MEMORANDUM

URBAN | CROSSROADS

DATE: February 27, 2024
TO: Tracy Zinn, T&B Planning, Inc.
FROM: Charlene So, Urban Crossroads
JOB NO: 13796-07 TG Memo

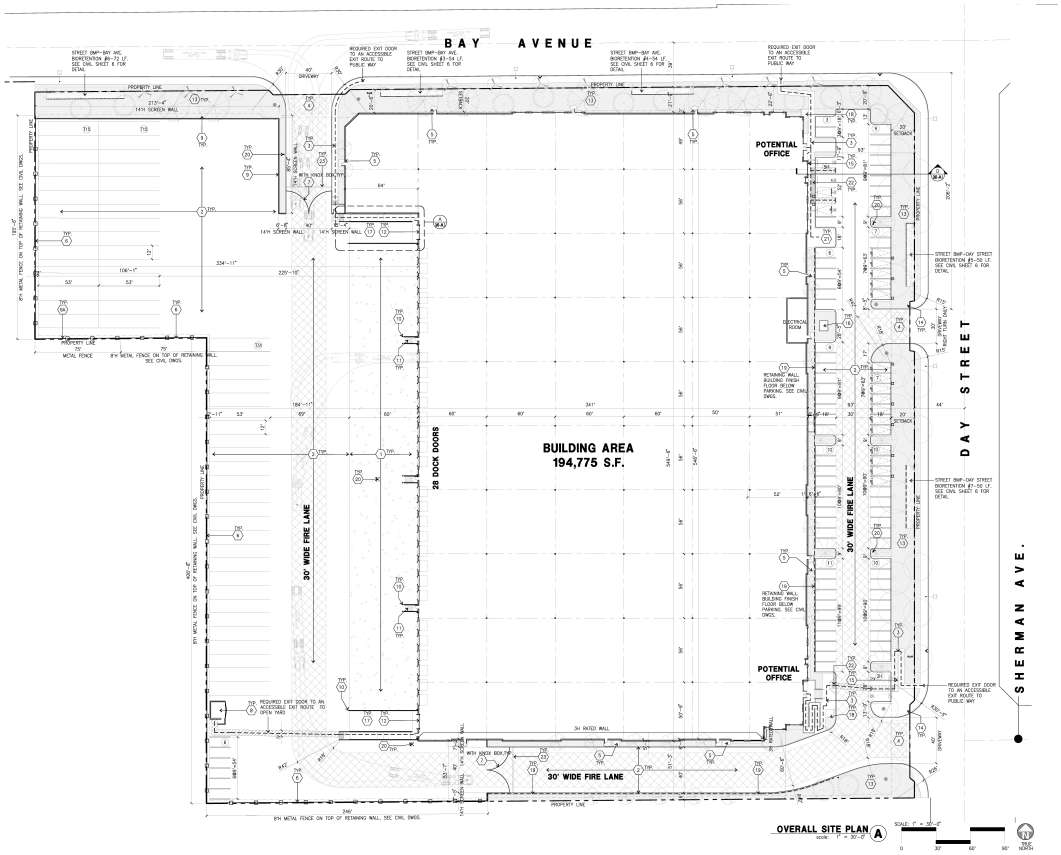
BAY & DAY COMMERCE CENTER TRIP GENERATION ASSESSMENT

Urban Crossroads, Inc. is pleased to provide the following Trip Generation Assessment for Bay & Day Commerce Center development (**Project**) which is located on the southwestern corner of Day Street and Bay Avenue in the City of Moreno Valley. The purpose of this work effort is to determine whether additional traffic analysis is necessary for the proposed Project based on the City of Moreno Valley's Traffic Impact Analysis (**TIA**) Preparation Guide for Vehicle Miles Traveled (**VMT**) and Level of Service (**LOS**) Assessment (June 2020) (**City Guidelines**).

PROPOSED PROJECT

The Project is proposed to consist of a 194,775 square foot warehouse building (75% general warehousing use and 25% high-cube cold storage warehouse use). A preliminary site plan is shown on Exhibit 1. There are three points of access proposed for the Project. The driveway on Bay Avenue will serve trucks only. The northerly driveway on Day Street will serve passenger cars only and the southerly driveway (which will align with Sherman Avenue) will serve both passenger cars and trucks.

EXHIBIT 1: PRELIMINARY SITE PLAN



TRIP GENERATION

The trip generation rates used for this assessment are based on the trip-generation statistics published in the latest Institute of Transportation Engineers (**ITE**) Trip Generation Manual, (11th Edition, 2021) (see Table 1). The following summarizes the proposed land uses and vehicle mixes:

- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for up to 146,081 square feet. The vehicle mix has also been obtained from the ITE Trip Generation Manual Supplement (2021). The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (**SCAQMD**) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.
- ITE land use code 157 (High-Cube Cold Storage Warehouse) has been used to derive site specific trip generation estimates for up to 48,694 square feet. High-cube cold storage warehouses include warehouses characterized by the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. High-cube cold storage warehouses are facilities typified by temperature-controlled environments for frozen food or other perishable products. The High-Cube Cold Storage Warehouse vehicle mix (passenger cars versus trucks) has also been obtained from the ITE's Trip Generation Manual (2021). The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 34.7%; 3-Axle = 11.0%; 4+-Axle = 54.3%.

TABLE 1: TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars (AM=88.2%, PM=83.3%, Daily=64.9%)			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (AM=1.97%, PM=2.79%, Daily=5.86%)			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks (AM=2.44%, PM=3.46%, Daily=7.27%)			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks (AM=7.39%, PM=10.45%, Daily=21.97%)			0.007	0.006	0.013	0.010	0.009	0.019	0.376
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars (AM-72.7%, PM-75.0%, Daily-64.6%)			0.076	0.004	0.080	0.019	0.071	0.090	1.370
2-Axle Trucks (AM-9.5%, PM-8.7%, Daily-12.3%)			0.003	0.007	0.010	0.005	0.005	0.010	0.260
3-Axle Trucks (AM-3.0%, PM-2.8%, Daily-3.9%)			0.001	0.002	0.003	0.002	0.001	0.003	0.083
4+-Axle Trucks (AM-14.8%, PM-13.6%, Daily-19.2%)			0.005	0.011	0.016	0.008	0.008	0.016	0.407
Passenger Car Equivalent (PCE) Trip Generation Rates									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (PCE = 1.5)			0.003	0.002	0.005	0.005	0.003	0.008	0.150
3-Axle Trucks (PCE = 2.0)			0.004	0.004	0.008	0.006	0.006	0.012	0.248
4+-Axle Trucks (PCE = 3.0)			0.021	0.017	0.038	0.030	0.026	0.056	1.127
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars			0.076	0.004	0.080	0.019	0.071	0.090	1.370
2-Axle Trucks (PCE = 1.5)			0.005	0.011	0.016	0.008	0.008	0.016	0.390
3-Axle Trucks (PCE = 2.0)			0.002	0.005	0.007	0.004	0.003	0.007	0.165
4+-Axle Trucks (PCE = 3.0)			0.015	0.034	0.049	0.024	0.025	0.049	1.222

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] TSF = thousand square feet

[3] Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.
Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project in actual vehicles are shown on Table 2. The proposed Project is anticipated to generate a total of 358 two-way trips per day with 29 AM peak hour trips and 28 PM peak hour trips. The City's Guidelines require that truck intensive uses translate heavy truck trips to passenger car equivalents (**PCE**) for the purposes of any operations analyses. The Project is anticipated to generate 542 PCE two-way trips per day, with 37 PCE AM peak hour trips and 39 PCE PM peak hour trips.

FINDINGS

The Project is anticipated to generate fewer than 50 peak hour trips (both actual and PCE based). As such, a level of service (**LOS**) based traffic analysis is not required for this Project based on the City's Guidelines. The City's traffic scoping form is provided in Attachment A. If you have any questions or comments, I can be reached at cso@urbanxroads.com.

TABLE 2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:									
Warehousing	146.081	TSF							
Passenger Cars:			18	4	22	5	17	22	162
2-axle Trucks:			0	0	0	0	0	0	16
3-axle Trucks:			0	0	0	0	0	0	18
4+-axle Trucks:			1	1	2	1	1	2	56
Total Truck Trips (Actual Vehicles):			1	1	2	1	1	2	90
Warehousing Subtotal Trips (Actual Vehicles)[2]			19	5	24	6	18	24	252
High-Cube Cold Storage Warehouse	48.694	TSF							
Passenger Cars:			4	0	4	1	3	4	68
2-axle Trucks:			0	0	0	0	0	0	14
3-axle Trucks:			0	0	0	0	0	0	4
4+-axle Trucks:			0	1	1	0	0	0	20
Total Truck Trips (Actual Vehicles):			0	1	1	0	0	0	38
Cold Storage Subtotal Trips (Actual Vehicles)[2]			4	1	5	1	3	4	106
Passenger Cars			22	4	26	6	20	26	230
Trucks			1	2	3	1	1	2	128
Project Total Trips (Actual Vehicles)[2]			**23**	**6**	**29**	**7**	**21**	**28**	**358**
Passenger Car Equivalent (PCE):									
Warehousing	146.081	TSF							
Passenger Cars:			18	4	22	5	17	22	162
2-axle Trucks:			0	0	0	1	0	1	22
3-axle Trucks:			1	1	2	1	1	2	36
4+-axle Trucks:			3	2	5	4	4	8	166
Total Truck Trips (PCE):			4	3	7	6	5	11	224
Warehousing Subtotal Trips (PCE)[2]			22	7	29	11	22	33	386
High-Cube Cold Storage Warehouse	48.694	TSF							
Passenger Cars:			4	0	4	1	3	4	68
2-axle Trucks:			0	1	1	0	0	0	20
3-axle Trucks:			0	0	0	0	0	0	8
4+-axle Trucks:			1	2	3	1	1	2	60
Total Truck Trips (PCE):			1	3	4	1	1	2	88
Cold Storage Subtotal Trips (PCE)[2]			5	3	8	2	4	6	156
Passenger Cars			22	4	26	6	20	26	230
Trucks			5	6	11	7	6	13	312
Project Total Trips (PCE)[2]			**27**	**10**	**37**	**13**	**26**	**39**	**542**

[1] TSF = thousand square feet

[2] Total Trips = Passenger Cars + Truck Trips.

ATTACHMENT A: CITY OF MORENO VALLEY PROJECT SCOPING FORM

EXHIBIT A

Project Scoping Form

This scoping form shall be submitted to the Lead Agency to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	PEN23-0074 through PEN23-0077
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Bay & Day Commerce Center
Project Address:	Southwest corner of Day Street and Bay Avenue
Project Opening Year:	
Project Description:	146,081 square feet of warehousing use and 48,694 square feet of high-cube cold storage warehouse use (total of 194,775 SF)

	Consultant:	**Developer:** (Representative)
Name:	Charlene So, Urban Crossroads, Inc.	David Ornelas, T&B Planning, Inc.
Address:		
Telephone:	949-861-0177	619-501-6041
Email:	cso@urbanxroads.com	

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11th Edition (2021)

Current General Plan Land Use: Business Park (BP)

Proposed General Plan Land Use: Business Park (BP)

Current Zoning: Business Park (BP)

Proposed Zoning: Business Park (BP)

	Existing Trip Generation			Proposed Trip Generation (PCE)		
	In	Out	Total	In	Out	Total
AM Trips				27	10	37
PM Trips				13	26	39

Trip Internalization: ☐ Yes ☑ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☑ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses (see Page 3 of the guidelines related to LOS assessment and Pages 22-23 for VMT screening criteria).

Is the project screened from LOS assessment? ☑ Yes ☐ No

LOS screening justification (see Page 3 of the guidelines): Project is anticipated to generate less than 100 peak hour trips.

Is the project screened from VMT assessment? ☑ Yes ☐ No

VMT screening justification (see Pages 22-23 of the guidelines): The Project is anticipated to generate fewer than 400 daily trips and is therefore screened from VMT analysis by Project Type Screening

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
N/A %	N/A %	N/A %	N/A %

Link level of service and data collection:

____ will be required — Based on the proposed trip generation, proposing a trip generation assessment only (no operations analysis required)

X___ will not be required

- Attach list of study intersections (and roadway segments if applicable)
- Attach site plan
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other ____
- Date of Traffic Counts Not Applicable
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used Not Applicable
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)