APPENDIX J.2

Transit Reduction Memo

NELSON
NYGAARD

MEMORANDUM

To: Eileen Hunt and Wes Pringle, LADOT

From: Nelson\Nygaard

Date: April 17, 2020

Subject: 3630 Crenshaw TAS: Additional Transit VMT Reductions

The following memorandum describes proposed VMT reductions to be applied to the 3630 Crenshaw Transportation Assessment Study (TAS). During the scoping efforts with LADOT, these factors were agreed to be proposed in the Transportation Assessment based on initial review of the VMT Calculator tool with LADOT staff. The proposed project is a joint development project between the applicant and the County of Los Angeles and Metro. The project site is currently being developed by Metro as the north terminus for the Metro Crenshaw/LAX line that intersects with the existing Metro Expo Line. This intersection and the project are designed to be a high-volume multi-modal transit hub that will also provide as a transfer point to various Metro bus lines and DASH lines at the project site. The project site includes a portal to the underground station to the Crenshaw/LAX Line on its east site, and includes a knock-out panel to a potential future portal on its west site. The Crenshaw/LAX Line is currently being tested by Metro and expected to be in operation by mid-2020, well before construction or operation of the proposed project.

VMT Analysis Findings

The following section provides a summary of the results of the VMT calculator analysis findings in the TAS.

As stated per the LADOT Transportation Analysis Guidelines (TAG), a new development would have a less-than-significant transportation impact if the project were to achieve an average daily VMT per capita that is 15% less than the Area Planning Commission's average daily VMT per Capita. If a project were to result in VMT rates that exceed the 15%-reduction threshold, the project would be inconsistent with statewide and local environmental and transportation policies and therefore, would result in a significant transportation impact. Initial results from the LADOT VMT calculator are shown in **Table 1**.

Table 1 Proposed Project Analysis Results (from VMT Calculator tool)

Analysis Results	
Total Employees: 145 Total Population: 975	
3,881 Daily Vehicle Trips 25,495 Daily VMT	
7.2 Household VMT per Capita N/A VMT per Employee	
Significant VMT Impact?	
Household > 6.0	Yes
Work > 11.6	N/A

The analysis shows the Proposed Project would result in a ***significant transportation impact for household VMT*** per capita. **However, the LADOT VMT Calculator does not account for the presence of the under-construction Metro Crenshaw/LAX Line (to be in operation in 2020, prior to project operation) as well as bus pull-outs and other station amenities that will effectively transform the Project Site and Metro site into a multi-modal transit hub for the area.**

Work VMT per Employee is not reported for projects in which the only commercial use is retail, since retail VMT impacts are not addressed by the VMT Calculator. The Project includes retail uses that do not exceed 50,000 square feet, and therefore meets the screening criteria and a ***no impact determination for VMT per employee*** can be made for the portion of the project that contains retail uses.

Additional Transit VMT Reductions

The *California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures, August 2010*[1] is a common resource for transportation practitioners to estimate a variety of VMT reduction credits. CAPCOA was used as a baseline to justify further reductions, and based on the evidence, an **11.1%** additional transit reduction is proposed based on the property's location and mix of uses. This VMT credit comes from a variety of CAPCOA transportation measures and is summarized in **Table 2**. While there is no research identified that specifically looks at the quantitative impact of transit facility improvement as a standalone strategy, it can be reasonably assumed based on substantial evidence and our expert opinion that the future rail and bus network in the immediate Project vicinity and the Los Angeles region as a whole will be drastically altered as part of multiple Metro projects under construction or funded and in progress. This is particularly apparent directly at the Project Site, where the future Crenshaw/LAX Line (scheduled to open in 2020) will intersect the existing Expo Line. This key transit hub will allow for residents to viably commute via transit in all directions throughout Los Angeles County, connecting to future transit lines such as the Purple Line extension as well as Los Angeles International Airport.

The following measures were used to quantify the additional reductions:

[1] *California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures, August 2010.* http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

TST-1 Provide a Bus Rapid Transit System

CAPCOA does not have a measure that quantifies reductions for an entirely new rail system, therefore TST-4: Provide a Bus Rapid Transit System was chosen as the description from CAPCOA includes BRT systems with fixed guideways. The effects of providing a new light rail line would be expected to match or be greater than that of a BRT system, therefore the maximum allowed reduction was applied. The description in CAPCOA follow, with matching features of the Crenshaw line in **bold**:

- **Grade-separated right-of-way**, including bus only lanes (for buses, emergency vehicles, and sometimes taxis), and other **Transit Priority measures**. Some systems use **guideways** which automatically steer the bus on portions of the route.
- **Frequent, high-capacity service**
- **High-quality vehicles that are easy to board, quiet, clean, and comfortable to ride.**
- **Pre-paid fare collection to minimize boarding delays.**
- **Integrated fare systems, allowing free or discounted transfers between routes and modes.**
- **Convenient user information and marketing programs.**
- **High quality** bus **stations with Transit Oriented Development in nearby areas.**
- **Modal integration**, with BRT **service coordinated with walking and cycling facilities, taxi services, intercity bus, rail transit, and other transportation services.**

TST-3 Expand Transit Network

The project will expand the local transit network by adding or modifying existing transit service to enhance the service near the project site. This will encourage the use of transit and therefore reduce VMT. The maximum reduction was applied, as the Crenshaw Line would directly connect the Expo Line with the Green line, allowing for connections throughout the LA Metro service area.

Other Grouped CAPCOA Strategies

The measures below are allowed when combined strategies are utilized. Additional expected reductions such as proximity of site to multiple transit facilities and expansion of network **(TST-3)**, described above.

TST-2 Implement Transit Access Improvements

This project will improve access to transit facilities through sidewalk/ crosswalk safety enhancements and bus shelter improvements. The benefits of Transit Access Improvements are applied because the site is proposed to be built directly above the future Crenshaw line access portal, and site design incorporates wider sidewalks and direct rail station access from entry and exit points of both the residential and mixed use retail uses in Site B, and access via a single pedestrian crossing through a nonmotorized pedestrian plaza from Site A.

TST-5 Provide Bike Parking Near Transit

Provide short-term and long-term bicycle parking near rail stations, transit stops, and freeway access points. The benefits of Station Bike Parking have no quantified impacts as a standalone strategy and should be grouped with Transit Network Expansion **(TST-3)** to encourage multimodal use in the area and provide ease of access to nearby transit for bicyclists.

The following table summarizes the CAPCOA measures applied to determine the proposed reduction. The mitigation measures quantified generally correspond to measures previously discussed in CAPCOA's earlier reports: *CEQA and Climate Change*; and *Model Policies for Greenhouse Gases in General Plans*. Following the

measure name is a cross-reference to the corresponding measure in other previously published CAPCOA reports. The term "MP#" refers to a measure in the Model Policies document. The term "CEQA#" refers to a measure in the CEQA and Climate Change report.

Table 2 CAPCOA VMT Reduction Measures

Transit Improvement Measure	VMT Reduction
CAPCOA TST-1: Provide a Bus Rapid Transit System (CEQA# MS-G3)	A = 3.2%
CAPCOA TST-3: Expand Transit Network (CEQA# MS-G3)	B = 8.2%
Grouped Strategies – Increases effectiveness, no VMT reduction applied	
CAPCOA TST-2: Implement Transit Access Improvements (MP#LU-3.4.3) CAPCOA TST-5: Provide Bike Parking Near Transit (CEQA MP# TR-4.1.4)	(Grouped strategies with TST-3)
Combined Additional Reductions to MXD Model X = 1 – (1-A) * (1-B)	X = 11.1376% (11.1% rounded)

CAPCOA Application to VMT Model

In the LADOT VMT Model, transit improvement strategies affect both home-based work (HBW) production and home based other (HBO) production trips and subsequent VMT calculations. The LADOT VMT Model's calculation methodology (**Table 3**) was carried forward in determining additional reduction factors due to the future transit conditions surrounding the Project Site. Data utilized from the original VMT Model outputs are outlined in red. With the above referenced reductions factored into the VMT tool, a manual recalculation of HBW and HBO VMT was conducted and applied to the overall VMT analysis. The adjusted VMT Calculator with additional **11.1% transit reduction** credit is displayed in **Table 4** along with the VMT Calculator's MXD and TDM adjustments. The transit reductions are highlighted in green, and the modified VMT calculations are highlighted in yellow. The summary of adjusted project and mitigated household VMT is shown in **Table 5**.

It is important to note that the CAPCOA methodology does include many other categorical VMT reduction applications, as well as an entirely standalone system of applying reductions with maximum values based on the urban context. This exercise does not fully utilize CAPCOA to assume VMT reductions to replace the LADOT VMT Model. Instead, this exercise applies specific transit improvement measures to complement and add to the LADOT VMT Model, as future transit service is not represented in the latest version of the model.

Applying the additional proposed VMT reduction along with existing reductions for MXD and TDM strategies proposed with the Project, the final household per capita VMT for the Project falls below the VMT impact threshold, and therefore results in no significant impact to household VMT (*Threshold T-2.1* is **not met**).

Table 3 MXD Worksheet from LADOT VMT Model

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: March 18, 2020
Project Name: Crenshaw Crossing
Project Scenario: Build
Project Address: 3606 EXPOSITION BLVD, 90016

Version 1.2

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	537	-29.2%	380	8.5	4,565	3,230
Home Based Other Production	1,437	-32.8%	966	5.7	8,191	5,506
Non-Home Based Other Production	760	-11.8%	670	7.6	5,776	5,092
Home-Based Work Attraction	210	-35.2%	136	10.3	2,163	1,401
Home-Based Other Attraction	2,004	-32.3%	1,356	5.5	11,022	7,458
Non-Home Based Other Attraction	904	-11.6%	799	7.0	6,328	5,593

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-19.7%	305	2,593	-19.7%	305	2,593
Home Based Other Production	-19.7%	775	4,420	-19.7%	775	4,420
Non-Home Based Other Production	-5.4%	634	4,815	-5.4%	634	4,815
Home-Based Work Attraction	-5.4%	129	1,325	-5.4%	129	1,325
Home-Based Other Attraction	-5.4%	1,282	7,053	-5.4%	1,282	7,053
Non-Home Based Other Attraction	-5.4%	756	5,289	-5.4%	756	5,289

MXD VMT Methodology Per Capita & Per Employee

Total Population: 975
Total Employees: 145
APC: South Los Angeles

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**7,013**	**7,013**
Total Home Based Work Attraction VMT	**1,325**	**1,325**
Total Home Based VMT Per Capita	**7.2**	**7.2**
Total Work Based VMT Per Employee	**N/A**	**N/A**

Table 4 Adjustment Calculations to LADOT VMT Model

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	CAPCOA Transit Reduction	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	537	-29.2%	-11.1%	320	8.5	4,565	2,722
Home Based Other Production	1,437	-32.8%	-11.1%	806	5.7	8,191	4,594
Non-Home Based Other Production	760	-11.8%	-	670	7.6	5,776	5,092
Home-Based Work Attraction	210	-35.2%	-	136	10.3	2,163	1,401
Home-Based Other Attraction	2,004	-32.3%	-	1,356	5.5	11,022	7,458
Non-Home Based Other Attraction	904	-11.6%	-	799	7.0	6,328	5,593

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-19.7%	257	2,185	-19.7%	257	2,185
Home Based Other Production	-19.7%	647	3,688	-19.7%	647	3,688
Non-Home Based Other Production	-5.4%	634	4,815	-5.4%	634	4,815
Home-Based Work Attraction	-5.4%	129	1,325	-5.4%	129	1,325
Home-Based Other Attraction	-5.4%	1,282	7,053	-5.4%	1,282	7,053
Non-Home Based Other Attraction	-5.4%	756	5,289	-5.4%	756	5,289

Table 5 Summary of Adjusted Household VMT

MXD Trip Type	Project VMT (Adjusted)	Mitigated VMT (Adjusted)
Home Based Work Production	2,185	2,185
Home Based Other Production	3,688	3,688
Total (rounded to neared mile)	5,873	5,873
Total Home Based VMT Per Capita (Population = 975)	6.0	6.0