

Memorandum

Date: November 3, 2023

To: Matt Simons, City of Lancaster
Benjamin Mitton, NorthPoint Development

From: Sarah Brandenburg, Biling Liu

Subject: Lancaster Fox Field East Industrial Development Project VMT Analysis

LA23-3482

Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Lancaster Fox Field East industrial development project (Project) in the City of Lancaster. This analysis compares Home-Based Work VMT per employee generated by the Project to the City's adopted threshold of 15% below Baseline VMT of the Antelope Valley. An impact will occur if the Project's Home-Based Work VMT per employee exceeds this threshold. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the Office of Planning and Research's (OPR) Technical Advisory, and the *City of Lancaster Department of Public Works Local Transportation Assessment Guidelines* (January 2021).

This memorandum is divided into four sections: Project Introduction, Modeling Methodology, VMT Analysis, and Conclusions.

Project Description

The Fox Field Commerce Center East development proposes a cold-storage warehouse building with a total of 1,227,596 square feet (sf) on vacant land in the northeast quadrant of 30th Street West and West Avenue G intersection in the City of Lancaster. The Project site has two unsignalized access driveways on 30th Street West. Both driveways are proposed to provide full access to and from the north and south on 30th Street West. **Figure 1** presents the site plan for the Project.

Modeling Methodology

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a travel demand forecasting model with socioeconomic and transportation network inputs, such as population, employment, and the regional and local roadway network, that estimates current travel behavior and forecasts future changes in travel demand. The SCAG model has 2012 as the base year and 2040 as the forecast year and can be used to estimate VMT for existing year 2023 conditions. The 2040 model contains the planned transportation improvements in the RTP and the growth projections in the SCS.

Table 1 presents the socioeconomic (SED) inputs for the Project. The Project employment was estimated from data provided by NorthPoint Development based on the expected operations of the site. The Fox Field East industrial development will have approximately 0.38 employees per thousand square feet, which equates to 466 employees on the Project site

Table 1: Project SED Inputs

Project TAZ SED	Employment
Project	466

When calculating VMT for a project, the VMT methodology should match the methodology used to establish the Baseline VMT metrics and impact thresholds. For non-residential projects in the City of Lancaster, Baseline VMT is defined as a measurement of Home-Based Work VMT per employee, which reflects all commute trips for places of employment within the Los Angeles County Antelope Valley Planning Area (Antelope Valley). All Home-Based Work auto vehicle VMT attracted by the Project is divided by the total employment to get the efficiency metric of Home-Based Work VMT per employee. Following the VMT analysis, the Home-Based Work VMT per employee of the Project was then compared to the Antelope Valley Baseline VMT to determine if it exceeds the City's impact threshold.

VMT Assessment

The Home-Based Work VMT per employee of the Project was calculated for the base year (2023) using the SCAG travel demand model. The year 2023 analysis shows how the VMT generated by the Project compares to current travel and VMT characteristics in the area. **Table 2** shows the Home-Based Work VMT per employee of the Project.

Table 2: Project VMT and VMT Threshold for Non-Residential Projects in Lancaster

VMT Metrics for Non-Residential Projects	Home-Based Work VMT per Employee
Project VMT Estimates (2023)	15.3
Antelope Valley Planning Area (AVPA) Baseline VMT (2023)	9.0
Threshold: 15% Below AVPA Baseline VMT	7.6
Percent Higher than VMT Threshold	100%
VMT Exceeds Threshold?	Yes

As shown above, the Project generates 15.3 Home-Based Work VMT per employee. In comparison to the City's threshold of 15% below Baseline VMT of the Antelope Valley, the Project is 7.7 Home-Based Work VMT per employee higher and will result in a VMT impact.

To mitigate the Project's VMT impact, approximately one-half of the Home-Based Work VMT per employee needs to be reduced to achieve the VMT threshold of 7.6 Home-Based Work VMT per employee as shown above in Table 2. To determine the total amount of VMT that exceeds the City's VMT threshold, the Project Home-Based Work VMT per employee was multiplied by the estimated employment of the Project (15.3 Home-Based Work VMT per employee as shown in Table 2 multiplied by 466 employees as shown in Table 1 which equates to 7,130 VMT as shown in Table 3). The City's VMT threshold for non-residential projects was then applied to the Project employment to determine the maximum amount of VMT that the Project would be allowed to generate without exceeding the City's threshold (7.6 VMT per employee as shown in Table 2 multiplied by 466 employees as shown in Table 1 which equates to 3,542 VMT as shown in Table 3). The Project VMT is then compared to the maximum allowable VMT based on the City's threshold and the excess VMT generated by the Project is used to determine the required VMT reduction. The VMT reduction required equates to 3,588 total VMT as shown in **Table 3**. The City recently adopted a \$150 per VMT mitigation fee under the VMT impact fee program. Therefore, the Project's VMT impacts will be reduced by contributing \$538,200 to the City's VMT impact fee program. This equates to a fee of approximately \$438.40 per KSF.

Table 3: VMT Reduction Required

Home-Based Work VMT for Non-Residential	Project VMT Estimate	VMT Threshold (15% below Baseline)	VMT Reduction Required
VMT / Employee	15.3	7.6	7.7
Project VMT	7,130	3,542	3,588
City of Lancaster VMT Impact Fee Program			
Mitigation Fee per VMT			\$150
Mitigation Fee			\$538,200
Building Size (SF)			1,227,596
Fee per KSF			\$438.40

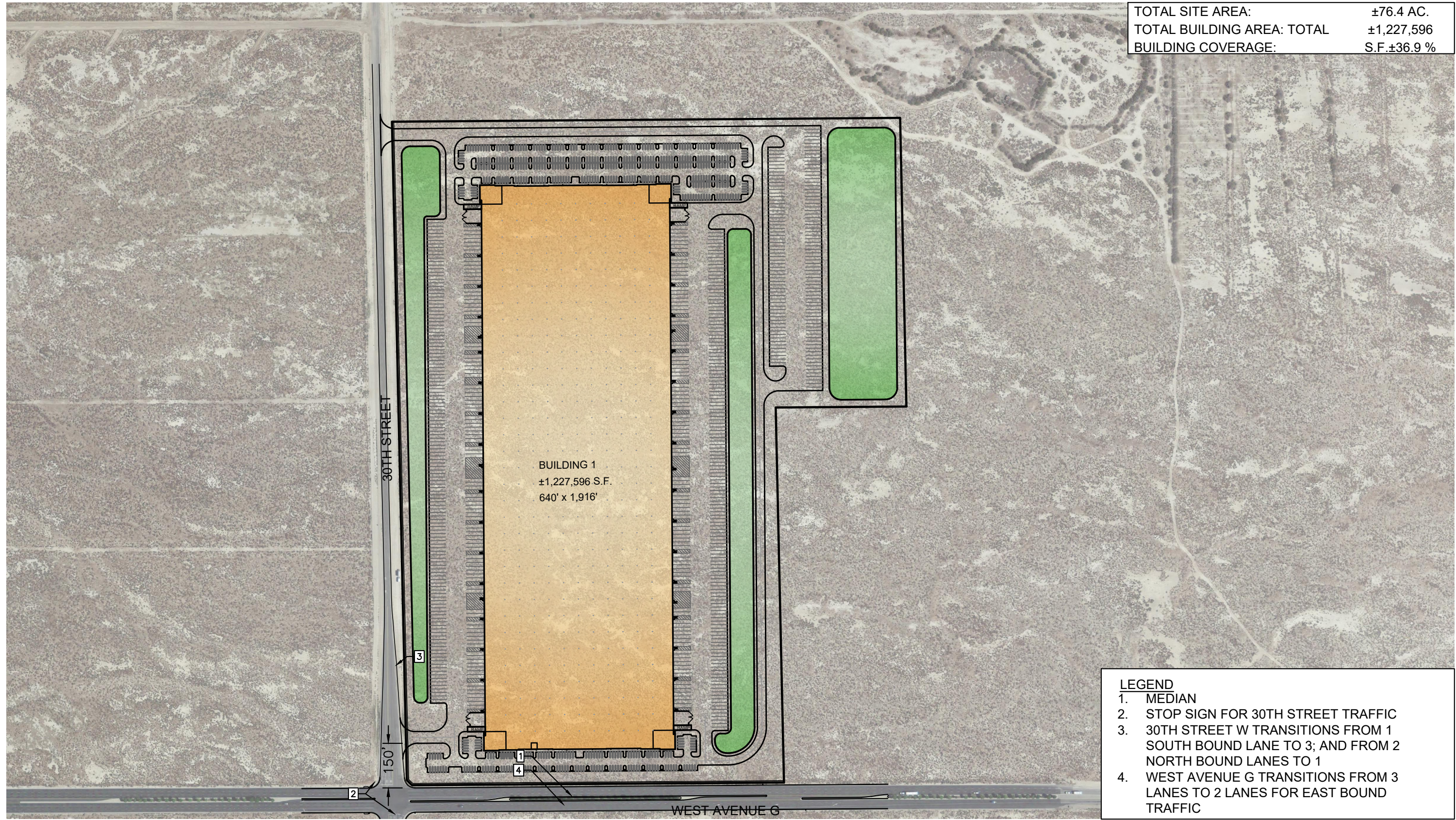
Conclusions

This technical memorandum documents the process to determine the potential VMT impacts of the proposed Fox Field East industrial development project with a cold-storage warehouse building in the City of Lancaster. The following summarizes the results of the VMT analysis:

- The VMT analysis for the Project is based on the City's guidance for transportation impacts. The VMT analysis methodology for the Project is consistent with the methodology used to establish the Baseline VMT metrics and impact thresholds for projects in the City of Lancaster.
- For non-residential projects in the City of Lancaster, the Home-Based Work VMT per employee is analyzed to determine the VMT impact. The Home-Based Work VMT per employee generated by the Project under base year (2023) is then compared to the Antelope Valley Baseline VMT.
- The Project generates 15.3 Home-Based Work VMT per employee which is approximately twice as high as the City's threshold. Therefore, the Project will result in a VMT impact.
- The Project's VMT impacts can be reduced by contributing to the City's recently adopted VMT impact fee program.
- The VMT reduction required by the Project results in a total VMT impact fee of \$538,200, which equates to a fee of approximately \$438.40 per KSF.



TOTAL SITE AREA:	±76.4 AC.
TOTAL BUILDING AREA: TOTAL	±1,227,596
BUILDING COVERAGE:	S.F.±36.9 %



LEGEND

1. MEDIAN
2. STOP SIGN FOR 30TH STREET TRAFFIC
3. 30TH STREET W TRANSITIONS FROM 1 SOUTH BOUND LANE TO 3; AND FROM 2 NORTH BOUND LANES TO 1
4. WEST AVENUE G TRANSITIONS FROM 3 LANES TO 2 LANES FOR EAST BOUND TRAFFIC



Figure 1
Project Site Plan