

Appendix F

Vehicle Miles Travelled Analysis Memorandum

MEMORANDUM

To: Manraj Bhatia, City of Carson
From: Sabita Tewani, AICP, Transportation Planner
Dennis Pascua, Transportation Services Manager
Subject: KL Fenix Truck Facility Vehicle Miles Traveled (VMT) Analysis
Date: February 25, 2020
cc: Collin Ramsey, Senior Project Manager
Attachment(s): CSTDM TAZ Map

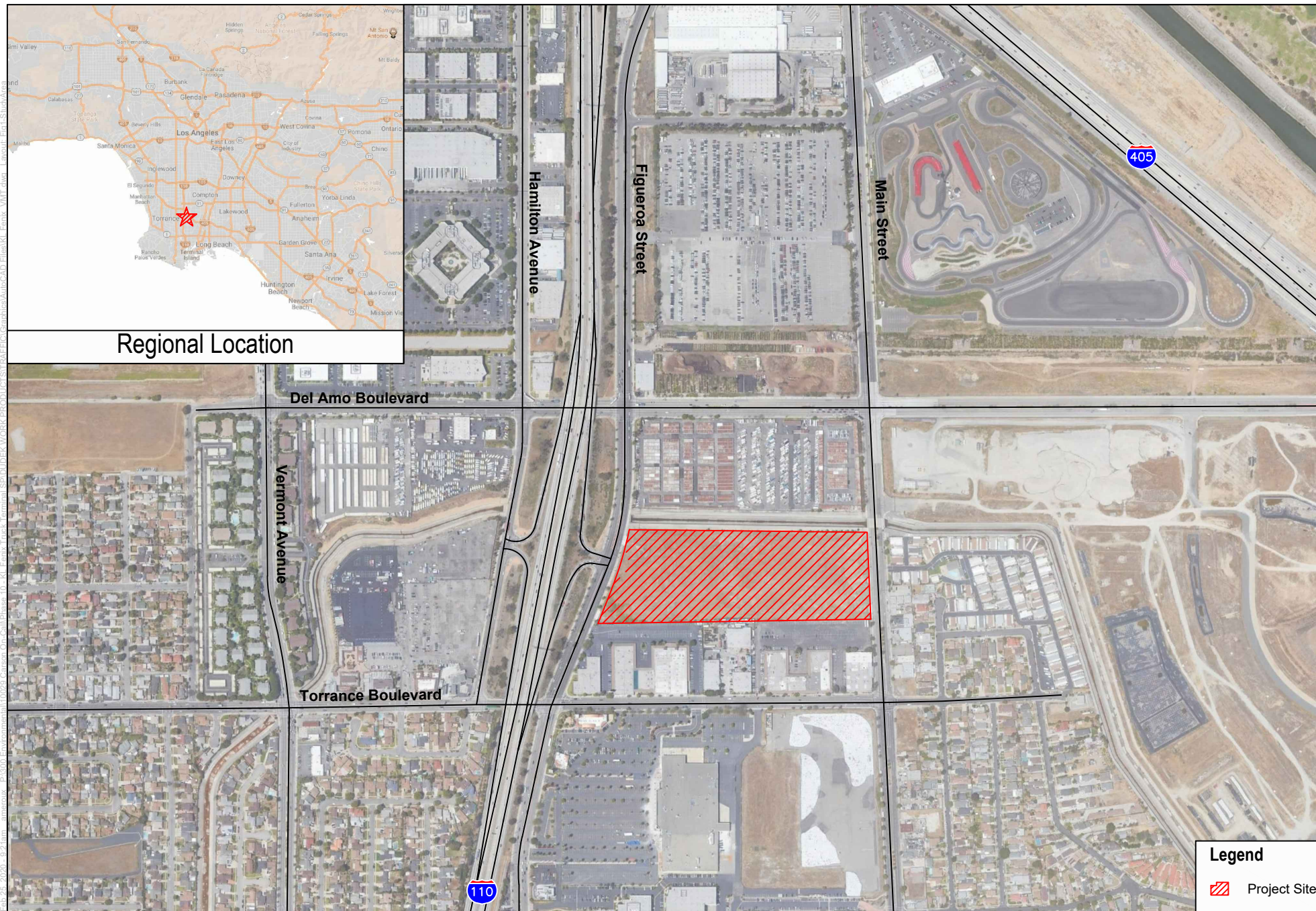
The following memorandum provides a Vehicle Miles Traveled (VMT) analysis of the KL Fenix Truck Facility (project) located on the east side of Figueroa Street, directly across from the Figueroa Street/Interstate 110 (I-110) northbound ramps intersection, in the City of Carson (City) in Los Angeles County (County).

This analysis was conducted to qualitatively determine if the project would have a significant transportation impact under recently adopted California Environmental Quality Act (CEQA) guidelines for which compliance with Senate Bill 743 (SB 743), requiring VMT analysis, will be required beginning July 1, 2020. This VMT/SB 743 consistency analysis has been prepared consistent with the Office of Planning and Research's (OPR) guidance and methodologies currently available to estimate VMT, and for determining significance of transportation impacts under CEQA.

1 Project Description

The project would consist of the construction and operation of a truck facility for transferring goods, or breaking down and assembling tractor-trailer transportation, as defined by the City's Municipal Code Section 9191.698. The truck facility on this site will mainly contribute to mobilize goods that are imported, and also for goods that are made in the United States, to be exported through the local Ports of Los Angeles and Long Beach (Ports). The project is an intermediary land use between the Ports and the next/final destination (warehouses) of the products shipped through the trucks-trailers utilizing the project.

The project would include a warehouse/office building that will face the Main Street frontage. The warehouse space will be approximately 39,500 square feet, along with an attached two story office space on one side that will be about 14,050 square feet. The total building area will be approximately 53,000 square feet with a height of approximately 42 feet. The project would include 102 parking spaces for the proposed warehouse/office use. It would also include 475 spaces for cargo containers, along with 6 loading docks, and designated exterior and interior areas for the unloading and loading of goods between containers. Storage for stacked containers is not a part of the project. The primary route for the trucks transporting the imported and exported goods would be on the I-110 on- and off-ramps located across Figueroa Street, directly west of the property. A very limited number of trucks using this truck facility would use the City's streets as part of their route due to its direct access to the freeway (I-110). Figure 1 illustrates the location of the project, and Figure 2 illustrates the project site plan.



SOURCE: Google Maps 2018

FIGURE 1

Project Location and Study Area

KL Fenix Truck Terminal Specific Plan

PROJECT DATA

PROPERTY INFORMATION

ASSESSOR'S ID NO: 7336-003-030
ADDRESS: 2 1601 S MAIN ST
CARSON CA 90745
PROPERTY TYPE: VACANT LAND
PROPERTY BOUNDARY DESCRIPTION
*TR=PARCEL MAP AS PER BK 62
P 68 OF PM LOT 4

EXISTING ZONE:

ML-D
LIGHT MANUF. W/DESIGN OVERLAY
LAND USE: TRUCK TERMINAL

NET SITE AREA = 631,620 sf / 14.5 AC
FOOTPRINT AREA = 46,525 sf
OFFICE = 14,050 sf
WAREHOUSE = 39,500 sf
NET COVERAGE = 13.57%
NET F.A.R. = 11.74%

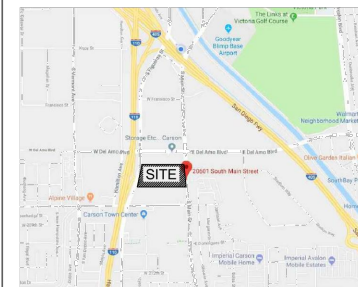
WAREHOUSE = 39,500sf / 1500 sf 27 PARKING
OFFICE 1 STORY = 7,025 sf
OFFICE 2 STORY = 7,025 sf
TOTAL OFFICE = 14,500 sf / 300 sf = 49 PARKING

TOTAL PARKING SPACES = 102
PROVIDED 98 PARKING SPACES
4 HANDICAP PARKING SPACES

PARKING CONTAINERS 50' LONG = 475 SPACES
LOADING DOCK 50' LONG = 6 SPACES

LANDSCAPED AREA = 23,575 SF

VICINITY MAP



REVISIONS: DATE:

OWNER:



**KL FENIX
CORPORATION**

**CIVIL
ENGINEER**

FELIPE SEGOVIA
2360 SANTA CRUZ CT
TORRANCE CA 90501
(310) 560-7409



DRAWN BY:

ADRIAN LOPEZ
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310-651-9888

PROJECT: TRUCK TERMINAL
OWNER: KL FENIX CORPORATION
19401 S MAIN ST, SUITE #301 CARSON CA 90248
PROJECT ADDRESS: 20601 S MAIN ST, CARSON, CA 90745
ASSESSOR'S ID NO: 7336-003-030

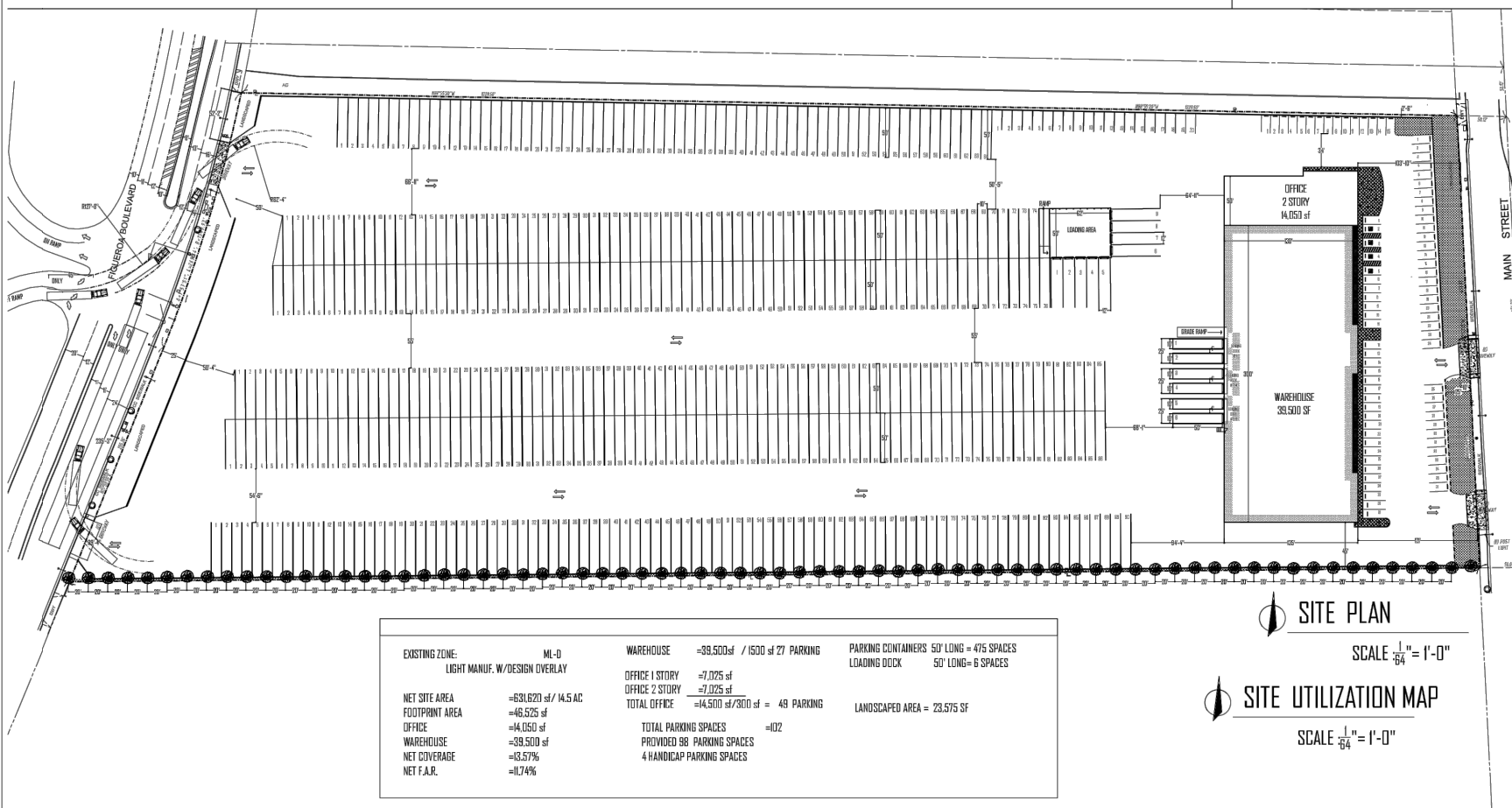
SCALE:

DATE:

8/7/2018

SHEET #:

A-2



SOURCE: KL Fenix Corporation 2019

DUDEK



NOT TO SCALE

KL Fenix Truck Terminal Specific Plan

**FIGURE 2
Site Plan**

1.1 Project Design Features

In order to reduce the project's potential VMT, as well as, be consistent with KL Fenix Truck Terminal Specific Plan, the project proposes to implement following measures to promote the use of alternative transportation such as transit, ride-sharing, bicycling, and walking to reduce project trips and/or vehicle miles traveled, as Project Design Features (PDF). The following measures/PDFs will be implemented by the project consistent with the Specific Plan:

- **Land Use/Location**
 - Increase Density
 - The project site was previously operated as a brownfield landfill and is currently unutilized and abandoned. The project would increase the density by adding jobs that would be required to operate the truck facility and warehouse.
 - Improve or increase access to transit
 - To improve accessibility to multiple public transportation lines (Carson Circuit Transit System, Torrance Transit and MTA) adjacent to the site, the project will work with the public transportation agencies to identify potential bus routes that may be modified to provide direct service to the project site. Additionally, the project could identify nearby bus-stops to upgrade or move closer to the site to further encourage the use of transit in the area.
 - Provide pedestrian network improvements such as pedestrian countdown signals, crosswalks, curb ramps, sidewalks and trees as applicable around the project site.
 - Orient the project toward bicycle facilities. A future bike lane is proposed along Figueroa Street, adjacent to the western boundary of the project site.
- **Site Enhancements**
 - Improve pedestrian or bicycle networks, or transit service
 - Construct/improve sidewalks along project site and connect with existing sidewalks along Main Street and Figueroa Street
 - Provide preferential parking
 - Allocation of preferred parking for alternative-fuel vehicles, low-emitting, and fuel- efficient and ride-sharing vehicles.
 - Parking spaces, designated or assigned through use of a sign or painted space markings for Carpools or Vanpools that are provided in a location more convenient to the entrance for the place of employment than parking spaces provided for single-occupant vehicles.
 - Provide bicycle parking for visitors and employees
 - Include short term and long-term bicycle parking. Project could provide additional amenities such as shower and locker facilities.
 - Provision of electric vehicle charging stations (i.e., provide electric vehicle supply wiring equal to 5 percent of the total number of parking spaces).

- **Commute Trip Reduction Programs**

- Implement Voluntary or Required Commute Trip Reduction Program: These include a multi-strategy program that encompass a combination of individual measures such as:
 - Carpooling encouragement
 - Ride-matching assistance
 - Preferential carpool parking
 - Flexible work schedules for carpools
 - Half time transportation coordinator
 - Vanpool assistance
 - Bicycle end-trip facilities (parking, showers and lockers)
- Provide partially or fully subsidized transit passes: Transit pass discount programs are typically negotiated with transit service providers to purchase transit passes in bulk, and therefore at a discounted rate. Discounted passes are then sold to interested employees, helping them to obtain price discounts through the economies of scale of bulk purchasing. Transit pass discount programs are generally provided to project site employees.

2 SB 743 Background

A change to transportation analysis in CEQA environmental review occurred when Governor Jerry Brown signed Senate Bill (SB) 743 into a law that required an update in the metric of transportation impact from Level of Service (LOS) and automobile delay to one that promotes the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses for transit priority areas. SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, will no longer be considered an environmental impact under CEQA.

The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. Under the new guidelines, VMT has been adopted as the most appropriate measure of transportation impacts under CEQA. The OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. The City of Carson is currently in the process of adopting VMT metric and formulating guidelines and significance criteria for transportation impact analysis. Therefore, the project's VMT analysis utilizes OPR's guidance and most appropriate methodology currently applicable.

3 VMT Guidelines and Technical Advisory

OPR has approved the addition of new Section 15064.3, "Determining the Significance of Transportation Impacts" to the State's CEQA Guidelines, compliance with which will be required beginning July 1, 2020. The Updated CEQA Guidelines state that "...generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts..." and define VMT as "...the amount and distance of automobile travel attributable to a project...". It should be noted that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models

or data provide combined auto and heavy truck VMT). Other relevant considerations may include the effects of the project on transit and non-motorized travel.

Section 15064.3 (b)(1) *Criteria for Analyzing Transportation Impacts* includes presumptions that certain projects (including residential, retail, office, and mixed-use projects) proposed within one-half mile of an existing major transit stop or along a high-quality transit corridor will have a less-than-significant impact on VMT. If the specified presumption does not apply, VMT should be analyzed through a qualitative or quantitative analysis. The Updated CEQA Guidelines are accompanied by the Technical Advisory, which includes specifications for how to estimate and forecast VMT. For most projects with multiple land uses, such as residential, commercial, etc., OPR's Technical Advisory suggests that automobile VMT associated with each land use should be quantified. In some cases only the dominant use can be considered. Further, if evaluating each land use separately the automobile VMT from specific trip purposes or travel tours should be isolated.

Additionally, Section 15064.3 (b)(3) *Qualitative Analysis* mentions if existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles qualitatively. Such qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. The following method, Assessing Change in Total VMT, from the Technical Advisory will be the primary method of this VMT analysis:

Assessing Change in Total VMT

A third method, estimating the change in total VMT with and without the project, can evaluate whether a project is likely to divert existing trips, and what the effect of those diversions will be on total VMT. This method answers the question, "What is the net effect of the project on area VMT?" As an illustration, assessing the total change in VMT for a grocery store built in a food desert that diverts trips from more distant stores could reveal a net VMT reduction. The analysis should address the full area over which the project affects travel behavior, even if the effect on travel behavior crosses political boundaries.

OPR recommends using more location-specific information and local jurisdictions to develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code and regulations in the CEQA Guidelines on the development of thresholds of significance (e.g., CEQA Guidelines, § 15064.7). Strategies and projects that decrease local VMT but increase total VMT should be avoided. Agencies should also consider whether their actions encourage development in a less travel-efficient location by limiting development in travel-efficient locations.

3.1 Thresholds of Significance

The updated CEQA Guidelines themselves do not establish a significance threshold, the OPR's Technical Advisory recommends a threshold of significance for residential, office and other land uses. While the recommended threshold for per capita or per employee for residential or office projects, respectively, is 15 percent below that of existing development, lead agencies can use more location-specific information to develop their own specific threshold for other project/land use types.

The proposed truck facility would be considered as other project/land use, and as such, the City could develop their own threshold per OPR guidance discussed below. Further, consistency with regional transportation plan is required for all land use projects.

3.1.1 VMT Screening for Land Use Projects

The Technical Advisory suggests that agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

- **Screening Threshold for Small Projects (110 daily trips or less):** Since the project generates more than 110 trips per day, it cannot be assumed to cause a less-than-significant transportation impact.
- **Map Based Screening for Residential and Office Projects:** Currently, the City does not have VMT maps that can be utilized to identify areas with low VMT for projects.
- **Presumption of Less Than Significant Impact Near Transit Stations:** The project site is not located within one-half mile of an existing major transit stop or an existing stop along a high quality transit corridor.
- **Presumption of Less Than Significant Impact for Affordable Residential Development:** The project does not propose affordable residential units and is not a residential development.

The above mentioned VMT screening criteria do not apply to the project. Therefore, a qualitative VMT analysis was prepared per the methodology described above.

4 Analysis

4.1 Proposed Project Land use and Travel Characteristics

Based on the information provided by the applicant, the project would have two main components:

1. **Truck Facility** – Trucks would be transferring goods or breaking down and assembling tractor-trailer transportation on the site and mobilizing goods that are imported and exported through the local Ports of Los Angeles and Long Beach. The final destinations of the goods after pick-up at the ports are anticipated to be primarily the cities of Commerce, Industry, Ontario, Pomona, and Fontana (a total of 75%). Some of the trucks would be destined to neighboring cities of Rancho Dominguez, Compton and Gardena (a total of 15%). Approximately 5% of the trucks are anticipated to travel to northern LA County (Panorama City, Pacoima) and approximately 5% to other destinations.
2. **Office/Warehouse** – The project proposes a 39,500 square foot warehouse space with about 14,050 square feet of office space. It is anticipated that there would be approximately 30 employees at the project site.

Utilizing the trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition* (2017) and *9th Edition* (2012) for land use category Intermodal Truck Terminal (ITE Code 30), the project would generate approximately 1,188 daily trips, 106 AM peak hour net trips (50 inbound and 56 outbound), and 100 PM peak hour trips (53 inbound and 47 outbound). Adjusting for passenger car equivalent (PCE) factor, using the City of Fontana Truck Trip Generation Study Truck Terminal vehicle mix and percentage splits, trip generation for the

project would be approximately 2,233 daily trips, 199 AM PCE peak hour trips (93 inbound, and 106 outbound) and 188 PM PCE peak hour trips (99 inbound, 89 outbound). It should be noted that the traffic study analyses a conservative and worst case scenario for the trip generation potential of the project.

4.2 California State Travel Demand Model

One method of VMT analysis is through using data from the California State Travel Demand Model (CSTDm), using the guidance from OPR's Technical Advisory. Per OPR Technical Advisory, both trip- and tour-based assessments can be used as measures of transportation efficiency, using denominators such as per capita, per employee, or per person-trip. Therefore, employee VMT was obtained for each CSTDm Traffic Analysis Zone (TAZ) within the City and compared with the TAZ the project is located within.

The CSTDm was developed to forecast all of California residents' personal travel as well as commercial vehicle travel on a typical day when schools are in session. The original 2010 version of the CSTDm was updated in 2013-14. This model uses a TAZ system of approximately 5,474 zones and is tour based model. A travel demand model utilizes a series of mathematical equations that forecast travel behavior and transportation services demand within a region. The project site lies within TAZ 4631. A copy of the city-wide TAZ map within the CSTDm is attached.

Based on review of the VMT data from the CSTDm, as noted in Table 1, for the base year 2010, the project TAZ VMT is 32.42, the City average VMT is 33.29 and the County average VMT is 34.57. Also noted in the table, for the buildout year 2040, the project TAZ VMT is 33.82, the City average VMT is 33.79 and the County average VMT is 32.07.

Table 1: Project, City and County Level VMT Summary –Year 2010

TAZ	Year 2010		
	VMT	Employees	VMT per Employee
Year 2010			
Project TAZ (4631)	182,179	5619	32.42
City Average	166,581	4895	33.29
County Average	108,017	3,212	34.57
Year 2040			
Project TAZ (4631)	123,696	3,657	33.82
City Average	151,730	4,430	33.79
County Average	128,150	4,134	32.07

Notes: TAZ = Traffic Analysis Zone; VMT – Vehicle Miles Traveled
Source: California State Travel Demand Model (CSTDm), 2013-2014.

4.3 VMT Analysis

As described above, OPR allows for the estimating of the project to change total VMT based on whether the project is likely to divert existing trips. Additionally, Section 15064.3 (b)(3) allows for a *Qualitative Analysis* if existing models or methods are not available to estimate the vehicle miles traveled for the particular project being

considered, and the lead agency may analyze the project's vehicle miles qualitatively. Furthermore, given that current methods to quantitatively analyze VMT are based on using residential or service populations (employees) as the primary metric of evaluation, industrial projects as a whole, and most other non-residential/commercial/office project, and specifically, trucking facility projects, do not correspond with the current quantitatively based VMT assessment methods.

The project would operate a truck facility for transferring goods, or breaking down and assembling tractor-trailer transportation, and will mainly contribute to mobilize goods that are imported, and also for goods that are made in the United States, to be exported through the local Ports. The project is an intermediary land use between the Ports and the next/final destination (warehouses) of the products shipped through the trucks-trailers utilizing the project. Currently, trucks-trailers from the Ports, destined to warehouses, and vice-versa, use other existing truck facilities to transfer goods, or break-down/assemble their tractor-trailer configurations. Figure 3 illustrates the regional freeway facilities serving the Ports via the project site.

The Ports (of Los Angeles and Long Beach) are approximately 12 miles from the project site. The proximity to freeway and Ports would reduce the project's trips on other roadways and facilitate tractor trailer traffic destined for pick-up/drop-off of containers. The Ports are the two largest container ports in the United States. The growth of the Ports has been steady and from its most recent cargo forecast it is forecast to double in the next two decades. The Ports' growth would have a significant impact on local economy and directly or indirectly provides for more jobs in the region. Therefore, the City would benefit from developing the site as a use which benefits from its proximity to the Ports.

The location of the project is strategic for a truck facility as it is located close to freeway on- and off-ramps located across Figueroa Street, a frontage road to I-110. I-110 provides direct access to the Ports of Los Angeles and Long Beach, and also connects the site to other regionally significant freeways such Interstate 405 (I-405), Interstate 710 (I-710), and State Route 91 (SR-91). The location of the project site reduces the need for trucks to travel along other roadways from other truck facilities that may be further away from regional freeways. As shown in Figure 4, the project would divert trucks that are destined to other truck facilities further away from the regional freeway system to the project site which is directly connected to the existing on- and off-ramps at I-110/Figueroa Street. This diversion would reduce the VMT generated by those trucks.

In addition, the project would implement the Project Design Features to promote the use of alternative transportation such as transit, ride-sharing, bicycling, and walking to further reduce project trips and/or vehicle miles traveled.

5 Conclusions

Based on the qualitative VMT analysis above for the proposed KL Fenix Truck Facility, the following conclusions are made:

- The project would operate a truck facility for transferring goods, or breaking down and assembling tractor-trailer transportation, for goods destined to/from the local Ports of Los Angeles and Long Beach. The project is an intermediary land use between the Ports and the next/final destination (warehouses) of the products shipped through the trucks-trailers utilizing the project.

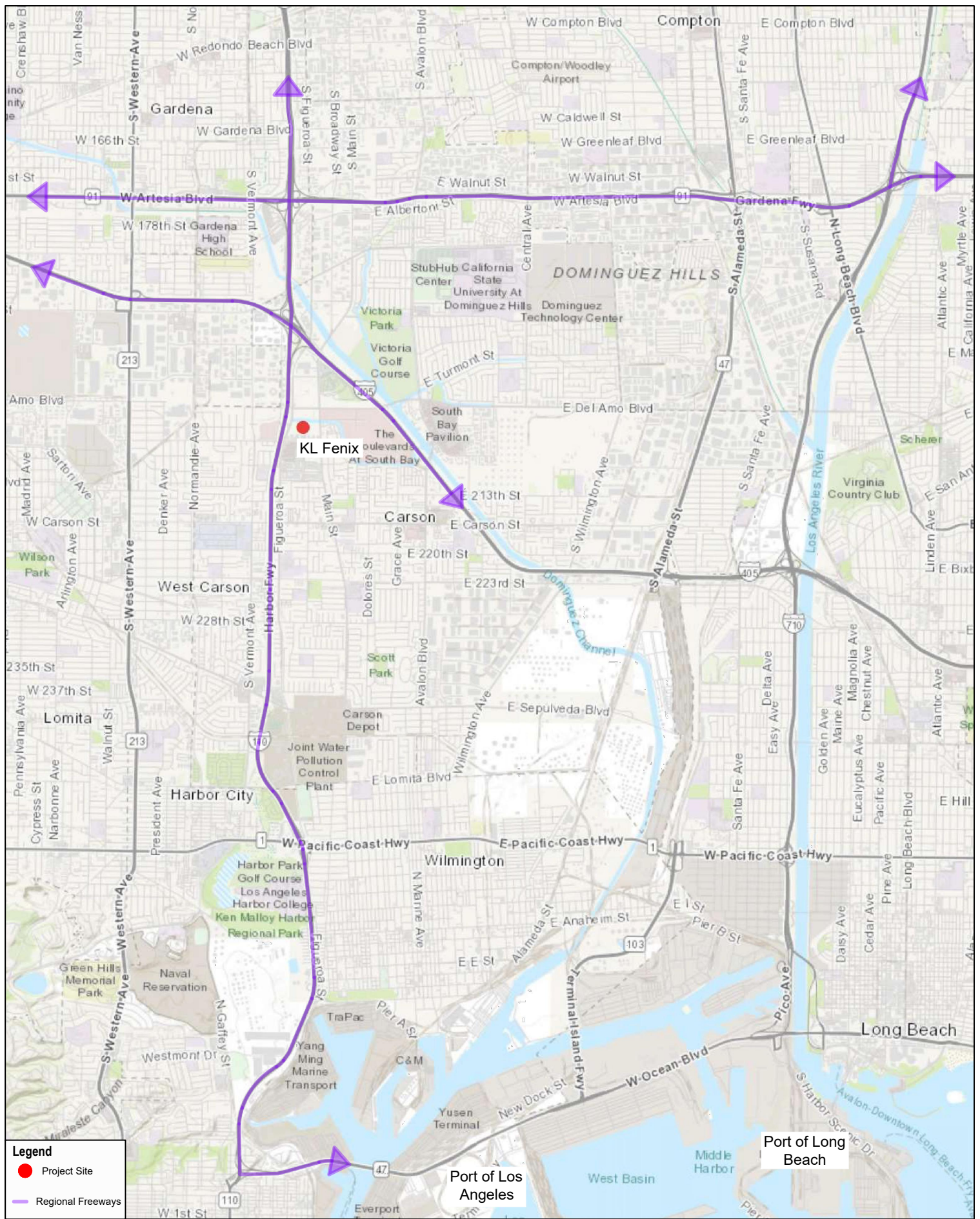
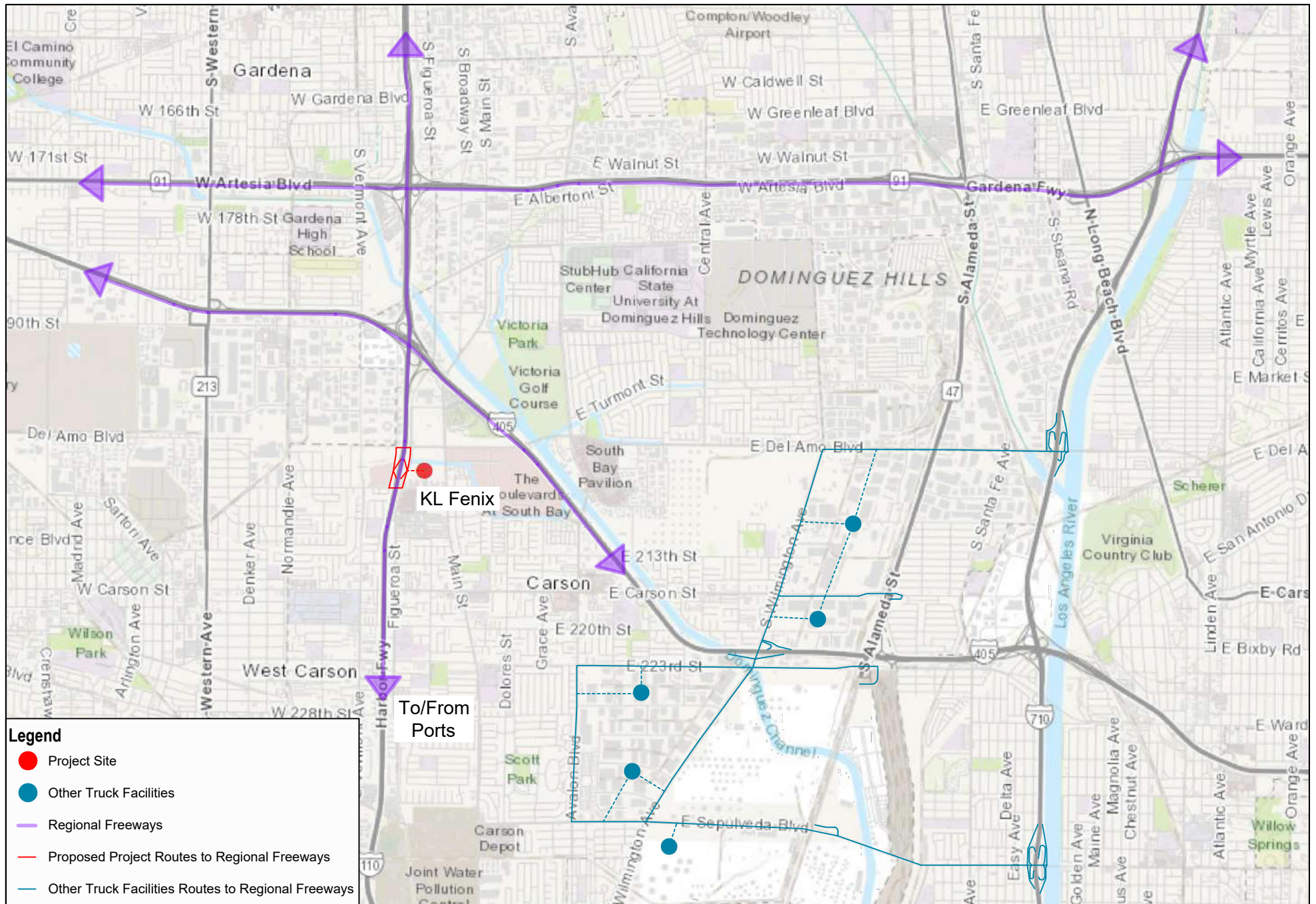


FIGURE 3
Regional Freeways Serving Ports and Project Site

KL Fenix Truck Terminal Specific Plan



SOURCE: ESRI 2018

DUDEK



NOT TO SCALE

FIGURE 4

Truck Travel Routes for Proposed Project and Other Truck Facilities

KL Fenix Truck Terminal Specific Plan

- Traffic Impact Study for the project (Dudek 2019), indicates that the project would generate approximately 1,188 daily trips, 106 AM peak hour net trips (50 inbound and 56 outbound), and 100 PM peak hour trips (53 inbound and 47 outbound). Adjusting for passenger car equivalent (PCE) factor, the project would generate approximately 2,233 daily trips, 199 AM PCE peak hour trips (93 inbound, and 106 outbound) and 188 PM PCE peak hour trips (99 inbound, 89 outbound).
- The location of the project is strategic for a truck facility as it is located close to freeway on- and off-ramps located across Figueroa Street, a frontage road to I-110, which provides direct access to the Ports, and also connects the site to other regionally significant freeways such Interstate 405 (I-405), Interstate 710 (I-710), and State Route 91 (SR-91). The location of the project site reduces the need for trucks to travel along other roadways from other truck facilities that may be further away from regional freeways. This diversion from other truck facilities would reduce the VMT generated by those trucks.
- The project would implement the Project Design Features to promote the use of alternative transportation such as transit, ride-sharing, bicycling, and walking to further reduce project trips and/or vehicle miles traveled.

Therefore, based on the project's proximity to I-110, which provides direct access to other regional significant freeway facilities; the project's potential to divert truck traffic from other truck facilities located further away from regional freeway facilities; and, the requirement to implement VMT-reducing Project Design Features, the proposed KL Fenix truck facility would have a less than significant impact to vehicle miles traveled.



Attachment

CSTDm TAZ Map

