Exhibit F

Traffic Impact Study Scope – City of Corona

Project Name:	Magnolia Avenue Business Center
Project Address:	1375 Magnolia Avenue
Project Description:	Building 1 = 238,370 SF industrial park; Building 2 = 96,150 SF warehousing
Case Number:	

	Consultant	Developer
Name:	Urban Crossroads, Inc. Charlene So	Western Realco, Jeremy Mape
Address:	1133 Camelback St. #8329 Newport Beach, CA 92658	500 Newport Center Dr, Suite 630 Newport Beach, CA 92660
Telephone: E-mail:	949-861-0177 cso@urbanxroads.com	949-720-0369 jmape@westernrealco.com

A. Trip Generation

Proposed Land Use	M-4	Previous Land Use	M-4
Existing Zoning	SP01	Proposed Zoning	SP01-002

(IN PCE)	In	Out	Total
AM Peak Hour	91	23	114
PM Peak Hour	30	89	119

B. Trip Distribution

Attach graphical representation

C. Background Traffic

Project Opening year:		**Growth Rate:**	N/A

D. Study Intersections

N/A	

E. Specific Issues to be addressed in the Study

N/A

Approved By:

City of Corona Traffic Engineering:	
Date:	

February 1, 2022

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

SUBJECT: MAGNOLIA AVENUE BUSINESS CENTER TRIP GENERATION ASSESSMENT

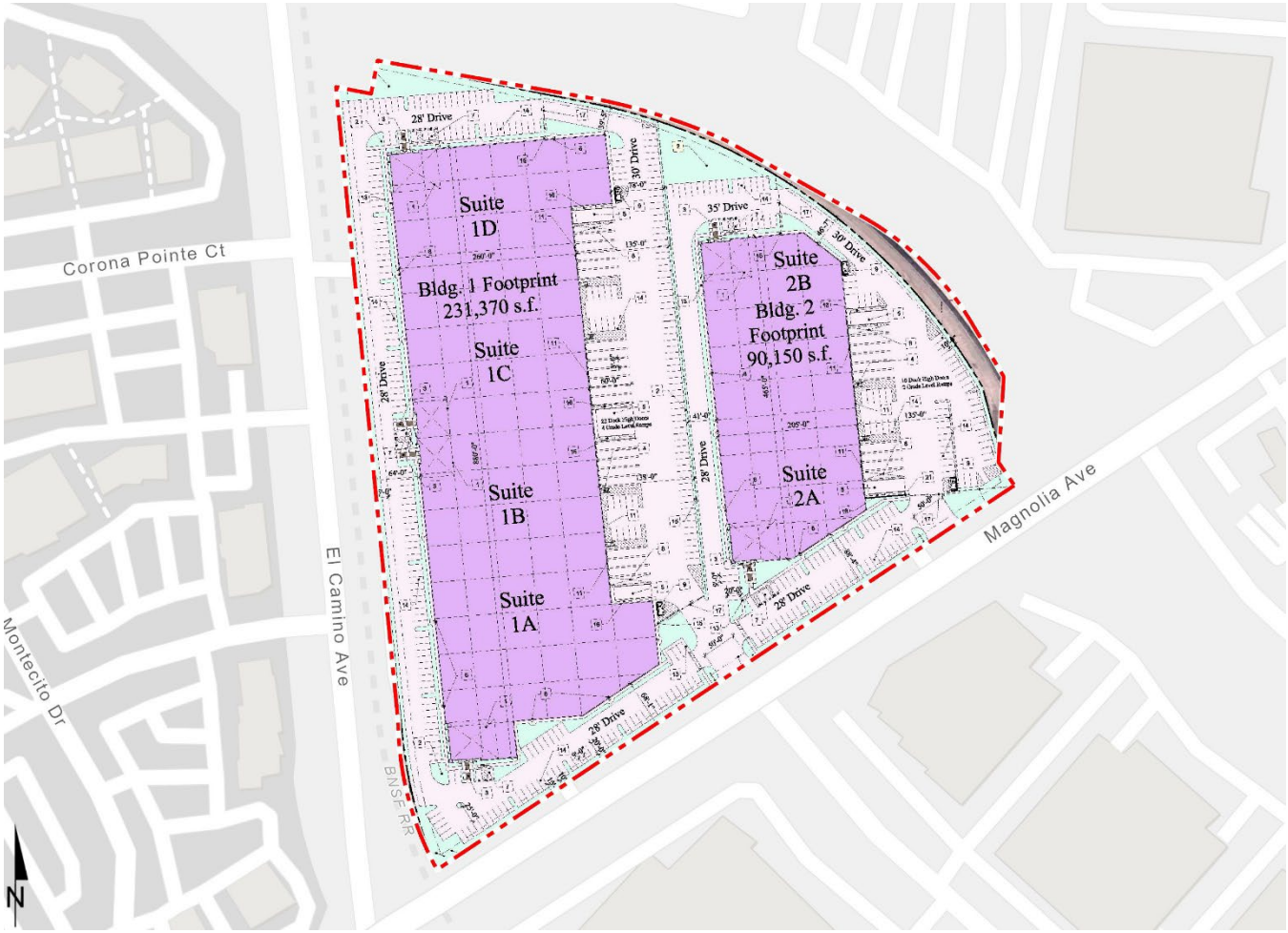
Dear Ms. Tracy Zinn:

Urban Crossroads, Inc. is pleased to provide the following Trip Generation Assessment for Magnolia Avenue Business Center development (referred to as **Project**) which is located at 1375 Magnolia Avenue in the City of Corona. The purpose of this work effort is to assess the potential changes in trip generation associated with the proposed Project as compared to the existing uses onsite and to determine if any additional work is needed based on the City's Traffic Impact Study Guidelines (dated July 2006, referred to as **City Guidelines**).

PROPOSED PROJECT

The preliminary site plan for the proposed Project is shown on Exhibit 1. The proposed Project is to consist of two buildings with a total of 334,520 square feet of warehousing/industrial use (includes office/mezzanine space). Access to the Project site will be provided to Magnolia Avenue via a full access driveway at Sherborn Street and a right-in/right-out driveway located to the east of Sherborn Street. Building 1 is anticipated to contain four suites and serve multiple tenants. As such, Building 1 has been evaluated assuming 238,370 square feet of industrial park use while Building 2 has been evaluated assuming 96,150 square feet of warehousing use.

EXHIBIT 1: PRELIMINARY SITE PLAN



TRIP GENERATION ASSESSMENT

The trip generation rates used for this assessment are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual (11th Edition, 2021) for the proposed land uses. Passenger car equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). 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. A PCE of 1.5, 2.0, and 3.0 are applied to 2-axle, 3-axle, and 4+-axle vehicles, respectively, consistent with the City Guidelines.

BACKGROUND AND TRIP GENERATION: EXISTING USE

The site is currently occupied by several manufacturing buildings totaling 165,250 square feet of building space. There are also 3 other ancillary buildings on-site that have not been considered for the purposes of this evaluation as those buildings appear to have been utilized for maintenance, etc. The 3 ancillary buildings total to 3,290 square feet. The site was previously occupied by Clow Valve and its sister company Anaco along with two other McWane Divisions (McWane Ductile-Utah and Tyler Union) up until Year 2020. Clow Valve's activities included machining, testing, coating, and shipping wet barrel fire hydrants. The manufactured finished valves were also stored and distributed from this location. Anaco manufactured rubber soil pipe couplings. Slow Valve company acquired the former Rich Manufacturing Company of Corona in 1972 and operated on this site until 1985 when McWane, Inc. purchased all of Clow Corporation's stock and Clow Valve became an operating division of McWane. Most operations on the site ceased in 2020, as such, there is no ability to collect data that is reflective of a fully occupied and operational site. However, these buildings could be re-occupied by a similar manufacturing tenant. As such, the ITE Land Use for Manufacturing (ITE 140) has been utilized for the purposes of calculating the existing trip generation. Trip generation rates are shown in Table 1. The following summarizes the proposed land use and vehicle mix:

- ITE land use code 140 (Manufacturing) has been used to derive site specific trip generation calculations for the existing use. A manufacturing facility is an area where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, manufacturing facilities generally also have office, warehouse, research, and associated functions. The vehicle mix has also been obtained from the ITE's latest Trip Generation Manual. 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: EXISTING USE 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									
Manufacturing[3]	TSF	140	0.517	0.163	0.680	0.229	0.511	0.740	4.750
Passenger Cars			0.494	0.156	0.650	0.220	0.490	0.710	4.300
2-Axle Trucks			0.003	0.002	0.005	0.002	0.003	0.005	0.075
3-Axle Trucks			0.003	0.003	0.006	0.003	0.004	0.006	0.093
4+-Axle Trucks			0.011	0.008	0.019	0.008	0.011	0.019	0.282
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Manufacturing[3]	TSF	140	0.517	0.163	0.680	0.229	0.511	0.740	4.750
Passenger Cars			0.494	0.156	0.650	0.220	0.490	0.710	4.300
2-Axle Trucks (PCE = 1.5)			0.005	0.003	0.008	0.003	0.004	0.008	0.113
3-Axle Trucks (PCE = 2.0)			0.006	0.006	0.012	0.005	0.007	0.012	0.186
4+-Axle Trucks (PCE = 3.0)			0.033	0.023	0.056	0.023	0.033	0.056	0.845

[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.

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

The trip generation summary illustrating daily, and peak hour trip generation estimates for the existing use in actual vehicles and PCE are shown on Table 2. As shown in Table 2, the existing use currently generates a total of 788 two-way trips per day with 112 AM peak hour trips and 121 PM peak hour trips (actual vehicles). The existing use currently generates a total of 904 two-way PCE trips per day with 120 AM PCE peak hour trips and 130 PM PCE peak hour trips.

TABLE 2: EXISTING USE 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:								
Manufacturing	165.250 TSF							
Passenger Cars:		82	26	108	36	81	117	712
2-axle Trucks:		0	0	0	0	0	0	12
3-axle Trucks:		0	1	1	0	1	1	16
4+-axle Trucks:		2	1	3	1	2	3	48
Total Truck Trips (Actual Vehicles):		2	2	4	1	3	4	76
Total Trips (Actual Vehicles)[2]		**84**	**28**	**112**	**37**	**84**	**121**	**788**
Passenger Car Equivalent (PCE):								
Manufacturing	165.250 TSF							
Passenger Cars:		82	26	108	36	81	117	712
2-axle Trucks:		1	0	1	1	1	2	20
3-axle Trucks:		1	1	2	1	1	2	32
4+-axle Trucks:		5	4	9	4	5	9	140
Total Truck Trips (PCE):		7	5	12	6	7	13	192
Total Trips (PCE)[2]		**89**	**31**	**120**	**42**	**88**	**130**	**904**

[1] TSF = thousand square feet

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

PROPOSED PROJECT

The Project is proposed to consist of a total of 334,520 square foot warehousing/industrial use. Building 1 is anticipated to contain four suites and serve multiple tenants. As such, Building 1 has been evaluated assuming 238,370 square feet of industrial park use while Building 2 has been evaluated assuming 96,150 square feet of warehousing use. Trip generation rates are shown in Table 3. The following summarizes the proposed land use and vehicle mix:

- The trip generation rates for ITE land use code 130 (Industrial Park) have been used to derive site specific trip generation estimates for Building 1 (238,370 square feet). The vehicle mix has been obtained from the ITE's latest Trip Generation Manual. 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%.
- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for Building 2 (96,150 square feet). A warehouse is primarily devoted to the storage of materials but may also include office and maintenance areas. The vehicle mix has been obtained from the ITE's latest Trip Generation Manual. \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 3: PROPOSED PROJECT 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			0.116	0.034	0.150	0.042	0.108	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376
Industrial Park[3]	TSF	130	0.275	0.065	0.340	0.075	0.265	0.340	3.370
Passenger Cars			0.243	0.057	0.300	0.066	0.234	0.300	2.800
2-Axle Trucks			0.005	0.001	0.007	0.001	0.005	0.007	0.095
3-Axle Trucks			0.007	0.002	0.008	0.002	0.006	0.008	0.118
4+-Axle Trucks			0.020	0.005	0.025	0.006	0.020	0.025	0.357
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.116	0.034	0.150	0.042	0.108	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
Industrial Park[3]	TSF	130	0.275	0.065	0.340	0.075	0.265	0.340	3.370
Passenger Cars			0.243	0.057	0.300	0.066	0.234	0.300	2.800
2-Axle Trucks (PCE = 1.5)			0.008	0.002	0.010	0.002	0.008	0.010	0.143
3-Axle Trucks (PCE = 2.0)			0.013	0.003	0.017	0.004	0.013	0.017	0.236
4+-Axle Trucks (PCE = 3.0)			0.061	0.014	0.075	0.017	0.059	0.075	1.070

[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.

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

The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project in actual vehicles and PCE are shown on Table 4. As shown in Table 4, the proposed Project is anticipated to generate a total of 972 two-way trips per day with 97 AM peak hour trips and 97 PM peak hour trips (actual vehicles). The proposed Project is anticipated to generate a total of 1,268 two-way PCE trips per day with 114 AM PCE peak hour trips and 119 PM PCE peak hour trips.

TABLE 4: PROPOSED 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:								
Building 1: Industrial Park	238.370 TSF							
Passenger Cars:		58	14	72	16	56	72	668
2-axle Trucks:		1	0	1	0	1	1	24
3-axle Trucks:		2	0	2	0	2	2	28
4+-axle Trucks:		5	1	6	1	5	6	86
Total Truck Trips (Actual Vehicles):		8	1	9	1	8	9	138
Industrial Park Trips (Actual Vehicles)[2]		**66**	**15**	**81**	**17**	**64**	**81**	**806**
Building 2: Warehousing	96.150 TSF							
Passenger Cars:		11	3	14	4	10	14	108
2-axle Trucks:		0	0	0	0	0	0	10
3-axle Trucks:		0	0	0	0	0	0	12
4+-axle Trucks:		1	1	2	1	1	2	36
Total Truck Trips (Actual Vehicles):		1	1	2	1	1	2	58
Warehousing Trips (Actual Vehicles)[2]		**12**	**4**	**16**	**5**	**11**	**16**	**166**
Passenger Cars		69	17	86	20	66	86	776
Trucks		9	2	11	2	9	11	196
Total Project Trips (Actual Vehicles)		**78**	**19**	**97**	**22**	**75**	**97**	**972**
Passenger Car Equivalent (PCE):								
Building 1: Industrial Park	238.370 TSF							
Passenger Cars:		58	14	72	16	56	72	668
2-axle Trucks:		2	0	2	1	2	3	34
3-axle Trucks:		3	1	4	1	3	4	56
4+-axle Trucks:		15	3	18	4	14	18	256
Total Truck Trips (PCE):		20	4	24	6	19	25	346
Industrial Park Trips (PCE)[2]		**78**	**18**	**96**	**22**	**75**	**97**	**1,014**
Building 2: Warehousing	96.150 TSF							
Passenger Cars:		11	3	14	4	10	14	108
2-axle Trucks:		0	0	0	0	0	0	14
3-axle Trucks:		0	0	0	1	1	2	24
4+-axle Trucks:		2	2	4	3	3	6	108
Total Truck Trips (PCE):		2	2	4	4	4	8	146
Warehousing Trips (PCE)[2]		**13**	**5**	**18**	**8**	**14**	**22**	**254**
Passenger Cars		69	17	86	20	66	86	776
Trucks		22	6	28	10	23	33	492
Total Project Trips (PCE)		**91**	**23**	**114**	**30**	**89**	**119**	**1,268**

[1] TSF = thousand square feet

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

PROJECT TRIP GENERATION COMPARISON

As shown in Table 5, the development of the proposed Project is anticipated to generate 364 more two-way PCE trips per day with 6 fewer PCE AM and 11 fewer PCE PM peak hour trips as compared to the existing use.

TABLE 5: TRIP GENERATION COMPARISON

	AM Peak Hour			PM Peak Hour			
Land Use	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**Daily**
Actual Vehicles:							
Existing Cars	82	26	108	36	81	117	712
Existing Trucks	2	2	4	1	3	4	76
Existing Total	84	28	112	37	84	121	788
Project Cars	69	17	86	20	66	86	776
Project Trucks	9	2	11	2	9	11	196
Project Total	78	19	97	22	75	97	972
VARIANCE (Actual Vehicles)[2]	**-6**	**-9**	**-15**	**-15**	**-9**	**-24**	**184**
Passenger Car Equivalent (PCE):							
Existing Cars	82	26	108	36	81	117	712
Existing Trucks	7	5	12	6	7	13	192
Existing Total	89	31	120	42	88	130	904
Project Cars	69	17	86	20	66	86	776
Project Trucks	22	6	28	10	23	33	492
Project Total	91	23	114	30	89	119	1,268
VARIANCE (PCE)[2]	**2**	**-8**	**-6**	**-12**	**1**	**-11**	**364**

CONCLUSION

The Project is anticipated to result in a net reduction to the AM and PM peak hours in comparison to the existing use and would contribute fewer than 50 net new peak hour trips to any driveway or off-site study area intersection. As such, the effects to off-site intersections are anticipated to be the same or less than those occurring with the existing use. Therefore, no additional traffic-related analysis is anticipated as a result of the proposed Project.

If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.

Charlene So

Charlene So, PE
Associate Principal