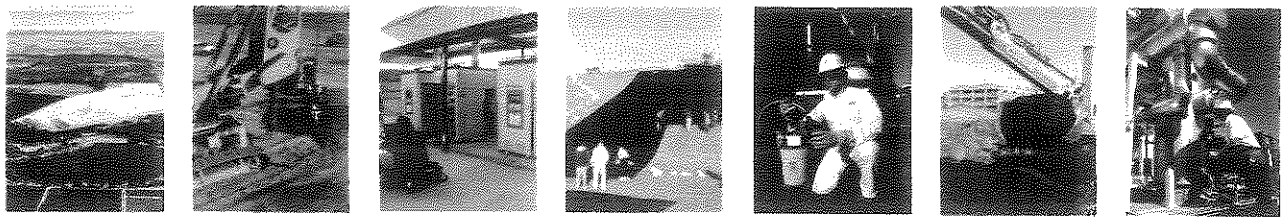
SCS ENGINEERS



CARSON FOOTBALL STADIUM INITIATIVE ELECTIONS CODE 9212 REPORT

Presented to:

Carson City Council
City of Carson
701 East Carson Street
Carson, CA 90745

Presented by:

SCS ENGINEERS
3900 Kilroy Airport Way
Suite 100
Long Beach, CA 90806-6816
(562) 426-9544

April 17, 2015

Offices Nationwide
www.scsengineers.com

EXHIBIT B

CARSON FOOTBALL STADIUM INITIATIVE
ELECTIONS CODE 9212 REPORT

Presented to:

Carson City Council
City of Carson
701 East Carson Street
Carson, CA 90745

Presented by:

SCS ENGINEERS
3900 Kilroy Airport Way
Suite 100
Long Beach, CA 90806-6816
(562) 426-9544

April 17, 2015

Table of Contents

List of Tables

List of Figures

List of Appendices

1 EXECUTIVE SUMMARY

A voter-sponsored initiative, known as the '*Initiative Measure to Approve a Professional Football Stadium and Other Permitted Uses in the City of Carson*' (*Stadium Initiative*) has been proposed and has since received a sufficient number of signatures from the City's residents to move forward for consideration by the City's Council and/or voters. This Report has been prepared in accordance with State law and as instructed by the City, to provide the City Council and public at large a summary of the *Stadium Initiative's* potential impacts (both positive and negative) upon the community and environment.

The *Stadium Initiative* would allow the development of a professional sports stadium and associated commercial development on a 168-acre *Project Site* which is located in the South Bay region of Los Angeles County, along the western edge of the San Diego Freeway (I-405) between Avalon Boulevard to the south and extending just north of Del Amo Boulevard. Refer to Figure 1 for a Vicinity Map of the *Project Site* location and surrounding area. The *Stadium Project* would consist of the following primary elements:

- A stadium which can accommodate one or two professional football teams; and allows for a permanent seating capacity of up to approximately seventy thousand (70,000) seats with expansion capability up to a seating capacity of approximately seventy-five thousand (75,000) seats; and,
- A hotel with up to three hundred and fifty (350) rooms and ancillary hotel amenities; and,
- Up to 850,000 square feet (not including the stadium or hotel) of other permitted commercial, entertainment, and supporting uses; and,
- A minimum of ten thousand (10,000) parking spaces.

The *Project Site* is currently vacant with the exception of remediation activities related to the clean-up of a landfill that operated on the property prior to 1965. However, the *Project Site* is the subject of previous planning activity consisting of the *Boulevards at South Bay Specific Plan (Boulevards Project)* which proposes to develop the same *Project Site* with a potential mix of approximately two (2) million square feet of commercial, retail and entertainment uses; a 300-room hotel; and up to 1,550 residential units. This *Boulevards Project* (formerly known as Carson Marketplace) has already undergone a significant amount of detailed land use planning and environmental analysis which culminated with the City's certification of an Environmental Impact Report (EIR) for the Specific Plan in 2006. If the *Stadium Project* fails to be developed, then the *Boulevards Project* could proceed as previously envisioned. Since the previously approved *Boulevards Project* underwent detailed environmental review and public scrutiny, this Report seeks to inform the City and its residents of what fiscal, environmental, or land use impacts would remain substantially the same, which impacts would be further aggravated, and which impacts would be potentially reduced, should the *Project Site* be developed with the *Stadium Project* instead of the *Boulevards Project*. The summary table provided below includes a very concise summary of these major issues, and more detailed analysis can be found throughout the subsequent sections of this Report.

Table 1. Project Comparison Summary

Fiscal Effects of the Project		
Issue Area	**Comparison to Boulevards Project**	**Summary**
Tax Revenue	Increased tax revenue	As further detailed in the full Fiscal Analysis completed by AECOM Technical Services, Inc., professional NFL stadiums are a significant economic driver which create a center for new jobs, sales tax, and trickle down spending to surrounding businesses. Ultimately the *Stadium Project* would be anticipated to generate approximately $60 million dollars in new State and City taxes among many other fiscal benefits.
Capital Improvements	Improved infrastructure at no cost to City	While the development and operation of the *Stadium Project* may also require improvements to and increased maintenance costs for several City streets, upgrades to local utility infrastructure, etc., all such costs will be fully paid by the Stadium developer, not the City or its taxpayers. Many of these capital improvements would provide benefits to the City on a daily basis, even though the Stadium would only operate at a high level of use for a small portion of the year.
Costs of Public Services	Increased Services at no cost to City	The operations of the Stadium would likely necessitate additional public services such as police, fire protection, and emergency medical response. However, the City will be reimbursed by the Stadium operator for all additional service costs.
Housing Funds	Potential loss of housing funds	The *Project Site* was previously planned for up to 1,550 new residential units, although the construction of such units were not required The City's compliance with some State housing laws is dependent on the inventory of new housing opportunities provided by this property. If the *Project Site* is developed with a Stadium, the City may need to identify alternative housing sites which satisfy State mandates. The City has several options to address this issue, including increasing density on vacant parcels, encouraging redevelopment of underutilized commercial parcels with mixed-use development, and/or adopting new Specific Plans with greater emphasis on new housing opportunities.

19

Land Use Compatibility		
Issue Area	**Comparison to Boulevards Project**	**Summary**
City's General Plan & Zoning Policies	Several changes to City's Zoning	The *Stadium Initiative* would modify all necessary City planning documents and policies to ensure that the project is consistent with the City's laws and regulations. Perhaps most importantly, the *Stadium Project* would fulfill the City's vision to establish a "Signature Project" with shopping, entertainment, & employment opportunities.
Adjacent Land Uses	Positive Impacts to Underutilized/Vacant Land Increased impacts to residential areas	The development of the *Stadium Project* would provide an economic driver for commercial uses located to the east and would likely spur on the development of vacant or underutilized land to the north. The intensification of noise and traffic could negatively affect existing residential neighborhoods to the south and west; however the *Stadium Project* includes setbacks, height limits, and operational restrictions which are all intended to reduce impacts on these local residents.
Uses of Vacant Land	Positive Impacts to Underutilized/Vacant Land	The *Stadium Initiative* only applies to an approximate 168-acre portion of the City which is bounded by the I-405 to the east, a property line approximately 250-feet north of Del Amo Boulevard, Avalon Boulevard to the south, and the Torrance Flood Control Channel to the west. The *Stadium Initiative* would apply a new Stadium Overlay Zone to this property which would allow a professional sports stadium to be developed as an alternative to the previously planned *Boulevards at South Bay Specific Plan*. While this would affect the development of the 168-acre *Project Site*, which is vacant at this time, it would have no direct affect on vacant properties throughout the remainder of the City. Indirectly, the *Stadium Project* will likely spur on the development of vacant or underutilized properties to the north and west as the demand for nearby parking structures, hotels, and similar visitor serving uses is increased.

Environmental & Infrastructure Impacts		
Issue Area	**Comparison to Boulevards Project**	**Summary**
Aesthetics	Significantly taller buildings Total structural development is reduced in size and setback more	The *Stadium Project* appears to provide a reduced amount of gross square footage, greater setbacks, and increased building heights as was approved under the previous *Boulevards Project*. The larger setbacks and reduced footprint of total development would counteract the negative aesthetic impacts of increased building height. Therefore, aesthetic impacts from structural development are not expected to be significantly greater than the preceding *Boulevards Project*. Furthermore, the *Stadium Initiative* includes twelve (12) different *Environmental Measures* which are specifically intended to preserve the aesthetic quality of the *Project Site* and surrounding area.
Air Quality	Daily air quality impacts are higher when large events are held Annual air quality impacts are lower	On days when a large NFL game or similar event occurs, the air quality analysis indicates that peak daily emissions from the *Stadium Project* would be worse than the *Boulevards Project*. This is because traffic is a significant generator of air emissions and days when high volumes of cars visit the Stadium, air emissions would be significantly elevated. However, for over 300 days of the year, the Stadium would be expected to have a substantially lower traffic level and lower emissions as well. The development from the *Boulevards Project* (residences and typical commercial) generate consistently high levels of traffic and emissions everyday of the year. As a result, the total annual emissions from the *Stadium Project* are lower than what would result from the *Boulevards Project*.
Landfill Remediation	Hazardous materials will still be properly remediated	The previously planned remediation of the landfill would continue as planned, with the shallow soil contamination work being completed before the Stadium construction begins. Then long-term groundwater remediation and gas control equipment would be operated throughout the life of the Stadium operations.
Noise	Noise impacts to local residents during construction & operation will be worse	Short-term impacts from construction activity such as pile driving could significantly affect local residents living in adjacent neighborhoods. Additionally, long-term noise from cheering crowds, tailgating activity, fireworks, etc. could significantly affect residents within approximately 2,000 feet of the *Project Site*. However, the *Stadium Project* does include several mitigation measures intended to lessen these impacts including hourly restrictions on tailgating and fireworks, setbacks from local neighborhoods, limits on the volume of amplified music and public announcement systems, etc.

12

Environmental & Infrastructure Impacts		
Issue Area	**Comparison to Boulevards Project**	**Summary**
Water	Reduced annual demand for potable water	While several design criteria have yet to be confirmed, the *Stadium Project* is likely to utilize less potable water than the previously planned *Boulevards Project*. Recently constructed modern stadiums have been able to utilize recycled water for up to 85% of their daily operations.
Sewer	No substantial change in impact	The *Stadium Project* would generate a substantial amount of wastewater; however, this sewage discharge would only require approximately 1% of the local treatment plant's available operational capacity. Local infrastructure such as lifting stations and sewer mains may need to be upgraded, but such capital improvements will be financed by the Stadium developer not the City.
Public Services	Increased service at no cost to the City	The *Stadium Project* would require additional public services such as police, fire protection, and emergency medical response. However, the City will be reimbursed by the Stadium operator for all additional service costs.
Traffic & Parking	Worse During Large Event Days Better Annually	The *Stadium Project* would create acute traffic congestion approximately 42 days of the year when the site hosts events with crowds greater than 20,000 persons. During such occasions, local arterial roads such as Del Amo and Avalon Boulevards would suffer from short-term, but severe traffic loads. However, since the *Stadium Project* will include physical improvements to twelve (12) different intersections in the surrounding region, traffic will actually improve during the 300+ days of the year when the Stadium has small or no event activity. The *Stadium Project* is also only proposing to include less than half of its parking capacity on the *Project Site*. Therefore, a parking management plan would need to be developed and offsite parking facilities would have to be identified or constructed.

As illustrated in the summary table, the potential benefits and negative effects of the *Stadium Project* vary. As could be logically expected, the Stadium will generate increased levels of noise and traffic during sporting or entertainment events with attendance greater than 20,000 persons. It is important to recognize that events of such size would only occur for a small portion of the year, probably 40-50 days total based upon the operational history of similar facilities throughout the Country. The remainder of the year the *Stadium Project* would actually operate at a level of intensity which is the same or less than the previously planned *Boulevards Project* due to the lack of regional commercial development and residential units. As a result, the City and surrounding community could enjoy the fiscal and infrastructure benefits afforded by the *Stadium Project* for the entire year, while only being impacted approximately 40-50 event days of the year based upon comparable stadium facilities.

2 PROJECT BACKGROUND

2.1 Voter Initiative Background

On March 4, 2015, a voter-sponsored initiative, known as the '*Initiative Measure to Approve a Professional Football Stadium and Other Permitted Uses in the City of Carson*' (*Stadium Initiative*) was filed with the City Clerk's office. The *Stadium Initiative* would allow the development of a new professional football stadium (*Stadium Project*) as an alternative to the currently approved uses within the Boulevards at South Bay Specific Plan (*Boulevards Project*), which was formerly known as the Carson Marketplace. This *Stadium Project* would be developed on an underutilized parcel of land (*Project Site*) which is located on the western edge of the San Diego Freeway (I-405) between Avalon Boulevard and a property line located approximately 250-feet north of Del Amo Boulevard.

Voter Initiative Process

The procedures for municipal voter initiatives are found in California State Law[1]. The initiative process consists of the following primary steps:

1. A voter of the City proposes the initiative language and receives, from the City Attorney, a Title and Summary of the newly proposed initiative.

2. The initiative is then presented as a petition to City voters for their signatures.

3. If 10% or more of the City's registered voters have signed the petition, it is presented to the City Council for further action.

4. The City Council must then act as follows[2]:

    a. (Optional) Request an Informational Report which summarizes the potential positive and negative effects of the initiative (this Report must be completed and presented back to the Council within 30 days); and either,

[1] Elections Code § 9200 et seq.
[2] Elections Code § 9214

b. Immediately approve the initiative via a vote of the Council members; or,

c. Schedule the initiative for an election for the initiative to be approved or denied by the City's voters.

In accordance with the options listed above, the City Council requested preparation of this Informational Report on potential impacts that may result from the *Stadium Project* that is the subject of the *Stadium Initiative*.

Contents of Carson Football Stadium Initiative

The full *Stadium Initiative* can be reviewed by the public and contains a significant number of details regarding the intended revisions to the City of Carson's local laws, zoning, and specific planning for the *Project Site*. As further detailed in Table 2 below, the *Stadium Initiative* addresses four main topics:

1. **How would the *Project Site* be developed with a professional football stadium instead of the previously planned mixture of commercial and residential development?**

   The *Stadium Initiative* includes a description of major project elements including setbacks, height of stadium structures, stadium seating capacity, parking, etc.

2. **How would the City's existing laws, policies, and planning documents be modified to allow for the *Stadium Project*?**

   A new *Stadium Overlay Zone* would be created which allows a professional sports stadium and related uses to be constructed on this specific site. The *Stadium Initiative* includes maps and legal descriptions of the *Project Site* where the new Overlay Zone will be implemented.

3. **What measures will be taken to mitigate the potentially negative aspects of the *Stadium Project* such as traffic, noise, and public safety?**

   The *Stadium Initiative* includes an appendix of ninety (90) different *Environmental Measures* which will be implemented to minimize environmental impacts to aesthetics, air quality, geology, hazardous materials, water quality, noise, public services, and transportation.

4. **Who will be responsible for the costs involved with the construction of the *Stadium Project* and related infrastructure and services, such as road improvements, sewer mains, and emergency services including police and fire protection?**

   The *Stadium Initiative* includes conclusive statements which clarify that the City **WILL NOT** be responsible for any of the costs related to Stadium construction (including cost overruns) nor will it be responsible for stadium operating costs, maintenance, or capital improvement expenses. Additionally, the *Stadium Initiative* states that the City will be reimbursed for costs associated with the provision of additional public safety and traffic management services related to Stadium events.

The *Stadium Initiative* contains text changes necessary to amend the City's General Plan, Zoning Ordinance, and all other local governance documents by adding language necessary to create a *Stadium (S) Overlay Zone*. The broad uses added for the *Stadium Project* include: commercial recreation, commercial, and entertainment uses. The *Stadium Project* would not include any residential component as currently allowed, but not required, in the *Boulevards Project*.

All cities and counties within the State of California are required to have an adopted General Plan, which serves as a "local government's long-term blueprint for the community's vision of future growth"[3]. Each General Plan contains at least seven mandated elements which discuss: land use, circulation, housing, conservation, open space, noise, and safety. The City's existing General Plan contains goals, policies and implementation measures to address these seven primary elements and the Plan also includes references to allow for a "Signature Project' within the City. Changes proposed in the *Stadium Initiative* would define this planned "Signature Project" as a professional football stadium. Changes proposed in the *Stadium Initiative* would also set forth the relationship between the *Boulevards Project* and the *Stadium Project*, by specifying that the Specific Plan guidelines adopted for the *Boulevards Project* would remain in full force and effect if the *Stadium Project* is not developed (irrespective of whether or not the *Stadium Initiative* is approved). However, if the *Stadium Initiative* is approved and the *Stadium Project* is subsequently constructed, then all development standards and policies related to the *Stadium Initiative* supersede all other existing City codes and Specific Plan documents.

A summary of each section of the *Stadium Initiative* is provided in Table 2 below. Please refer to the publicly accessible copy of the entire *Stadium Initiative* text for further details.

[3] Government Code § 65300 et seq.

Table 2. Summary of Carson Football Stadium Initiative Contents

Section	Summary
Section 1: Title	Identifies the Initiative as the "Carson Football Stadium Initiative."
Section 2: Findings and Purpose	Outlines the findings and purpose of the Initiative for people of the City of Carson.
Section 3: Amendment of Carson General Plan	Provides language for the Amendment of the Carson General Plan, including policies and implementation measures.
Section 4: Carson Football Stadium Initiative Relationship to the Boulevards at South Bay Specific Plan	Clarifies the relationship between the Initiative and the Boulevards at South Bay Specific Plan, including specifying that the *Stadium Project* is an alternative to development of the *Boulevards Project* under the currently approved Boulevards at South Bay Specific Plan.
Section 5: Amendments to the Carson Municipal Code	Provides language for the Amendments to the Carson Municipal Code, for both its text and Zoning Maps, and includes development standards for the *Stadium Project*. Also, provides for protections to ensure that the City is not responsible for the costs of constructing, operating, or maintaining the Stadium and that the City will be reimbursed for associated public services.
Section 6: Environmental Protection	Provides a full discussion on protection of the environment and includes Mitigation Measures termed, *Environmental Measures* that would apply to the *Stadium Project* in lieu of the Mitigation Measures adopted for the Boulevards at South Bay Specific Plan. To allow for flexibility and to account for unforeseeable modifications during the course of implementation of the *Stadium Project*, the Initiative states that the Stadium developer or operator may request modifications to the *Environmental Measures* and the Director of Community Development (or successor planning official) may administratively approve of such modifications if the Director of Community Development (or successor planning official) determines that such modifications provide a similar level of protection from or reduction of potential environmental impacts.
Section 7: Labor Policy	Requires a *Stadium Project* labor agreement and Stadium Operations labor agreement that are consistent with the requirements of federal, state, and local law.
Section 8: Internal General Plan and Municipal Code Consistency	Describes the *Stadium Project* consistency with the General Plan and Municipal Code and specifies that in the event that there is no exact literal match that the Initiative be read and construed to be in full harmony with the General Plan and Municipal Code and specifies that the Initiative shall govern.
Section 9: Implementation of this Initiative	Establishes the effective date of the Initiative as the earliest date legally possible pursuant to governing provisions of the California Elections Code. With respect to the General Plan Amendment, the Initiative states that that if the four amendments of the General Plan permitted by state law for any calendar year have already been utilized in the year in which this Initiative becomes effective, the General Plan amendments set forth in this Initiative shall be the first amendments inserted into the General Plan on January 1 of the next year.
Section 10: Effect of Other Measures on the Same Ballot	Provides that if the Initiative is not approved by the City Council, it shall be submitted to the voters and also specifies the effects of other measures that could potentially conflict with the Initiative.
Section 11: Interpretation and Severability	Establishes language for the interpretation of the Initiative and indicates the desire that the City Council use its best efforts to sustain the Initiative.
Section 12: Amendment	States that the Initiative may only be amended or repealed by a majority of the voters of the City of Carson voting in an election held in accordance with state law.
Section 13. Exhibits to This Initiative	Lists Exhibits to the Initiative as: A) Property Map; B) General Plan Land Use Map; C) Zoning Map; D) *Environmental Measures*; and E) The Boulevards at South Bay Specific Plan.

2.2 Stadium Project Description

As provided for in the *Stadium Initiative*, the City would amend the City's General Plan, and Zoning Ordinance (contained in Chapter 1 of Article IX of the Carson Municipal Code) to provide for new land use designations, zoning, and development standards for the *Project Site*, and add Chapter 2 to Article X of the City's Municipal Code, to establish guiding legislative policies and minimum requirements for the development, construction, operation, maintenance, management, and financing of the *Stadium Project*. The City's General Plan and Zoning Ordinance amendments would include establishing an alternative land use plan for the *Project Site* through the establishment of a *Stadium Overlay Zone* designation (refer to Figure 2). By adding an overlay zone to the *Project Site*, the *Stadium Initiative* would allow for the development of a professional football stadium and supporting uses such as parking, restaurants, retail stores, telecommunications facilities, and offices, among other ancillary uses. Notably, the Stadium Overlay would not prohibit the development of the *Project Site* with other uses. Therefore, if the *Stadium Initiative* is approved and yet the *Stadium Project* is never developed, then the *Project Site* could be developed in accordance with the previously approved *Boulevards at South Bay Specific Plan*. Overlays are a commonly used city planning practice intended to establish highly specialized zoning for particular sites throughout a community. In fact, the City of Carson already has several such overlays for blimp ports, cemeteries, colleges, mixed-use residential developments, and landfills.

The *Stadium Project* primarily consists of the development, construction, operation, maintenance, management, and financing of:

- A stadium which can accommodate one or two professional football teams; and allows for,
    - A permanent seating capacity of up to approximately seventy thousand (70,000) seats, including club and suite seating, with expansion capability up to a seating capacity of approximately seventy-five thousand (75,000) seats for larger events, and other permitted uses.
    - Public assemblies, facilities, and uses including but not limited to: tailgating, entertainment, concerts, festivals, fairs, conventions, conferences, and other similar facilities and uses.
    - Uses typically located within or in close proximity to stadiums, including but not limited to: retail stores, restaurants, bars, alcoholic beverage sales, kiosks, offices, medical treatment facilities, athletic training facilities, lodging facilities, museums, theaters, parking facilities, studios, telecommunication facilities, heliports, temporary and/or permanent hospitality facilities, fireworks and other pyrotechnical, lighting, and sound displays, signs, and storage.
- A hotel with up to three hundred and fifty (350) rooms and ancillary hotel amenities.
- Up to 500,000 square feet of other permitted uses south of Del Amo Boulevard (not including the stadium or hotel).

- Up to 350,000 square feet of other permitted uses north of Del Amo Boulevard (not including the stadium or hotel).

- A minimum of ten thousand (10,000) parking spaces; up to three thousand three hundred (3,300) of which may be compact spaces.

- Facilities for the implementation, operation, maintenance, and monitoring of soil, soil gas, and groundwater remediation.

Please refer directly to the *Stadium Initiative* for a complete list of all proposed and allowed uses related to the *Stadium Project*.

Table 3. Stadium Project Uses

General Category	Example Uses
Public Assembly	Sports Stadium; concerts; festivals; fairs; public gatherings; exhibitions, conventions, meetings, banquets, civic events, pageants, patriotic celebrations, tailgating
Retail	Retail stores; kiosks; novelty stores; sports stores
Offices	Stadium management & rental; sports offices; athletic team offices, entertainment offices, media offices, public safety offices
Athletic Training	Practice uses; practice facilities and fields; fitness facilities; gyms
Restaurant/Entertainment	Restaurants; lounges; bars; clubs; banquet and catering services; concession stands, cinemas, theaters, outdoor stages
Hotel/Lodging	Hotels; lodging facilities; ancillary hotel amenities including restaurants, lounges, bars, clubs, and conference facilities
Safety	Helipad/Heliport; medical offices and treatment facilities
Convenience/Access	Helipad/Heliport
Cultural Facilities	Museums; cultural facilities; hall of fame; displays; memorabilia facilities; sports and entertainment experience facilities; and facilities supporting public tours of the Stadium
Transportation/Parking	Helipad/Heliport; surface parking areas; parking structures; public plazas; transit facilities
Communication	Telecommunication facilities, including but not limited to: transmission transmitter, repeater, switching stations, uplinks, downlinks, cell towers, satellite dishes, microwave facilities, and other facilities related to transmission of media and broadcasts
Television/Broadcasting	Studios and facilities for motion picture, television and radio broadcasting; film or tape reproductions, closed circuit, cable or pay television or radio satellite transmission, pay-per-view, wireless networks, Internet, world wide web, and similar rights
Temporary Uses	Promotional tents, hospitality tents; pavilions; exhibits; displays; fireworks, special pyrotechnical displays and lighting effects; kiosks; vendor carts, trucks and tents; temporary and mobile broadcast and video facilities and displays areas; filming activities; signs; carnivals; circuses; parades

2.3 Site Location & History

The *Project Site* is located at 20400 Main Street in the City of Carson in the South Bay area of Los Angeles County and encompasses approximately 168- acres of land. The *Project Site* is bounded by a mixture of major roadways & interstates to the north and east as well as predominantly single-family homes to the south and west.

Table 4. Adjacent Land Uses

Project Site Boundary	Adjacent Land Use
North	Vacant Land and Porsche Experience
East	I-405 & Regional Retail
South	Avalon Boulevard, Single-Family Homes, & Torrance Flood Control Channel
West	Main Street, Light-Industrial, Single-Family Homes & Torrance Flood Control Channel

The *Project Site* is generally located approximately seventeen (17) miles south of downtown Los Angeles and approximately six and a half (6.5) miles east of the Pacific Ocean. Regional access to the *Project Site* is provided by the San Diego Freeway (I-405), Harbor Freeway (I-110), Artesia Freeway (SR-91), and Long Beach Freeway (I-710). I-405 is located adjacent to the *Project Site's* eastern boundary, I-110 is located approximately one quarter mile west of the *Project Site*, and SR-91 is located approximately 2.5 miles north of the *Project Site*. Locally, access to the *Project Site* is available via Main Street (a north-south thoroughfare on the western side of the *Project Site*), Avalon Boulevard (an exit from I-405 and a major north-south arterial), and Del Amo Boulevard (an east-west arterial which bisects the northern portion of the *Project Site*).

The *Project Site* is primarily vacant; existing development consists primarily of various remediation and site control features needed to mitigate the existence of the closed Cal Compact landfill which used to occupy a 157-acre portion of the property. The *Project Site* has been essentially vacant since the closing and covering of the landfill in 1965. Due to the ongoing remediation activity the *Project Site* is virtually devoid of any native and/or mature vegetation.

Cal Compact Landfill & Remediation

The 157-acre portion of the *Project Site* that is located south of Del Amo Boulevard was formerly used as a landfill under an Industrial Waste Disposal Permit issued to Cal Compact, Inc. by the County of Los Angeles. Landfilling on the site began in 1959, shortly after the banning of incinerators in Los Angeles County in 1957. Landfilling occurred from April 1959 to December 1964 with an approximate closing date of February 1965. During the operating life of the landfill, approximately seven (7) million cubic yards of solid municipal waste and 2.6 million barrels of industrial liquid waste were received at the facility. Waste received included organic wastes, such as solvents, oils, and sludges, as well as heavy metals, paint sludges, and inorganic salts.

As a result of contamination on and adjacent to the landfill, the 157-acre site is listed by the State of California Department of Toxic Substances Control (DTSC) as a hazardous substances site. In March 1988, the DTSC required that an investigation of contamination at the landfill site be conducted and that remedial action plans (RAPs) be prepared accordingly.[4] Two (2) different RAPs were subsequently developed and approved in 1995 (for the shallow ground surface portion of the site) and 2005 (for the lower groundwater underlying the site). Implementation of the RAP systems for the shallow ground surface must be completed before the *Stadium Project* or any other site development can occur.

Metro 2000 Commercial Development

In 1993, a project known as Metro 2000 was proposed as a multi-phase development on the *Project Site*. Phase I of the Metro 2000 project included the development of L.A. MetroMall, a 1.83-million–square foot regional mall consisting exclusively of retail outlet stores. Phase II of the Metro 2000 project included an additional 687,400 square feet of regional commercial retail uses and 600,000 square feet of office floor area. Therefore, build-out of the Metro 2000 project consisted of a total of approximately 3.1 million square feet of gross buildable area. A Draft and Final EIR for Metro 2000 were prepared and certified by the Carson City Council in 1995. Subsequently, the State Department of Toxic Substances Control (DTSC) approved the RAP for the remediation of the site. Despite the completion of this significant planning effort, no portion of the Metro 2000 project was ever constructed.

Boulevards at South Bay Specific Plan

The Boulevards at South Bay Specific Plan (*Boulevards Project*), formerly known as the Carson Marketplace, was approved for the *Project Site* in 2006 and was more recently amended in 2011. The *Boulevards Project* proposes a potential mix of approximately two (2) million square feet of commercial, retail and entertainment uses; a 300-room hotel; and up to 1,550 residential units. The Specific Plan is designed to accommodate these uses through the creation of three development districts and two land use categories: Commercial Marketplace (CM) and Mixed-Use Marketplace (MU-M). The development districts and land use categories allow for a greater variety of land uses and customized development standards. The *Boulevards Project* was reviewed pursuant to the California Environmental Quality Act (CEQA) and an Environmental Impact Report (EIR) was certified in 2006 and amended in 2009. This EIR evaluated the potential environmental impacts associated with build-out of the Specific Plan and concluded that significant impacts would occur in the following areas:

- Land Use
- Traffic & Circulation
- Geology & Soils
- Air Quality
- Public Services (i.e. police, fire, schools, etc.)
- Visual Qualities
- Hazards & Hazardous Materials
- Surface Water Quality
- Noise
- Utilities (i.e. water, sewer, solid waste, etc.)

[4] Remedial Action Order No.*HSA87/88-040

As previously discussed, if the *Stadium Initiative* is approved, but the Stadium itself fails to be physically developed, then the *Boulevards Project* can be developed without further complications.

3 FISCAL IMPACT ANALYSIS

Refer to Appendix II for the detailed Fiscal Analysis of NFL Stadium Report, prepared by AECOM Technical Services, Inc (Fiscal Report). The Fiscal Report provides numerous estimates for additional revenue generation associated with jobs, construction, and taxes related to the *Stadium Initiative*. Estimates of new capital improvements and maintenance costs, potential loss of housing program funding, and increased public service costs have been provided throughout this Report where applicable.

4 LAND USE POLICY

Generally California law requires consistency between a city's zoning (including Specific Plans) and its General Plan. Consistency is commonly demonstrated through the statement of the relationship of the specific plan to the general plan or through a discussion of the individual policies and programs and how each consistently implements the general plan.

The amendments to the City's General Plan and Municipal Code, as proposed in the *Stadium Initiative* represent the *Stadium Initiative* proponent's intent to eliminate any possible internal inconsistency within or between any elements of the City's existing codes or policies and any provisions contained in the *Stadium Overlay Zone*.

4.1 Modifications to City Planning Documents

Revisions to City General Plan & Zoning Ordinance

As previously discussed, the *Stadium Initiative* contains numerous text changes necessary to amend the General Plan and Zoning Ordinance by adding language necessary to create a *Stadium Overlay Zone.* These text changes include:

- Several amendments to the City's Land Use Element policies to, in part "Encourage the development, construction, operation, maintenance, management, and financing of a stadium and other permitted uses on the approximately 168-acre Boulevards at South Bay Specific Plan area…"

- Amend the City's Land Use Element to add a new policy (LU-11.3) which identifies and encourages the development of the *Stadium Project* as "Signature Project" to serve as a focal point for the City.

- Amend the City's Economic Development Element to further identify the *Stadium Project* as a potential "Signature Project".

- Amend the City's Transportation Element to clarify that alternative routes for bike paths may be necessary to accommodate the new *Stadium Project*.

- Amend the City's Housing Element to specify that while the *Boulevards Project* allows for residential development on the *Project Site*, the *Stadium Project* could potentially eliminate the use of the *Project Site* for residential development.

- Amend Section 9113.2 of the City's Zoning Ordinance to create and define the new *Stadium Overlay Zone*.

- Create a new section of the Zoning Ordinance, known as Section 9138.19, to establish various boundaries, allowed land uses, development standards, and other pertinent information related to the newly proposed *Stadium Overlay Zone*.

- Create a new chapter, known as Chapter 2, in Article X of the City's Municipal code to establish the Authorization, Guiding Legislative Policies, and Minimum Requirements for the *Stadium Project*. This new chapter specifies that the City will not be responsible for the costs of construction and/or operation of the *Stadium Project* and that the Stadium developer must commit to a minimum of twenty (20) years of operations before construction of the *Stadium Project* can begin.

Land Use Compatibility

With the aforementioned revisions to applicable City planning documents, the proposed *Stadium Project* would be compatible with the City's General Plan, as well as the City's Redevelopment Plan. The Redevelopment Plan and General Plan both encourage the development of the *Project Site*, with a project that would accomplish the following: (1) provide for the productive use of a brownfield site; (2) provide a signature project for the City with freeway visibility; (3) provide a mixed-use development with shopping, entertainment, restaurant, hotel and residential uses; and (4) increase housing and employment opportunities within the City. Since the *Stadium Project* would potentially eliminate the potential residential component of the *Boulevards Project*, other opportunities for residential development may need to be identified elsewhere in the City.

The *Project Site*, located in the northwestern portion of the City of Carson, is within an area that is substantially developed with urban uses of various types as described below.

- Land uses north of the *Project Site* generally consist of: an undeveloped utility easement, a nursery, the Dominguez Hills Golf Course and Practice Range, and the Goodyear Blimp Base Airport;
- Land uses south of the *Project Site* generally consist of: the concrete-lined Torrance Flood Control Channel, residences and mobile homes, and various commercial uses such as car dealerships and churches;
- Land uses east of the *Project Site* generally consist of: Interstate-405 freeway, a regional commercial shopping center (South Bay Pavilion);
- Land uses west of the *Project Site* generally consist of: the concrete-lined Torrance Flood Control Channel, various light industrial uses, commercial/service uses, residential uses, and mobile homes.

The proposed mixture of sports, entertainment, and commercial uses within the *Stadium Project* would be largely compatible with and even complimentary to other existing commercial and recreational land uses located to the east and northeast of the *Project Site*. The currently vacant and underutilized properties to the north and northwest would likely benefit from the increased commercial traffic in the region and would more be likely to quickly redevelop with offsite parking structures, restaurants, and other uses which draw income from the new *Stadium Project* operations. However, the intensity of uses proposed for the *Stadium Project* may raise potential compatibility issues with the residential uses located to the south, southwest, and west of the *Project Site,* although many of these issues are addressed in the design standards, restrictions and requirements (see *Environmental Measures*). As detailed further in the Noise analysis section of this Report, the *Stadium Project* has the potential for creating long term noise impacts in excess of the City's established standards for residential areas. Additionally, traffic impacts from large events, aesthetic impacts from structures and signage, and light pollution from Stadium facilities all have the potential to create potential compatibility issues between the proposal *Stadium Project* and the adjacent residential development. Accordingly, the *Stadium Initiative* includes numerous *Environmental Measures* which are specifically intended to resolve this potential compatibility issue. These measures capitalize on the existing Torrance Flood Control Channel as a small buffer between the *Project Site* and the adjacent residential neighborhoods and build upon that buffer by providing stringent setbacks, height limits, signage limitations, etc. along the Torrance Flood Control Channel. Such residential protection measures include, but are not limited to:

- **Height Limit-** The *Stadium Project's* lowest height limit of twenty-five (25) feet is mandated for all areas within 100-feet of the Torrance Flood Control Channel.

- **Setbacks-** Most development must maintain a minimum twenty (20) foot setback from the Torrance Flood Control Channel, but more intensive uses such as the hotel and core Stadium structure must observe a larger 500-foot setback.

- **Signage-** No signs shall be allowed within one hundred (100) feet of the Torrance Flood Control Channel, except non-illuminated banners not exceeding 50 square feet, Information Signs, and wall signs on the perimeter wall that face inward toward the Stadium.

- **Signage-** Architectural Digital Display Signs which are mounted on the Stadium shall not face towards residential areas to the south, southwest, or west.

- **Lighting-** Stadium and signage lighting shall be designed and oriented in such a manner as to reduce intrusive light spill on to the adjacent off-site residences.

- **Construction-** During project construction, the applicant or developer shall appoint a construction relations officer to act as a community liaison.

- **Construction-** Temporary noise barriers shall be used for grading and foundation work whenever construction activities occur within 150 feet of off-site residences. Pile drivers used within 1,500 feet of off-site residences shall be equipped with noise control measures.

- **Noise-** A sound attenuating fence and/or berm shall be provided along the perimeter of the *Project Site*, adjacent to the Torrance Flood Control Channel and shall have a minimum height of eight (8) feet.

- **Noise-** The stadium sound system, including public address system, shall be designed to reduce sound spillage to adjacent off-site residences.

Please refer to the full text of the *Stadium Initiative* for a complete, verbatim list of *Environmental Measures* that are intended to protect surrounding land uses. It is anticipated that with the application of these measures, that impacts to surrounding residents would be substantially reduced. Subsequent sections of this document analyze some of the potential impacts in a more detailed, subject-specific manner, including noise, aesthetics, and traffic.

4.2 Compliance with Housing Laws

Summary of State Housing Laws

California's state housing laws are enacted to encourage uniformity in building standards and to protect the health, safety, and general welfare of the public and occupants. The housing laws which govern and/or require the preparation of Housing Elements can be found in Government Code § 65000 et seq. The Housing Element is one of the seven mandated elements of the City's General Plan. Through Housing Element Law, California ensures the adoption of land use plans and regulatory systems that provide opportunities for housing of all economic segments of the community and do not unduly constrain housing development. Compliance with Housing Element law affords a jurisdiction eligibility for certain state and federal funds for affordable housing and reduces vulnerabilities associated with lawsuits regarding housing related decisions.

A driving factor in California's Housing Law is an area's regional housing needs. Based on California Department of Finance population projections and population forecasts, statewide housing needs are determined on the state level and are allocated to the appropriate Councils of Governments (COG) for each region. The COG develops a Regional Housing Needs Plan (RHNP) and allocates a share of the housing needs to the cities and counties within the region. The objectives of the RHNP are to:

1) Increase the housing supply and the mix of housing types, tenure, and affordability in all cities and counties within the region in an equitable manner;
2) Promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns; and
3) Promote an improved intraregional relationship between jobs and housing.

The Housing Element component of the general plan allows local governments to balance the need for growth, including the need for additional housing, against other competing local interests such as the need for jobs. The law encourages open markets and provides flexibility for the private sector to address housing demands, while leaving land use decisions to the jurisdiction's legislative bodies.

Consistency with City's Housing Element

The City of Carson's adopted 2012 Final Regional Housing Needs Assessment (RHNA) identified an overall construction need of 1,698 new residential units in Carson. If developed in accordance with the Specific Plan, the *Boulevards Project* has the potential to provide up to 1,550 new residential units (approximately 91% of the City's entire housing needs). Table 5 lists Carson's RHNA by income level.

Table 5. City of Carson Regional Housing Needs Assessment (2014-2021)

Income Level	Total Construction Need	Percent by Income Level
Extremely Low Income (<50% MFI)	224	--
Very Low Income (0-50% MFI)	447	26.3
Low Income (51-80% MFI)	263	15.5
Moderate Income (81-120% MFI)	280	16.5
Extremely Low Income (<50% MFI)	708	41.7
Total	1,698	100%

Table 6 shows Carson's residential development potential on vacant lands without the residential units proposed within the *Boulevards Project*. As illustrated by this table, the City's availability for the development new housing is approximately 836 gross and 640 net new units. To allow for reductions associated with adherence to development standards such as building setbacks and landscaping, the number (net) of new units available was determined by reducing the developable area by 15%. The *Stadium Initiative* amends the Housing Element to address this issue in part by clarifying that the *Stadium Project* is may eliminate the potential residential development associated with the *Boulevards Project*. As the table clarifies, without the planned housing related to the *Boulevards Project*, the City may need to take actions to provide for alternative housing opportunities. Such actions could include rezoning vacant lots to higher densities, encourage further redevelopment of underutilized commercial parcels with mixed-use projects, are adopt/amend Specific Plans with major housing components. Non-compliance with State housing laws could result in the loss of State and federal funding for affordable housing programs in the City of Carson. Such funding can amount to approximately $1,385,146.00 in assistance for the City's various housing programs.[5]

Table 6. Sites Suitable for Residential Development Included in 2014-2021 Housing Element

No. of Parcels Vacant	Square Feet	Acres	General Plan Designation	Zoning	Gross Units	Potential Units (Net New)
7	1,076,367	24.71	LD	Residential Agricultural Singe Family (RA)	220	165
47	303,177	6.96	LD	Residential Single Family (RS)	58	12
2	55,164	0.33	LD	Residential Multiple Dwelling (RM-8)	2	1

[5] Data provided by the City of Carson: CDBG- $685,146.00; HOME Program- $700,000.00

No. of Parcels Vacant	Square Feet	Acres	General Plan Designation	Zoning	Gross Units	Potential Units (Net New)
2	21,778	0.50	LD	Residential Multiple Dwelling (RM-12)	6	4
1	8,445	0.19	LD	Residential Multiple Dwelling (RM-18)	3	2
1	16,552	0.38	HD	Residential Multiple Dwelling (RM-25)	9	8
11	379,843	8.72	MU-R	Mixed-Use Residential Carson Street (MU-CS)	474	401
2	55,314	1.27	MU-R	Mixed-Use Residential Sepulveda Blvd. (MU-SB)	43	37
2	45,756	1.05	MU-R	Commercial-General (CG)	12	10
8	34,647	0.80	LD	Open Space (OS)	8	0
1	4,862	0.11	LD	Manufacturing-Light (ML)	1	0
84	**2,001,905**	**45.02**	**TOTALS**		**836**	**640**

It should be noted that the approval of the *Stadium Initiative* would not immediately cause the City to be non-compliant with the applicable State housing laws. The establishment of the *Stadium Overlay Zone* creates the ***opportunity*** for development of the *Stadium Project* but does not ***preclude*** the build-out of the *Boulevards Project* housing until actual Stadium construction begins. Furthermore, it is possible for the City to pursue alternative solutions for its housing needs. Table 7 demonstrates that the City's housing needs may be achieved through use of other options afforded by the General Plan policies and increased densities. The application of additional specific plans or other planning mechanisms could double the allowed density on most vacant parcels in the City, creating the additional housing inventory needed to comply with State law.

Table 7. Potential for Increased Density on Sites Suitable for Residential Development

No. of Parcels Vacant	Square Feet	Acres	Site's Current General Plan Designation	Potential Units (RHNA)	Increased Density-Medium RM-12+	Increased Density-Maximum RM-25+
7	1,076,367	24.71	LD	165	252	525
47	303,177	6.96	LD	12	71	148
2	55,164	0.33	LD	1	3	7
2	21,778	0.50	LD	4	5	11
1	8,445	0.19	LD	2	2	4
1	16,552	0.38	HD	8	8	8
11	379,843	8.72	MU-R	401	401	401
2	55,314	1.27	MU-R	37	37	37
2	45,756	1.05	MU-R	10	10	12
75	**1,962,396**	**44.11**		**640**	**789**	**1153**

There is evidence that the City is already capable of creating additional housing inventory with its existing zoning and planning policies. For example, the Avalon Mixed-use Project is currently under review by the City's planning department and if approved would result in the development of 357-units of additional housing on a 5.5 acre project site (total of seven parcels) at the corner of Carson Street and Avalon Boulevard. In the City's Housing Element this project site was only anticipated to produce a total of 128 housing units. Therefore, the actual Avalon Project could potentially produce 280% more housing units than previously expected. The approval of this and similar projects could provide the solution needed to fulfill the City's housing obligations.

5 ENVIRONMENTAL BENEFITS & IMPACTS

5.1 Environmental Background

Voter Initiative Process in Relation to CEQA

For most land use development projects of significant size or complexity, the project is subject to detailed environmental review pursuant to the California Environmental Quality Act (CEQA). However, CEQA is only applied to review "Projects" as defined by the State law. CEQA guidelines section 15378 (b)(3), states that a "Project does not include: the submittal of proposals to a vote of the people of the state or of a particular community that does not involve a public agency sponsored initiative". Since the *Stadium Initiative* does not involve public agency sponsorship, it is "not a project" and thus is exempt from CEQA review.

This interpretation of the CEQA guidelines has been extensively challenged and defended in California courts. Approval of an environmental analysis pursuant to CEQA compliance is not required before a city council adopts or submits an initiative to the voters under the provisions of Elections Code 9214(b). The court in *Tuolumne Jobs & Small Business Alliance vs. The Superior Court of Tuolumne County* found that a lengthy CEQA analysis would be *"contrary to the statutory language and legislative history pertaining to voter initiatives, and . . . [does] not compel a different result" because of policy considerations.* The abbreviated review under a Section 9212 report (as provided by Section 9214(c)) therefore, is the "exclusive" means to assess potential environmental impacts of such voter initiatives.[6]

In the previous court challenges, the courts emphasized timing conflicts between CEQA and the Elections Code. The timelines and procedures prescribed in CEQA, which include public comment periods, cannot be accomplished within the 10 days a city council has to adopt an initiative or the 40 days a city council must adopt if a Section 9212 report is ordered. The courts determined that the Section 9212 report represented the Legislature's intentional compromise and balance of interests, allowing for both environmental review and prompt action on initiatives in accordance with the interests of the voters.

[6] Tuolumne Jobs & Small Business Alliance vs. The Superior Court of Tuolumne County, S207173, Ct.App. 5 F063849

Therefore, the *Stadium Initiative* is not subject to CEQA review. Instead the contents of this Report will serve as the concise environmental analysis needed to inform the City Council and voters of the potential environmental benefits and impacts that may potentially result from the development of the *Stadium Project*.

Prior Environmental Review

On February 8, 2006, the City adopted the Carson Marketplace Specific Plan setting forth a development plan for the *Project Site*. The Carson Marketplace Specific Plan, later renamed the *Boulevards at South Bay Specific Plan*, was amended by the City on April 5, 2011. As amended, the *Boulevards at South Bay Specific Plan* allows the development of the *Project Site* with a mixed-use project consisting of approximately 2 million square feet of retail, commercial, and entertainment uses, a hotel with 300 rooms, and up to 1,550 multifamily residential dwelling units.

In compliance with CEQA Section 15063, the Redevelopment Agency conducted an Initial Study to evaluate the Carson Marketplace's potential to adversely impact the environment. In the Initial Study, the Redevelopment Agency determined that implementation of the Carson Marketplace could, either by itself or in conjunction with past, present, and reasonably foreseeable future development in the vicinity, have significant effects in the following areas:

- Land Use;
- Visual Qualities;
- Traffic and Circulation;
- Hazards and Hazardous Materials;
- Geology and Soils;
- Surface Water Quality;
- Air Quality;
- Noise;
- Public Services (Police and Fire Protection, Schools, Libraries, and Recreational Facilities); and
- Utilities (Water Supply, Wastewater Generation, and Solid Waste).

The Redevelopment Agency determined that the proposed Project would not have the potential to cause significant impacts in the following areas: Agricultural Resources, Biological Resources, Mineral Resources, Cultural Resources, Hydrology (Drainage and Groundwater Quality), and Population and Housing. Therefore, these areas were not examined in the EIR.

A Notice of Completion and Availability of the Draft EIR (DEIR) was made available for public review on May 12, 2005. The Draft EIR was circulated for a 45-day review period, which began on November 1, 2005 and ended on December 15, 2005. Public meetings to discuss the DEIR were held on November 29, 2005 and December 12, 2005. The Final EIR (FEIR) was certified by the Redevelopment Agency on February 8, 2006 (SCH 2005051059). An Addendum to the FEIR was prepared in July 2009 to analyze the impacts of using an alternate method of handling landfill gas emissions that was not considered in the FEIR. The changes which led to the July 2009 Addendum were due to factors that were not related to the *Stadium Project.* The need for the addendum was triggered by policy changes adopted by the South Coast Air Quality

Management District prohibiting the use of gas flares which were considered in the DEIR. Since the onsite landfill remediation activities included the use of gas flares, the EIR had to be modified to correctly reflect the environmental conditions related to the remediation activities. This lengthy environmental review process clearly established and disclosed the City's intent to develop the *Project Site* with a substantial amount of mixed-use growth.

5.2 Environmental Review of Stadium

Before reviewing the subsequent sections of this Report regarding the potential environmental benefits and/or impacts of the *Stadium Initiative*, it is important to recognize that unlike the typical environmental review conducted under CEQA the analysis in this Report was completed without the benefit of a complete development plan application. The *Stadium Initiative* contains some data regarding the maximum seating capacity of the core Stadium and square footage of additional commercial development, proposed setback & height limits, maximum area of signage, etc. which assisted in the completion of this document. However, the *Stadium Initiative* does not provide detailed development information, such as site plans, floor plans, elevations, etc. (nor is it required to) typically utilized to complete an environmental assessment. However, much of the information needed to assess the typical impacts associated with a stadium facility can be obtained from secondary sources such as the environmental documents produced for projects such as Levi's Field (operating NFL stadium in Santa Clara, CA), Farmer's Field (proposed NFL stadium in Los Angeles, CA), or Metlife Stadium (NFL stadium in Meadowlands, NJ).

For example, the *Stadium Initiative* does not include a conceptual site plan nor does it include conceptual structural designs (i.e. elevations) for the core Stadium structure or supporting commercial uses. So an analysis of the Stadium's exact architectural style and the corresponding compatibility with surrounding development was impossible. Additionally, without a site plan the exact footprint of the Stadium, hotel, and other structures can vary considerably even when the *Stadium Initiative's* setbacks are applied to the *Project Site*. As a result, the exact probability of impacts such as noise, which are naturally diminished as the space between land uses increases, could not be exactly defined. In instances such as this, the Report still attempts to provide a general assessment of impacts often times based upon a series of reasonable assumptions deduced from the environmental review of several other stadium facilities throughout the Country. Environmental documents which were produced for the potential development of the Farmers Field Stadium in downtown Los Angeles, the Levi's Stadium in Santa Clara, and the New Meadowlands Stadium in New Jersey were all utilized to a certain degree as a source of data to complete this Report. Unless otherwise noted in this Report, the following major assumptions were made to facilitate the completion of a more comprehensive analysis of the *Stadium Project*:

1. The *Stadium Project* is assumed to have similar infrastructure demands (i.e. water, sewer, power) and impact levels (i.e. water demand, traffic generation) as comparable stadium projects located throughout the Country. Adjustments to expected impact data were made as appropriate to reflect stadium projects of differing size and types.

2. The *Stadium Initiative* does not provide a detailed list of or limit upon the number of events that can be held at the new stadium facility, nor does it specify the expected

attendance at each event type. Therefore, it was conservatively assumed that two NFL teams would utilize the Stadium facility and thus an NFL home game would be played every week of the NFL preseason, regular season, playoffs, and Superbowl for a maximum potential of twenty-four (24) days of NFL usage per year. All NFL events were assumed to have a minimum attendance of 70,000 fans. Additionally, it was assumed that a series of non-NFL related events would occur at the Stadium throughout the year with varying numbers of attendees (see Tables 8 and 9 below). These event frequency assumptions were replicated directly from the assumptions made in the Environmental Impact Report for the Levi's Stadium in Santa Clara, CA. This event schedule was intended to provide data for the analysis of traffic, water usage, etc. Since the *Stadium Initiative* does not include a specified limit of events, the Stadium developer and operator will have the ability to hold more or less events than are anticipated in this Report and the corresponding environmental impacts could rise and fall proportionately.

Table 8. Number of NFL Events per Year

Type of Event	Number of Events
Pre-season Game	4
Regular Season Game	16
Playoff Game	3
Superbowl	1
Total Event Days	**24**

Table 9. Number of Non-NFL Events per Year

Type of Event	Number of Events Per Year	Numbers of Days Per Event	Total Days	Approximate Attendance
X-Games	1	4	4	50,000
Motor Cross	1	1	1	42,500
International Soccer	2	1	2	40,000
Concerts	1	1	1	37,500
College Football	1	1	1	37,500
Festivals/Antique Shows	8	1	8	25,000
College Bowl Game	1	1	1	25,000
Car Shows	2	4	8	12,000
Small Events	250	1	250	50-500

3. While the *Stadium Initiative* specifies that the *Stadium Project* may include 850,000 square feet of supporting commercial uses, it does not clarify the maximum square footage of unique commercial uses such as restaurants, retail, entertainment, etc. Therefore, the Report assumes that 20% (170,000) of this development will consist of restaurants and the remaining 80% (680,000) will consist of general retail. This assumption was necessary because restaurants in particular can generate higher rates of water and wastewater than other commercial uses.

Aesthetics

As of the date of completion of this Report, no official project design documents have been provided by the Stadium Developer. Therefore, all assumptions regarding the design of the Stadium structures, layout of the site, size and arrangement of signage, and other project features which effect the overall aesthetics must be inferred from the *Stadium Initiative's Environmental Measures* for aesthetics, as well as, the setbacks, height limits, building coverage, and similar criteria which are explicitly included in the *Stadium Initiative*.

General Site & Structural Design

Based upon the project characteristics specified in the initiative, the *Stadium Project* would, at a minimum, consist of the following major components:

1. Development of the core Stadium structure and attached uses such as restaurants, vending facilities, administrative offices, medical & telecommunications support facilities, etc. The Stadium will be designed and built in an environmentally sustainable manner such that it can achieve LEED certification.
2. 10,000 parking spaces
3. 350-room hotel
4. 500,000 square feet of additional commercial development (detached from the core Stadium structure) south of Del Amo Boulevard
5. 350,000 square feet of additional commercial development (detached from the core Stadium structure) north of Del Amo Boulevard.

The table below shows a comparison between the components of the existing project, the *Boulevards Project*, and the *Stadium Project*. The total *Stadium Project* is likely to result in approximately 1.64 million square feet of structural development. This is approximately half the square footage of structural development that would have been expected to occur with the full build-out of the *Boulevards Project*. Most of the reduction in structural development would result from the presumed elimination of the previously proposed potential for 1,550 residential units.

Table 10. Comparison of Project Components

Existing Project: Boulevards at South Bay		*Stadium Project*	
Use	Area/Size (max.)	Use	Area/Size (max.)
Commercial Retail	>100,000 SF	Stadium	555,364 SF[7]
Hotel	200,000 SF/300-room	Hotel	235,000 SF[8]/ 350-room
Vertical Mixed-Use: Two-story office/retail	10,000 -30,000 SF	Mixed Use Commercial	850,000 SF

[7] The Stadium Initiative does not contain a proposed square footage for the core Stadium structure, therefore the square footage of Levi's Stadium was utilized for this analysis since both stadiums would have the same number of maximum seats (75,000).

[8] Area was estimated based on average square footage per room of 667 SF as provided in the *Boulevards at South Bay Specific Plan*.

Existing Project: Boulevards at South Bay		*Stadium Project*	
Use	Area/Size (max.)	Use	Area/Size (max.)
Other Vertical Mixed-Uses	2,000,000 SF	-	-
Residential/Multifamily	1,550,000 SF[9]	-	-
Total	**3,880,000 SF**	**Total**	**1,640,364 SF**

In an effort to further guarantee sound project design principles and minimize aesthetic impacts to adjacent land uses, the *Stadium Initiative* includes a multitude of minimum setbacks for each component of the *Stadium Project*. These setbacks have been summarized in the table below. The setbacks consistently put an emphasis on maintaining a buffer zone between intensive uses (such as the core Stadium and the hotel) and the residential neighborhoods which are located on the far side of the Torrance Flood Control Channel. For example, the *Stadium Initiative* requires a minimum 500-foot setback between the Torrance Flood Control Channel and the intensive uses such as the core Stadium structure and the hotel. In comparison, the previously approved *Boulevards Project* only required a 250-setback between the hotel or movie theater and the channel. Therefore, the *Stadium Project* is providing a superior level of protection with the application of a significantly larger setback in proximity to residential uses.

Table 11. Setbacks for Stadium Project

Stadium	Commercial Development South of Del Amo	Commercial Development North of Del Amo	Miscellaneous Infrastructure
▪ **500 feet** from Torrance Flood Control Channel ▪ **100 feet** from 405 Right-of-Way	▪ **20 feet** from Torrance Flood Control Channel ▪ **10 feet** from Del Amo & Main Street frontage property lines ▪ **20 feet** from 405 Right-of-Way ▪ Hotel shall be **500 feet** from Torrance Flood Control Channel ▪ Permanent telecommunication facilities shall be **200 feet** from Torrance Flood Control Channel	▪ **10 feet** from Del Amo & Main Street frontage property lines ▪ **20 feet** from northern property line ▪ **20 feet** from 405 Right-of-Way	▪ Lighting- No Setback ▪ Surface parking- No Setback ▪ Roadways- No Setback ▪ Remediation related facilities- No Setback ▪ Helipad- Must be on Northeast side of Stadium

Height limits are commonly applied to development projects as a way to create architectural continuity throughout a community, avoid hazards in airport approach zones, minimize the casting of shadows on adjacent properties, etc. In an effort to uphold these planning principles, the *Stadium Initiative* sets maximum height limits according to the type of use and the portion of the *Project Site* where each use would be constructed. These height limits are summarized in the

[9] Assumes 1,000 SF per residential unit multiplied by 1,550 residential units.

table below. Again, it is important to note that the *Stadium Initiative* places a specific emphasis on mandating its lowest height limit (25 feet) for portions of the *Project Site* which are within close proximity to the Torrance Flood Control Channel and the residential neighborhoods to the west. This would ensure that the development of stadium related structures along the western and southern boundaries of the *Project Site* would be compatible in scale to the residential neighborhoods on adjacent properties. Refer to Figure 3 for a map of the differing setback locations.

Table 12. Height Limits for Stadium Project

Stadium	Commercial Development South of Del Amo	Commercial Development North of Del Amo	Exemptions/Exceptions
▪ **300 feet** for core Stadium structure ▪ **350 feet** for architectural features, scoreboards, roof canopies, flagpoles, & lighting	▪ **25 feet** for all development within 100 feet of the Torrance Flood Control Channel ▪ **45 feet** for all development within 50 feet of Del Amo & Main Street property lines ▪ **200 feet** for all development within the area bounded by: *Northeast-* I-405 *South-* A line 600 feet north of the Torrance Flood Control Channel *Southwest-* Jim Dear Boulevard *West-* A line 1500 feet west of the I-405 right-of-way ▪ **75 feet** for development for all remaining areas not defined above	▪ **75 feet** for all development unless otherwise exempted	▪ **200 feet** for the hotel regardless of other height limits ▪ **75 feet** for lighting regardless of other height limits ▪ **20 feet for** fences, freestanding walls, berms, hedges ▪ **Heights of signs** are regulated separately, per signage standards ▪ **No height limit** for telecommunications equipment or remediation facilities

Table 13. Comparison of Allowed Heights

Existing Project: Boulevards at South Bay		*Stadium Project*	
Use	Base Building Height (max.)	Use	Base Building Height (max.)
Commercial Retail	32 FT	Stadium	300 FT
Hotel	75 FT	Hotel	200 FT[10]
Vertical Mixed-Use: Two-story office/retail	35 FT	N/A	N/A
Other Vertical Mixed-Uses	85 FT	Mixed Use Commercial	200 FT[9]
Residential/Multifamily	75 FT	Not Included	Not Included
Theater	60 FT	Theater	200 FT[9]
Parking Structure	45 FT	Parking Structure	200 FT[9]

An important component of any project's aesthetics is the landscaping improvements made throughout the site. In regards to this design element, the *Stadium Initiative* mandates that a minimum of 5% of the total *Project Site* (excluding building footprints and roads) shall be landscaped. This equates to approximately 5-6 acres of total landscaping on the *Project Site*. Due to the underlying historic landfill, the *Project Site* will have some unique limitations on the placement of landscaping. Certain portions of the property will not be capable of supporting mature trees unless they are placed within structure planting containers underlain by piles. Additionally, perimeter landscaping along Del Amo, Main Street, the Torrance Flood Control Channel, & I-405, will be provided by a landscape plan and subject to approval of the City's Director of Community Development. Based on fiscal projections from the *Boulevards Project*, landscape improvements for the Avalon & I-405 interchange alone were approximately $400,000.00. Therefore, offsite landscape improvements along multiple thoroughfares in the project vicinity could cost substantially more. Such costs would be included in the capital improvement budgets for area road improvements and would be paid for by the Stadium developer.

Ultimately, the *Stadium Project* appears to provide a reduced amount of gross square footage, greater setbacks, and increased building heights as was approved under the previous *Boulevards Project*. The larger setbacks and reduction in total square footage would offset the increased building mass and height created by the development of the stadium structure and hotel. Therefore, aesthetic impacts are not expected to be significantly greater than the preceding project. Furthermore, the *Stadium Initiative* includes twelve (12) different *Environmental Measures* which are specifically intended to preserve the aesthetic quality of the *Project Site* and surrounding area. These mitigation measures cover a variety of subjects including: keeping reflective surfaces to a minimum, shielding lighting to limit offsite light spillage, mandates for

[10] Building heights in the *Stadium Project* would vary by location, i.e. within 100-FT of Torrance Lateral Flood Control Channel, max. height = 25-FT; within 50-FT of Del Amo Blvd and Main Street, max. height = 45-FT; all other area and uses, max. height =75 FT unless listed above. Proposed heights for these uses were not included in documents, therefore heights listed are maximum allowable.

building façade articulation, and the screening of unsightly facilities such as trash bins. The incorporation of these measures should further mitigate any potential aesthetic impacts.

Signage

A substantial component of the *Stadium Project* will be the signs that are needed to satisfy various needs ranging from large-scale marketing along the I-405 corridor to small directional signs (for pedestrian directions, bathrooms locations, etc.) spread throughout the *Project Site*. The *Stadium Initiative* provides a varying level of detail and regulation for sign placement, size, height, etc. These variations are proportionate to the likelihood that a sign could be obtrusive to the surrounding land uses and community. For instance, "signs which are relatively small in size and/or not readily visible to offsite views from adjacent properties" are exempt from further discussion and limitations in the *Stadium Initiative*. Conversely, the *Stadium Initiative* includes the allowance for three (3) *Electronic Message Center Signs* which are designed to be large, digital display signs located along the *Project Site's* exposure to views from the I-405 motorists. In acknowledgement that these specific signs may create aesthetic issues within the project area if not placed and designed properly, this category of sign will be specifically regulated with the following criteria:

Electronic Message Center Signs shall be-

- Setback 50 feet from the I-405 right-of-way
- Setback 200 feet from the Torrance Flood Control Channel
- Separated by 500 feet from each other
- Shall not exceed a height of 125 feet and a width of 60 feet
- Controlled in a manner which adjusts light levels in accordance with fluctuating natural light (i.e. dim during night time hours versus daytime hours)

The *Stadium Project* includes the development of one such *Electronic Message Center Sign*, at the southeastern corner of the *Project Site* in close proximity to adjacent residential development (refer to Figure 6 for possible sign locations). This sign will need to be carefully designed and oriented; otherwise nearby residences could be adversely affected. For sake of brevity, this Report does not include a summation of all variations of signage and associated criteria included in the *Stadium Initiative*. However, there are two themes which are important to note. First, the *Stadium Project* would include a substantial amount of signage which may exceed 130,000 square feet of signs in various sizes, shapes and locations, many of which are capable of emitting light. Secondly, the *Stadium Initiative* does contain multiple *Environmental Measures* intended to protect the surrounding community from inappropriately placed signage. For instance, within 100 feet of the Torrance Flood Control Channel the *Stadium Initiative* states that "no Signs shall be permitted except non-illuminated banners, streamers, pennants and similar displays on parking lighting poles not exceeding fifty (50) square feet, Information Signs, and wall Signs on the perimeter wall that face inward toward the Stadium." Additionally, *Architectural Digital Display Signs* which are directly attached to the Stadium, are not allowed be placed on the western or southern facades of the Stadium where they might be visible from and disturbing to surrounding residential areas. As such, the development of signage throughout the *Stadium Project* is expected to be intensive and yet regulated in a manner which should minimize impacts on surrounding residential neighborhoods.

Air Quality

Regional Emissions

Both the *Boulevards Project* and the *Stadium Project* would generate air pollutant emissions with potential impacts due to construction and use of the *Project Site*. The draft EIR for the *Boulevards Project* assessed the local and regional impacts of criteria pollutant emissions as well as potential health risk impacts of air toxics emissions from that project. The major sources of air pollutants from the *Stadium Project* would be natural gas consumption and mobile trip generation. Additionally, "area sources" would contribute a small percentage of total emissions. These sources would include application of architectural coatings and use of landscaping equipment such as lawn mowers.

Natural gas consumption rates from the Levi's Stadium draft EIR were modified and used to estimate emissions for the proposed Carson stadium. For the ancillary hotel, restaurant, and retail space, natural gas consumption rates for each land use type were obtained from the *Boulevards Project* draft EIR, which in turn references the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook.

Area source emissions were estimated using the California Emissions Estimator Model (CalEEMod v2013.2.2) provided by the California Air Pollution Control Officers Association (CAPCOA) for assessing air quality impacts of land use projects. The model applies default regional emission factors based on square footage of each land use type included in the project.

Mobile emissions were prepared using trip generation estimates from the traffic study prepared by Fehr & Peers and emission factors from the California Air Resources Board's EMFAC Emissions Database. The traffic study provided estimates of maximum number of daily trips on weekdays with NFL games, weekend days with NFL games, and weekdays without NFL games. Air emission calculations were prepared using the daily trip estimates for weekdays with NFL games to provide the most conservative (high) estimate of emissions. It was assumed that the average trip to a game at the proposed stadium would be 40 miles, and that fans and stadium employees would arrive by passenger car, light duty trucks, and buses. The traffic study provided an estimated breakdown of fans and employees arriving by auto and by bus. The breakdown of autos into passenger cars and two classes of light duty trucks was estimated using the distribution of these vehicle classes within the entire SCAQMD jurisdiction as provided by the EMFAC database. The average vehicle occupancy for attendees to a weekday game was assumed to be 2.7 persons per vehicle in the traffic study. Trips generated by the hotel, restaurant, and retail space were assumed to be 15 miles in length.

Table 14 below summarizes the estimated maximum daily criteria pollutant emissions associated with operation of the *Stadium Project*. Mobile trip generation accounts for the majority of the emissions.

Table 14. Regional Emissions for Stadium Project

Emissions Source	Project Operation Emissions (lb/day)				
	CO	ROC	NO_x	PM_{10}	SO_x
Natural Gas Consumption	10	2	26	0	0
Area Sources	0	63	0	0	0
Mobile Trip Generation	5,893	137	702	13	21
Total	**5,904**	**201**	**728**	**13**	**21**

As seen in Table 15, the *Stadium Project* would generate more carbon monoxide (CO), oxides of nitrogen (NO_x), and oxides of sulfur (SO_x) than the *Boulevards Project* on a peak day. However, the *Stadiums Project* would generate significantly less reactive organic compounds (ROC) and particulate matter (PM_{10}). Both projects would exceed SCAQMD's CEQA significance thresholds for CO, ROC, and NO_x, and neither would exceed the threshold for SO_x. Note that operation of the *Stadium Project* would not exceed the PM_{10} threshold, while operation of *Boulevards Project* would exceed the threshold.

Table 15. Daily Regional Emissions Comparison

Project	Emissions (lb/day)				
	CO	ROC	NO_x	PM_{10}	SO_x
Stadium Project- Peak Day	5,904	201	728	13	21
Stadium Project- Small Event Day	40	65	40	0.5	0.2
Boulevards Project	4,427	505	590	590	4
Significance Thresholds	*550*	*55*	*55*	*150*	*150*

Based upon the preceding analysis, the difference in air quality emissions between the *Boulevards Project* and the *Stadium Project* on a daily level are a mixed result when the analysis looks at the worst case scenario of high emissions during days of high Stadium traffic. Depending on the type of pollutant, some emissions are higher for the *Stadium Project* and some are lower in comparison to the *Boulevards Project*. However, it is important to note that on an annual level, emissions levels are significantly reduced with the *Stadium Project* because traffic is a major contributor to total air emissions. On an annual basis, the *Stadium Project* has lower levels of traffic than the *Boulevards Project* for the majority of the year (300+ days). Therefore, the reduced traffic loading from the *Stadium Project* results in a lower level of air emissions over the year as a whole. The total annual air emissions for each project have been estimated in Table 16 below.

Table 16. Annual Regional Emissions Comparison

Project	Emissions (ton/year)				
	CO	ROC	NO_x	PM_{10}	SO_x
Stadium Project	217	17	28	0.5	0.8
Boulevards Project	463	27	53	1.0	1.8

The major sources of greenhouse gas (GHG) emissions associated with operation of the *Stadium Project* would be natural gas consumption, electricity consumption, and mobile trip generation. GHG emissions from natural gas consumption would occur at the *Project Site*, while emissions from electricity generation and the majority of vehicle emissions would occur elsewhere, but as a result of activities at the *Project Site*. As discussed in the air quality assessment, natural gas consumption was based on data from the Levi's Stadium draft EIR and mobile trip generation data was provided in the traffic study by Fehr & Peers. Electricity consumption estimates were also prepared using data from the Levi's Stadium draft EIR and the *Boulevards Project* draft EIR.

Table 17 provides a summary of annual GHG emissions for operation of the *Stadium Project*. Mobile trip generation accounts for a majority of the total emissions, followed by indirect emissions from electricity consumption.

Table 17. Greenhouse Gas Emissions for Stadium Project

Emissions Scenario	GHG Emissions (metric tonnes/year)			
	CO_2	CH_4	N_2O	Total ($MTCO_2e$)
Natural Gas Consumption	3,546	0.07	0.01	3,549
Electricity Consumption	15,051	0.69	0.14	15,110
Mobile Trip Generation	54,419	3.94	1.17	54,865
Total	**73,015**	**4.69**	**1.32**	**73,524**

Table 18 provides a comparison of estimated greenhouse gas emissions for the *Stadium Project* and the *Boulevards Project*. Note that the *Boulevards Project* draft EIR did not include a GHG emissions analysis. Emissions were estimated using data from the *Boulevards Project* draft EIR for natural gas consumption, electricity consumption, and mobile trip generation. Although both projects exceed the CEQA significance threshold of 10,000 metric tonnes of carbon dioxide equivalent ($MTCO_2e$), the *Boulevards Project* would generate substantially more GHG emissions due to greater mobile trip generation. While the *Stadium Project* would generate more peak daily trips, the *Boulevards Project* would generate large traffic volumes year around.

Table 18. Greenhouse Gas Emissions Comparison

Project	GHG (MTCO2e/yr)
Stadium Project	73,524
Boulevards Project	136,049
Significance Threshold	*10,000*

Landfill Remediation

As discussed previously, the *Project Site* was historically used as a landfill facility prior to 1965. As a result, the *Project Site* does contain some hazardous materials and remediation activities will be needed to ensure that the *Stadium Project* can be built and operated safely. Some of this remediation activity has already been completed such as:

- All planned soil compaction has been completed;
- Landfill cap construction has been completed in portions of the *Project Site*;
- Landfill gas (LFG) extraction wells have been installed;
- The groundwater extraction and treatment system has been installed and is operating;
- Groundwater and other monitoring is being conducted.

The complete remediation and ongoing activity to control the closed landfill will be subject to the review, approval, and monitoring of the State (DTSC). The State overview is conducted through the approval and implementation of Remedial Action Plans (RAPs) and such plans have already been approved for the *Project Site* in preparation for the *Boulevards Project*. If the *Stadium Project* moves forward, these existing RAPs would be modified where necessary to accommodate the different type of construction. Such adjustments may consist of:

- Landfill Cap – A shift to the *Stadium Project* should not significantly impact cap construction although design details may change. Piling locations may, however, change significantly and modifications to the landfill membrane may be required as well.
- Landfill Gas (LFG) Control – A redesign of some portions of the LFG control system, particularly header locations, may be necessary to accommodate the new layout of structures.
- Groundwater Extraction and Treatment – It is not expected that the groundwater treatment and extraction system that is already in place would be affected.
- Building Protection Systems – Building protection systems design would differ due to the different locations and designs of the structures themselves.

With successful implementation of these RAP modifications, the new *Stadium Project* could be completely safely without significant risks from onsite hazardous materials. Ultimately, the *Boulevards Project* was feasible, even considering that the project included a large amount of residential development and that the site needed to be rendered safe for that onsite population. If the *Project Site* could be rendered safe for a residential population that is present 24 hours a day and seven days a week, it is also possible to render the site safe for the use by fluctuating populations of sporting fans, hotel visitors, and retail shoppers.

Noise

It is difficult to assess the exact noise impact potential from the *Stadium Project* as the initiative lacks any detailed site plans and/or structural designs for the development of the professional football stadium and its supporting uses. Therefore, a general prediction of the *Stadium Project's* noise levels has been derived from the analysis conducted for similar stadium projects throughout the Country and compared to the City of Carson's Noise Control Ordinance.

Short-Term Construction

In accordance with the City of Carson's Noise Control Ordinance, any long-term construction project which is expected to operate noise generating equipment on a project site for twenty-one (21) days or more must comply with the following maximum noise levels.

Table 19. Maximum Noise Levels – Long-Term Construction

Day	Time	Near Single-family Residential	Near Multi-family Residential
Monday-Saturday	7:00am-8:00pm	65dBA	70dBA
Monday-Saturday	8:00pm-7:00am	55dBA	60dBA
Sundays & Legal Holidays	All Day	55dBA	60dBA

Since the *Stadium Project's* construction is likely to take years to complete, it would qualify for these long-term noise restrictions. Construction for the *Stadium Project* will include the use of several different types of equipment, the loudest of which is a pile driver. At a distance of 50 feet a pile driving machine is capable of producing noise levels as high as 105 dBA, which is well in excess of the City's allowed maximum. Noise levels of major equipment which may be used during construction of the *Stadium Project* are listed in Table 20.

Table 20. Noise Levels of Major Construction Equipment[11]

Equipment Type	Noise Level at 50 feet (dBA)
Pile drivers	105
Trucks	91
Front Loaders	79
Graders	85
Bulldozers	80
Pickup Trucks	60
Backhoes	85
Concrete Mixers	85

However, noise decreases as the distances between the noise source (i.e. the construction vehicle) and noise receptor (i.e. the residential structure) increase. In general, noise is decreased by 6 dBA every time the distance between the noise source and receptor is doubled. As shown in Table 21 below, using this general sound attenuation principal, pile driving activities within 3,200 feet of single-family residences would exceed the City's noise control limits.

[11] USEPA, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* (Dec 1971)

Table 21. Example Noise Attenuation Distances

Distance from Pile Driver (feet)	dBA	Exceeds Noise Control
50	105	Yes
100	99	Yes
200	93	Yes
400	87	Yes
800	81	Yes
1,600	75	Yes
3,200	69	Yes
6,400	63	No

Since the majority of the pile driving on the *Project Site* would be needed to support the core Stadium structure, and the Stadium is likely to be centrally located on the *Project Site*, pile driving activities may occur at a greater distance from residential areas in comparison to the construction activity associated with the *Boulevards Project*. To help further mitigate this potential noise impact from pile driving and other related construction activity, the *Stadium Initiative* includes several different mitigation measures, as follows.

- Project construction contractors shall be required to provide a noise management plan to reduce construction noise at offsite residences to the extent feasible.

- Project construction and demolition activities, including pile driving, shall occur between 7:00 A.M. and 8:00 P.M Monday through Saturday, except construction activities which cannot be interrupted (e.g., continuous concrete pours); construction activities conducted within a structure located more than 400 feet from an off-site residence; construction activities that must occur during such hours due to restrictions imposed by a public agency; and emergency repairs, such as repairs to damage to utility infrastructure.

- At a minimum, the noise management plan shall include the following requirements:
    - Noise-generating equipment operated at the Property shall be equipped with noise control devices to the extent reasonably available.
    - All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.
    - Pile drivers used within 1,500 feet of off-site residences shall be equipped with noise control measures to reduce sound energy emissions associated with pile driving.
    - Holes for piles will be predrilled to the extent feasible.
    - Temporary sound barriers shall be used and relocated, as needed, for grading and foundation work whenever construction activities occur within 150 feet of off-site residences
    - Loading areas shall be located away from the residences located on the west and south of the Property.

- Haul routes shall avoid noise-sensitive land uses to the extent feasible.
- Staging areas and construction material storage areas shall be located away from adjacent residences.

- A construction relations officer shall be designated to serve as a liaison with residents, and a contact telephone number shall be provided to residents.

While the aforementioned *Environmental Measures* will serve to limit offsite noise impacts, they may not reduce noise levels below the City's municipal code standards. Furthermore, the measures included in the *Stadium Initiative* are not as stringent as the pile driving mitigation measures included in the *Boulevards Project* EIR (although the *Stadium Project* is somewhat self-mitigating in that pile driving activity is likely to be concentrated on a central portion of the *Project Site*). Therefore, it is possible that noise impacts from the *Stadium Project* will be worse than the impacts expected from the *Boulevards Project*.

Long-Term Operations

As a precursor to environmental review for the recently constructed Levi's Stadium in Santa Clara, CA, acoustic consultants Illingworth & Rodkin, Inc. (Illingworth Study) completed a baseline noise study during an NFL football game. Their noise measurements were taken at Candlestick Park in San Francisco, California, during a regular season football game between the San Francisco 49ers and the New York Jets. The attendance at the football game was approximately 67,782 persons. The acoustic study was intended to provide an understanding of the noise sources and levels associated with a typical NFL football game played in a typical NFL stadium. The Illingworth Study resulted in noise measurements which varied from a low of 47 dBA to a high of 103 dBA depending on the proximity to the playing field and the varying activity level of the game. Table 22 lists the results of long-term noise monitoring and Table 23 lists the results of short-term noise monitoring conducted in the Illingworth Study.

Table 22. Long-Term Noise Monitoring

Site Location	Typical Noise Source	Prior to Game (dBA Leq)	Average Noise Throughout Game (dBA Leq)	Home Team 1st Down (dBA Lmax)	Home Team Touchdown (dBA Lmax)
LT-5 Crows Nest Inside Stadium Above Pressbox	Crowd cheering, public announcement system	65	78-92	95-97	99-103
LT-6 Parking Lot 1,350 feet from stadium edge & 1,800 feet from center of playing field	Tail gating, vehicles, small generators, informal fireworks, etc.	57-61	55- First Half 60-63 Second Half	N/A	N/A

Table 23. Short-Term Noise Monitoring (dBA Lmax)

Site	Distance from Stadium Edge	Public Address System	National Anthem	Cheering	Pre-game Fireworks
ST-6	1,350 feet	55-56	-	52-65	-
ST-7	1,450 feet	50-55	62	55	61
ST-8	1,800 feet	47	-	48-60	-

Ultimately, at a distance of 1,350 feet from the core Stadium structure's perimeter, noise levels seemed to stay around or below typically acceptable residential levels of 65dBA. However, the Illingworth Study concluded that despite this finding, ambient noise levels were still being raised significantly over noise baselines recorded when no game time activity was occurring. Therefore, the EIR prepared for the Levi's Stadium concluded that significant noise impacts would occur for residents within 1,900 feet of parking lots and 2,000 feet from the perimeter of the stadium structure. Based upon these conservatively high estimates, approximately fifteen-hundred (1,500) residential units could be affected by Stadium related noise (refer to Figure 5). While the unique aspects of the *Stadium Project* in Carson may alter these results due to a differing stadium design, high ambient noise levels from traffic on I-405, etc. there are insufficient project design documents to provide a more detailed analysis. Ultimately, a conservative assumption would be that the *Stadium Project* allows for the stadium to be constructed within 500-feet of residential structures and would potentially result in noise impacts to local residents during high intensity events such as professional football games. In an effort to mitigate the noise impact, the *Stadium Initiative* includes long-term *Environmental Measures* to specifically reduce the impacts to local residents. These measures include, but are not limited to:

- A sound attenuating fence and/or berm shall be provided along the perimeter of the Property adjacent to the Torrance Flood Control Channel between Main Street on the west and Jim Dear Boulevard on the east, and shall have a minimum height of eight (8) feet.
- During operation of a Project building (following construction), truck deliveries within 250 feet of an off-site residence shall not occur between 10:00 P.M. and 7:00 A.M.
- The stadium sound system, including the public address system, shall be designed to reduce sound spillage to adjacent off-site residences.

Other potential long-term activities that could continually result in noise impacts are: fireworks displays, tailgating activities, and amplified sound from training activities, temporary promotional events, circuses, carnivals and parades. The *Stadium Initiative* prohibits these types of activities from occurring after 10:00 p.m. except for special holiday events (e.g. Fourth of July, New Year's Eve, a winter holiday show). Tailgating is further restricted from starting before 7:00 a.m. on the east side of the Stadium and 8:00 a.m. on the west side of the Stadium, except during playoff and championship games that may start at 7:00 a.m.

Ultimately, there is inconclusive data to support the assertion that the *Stadium Project* will not have a significant noise impact, regardless of the proposed *Environmental Measures* to protect local residents. Further ambient noise studies would have to be conducted at the *Project Site* and

additional design criteria for the *Stadium Project* would have to be provided in order to complete a deeper level of analysis. Additional mitigation measures, such as the erection of a sound wall/berm larger than eight (8) feet along the Torrance Flood Control Channel or consolidating of parking lot use away from the residential areas when smaller stadium events are held (less than 10,000 attendees), would help to further mitigate potential noise impacts. However, these measures are not currently included in the *Stadium Initiative* and cannot be added to initiative language at this time. Therefore, additional measures of this type would be subject to a voluntary agreement between the City and the Stadium developer/operator.

Public Facilities & Services

Schools

The *Stadium Project* is within the jurisdiction of the Los Angeles Unified School District (LAUSD). Information contained in the *Stadium Initiative* indicates that the *Stadium Project* would not have a residential component. Instead, the 1,550 residential units originally planned in the *Boulevards Project*, would be replaced by the professional football stadium. The number of new students which are generated by additional commercial development is much lower than residential development. Elimination or reduction in the residential component of the *Stadium Project* would therefore reduce the impacts on schools below those that were identified in the certified EIR for the *Boulevards Project*.

Open Space/Parks

Since the *Boulevards Project* would include a residential component, it is required to provide mitigation per the City parks and open space requirement. This mitigation requires the provision of three acres of park land per 1,000 new residents. Local developers generally satisfy this requirement through a combination of land dedication, improvements, private recreation, and in lieu fees per Section 9207.19, Park and Recreational Facilities, of the City development code. The intent is to provide an appropriate amount and distribution of public and/or private open spaces throughout the City.

The City does not have a requirement for parks related land dedication, improvements, private recreation, and/or in-lieu fees for commercial or stadium development. Therefore, no open space mitigation requirement would be applied to the *Stadium Project*. However, the *Stadium Project* would result in the development of public spaces which can be used for sports (professional, collegiate, interscholastic, amateur), entertainment, concerts, festivals, fairs, tailgating, public and private gatherings, public markets, exhibitions, conventions, conferences, meetings, banquets, civic events, pageants, and patriotic celebrations. Thus, the intent of the City's regulations to provide additional public open space will be met, even if it is not generally applied to commercial projects.

Water Usage

Water service in the City of Carson is provided by the California Water Service Company and the Southern California Water Company. The *Project Site* is served by California Water Service Company (CWS), which serves a 35-square mile area including most of the City of Carson. In 2010, approximately 63% of the water supply distributed by CWS was comprised of imported

water, 23% is groundwater, and 14% is recycled water. To meet water demands for the next decade, the company will rely on a mix of ground, imported and recycled water sources. CWS projections indicate that, under normal precipitation conditions, it will have sufficient water supplies to meet annual customer water demand through 2040. This is based on the continuation of conservation programs, on additional recycled water becoming available, and on planned efforts to emphasize groundwater supplies and to reduce reliance on imported water sources[12].

The expected demands of water usage are not explicitly defined in the *Stadium Initiative*. Levi's Stadium in Santa Clara has the same number of maximum seats (75,000) and a similar number of expected events throughout the year. The draft EIR for the Levi's Stadium project indicates that the water demand is expected to be approximately 157.4 acre feet per year, which includes the core stadium structure, landscaping, office space, retail space, and two cooling towers. Unlike the *Stadium Project* in Carson, the Levi's Stadium has no substantial amount of additional commercial uses other than those directly imbedded in the core stadium structure. The *Carson Stadium Project* on the other hand includes the development of a 350-room hotel and 850,000 square feet of mixed use space in addition to the core stadium structure. The area of landscaping for the *Stadium Project* is approximately 14 times larger and the area of commercial uses is approximately 23 times larger than Levi's Stadium. Therefore, additional water demand for these supplemental uses had to be calculated. The estimate for total water usage for the *Stadium Project* is approximately 584 acre feet per year of potable water and 459 acre feet per year of recycled water.

This assumption is conservative based on the idea that the core stadium, NFL playing field, mixed commercial space, and hotel all use 100% potable water. It is possible that a large portion of the estimated potable water demand could be met using recycled water. Toilets and urinals in the stadium, hotel, and/or mixed-use space could utilize recycled water to decrease the potable water demand of the *Stadium Project*. For example, Levi's Stadium was recently constructed and recycled water meets 85% of the stadium's water demand. Additionally, low flow toilets and low or no flow urinals can significantly reduce potable or recycled water demand. Converting to waterless urinals has saved the Staples Center 7,832,000 gallons or 24 acre-feet of potable water per year.

The table below summarizes the anticipated water demand generated by the *Stadium Project*. Assumptions for the water demand for the core stadium were interpolated from the Levi's Stadium EIR. The water demand for other project components, including the proposed hotel, restaurant space, and retail space, were compared to the *Boulevards Project* EIR.

[12] Boulevards at South Bay EIR, Volume I, Section IV.J.1 Water Supply and California Water Service Company's 2010 Urban Water Management Plan for Dominguez District.

Table 24. Anticipated Water Demand

Areas of Development	Square Footage of Development	Water Usage Factor	Gallons Per Day	Recycled (AFY)	Potable (AFY)
Demand for Core Stadium					
NFL Game Days (24)			328,788	-	24.22
Non NFL Game Days (26)			236,225	-	18.85
Demand for Other Project Components					
Restaurant Space (20%)	170,000	1.1 gal/ft^2	187,000		209.47
Retail Space (80%)	680,000	0.358 gal/ft^2	243,440	-	272.69
Landscaped Areas (5%)	256,575	0.071 gal/ft^2	18,210	20.40	-
Playing Field Area (1)	57,600	0.079 gal/ft^2	4,550	-	5.10
Hotel (350 rooms)	235,000	138 gal/room	48,300	-	54.10
Parking Lot and Additional Playing Fields (4)	4,791,600	3.99 AFY/acre	391,958	439.08	-
		Total		459.48	584.43

As indicated in the certified EIR, anticipated potable water usage for the *Boulevards Project* was determined to be 892-acre feet per year. It was determined that this increase in demand for water would not exceed available supplies and that the impact on water supply and water conveyance systems would be less than significant. Therefore, the expected potable water demand for the *Stadium Project* is less than the acceptable demand for the *Boulevards Project* and impacts to local water supplies should remain insignificant. According to the City's review of its current infrastructure, upgrades to local water and sewer systems may be necessary with an estimated cost of approximately $4,000,000.00. These capital costs would be paid by Stadium developer/operator, as well as any additional maintenance costs. The application of multiple water saving *Environmental Measures* defined in the *Stadium Initiative* may further reduce water demand. For instance, the *Stadium Initiative* indicates that planted areas shall be irrigated with recycled water to the extent available and feasible and that all toilets, urinals, sinks, showers and other water fixtures installed on-site shall be low-flow fixtures.

Sewer Capacity

The total sewage generation for the project was estimated using sewage outfall from comparable stadiums along with local generation rates for the commercial and hotel uses. For the output of the core stadium alone, a yearly schedule of 24 days of NFL events, 26 days on non-NFL events, and 315 non-event/small event days were assumed. The New Meadowlands Stadium EIS reported many wastewater outputs for varying daily events, including an output of 240,726 gallons per day on NFL event days, 151,350 gallons per day on non-NFL event days, and 1,350 gallons per day on eventless days. Using these estimates, an annual average of 27,775 gallons per day was calculated for a typical core Stadium structure.

Using the assumptions discussed previously, the *Stadium Project* also includes 170,000 square feet of restaurant space, 680,000 square feet of retail space, and a 350-room hotel. Sewage generation rates are estimated to be 408 gallons per day per 1,000 square feet for retail and restaurant space, and 260 gallons per day per room produced by hotels[13]. Using this data, wastewater generations of 69,360 gallons per day for the restaurant space, 277,440 gallons per day for the retail space, and 91,000 gallons per day for the hotel were calculated.

In total, an average wastewater output of 465,575 gallons per day was estimated for the entire *Stadium Project*, with a maximum daily output of 678,526 on NFL game days and a minimum daily output of 439,150 gallons per day on non-event days. The wastewater generation for the *Boulevards Project* was estimated to be 721,113 gallons per day. Therefore, the *Stadium Project* would potentially result in a small reduction in total wastewater discharge even during its maximum discharge days (when NFL games occur). The *Project Site* is served by the Joint Water Pollution Control District which is located within the City of Carson. The Plant is currently processing 300 million gallons of sewage per day, but is capable of processing up to 400 million gallons. With a surplus of approximately 100 million gallons per day, the Plant can easily accommodate the wastewater generated by the *Stadium Project*. Localized infrastructure such as the lifting station, known as the Main Street Pumping Plant, may need upgrades. According to the City's review of its current infrastructure, upgrades to local water and sewer systems may be necessary with an estimated cost of approximately $4,000,000.00. These capital costs would be paid by Stadium developer/operator, as well as any additional maintenance costs. All such infrastructure improvements would be paid for by the Stadium developer, not the City.

Table 25. Anticipated Sewage Generation

Source	Space/Usage	Generation Rate[14]	Generation (Gallons per day)
Stadium	24 NFL Game Days	240,726 gallons per day	27,775
	26 Non-NFL Event Days	151,350 gallons per day	
	315 Non-Event Days	1,350 gallons per day	
Restaurant Space	170,000 square feet	408 gallons per day per 1,000 square feet	69,360
Retail Space	680,000 square feet	408 gallons per day per 1,000 square feet	277,440
Hotel	350 rooms	260 gallons per day per room$_2$	91,000
		Total Average Daily Generation:	465,575
		Maximum Daily Generation:	678,526
		Minimum Daily Generation:	439,150

[13] Generation rates were provided in the draft EIR for NBC's Universal Evolution Plan.

[14] Wastewater generation rates for restaurant and retail space were based on Table 156 from the City of Los Angeles' Draft EIR for the NBC Universal Evolution Plan. Wastewater generation rates for the core Stadium structure were based on the New Meadowlands Project EIS.

Public Safety (Police)

Police services are provided by the Los Angeles County Sheriff's Department (LASD). There is one existing Carson Sheriff Station, located at 21356 South Avalon in Carson. This station also provides police services for West Compton, Gardena, Torrance, and Rancho Dominguez. The *Environmental Measures* contained in the *Stadium Initiative* include a measure requiring the Stadium operator to develop and implement a Safety and Operations Plan in consultation with the police/sheriff department and fire department, and update as necessary. The Safety and Operations Plan would include without limitation, a plan to manage compliance with site security rules, including tailgating rules, noise management measures, and alcoholic beverage sale conditions. The Safety and Operations Plan would also include communications systems and access for emergency response services (Environmental Measure PS.6). In addition, the Safety and Operations Plan would require the Stadium applicant or developer to pay the LASD the actual cost to staff additional personnel and equipment (Environmental Measure PS.7). Based upon an evaluation of Safety Plans associated with other stadium facilities and information provided by the Los Angeles County Sheriff's Department, it is estimated that 200-250 uniformed police officers would be needed to provide law enforcement services at and near the Stadium facility on major event days at an approximate minimum cost of $336,000.00 per day. All such additional law enforcement services would be planned for, secured, and paid by the Stadium operator, not the City.

Public Safety (Fire)

Fire protection services in the City of Carson are provided by the Los Angeles County Fire Department (LACoFD). The *Project Site* is located within Division I of the Central Region in the Battalion 7 service area. There are six primary fire stations that provide both fire and emergency medical service to the City of Carson, with four of the stations located within Carson's boundaries. The nearest response unit to the *Project Site* is Fire Station No. 36, located at 127 West 223rd Street, approximately 1.5 miles south of the site. Other response units in the area include Station No. 10 at 1860 East Del Amo Boulevard and Station No. 116 at 755 Victoria Street. The latter two stations are located approximately 2.4 miles from the *Project Site*.

In addition to existing stations, the LACoFD "Five-Year Fire Station Plan" identifies a proposed station near the I-405/110 interchange. A future LACoFD fire station in the proximity of the I-405/110 interchange would be located north of the *Project Site* and would be accessible to the site's primary entrances. There was a potential that this new fire station would be financed by a community services district associated with the development of the *Boulevards Project*, a capital improvement contribution valued at approximately $3,200,000.00. The *Stadium Initiative* provides no clarification that this equivalent support will be provided for the new station, only that the need for increased services will be reimbursed. Since increased fire protection personnel will only be needed on days of major stadium events, it is unclear whether or not the Stadium developer would be responsible for directly funding the development of the new fire station.

The Safety and Operations Plan proposed in the *Environmental Measures* included in the *Stadium Initiative* would mandate the review and approval of water line sizes and hydrant locations for purposes of ensuring that they meet fire flow requirements (Environmental Measure PS.1). The *Environmental Measures* also include requirements for review and approval of

construction plans by the Fire Department for purposes of ensuring adequate ingress and egress access points (Environmental Measure PS.2 & 3) and payment to the fire department of the actual cost to staff additional personnel and equipment (Environmental Measure PS.7). Based upon the evaluation of Safety Plans for other stadium facilities and information provided by fire department, up to ten (10) fire personnel and supporting equipment would be present at each major stadium event, with a total approximate cost of $10,000.00 per day. These costs would be paid by the Stadium developer/operator, not the City.

Transportation & Traffic

Traffic

On game days, the 70,000-seat stadium, 350-room hotel, and 850,000 square feet of commercial development would all be in operation simultaneously and would generate substantial short-term traffic loads. An independent analysis of traffic generation and impacts for the *Stadium Project* was completed by the transportation firm Fehr and Peers (refer to Appendix I). Based upon this analysis it is estimated that on a weekday game day, a total of approximately 72,500 vehicular trips are expected to be generated by all uses on the entire *Project Site*, of which about 14,000 trips could occur during the peak hour prior to the game and an estimated 20,100 trips could occur during the peak hour after the game is over. On a weekend game day, a total of approximately 60,900 vehicular trips are expected to be generated by all uses on the entire *Project Site*, of which about 10,700 trips could occur during the peak hour prior to the game and an estimated 15,600 trips could occur during the peak hour after the game is over.

Table 26. Anticipated Trips Generated by Stadium Project

Weekday NFL Game (Monday or Thursday)				
Land Use	**Size**	**Daily Trips**	**Arrival Peak Hour Trips**	**Departure Peak Hour Trips**
Stadium	70,000 seats	53,022	12,256	19,243
Hotel	350 rooms	1,966	149	45
Other Commercial	850,000 s.f.	17,501	1,612	788
	Total	**72,489**	**14,017**	**20,076**
Weekend NFL Game (Saturday or Sunday)				
Land Use	**Size**	**Daily Trips**	**Arrival Peak Hour Trips**	**Departure Peak Hour Trips**
Stadium	70,000 seats	48,200	8,830	14,130
Hotel	350 rooms	1,484	153	47
Other Commercial	850,000 s.f.	11,222	1,701	1,414
	Total	**60,906**	**10,684**	**15,591**
Weekday No Stadium Event (Monday through Friday)				
Land Use	**Size**	**Daily Trips**	**Arrival Peak Hour Trips**	**Departure Peak Hour Trips**
Stadium	70,000 seats	0	0	0
Hotel	350 rooms	2,359	159	180
Other Commercial	850,000 s.f.	23,102	487	2,128
	Total	**25,461**	**646**	**2,308**

This traffic volume would potentially result in transportation impacts greater than the previously approved *Boulevards Project* on days with events of greater than 20,000 persons, or potentially 42 out of the 365 days in a year. Most of these days, however, would be on weekends when background traffic is lower. On the remaining 323 days, the *Stadium Project* is expected to result in fewer traffic impacts when compared to the *Boulevards Project*. Also, the *Stadium Project* would have lesser impacts during the AM peak hour throughout the year.

Due to the regional nature of the facility, the majority of the trips are likely to travel on the freeway system and on streets providing access between the freeways and event parking facilities. Hence, the impacts are likely to remain concentrated within a limited network of streets within the study area (refer to Figure 7 for a map of potentially impacted streets and intersections).

Large events would require implementation of comprehensive traffic management and control plans to temporarily increase the capacity of the roadway system to optimize the flow of traffic during the peak periods of arrivals to and departures from the Stadium. This will help reduce but not completely eliminate the traffic-related impacts of events at the *Project Site*. Events on a weekend would generate fewer impacts than on weekday because background traffic on the local street system is generally less than on a weekday. It is important to note that the *Boulevards Project* EIR confirmed that the project would result in significant and unmitigable traffic impacts (Class 1) related to congestion on the I-405. Therefore, significant traffic impacts will occur regardless of which project gets developed. Ultimately, the severity of traffic impacts is high with both projects, but the *Boulevards Project* produces constant high traffic volumes on every weekday throughout the year. Whereas, the *Stadium Project* produces acute traffic impacts on fewer than 50 days throughout the year.

To help minimize these traffic impacts, the *Stadium Initiative* includes several traffic specific *Environmental Measures* which include: the completion of a construction traffic management plan and a Transportation Demand Management Program (for long-term operations), physical improvements to twelve (12) intersections throughout the region, physical improvements to local public transit facilities (as directed by the City's Transit Authority), the installation of digitally controlled traffic management signs, and the establishment of a website to provide the local community with information regarding upcoming events. The implementation of these *Environmental Measures* are anticipated to reduce, but not totally mitigate the significant traffic impacts experienced on major event days with attendees in excess of 20,000 persons. Based on data derived from the City's Capital Improvement Program, the costs of stadium related street improvements could amount to approximately $37,000,000.00 (over a five year period) and increased maintenance of roads and related infrastructure could cost $738,000.00 annually. In accordance with the *Stadium Initiative*, all such increased capital improvement and maintenance costs would be paid by the Stadium developer/operator.

Additional mitigation measures, such as the extension of the Metrolink rail system to the *Project Site* or the coordination of event schedules to minimize conflicts with the operations of the existing StubHub Center, would help to further mitigate potential traffic impacts. However, these measures are not currently included in the *Stadium Initiative* and cannot be added to initiative

language at this time. Therefore, additional measures of this type would be subject to a voluntary agreement between the City and the Stadium developer/operator.

Parking

The *Stadium Project* is proposing to provide a minimum of 10,000 parking spaces on the *Project Site*. It is estimated that a total of approximately 26,500 vehicles would be generated by an NFL game on a weekday (24,100 spectator vehicles and 2,400 employee vehicles) and that about 24,100 vehicles would be generated by a weekend game (21,700 spectator vehicles and 2,400 employee vehicles) which would need to be parked. Weekend parking demand is expected to be lower than weekday demand, because it is anticipated that average vehicle occupancy is expected to be higher on weekends.

With the proposed on-site parking supply of at least 10,000 spaces, the stadium would need to accommodate up to approximately 16,500 spaces and 14,100 spaces in alternative parking facilities for a weekday and a weekend game, respectively. Multiple potential offsite parking locations have been identified as shown in Figure 8. A detailed parking management plan is typically prepared for events centers such as the proposed Stadium. A parking management plan typically provides a comprehensive analysis of parking demand, proposed supply, parking operations at on-site parking facilities, identification of off-site parking, shuttle operations from off-site lots, and plan variations for various levels of expected attendance. The development of surrounding lands as parking facilities instead of higher value uses such as offices, residences, or retail establishments may result in reduced property tax revenues for those particular parcels.

6 CONCLUSION

As discussed throughout this Report, the development of the *Stadium Project* would offer significant fiscal benefits to the City but also entails some increased environmental and land use related impacts. In particular, the *Stadium Project* would result in an elevated likelihood of noise and traffic impacts on days when the facility hosts events in excess of 20,000 attendees. However, during the remaining portions of the year (expected to be over 300 days) the *Stadium Project* would have a lower level of activity in comparison to the *Boulevards Project* and thus total annual impacts from air quality emissions and potable water usage would be decreased. The development of the *Project Site* with a stadium could eliminate the potential development of housing as provided for in the *Boulevards Project*. This inconsistency could be resolved by applying a higher density zoning to vacant parcels in other areas of the City. Lastly, the development of the *Stadium Project* would likely trigger the need for localized infrastructure improvements to streets, wastewater lift stations, and emergency service facilities (i.e. police & fire), however all such improvements would be paid by the Stadium developer rather than the City or its tax payers.

Figures

Figure 1. Vicinity Map

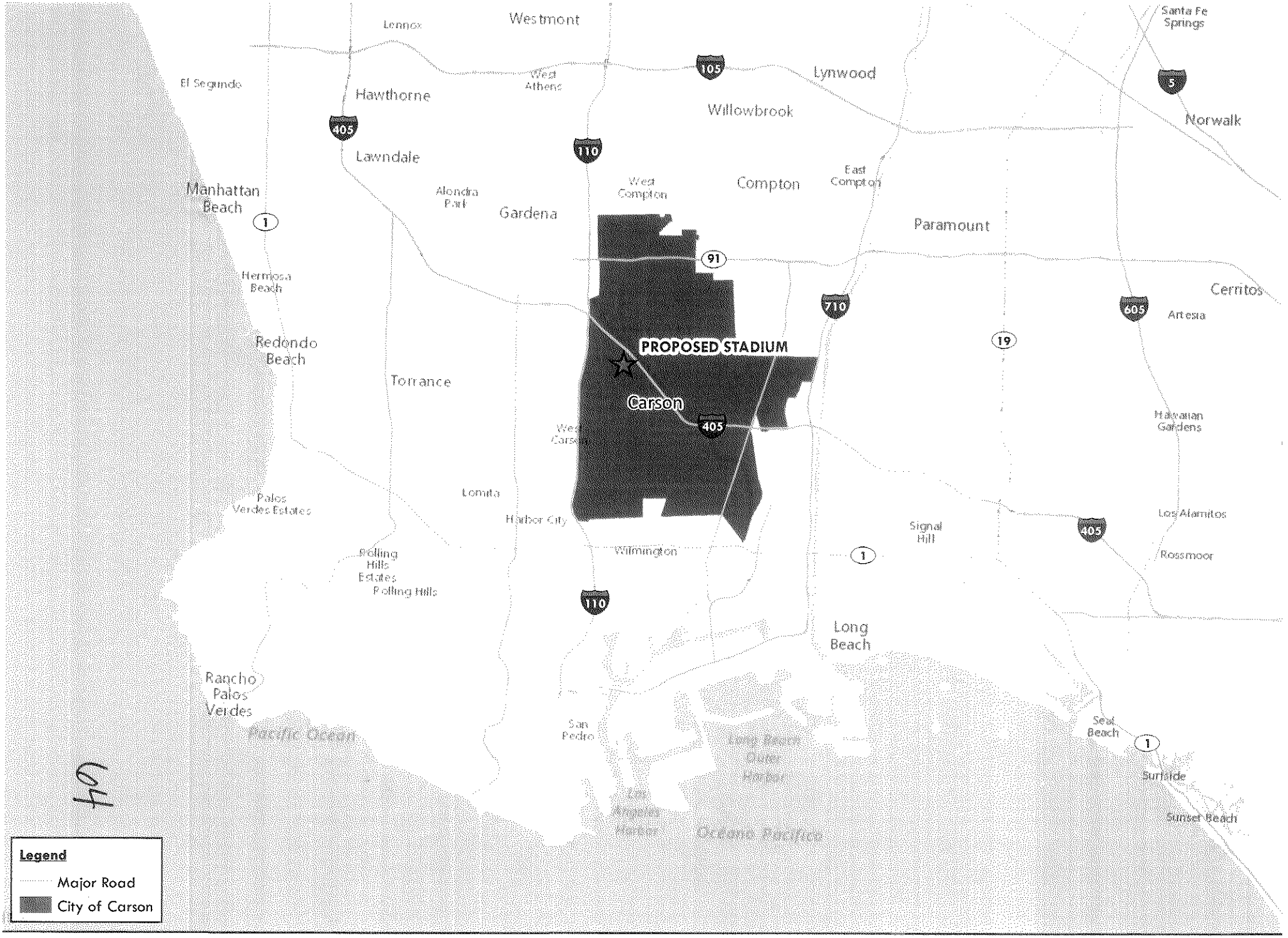


FIGURE 1. VICINITY MAP

Figure 2. Stadium Overlay Map

FIGURE 2 STADIUM OVERLAY MAP

Figure 3. Setback Map

PREPARED BY SCS TRACER
APRIL 2015

FIGURE 3. SETBACK MAP

Figure 4. Height Restriction Map

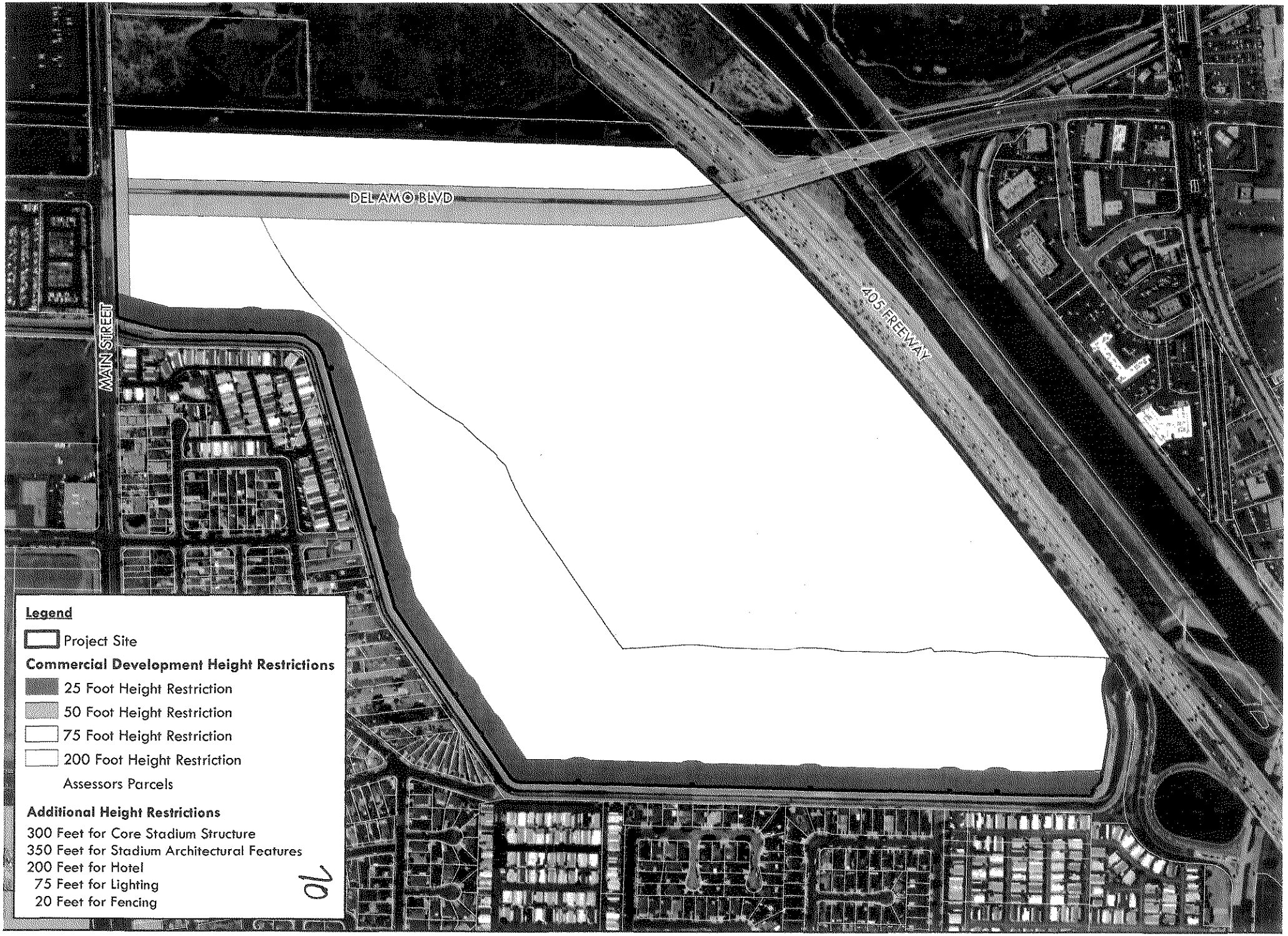
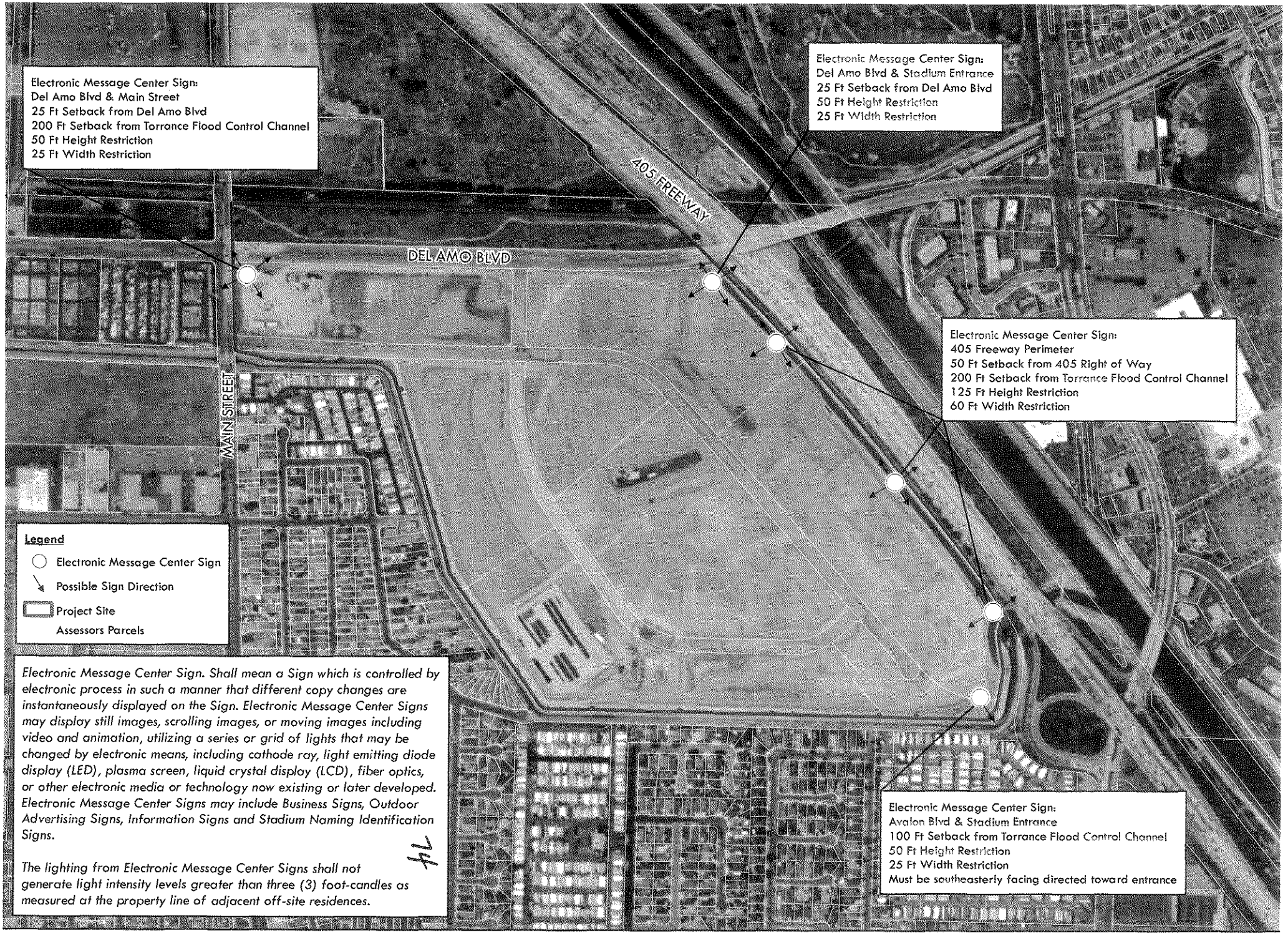


FIGURE 4 HEIGHT RESTRICTION MAP

Figure 5. Residential Noise Impacts

FIGURE 5. RESIDENTIAL NOISE IMPACTS

Figure 6. Illuminated Signs



Electronic Message Center Sign. Shall mean a Sign which is controlled by electronic process in such a manner that different copy changes are instantaneously displayed on the Sign. Electronic Message Center Signs may display still images, scrolling images, or moving images including video and animation, utilizing a series or grid of lights that may be changed by electronic means, including cathode ray, light emitting diode display (LED), plasma screen, liquid crystal display (LCD), fiber optics, or other electronic media or technology now existing or later developed. Electronic Message Center Signs may include Business Signs, Outdoor Advertising Signs, Information Signs and Stadium Naming Identification Signs.

The lighting from Electronic Message Center Signs shall not generate light intensity levels greater than three (3) foot-candles as measured at the property line of adjacent off-site residences.

PREPARED BY SCS TRACER
APRIL 2015

0 250 500 1,000

PROPOSED NFL STADIUM LOCATION

FIGURE 6. ILLUMINATED SIGNS

Figure 7. Primary Traffic Routes

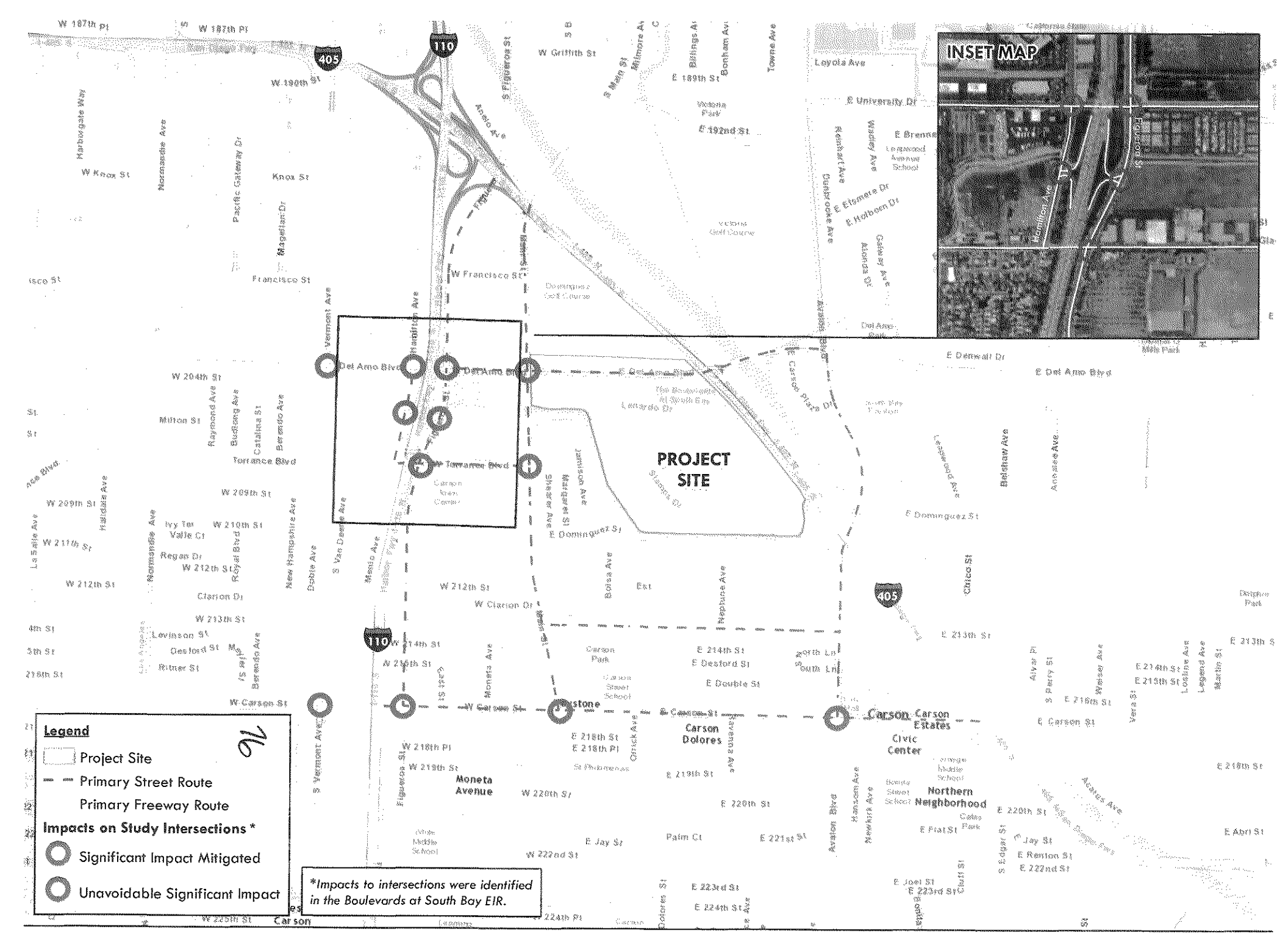
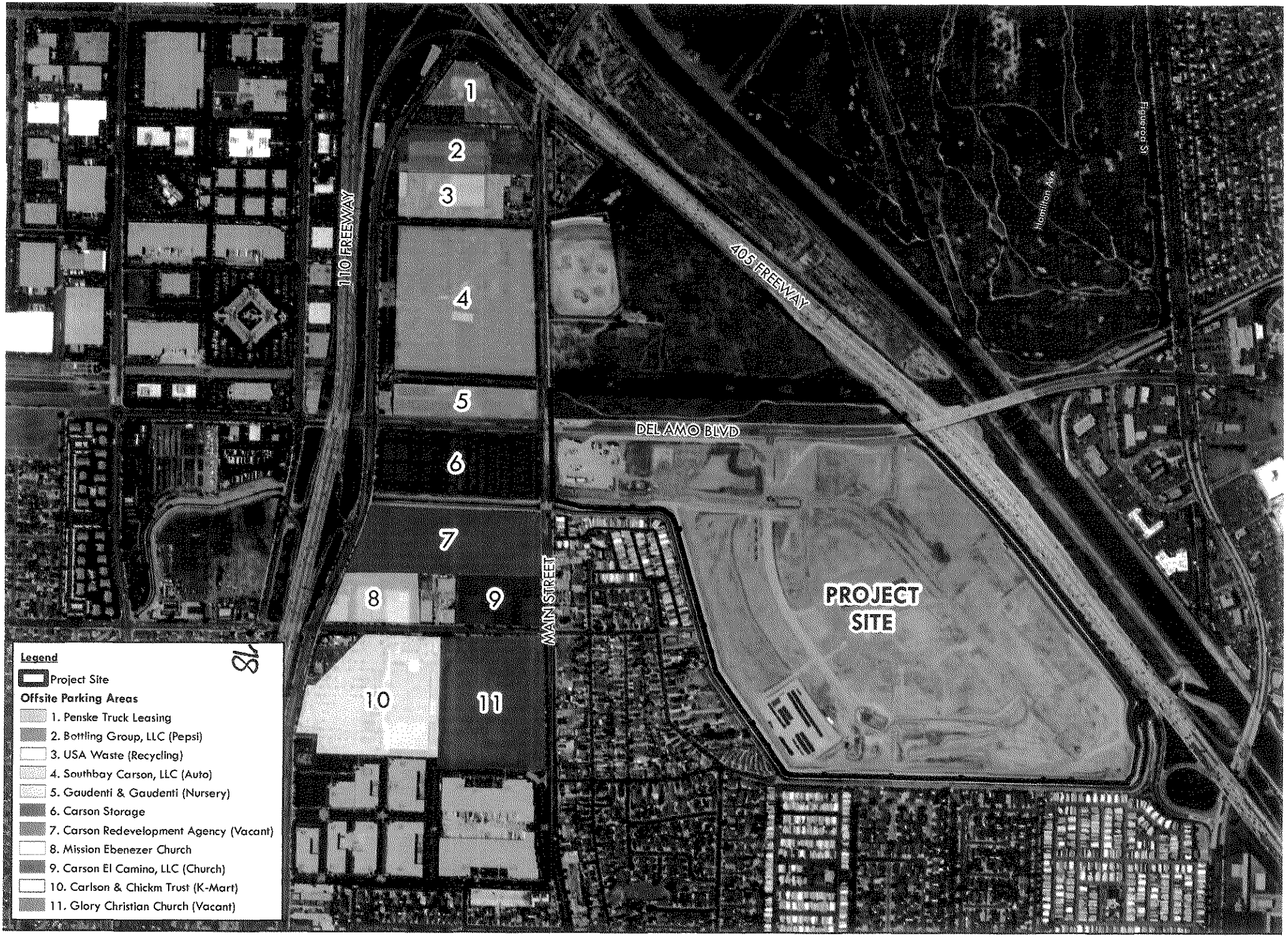


FIGURE 7. PRIMARY TRAFFIC ROUTES

Figure 8. Offsite Parking Areas



PREPARED BY SCS TRACER
APRIL 2015

0 0.125 0.25 0.5

PROPOSED NFL STADIUM LOCATION

FIGURE 8. OFFSITE PARKING AREAS

Appendices

Appendix I. Technical Memorandum – Traffic and Parking

FEHR & PEERS

TECHNICAL MEMORANDUM

Date: April 17, 2015

To: Nathan Eady, SCS Tracer Environmental

From: Tom Gaul, Anjum Bawa, and Spencer Reed

Subject: Transportation and Parking Assessment of Carson Football Stadium Initiative

Ref: 2750

This document summarizes a transportation and parking assessment conducted by Fehr & Peers for the proposed Carson Football Stadium Initiative. The assessment includes a comparative analysis of potential transportation impacts for the proposed Carson Football Stadium with impacts that were previously identified for the Boulevards at South Bay project (formerly known as the Carson Marketplace project) in the November 2005 Environmental Impact Report (EIR) for that project. Provided below is an introduction followed by a brief summary of the Boulevard at South Bay project including trip generation estimates and significant impacts. We then summarize the various components of the proposed Carson Football Stadium including trip generation estimates for both game days and non-game days and discussion of possible regional inbound/outbound vehicular routes to/from the project. This is followed by a comparative analysis of potential transportation impacts resulting from the previously approved Boulevard at South Bay Project with the new proposal for the Carson Football Stadium.

1. INTRODUCTION AND BACKGROUND

The Carson Football Stadium Initiative proposes the construction of a professional football stadium and other permitted uses (retail, restaurants, hotel, etc.) on the approximately 168-acre site southwest of the San Diego Freeway (I-405) and west of the I-405/Avalon Boulevard interchange. The project site is bounded by the former Dominguez Golf Course to the north, the Torrance Lateral Flood Control Channel and residential uses to the south and west, industrial uses to the west, and the I-405 Freeway to the east. Figure 1 shows the location of the project within the region, and an illustrative conceptual site plan for the Stadium is shown in Figure 2.

The Stadium could accommodate one or two professional football teams with a permanent seating capacity of 70,000 seats and expansion capability up to a seating capacity of approximately 75,000 seats for larger events such as playoff games. The Stadium could be used for sports, entertainment, concerts, festivals, fairs, tailgating, public and private gatherings, public markets, exhibitions, conventions, conferences, meetings, banquets, civic events, pageants, patriotic celebrations and other similar events; office, and media and broadcasting facilities; athletic and medical facilities; retail, food and beverage facilities; hotel; and other permitted uses as provided in the initiative.

The site is currently approved for a mixed-use development, Boulevards at South Bay (formerly known as Carson Marketplace). Provided below is a brief description of this project including a summary of trip generation and transportation related significant impacts identified in the Carson Marketplace EIR.

Boulevards at South Bay

The Boulevards at South Bay project proposed to build 1,370,000 square feet (sf) of regional commercial including multiple big-box retail stores; 130,000 sf of neighborhood commercial including neighborhood retail shops; 1,550 residential units including 400 apartments and 1,150 condominiums; a 300-room hotel; 81,125 sf of restaurants; and 214,000 sf of commercial recreation/entertainment including a 4,500-seat multiplex movie theater.

The project consisted of two components. The project was approved with the understanding that the then proposed improvements at the Avalon Boulevard/I-405 interchange would be constructed prior or concurrently with the project. The improvements at the Avalon Boulevard/I-405 interchange have since been constructed except for the extension of Lenardo Drive within the site to connect with the reconfigured I-405 Southbound On-/Off-Ramps.

As part of the environmental processing (November 2005) for the Boulevards at South Bay project, a detailed transportation impact analysis was conducted. The analysis included estimates of vehicular trips generated by the proposed project. The project was estimated to generate a total of 68,951 weekday daily trips, of which 2,508 trips were expected to occur during the AM peak hour and 5,772 trips were expected to occur during the PM peak hour.

A total of 27 intersections were studied to determine project related impacts during the weekday AM and PM peak hours. The EIR identified that the project would result in significant traffic impacts at 5 of the 27 study intersections during the AM peak hour and at 12 of the 27 study intersections during the PM peak hour. Mitigation measures were proposed at many of the impacted locations. With the implementation of mitigation measures, the project was expected to result in significant and unavoidable impacts at two of the 27 study intersections. Figure 3 shows the location of the 27 study intersections and also identifies the impacted locations and proposed mitigation measures.

The project EIR also studied 32 freeway segments. The EIR determined that the project could result in significant impacts at four freeway segments in the AM peak hour and seven segments in the PM peak hour.

2. PROPOSED ALTERNATIVE PLAN – FOOTBALL STADIUM

As described in Section 1, the proposed Carson Football Stadium Initiative (Project) would involve the construction of a stadium that can accommodate one or two professional football teams with a permanent seating capacity of up to approximately 70,000 seats, including club and suite seating, with expansion capability up to a seating capacity of approximately 75,000 seats for larger events such as playoff games. A combination of pre-season, regular season, post season,

and the Super Bowl could result in up to 24 NFL games being held at the Stadium per year. Provided below is a summary of the number of games proposed at the Stadium.

Type of Game	Number of Games per Year
Pre-season	4
Regular Season	16
Post Season	3
Super Bowl	1

Source: SCS Tracer Environmental

The Stadium could also be used to host other events of various attendance levels including sports, entertainment, concerts, festivals, fairs, tailgating, public and private gatherings, public markets, exhibitions, conventions, conferences, meetings, banquets, civic events, pageants, patriotic celebrations and other similar events. Provided below is list of potential events that could be anticipated at the Stadium.

Event Type	Estimated Attendance for Entire Event	No. of Events per Year	No. of Days per Event
X-Games	50,000	1	4
Moto-Cross	42,500	1	1
International Soccer	40,000	2	1
Concerts	37,500	1	1
College Football	37,500	1	1
Festivals/Antiques Show	25,000	8	1
College Bowl Game	25,000	1	1
Car Shows	12,000	2	4
Small Events	50 to 500+	250	250+

Source: SCS Tracer Environmental

In addition, the Project would include construction of a 350-room hotel and 850,000 sf of commercial development. The Project is proposing to supply a minimum of 10,000 parking spaces on the project site for use by the Stadium. Additional parking spaces would be provided for the hotel and commercial development.

Trip Generation

Stadium

The proposed Project's trip generation estimates are based on pro-football season games which, at full attendance, would have 70,000 spectators and an estimated 4,000 employees traveling to the Project site for up to 20 NFL home games per year. The Stadium could accommodate up to 75,000 spectators for a playoff or Super Bowl game, but these events typically have other events before the main event, and therefore the trips are more spread out during the arrival and departure periods. These events also feature a higher level of transportation management plans and so are expected to generate similar levels of trips during the peak hour of arrival and departure of spectators.

As seen in Tables 1 and 2, trip generation estimates for an NFL game were developed for both spectators and employees based on average vehicle occupancy (AVO) rates, transit ridership, and bicycle and pedestrian mode share estimates based on experience at other stadiums and the context of the Carson area. Kickoff for a professional football season game on a Monday or Thursday is typically scheduled at 5:20 PM and the event typically runs for approximately 3 hours. On a Sunday, kickoff is typically at 1:20 PM. As such, the peak hour of arrival on a weekday is typically expected to occur between 4:00 and 5:00 PM while the peak hour of departure is expected to occur between 8:30 and 9:30 PM. On a Sunday, the peak hour of arrival is typically expected to occur between 12:00 PM and 1:00 PM and the peak hour of departure is expected between 4:30 and 5:30 PM.

As seen in Table 3, for a weekday NFL game, a total of approximately 53,000 vehicular trips (inbound and outbound) are expected to be generated by the Stadium, of which about 12,100 inbound trips could arrive during the peak hour prior to the game, and about 19,000 outbound trips could depart during the peak hour after the game is over. As seen in Table 3, for a weekend NFL game, a total of approximately 48,200 vehicular trips (inbound and outbound) are expected to be generated by the Stadium, of which about 8,700 inbound trips could arrive during the peak hour prior to the game, and approximately 14,000 outbound trips could depart during the peak hour after the game is over.

Additional Uses

The proposed Project could also include a 350-room hotel and 850,000 sf of additional commercial uses on the Project site. The hotel and commercial development are expected to be in operation on both game days and non-game days. Trip generation estimates were developed for these additional uses for the arrival and departure peak hours associated with a game. As seen in Table 4, for a weekday game day, a total of approximately 19,500 vehicular trips (inbound and outbound) are expected to be generated by the additional uses, of which about 1,800 trips could occur during the peak hour prior to the game and an estimated 800 trips could occur during the peak hour after the game is over. On a weekend (Sunday) game, a total of approximately 12,700 (inbound and outbound) vehicular trips are expected to be generated by the additional uses, of which about 1,900 trips could occur during the peak hour prior to the game and about 1,500 trips

could occur during the peak hour after the game is over. The trip estimates for the additional uses on game days are net external estimates after consideration of potential interaction between the Stadium and the hotel and commercial uses.

Trip generation estimates were also developed for the additional uses for the standard AM and PM peak hours of traffic for weekday non-game days. As seen in Table 4, for a weekday non-game day, a total of approximately 25,500 vehicular trips (inbound and outbound) are expected to be generated by the additional uses, of which about 600 trips could occur during the AM peak hour and about 2,300 trips could occur during the PM peak hour.

Total Project Trips

On game days, the 70,000-seat Stadium, 350-room hotel, and 850,000 sf of commercial development would be in operation. As summarized in Table 5, on a weekday game day, a total of approximately 72,500 vehicular trips (inbound and outbound) are expected to be generated by all uses on the entire project site, of which about 14,000 trips could occur during the peak hour prior to the game and an estimated 20,100 trips could occur during the peak hour after the game is over. On a weekend game day, a total of approximately 60,900 vehicular trips (inbound and outbound) are expected to be generated by all uses on the entire project site, of which about 10,700 trips could occur during the peak hour prior to the game and an estimated 15,600 trips could occur during the peak hour after the game is over.

Trip Distribution

NFL games at the Stadium are expected to draw spectators from the larger metropolitan region including the five counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As such, a majority (up to 90%) of the traffic is expected to use the regional freeway system to travel to/from the Stadium. As shown in Figure 1, the project site is proximate to the I-405 and the I-110 freeways with ramps at Figueroa Street, Main Street, Avalon Boulevard, Carson Street, and Hamilton Avenue. Other regional streets including Del Amo Boulevard, Vermont Avenue, Torrance Boulevard, 213th Street, and 190th Street are also expected to transport a high volume of project traffic on game days. However, since a majority of the project trips are expected to use freeways and select regional streets, project-related traffic on local/residential streets in the study area is expected to be moderate in volume.

3. ASSESSMENT OF POTENTIAL TRAFFIC IMPACTS

As described in the Section 1, the Boulevards at South Bay project was expected to generate a net external 68,951 daily trips, including 2,508 trips during the AM peak hour and 5,772 trips during the PM peak hour. For a comparative assessment, it is important to discuss potential project-related impacts in the context of number of days on which the impacts could be experienced.

- Professional Football Games: As summarized in Section 2, a maximum of 24 games are expected to be held at the proposed Stadium per year including 4 preseason games, 16 regular season games, 3 post season games and a Super Bowl. A majority of these games are

likely to be on a weekend day (Sunday), while a small number (generally one for each team per season) could be scheduled on a weekday (Monday or a Thursday).

As discussed in Section 2, for a weekday game, the Stadium plus the additional uses are expected to generate approximately 72,500 vehicular trips (inbound and outbound) during the course of the day, of which about 14,000 trips could occur during the peak arrival hour prior to the game. The arrival peak hour for a weekday game would be similar to the typical weekday PM peak hour and the trips generated by a weekday game during this hour are estimated to be substantially greater than the PM peak hour trips estimated for the Boulevards at South Bay project. An estimated 20,100 trips could occur during the peak departure hour after a weekday game, but this would occur later in the evening when background traffic volumes are substantially lower.

On a weekend game day, a total of approximately 60,900 vehicular trips (inbound and outbound) are expected to be generated by the entire project, of which about 10,700 trips could occur during the peak hour prior to the game, and 15,600 trips could occur during the peak hour after the game is over.

Given the greater number of trips generated, the Project is likely to generate more traffic impacts than the previously approved Boulevards at South Bay project. However, because the event is a regional draw, the majority of these trips are likely to travel on the freeway and adjacent streets providing access between the freeways and event parking facilities. Hence, the impacts are likely to remain concentrated within a limited network of streets in the project area. Impacts on freeway segments are likely to increase during the peak hours of arrival and departure.

Furthermore, a majority of the games will be held on a Sunday when background traffic on the street system is generally lighter than compared to a weekday, providing more capacity for event traffic compared to on a weekday evening. Therefore traffic impacts for a weekend game are expected to be less than for a weekday game. Generally weekday games are limited to two events a season.

Also, large events such as a professional football game will require a comprehensive traffic management and control plan potentially involving deployment of traffic control officers, temporary changeable message signs, neighborhood protection strategies, upgraded traffic signal equipment, traffic signal overrides/priority, temporary reversible lanes, etc., which temporarily increase the capacity of the roadway system to optimize the flow of traffic during the peak period of arrivals and departure to/from the Stadium. The traffic management plan should also include shuttles to nearby elements of the regional transit system, such as the Metro Silver Line at the Harbor Gateway Transit Center or the Metro Blue Line Del Amo Station. The traffic management plan would be in addition to implementation of all of the traffic mitigation measures previously proposed for the Boulevards at South Bay project.

In addition, the Stadium project will implement virtually all the traffic improvements provided for by the Boulevards of South Bay project.

- Other Events with Attendance of 20,000 to 50,000: As summarized in Section 2, it is anticipated that the Stadium could host other events on approximately 18 days per year with attendance ranging from 20,000 to 50,000. These events could be held on weekdays or weekend days. When compared to the trip generation estimates for the Boulevards at South Bay, an event with attendance in excess of 20,000 people could generate more trips than Boulevards at South Bay and therefore result in a higher level of impacts on the roadway system serving the Project site both on a weekday and weekend day. However, these events would also require implementation of traffic management and control plans to temporarily increase the capacity of the roadway system to accommodate high volumes of traffic during the peak period of arrivals and departure to/from the Stadium. Also, events on a weekend would generate fewer impacts than on weekdays because background traffic on street system is generally less than on a weekday.

- Other Events with Attendance of 50 to 20,000: It is anticipated that approximately 258 other events could be scheduled at the Stadium per year with attendance ranging between 50 and 20,000 people. These events are expected to generate fewer trips than the previously proposed Boulevards at South Bay project. Therefore, traffic impacts resulting from these events would be fewer compared to the impacts identified for the Boulevards at South Bay project.

To summarize, events at the proposed Carson Football Stadium could result in traffic impacts greater than the previously approved Boulevards at South Bay on days with events of greater than 20,000 persons, or potentially 42 of the 365 days in a year. Most of these days (approximately 40 of the 42 days), however, would be on weekends when background traffic is lower. On the remaining 323 days, the Project is expected to result in fewer traffic impacts when compared to the Boulevards at South Bay project. Also, the Project would have fewer impacts during the AM peak hour throughout the year.

4. PARKING

The Project is proposing to provide a minimum of 10,000 parking spaces for the Stadium. The retail and hotel uses are expected to provide parking supply for their uses separate from the Stadium parking.

As summarized in Table 3, it is estimated that a total of approximately 26,500 vehicles would be generated by an NFL game on a weekday (24,100 spectator vehicles and 2,400 employee vehicles) and that about 24,100 vehicles would be generated by a weekend game (21,700 spectator vehicles and 2,400 employee vehicles), which would need to be parked. Weekend parking demand is expected to be lower than weekday demand, because it is anticipated that AVO is higher on weekends.

With the proposed on-site parking supply of at least 10,000 spaces, the Stadium would need to accommodate up to approximately 16,500 spaces and 14,100 spaces in alternative parking facilities for a weekday and a weekend game, respectively.

Offsite parking locations could include the Victoria Golf Course, Alpine Village, Stub Hub Center, etc. A detailed parking management plan is typically prepared for events centers such as the proposed Stadium. A parking management plan typically provides a comprehensive analysis of parking demand, proposed supply, parking operations at on-site parking facilities, identification of off-site parking, shuttle operations from off-site lots, and plan variations for various levels of expected attendance.

5. SUMMARY AND CONCLUSION

A transportation and parking assessment was conducted for the proposed Carson Football Stadium Initiative, which would involve the construction of a stadium that can accommodate one or two professional football teams with a permanent seating capacity of up to approximately 70,000 seats with expansion capability up to 75,000 seats for larger events. The Project could also include construction of a 350-room hotel and 850,000 sf of commercial development.

- Proposed events including professional football games at the proposed Carson Football Stadium could result in greater traffic impacts than the previously approved Boulevards at South Bay project on days with events of greater than 20,000 attendance (estimated at roughly 42 days of the 365 days in a year). Most of these days (approximately 40), however, would be on weekends when background traffic is lower. On the remaining 323 days, the Project is expected to result in fewer traffic impacts when compared to the Boulevards at South Bay project. Also, the Project would have fewer impacts during the AM peak hour throughout the year.

- Due to the regional nature of the facility, the majority of the trips are likely to travel on the freeway system and on streets providing access between the freeways and event parking facilities. Hence, the impacts are likely to remain concentrated within a limited network of streets in the project area.

- Large events would require implementation of comprehensive traffic management and control plans to temporarily increase the capacity of the roadway system to optimize the flow of traffic during the peak periods of arrivals to and departures from the Stadium. This will help reduce the traffic-related impacts of events at the Stadium.

- Events on a weekend would generate fewer impacts than on weekday because background traffic on the street system is generally less than on a weekday.

- A peak parking demand of approximately 26,500 vehicles could be generated by an NFL game on a weekday and 24,100 vehicles on a weekend. With the proposed on-site parking supply of a minimum of 10,000 spaces, the Stadium would need to accommodate up to approximately 16,500 spaces and 14,100 spaces in off-site parking facilities for a weekday and a weekend game, respectively.

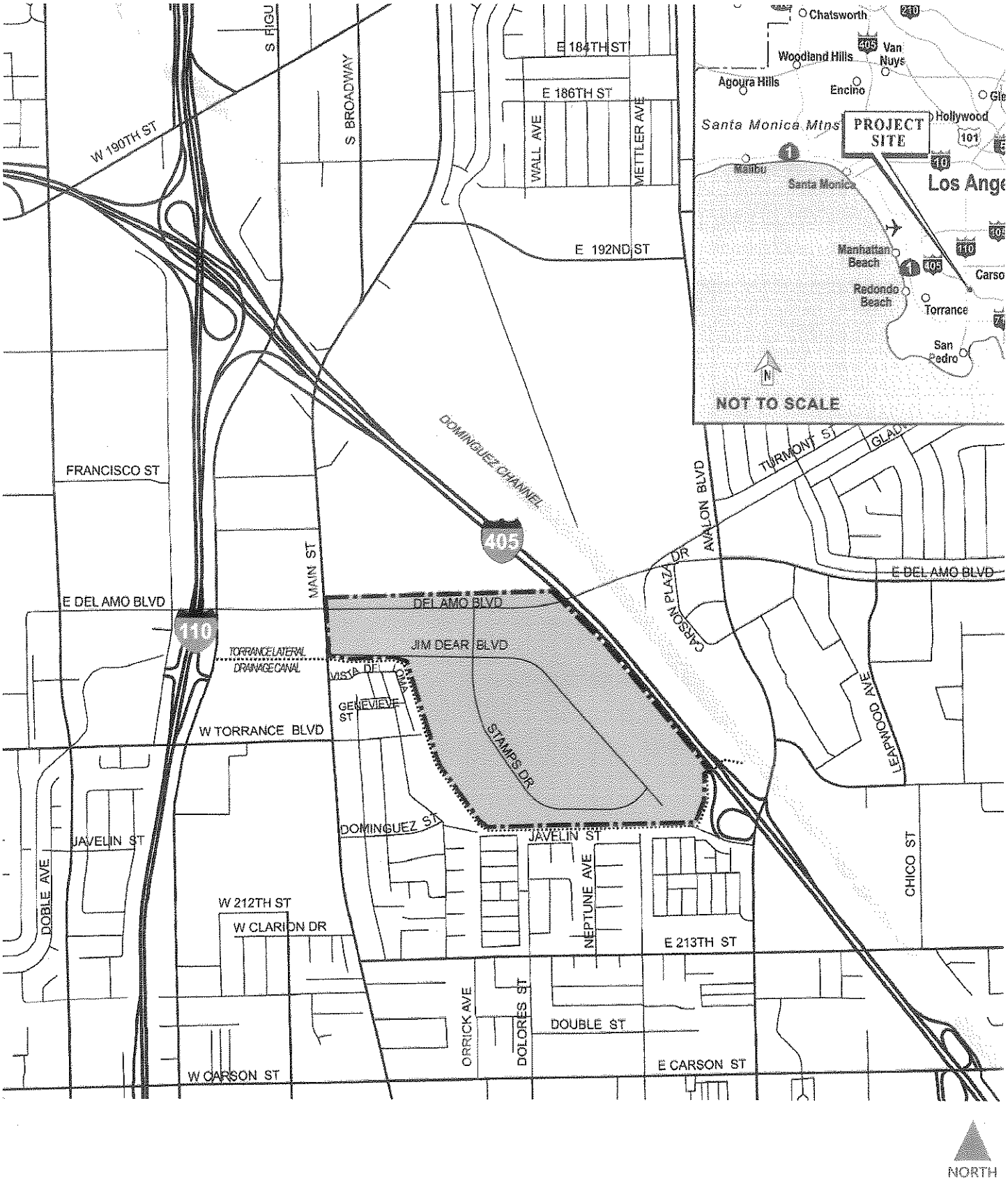


Figure 1

Project Location

Figure 2
Conceptual Site Plan

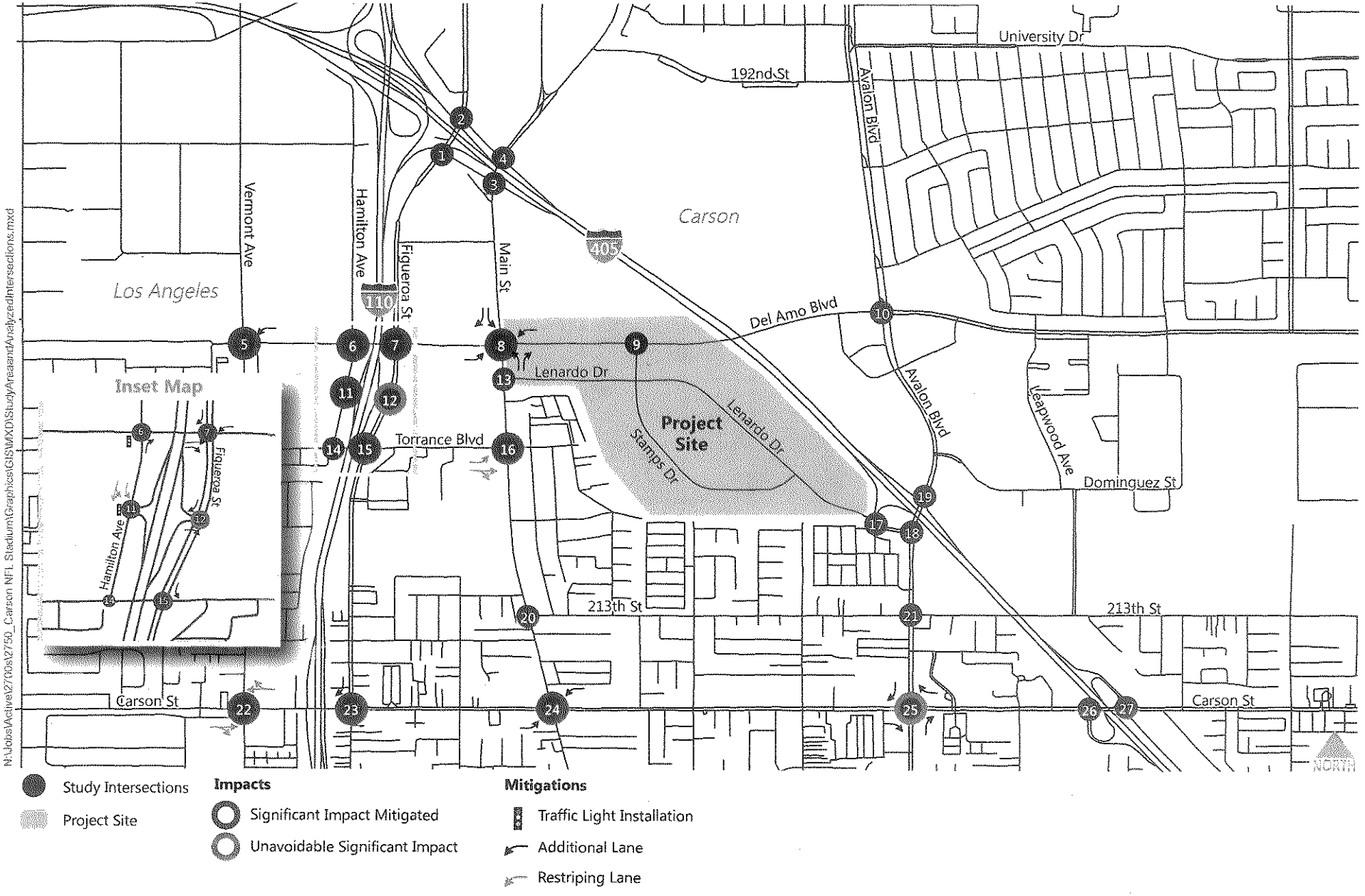


Figure 3

Boulevards at South Bay - Study Intersections, Significant Impacts and Proposed Mitigations

TABLE 1
DISTRIBUTION OF PERSON TRIPS ACROSS DIFFERENT TRAVEL MODES

PROJECT TRIP GENERATION MODE SPLIT				
Trip Type	**Scenario**	**Auto**	**Transit***	**Bike/ Walk**
Spectators	Weekday	93%	5%	2%
	Weekend	93%	5%	2%
Employees	Weekday	90%	5%	5%
	Weekend	90%	5%	5%

*Percentage of people traveling on local and regional transit lines expected to arrive/depart the event site via shuttle

DISTRIBUTION OF PERSON TRIPS ACROSS DIFFERENT TRAVEL MODES					
Trip Type	**Scenario**	**Auto**	**Transit***	**Bike/ Walk**	**Total**
Spectators (70,000)	Weekday	65,100	3,500	1,400	**70,000**
	Weekend	65,100	3,500	1,400	**70,000**
Employees (4,000)	Weekday	3,600	200	200	**4,000**
	Weekend	3,600	200	200	**4,000**

*People traveling on local and regional transit lines expected to arrive/depart the event site via shuttle

TABLE 2
AUTO TRIP FACTORS AND ARRIVAL/DEPARTURE PERCENTAGES

Trip Type	Scenario	AVO*	Peak Hour Arrival	Peak Hour Departure
Spectators	Weekday	2.7	50%	75%
	Weekend	3.0	40%	60%
Employees	Weekday	1.5	0%	40%
	Weekend	1.5	0%	40%

* AVO = average vehicle occupancy

TABLE 3
CARSON FOOTBALL STADIUM
STADIUM TRIP GENERATION

PROJECT AUTOMOBILE TRIP GENERATION ESTIMATES					
Trip Type	**Scenario**	**Total Vehicles**	**Total Trips**	**Peak Hour Arrival Trips**	**Peak Hour Departure Trips**
Spectators	Weekday	24,111	48,222	12,056	18,083
	Weekend	21,700	43,400	8,680	13,020
Employees	Weekday	2,400	4,800	0	960
	Weekend	2,400	4,800	0	960
TOTAL	**Weekday**	**26,511**	**53,022**	**12,056**	**19,043**
	Weekend	**24,100**	**48,200**	**8,680**	**13,980**

TABLE 4
ADDITIONAL USES ESTIMATED TRIP GENERATION

Weekday Game Day

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
			Daily Rate	Arrival Peak Hour [b]			Departure Peak Hour			Trip Rate Unit	Daily Trips	Arrival Peak Hour Trips			Departure Peak Hour Trips		
				Rate	% In	% Out	Rate	% In	% Out			In	Out	Total	In	Out	Total
Hotel	310	350 rm	[c]	0.60	51%	49%	[d]	51%	49%	per rm	2,759	107	103	210	32	31	63
Internal capture [g]			*25%*	*25%*			*25%*				(690)	(27)	(26)	(53)	(8)	(8)	(16)
Transit credit [h]			*5%*	*5%*			*5%*				(103)	(4)	(4)	(8)	(1)	(1)	(2)
Net External Hotel											1,966	76	73	149	23	22	45
Commercial Development	820	850 ksf	[e]	[e]	48%	52%	[f]			per ksf	27,293	1,206	1,307	2,513	246	983	1,229
Internal capture [g]			*25%*	*25%*			*25%*				(6,823)	(301)	(327)	(628)	(61)	(246)	(307)
Transit credit [h]			*5%*	*5%*			*5%*				(1,024)	(45)	(49)	(94)	(9)	(37)	(46)
Pass-By credit [i]			*10%*	*10%*			*10%*				(1,945)	(86)	(93)	(179)	(18)	(70)	(88)
Net External Retail											17,501	774	838	1,612	158	630	788
NET TRIPS											**19,467**	**850**	**911**	**1,761**	**181**	**652**	**833**

Weekend Game Day

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
			Daily Rate	Arrival Peak Hour [b]			Departure Peak Hour			Trip Rate Unit	Daily Trips	Arrival Peak Hour Trips			Departure Peak Hour Trips		
				Rate	% In	% Out	Rate	% In	% Out			In	Out	Total	In	Out	Total
Hotel	310	350 rm	5.95	[c]	46%	54%	[d]	46%	54%		2,083	99	116	215	30	35	65
Internal capture [g]			*25%*	*25%*			*25%*				(521)	(25)	(29)	(54)	(7)	(9)	(16)
Transit credit [h]			*5%*	*5%*			*5%*				(78)	(4)	(4)	(8)	(1)	(1)	(2)
Net External Hotel											1,484	70	83	153	22	25	47
Commercial Development	820	850 ksf	[e]	3.12	49%	51%	[f]				17,500	1,299	1,353	2,652	823	1,383	2,206
Internal capture [g]			*25%*	*25%*			*25%*				(4,375)	(325)	(338)	(663)	(206)	(346)	(552)
Transit credit [h]			*5%*	*5%*			*5%*				(656)	(49)	(50)	(99)	(31)	(52)	(83)
Pass-By credit [i]			*10%*	*10%*			*10%*				(1,247)	(93)	(96)	(189)	(59)	(98)	(157)
Net External Retail											11,222	832	869	1,701	527	887	1,414
NET TRIPS											**12,706**	**902**	**952**	**1,854**	**549**	**912**	**1,461**

Weekday Non-Game Day

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
			Daily Rate	AM Peak Hour			PM Peak Hour			Trip Rate Unit	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	% In	% Out	Rate	% In	% Out			In	Out	Total	In	Out	Total
Hotel	310	350 rm	[b]	0.53	59%	41%	0.60	51%	49%	per rm	2,759	110	76	186	107	103	210
Internal capture [g]			*10%*	*10%*			*10%*				(276)	(11)	(8)	(19)	(11)	(10)	(21)
Transit credit [h]			*5%*	*5%*			*5%*				(124)	(5)	(3)	(8)	(5)	(4)	(9)
Net External Hotel											2,359	94	65	159	91	89	180
Commercial Development	820	850 ksf	[e]	[e]	62%	38%	[e]	48%	52%	per ksf	27,293	357	218	575	1,206	1,307	2,513
Internal capture [g]			*1%*	*1%*			*1%*				(273)	(4)	(2)	(6)	(12)	(13)	(25)
Transit credit [h]			*5%*	*5%*			*5%*				(1,351)	(17)	(11)	(28)	(60)	(64)	(124)
Pass-By credit [i]			*10%*	*10%*			*10%*				(2,567)	(33)	(21)	(54)	(113)	(123)	(236)
Net External Retail											23,102	303	184	487	1,021	1,107	2,128
NET TRIPS											**25,461**	**397**	**249**	**646**	**1,112**	**1,196**	**2,308**

Notes:

a. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 9th Edition* , 2012, unless otherwise noted.

b. Arrival peak hour assumed to be equal to PM Peak Hour for weekday games.
Arrival peak hour assumed to be equal to Sunday Peak Hour for weekend games.

c. ITE hotel trip generation equations used rather than linear trip generation rate:
Weekday Daily: T = 8.95(X) - 373.16, where T = trips, X = rooms
Sunday Peak Hour: T = 0.70(X) - 29.89, where T = trips, X = rooms

d. Hotel trip generation rate for departure peak hour assumed to be 30% of the arrival peak hour. Directional distribution assusumed to match across both arrival and departure peak hours.

e. ITE retail trip generation equations used rather than linear trip generation rate:
Weekday Daily: Ln(T) = 0.65 * Ln(X) + 5.83, where T = trips, X = area in ksf
AM Peak Hour: Ln(T) = 0.61 * Ln(X) + 2.24; where T = trips, X = area in ksf
PM Peak Hour: Ln(T) = 0.67 * Ln(X) + 3.31, where T = trips, X = area in ksf
Sunday Daily: T = 15.63(X) + 4214.46; where T - trips, X = area in ksf

f. Inbound and outbound trip generation for depature peak hour determined from use of Institute of Transportation Engineers (ITE), *Trip Generation, 9th Edition* , 2012; Section 820; Table 1: Hourly Variation in Shopping Center Traffic. Departure peak hour assumed to be 9pm - 10pm for weekday games and 4pm - 5pm for weekend games.

g. Internal capture represents the percentage of trips between land uses that occur within the site.

h. 5% credit developed to account for transit access to the project site

i. Source for pass-by credits: Attachment I of LADOT's Traffic Study Policies and Procedures, August 2014, based on Institute of Transportation Engineers' "Trip Generation handbook, an ITE Recommended Practice", 2003.

TABLE 5
PROJECT SITE ESTIMATED TRIP GENERATION

Weekday Game Day								
Land Use	Size	Estimated Trip Generation						
		Daily Trips	Arrival Peak Hour Trips			Departure Peak Hour Trips		
			In	Out	Total	In	Out	Total
Stadium	70,000 seats	53,022	12,056	200	12,256	200	19,043	19,243
Hotel	350 rm	1,966	76	73	149	23	22	45
Commercial Development	850 ksf	17,501	774	838	1,612	158	630	788
PROJECT NET TRIPS		**72,489**	**12,906**	**1,111**	**14,017**	**381**	**19,695**	**20,076**

Weekend Game Day								
Land Use	Size	Estimated Trip Generation						
		Daily Trips	Arrival Peak Hour Trips			Departure Peak Hour Trips		
			In	Out	Total	In	Out	Total
Stadium	70,000 seats	48,200	8,680	150	8,830	150	13,980	14,130
Hotel	350 rm	1,484	70	83	153	22	25	47
Commercial Development	850 ksf	11,222	832	869	1,701	527	887	1,414
PROJECT NET TRIPS		**60,906**	**9,582**	**1,102**	**10,684**	**699**	**14,892**	**15,591**

Weekday Non-Event Day								
Land Use	Size	Estimated Trip Generation						
		Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Stadium	70,000 seats	0	0	0	0	0	0	0
Hotel	350 rm	2,359	94	65	159	91	89	180
Commercial Development	850 ksf	23,102	303	184	487	1,021	1,107	2,128
PROJECT NET TRIPS		**25,461**	**397**	**249**	**646**	**1,112**	**1,196**	**2,308**

Appendix II. Fiscal Analysis of NFL Stadium Development

AECOM

Project Report

Fiscal Analysis of NFL Stadium Development

Prepared for

The City of Carson, California

Submitted by

AECOM Technical Services, Inc. (AECOM)

April 17, 2015

Project No. 60343761

303 East Wacker Drive Suite 600
Chicago, IL 60601
312.373.7558 FAX 312.373.6800 www.aecom.com

General & Limiting Conditions

Every reasonable effort has been made to ensure that the data contained in this report are accurate as of the date of this study; however, factors exist that are outside the control of AECOM and that may affect the estimates and/or projections noted herein. This study is based on estimates, assumptions and other information developed by AECOM from its independent research effort, general knowledge of the industry, and information provided by and consultations with the client and the client's representatives. No responsibility is assumed for inaccuracies in reporting by the client, the client's agent and representatives, or any other data source used in preparing or presenting this study.

This report is based on information that was current as of April 2015 and AECOM has not undertaken any update of its research effort since such date.

Because future events and circumstances, many of which are not known as of the date of this study, may affect the estimates contained therein, no warranty or representation is made by AECOM that any of the projected values or results contained in this study will actually be achieved.

Possession of this study does not carry with it the right of publication thereof or to use the name of "AECOM" in any manner without first obtaining the prior written consent of AECOM. No abstracting, excerpting or summarization of this study may be made without first obtaining the prior written consent of AECOM. Further, AECOM has served solely in the capacity of consultant and has not rendered any expert opinions. This report is not to be used in conjunction with any public or private offering of securities, debt, equity, or other similar purpose where it may be relied upon to any degree by any person other than the client, nor is any third party entitled to rely upon this report, without first obtaining the prior written consent of AECOM. Any changes made to this study, or any use of the study not specifically prescribed under agreement between the parties or otherwise expressly approved by AECOM, shall be at the sole risk of the party making such changes or adopting such use.

This study is qualified in its entirety by, and should be considered in light of, these limitations, conditions and considerations.

Fiscal Analysis of NFL Stadium Development

AECOM has completed a fiscal analysis of the potential stadium development over the course of a 40-year lease term. We have analyzed and compared two potential scenarios for stadium development and assumed deal terms with one or two NFL teams, as well as our estimates of future stadium operations.

Our analysis was focused on quantifying all fiscal (tax) impacts to the City of Carson that would be a direct result of the stadium's development and operations, for both scenarios. In general, relevant new tax revenues, loss of existing tax revenues, and fiscal costs to the City include:

- All City revenues realized by the proposed lease terms (such as ground rent, performance rent, and various credits and offsets based on taxes paid by the team),
- New tax revenues generated by the construction and operation of the stadium (such as from sales, TOT, and other taxes), and
- The loss of funding for other projects that would be caused by stadium development.

All impacts are based on direct stadium operations and do not include the ongoing business operations of the team(s); these operations and associated spending and employment would generate additional impacts to Carson. This development project would also generate a number of other positive impacts to the City, including employment and income to Carson residents, national/international exposure, the addition of a new entertainment venue, and others; however, these economic impacts are not included in this report because they do not directly impact the City's fiscal position and/or are difficult to quantify.

These impacts also do not include any other costs that the Team is assumed to retain full responsibility for, such as for public services associated with events. For example, police and fire costs for an NFL gameday are estimated to be approximately $346,000.

I. City of Carson Fiscal Impacts

The results of our fiscal analysis of the two scenarios appear below.

Assumed Terms

Our estimates are based on the following assumptions:

- **Fixed Rent**: one NFL tenant would pay a graduated annual rent, ranging from $180,000 in the stadium's first year to $1.5 million in Year 40. A second team's rent would range from $1 million to $1.5 million per year.

- **Performance Rent**: the team or teams' performance rent would be calculated as follows, beginning in Year 31:
    - Non-NFL Net Revenue: the team would share 50 percent of net revenue from non-NFL events.
    - Credits: It would then be credited against the above payment for 50 percent of its total fixed rent and 50 percent of the City's share of possessory interest tax paid.

  The net result would be the team's total performance rent, in addition to its fixed rent.

- **Senior and Youth Program Fee**: the team would annually pay $250,000 to the City for senior and youth programs.
- **CFD Tax**: the City's share of this expense is currently being paid by AIG (through 2027). However, it is assumed that before 2027, a CFD tax will be imposed to build cash reserves for future payments. We assume that beginning in 2019 (the stadium's first year), the team will pay $500,000 per year, increasing to $700,000 per year in 2028 (to be inflated).
- **Ground Rent before City Offset**: the net sum of the above items is considered to be the team's Ground Rent before City Offset.
- **Direct Stadium-Generated Tax Offset:** the team would be credited for the following items:
    - Sales Tax: 50 percent of sales taxes generated from sales of food and beverage and merchandise at stadium events.
    - Business License Tax: 50 percent of the business license tax paid by the stadium entity.
    - Utilities Tax: 50 percent of the City's share of taxes paid on stadium utilities.
    - Possessory Interest Tax: 50 percent of the City's share of the team's payment of possessory interest tax.
- **Net Ground Rent after Tax Offset:** the Ground Rent before City Offset, less the Direct Stadium-Generated Tax Offset, will equal the team's net payment.

The City will also benefit from other activity that will generate new tax revenues. In addition, the stadium development project will also have fiscal costs to the City. These are summarized below.

- **Incremental Tax Revenues:**
    - Sales Tax: the City will generate new sales tax revenues from stadium operations, through the sale of food and beverage and merchandise as well as similar sales by facility attendees outside of the stadium but within Carson.
    - Business License Tax: while 50 percent of this City revenue stream will be credited back to the team, 100 percent of the new tax collected is considered a fiscal benefit.

- Possessory Interest Tax: the City will retain its share of possessory interest paid by the team (although 50 percent will be credited to the team).
- Utilities Tax: similar to the business license tax and possessory interest tax, the City will collect its full share of utilities tax but will then credit 50 percent back to the team.
- Transient Occupancy Tax: the City will retain its share of TOT revenues generated by hotel room nights associated with stadium activity.

- **Incremental Fiscal Costs:**
  - CFD: as described above, the team will share this cost with the City; the City's expense is also accounted for as an expense.
  - Other: it is estimated that the loss of CDBG and HOME funding will be approximately $1.4 million per year.

Scenario #1 – One Team

In this one-team scenario, the team would pay a fixed annual rent and the senior/youth program fee, as well as a performance rent (after 30 years or when its debt is repaid) that consists of non-NFL revenue sharing and various credits. The team would also pay 50 percent of the city's CFD tax liability, and would receive credits of 50 percent of taxes generated by the stadium. Similar to the previous and all other scenarios, the City would also benefit from stadium-related spending onsite and throughout Carson, and would have the upfront capital improvement expense and other fiscal costs.

In this scenario, the City is forecasted to generate annual fiscal losses in most of the first 30 years, before the performance rent begins. Cumulative annual gains are approximately $85 million, and the net present value is estimated to be approximately $37 million.

Scenario #2– Two Teams

This scenario is similar to Scenario #1 but with two teams paying a fixed ground rent. In general, because of the presence of two teams, the scale of most City revenues and costs increase compared to a one-team scenario.

In each of the 40 years, a net fiscal gain is estimated for the City, which would increase substantially once the performance rent begins in Year 31. The cumulative net gains are approximately $140 million. The net present value of these future gains is approximately $73 million.

II. Regional Impacts

In March 2015, the Los Angeles County Economic Development Corporation's Institute for Applied Economics provided an economic impact analysis of the stadium project, for both one- and two-team

scenarios. The analysis addressed public fiscal benefits from stadium construction and operations, at the city, county, and state levels. Its findings included the following:

- The construction project would have impacts of nearly 17,000 annual jobs, and $1.1 billion in labor income, and $2.6 billion in business revenues at the county level, and nearly $120 million in state and local taxes.
- For a two-team scenario, total economic activity at the county level include more than 13,000 jobs and more than $600 million in labor income, and nearly $900 million in business revenue, as well as $60 million in state and local taxes.

These impacts do not include spending by event attendees outside of the stadium but within the city, county, and state, nor do they include team-related revenues that are not directly associated with the stadium, such as from broadcasting and sponsorships.

The report also notes that it is possible that the stadium would host one or more Super Bowls in its first decade of operations, and that a Super Bowl in particular would generate significant visitation and impacts to the community. Other benefits mentioned in the report include national and international exposure of the Carson area, contributions from teams and the NFL to local community and philanthropic groups, and the possibility of increased property values.