City of Rialto

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Date	Ver.	Action By	Action	Result

For Transportation Commission Meeting [September 7, 2022]

TO: Honorable Chairperson and Commission

APPROVAL: Marcus Fuller, City Manager

FROM: Justin Schlaefli, Consultant Engineer, TKE Engineering

Traffic Impact Analysis - Lilac Commerce Center TIA, Lilac Avenue South of Santa Ana Avenue.

(ACTION ITEM)

BACKGROUND:

The Project is proposed to consist of a single 82,958 square foot warehouse building. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2024. The following driveways will be assumed to provide access to the Project site:

- Driveway 1 on Lilac Avenue - Full Access (passenger cars only)
- Driveway 2 on Lilac Avenue - Full Access (passenger cars and trucks)

Regional access to the Project site is available from the I-10 Freeway via the Riverside Avenue interchange. Exhibit 1-3 depicts the location of the proposed Project in relation to the existing roadway network and the study area intersections.

Based on the trip generation and trip distribution of the proposed project, and based on discussion with City staff, the report analyzed the following intersections for traffic operations:

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection	Jurisdiction	CMP?
1	Lilac Av. & Santa Ana Av.	Rialto	No
2	Lilac Av. & Driveway 1	Rialto	No
3	Lilac Av. & Driveway 2	Rialto	No
4	Willow Av. & Santa Ana Av.	Rialto	No
5	Riverside Av. & I-10 WB Ramps	Rialto, Caltrans	No
6	Riverside Av. & I-10 EB Ramps	Rialto, Caltrans	No
7	Riverside Av. & Slover Av.	Rialto	No
8	Riverside Av. & Santa Ana Av.	Rialto	No

The first Scoping agreement was submitted in early November 2021. The TIA was submitted multiple times with the most recent report dated August 2022. The third submittal of the TIA was reviewed with a recommendation for approval.

Consistent with City of Rialto Traffic Impact Analysis guidelines, study intersections were identified to include freeway interchanges within two (2) miles that were designated to take more than 40% of total traffic from the project and intersections which Project contributed 50 or more peak hour trips. This included the locations listed above.
This site appears to comply with zoning on the property.

The **site location** is shown on **Page 2 of the TIA,** which is included as **Attachment 1**, while the **site plan** is shown on **Page 4 of the TIA**, which is included as **Attachment 2.**

Truck Turn Templates are on shown on the site plan included as **Attachment 3**.

Trip generation for the project is based on the City's guidelines for warehouse projects, which uses rates from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (9th Edition). Land Use 150 "Warehousing" was used to develop the project trip generation. The City requires warehouse projects use a minimum truck rate of 40% of the total project traffic. Further, the City requires that the truck mix for warehousing include 70% 4-axle trucks, 28% 3-axle trucks, and 2% 2-axle trucks. The City Guidelines require projects that anticipate the generation of significant truck traffic convert all truck trips into passenger car equivalents (PCEs). The truck trips were converted to PCEs using the City's conversion rates of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks and 3.0 for 4+ axle trucks. Table 4-2 from the TIA shows the project trip generation. As shown in Table 4-2, the total project is anticipated to generate 25 total trips during the a.m. peak hour, 26 total trips during the p.m. peak hour, and 300 total daily trips. After converting to PCEs, the project is anticipated to generate 42 PCE trips during the a.m. peak hour, 44 PCE trips during the p.m. peak hour, and 504 daily PCE trips.

A comparison to the most current edition of ITE, Trip Generation (11th Edition) was also completed to ensure a conservative analysis. It was found that trip rates for Land Use 150 "Warehousing" have been reduced slightly in the latest edition. Therefore, the information above is considered slightly conservative.

Trips are shown on **Page 38, Table 4-2 of the TIA,** which is included as **Attachment 4**.

ANALYSIS/DISCUSSION:

The TIA included cumulative impacts when added to other proposed projects in the area at project intersections in addition to the existing conditions. When cumulative traffic was added the study intersections were found to operate at an acceptable level of service with the exception of three (3) locations as shown below:

TABLE 6-1: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2024) CONDITIONS

#	Intersection	Traffic Control[1]	EAC (2024) Delay[2] (secs.) AM	EAC (2024) Delay[2] (secs.) PM	EAC (2024) Level of Service AM	EAC (2024) Level of Service PM	EAPC (2024) Delay[2] (secs.) AM	EAPC (2024) Delay[2] (secs.) PM	EAPC (2024) Level of Service AM	EAPC (2024) Level of Service PM
1	Lilac Av. & Santa Ana Av.	CSS	12.6	12.8	B	B	13.7	13.0	B	B
2	Lilac Av. & Driveway 1	**CSS**	Future Intersection				8.8	9.0	A	A
3	Lilac Av. & Driveway 2	**CSS**	Future Intersection				9.0	9.0	A	A
4	Willow Av. & Santa Ana Av.	AWS	8.9	9.0	A	A	9.2	9.3	A	A
5	Riverside Av. & I-10 WB Ramps	TS	36.7	29.7	D	C	37.6	30.7	D	C
6	Riverside Av. & I-10 EB Ramps	TS	**65.0**	**89.0**	**E**	**F**	**66.0**	**91.9**	**E**	**F**
7	Riverside Av. & Slover Av.	TS	**151.6**	**109.5**	**F**	**F**	**156.2**	**112.8**	**F**	**F**
8	Riverside Av. & Santa Ana Av.	TS	32.6	23.6	C	C	35.3	24.1	D	C

* **BOLD** = Significant Impact

[1] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[2] Deficient occurs (improvements needed) when the addition of project related trips causes either peak hour LOS to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E/F) or the peak hour delay to increase as follows:
- LOS A/B = By 10.0 seconds
- LOS C = By 8.0 seconds
- LOS D = By 5.0 seconds
- LOS E = By 2.0 seconds
- LOS F = By 1.0 seconds

The TIA identified improvements at these locations as shown below:

TABLE 6-3: INTERSECTION ANALYSIS FOR EAPC (2024) CONDITIONS WITH IMPROVEMENTS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R	Delay[2] (secs.) AM	Delay[2] (secs.) PM	Level of Service AM	Level of Service PM
6	Riverside Av. & I-10 EB Ramps																	
	- Without Improvements	TS	0	3	0	2	2	0	1	1	1	0	0	0	**66.0**	**91.9**	**E**	**F**
	- With Improvements	TS	0	3	**1>>**	2	2	0	1	1	1	0	0	0	34.8	28.1	C	C
7	Riverside Av. & Slover Av.																	
	- Without Improvements	TS	1	2	0	1	2	0	1	2	0	1	2	0	**156.2**	**112.8**	**F**	**F**
	- With Improvements[4,5]	**TS**	1	**3**	0	1	**3**	**1>**	1	2	0	1	2	0	31.6	30.3	C	C

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free Right Turn Lane; **1** = Improvement

[2] Per the Highway Capacity Manual 6th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] AWS = All-Way Stop; CSS = Cross-street Stop; TS = Traffic Signal

[4] Recommended improvement includes modifying the traffic signal from permissive left turn phasing to protected left turn phasing on the eatbound approach.

[5] Recommended improvement includes modifying the traffic signal to implement overlap phasing on the southbound right turn lane.

Based on these improvements, the following fair-share contributions are recommended:

TABLE 7-1: PROJECT FAIR SHARE CALCULATIONS

#	Intersection		Existing	Project	2024 With Project	Total New Traffic	Project % of New Traffic[1]
6	Riverside Av. & I-10 EB Ramps						
		AM:	2,779	17	4,290	1,511	1.1%
		PM:	3,488	19	4,978	1,490	**1.3%**
7	Riverside Av. & Slover Av.						
		AM:	2,222	17	3,304	1,082	1.6%
		PM:	2,903	19	3,906	1,003	**1.9%**

[1] **BOLD** Highest fair share percentage is highlighted.

The fair-share contributions have been calculated using the above percentages and the cost estimates for interchange improvements as discussed and documented in the TIA. Based on these calculations, it is recommended that the project pay the following fair-share contributions:

- City of Rialto: $7,687
- Caltrans: $6,620

VEHICLE MILES TRAVELED (VMT):
A VMT screening analysis is summarized in the TIA. As discussed in the TIA, VMT is a function of travel volumes multiplied by distance. Therefore, provision of needed services in a community may be found to reduce VMT as patrons have a shorter distance to travel. As such, OPR and SBCTA VMT Guidelines identify that Project types falling under the screening criteria includes the following:

- K-12 Schools
- Local-serving retail less than 50,000 square feet
- Local parks
- Day care centers
- Local serving gas stations
- Local serving banks
- Local serving hotels (e.g. non-destination hotels)
- Student housing Projects on or adjacent college campuses
- Local-serving assembly uses, Community Institutions
- Local serving community colleges
- Affordable or supportive housing, Assisted living facilities, Senior housing
- Projects generating less than 110 daily vehicle trips

The proposed project is not considered a small project and was not screened out based on other project screening criteria. Therefore, a full VMT evaluation was completed and is presented in Section 8.0 of the TIA. The following VMT characteristics apply to this project.

TABLE 8-3: VMT PER SP COMPARISON

	Baseline	Cumulative
Regional Threshold	17.33	17.33
Project	19.96	19.90
Percent Change	+16.70%	+16.36%

The following VMT reduction measures were evaluated for effectiveness:

- Commute Trip Reduction Marketing
- Ridesharing Program
- End-of-Trip Facilities (Bicycle)
- Employee Parking Cash-Out

Based on the measures above, the following VMT reduction was calculated:

$$Reduction_{Subsector} = 1 - [(1 - A) \times (1 - B) \times (1 - C) \ldots]$$

Project's VMT reduction are as follows:

$$17.36\% = 1 - [(1 - 3.6\%) \times (1 - 3.6\%) \times (1 - 0.30\%) \times (1 - 10.8\%)]$$

Based on implementation of these VMT reduction measures, the project would reduce VMT to below the City's significance threshold. This would lead to a significant but mitigated transportation impact under CEQA.

Conclusion

Intersections studied are projected to operate consistent with City of Rialto guidelines without deficiencies except at the two locations as noted in Table 6-1 of the TIA.

Based on these conclusions, it is recommended that the applicant pay applicable development impact fees in addition to a fair-share contribution in the total amount of $14,307. The proposed project would be required to provide frontage and access improvements consistent with City of Rialto standards. Finally, the project would be required to implement VMT reduction measures including the following:

- Commute Trip Reduction Marketing
- Ridesharing Program
- End-of-Trip Facilities (Bicycle)
- Employee Parking Cash-Out

RECOMMENDATIONS:

Staff requests that the Transportation Commission:

- Provide recommendations related to approval.
- Recommend payment of applicable DIF fees.
- Recommend payment of a Fair-share contribution.
- Recommend implementation of a Transportation Demand Management program incorporating the VMT reduction measures listed in the TIA in perpetuity.
- Recommend approval to the Planning Commission.