

Memorandum

Date: May 26, 2023
To: Matt Simons, City of Lancaster
Chandler Elliott, NorthPoint Development
From: Sarah Brandenburg, Biling Liu
Subject: **Lancaster Fox Field Commerce Center - West Warehouse Project VMT Analysis**

LA23-3445

Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Fox Field Commerce Center – West 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 – West industrial development proposes a warehouse building with 647,000 square feet (sf) on the vacant land north of West Avenue G and east of 45th Street West in the City of Lancaster, with access on West Avenue G and 45th Street West. **Attachment A** contains the project site plan.

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 current 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 Commerce Center - West development will have approximately 0.38 employees per thousand square feet.

Table 1: Project SED Inputs	
Project TAZ SED	Employment
Project	246

When calculating VMT for a project site, 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)	14.5
Antelope Valley Planning Area (AVPA) Baseline VMT (2023)	9.0
Threshold: 15% Below AVPA Baseline VMT	7.6
Percent Higher than VMT Threshold	90%
VMT Exceeds Threshold?	Yes

As shown above, the Project generates 14.5 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 6.9 Home-Based Work VMT per employee higher and will result in a VMT impact.

To mitigate the Project's VMT impact, the Home-Based Work VMT per employee needs to be reduced by 90% 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 (14.5 Home-Based Work VMT per employee as shown in Table 2 multiplied by 246 employees as shown in Table 1 which equates to 3,567 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 246 employees as shown in Table 1 which equates to 1,870 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 1,697 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 \$254,550 to the City's VMT impact fee program. This equates to a fee of approximately \$393 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	14.5	7.6	6.9
Project VMT	3,567	1,870	1,697
City of Lancaster VMT Impact Fee Program			
Mitigation Fee per VMT			\$150
Mitigation Fee			\$254,550
Building Size (SF)			647,000
Fee per KSF			\$393

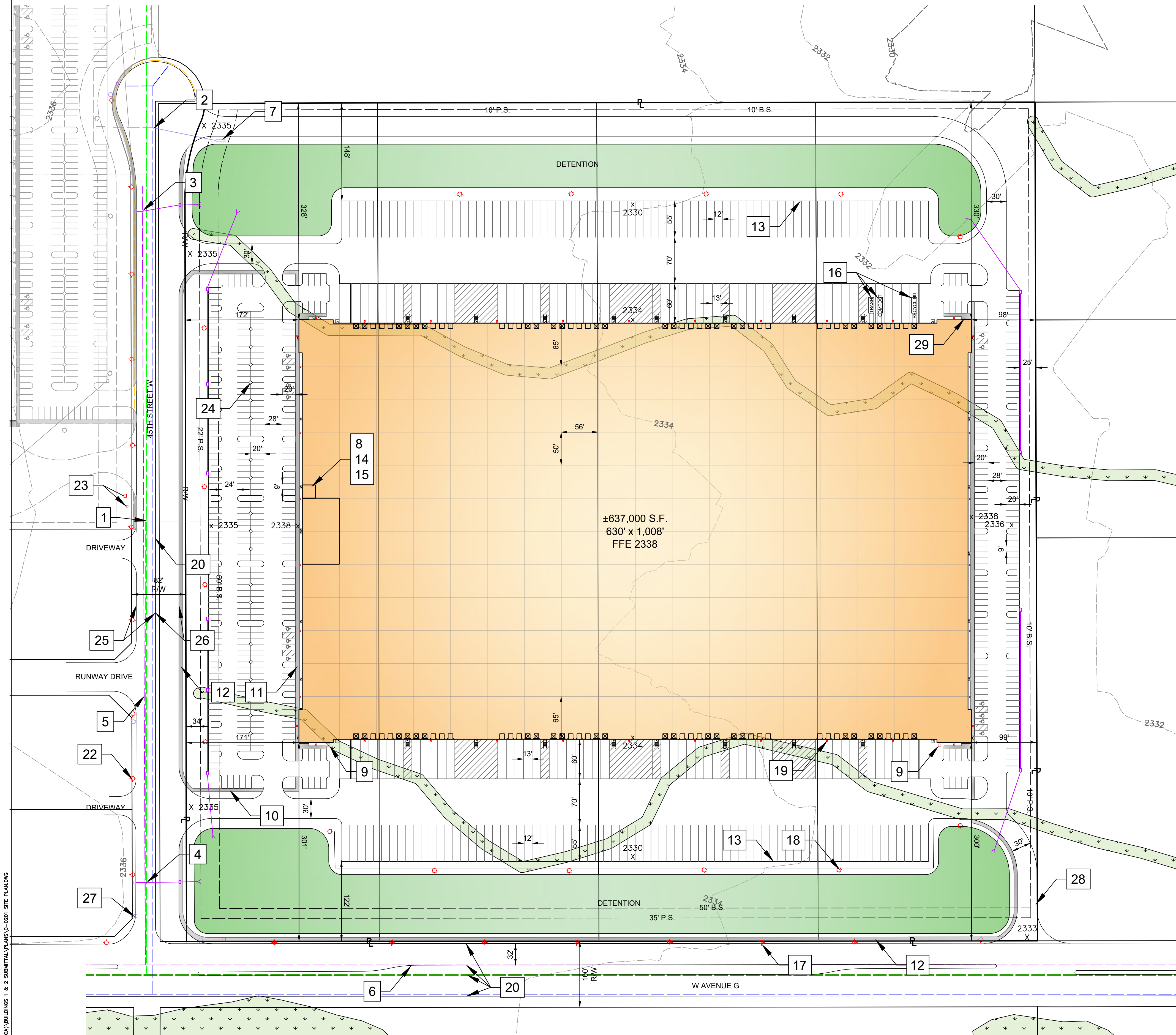
Conclusions

This technical memorandum documents the process to determine the potential VMT impacts of the proposed Fox Field Commerce Center – West industrial development project 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 14.5 Home-Based Work VMT per employee which is 90% higher than 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 \$254,550, which equates to a fee of approximately \$393 per KSF.

Attachment A: Project Site Plan

S:\01 PROJECTS\INDUSTRIAL\4320 FOX FIELD 70 (LANCASTER, CA)\BUILDINGS 1 & 2 SUBMITTAL\PLANS\C-0200 SITE PLAN.DWG



GENERAL NOTES

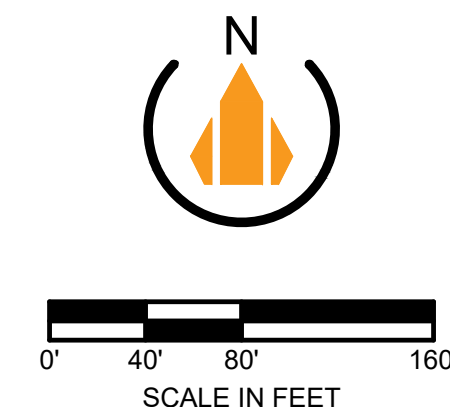
- THIS PLAN SHALL SERVE AS A PRELIMINARY PLAN.
- EXISTING CONDITIONS AND UTILITIES ARE INDICATED ON THE SITE PLAN.
- GENERAL CONFIGURATION OF PROPOSED LOTS AND TRACTS ARE AS INDICATED ON THE PLAN.
- PROPOSED CONTOURS, GRADES AND UTILITIES ARE SUBJECT TO FINAL ENGINEERING DESIGN AND APPROVAL BY CITY, PRIVATE UTILITY COMPANIES AND BUILDING PERMIT PLAN APPROVAL.
- INGRESS AND EGRESS TO EACH LOT WILL BE FROM A PUBLIC STREET AND/OR ACCESS EASEMENT.
- PRIVATE ACCESS EASEMENT AGREEMENTS FOR EACH LOT SHALL BE RECORDED AGAINST THE PROPERTY AS REQUIRED TO PROVIDE ACCESS.
- LOTS OR TRACTS ESTABLISHED BY THIS PLAN MAY BE FURTHER SUBDIVIDED BY APPLICATION FOR LOT SPLIT OR MINOR SUBDIVISION.
- ALL ROOFTOP MECHANICAL EQUIPMENT WILL BE SCREENED.
- PHOTOMETRIC PLAN WILL BE SUBMITTED AT A LATER DATE INDICATING PARKING LOT AND WALL MOUNTED LIGHTS AND LIGHT LEVELS AND STREET LIGHTS ALONG WILLIAM J BARNES AVENUE. STREET LIGHTS HAVE BEEN INSTALLED ALONG THE WEST SIDE OF 45TH STREET W. SIGNAGE PLAN WILL BE SUBMITTED AT A LATER DATE. SIGNS SHALL CONFORM WITH CITY OF LANCASTER CALIFORNIA ZONING REGULATIONS.
- GRADING PLAN WILL BE SUBMITTED AT A LATER DATE. PRELIMINARY SPOT ELEVATIONS INDICATED ON PLAN.
- STORM SEWER PLAN AND DRAINAGE STUDY WILL BE SUBMITTED AT A LATER DATE AND WILL INDICATE SIZES AND VOLUMES. PRELIMINARY STORM SEWER ALIGNMENT INDICATED ON PLAN.
- DETENTION BASIN TO BE OVER EXCAVATED FOR ONSITE BORROW AREA. PRELIMINARY PERCOLATION TESTS INDICATE PERCOLATION RATES FROM 1.5-2.2" PER HOUR. BASIN WILL BE DESIGNED WITH A CONNECTION TO EXISTING STORM SEWER AND TO PERCOLATE INTO THE GROUND.
- LANDSCAPING PLANS WILL BE SUBMITTED AT A LATER DATE. IT WILL INDICATE PARKING LOT SHADING OF 50% AFTER 15 YEARS OF TREE GROWTH.
- GROUND MOUNTED EQUIPMENT SHALL BE SCREENED.
- WETLANDS INDICATED PER NWI MAP, FURTHER STUDY REQUIRED.
- SITE PLAN IS BASED ON GIS DATA, NOT SURVEYED DATA

LEGEND

- CONNECT TO EXISTING 15" CVP SANITARY SEWER
- CONNECT TO EXISTING 16" STL WATER MAIN
- CONNECT TO EXISTING 15" STORM SEWER
- CONNECT TO EXISTING 36" STORM SEWER
- EXISTING 36" STORM SEWER
- EXISTING 48" STORM SEWER
- WATER VAULT - METER AND BACKFLOW PREVENTER
- FIRE PUMP ROOM
- TRANSFORMER
- 5' SIDEWALK (PRIVATE)
- 6' SIDEWALK (PRIVATE)
- 5' SIDEWALK (PUBLIC)
- RIBBON CURB TO ALLOW SURFACE FLOW TO DETENTION BASIN
- ROOF ACCESS FROM INSIDE THE BUILDING IS FROM WITH THE FIRE PUMP ROOM
- SWITCH/ELECTRONIC GEAR WILL BE LOCATED ADJACENT TO FIRE PUMP ROOM
- COMPACTORS SHALL BE PROVIDED FOR TRASH, COMPOST, AND RECYCLING
- PROPOSED STREET LIGHT
- PARKING LOT LIGHT
- BUILDING MOUNTED LIGHT
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- EXISTING STREET LIGHT
- EXISTING TRANSFORMER
- DIAMOND ISLAND FOR TREES
- EXISTING 45TH STREET - 30" CURB ON WEST SIDE AND EDGE OF PAVEMENT ON THE EAST SIDE
- CONSTRUCT EAST HALF OF 45TH STREET W - TOTAL WIDTH 64'
- FIRE HYDRANT
- ACCESS EASEMENT
- BIKE PARKING (12 BIKES)

CITY OF LANCASTER REQUIREMENTS		
CURRENT ZONING:	SP-9501	
PROPOSED ZONING:	SP-9501	
PROPOSED USES:	WAREHOUSE AND COLD STORAGE	
SITE CONSTRAINTS	BUILDING 1	
	REQUIRED	PROVIDED
BUILDING HEIGHT:	NONE	50'
CAR PARKING DIMENSIONS:	9 x 20'	9' X 20'
DRIVE AISLE WIDTH (MIN.):	20'/28' *	20'/28' *
BUILDING SETBACKS		
FRONT - W AVENUE G:	50' **	300'
FRONT - 45th STREET W	50' **	171'
SIDE (NORTH):	10'	328'
REAR (EAST):	10'	98'
PARKING SETBACKS		
FRONT - W AVENUE G:	35'	122'
FRONT - 45TH STREET W	22'	34'
SIDE (NORTH):	10'	148'
REAR (EAST):	10'	25'
DEVELOPMENT DATA		
BUILDING DATA		
LOT AREA (AC.):	37.5 AC.	
RIGHT-OF-WAY DEDICATION (SF):	0 AC.	
NET SITE AREA (AC.):	37.5 AC.	
BUILDING AREA (SF):	637,000 SF	
BUILDING COVERAGE:	39.0%	
LANDSCAPED AREA:	6.6 AC.	
LANDSCAPED COVERAGE:	17.6%	
DOCKS:	48	
KNOCKOUTS:	46	
PARKING DATA		
	REQUIRED	PROVIDED
(1) INDUSTRIAL REQUIREMENT (STALLS):	128	443
(2) BICYCLE PARKING:	45	48
ADA PARKING (STALLS):	9	14
TRAILER PARKING (STALLS):		148
(4) ELECTRIC CAR CHARGING STATION (EV):		
REQUIRED EV STALLS:	89	89
EVCS CAPABLE STALLS:	22	22
(1) INDUSTRIAL REQUIREMENT (STALLS): 5 PARKING STALLS FOR 25,000 SF; AND 1 PARKING STALL PER EACH ADDITIONAL 5,000 SF		
(2) BICYCLE PARKING: 1 BICYCLE SPACE PER 10 EMPLOYEES		
**28' WIDE FIRE ACCESS		
**50' SETBACK DUE TO BUILDING HEIGHT OVER 35' TALL AND BUILDING LENGTH LONGER THAN 150'		

LEGEND	
GENERAL	
	WETLANDS
2332 X	PROPOSED SPOT ELEVATIONS
EASEMENTS & SETBACKS	
B.S.	BUILDING SETBACK
R/W	RIGHT OF WAY
PL	PROPERTY LINE
P.S.	PARKING SETBACK
UTILITIES	
	EXISTING NATURAL GAS MAIN
	EXISTING POWER/ELECTRIC LINE
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
CONTOURS	
	EXISTING INDEX CONTOURS
	EXISTING INTERMEDIATE CONTOURS



NorthPoint™
DEVELOPMENT

REVISIONS/APPROVALS:

NO.:

DATE:

2023.02.10

REVIEWED BY:

JAMES KRAATZ

DESIGNED BY:

JAMES KRAATZ

DRAFTED BY:

ALEX EDWARDS

SP PROJECT #:

4320

BUILDING 2 SITE PLAN

FOX FIELD COMMERCE
CENTER - WEST (FFCC-W)
CITY SUBMITTAL

LANCASTER, LOS ANGELES COUNTY, CA

SHEET #:

C-0200