

January 12, 2021

Ms. Deirdre McCollister
MIG
1650 Spruce Street, Suite 102
Riverside, California 92507

**SUBJECT: 6TH STREET PROPERTIES SUB FUND, LLC WAREHOUSE (PREA-2020-00163) TRIP
GENERATION ASSESSMENT**

Dear Ms. Deirdre McCollister:

Urban Crossroads, Inc. is pleased to provide the following Trip Generation Assessment for 6th Street Properties Sub Fund, LLC Warehouse property (**Project**) which is located at 24712 6th Street in the County of San Bernardino. The purpose of this work effort is to determine whether additional traffic analysis is necessary for the proposed Project based on the County of San Bernardino's Transportation Impact Study Guidelines (July 9, 2019) (**County Guidelines**).

PROPOSED PROJECT

The Project is proposed to consist of a single building with 179,000 square feet of warehousing use (which includes 10,000 square feet of office space). For the purposes of this assessment, and to allow for some flexibility in the trip generation evaluated for the speculative warehouse building, a larger total square footage of 179,500 is utilized. Additionally, the building has been evaluated assuming 17,950 square feet of general light industrial use (10% of the total square footage) and 161,550 square feet of warehousing use (90% of the total square footage). The Project is proposed to have one driveway on Pedley Road (serving both passenger cars and trucks) and two driveways on 6th Street (one serving both passenger cars and trucks and one service passenger cars only).

PROJECT TRIP GENERATION

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 (10th Edition, 2017) for the proposed general light industrial use (ITE Land Use Code 110) and warehousing use (ITE Land Use Code 150) (see Table 1). The following summarizes the proposed land uses and vehicle mixes:

- **General Light Industrial (ITE Land Use Code 110):** The vehicle mix has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). This manual provides the following vehicle mix: AM Peak Hour: 97.0% passenger cars and 3.0% trucks; PM Peak Hour: 98.0% passenger cars and 2.0% trucks; Weekday Daily: 92.0% passenger cars and 8.0% trucks. 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%.

- **Warehousing (ITE Land Use Code 150):** The vehicle mix has been obtained from the ITE’s Trip Generation Manual Supplement (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

TABLE 1: TRIP GENERATION RATES

Land Use	Units ¹	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates²									
General Light Industrial ³	TSF	110	0.616	0.084	0.700	0.082	0.548	0.630	4.960
Passenger Cars			0.598	0.081	0.679	0.080	0.537	0.617	4.563
2-Axle Trucks			0.003	0.000	0.004	0.000	0.002	0.002	0.066
3-Axle Trucks			0.004	0.001	0.004	0.000	0.002	0.003	0.082
4-Axle+ Trucks			0.012	0.002	0.013	0.001	0.007	0.008	0.248
Warehousing ³	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks			0.003	0.001	0.004	0.001	0.003	0.005	0.078
3-Axle Trucks			0.004	0.001	0.005	0.002	0.004	0.006	0.097
4-Axle+ Trucks			0.011	0.003	0.014	0.005	0.013	0.018	0.294
Passenger Car Equivalent (PCE) Trip Generation Rates⁴									
General Light Industrial ³	TSF	110	0.616	0.084	0.700	0.082	0.548	0.630	4.960
Passenger Cars			0.598	0.081	0.679	0.080	0.537	0.617	4.563
2-Axle Trucks (PCE = 1.5)			0.005	0.001	0.005	0.000	0.003	0.003	0.099
3-Axle Trucks (PCE = 2.0)			0.008	0.001	0.009	0.001	0.005	0.005	0.164
4-Axle+ Trucks (PCE = 3.0)			0.035	0.005	0.039	0.003	0.021	0.024	0.745
Warehousing ³	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (PCE = 1.5)			0.004	0.001	0.006	0.002	0.005	0.007	0.118
3-Axle Trucks (PCE = 2.0)			0.007	0.002	0.009	0.003	0.009	0.012	0.194
4-Axle+ Trucks (PCE = 3.0)			0.032	0.010	0.042	0.014	0.039	0.054	0.882

² TSF = thousand square feet

³ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

³ Vehicle Mix Source: ITE Trip Generation Handbook Supplement (2020), Appendix C.

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.

⁴ PCE factors per SBCTA CMP: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

The resulting trip generation for the proposed Project is shown on Table 2 (in actual vehicles). As shown on Table 2, the proposed Project is anticipated to generate 374 two-way trips per day, with 39 trips generated during the AM peak hour and 42 trips generated during the PM peak hour.

TABLE 2: PROPOSED PROJECT TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Project Trip Generation Summary (Actual Vehicles)								
General Light Industrial (10%)	17.950 TSF							
Passenger Cars:		11	1	12	1	10	11	82
2-axle Trucks:		0	0	0	0	0	0	2
3-axle Trucks:		0	0	0	0	0	0	2
4+-axle Trucks:		0	0	0	0	0	0	4
Total Truck Trips:		0	0	0	0	0	0	8
General Light Industrial Total Trips (Actual Vehicles)		11	1	12	1	10	11	90
Warehousing (90%)	161.550 TSF							
Passenger Cars:		18	5	23	7	19	26	206
2-axle Trucks:		0	0	0	0	1	1	14
3-axle Trucks:		1	0	1	0	1	1	16
4+-axle Trucks:		2	1	3	1	2	3	48
Total Truck Trips:		3	1	4	1	4	5	78
Warehousing Total Trips (Actual Vehicles)		21	6	27	8	23	31	284
Project Total Passenger Cars:		29	6	35	8	29	37	288
Project Total Truck Trips:		3	1	4	1	4	5	86
Project Total Trips (Actual Vehicles)²		32	7	39	9	33	42	374

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

The County’s Guidelines require that truck intensive uses translate heavy truck trips to passenger car equivalents (PCE). As shown on Table 3, the Project is anticipated to generate 504 two-way PCE trips per day, with 45 PCE AM peak hour trips and 48 PCE PM peak hour trips.

TABLE 3: PROPOSED PROJECT TRIP GENERATION SUMMARY (PCE)

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Project Trip Generation Summary (Passenger Car Equivalent):								
General Light Industrial (10%)	17.950 TSF							
Passenger Cars:		11	1	12	1	10	11	82
2-axle Trucks:		0	0	0	0	0	0	2
3-axle Trucks:		0	0	0	0	0	0	4
4+-axle Trucks:		1	0	1	0	0	0	14
Total Truck Trips:		1	0	1	0	0	0	20
General Light Industrial Total Trips (PCE)		12	1	13	1	10	11	102
Warehousing (90%)	161.550 TSF							
Passenger Cars:		18	5	23	7	19	26	206
2-axle Trucks:		1	0	1	0	1	1	20
3-axle Trucks:		1	0	1	1	1	2	32
4+-axle Trucks:		5	2	7	2	6	8	144
Total Truck Trips:		7	2	9	3	8	11	196
Warehousing Total Trips (PCE)		25	7	32	10	27	37	402
Project Total Passenger Cars:		29	6	35	8	29	37	288
Project Total Truck Trips:		8	2	10	3	8	11	216
Project Total Trips (PCE)²		37	8	45	11	37	48	504

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

The Project is anticipated to generate fewer than 50 peak hour trips (both actual and PCE based). As such, additional level of service (LOS) based traffic analysis is not required for this Project based on the County’s Guidelines. If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE
Associate Principal