

January 9, 2020

Ms. Tracy Zinn  
T&B Planning, Inc.  
3200 El Camino Real, Suite 100  
Irvine, CA 92602

**SUBJECT: CHERRY DISTRIBUTION FACILITY TRIP GENERATION ASSESSMENT**

Dear Ms. Tracy Zinn:

Urban Crossroads, Inc. is pleased to provide the following Trip Generation Assessment for Cherry Distribution Facility development which is located on the northeast corner of Cherry Avenue and Santa Ana Avenue in the City of Fontana. The purpose of this work effort is to assess the potential changes in trip generation associated with the proposed Project as compared to the approved use per the Southwest Industrial Park (SWIP) Specific Plan in support of the proposed addendum.

**PROPOSED PROJECT**

The Project is proposed to consist of a 193,433 square foot building with up to 10 percent of refrigeration. As such, the trip generation rates used for this analysis are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual (10<sup>th</sup> Edition, 2017) for the proposed high-cube cold storage warehouse use (ITE Land Use Code 157) (see Table 1). The following summarizes the proposed land use and vehicle mix:

- **High-Cube Cold Storage Warehouse (ITE Land Use Code 157):** The truck percentage was obtained from the ITE's High Cube Warehouse Vehicle Trip Generation Analysis (October 2016). The vehicle mix varies by peak hour and overall daily: 69.2% passenger cars in the AM peak hour, 78.3% passenger cars in the PM peak hour, and 67.8% passenger cars weekday daily. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. For the purposes of this analysis, the percentage of trucks, by axle type, were obtained from the SCAQMD Warehouse Truck Trip Study Data Results and Usage presentation (2014) recommended truck mix (see attached). The SCAQMD has recently performed surveys of existing facilities and compiled the data to provide interim guidance on the mix of heavy trucks for these types of high-cube warehousing/distribution facilities. Based on this interim guidance from the SCAQMD, the following truck fleet mix was utilized for the purposes of estimating the truck trip generation for the site (with cold storage): 34.7% of the total trucks as 2-axle trucks, 11.0% of the total trucks as 3-axle trucks, and 54.3% of the total trucks as 4+-axle trucks.

**TABLE 1: TRIP GENERATION RATES**

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Actual Vehicle Trip Generation Rates</b>									
High-Cube Cold Storage Warehouse <sup>3</sup>	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars (AM-69.2%; PM-78.3%; Daily-67.8%)			0.059	0.018	0.076	0.025	0.069	0.094	1.437
2-Axle Trucks (AM-10.69%; PM-7.53%; Daily-11.17%)			0.009	0.003	0.012	0.002	0.007	0.009	0.237
3-Axle Trucks (AM-3.39%; PM-2.39%; Daily-3.54%)			0.003	0.001	0.004	0.001	0.002	0.003	0.075
4-Axle+ Trucks (AM-16.76%; PM-11.80%; Daily-17.52%)			0.014	0.004	0.018	0.004	0.010	0.014	0.371
<b>Passenger Car Equivalent (PCE) Trip Generation Rates</b>									
High-Cube Cold Storage Warehouse <sup>3</sup>	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars (AM-69.2%; PM-78.3%; Daily-67.8%)			0.059	0.018	0.076	0.025	0.069	0.094	1.437
2-Axle Trucks (AM-10.69%; PM-7.53%; Daily-11.17%) (PCE = 1.5)			0.014	0.004	0.018	0.004	0.010	0.014	0.355
3-Axle Trucks (AM-3.39%; PM-2.39%; Daily-3.54%) (PCE = 2.0)			0.006	0.002	0.007	0.002	0.004	0.006	0.150
4-Axle+ Trucks (AM-16.76%; PM-11.80%; Daily-17.52%) (PCE = 3.0)			0.043	0.013	0.055	0.011	0.031	0.042	1.114

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

<sup>2</sup> TSF = thousand square feet

<sup>3</sup> Vehicle Mix Source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE.

Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type for high-cube warehouse.

PCE rates are per SBCTA.

The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project in actual and passenger car equivalent (PCE) vehicles are shown on Table 2. As shown in Table 2, the proposed distribution facility is anticipated to generate a net total of 594 PCE trip-ends per day with 29 PCE AM peak hour trips and 30 PCE PM peak hour trips.

**TABLE 2: PROPOSED PROJECT TRIP GENERATION SUMMARY**

Land Use	Quantity	Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Actual Vehicle Trip Generation Summary</b>									
Cherry Distribution Facility	193,433	TSF							
Passenger Cars:			11	3	14	5	13	18	278
Truck Trips:									
2-axle:			2	1	3	0	1	1	46
3-axle:			1	0	1	0	0	0	16
4+axle:			3	1	4	1	2	3	72
- Truck Trips			6	2	8	1	3	4	134
<b>TOTAL TRIPS (Actual)</b>			<b>17</b>	<b>5</b>	<b>22</b>	<b>6</b>	<b>16</b>	<b>22</b>	<b>412</b>
<b>Passenger Car Equivalent (PCE) Trip Generation Summary</b>									
Cherry Distribution Facility	193,433	TSF							
Passenger Cars:			11	3	14	5	13	18	278
Truck Trips:									
2-axle:			3	1	4	1	2	3	70
3-axle:			1	0	1	0	1	1	30
4+axle:			8	2	10	2	6	8	216
- Truck Trips			12	3	15	3	9	12	316
<b>TOTAL TRIPS (PCE)</b>			<b>23</b>	<b>6</b>	<b>29</b>	<b>8</b>	<b>22</b>	<b>30</b>	<b>594</b>

<sup>1</sup> TSF = thousand square feet

**CURRENTLY APPROVED PROJECT**

The Project site is located within the Slover Central Manufacturing District (SCD) of the SWIP. The SCD is proposed to provide opportunities for light and heavy manufacturing/warehousing uses that are supported by trucking routes and the existing rail spur. The SCD is generally bounded by Slover Avenue and the I-10 Freeway to the north, Cherry Avenue to the west, Beech Avenue to the east, and midway between Santa Ana Avenue and Jurupa Avenue to the south. The SWIP included the development of approximately 1,113,002 square feet of manufacturing and 2,597,004 square feet of warehousing uses for a total of 3,710,006 square feet. As shown in Table 3, the SWIP Project Traffic Analysis (prepared by RBF Consulting, September 29, 2011) concluded that the SCD would generate 12,106 trips per day, with 1,435 trips generated during the AM peak hour and 1,473 trips generated during the PM peak hour. A trip generation rate for uses within the SCD has been developed by dividing the trip generation by the proposed 3,710,006 square feet of future development. As such, based on the trip generation rates for the currently approved use within the SCD, the Project is anticipated to generate 632 trips per day, with 74 trips generated during the AM peak hour and 77 trips generated during the PM peak hour (see Table 3).

**TABLE 3: CURRENTLY APPROVED LAND USE TRIP GENERATION SUMMARY**

Land Use	Quantity	Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Slover Central Manufacturing District (SCD)</b>									
Slover Central Manufacturing District (SCD) <sup>2</sup>	3,710.006	TSF	1,139	296	1,435	453	1,020	1,473	12,106
<b>SCD Specific Trip Generation Rates</b>									
SCD		TSF							
			0.31	0.08	0.39	0.12	0.27	0.40	3.26
<b>Slover Central Manufacturing District (SCD)</b>									
Proposed Project	193.433	TSF							
			59	15	74	24	53	77	632

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> Source: SWIP Project Traffic Analysis, RBF Consulting, September 29, 2011.

**PROJECT TRIP GENERATION COMPARISON**

As shown in Table 4, the development of the proposed Project is anticipated to generate 38 fewer PCE trip-ends per day with 45 fewer PCE AM and 47 fewer PCE PM peak hour trips as compared to the currently approved use within the SCD. The same comparison was made for actual vehicles, where the Project is anticipated to generate 220 fewer trip-ends per day with 52 fewer AM and 55 fewer PM peak hour trips as compared to the currently approved use within the SCD (see Table 4).

**TABLE 4: TRIP GENERATION COMPARISON**

Project	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
<b>Trip Generation Comparison (Actual Vehicles)</b>							
Cherry Distribution Facility							
Approved Project (SCD)	59	15	74	24	53	77	632
Proposed Project (High-Cube Cold Storage)	17	5	22	6	16	22	412
<b>Variance</b>	<b>-42</b>	<b>-10</b>	<b>-52</b>	<b>-18</b>	<b>-37</b>	<b>-55</b>	<b>-220</b>
<b>Trip Generation Comparison (PCE)</b>							
Cherry Distribution Facility							
Approved Project (SCD)	59	15	74	24	53	77	632
Proposed Project (High-Cube Cold Storage in PCE)	23	6	29	8	22	30	594
<b>Variance</b>	<b>-36</b>	<b>-9</b>	<b>-45</b>	<b>-16</b>	<b>-31</b>	<b>-47</b>	<b>-38</b>

**CONCLUSION**

As the proposed Project is anticipated to result in a net reduction to the AM, PM, and daily trips in comparison to that evaluated for the currently approved development within the SCD, the impacts are anticipated to be the same or less than those previously identified at off-site study area intersections. Therefore, no additional traffic-related impacts are anticipated as a result of the proposed Project. If you have any questions, please contact me directly at (949) 336-5982.

Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE  
Associate Principal

# SCAQMD Warehouse Truck Study Truck Fleet Mix

Grouping	All Trucks	Actual %		
		2-Axle	3-Axle	4+ Axle
SCAQMD Composite	31.0%	6.8%	5.5%	18.7%
With Cold Storage	44.7%	15.5%	4.9%	24.3%
Without Cold Storage	27.5%	4.6%	5.7%	17.2%
Fontana Study	20.4%	3.5%	4.6%	12.3%

Grouping	All Trucks	Normalized %		
		2-Axle	3-Axle	4+ Axle
SCAQMD Composite	31.0%	21.9%	17.7%	60.3%
With Cold Storage	44.7%	34.7%	11.0%	54.4%
Without Cold Storage	27.5%	16.7%	20.7%	62.5%
Fontana Study	20.4%	17.2%	22.5%	60.3%

## Exhibit B

### SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Fontana Engineering Department requirements for traffic impact analysis of the following project. The analysis must follow the SBCTA Congestion Management Plan (CMP) Guidelines Updated 2016.

Case No. (i.e. TR, PM, CUP, PP)  
 Related Cases -  
 SP No. \_\_\_\_\_  
 EIR No. \_\_\_\_\_  
 GPA No. \_\_\_\_\_  
 CZ No. \_\_\_\_\_  
 Project Name: Cherry Distribution Facility  
 Project Address: NEC of Cherry Avenue & Santa Ana Avenue  
 Project Description: 193,433 square foot high-cube warehouse with cold storage

	<u>Consultant</u>	<u>Developer</u>
Name:	<u>Charlene So - Urban Crossroads, Inc.</u>	<u>Black Creek Group</u>
Address:	<u>260 E. Baker Street, Suite 200</u> <u>Costa Mesa, CA 92626</u>	<u>4675 MacArthur Court, Suite 265</u> <u>Newport Beach, CA 92660</u>
Telephone:	<u>949-336-5982</u>	<u>949-892-4900</u>
Fax:	_____	_____

**A. Trip Generation Source:** (ITE 10th Edition)

Current GP Land Use	<u>SCD</u>	Proposed Land Use	<u>SCD</u>
Current Zoning	<u>SWIP</u>	Proposed Zoning	<u>SWIP</u>
Current Trip Generation	Proposed Trip Generation		
In                      Out                      Total	In	Out	Total
AM Trips	<u>                    </u>	<u>                    </u>	<u>                    </u>
PM Trips	<u>                    </u>	<u>                    </u>	<u>                    </u>
Internal Trip Allowance	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	( _____ % Trip Discount)
Pass-By Trip Allowance	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	( _____ % Trip Discount)

A pass-by trip discount is allowed for appropriate land uses per ITE trip generation handbook 3rd edition. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure. (Attach table for detailed trip generation)

**B. Trip Geographic Distribution:** N Vari<sub>±</sub> %    S Vari<sub>±</sub> %    E Vari<sub>±</sub> %    W Vari<sub>±</sub> %  
 (attach exhibit for detailed assignment)

**C. Background Traffic**

Project Opening & Future Build-Out Year: \_\_\_\_\_ Annual Ambient Growth Rate: 1.38 %

Phase Year(s) No Phasing

Other area projects to be analyzed: N/A

Model/Forecast methodology N/A

Exhibit B – Scoping Agreement – Page 2

**D. Study intersections:** (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- |               |           |
|---------------|-----------|
| 1. <u>N/A</u> | 6. _____  |
| 2. _____      | 7. _____  |
| 3. _____      | 8. _____  |
| 4. _____      | 9. _____  |
| 5. _____      | 10. _____ |

**E. Study Roadway Segments:** (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- |               |           |
|---------------|-----------|
| 1. <u>N/A</u> | 6. _____  |
| 2. _____      | 7. _____  |
| 3. _____      | 8. _____  |
| 4. _____      | 9. _____  |
| 5. _____      | 10. _____ |

**E. Other Jurisdictional Impacts**

Is this project within a City’s Sphere of Influence or one-mile radius of City boundaries?  Yes  No

If so, name of City Jurisdiction: Caltrans (I-10 Freeway @ Cherry Avenue)

**F. Site Plan** (please attach reduced copy)

**G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)** (To be filled out by Engineering Department)

(NOTE: If the traffic study states that “a traffic signal is warranted” (or “a traffic signal appears to be warranted,” or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

**H. Existing Conditions**

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.  
Date of counts \_\_\_\_\_

**Recommended by:**

Charlene S  
\_\_\_\_\_  
Consultant’s Representative                      Date      1/9/2020

**Approved Scoping Agreement:**

\_\_\_\_\_  
City of Fontana Traffic Engineer                      Date

Scoping Agreement Submitted on 1/9/2020

Revised on \_\_\_\_\_