SCOPE FOR TRAFFIC STUDY

Project Name:	Nevada Street Warehouse (PROJ 2022-00012)

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:

Project Address:	North of Palmetto Avenue, east of Nevada Street		
Project Description:	95,145 SF of high-cube cold storage, 285,434 SF of high-cube fulfillment		
City:	County of San Bernardino (Donut Hole)		
Project Buildout Year:		**Ambient Growth Rate per Year:**	N/A
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name:	Nevada Street		
Xtn E/W Street Name:	Palmetto Avenue		
Thomas Guide Pg+Grid:		**County Supervisorial District:**	

	Engineer	**Developer** Rep
Company:	Urban Crossroads, Inc.	T&B Planning
Name:	Charlene So	David Ornelas
Address:	1133 Camelback St. #8329	4909 Murphy Canyon Rd. Suite 405
City, State, Zip Code:	Newport Beach, CA 92658	San Diego, CA 92123
Phone #:	(949) 861-0177	(619) 501-6041
Fax #:		
Email:	cso@urbanxroads.com	dornelas@tbplanning.com

By: Charlene So

Print Name: Charlene So **8/16/2022**

Consultant/Developer's Representative **Date**

Reviewed By:

Print Name:

Traffic Division Representative **Date**

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1. **Traffic Distribution**: N/A

2. **Trip Credit:** N/A

Transportation Demand Management (TDM)	No	
Existing Active Land Use	No	
Previous Land Use	No	
Internal Trip Reduction	No	
Pass-by Trip Reduction	No	

3. **Related Projects:** N/A

4. **Freeway Analysis:** N/A

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tiguide.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the SANBAG CMP outlines allowable modifications to these procedures. The SANBAG CMP can be viewed online at:
http://www.sanbag.ca.gov/planning/subr_congestion.html

SCOPE FOR TRAFFIC STUDY

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5. Trip Generation

Trip Generation Rate(s) Source: San Diego Municipal Code Trip Generation Manual (2003)	**I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:**	**Edition:** 11th	

Land Use Code	**Land Use**	**Rate Based on**	**Qty**	***AVTE vs**	**ADT**	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour	
						In	Out	In	Out	In	Out
157	High-Cube Cold Storage	I	95,145 SF		300	7	6	5	9		
N/A	High-Cube Fulfillment	WSP	285,434 SF		778	36	9	21	34		

* - Average Vehicle Trip Ends.
For ITE Land Uses provide number and name of Land Use. e.g. LU 814 - Variety Store

SCOPE FOR TRAFFIC STUDY

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6. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

Xtn #	% County	Thomas Guide Page+Grid	N-S/E-W Street Name	City	Signalized	CMP
			Not Applicable			

Cities to be consulted: N/A

SCOPE FOR TRAFFIC STUDY

Project Name:	Nevada Street Warehouse

7. Other:

Traffic counts may be conducted immediately per the following:
• Must be taken on Tuesdays, Wednesdays or Thursdays.
• Must exclude holidays, and the first weekdays before and after the holiday.
• Must be taken on days when local schools or colleges are in session.
• Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
• Traffic counts used for other traffic studies in the area shall **NOT** be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
• New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
• For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
• For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.

This analysis must follow the most current Traffic Impact Study Guidelines for the County as stated in the County's Road Planning and Design Standards.

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of $3400 is required at the time that a land use application is filed with the Department of Land Use Services If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.

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Project Name:	Nevada Street Warehouse

9. Contact Information:

Please submit a signed copy of this scope for approval by the Traffic Division. Draft scopes may be sent electronically. Final scope with signature should be submitted in person or by US Mail to:

County of San Bernardino
Dept. of Public Works, Traffic Division
825 E. 3rd Street, Rm 115
San Bernardino, CA 92415-0835

Phone: 909-387-8104
Fax: 909-387-7809
Email: jeremy.johnson@dpw.sbcounty.gov (Jeremy Johnson)

URBAN CROSSROADS

urbanxroads.com

August 16, 2022

Mr. Marc Mitri
County of San Bernardino Public Works
825 East Third Street
San Bernardino, CA 92415

SUBJECT: NEVADA STREET WAREHOUSE (PROJ-2022-00012) SCOPING AGREEMENT

Dear Mr. Marc Mitri:

Urban Crossroads, Inc. is pleased to submit this scoping letter to County of San Bernardino Public Works regarding the proposed Nevada Street Warehouse development (**Project**), which is located north of Palmetto Avenue and east of Nevada Street in the County of San Bernardino (within the Donut Hole near the City of Redlands). The Project includes the development of 380,579 square foot warehouse use within a single building (see Exhibit 1). This letter describes the draft proposed Project trip generation.

As indicated on Exhibit 1, access to the Project site will be provided to Nevada Street. It should be noted that this scoping agreement has been prepared in accordance with the County of San Bernardino Transportation Impact Study Guidelines (**TIS Guidelines**), July 2019 and the County of San Bernardino Congestion Management Program, 2016 Update.

TRIP GENERATION

The Project includes the development of 380,579 square foot warehouse use within a single building. However, for the purposes of the trip generation, it has been assumed that 25% of the building square footage (or 95,145 square feet) would be attributable to high-cube cold storage warehousing use and 75% of the building square footage (or 285,434 square feet) towards high-cube fulfillment center warehousing use. The trip generation rates shown on Table 1 are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual (11th Edition, 2021) and the High Cube Warehouse Trip Generation Study (WSP, January 2019) were used to estimate the trip generation for the proposed Project:

- High-Cube Fulfillment Center Warehouse has been used to derive site specific trip generation estimates for 285,434 square feet of the proposed Project. The ITE Trip Generation Manual has trip generation rates for high-cube fulfillment center use for both non-sort and sort facilities (ITE land use code 155). While there is sufficient data to support use of the trip generation rates for non-sort facilities, the sort facility rate appears to be unreliable because they are based on limited data (i.e., one to two surveyed sites). The proposed Project is speculative and whether a non-sort or sort facility end-user would occupy the buildings is not known at this time. Lastly, the ITE

Trip Generation Manual recommends the use of local data sources where available. As such, the best available source for high-cube fulfillment center use would be the trip-generation statistics published in the High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) which was commissioned by the Western Riverside Council of Governments (WRCOG) in support of the Transportation Uniform Mitigation Fee (TUMF) update in the County of Riverside. The WSP trip generation rates were published in January 2019 and are based on data collected at 11 local high-cube fulfillment center sites located throughout Southern California (specifically Riverside County and San Bernardino County). However, the WSP study does not include a split for inbound and outbound vehicles, as such, the inbound and outbound splits per the ITE Trip Generation Manual for Land Use Code 155 have been utilized. The truck percentages were further broken down by axle type per the WSP recommended truck mix: 2-4-Axle = 44.1%; 5+-Axle = 55.9%.

- ITE land use code 157 (High-Cube Cold Storage Warehouse) has been used to derive site specific trip generation estimates for up to 95,145 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 been obtained from the ITE's Trip Generation Manual. 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%.

Passenger car equivalent (PCE) factors were applied to the trip generation rates to convert trips made by heavy trucks (large 4+-axles trucks) to PCE values. PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in the County's Guidelines (1.5 for 2-axle, 2.0 for 3-axle, and 3.0 for 4+-axle trucks).

TABLE 1: ITE 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									
High-Cube Fulfillment Center Warehouse	TSF	--[4]	0.099	0.023	0.122	0.064	0.101	0.165	2.129
Passenger Cars			0.083	0.020	0.103	0.056	0.088	0.144	1.750
2-4 Axle Trucks			0.006	0.002	0.008	0.004	0.007	0.011	0.162
5+-Axle Trucks			0.009	0.002	0.011	0.004	0.006	0.010	0.217
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.065	0.090	1.370
2-Axle Trucks			0.003	0.007	0.010	0.005	0.005	0.010	0.260
3-Axle Trucks			0.001	0.002	0.003	0.002	0.001	0.003	0.083
4+-Axle Trucks			0.005	0.011	0.016	0.008	0.008	0.016	0.407
Passenger Car Equivalent (PCE) Trip Generation Rates[5]									
High-Cube Fulfillment Center Warehouse	TSF	--[4]	0.099	0.023	0.122	0.064	0.101	0.165	2.129
Passenger Cars			0.083	0.020	0.103	0.056	0.088	0.144	1.750
2-4 Axle Trucks (PCE = 2.0)			0.013	0.003	0.016	0.009	0.013	0.022	0.324
5+-Axle Trucks (PCE = 3.0)			0.027	0.006	0.033	0.012	0.018	0.030	0.651
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.065	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 % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

[4] Vehicle Mix Source: High Cube Warehouse Trip Generation Study, WSP, January 29, 2019.
Inbound and outbound split source: ITE Trip Generation Manual, Eleventh Edition (2021) for ITE Land Use Code 155.

[5] PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

The Project trip generation summary is shown on Table 2. The proposed Project is anticipated to generate a total of 812 two-way trips per day with 46 AM peak hour trips and 58 PM peak hour trips (actual vehicles). Project trip generation is also provided in passenger car equivalent (PCE) as any peak hour intersection operations analyses would need to utilize PCE volumes per the County Guidelines. As shown on Table 2, the Project is anticipated to generate a total of 1,078 two-way PCE trips per day with 58 AM PCE peak hour trips and 69 PM PCE peak hour trips.

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:								
High-Cube Cold Storage	95.145 TSF							
Passenger Cars:		6	2	8	2	6	8	130
2-axle Trucks:		0	1	1	0	1	1	26
3-axle Trucks:		0	0	0	0	0	0	8
4+-axle Trucks:		0	1	1	1	1	2	40
Total Truck Trips (Actual Vehicles):		0	2	2	1	2	3	74
Total Trips (Actual Vehicles)[2]		**6**	**4**	**10**	**3**	**8**	**11**	**204**
High-Cube Fulfillment	285.434 TSF							
Passenger Cars:		24	6	30	16	25	41	500
2-4axle Trucks:		2	0	2	1	2	3	46
5+-axle Trucks:		3	1	4	1	2	3	62
Total Truck Trips (Actual Vehicles):		5	1	6	2	4	6	108
Total Trips (Actual Vehicles)[2]		**29**	**7**	**36**	**18**	**29**	**47**	**608**
Passenger Cars		**30**	**8**	**38**	**18**	**31**	**49**	**630**
Trucks		**5**	**3**	**8**	**3**	**6**	**9**	**182**
Total Trips (Actual Vehicles)[2]		**35**	**11**	**46**	**21**	**37**	**58**	**812**
Passenger Car Equivalent (PCE):								
High-Cube Cold Storage	95.145 TSF							
Passenger Cars:		6	2	8	2	6	8	130
2-axle Trucks:		0	1	1	1	1	2	38
3-axle Trucks:		0	0	0	0	0	0	16
4+-axle Trucks:		1	3	4	2	2	4	116
Total Truck Trips (PCE):		1	4	5	3	3	6	170
Total Trips (PCE)[2]		**7**	**6**	**13**	**5**	**9**	**14**	**300**
High-Cube Fulfillment	285.434 TSF							
Passenger Cars:		24	6	30	16	25	41	500
2-4axle Trucks:		4	1	5	2	4	6	92
5+-axle Trucks:		8	2	10	3	5	8	186
Total Truck Trips (PCE):		12	3	15	5	9	14	278
Total Trips (PCE)[2]		**36**	**9**	**45**	**21**	**34**	**55**	**778**
Passenger Cars		**30**	**8**	**38**	**18**	**31**	**49**	**630**
Trucks		**13**	**7**	**20**	**8**	**12**	**20**	**448**
Total Trips (PCE)[2]		**43**	**15**	**58**	**26**	**43**	**69**	**1,078**

[1] TSF = thousand square feet

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

CONCLUSION

The traffic impact study area is to be defined in conformance with the requirements of the County Guidelines, which state that the requirement to prepare a traffic study will be based upon, but not limited to, one or more of the following criteria:

- If a project generates 100 or more trips without consideration of pass-by trips during any peak hour.
- If a project is located within 300 feet of the intersection of two streets designated as Collector or higher in the County's General Plan or the Department's Master Plan or impacted intersection as determined by the Traffic Division.
- If this project creates safety or operational concerns.

Based on this criterion, the Project is anticipated to generate fewer than 100 peak hour trips during any peak hour and would contribute fewer than 50 peak hour trips to any off-site study area intersection. In addition, the Project is not located within 300-feet of an intersection of two streets designated as Collector or higher and would not create safety or operational concerns based on compliance with County design standards. As such, additional traffic analysis beyond this scoping agreement does not appear to be necessary.

A vehicle miles traveled (VMT) assessment has been conducted under separate cover.

If you have any questions, please contact me directly at cso@urbanxroads.com.

Respectfully submitted,
URBAN CROSSROADS, INC.

Charlene So

REGISTERED PROFESSIONAL ENGINEER
CHARLENE HWANG SO
No. TR 2414
TRAFFIC
STATE OF CALIFORNIA

Charlene So, PE
Principal

Attachments

EXHIBIT 1: PRELIMINARY SITE PLAN