STREETSCAPE ELEMENTS

Street design can be considerably enhanced by several components (elements). These include sidewalk space; street intersections; design treatments at major street intersections or nodes; pedestrian crossings; and street landscaping. These elements add to the character of the street and are further described in this section.

5.3.1 SIDEWALKS

The ideal sidewalk conditions would allow for a planting buffer between street and sidewalk, a street furniture area, walking/strolling spaces and window shopping/browsing area as explained below. The sidewalk for Long Beach Boulevard is divided into four distinct zones: the Edge Zone (1), the Furnishing Zone (2), the Throughway Zone (3), and the Frontage Zone (4) as shown in Figure 5.1.

- **Edge Zone (1).** This is the transition from the roadway to the sidewalk, usually defined with a curb.
- **Furnishing Zone (2).** This is the next zone in the sidewalk. It provides a buffer between pedestrians and street traffic. It generally includes trees, tree lawns, phone booths, parking meters, trash cans, traffic signal cabinets, fire hydrants, bicycle racks, seating, etc.
- **Throughway Zone (3).** This is intended for pedestrian travel only. Ideally, it should be clear of obstacles, including driveway aprons. The minimum width of this zone is 4 feet for Americans with Disability Act (ADA) accessibility with allowance of 5 feet at least every 200 feet.

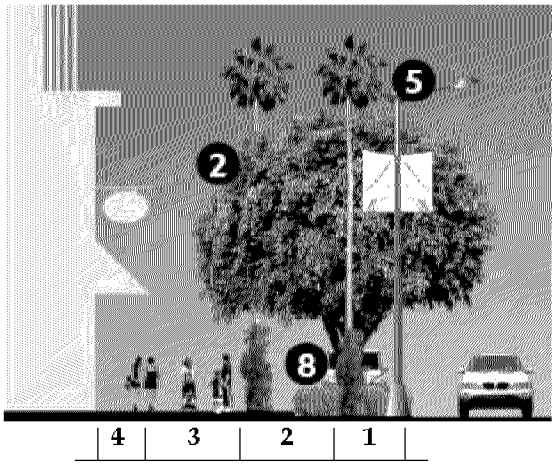


Figure 5.1: Sidewalk Zones

- **Frontage Zone (4)**. This includes the portions of the sidewalk nearest to property lines. This is the zone in which pedestrians interact with shop displays, slowing down to window shop or enter and exit buildings.

In absence of a Furnishing Zone, the Frontage Zone also accommodates some of the furnishing such as lights, benches, vertical water elements, and trash cans among other outdoor furniture.

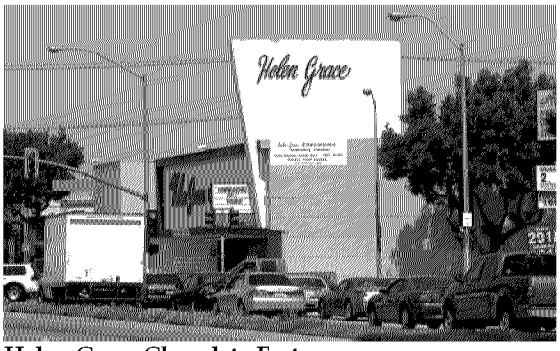
In order of emphasis, the mixed-use Downtown Village II and Village III-Transit Village shall have at least 18 feet of sidewalk space for pedestrian circulation.

Downtown Village I and Village IV-Business Village are planned to have smaller building envelopes along the sidewalks and these villages should ideally have 18 feet of sidewalk space.

5.3.2 DOWNTOWN VILLAGE I DESIGN GUIDELINES

The following design guidelines apply to Downtown Village I:

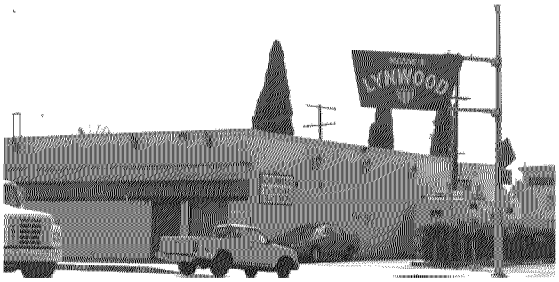
- **Minimum sidewalk width:** 18 feet.
- **Planting width:** 3-4 feet.
- **Sidewalk Material:** PCC.
- **Planting Materials:** Mexican Fan Palm or Canary Island Date Palm, Fichus (specimen tree), Shrub (hedge), and Bougainvillea (vine). Figures 5.2 through 5.5 illustrate the landscape plan in Downtown Village I.
- **Street Furnishings:** Street lighting, outdoor seating, bicycle racks, trash receptacles, and other amenities are provided on the sidewalk.
- Street lighting will also carry banners designed to announce special civic or cultural events.
- Water elements should be implemented into the streetscape without acting as a barrier to pedestrian circulation. Small fountains or vertical water falls attached to the building façade would work best due to the limited sidewalk space.



Helen Grace Chocolate Factory

- **Street Intersections:** The major street crossing at Tweedy Boulevard at Long Beach Boulevard is enhanced by pedestrian crossing that is paved with stamped or colored concrete as illustrated in Figure 5.3.
- **Landmark Element:** A landmark element in the form of an archway or gateway is planned across the intersection of Tweedy Boulevard (entrance to the City) and Long Beach Boulevard.

The intersection of Martin Luther King Jr. Boulevard and Long Beach Boulevard is an important one for the City, marked by the presence of Helen Grace, the premium chocolate factory and factory store (since 1944). The recommendation for this important intersection is to either enhance the marquee of the Helen Grace building with its signage or introduce the City gateway monument. The existing sign monument at Tenaya Avenue and Long Beach Boulevard is to be removed.



The current welcome sign for Lynwood does not stand out.

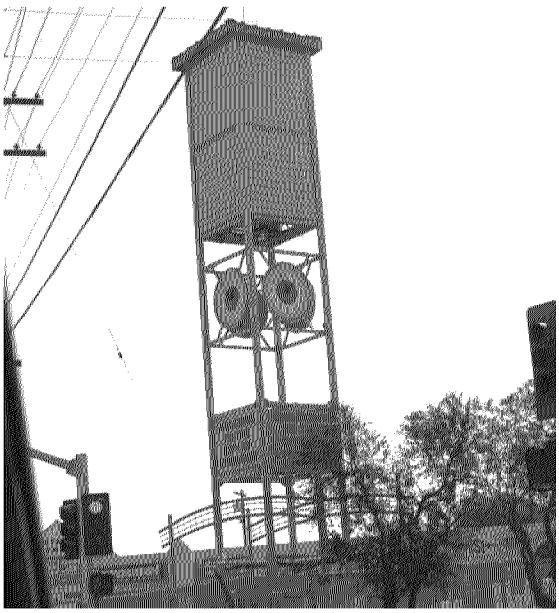
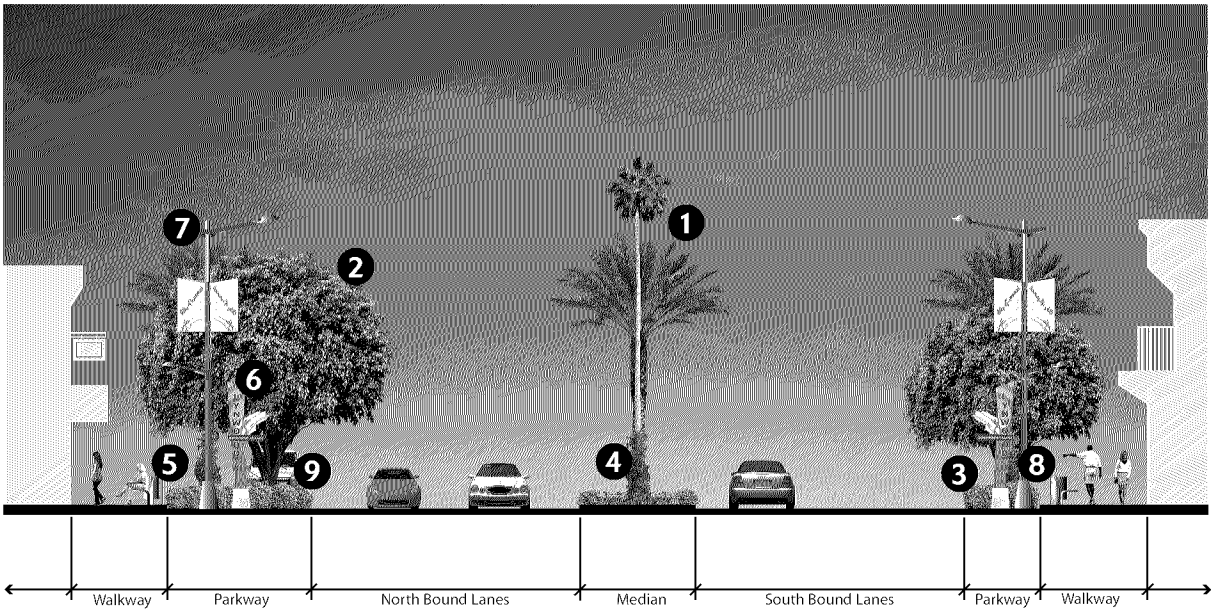

Current Lynwood welcome sign and clock tower monument at Tenaya Avenue

Figure 5.2: Intersection at Tweedy Boulevard



1. Mexican Fan Palm or Canary Island Date Palm
2. Ficus - Specimen Tree
3. Shrub - Hedge
4. Bougainvillea - Vine
5. Bench
6. Signage
7. Street Lighting
8. Trash Can
9. Street Parking

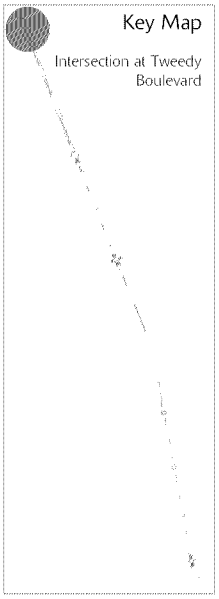
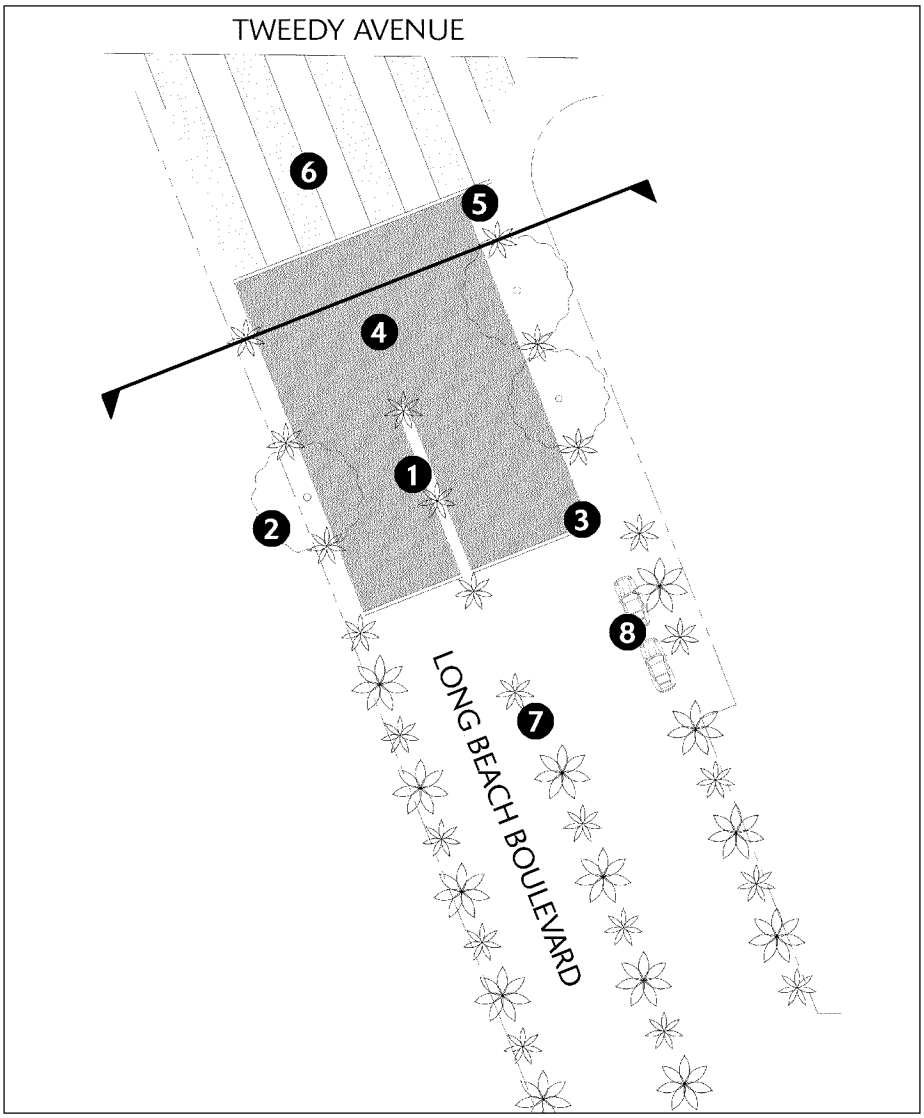


Figure 5.3: Downtown Village I: Tweedy Boulevard Intersection Detail Plan



1. Mexican Fan Palm or Canary Island Date Palm
2. Ficus - Specimen Tree
3. Planting Area
4. Enhanced Paving
5. Monument
6. Pedestrian Walk
7. Median
8. Street Parking

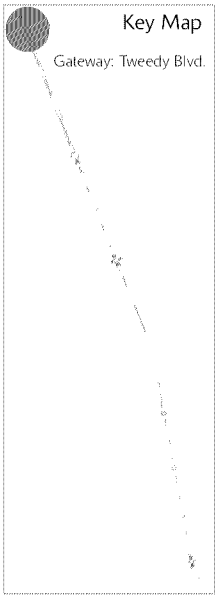


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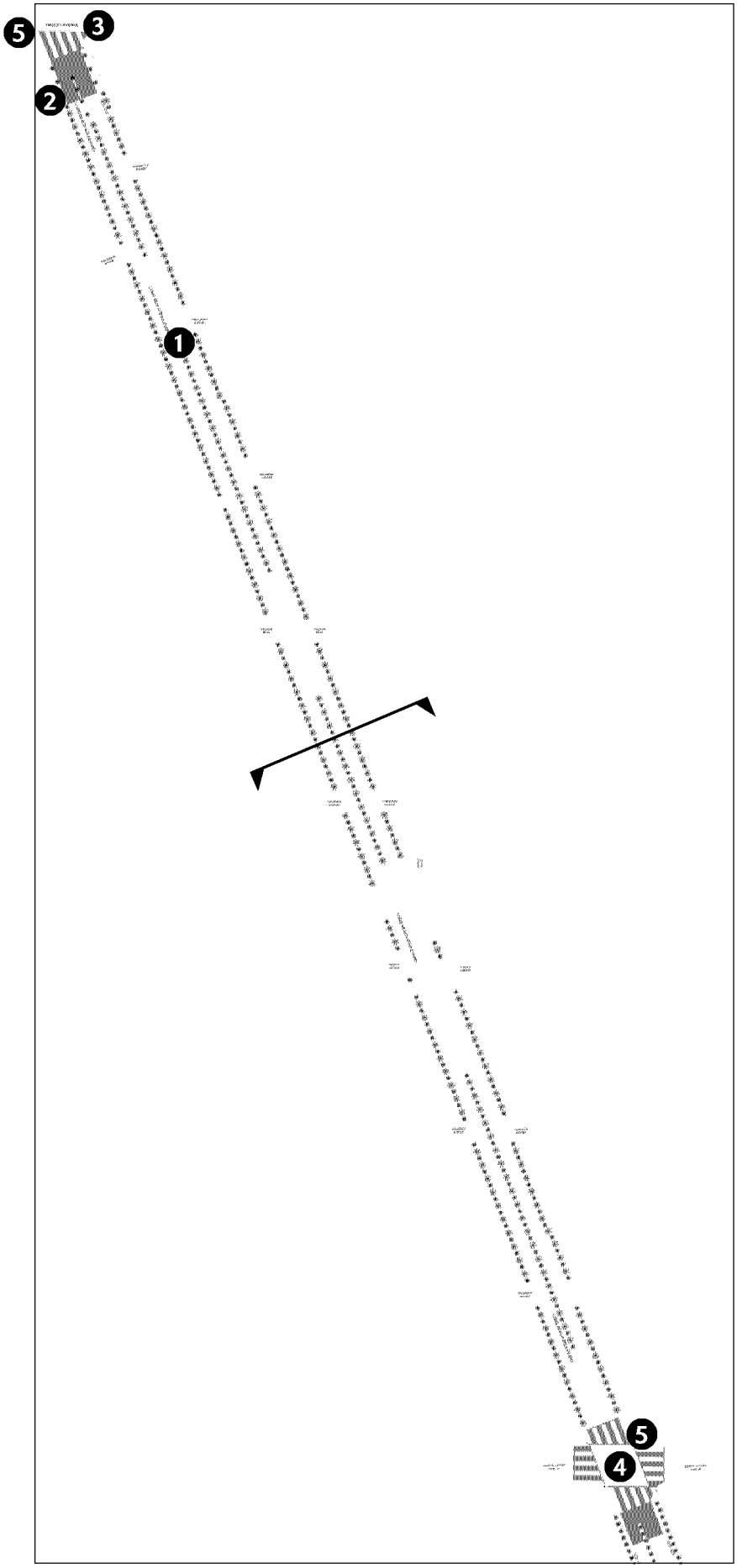
Figure 5.4: Downtown Village I: Street Tree Plan



1. Mexican Fan Palm or Canary Island Date Palm
2. Ficus - Specimen Tree
3. Gateway at Tweedy
4. Intersection at MLK
5. Signage

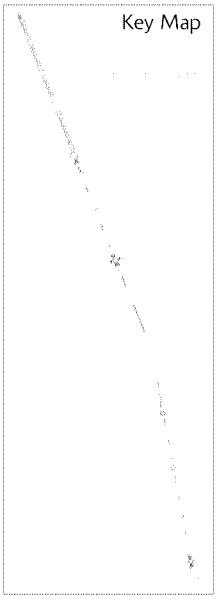


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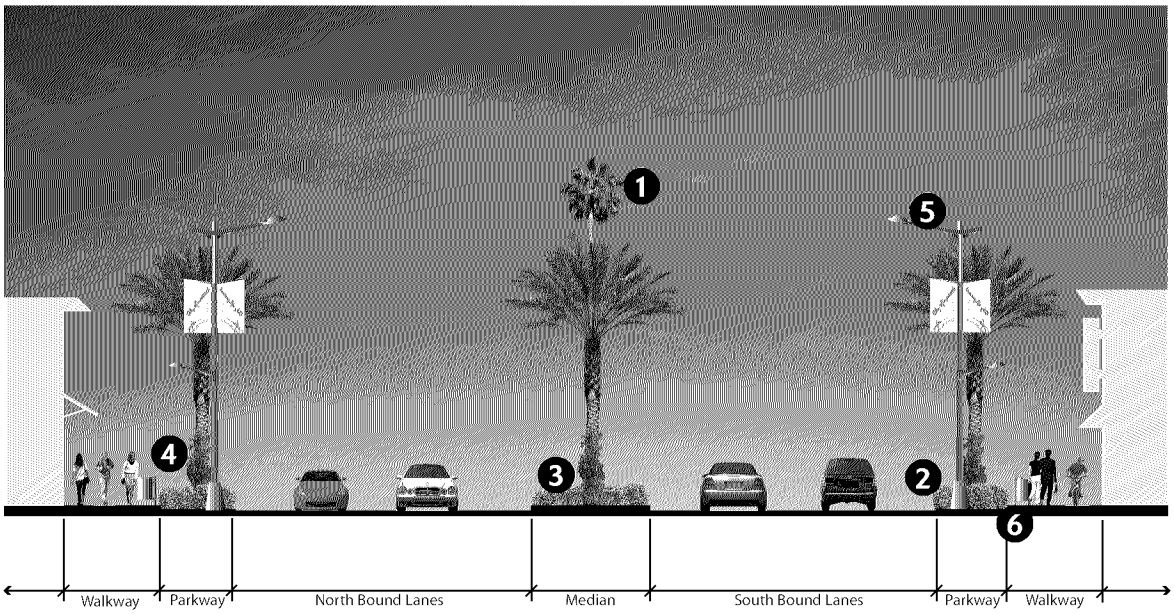
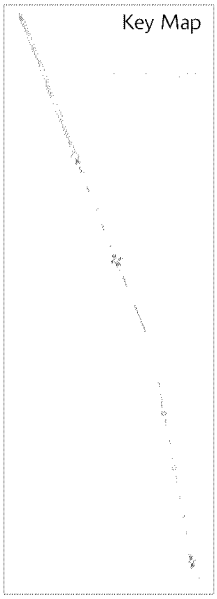
Figure 5.5: Downtown Village I: Street Section



1. Mexican Fan Palm or Canary Island Date Palm
2. Shrub - Hedge
3. Daylily
4. Bougainvillea - Vine
5. Street Lighting
6. Trash Can



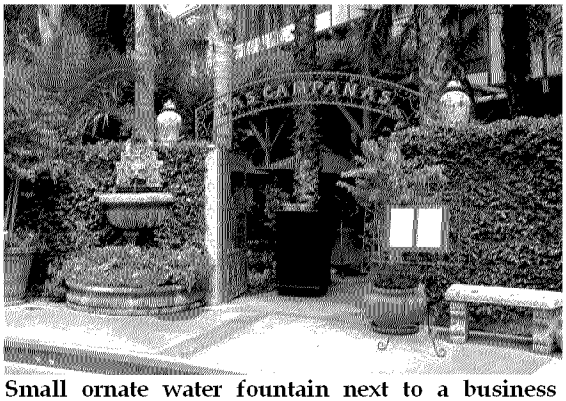
5.3.3 Downtown Village II Design Guidelines

The following design guidelines apply to Village II:

- **Minimum sidewalk width:** 18 feet.
- **Planting width:** 3-4 feet.
- **Material:** PCC.
- **Planting Materials:** Mexican Fan Palm or Canary Island Date Palm, Fichus (specimen tree), and Bougainvillea. Figures 5.6 through 5.10 illustrate the landscape plan for Downtown Village II.
- **Street Furnishings:** Street lighting, outdoor seating, bicycle racks, trash receptacles, and other amenities are provided on the sidewalk.
- Street lighting will also carry banners designed to announce special civic or cultural events.
- Water elements should be implemented into the streetscape without acting as a barrier to pedestrian circulation. Small fountains or vertical water falls attached to the building façade would work best due to the limited sidewalk space.
- **Street Intersections:** The major intersection at Imperial Highway and Long Beach Boulevard is marked by enhanced paving across the intersection. The pedestrian walking zone is especially important as this is a busy intersection with movement of pedestrians, bicyclists, and vehicles.
- Pedestrian bulb-outs should be considered to reduce the pedestrian crossing distance and time. This also improves pedestrian visibility.

Intersection of Imperial Highway and Long Beach Boulevard.

- **Landmark Element:** A landmark element in the form of an archway or gateway is planned at the northeast and southwest corner of Imperial Highway and Long Beach Boulevard. This should be a major landmark that adds to the ambience of this intersection as a "Town Square" for the City.



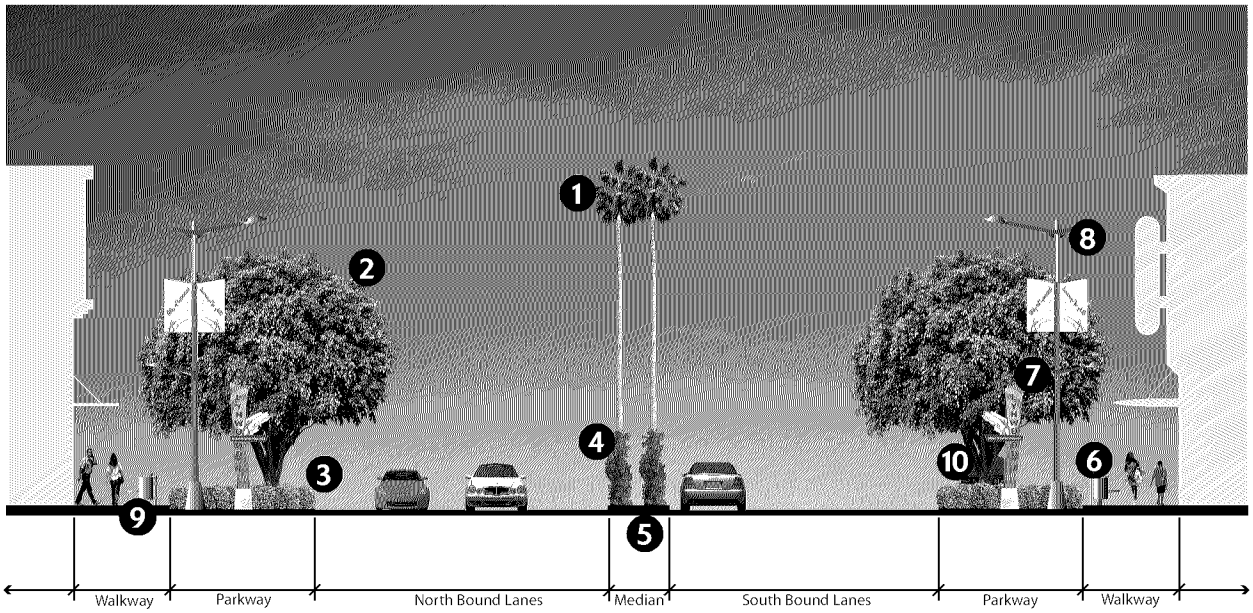
Small ornate water fountain next to a business entrance.

5.3.4 Village III-Transit Village Design Guidelines

The following design guidelines apply to Village III-Transit Village:

- **Minimum sidewalk width:** 18 feet.
- **Planting width:** 3-4 feet.

Figure 5.6: Intersection at Martin Luther King Jr. Boulevard



1. Mexican Fan Palm or Canary Island Date Palm
2. Ficus - Specimen Tree
3. Shrub - Hedge
4. Bougainvillea - Vine
5. Median
6. Bench
7. Signage
8. Street Lighting
9. Trash Can
10. Street Parking

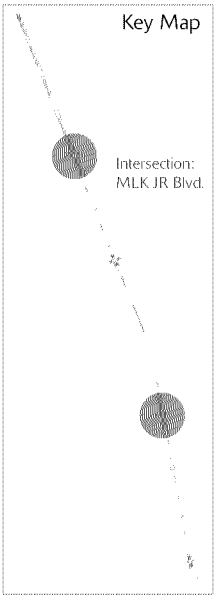
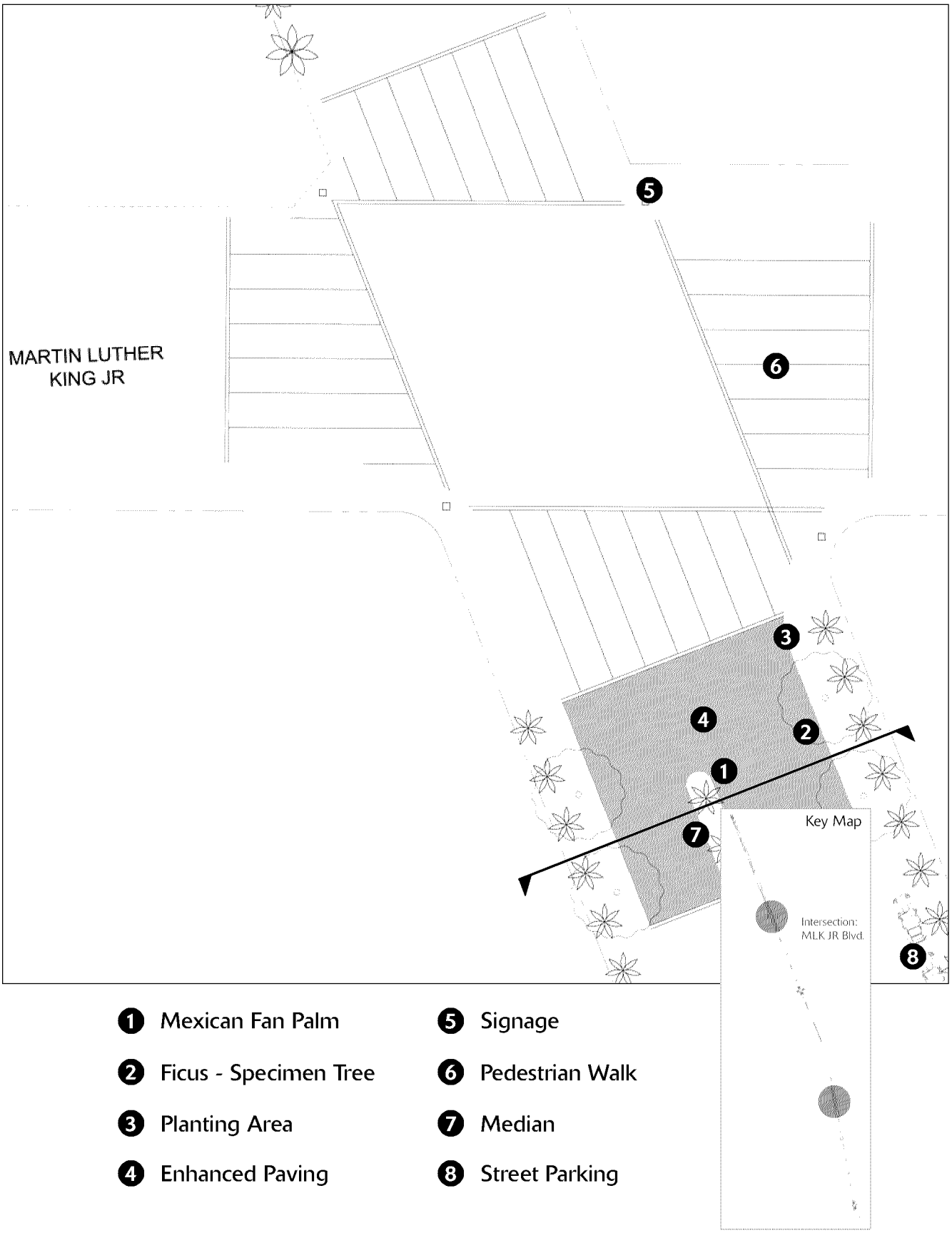


Figure 5.7: Downtown Village II: Martin Luther King Jr Boulevard Intersection Detail Plan



1. Mexican Fan Palm
2. Ficus - Specimen Tree
3. Planting Area
4. Enhanced Paving
5. Signage
6. Pedestrian Walk
7. Median
8. Street Parking

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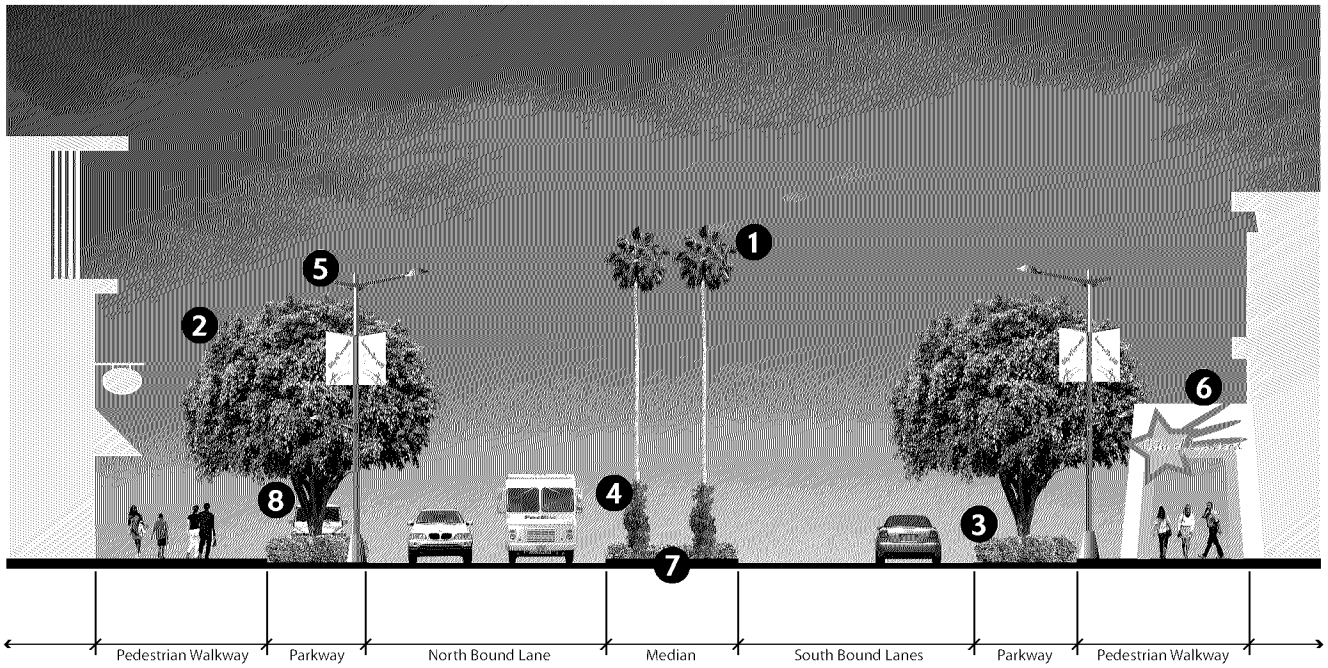
Figure 5.8: Intersection at Imperial Highway



1. Mexican Fan Palm or Canary Island Date Palm
2. Ficus - Specimen Tree
3. Shrub - Hedge
4. Bougainvillea - Vine
5. Street Lighting
6. Signage
7. Median
8. Street Parking

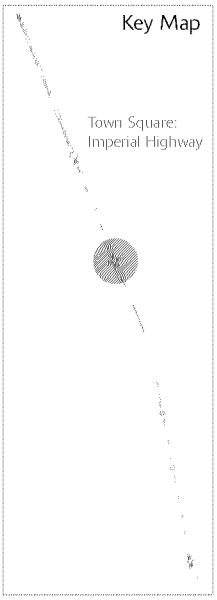
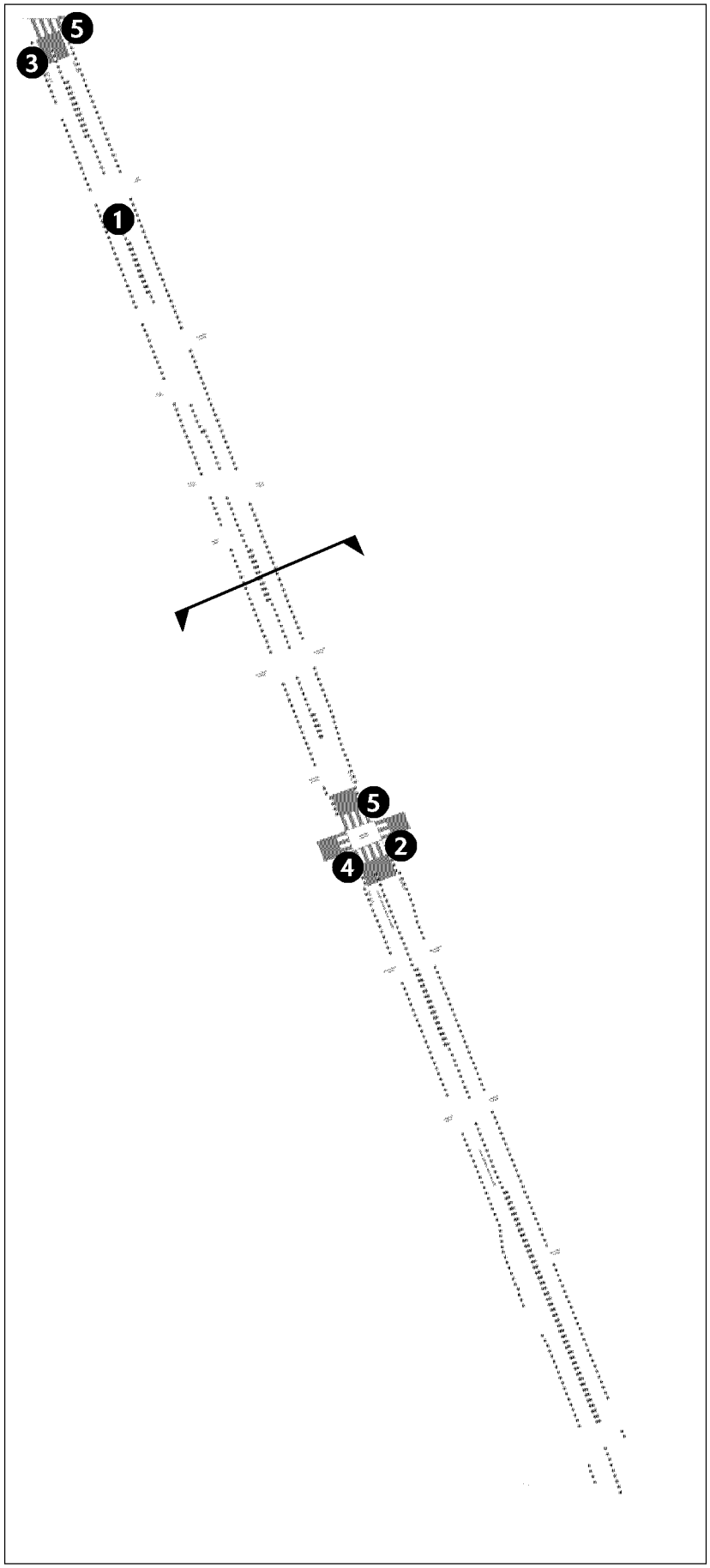
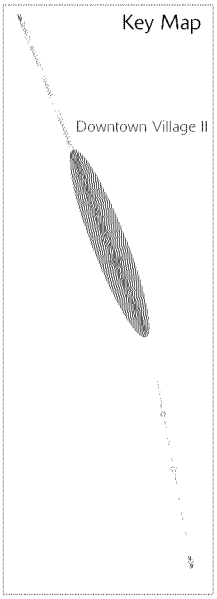


Figure 5.9: Downtown Village II: Street Tree Plan



1. Mexican Fan Palm
2. Ficus - Specimen Tree
3. Intersection at MLK
4. Town Square at Imperial
5. Signage



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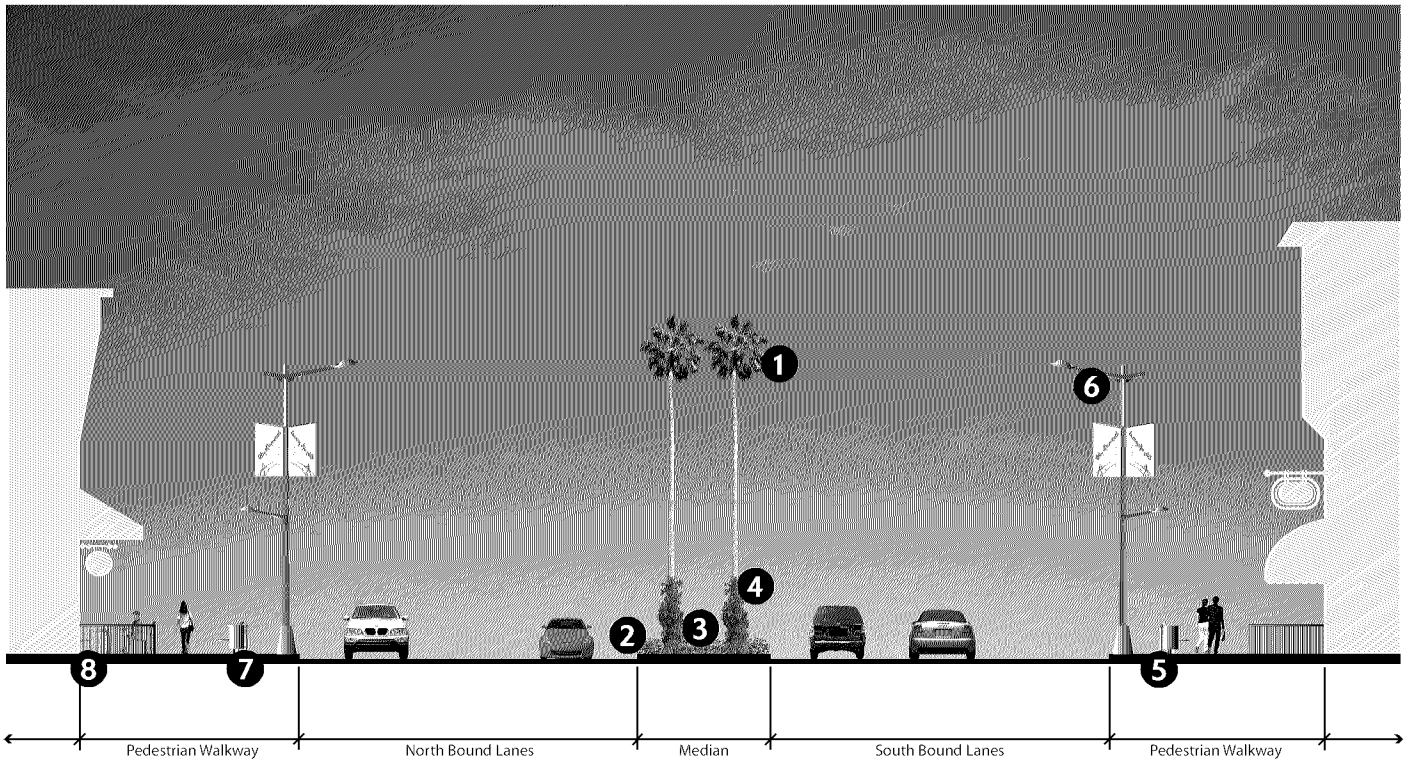
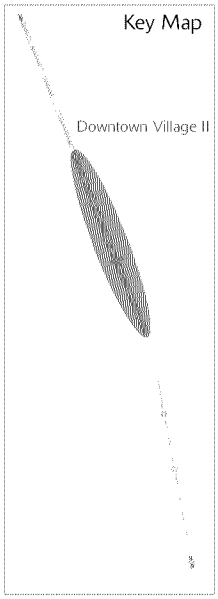
September, 2006

Figure 5.10: Downtown Village: Street Section



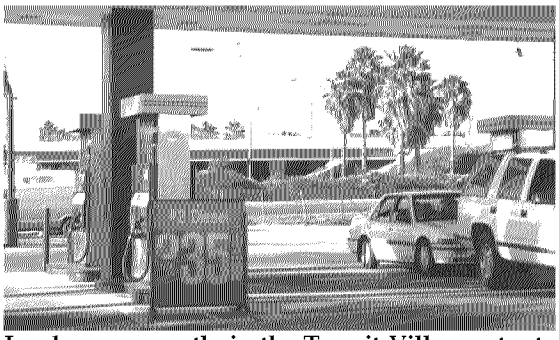
1. Mexican Fan Palm
2. Shrub - Hedge
3. Daylily
4. Bougainvilla - Vine
5. Bench
6. Lighting
7. Trash Can
8. Patio



- **Material:** PCC.
- **Planting Materials:** Mexican Fan Palm, or Canary Island Date Palm, Fichus (specimen tree), and Bougainvillea. Landscape palette is shown in Figures 5.11 through 5.14.
- **Street Furnishings:** Street lighting, outdoor seating, bicycle racks, trash receptacles, and other amenities are provided on the sidewalk. Bicycle racks, security, and lighting should be enhanced under I-105 along the Boulevard.
- Street lighting will also carry banners designed to announce special civic or cultural events.
- Water elements should be implemented into the streetscape without acting as a barrier to pedestrian circulation. Small fountains or vertical water falls attached to the building façade would work best due to the limited sidewalk space.
- **Street Intersections:** Josephine Street and Long Beach Boulevard is marked by enhanced paving and crosswalks for safe pedestrian crossings. Embedded flashing lights for the crosswalks at Interstate 105 and Long Beach Boulevard are recommended.
- **Landmark Element:** A landmark element in the form of an archway or gateway is planned at the intersection of Josephine Street and Long Beach Boulevard. Way finding signs should be planned to show the different components of Green Line.

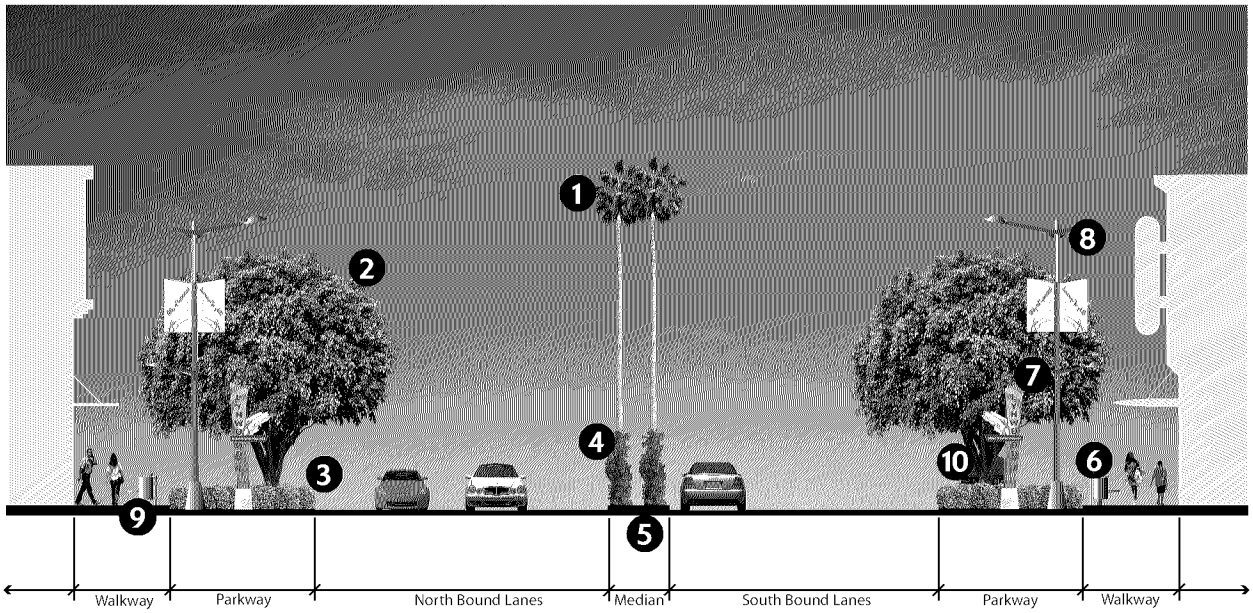
Traveling past Josephine Street toward the Green Line station currently lacks pedestrian crosswalks and appropriate landmarks.

This part of the median is divided with a fence to prevent pedestrians crossing the street. The pedestrian-scaled light post seems out of place since pedestrians are deterred from using the space.



Land uses currently in the Transit Village cater to vehicles such as gas stations and U-Haul rental lots. The conceptual TOD plan calls for pedestrian-friendly uses instead, such as cafés and bookstores.

Figure 5.11: Intersection at Josephine Street



1. Mexican Fan Palm or Canary Island Date Palm
2. Ficus - Specimen Tree
3. Shrub - Hedge
4. Bougainvillea - Vine
5. Median
6. Bench
7. Signage
8. Street Lighting
9. Trash Can
10. Street Parking

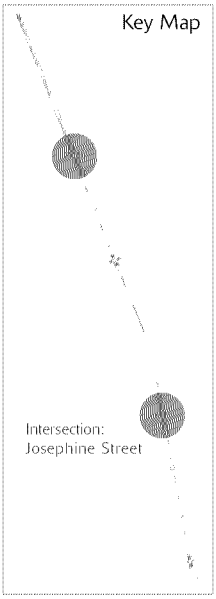
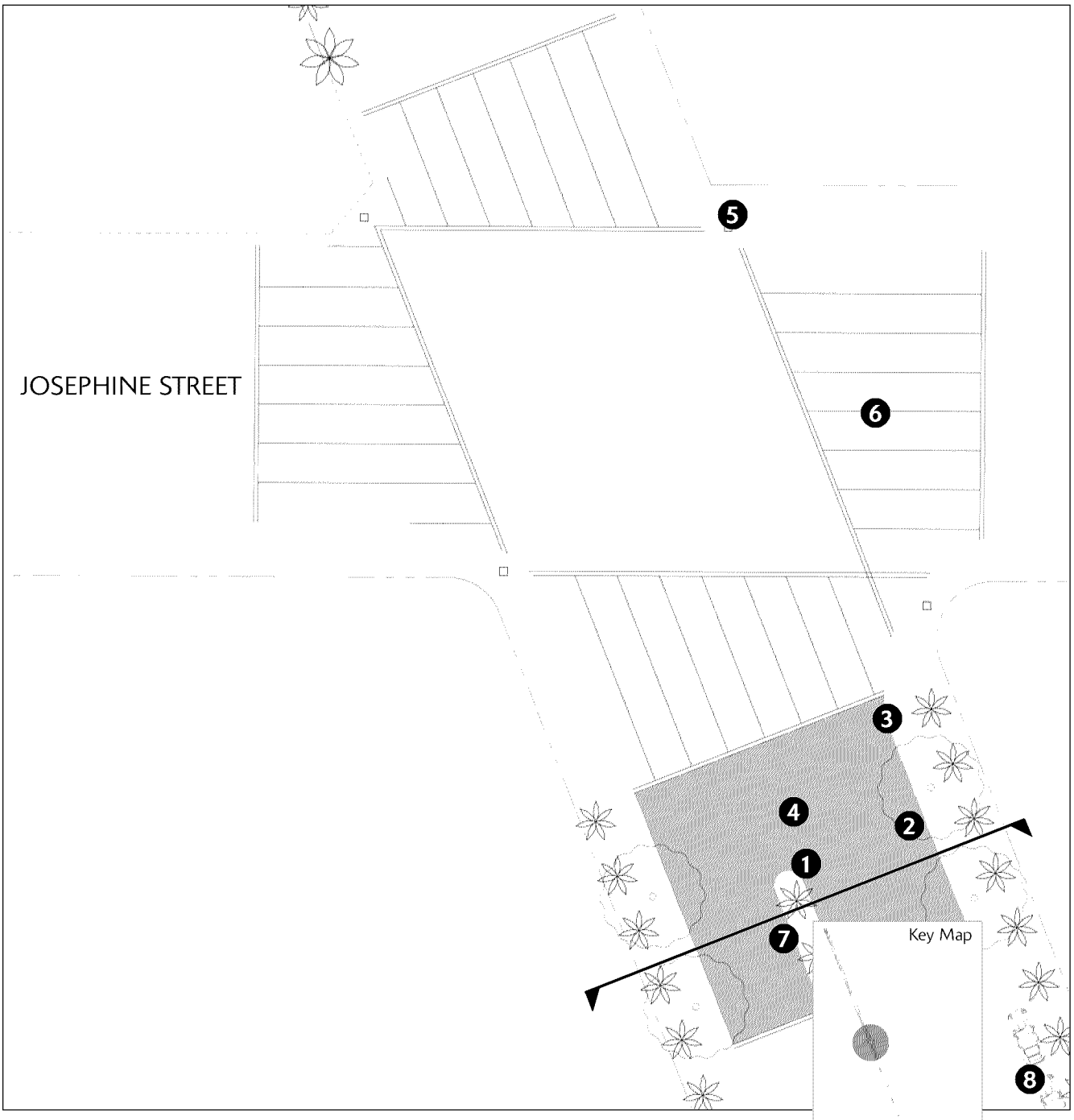


Figure 5.12: Transit Village: Joeephine Street Intersection Detail Plan



1. Mexican Fan Palm
2. Ficus - Specimen Tree
3. Planting Area
4. Enhanced Paving
5. Signage
6. Pedestrian Walk
7. Median
8. Street Parking

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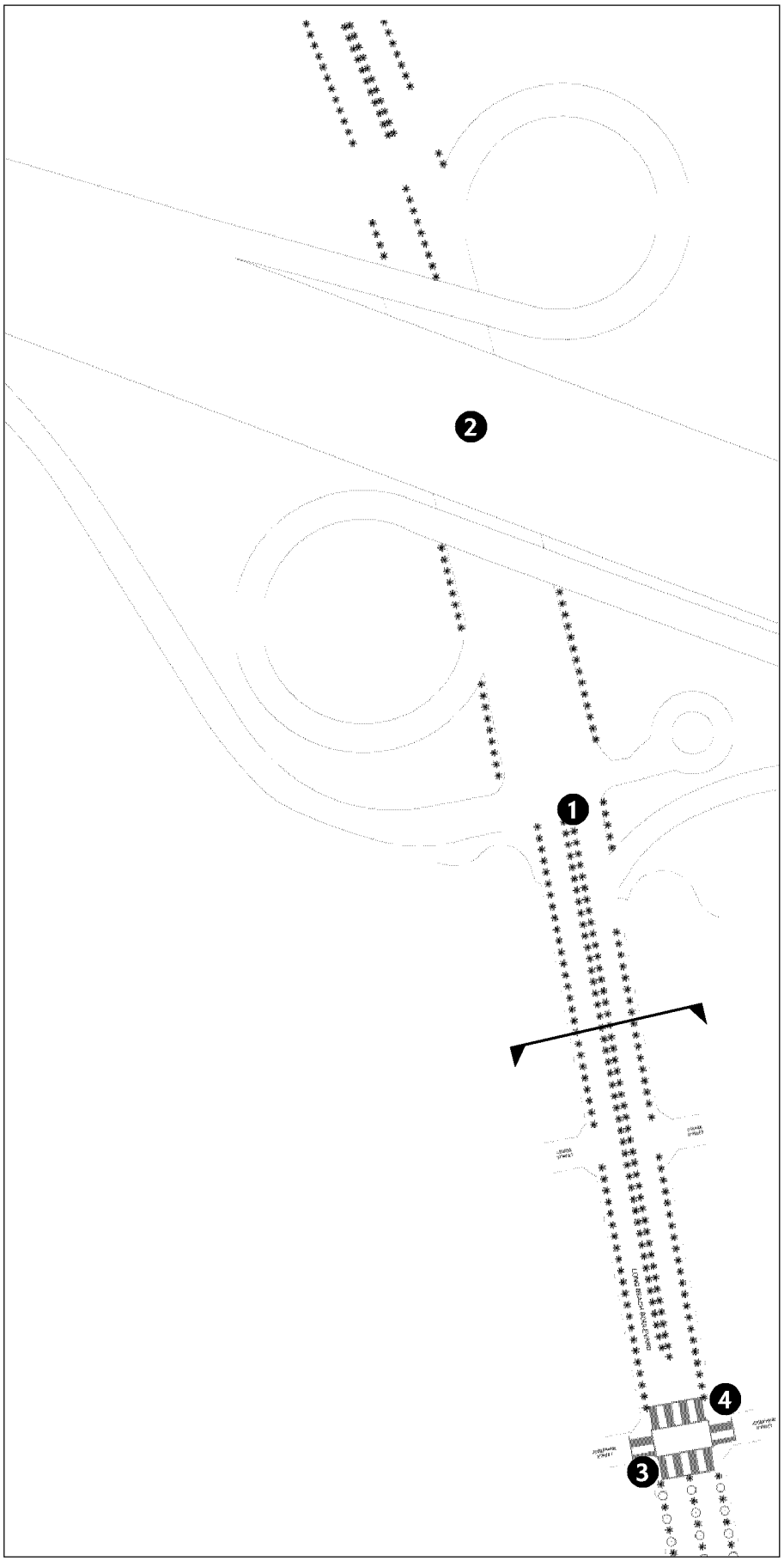
Figure 5.13: Transit Village: Street Tree Plan



1. Mexican Fan Palm
2. Highway 105
3. Intersection at Josephine
4. Signage

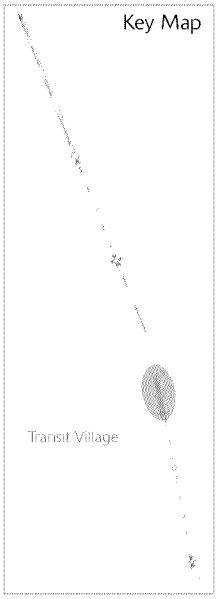


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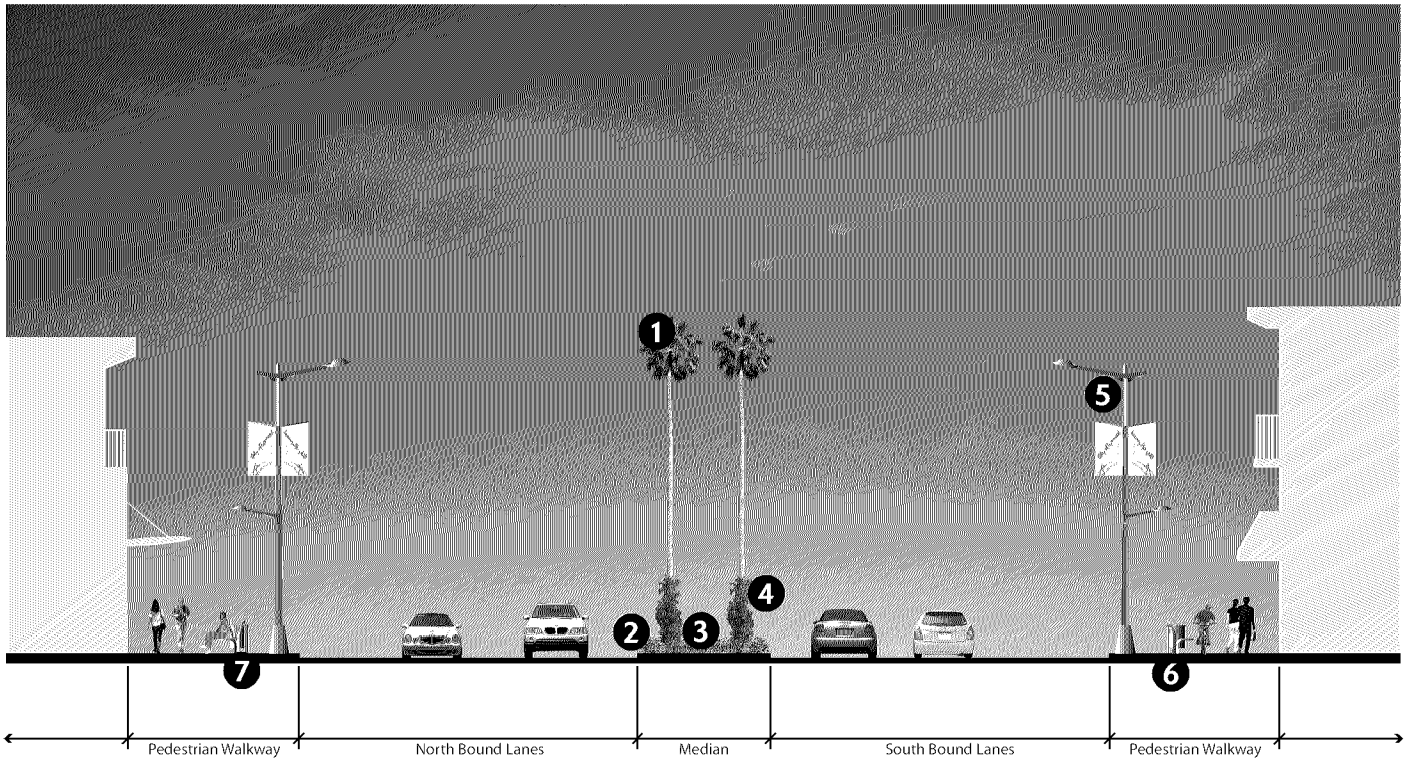
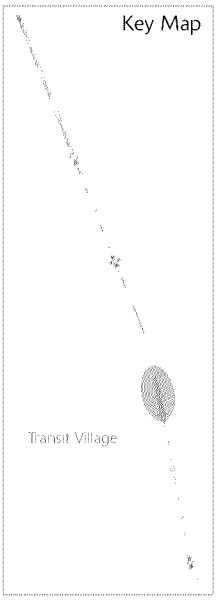
Figure 5.14: Transit Village: Street Section



1. Mexican Fan Palm
2. Shrub - Hedge
3. Daylily
4. Bougainvillea - Vine
5. Lighting
6. Bench
7. Trash Can



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5.3.5 Village IV – Business Village Design Guidelines

The following design guidelines apply to Village IV:

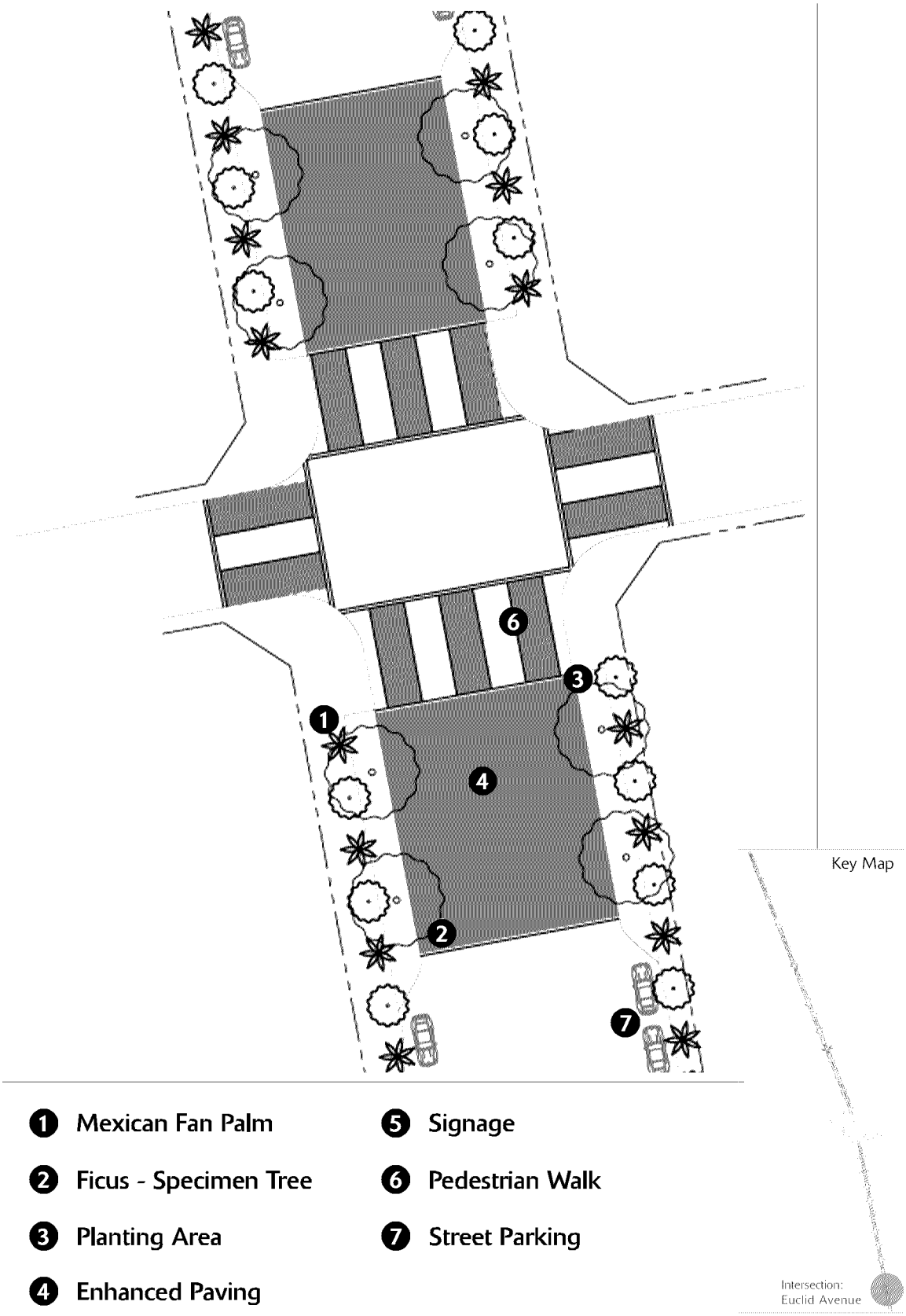
- **Minimum sidewalk width:** 18 feet.
- **Planting width:** 3-4 feet.
- **Material:** PCC.
- **Planting Materials:** Mexican Fan Palm, Camphor Tree, Daylily, Bougainvillea, and Shrub (Hedge). Landscape palette placement is located in Figures 5.15 through 5.17.
- **Street Furnishings:** Street lighting, outdoor seating, bicycle racks, trash receptacles, and other amenities are provided on the sidewalk. Bicycle racks, security, and lighting should be enhanced under I-105 along the Boulevard.
- Street lighting will also carry banners designed to announce special civic or cultural events.
- Water elements should be implemented into the streetscape without acting as a barrier to pedestrian circulation. Small fountains or vertical water falls attached to the building façade would work best due to the limited sidewalk space.
- **Street Intersections:** Euclid Avenue is completely contained within the City limits and is marked by enhanced paving and crosswalks for safe pedestrian crossings.
- **Landmark Element:** A landmark element in the form of an archway or gateway is planned at the intersection of Euclid Avenue and Long Beach Boulevard.

Most businesses, such as this restaurant located just south of Cedar Avenue, offer parking on the side of the building.

The intersection of Burton Avenue and Long Beach Boulevard experiences a high level of traffic.

The median in front of these one-story businesses between Euclid and Orchard Avenues helps mitigate traffic while adding landscape elements.

Figure 5.15: Euclid Intersection Detail Plan



1. Mexican Fan Palm
2. Ficus - Specimen Tree
3. Planting Area
4. Enhanced Paving
5. Signage
6. Pedestrian Walk
7. Street Parking

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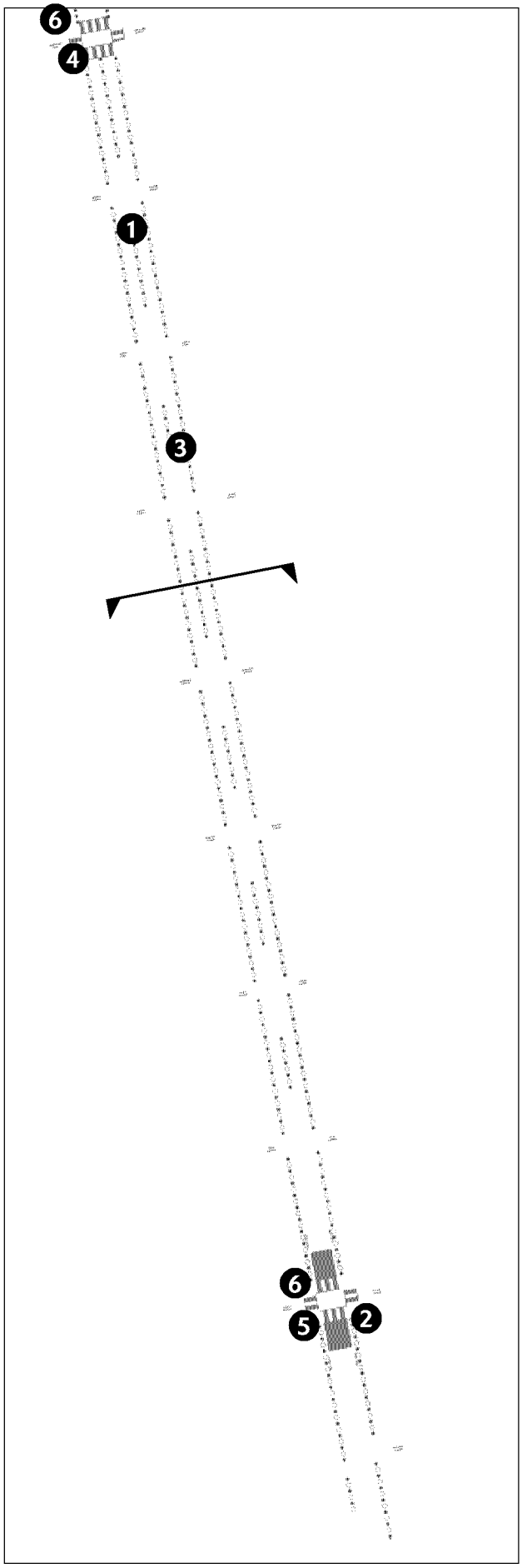
Figure 5.16: Business Village: Street Tree Plan



1. Mexican Fan Palm
2. Ficus - Specimen Tree
3. Camphor Tree
4. Intersection at Josephine
5. Gateway at Euclid
6. Signage

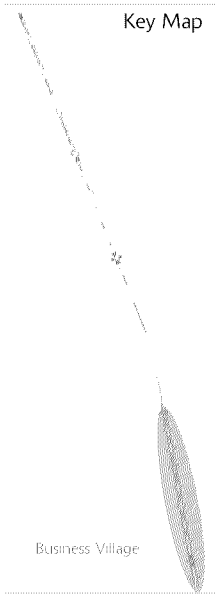


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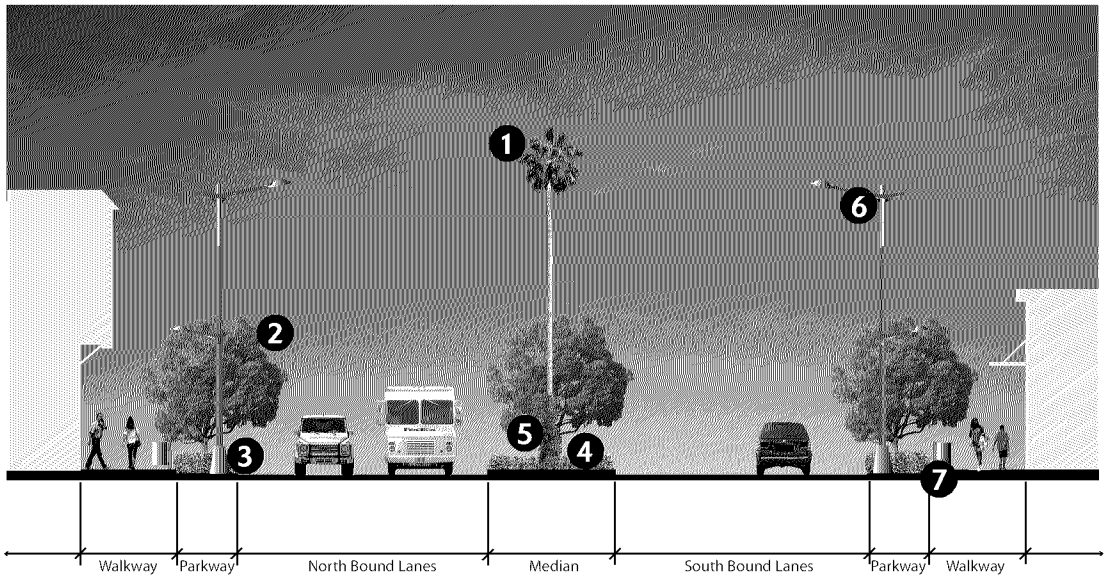
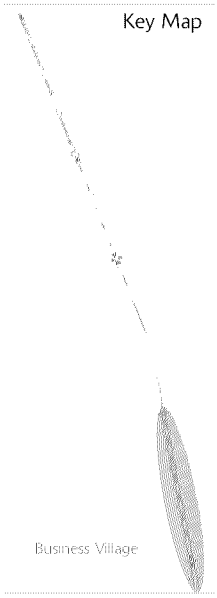
Figure 5.17: Business Village: Street Section



1. Mexican Fan Palm
2. Camphor Tree
3. Shrub - Hedge
4. Daylily
5. Bougainvillea - Vine
6. Street Lighting
7. Trash Can



Nodes and Intersections. Based on the land use organization of four villages along the Boulevard, the landscape plan reinforces and echoes the transitions between villages by the design of intersections or major nodes. The layout approach to these intersections is marked by special stamped concrete pavers and labeled enhanced paving at Tweedy Boulevard, Imperial Highway, Martin Luther King Jr. Boulevard, Josephine Street, and Euclid Avenue as seen in previously referenced Figures 5.2 through 5.17.

The crosswalk is emphasized with scored/stamped concrete or other paving materials.

Signage Entry Monuments. The entrance to the City from I-105 serves as the gateway to the City. Major traffic flows in and out of the City along Long Beach Boulevard. It is recommended that the City implement major landmark entry monuments at the intersection of Imperial Highway and Long Beach Boulevard. This intersection functions as the "Town Square."

Other locations for gateway/archway monuments are Tweedy Boulevard, Martin Luther King Jr. Boulevard, Josephine Street, and Euclid Avenue. The archway as an entry monument is described in the next section.

5.3.6 Gateways and Archways as Sign Monuments

Successful neighborhoods, villages and downtown areas often implement community elements such as uniform signage, gateways or archways, and custom logos that represent the culture and values of the local population.

Beautifully created archways are seen in many communities across America as a street element to revitalization. Some of the examples include "El Archo" on Whittier Boulevard in Los Angeles; the Gaslamp District in San Diego; and Downtown and Old Sacramento in Sacramento.

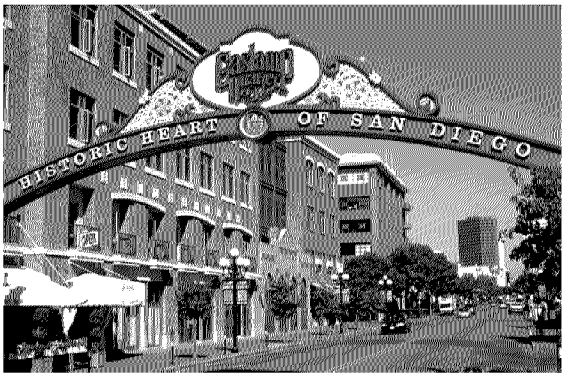
Appropriately designed gateways, archways and bridges can help reinforce identity and a sense of pride in Lynwood. The circulation and landscape plan envisions five archways to be placed at the following intersections along Long Beach Boulevard:

- Tweedy Boulevard;
- Martin Luther King Jr. Boulevard;
- Imperial Highway;
- Josephine Street; and
- Euclid Avenue.

These distinctive gateways/archways mark the entry and transitions to the four villages described in the Specific Plan.

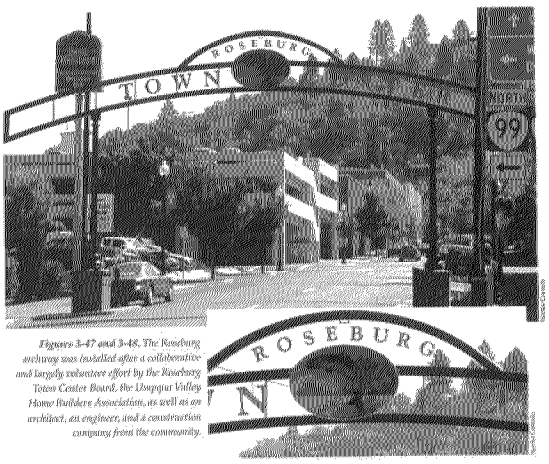
The gateway design may consist of sculpted signs, pylons, flags and banners, landscaping elements, gate and arches, or a combination of these elements. Some examples are illustrated to provide guidance. Local community participation should guide the design development process of archways or gateways. Design

of the gateway should incorporate elements of Spanish Colonial and Italianate styles.



The Gaslamp District in San Diego, California. Source: www.sandiegodowntown.org

The example shown above of the popular Gaslamp District of San Diego includes an archway that complements the building façades. It is lit at night and creates a festive entertainment ambiance.



Figures 3-47 and 3-48. The Roseburg archway was installed after a collaborative and largely volunteer effort by the Roseburg Town Center Board, the Umpqua Valley Home Builders Association, as well as an architect, an engineer, and a construction company from the community.

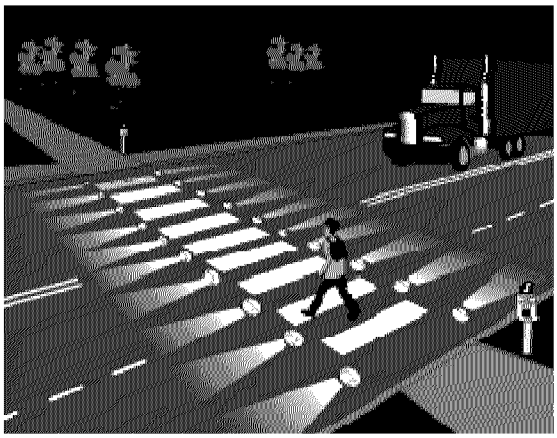
In 1999, the community of Roseburg, Oregon, adopted a downtown master plan for its Town Center, which called out for two gateway arches signifying arrival entry points into downtown. Source: "Placemaking on a Budget: Improving Small Towns, Neighborhoods, and Downtowns Without Spending a Lot of Money," 2005.

5.3.7 Pedestrian Crosswalks and Safety

Pedestrian crosswalks are a critical part of the circulation plan and are in extreme need of improvements throughout Long Beach Boulevard. The off-ramp of I-105 at Long Beach Boulevard presents a safety hazard for people who walk and bicycle to the parking lot under I-105 for the Green Line station.

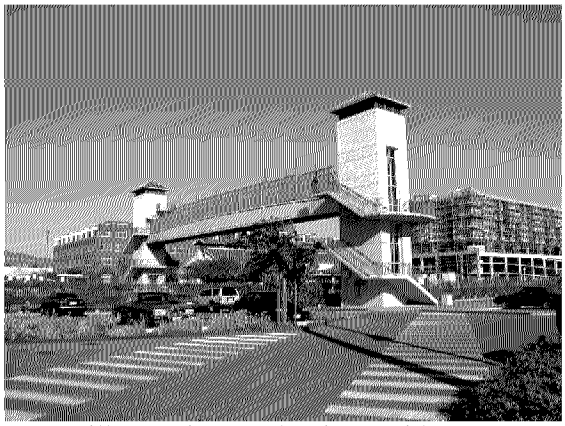
Existing Off-ramp at I-105

All crosswalks should provide for a more comfortable and safe pedestrian environment. The pedestrian crosswalk should be upgraded with high visibility markers for vehicles exiting and entering the freeway. Further safety enhancements such as bollards, well lit wayfinding signs, and warning signs and lights (such as flash lights) will help to improve visibility, particularly at night. The main function of bollards is to prevent traffic from encroaching into pedestrian areas while also contributing to the overall streetscape with attractive colors and shapes. Wayfinding signs should be oriented to both the drivers and pedestrians, providing direction for a short distance to lower speeds.



Mounted warning/flashing lights.

These crosswalk elements are necessary for the grade-level crossing to the transit area as well as other crosswalks indicated in previously referenced Figure 3.2-Pedestrian Pathways and Crosswalks. In the example of the Emeryville Station, a pedestrian bridge allows for pedestrians to enter and exit the transit station in a safe manner while also acting as an entry gateway to the City.



Emeryville Station Pedestrian Bridge. Source: www.dot.ca.gov

In some instances of longer blocks, incorporating curb extensions for midblock crossings helps pedestrians. Mid-block crossings are pedestrian crosswalks that are not at intersections. They help to decrease the crossing times and increase the visibility between pedestrians and drivers.

Embedded warning/flashing lights with lit bollards at a midblock crossing.

Each existing and proposed crosswalk shall be consistent with appropriate materials, colors, scale, and elements. The street width and traffic level will help determine what elements shall be appropriate for each individual crosswalk.

Improved crosswalks leading to pedestrian pathways and connecting to courtyards and/or plazas ensure a successful continuous connection with increased foot traffic for the local businesses as well as movement to the transit station.

5.3.8 Bicycle Paths and Parking

City of Lynwood has all the ingredients necessary to become a great "bicycle-friendly" community. The Metro Bus and the Green Line allow bicycles onboard without permits. Existing issues such as air quality, traffic congestion, lack of parking, and quality of life help foster the exploration of innovative approaches to building a city that will accommodate new growth in a positive, creative way while protecting basic community values. The goal is to create a strong bicycle/pedestrian program that will enable the residents of Lynwood to use their bicycles in a safe and efficient manner.

By using proper bike lanes, trails, and secondary streets, bicyclists will be able to move about the town quickly and safely. The relatively flat (1% or less) topography and the generally mild climate encourages year-round riding. Often, bicycles are the fastest way to commute five miles or less. On average, a 10-minute walk can cover ¼ of a mile, whereas a 10-minute bike ride can cover about 2 miles. The overall goal of this Plan is to make recommendations that can help create a physical environment free of barriers for those who choose to bicycle.

Arterial streets such as Long Beach Boulevard provide the most direct access to activity centers and other destinations. All arterial streets should be improved, over time, to become "bicycle friendly" and comprise the following characteristics:

- On-street lanes with a lane width of 4 feet to 6 feet between the bicycle lane stripe and the joint between the pavement and the gutter pan.
- May include short off-street sections to bypass major bottlenecks.
- Signalized intersections or through/priority travel (side streets stop).
- High-visibility signage and lane marking.
- High priority maintenance of bicycle travel areas.

The project area requires improvements for bicycle transportation that provide direct and convenient access to major activity centers and other destinations such as the Green Line, employment centers, downtown, schools, shopping, government buildings, and parks and other recreational destinations. Special attention should be given to access the following:

- Destinations along and across Long Beach Boulevard (especially at Martin Luther King Jr. Boulevard, Imperial Highway, etc.);
- Neighborhood shopping centers;
- Plaza Mexico;
- Employers on the northern and southern blocks of the project area;
- The Transit Green Line Station; and
- Along and across I-105.

Potential improvements for bicyclist should include bicycle lane striping. Bicycle lane stripes sometimes end before intersections, leaving the bicyclist without clear direction about where to ride. Usually, the stripes are discontinued because the right-of-way is not of sufficient width to stripe bike lanes and provide for other intersection improvements, such as right-turn or left-turn bays. At intersection approaches, the bike lane striping should be dashed to indicate that motorists may enter or cross the bike lane to make a right turn. Use of other pavement markings and signs is also recommended under such conditions. Where there is not adequate width to stripe the bike lane up to the intersection approach, the curbside lane should be signed as a shared-use lane. In some cases, use of the shared-use lane is restricted to buses, bicycles, and right turns. Some bike lanes are striped using paint, which typically lasts only two years. Some bike lanes are striped using thermoplastic, which can last three to five years.

Bicycle Parking. The two factors most important to bicyclists wishing to park their bikes are security and proximity to

destinations. A third important factor is availability of bike racks that are designed to allow use of high-security locks and locking methods.

Class I bicycle parking consists of bicycle lockers, restricted access facilities such as a locked room or garage, or an enclosed cage. Class II bicycle parking consists of on-street bicycle racks.

Convenient and secure bicycle parking facilities shall be provided within each future development. Additionally, the City should provide "U" bicycle racks on side streets within each village on Long Beach Boulevard.

The following bicycle parking requirements shall apply:

- **Non-residential.** Minimum 5 percent of the total number of automobile parking spaces provided.
  - **Office:** 80 percent of bicycle spaces should be Class I and 20 percent Class II.
  - **Retail:** 20 percent of bicycle spaces should be Class I and 80 percent Class II.
- **Residential.** Minimum of one Class I bicycle parking space per unit.

Bicycle Racks. Bicyclists, like motorists, look for convenient and secure parking places near their destinations. Often, bicyclists have few choices and will simply lock bicycles to nearby stationary objects, such as signs, railings, and parking meters on busy downtown sidewalks. Such an unstructured approach to bicycle parking inconveniences pedestrians and bicyclists alike and promotes the feeling that bicycles are unwelcome. Well-designed, attractive and well-placed racks make it obvious that bicycles are an important part of the transportation system.

The inverted "U" bicycle rack is recommended by the Association of Pedestrian and Bicycle Professionals. Simple, functional, and durable, the inverted "U" rack allows the user to lock two bicycles with either a standard U-shaped lock or a chain/cable and lock. The racks have no edges, seams, or hardware to pose a hazard or become unsightly.

5.4 STREET FURNISHINGS

Street furniture typically includes amenities located on sidewalks, and within plazas or courtyards. Elements of street furniture include benches, tables, chairs, trash receptacles, game tables, banners, bicycle racks, lighting, water elements, potted planters, kiosks, transit/bus shelters, signage, and other elements.

5.4.1 LANDSCAPE PLANTERS

Potted plants are encouraged to integrate plants into the street landscape with more flexibility for placement and relocation.

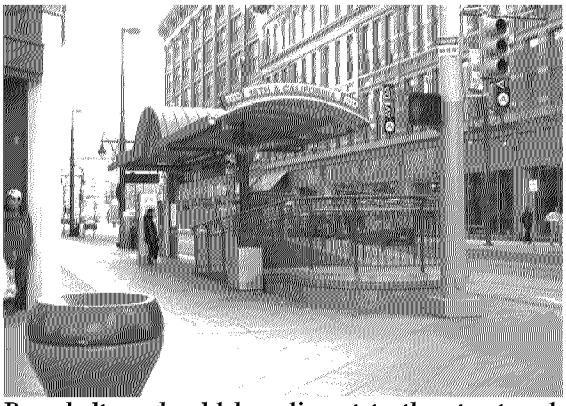
Placement of planters should be in the furnishing zone as described earlier in this chapter, as well as courtyards or places where tree plantings are not allowed. Landscape planters on sidewalks shall be spacious and include at least one mature tree. These planters should be alternated on each side of the street for a checkerboard effect.

Preferably, the style of planters should reflect the architectural theme of the village of its location. It should include concealed lighting fixture to provide a downward pool of light to the sidewalk.

Window planter boxes are encouraged for smaller scale buildings to create visual interest and to soften the appearance within existing developments lacking sufficient space for streetscape landscaping.

5.4.2 Bus Shelters

Bus stop locations should include a shelter for waiting passengers. Minimum size of bus shelters should be 6 feet wide and between 10 and 25 feet long. Basic amenities shall include a seating bench, trash receptacle, lighting, signage, and, where possible, a lighted enclosure to display the bus system map and schedules. Shelters may include electronic display signs to show actual arrival time of buses. Bus stop signs must be at least 7 feet off the ground, and include route name, number, bus stop name, and transit system logo.

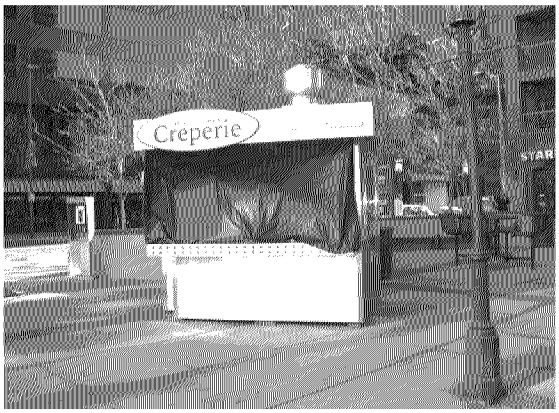


Bus shelters should be adjacent to the street and integrate into the streetscape design.

5.4.3 Kiosks

Kiosks can range in size and purpose depending on location and sidewalk width. Preferred locations are well-lit and within plazas, shopping centers, wide sidewalk areas, and intersections with sidewalk bulb-outs. Kiosks may provide a central location for community information, announcements, and maps. Some kiosks may include amenities such as newspapers racks, telephones, and tourist brochures. Popular commercial/retail kiosks typically sell flowers/gift baskets, sunglasses, cosmetics, hats, key chains, children's books, sports jerseys, purses, and watches. Other items may be food and drinks, Internet service, or an interactive reservations system to reserve movie tickets or dinner reservations within the area. City-owned kiosks may offer a place to pay utility bills, act as a substation for police services, postal services, or political events. Materials and paint should be vandal-resistant.

This informational kiosk has a representative available for questions and directions. The bold colors help to locate it from a distance.

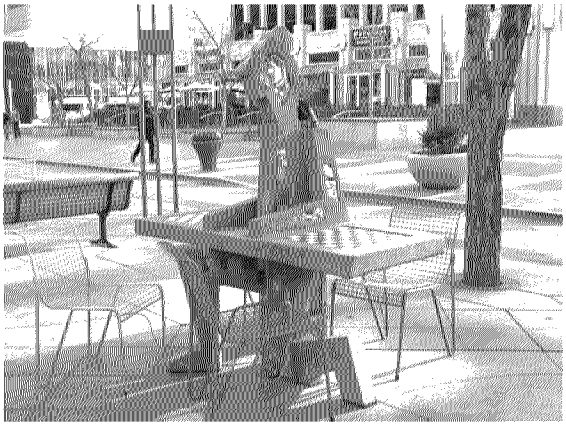


Kiosks may have limited operating hours, such as this breakfast and lunch serving booth.

5.4.4 Benches, Trash Receptacles, Tree Guards and Others

Benches should be designed with backrests and be able to accommodate two to three people comfortably. Design style should include solid colors, clean lines, be fixed in place. Some benches may be set back to back as seen in Figure 5.18. Placement of benches is parallel to the sidewalk, within the edge zone and should face the building façade. Bench locations should be coordinated with transit services to be compatible with stops and waiting areas.

Trash receptacles should be placed near benches, building entrances, and within the edge zone along the sidewalk. Design style could include a metal round container, elevated off the ground, with an ashtray feature.



Chess or checker tables promote healthy social interactions.

Tree guards are permanent solutions to accommodate the development of a new tree into its full mature size without hindering the growth of the tree. Tree grates can be used as well and offer the flexibility of removal should the tree outgrow its space. Tree grates should be stable enough for pedestrians to walk on, be made out of metal, and correlate with the design style of the benches and trash receptacles.

5.4.5 Street Lighting

Street lighting should be located in the curb zone with two light fixtures as seen in Figure 5.18. Light fixtures should include an option for brackets to attach banners and other temporary graphics elements between the pedestrian fixture and street-level fixture. Light sources should include metal halide, fluorescent, or compact fluorescent luminaries.

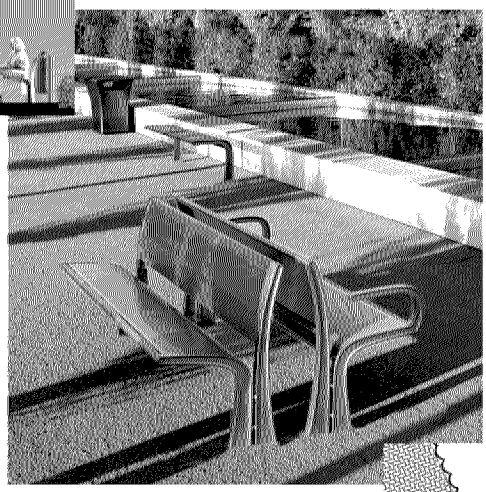
Increasingly, jurisdictions are installing traffic poles that are custom designed with elements such as special signage and logo.

5.4.6 Public Art

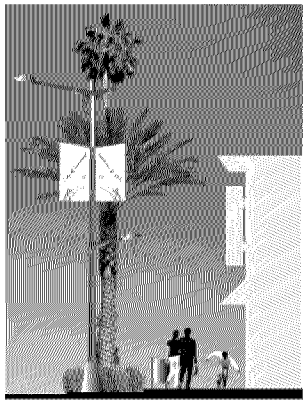
Public art offers an opportunity to commemorate a person, place, event, or time frame. Indirectly, public art helps to heighten a sense of community and pride. Public art can be utilized to help camouflage public infrastructure and utilities while enhancing the streetscape scene or can be integrated with seating and tables. Other ways to integrate public art into an urban environment include festive banners, murals on public and private buildings, sidewalk art (chalk drawings or tile designs), and stained glass art projects through a series of interrelated pieces constructed at several key locations within the median and public streetscape. The art pieces should provide colorful graphic depictions representative of the City's rich agricultural, cultural, and industrial history, and provide a thematic identity to the area. Art pieces can help define the village entries along Long Beach Boulevard, as well as at key nodes located near the intersections of Martin

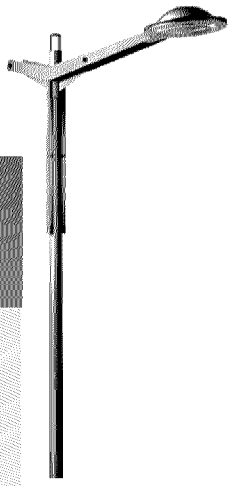
Figure 5.18: Street Furnishings

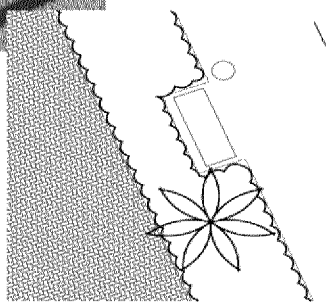
Bench



Lighting

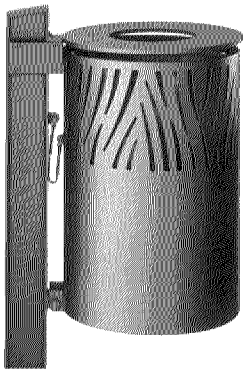


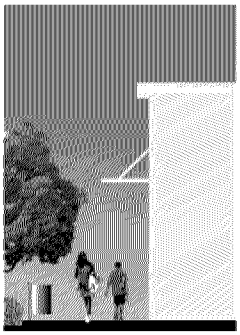


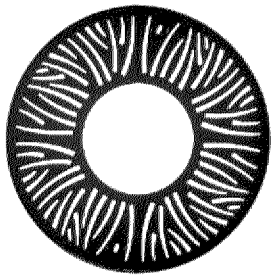


Tree guard

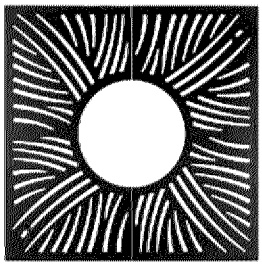
Trashcan Ashtray







Tree grate



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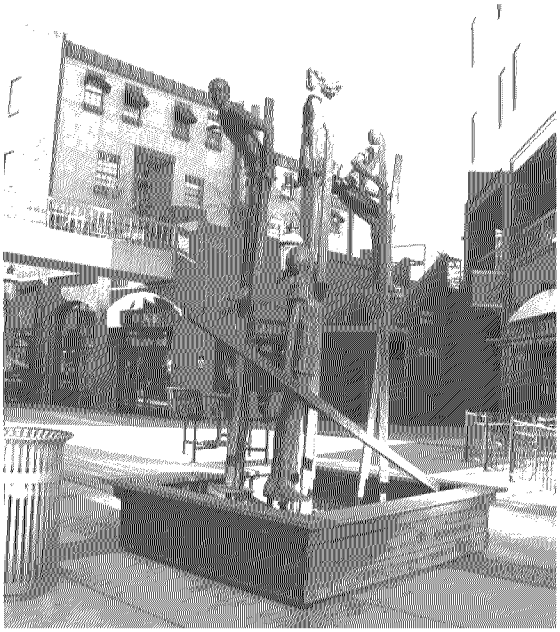
Luther King Jr. Boulevard and Imperial Highway.



Public art can be easily integrated with seating in a courtyard or plaza setting.

Other street furnishings may include pedestrian-scaled clock posts, and water elements such as fountains.

Large pubic spaces can accommodate large-scale art pieces such as this face sculpture.

5.4.7 SIGNAGE

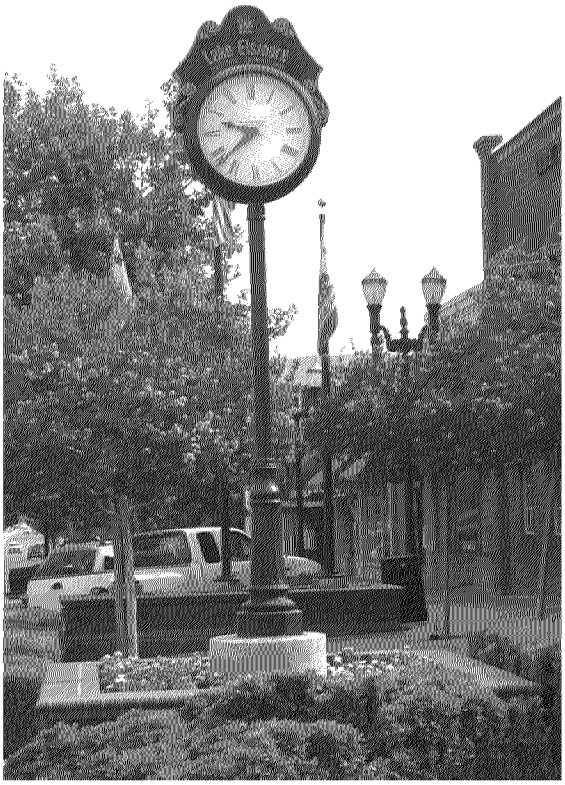
There at three types of signage considerations in an urban environment. These are:

- Street names;
- Way finding signs; and
- Business signs

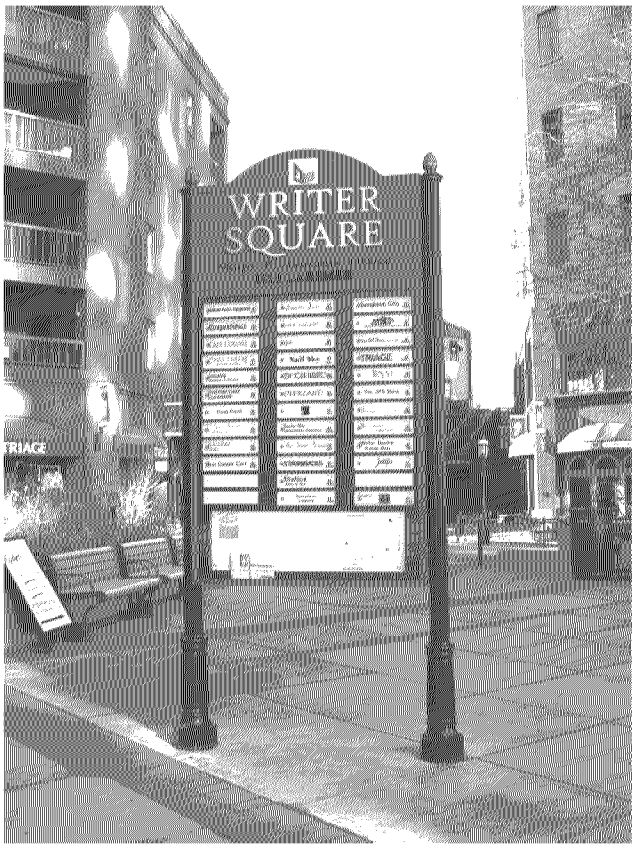
Unified street signs consist of street name with logo. It is recommended that the City prepare a signage package for street names, logos, banners with attention to size of letter, colors, identity theme, and visibility.

Way finding signs in an urban environment create place markers in minds of people. Such signage appears to provide identity as well as information. It may include name of the district, names of tenants, and a map with brochure among other design elements.

Business signage further reinforces the informational element on the Boulevard. These have been discussed in Chapter 4.0 Architectural Design Guidelines.

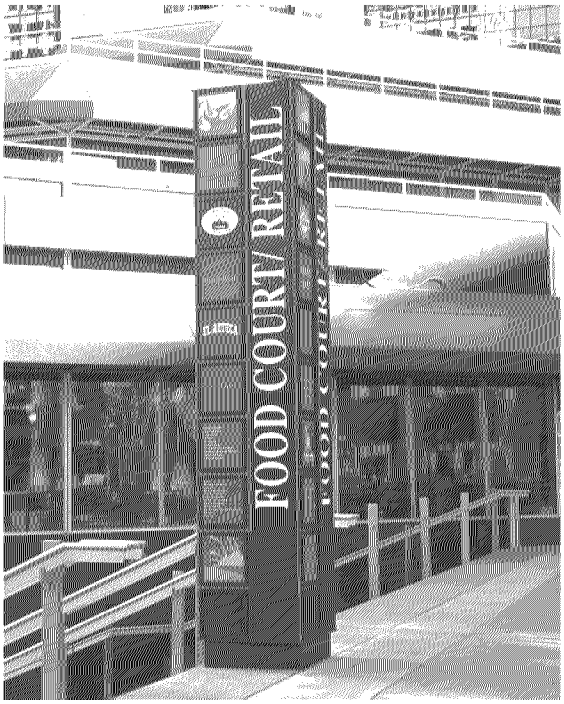


This clock post is designed to blend in with the rest of the streetscape style at the pedestrian level.



Downtown Denver

Existing Signage at Plaza Mexico



Downtown Denver

5.5 DEVELOPMENT STANDARDS

The site design and landscape development objectives for the Long Beach Boulevard Specific Plan area are:

- The on-site walkways will connect to the public sidewalks along bisected cross streets.
- Provide for off-street courtyards and plazas accessible from major pedestrian walkways, each with distinctive themes.
- Reserve sufficient area to create interesting spaces incorporating seating, lighting, interesting furnishings and decorative paving.
- Establish a series of focal points that create identity while extending the legacy of the City of Lynwood.
- Provide reduced setbacks commensurate with an urban setting.
- Limit the number of access points for automobiles into parking areas.
- Maximize the number of pedestrian openings without compromising the security of the residents.
- Promote pedestrian uses by conveniently locating access to the sidewalks.
- Provide a combination of patios, terraces and balconies to provide private open space.
- Provide sufficient areas between the garage and other buildings to create other amenities.
- Locate trash enclosures within the parking garage, screened from public and private views, decorative trash receptacles will be provided in active pedestrian areas.

6.0 ADMINISTRATION, IMPLEMENTATION, AND MAINTENANCE PLAN

6.1 INTRODUCTION

This chapter provides recommendations for the administrative, implementation, financing and regulatory methods to implement the Long Beach Boulevard Specific Plan for effective revitalization of the corridor. Further, it identifies maintenance measures for operations related to utilities, landscape, safety, and maintenance of all the villages on the Boulevard.

6.2 SPECIFIC PLAN ADMINISTRATION

The proceeding chapters of the Specific Plan have established the land use plan, building intensities and development standards, design guidelines, circulation and landscape plan. Subsequent to approval of the Specific Plan, implementation will entail review of various individual development projects. All developments within the Long Beach Boulevard Specific Plan are subject to the regulations and guidelines outlined in this document.

6.2.1 DEVELOPMENT REVIEW

To ensure that the policies, guidelines, and standards specified in this Specific Plan are met, projects within the Specific Plan area shall be subject to applicable City review and permits.

Such review may include, but not be limited to, site plan review, design review, conditional use permits, certificate of occupancy, and other applicable City procedures. The application requirements, review authority, required findings, conditions of approval, appeal procedures, and revocation procedures shall be as specified in Chapter 25-Zoning procedures of City of Lynwood Municipal Code.

Applications for, as well as processing and approval of, proposed divisions of land within the Specific Plan Area shall comply with the provisions of the California Subdivision Map Act and Chapter 24- Subdivisions Map Act of the City of Lynwood Municipal Code.

6.2.2 GENERAL PLAN AMENDMENTS

City of Lynwood General Plan designated a variety of land uses within the Long Beach Boulevard Specific Plan area. These have been described previously, in Chapter 2.0 Existing Setting.

The adoption of this Specific Plan will apply the recommended land use designations as detailed in Chapter 3.0 Land Use Plan. General Plan amendments will be required to maintain consistency with the Specific Plan.

6.2.3 ZONING ORDINANCE AND PLAN AMENDMENTS

Existing zoning districts within the Specific Plan boundary shall be repealed and the zoning plan amended to indicate the adopted "Long Beach Boulevard Specific Plan." All development standards, design guidelines, and other development regulations of this Specific Plan shall apply. For the development standards and land use regulations that are not amended in this Specific Plan, the provisions within the Zoning Ordinance shall apply.

6.2.4 Conflict and Ambiguity

Nothing in this Specific Plan shall be deemed to affect, annul, or abrogate any ordinances pertaining or applicable to the properties and their parcels affecting by the Specific Plan. If a conflict arises, the more restrictive requirement shall apply.

If ambiguity arises concerning appropriate classification of a particular use within the meaning and intent of this Specific Plan, or if ambiguity arises regarding matter of height, setbacks, landscape areas and other requirements, or zoning district boundaries, the remedies provided in the Zoning Ordinance for interpretations shall apply.

6.2.5 Substantial Conformance

The purpose of the following Substantial Conformance provision is to provide an administrative mechanism by which minor modifications to literal application of the Specific Plan or design departures from specific standards herein may be permitted by the City without amendment of the Specific Plan, provided that such departures do not result in significant impacts and are consistent with the intent, goals, and objectives of the Specific Plan. The ability to permit minor modifications to the Specific Plan via the Substantial Conformance provision allows for reasonable flexibility while maintaining the integrity of the Specific Plan, including protection against significant impacts to adjacent property owners. Substantial Conformance includes, but is not limited to, modifications necessary to comply with final conditions of approval or modifications affecting infrastructure, public services and facilities, landscape material and other issues except those affecting project financing and development regulations. Substantial Conformance include, but is not limited to, inclusion of land uses not listed in Chapter 3.0 of the Specific Plan; modifications that might be necessary to comply with final conditions of approval; or modifications affecting infrastructure, public services and facilities, landscape palette; and other issues. Except as otherwise provided below, Substantial Conformance shall not include significant modifications to the basic design of the project:

a. Determination of Substantial Conformance shall be made by the City of Lynwood Planning Manager.

b. Permitted Land Uses: Land uses specifically not listed as permitted in Chapter 3.0 of this Specific Plan may be permitted by the City, subject to a determination of Substantial Conformance, based on the following findings:

   i. The proposed use is compatible with the permitted uses in the Planning Area within which it is proposed;

   ii. The proposed use will not create any significant environmental impacts which were not previously addressed in the environmental document approved for the Long Beach Boulevard Specific Plan;

   iii. The proposed use will not substantially increase the severity of any significant environmental impacts which were previously addressed in the environmental document approved for the Long Beach Boulevard Specific Plan; and

   iv. The proposed use is similar to, and no more objectionable than the permitted uses in the designated planning area within which it is proposed.

c. Development Intensity: The anticipated intensity of development within the Long Beach Boulevard Specific Plan is identified by each Village Plan in Chapter 3.0 Land Use Plan. The development intensity of any particular land use type may be exceeded pursuant to a Substantial Conformance approval by the City, provided that the overall development intensity of the Long Beach Boulevard Specific Plan is not exceeded, and that the exceedance of the development intensity for the particular planning area will not result in impacts greater than those anticipated in the adopted environmental document prepared for the Specific Plan.

d. Infrastructure: Modifications to the alignment of roads, including resulting modifications to the alignment of the boundaries of individual parcels; creation of local public and/or private streets; or adjustments to individual infrastructure facilities such as drainage, sewer, and water may be approved by the City Engineer, provided that such modifications do not result in any significant impacts which were not previously addressed and resolved in the processing of the Specific Plan.

e. Design Details: Modifications to design elements, such as paving treatments, wall materials, architectural details, landscape treatments and plant palette, sidewalks, lighting, entry treatments, and other details provided in Chapters 4.0 and 5.0 may be approved by the Planning Manager.

f. Land Use Approvals: Specific provisions of land use approvals, architectural details; building size, height, bulk, and orientation; parking lot layout; and other site plan details may be permitted by the City to be revised utilizing substantial conformance provisions. In making such a determination, the Planning Manager shall be required to find that the revisions requested under Substantial Conformance are consistent with the provisions of the Specific Plan, and do not create impacts which were not recognized and addressed in the original approval.

g. Other: Modifications in addition to those specifically enumerated above that are deemed to be minor by the Planning Manager, and which are in keeping with the intent of the Long Beach Boulevard Specific Plan and are consistent with the goals and objectives of the Specific Plan and City of Lynwood General Plan.

6.2.6 Administrative Modifications

Administrative modifications to the development standards of this specific plan of up to 10 percent may be approved, or conditionally approved by the Planning Manager upon demonstration that the proposed adjustment would enhance the overall appearance and function of the project; would be compatible with; and would not be detrimental to, adjacent properties or improvements; and would advance the goals of the Long Beach Boulevard Specific Plan.

6.2.7 Amendments to the Specific Plan

This Specific Plan, or any portion, shall be amended or replaced using the same procedure as for the original Plan adoption.

6.2.8 Enforcements and Penalties

The penalties and procedures resulting from violation of the provisions of this Specific Plan shall be as listed in Chapter 25-Enforcements and Penalties (General Provisions) of the City of Lynwood Municipal Code.

6.3 IMPLEMENTATION

The implementation of Long Beach Boulevard Specific Plan will typically occur in two ways:

1) Incremental development following existing ownership patterns with consolidation of several parcels by developers; and/or
2) City-led initiatives for capital improvements to streets, sidewalks, and connections to transit and utilities.

Implementation of the Long Beach Boulevard Specific Plan will require property assembly of small lots, rezoning, and partial or complete redevelopment of existing land uses. Because the Specific Plan area is largely developed, phasing of new development and transitioning of commercial lands to mixed-use development should be accommodated in such a manner that would not severely interfere with the existing retail and commercial uses staying open for business.

The following planning actions or programs are recommended for effective implementation of the Specific Plan.

6.3.1 Facilitate Parcel Assembly

A mixed-use land use pattern is necessary to achieve the objectives of this Plan. The City of Lynwood's Redevelopment Agency should assist in assembly of key parcels through development agreements or purchasing properties.

6.3.2 Economic Restructuring

This program focuses on identifying the existing economic base and recruiting new types of businesses depending on the market assessment. As the main two central villages of this Specific Plan are intended to function as downtown for the City, a "Main Street" approach is applicable. The main street program builds local leadership and commitment to care for the Boulevard on a permanent basis. The City should apply for recognition as a Main Street demonstration city, or it can implement the program on its initiative. Over a period of time, the Boulevard will become and functions as the "town center." Additional information on the Main Street program can be obtained from the following organizations:

- The California Downtown Association
  5857 North Temple City Boulevard
  Temple City, California 91780
  (818) 286-3101
- National Main Street Center
  National Trust for Historic Preservation
  1785 Massachusetts Avenue, N.W.
  Washington, D.C. 20036
  (202) 673-4219
- California Main Street
  California Department of Commerce
  1121 "L" Street, Suite 600
  Sacramento, California 95814
  (916) 322-1398

6.3.3 Business Recruitment Team

As part of economic restructuring, a business recruitment team should be formed with members from the redevelopment agency, local chamber of commerce, and key merchants.

The team should identify details on issues related to business location, operations and marketing to support the revitalization of the corridor.

6.3.4 Promotion and Marketing Programs

The successful revitalization of Long Beach Boulevard in the City is predicated on effective promotion and marketing. Led by a downtown coordinator and in collaboration with the business recruitment team, specific marketing and promotional events and targeted business recruitment should be undertaken.

6.3.5 TOD Coordinator

Usually a downtown coordinator is designated with to devote energy and efforts for promoting the project.

In this instance, a TOD coordinator should be designated to specifically target transit oriented development potential, connections to the transit, parking, safety, and related issues. The coordinator would be responsible for facilitating the process of the downtown development, including accessing available transit oriented funding for City led initiatives.

6.3.6 Business Improvement District [BID]

The formation of a Business Improvement District (BID) is highly recommended to partly fund and maintain the revitalizations activities. SB-1424 allows cities to impose an assessment on business within self-designated downtown areas.

These self-assessed revenues can be used for improvements, such as the acquisition, construction, installation, or maintenance of any property with an estimated useful life of five years or more, including, but not limited to parking facilities, benches, trash receptacles, street lighting, decorations, banners, parks, fountains, and others. Revenues can also be used for activities, such as promotional events, security-personnel as well as camera installation and monitoring and maintenance of public spaces.

Additional information regarding the formation of BID can be obtained from the California Downtown Association.

- The California Downtown Association
  5857 North Temple City Boulevard
  Temple City, California 91780
  (818) 286-3101

6.4 PUBLIC IMPROVEMENTS

The following Long Beach Boulevard public improvement projects are identified for implementation:

6.4.1 Circulation

Improvements to the Boulevard involve implementing consistency along the length for the number of lanes, median and side-

walks. A striped bike lane addition will allow for safe bicycle movement. Bike parking "U" poles have to be added to side streets along the Boulevard in each village. Public works project for strengthening all the pedestrian crosswalks at key intersections with enhanced paving and installation of flashing lights is to be undertaken on the Boulevard.

Under-grounding utilities is recommended in the block north of I-105 in Village I near Tweedy Avenue.

Widening of the sidewalk is necessary for effective pedestrian and sidewalk design. Streetscape elements of landscaping, benches, planters, bus shelters along the Boulevard.

The City public works division along with the TOD coordinator will adopt a graphic package for street signs, way finding signs and gateway sign monuments.

6.5 POTENTIAL FUNDING MECHANISMS

This section summarizes the potential funding methods for improvements listed in the preceding section as well identify funding mechanisms for investment from public and private sector for developments along the Boulevard.

6.5.1 REDEVELOPMENT

The City's Redevelopment Agency is authorized to finance projects with property tax increment funds, interest income, Agency bonds, donations, loans from property, participation in development, sales tax as advanced or paid to the Agency in accordance with applicable provisions of the law, or with financial assistance from the City, County, State of California, Federal Government, or any other public agency, or any other legally available source. Details for these financing methods can be found in the Redevelopment Plan for Redevelopment Project Area "A" for the City of Lynwood.

Redevelopment Agency has adopted the developer relation guidelines. These should be modified to include Design Review Board along with the landscape and lighting assessment district fees and application guidelines.

6.5.2 LANDSCAPING AND LIGHTING ASSESSMENT DISTRICT

Landscaping and lighting assessment district could be used for installation and maintenance of landscaping and lighting, through annual assessments on benefiting properties. This district may also provide for construction and maintenance of appurtenant features, including curbs, gutters, walls, fountains, planters, sidewalks or paving, and irrigation or drainage facilities.

City of Lynwood's landscaping and lighting assessment district is monitored by the Public Works Department.

6.5.3 COMMUNITY DEVELOPMENT BLOCK GRANT FUND

This program is already being utilized by the City of Lynwood for various projects, including creating jobs, removal of physical barriers to the handicapped, code enforcement, residential and commercial rehabilitation, down payment assistance, street improvements, youth and senior programs, and homeless services.

6.5.4 Southern California Edison Under-grounding Funds

Utility companies are required to budget funds each year for under-grounding. These budgets are approved by the Public Utilities Commission and assigned to specific projects in each area based on priorities developed by local government.

City of Lynwood directs funding received for under-grounding utilities via the Lynwood Utility Authority. Currently the City has identified funds in the range of 2.4 million dollars for this purpose.

6.5.5 Economic Development Agency [EDA] Loans and Grants

The Economic Development Agency offers various loans and grants to spur economic activity. Grants are available for site preparation, construction of public works projects that demonstrate job creation potential. Individual enterprises that are unable to obtain finance through conventional means could be eligible for some EDA loans.

Most of these loans and grants require matching funds of varying proportions.

- **Short-Term Planning Grants.** Administered by the Economic Development Administration, these grants may be used to provide support for significant new economic development planning, policymaking and implementation efforts, and establish comprehensive economic development planning processes cooperatively with the state, the state political subdivisions, and economic development districts. Eligible activities include preparation and maintenance of a continuous comprehensive economic development planning process, coordination of multi-jurisdictional planning efforts, and diversification of the local economic base and implementation of programs, projects and procedures designed to create and retain permanent jobs and increase incomes. EDA assistance is limited to 12 months and may be extended up to 36 months.
- **Technical Assistance Grant (TAG) Program.** Administered by the Economic Development Administration, this program helps fill the knowledge and information gaps that may prevent leaders in the public and nonprofit sectors in distressed areas from making optimal decisions on local economic development issues. Eligible activities include supporting feasibility studies on potential economic development projects, revitalization plans, economic development conferences and seminars, and establishment of geographic information systems for local planning and development purposes.

6.5.6 TOD Funding

The following funding mechanisms are Federal, State, local/regional, and private funding sources to finance transit-oriented developments. It should be noted that the following options are not exhaustive, and other available funding sources may also be available. Programs and grants are categorized under three categories: (1) Transportation and Bicycle/Pedestrian Improvements, (2) Mixed Use and Residential Development, and (3) Economic Development Planning.

1. *Transportation and Bicycle/Pedestrian Improvements:*

   - **Community Based Transportation Planning (CBTP) Grant Program.** Administered by the California Department of Transportation, this program provides funds for transportation/land use planning projects that support livable community concepts. Projects must have a defined transportation objective, and address a deficiency, conflict, or opportunity in coordinating land use and transportation planning. Project proposals must include a comprehensive public participation process, and must demonstrate the implementation of this process throughout the project. Eligible activities include transit-oriented development, mixed-use development, pedestrian/bicycle/transit linkages, jobs/housing balance, reuse or infill/compact development and/or community/economic development.

   - **Non-Motorized Pilot Program.** Available for communities to create comprehensive transportation networks for walking and bicycling.

   - **Safe Routes to School Program.** Communities can use this fund to fix hazards and slow traffic on roads that serve schools, as well as to build pathways, bike lanes, and sidewalks near schools, while increasing safety through focused enforcement and education programs. Funding is distributed by the State DOT, and projects can be funded at 100 percent.

   - **Surface Transportation Program.** Administered by the Federal Highway Administration and Federal Transit Administration, this program can be used for any project including bicycle transportation, pedestrian walkways, carpool facilities, research, and safety improvements. It includes a 10 percent set-aside for the Transportation Enhancements Program. Funding is distributed by the State DOT.

   - **Transportation Enhancement Program.** Community-based program to initiate transportation projects that promote health, safety, economic development and community pride. This program is a 10 percent set-aside of the Surface Transportation Program mention above.

   - **Regional Transportation Improvement Program (RTIP).** Administered by the Regional Transportation Agencies, Metropolitan Transportation Commissions, and the California Transportation Commission. This program funds regional transportation capital improvement projects. Eligible activities include rail extensions, upgraded transit stations and vehicles, parking structures at major transit stations, construction of carpool lanes, road rehabilitation, and other related uses.

   - **State Transportation Improvement Program (STIP).** Administered by the California Department of Transportation. This program is a multiyear capital improvement program resource management document to assist

the state and local entities to plan and implement transportation improvements and to utilize resources in a cost-effective manner. Eligible activities include improving local roads, improving public transit (including buses), intercity rail, pedestrian, bicycle and intermodal facilities, and environmental enhancement and mitigation.

- **Congestion Mitigation and Air Quality Program (CMAQ).** Communities can use this program to improve air quality problems by investing in less-polluting transportation alternatives, including public transit improvements, fare/fee subsidy programs, and bicycling and walking facilities. CMAQ funds come to the state, but most of this funding is programmed by Metropolitan Planning Organizations as part of a broader plan to reduce air pollution. Funding can be disbursed to non-profit and private entities. CMAQ provides 80 percent funding, with a 20 percent local match required in most cases.
- **Transportation and Community and System Preservation (TCSP) Pilot Program.** Administered by the Federal Highway Administration, this program provides funds for planning and implementation grants, technical assistance and research to investigate and address the relationship between transportation; community and system preservation; and private sector-based initiatives. Eligible activities include transit-oriented development projects, traffic-calming measures, and projects to reduce the need for future infrastructure investments.
- **Bicycle Transportation Account (BTA) Program.** Administered by the California Department of Transportation, this program is intended to provide funds for bicycle transportation, which is recognized as an important and low cost mode of public transportation. It provides funds to local agencies for projects that improve safety and convenience for bicycle commuters. Eligible activities include bicycle path, lane or route construction and maintenance, bike lockers, racks on transit vehicles, planning, and safety education. Eligible cities must have an adopted Bicycle Transportation Plan. Cities must provide a local match of at least 10 percent of the total project cost.
- **Petroleum Violation Escrow Account (PVEA).** Administered by the California State Legislature, the court ordered refunds to the State for price overcharges on crude oil and refined petroleum products during a period of price control regulations. Eligible activities include projects that conserve energy (public transit, ridesharing), and projects that provide restitution to the public. These funds must act as a supplement to other funds already available for the proposed project.

2. *Mixed Use and Residential Development:*

- **American Communities Fund (ACF).** Administered by Fannie Mae, ACF leverages the resources of the financial industry, for-profit and nonprofit

developers, federal government, state and local governments to revitalize emerging neighborhoods and downtowns. Can be used for single-family and multifamily developments, and mixed-use and neighborhood retail developments. Investment vehicles include equity investments, debt financing, and historic tax credit investments.

- **Downtown Rebound Planning Grants Program.** Administered by the California Department of Housing and Community Development, this program grants funds for local planning for infill housing, adaptive reuse (conversion) of commercial and industrial space into residential units, and the development of other forms of high density downtown housing. Eligible activities include infill site inventories, infill development feasibility studies, strategic action plans to remove barriers and promote infill housing, mixed-use developments and transit corridor development, and updates of general plans and zoning ordinances. Grants may also be used for seismic and structural feasibility studies on candidate buildings for adaptive reuse.
- **CalHome Program.** Administered by the California Department of Housing and Community Development, these funds enable low- and very-low-income households to become or remain homeowners. Eligible activities include predevelopment, site development, rehabilitation and new construction, and acquisition and rehabilitation.
- **Child Care Facilities Finance Program (CCFFP).** Administered by the California Department of Housing and Community Development, these funds provide loan guarantees and direct loans for the development and/or expansion of childcare and development facilities, and family childcare homes serving more than six children. Eligible activities include purchase, development, construction, expansion, or improvements of license childcare and child development facilities and related equipment and fixtures.
- **Brownfield Economic Development Initiative (BEDI).** Administered by Department of Housing and Urban Development, BEDI grants, in conjunction with HUD Section 108 loans, may be used to revitalize brownfields. Eligible activities include environmental cleanup of sites, acquisition of a brownfield property and conveyance to a private sector party at a discounted price, use as funding reserves and direct enhancement of the security of a Section 108 loan. Eligible applicants are Community Development Block Grant (CDBG) entitlement communities and CDBG non-entitlement communities.

- **Affordable Housing Clearinghouse.** Administered by the Affordable Housing Clearinghouse, this private program provides lines of credit, community development loans, and commercial loans. The Clearinghouse is a consortium of lenders that pool their funds. Eligible activities include acquisition, group homes, homeless shelters, infrastructure development, mobile home park purchase assistance, new rental and for-sale housing, preservation of affordable housing, rehab of apartments and owner-occupied housing, self-help housing, Single Room Occupancy (SRO) hotels, and transitional housing. Orange County is a priority area for funding.
- **HOME Investment Partnership Program.** This program is already being utilized by the City of Lynwood for various residential projects, including deferred loans for rehabilitation/home improvements, correcting code violations, down payment assistance, land acquisition for affordable housing, and providing housing for homeless men.

6.5.7 Conditions of Approval for Individual Projects

The current approval process includes development impact fees schedule that gave been adopted by the Council and effective as of July 2, 2006, listed in Table 6.A. Further, the Redevelopment Agency has adopted the developer relation guidelines. Project located in the Specific Plan area are required to construct infrastructure and other facilities as part of their project approval when such improvements are directly related to their project.

In lieu of this method of financing, the City Redevelopment Agency may amend the developer relation guidelines to include special assessment/fee district to fund infrastructure and facilities related to circulation, landscaping, security-capital and operational costs. The conditions of approval will also include detail design review for conformance to the appropriate architectural style.

Table 6.A – Current Schedule of Development Impact Fees*

Facility Category	Single Family	Multifamily	Commercial	Industrial	Office
	Fee per Dwelling Unit		Fee per 1,000 Building Square Feet		
Police Services	$413.32	$413.32	$29.63	$12.52	$35.39
Parks/Recreation	2,270.10	2,270.10	—	—	—
Civic Center/City Garage	145.70	145.70	10.44	4.41	12.47
Water Facilities	1,381.25	1,381.25	2,244.53	1,381.25	1,381.25
Wastewater Facilities	347.17	208.30	433.96	267.32	267.32
Noise-Monitoring System	0.42	0.42	0.03	0.01	0.03
Technological Enhancements	35.02	35.02	2.51	1.06	3.00
Childcare	—	—	7.14	3.02	8.53
Subtotal	***$4,592.98***	***$4,454.11***	***$2,728.24***	***$1,669.59***	***$1,707.99***
Administration 5%	241.00	235.00	143.00	88.00	90.00
Total Public Facilities Development Impact Fee ("PFDIF")	**$4,834.00**	**$4,689.00**	**$2,871.00**	**$1,758.00**	**$1,798.00**
Transportation Facilities	$320.67	$224.47	$1,439.81	$234.09	$368.77
Administration 5%	$17.00	$12.00	$76.00	$12.00	$19.00
Total Transportation Development Impact Fee ("TDIF")	***$338.00***	***$236.00***	***$1,516.00***	***$246.00***	***$388.00***
TOTAL	**$5,172.00**	**$4,925.00**	**$4,387.00**	**$2,004.00**	**$2,186.00**

* Effective July 2, 2006

APPENDIX A: GLOSSARY

A.1 GLOSSARY OF ARCHITECTURAL AND PLANNING TERMS[1]

Arcade: An arched roof or covered passageway.

Arch: A curved structure supporting its weight over an open space such as a door or window.

Architrave: The lintel extending from one column or pier to another, the lowest part of the entablature.

Attic Story: A story above the main entablature of a building.

Awning: A fixed cover, typically made of cloth over a metal armature, that is placed over windows or building openings as protection from the sun and rain.

Baluster: The upright portion of the row of supports for a porch railing.

Balustrade: A series of balusters surmounted by a rail.

Bargeboard: A finishing board at the edge of a gable roof.

Bay: A regularly repeated spatial element in a building defined by beams or ribs and their supports.

Bay Window: A window projecting outward from the main wall of a building.

Beveled Glass: Glass with a decorative edge cut on a slope to give the pane a faceted appearance.

Belt Course: A continuous horizontal band, either plain or ornate, which projects from the surface of an exterior wall, separating two stories. Ornate belt courses often resemble cornices.

Belvedere: A rooftop pavilion from which a vista can be enjoyed.

Big-Box Store: A very large retail commercial building such as a Wal-Mart.

Board and Batten: Vertical siding composed of wide boards that do not overlap and narrow strips, or battens, nailed over the spaces between the boards.

Bond: The general method of overlapping the joints of successive courses of bricks or stones, thereby binding them together to form a wall or other surface. Different patterns may be formed by these joints (e.g., common bond, Flemish bond, English bond, herringbone bond).

Bowstring: A roof structural system composed of parallel trusses which resemble a bow with the string parallel to and nearest to the ground.

Bracket: A support element under overhangs

Canopy: A fixed, roof-like covering that extends from the building as protection from the sun and rain.

Cantilever: A projecting overhang or beam supported only at one end.

[1] Some definitions were adapted from the Penguin Dictionary of Architecture by John Fleming, Hugh Honour, and Nikolaus Pevsner, Fourth Edition, 1991.

Capital: The upper part of a column, pilaster, or pier: the three most commonly used types are Corinthian, Doric, and Ionic.

Casement Window: Window with hinges to the side and a vertical opening either on the side or in the center.

Chamfer: A 90-degree corner cut to reduce it to two 45-degree edges. A bias cut.

Clapboards: Narrow, horizontal, overlapping wooden boards, usually thicker along the bottom edge, that form the outer skin of the walls of many wood frame houses. The horizontal lines of the overlaps generally are from four to six inches apart in older houses.

Clerestory: An upward extension of a single-storied space used to provide windows for lighting and ventilation.

Colonnade: A row of columns supporting a roof structure.

Column: A freestanding, upright member of a circular section, usually intended as a support.

Coping: The capping or top course of a wall, sometimes protecting the wall from weather.

Corbel: A type of bracket found in some cornices of brick buildings. It is formed by extending successive courses of brick so that they stand out from the wall surface.

Cornice: The continuing projecting section of an entablature at the top of a wall or, any projecting ornamental molding along the top of a building, wall, or arch, finishing or crowning it. That along the sloping sides of a pediment is called raking cornice. The exterior trim of a building at the meeting of the roof and wall or projection at the top of a wall. A boxed cornice is a hollow cornice enclosing the eaves.

Course: In a masonry wall, a single line of bricks or stones.

Cupola: A lookout or similar small structure on the top of a building.

Curb Cuts: The elimination of a street curb to enable vehicles to cross sidewalks and enter driveways or parking lots.

Dentil: A small square shape often repeated in a horizontal line as an ornament in classical architecture.

Dormer: A vertically framed window which projects from a sloping roof and has a roof of its own.

Double Hung Window: A window with an upper and low sash arranged so that each slides vertically past the other.

Eaves: The overhang at the lower edge of the roof which usually projects out over the walls.

Eclectic: Stylistic classification based on historical periods is a common way to describe buildings, but the boundaries between stylistic periods are not always clear. Many buildings display characteristics of more than one style, resulting in eclectic hybrids often adapted to particular climates and cultures. Nevertheless, such categories are often a good starting point for understanding the visual properties of a building.

Elevation: A mechanically accurate, "head on" drawing of a face of a building or object, without any allowance for the

effect of the laws of perspective. Any measurement on an elevation will be in a fixed proportion, or scale, to the corresponding measurement on the real building.

Entablature: In classical architecture, the elaborated beam member carried by the columns, horizontally divided into architrave (below), frieze, and cornice (above). The proportions and detailing are different for each order, and strictly prescribed.

Façade: The exterior face of a building which is the architectural front, sometimes distinguished from other faces by elaboration of architectural or ornamental details.

Fanlight: Semi-circular window over a door or window with sash radiating like the ribs of an open fan.

Fascia: A flat strip or band with a small projection, often found near the roofline in a single-story building.

Fenestration: The arrangement and design of windows and doors in a building.

Finial: A formal decorative ornament at the top of a canopy, gable or pinnacle.

Flashing: Copper or other materials used to make weather-tight the joint between a chimney and a roof.

Flat Roof: A roof having only enough slope for drainage.

Fluting: shallow, concave grooves running vertically on the shaft of a column, pilaster or other surface.

Focal Point: A building, object, or natural element in a streetscene that stands out and serves as a point of focus, catching and holding the viewer's attention.

Frieze: The middle division of an entablature, between the architrave and the cornice, usually decorated but may be plain.

Gable: The triangular part of an exterior wall, created by the angle of a pitched roof.

Gable Roof: The triangular wall segments at the end of a double pitch or gable roof.

Gablet: A small ornamental gable.

Gambrel Roof: A roof with a broken slope creating two pitches between eaves and ridges, often found on barns.

Glazed Brick: A brick which has been glazed and fired on one side.

Glazing: Fitting glass into windows and doors.

Hip Roof: A roof with four uniformly pitched sides.

Historic District: A geographically defined area possessing a significant concentration or continuity of landmarks, improvements, or landscape features united by historic events or by physical development, and which area has been designated as an historic landmark district; said district may have within its boundaries noncontributing buildings or other structures that, while not of such historic and/or architectural significance to be designated as landmarks, nevertheless contribute to the overall visual character of the district.

Icon: A pictographic or graphic representation of an object. Used in signage to replace or supplement text.

Infill: A newly constructed building within an existing development area.

In-Kind Replacement: To replace a feature of a building with materials of the same characteristics such as material, texture color, etc.

Integrity: When a sufficient percentage of the structure dates from the period of significance. The majority of a building's structural system and materials should date from the period of significance and its character defining features should remain intact. These may include architectural details such as, porches, ornamental brackets and moldings and materials as well as the overall mass and form of the building.

Jamb: The vertical face of an archway, doorway or window.

Jobs/Housing Balance: The distribution of employment relative to the distribution of workers within a given geographic area. A geographic area is considered balanced when these distributions are approximately equal, and when available housing choices complement the earning potential of available jobs. When achieved, jobs-housing balance results in an adequate supply of housing (and therefore workers) being located within a reasonable distance of compatible employment opportunities.

Joist: Any small timber laid horizontally to support a floor or ceiling.

Keystone: The central stone of a true arch or rib vault.

Lintel: The horizontal member above a door or window which supports the wall above the opening.

Load-Bearing Construction: Construction in which walls, posts, columns or arcades support the weight of the ceilings and upper floors.

Loggia: A gallery behind an open arcade or colonnade.

Lot: A platted parcel of land intended to be separately owned, developed, and otherwise used as a unit.

Mansard: A roof with two slopes on each side, the lower slope being much steeper; frequently used to add an upper story.

Masonry: Wall construction of such material as stone, brick, and adobe.

Massing: A term used to describe the overall shape of a building, and how parts of a building relate to one another.

Mix Use Development: Three or more revenue producing land uses.

Mullions: The divisional pieces in a multi-paned window.

Muntin: A bar member supporting and separating panes of glass in a window or door.

Newel Post: The major upright support at the end of a stair railing or a guardrail at a landing.

Palladian Window: A three-part window with a top-arched center window and long, narrow rectangular windows on either side.

Panel: A sunken or raised portion of a door with a frame like border.

Parapet: A low wall placed to protect any spot where there is a sudden drop, for example at the edge of a bridge, quay, or house-top.

Pedestrian Pockets: A mix-use community that stresses walking and bicycling instead of parking lots and the automobile.

Pediment: A triangular piece of wall above the entablature, which fills in and supports the sloping roof.

Pier: A solid masonry support, as distinct from a column; the solid mass between doors, windows, and other openings in buildings.

Pilaster: A shallow pier or rectangular column projecting only slightly from a wall and, in classical architecture, conforming to one of the orders. A decorative feature which simulates an attached ("engaged") pillar on a building. Used throughout history, pilasters were particularly popular for Art Deco buildings.

Pitch: The slope of a roof expressed in terms of a ratio of height to span.

Porch: An outside walking area having the floor elevated more than eight inches above grade.

Portal: The principal entry of a structure.

Porte Cochere: Carriage porch large enough to let a vehicle pass through.

Portico: A large porch, usually with a pedimented roof supported by columns.

Posts: The main verticals of walls or doorways that support a lintel.

Preservation: The act or process of applying measures to sustain the existing form, integrity and material of a building or structure and its site. This may include ongoing maintenance or stabilization work when necessary.

Primary Building Façade: The particular façade of a building which faces the street to which the address of the building pertains.

Purlin: A horizontal structural member parallel to the ridge, supporting the rafters. Can extend out from the gable.

Quoins: Heavy blocks, generally of stone, used at the comer of a building to reinforce masonry walls.

Rafter: A sloping structural member of the roof that extends from the ridge to the eaves and is used to support the roof deck, shingles, or other roof coverings.

Reconstruction: The art or process of reproducing by new construction the exact form and detail of a vanished building, structure or object or part thereof, as it appeared at a specific period of time.

Rehabilitation: The act or process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical architecture and cultural values.

Relief: Carving raised above a background plane, as in bas relief.

Restoration: The act or process of accurately recovering the form and details of a property and its setting as it appeared at a particular period and time by means of removal of later work or by the replacement of missing earlier work.

Reveal: The vertical side section of a doorway or window frame.

Ridge: The highest line of a roof when sloping planes intersect.

Rustication: A method of forming stonework with recessed joints and smooth or roughly textured block faces.

Sash: The part of the window frame in which the glass is set.

Section: A representation of a building, divided into two parts by a vertical plane so as to exhibit the construction of the building.

Setback: The minimum horizontal distance between the lot or property line and the nearest front, side, or rear line of the building (as the case may be), including terraces or any covered projection thereof, excluding steps.

Shake: Split wood shingles.

Shed Roof: A sloping, single planed roof as seen on a lean-to.

Sill: The exterior horizontal member on which a window frame rests.

Shiplap Siding: Early siding consisting of wide horizontal boards with "U" or "V" shaped groves.

Slate: Thinly laminated rock, split for roofing, paving, etc.

Soffit: The finished underside of an eave.

Spandrel: The triangular space between the side of an arch, the horizontal above its apex, and the vertical of its springing; the surface between two arches in an arcade.

Stabilization: The act or process of applying measures designed to reestablish weather–resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at present.

Storefront: The first floor area of a retail façade, emphasized by the display window or windows.

Street Frontage: The total linear dimension of all property lines which coincide with the edge of an adjoining street right-of-way.

Street Wall: The edges created by buildings and landscaping that enclose the street and create space.

Stringcourse: A narrow horizontal band extending across the façade of a building and in some instances encircling such decorative features as pillars or engaged columns: may be flush or projecting, and flat, molded or richly carved.

Stucco: An exterior finish, usually textured, composed of Portland cement, lime, and sand, which are mixed with water.

Terra-cotta: Earth-colored baked clay products formed into molds and used ornamentally. Also referred to roof tile color.

Traffic-Calming Devices: Speed bumps, traffic islands, rumble strips, etc. that

force drivers to slow down. Often used to keep drivers from speeding through neighborhoods or to make selected streets less attractive as alternative routes.

Traffic Circle: A circular one-way road at a junction of thoroughfares, facilitating an uninterrupted flow of traffic. Also called a roundabout.

Transit-Oriented Development (TOD): Development built around bus or rail lines.

Transom: The horizontal division or cross-bar in a window. A window opening above a door.

Turret: A little tower often at the comer of a building.

Urban Fabric: The generic term for the physical aspect of urbanism, emphasizing building types, thoroughfares, open space, frontages, and streetscapes.

Veranda: A roofed porch, sometimes stretching on two sides of a building.

Widow's Walk: A small roof deck with guardrail usually located at the peak of a roof from which wives of ship captains could catch a first glimpse of their husband's ship returning from sea.

A.2 Glossary Of Design Terms

Aesthetics: The science and philosophy of beauty. If something is aesthetic, it is of beauty or artistic.

Asymmetry: The balanced arrangement of different elements without a common axis.

Balance: Another important aspect of rhythm. Balance can be described in terms of symmetrical and asymmetrical elements. An important feature of balance is that it is very often achieved by matching differing elements which, when perceived in whole, display balance.

Emphasis: Describes the use of elements which call attention to themselves. Emphasis is an important feature in creating balance when using dissimilar elements. Canopies and balconies are examples of elements which, when emphasized properly, can assist in presenting a balanced look. Emphasis also can be found within strip developments of malls by the location of a more massive or monumental building, such as a major department store. This emphasis provides a directional guide because it creates a point of reference for the users. Emphasis can also be used as a directional element such as the emphasis at a store entrance or mall entrance.

Garish: That which is gaudy, showy, flashing, dazzling, or too bright to be aesthetically pleasing.

Mass: Mass describes three dimensional forms, the simplest of which are cubes, boxes (or "rectangular solids"), cylinders, pyramids, and cones. Buildings are rarely one of these simple forms, but generally are composites of varying types of assets. This composition is generally described as the "massing" of forms in a building. During the design process, massing is one of many aspects of form considered by an architect or designer, and can be the result of both exterior and interior design concepts. Exterior massing can identify an entry, denote a stairway, or simply create a desirable form. Interior spaces (or lack of mass) can be designed to create an

intimate space or perhaps a monumental entry. Interior spaces create and affect exterior mass, and exterior mass can affect the interior space. Mass and massing are inevitably affected by their opposite, open space. The lack of mass, or creation of perceived open space, can significantly affect the character of a building. Architects often call attention to a lack of mass, by defining the open space with low walls or railings. Landscape architects also use massing in design such as in grouping of plants with different sizes and shapes. These areas are intended to be perceived as a whole rather than as individual trees or shrubs. Plant masses can be used to fill a space, define the boundary of an open area, or extend the perceived form of an architectural element.

Monochromatic: Painting with a single hue or color.

Monolithic: Exhibiting massive uniformity, singular.

Movement: The apparent directional emphasis of a building façade as indicated by its proportions. Static movement is based on square proportions; dynamic movement is based on rectangular proportions.

Pattern: The pattern of material can also add texture and can be used to add character, scale, and balance to a building. The lines of the many types of brick bonds are examples of how material can be placed in a pattern to create texture. The natural texture of rough wood shingles exhibit texture by the nature of the material and by the pattern in which the shingles are placed.

Proportion: Proportion deals with the ratio of dimension between elements. Proportion can describe height to height ratios, width to width ratios, width to height ratios, as well as ratios of massing. Landscaping can be used to establish a consistent rhythm along a streetscape which will disguise the lack of proportion in building size and placement.

Rhythm: The regular or harmonious recurrence of lines, shapes, forms, elements or colors, usually within a proportional system.

Scale: Scale is the measurement of the relationship of one object to another object. The scale of a building can be described in terms of its relationship to a human being. All of the components of a building also have a relationship to each other and to the building as a whole which is the "scale" of the components. Generally, the scale of the building components also relate to the scale of the entire building. The relationship of a building, or proportions of a building, to a human being is called its relationship to "human scale." The spectrum of relationships to human scale ranges from intimate to monumental. Intimate usually refers to small spaces or detail which is very much in keeping with the human scale, usually areas around eight to ten feet in size. These spaces feel intimate because of the relationship of a human being to the space. The distance of eight to ten feet is about the limit of sensory perception of communication between people including voice inclination and facial expression. This distance is also about the limit of an up-stretched arm reach for human beings, which is another measure of human scale. The components of a building with an intimate scale are often small and include details which

break those components into smaller units. At the other end of the spectrum, monumental scale is used to present a feeling of grandeur, security, timelessness, or spiritual well-being. Building types which commonly use the monumental scale to express these feelings are banks, churches, and civic buildings. The components of this scale also reflect this grandness, with oversized double door entries, 18-foot glass storefronts, or two-story columns. Landscape or hardscape elements can also bring human scale to a large building by introducing features such as a tree canopy, leaf textures, and fragrance. Plants can complement the scale of the architecture, as when large trees are used next to tall buildings, or small trees to accent a building component such as an entry.

Surface Materials: Can be used to create a texture for a building, from the roughness of stone or a ribbed metal screen to the smoothness of marble or glass. Some materials, such as wood, may be either rough (such as wood shingles or resawn lumber) or smooth (such as clapboard siding).

Symmetry: The balanced arrangement of equivalent elements about a common axis.

Texture: Texture refers to variations in the exterior façade and may be described in terms of the roughness of the surface material, the patterns inherent in the material or the patterns in which the material is placed. Texture and the lack of texture influence the mass, scale and rhythm of a building. Texture also can add intimate scale to large buildings by the use of small detailed patterns, such as brick masonry.

Appendix F

Lynwood Transit Area Specific Plan

The Lynwood Transit Area Specific Plan is on-file and available for review at the City of Lynwood Planning Department located at 11301 Bullis Road in the City of Lynwood