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RENAISSANCE RANCH FOCUSED TRAFFIC ASSESSMENT

Mr. Brian Hardy,

Urban Crossroads, Inc. is pleased to provide the following Focused Traffic Assessment for Renaissance Ranch development which is located east of Horsethief Canyon Road and south of the I-15 Freeway in the County of Riverside. The peak hour intersection operations analysis has been re-evaluated at the following intersections in order to assess the effects of sending 100% of the Project passenger car traffic to Temescal Canyon Road via Street A at Horsethief Canyon road as opposed to Bolo Court which was evaluated in the Renaissance Ranch Specific Plan (SP00333A01) Traffic Analysis (prepared by Urban Crossroads, Inc. dated March 1, 2022, referred to as 2022 Traffic Study):

- Horsethief Canyon Road & Temescal Canyon Road (#5)
- Horsethief Canyon Road & De Palma Road (#6)
- Horsethief Canyon Road & Street A (#7)

The 2022 Traffic Study distributed 25% of the passenger car traffic to the southeast to Bolo Court. All other study area intersections are anticipated to have any changes from those disclosed in the 2022 Traffic Study.

EXHIBIT 1: STUDY AREA

PROPOSED PROJECT

The proposed Project is to consist of the following land uses, which is consistent with the 2022 Traffic Study (no changes):

- 423,403 square feet of high-cube cold storage warehousing use within the Light Industrial area (20% of the light industrial square footage, calculated assuming 0.5 floor-to-area ratio)
- 740,956 square feet of high-cube fulfillment center warehousing use within the Light Industrial area (35% of the light industrial square footage, calculated assuming 0.5 floor-to-area ratio)
- 740,956 square feet of high-cube transload/short-term storage warehousing use within the Light Industrial area (35% of the light industrial square footage, calculated assuming 0.5 floor-to-area ratio)
- 211,702 square feet of manufacturing use within the Light Industrial area (10% of the light industrial square footage, calculated assuming 0.5 floor-to-area ratio)
- 156,816 square feet of warehousing use within the Business Park area (40% of the Business Park square footage, calculated assuming 0.5 floor-to-area ratio)
- 235,224 square feet of industrial park use within the Business Park area (60% of the Business Park square footage, calculated assuming 0.5 floor-to-area ratio)

TRIP GENERATION ASSESSMENT

As noted, there are no proposed changes to the trip generation evaluated in the 2022 Traffic Study. Table 1 summarizes the total trip generation from the 2022 Traffic Study:

TABLE 1: PROJECT TRIP GENERATION SUMMARY FROM 2022 TRAFFIC STUDY

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
Industrial Uses	2,509.056	TSF							
Passenger Cars/Light Trucks:			300	86	386	124	327	451	4,378
Truck Trips (2-Axle):			12	5	17	4	11	15	276
Truck Trips (3-Axle):			23	7	30	9	25	34	496
Truck Trips (4+-Axle):			89	26	115	29	79	108	1,824
Total Trips (PCE)[2]			**424**	**124**	**548**	**166**	**442**	**608**	**6,974**

[1] TSF = thousand square feet

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

PROJECT TRIP DISTRIBUTION

The distribution patterns for the passenger cars have been modified to send 100% out to Horsethief Canyon Road via Street A with 10% heading southbound on Horsethief Canyon Road and 90% to the north towards Temescal Canyon Road. There are no changes proposed to the truck trip distribution patterns from that previously evaluated in the 2022 Traffic Study. Exhibit 2 illustrates the Project passenger car trip distribution patterns from the 2022 Traffic Study and Exhibit 3 illustrates the proposed changes to the Project passenger car trip distribution patterns.

EXHIBIT 2: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION FROM 2022 TRAFFIC STUDY

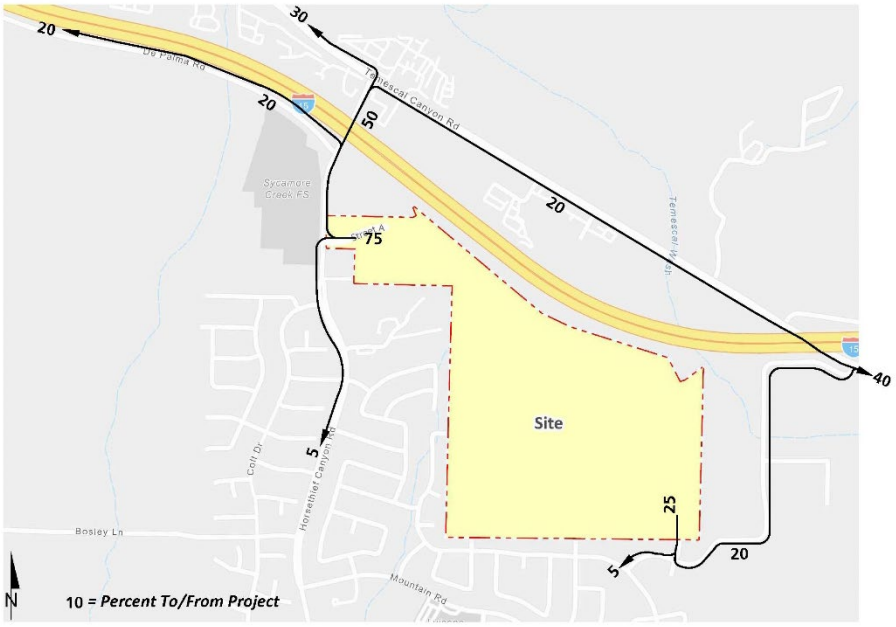

EXHIBIT 3: PROPOSED PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

INTERSECTION OPERATIONS ANALYSIS

The applicable study area intersections have been evaluated for the following analysis scenarios, which are consistent with the 2022 Traffic Study to compare and determine the net effect of reallocating the Project passenger car traffic:

- Existing plus Ambient Growth plus Project (EAP) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) Conditions
- Horizon Year (2040) With Project Conditions

EAP, EAPC, and Horizon Year (2040) traffic volumes from the 2022 Traffic Study have been utilized with the exception the Project traffic has been modified per the proposed distribution changes identified previously.

EAP CONDITIONS

Table 2 summarizes the intersection operations analysis results for EAP traffic conditions from the 2022 Traffic Study along with the proposed Project distribution changes. There are no changes to the findings as compared to the 2022 Traffic Study as all of the study area intersections are anticipated to operate at acceptable levels of service (LOS) with the addition of Project traffic. Peak hour operations analysis results for EAP traffic conditions are included in Attachment A.

TABLE 2: INTERSECTION ANALYSIS FOR EAP (2025) CONDITIONS

#	Intersection	Traffic Control[2]	EAP - Traffic Study Delay[1] (secs.) AM	EAP - Traffic Study Delay[1] (secs.) PM	EAP - Traffic Study Level of Service AM	EAP - Traffic Study Level of Service PM	EAP (2025) Delay[1] (secs.) AM	EAP (2025) Delay[1] (secs.) PM	EAP (2025) Level of Service AM	EAP (2025) Level of Service PM
5	Horsethief Canyon Rd. & Temescal Canyon Rd.	CSS	26.7	24.5	D	C	33.5	29.2	D	D
6	Horsethief Canyon Rd. & De Palma Rd.	AWS	16.7	19.8	C	C	19.9	25.8	C	D
7	Horsethief Canyon Rd. & Street A	CSS	13.1	16.1	B	C	14.6	21.9	B	C

[1] 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 LOS for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; CSS = Improvement

EAPC CONDITIONS

Table 3 summarizes the intersection operations analysis results for EAPC traffic conditions form the 2022 Traffic Study along with the proposed Project distribution changes. As shown on Table 3, the intersection of Horsethief Canyon Road at Temescal Canyon Road is anticipated to experience a deficiency during the AM and PM peak hour with the proposed distribution change as compared to the 2022 Traffic Study. The peak hour deficiency at the intersection of Horsethief Canyon Road and Street is consistent with the 2022 Traffic Study (not a new deficiency). Peak hour operations analysis results for EAPC (2025) traffic conditions are included in Attachment B.

TABLE 3: INTERSECTION ANALYSIS FOR EAPC (2025) CONDITIONS

#	Intersection	Traffic Control[2]	EAPC - Traffic Study Delay[1] (secs.) AM	EAPC - Traffic Study Delay[1] (secs.) PM	EAPC - Traffic Study Level of Service AM	EAPC - Traffic Study Level of Service PM	EAPC (2025) Delay[1] (secs.) AM	EAPC (2025) Delay[1] (secs.) PM	EAPC (2025) Level of Service AM	EAPC (2025) Level of Service PM
5	Horsethief Canyon Rd. & Temescal Canyon Rd.	CSS	31.0	34.7	D	D	**50.0**	**44.6**	**F**	**E**
6	Horsethief Canyon Rd. & De Palma Rd.	AWS	18.9	23.9	C	C	23.4	32.6	C	D
7	Horsethief Canyon Rd. & Street A	CSS	**99.6**	**92.5**	**F**	**F**	**185.0**	**171.0**	**F**	**F**

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

[1] 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 LOS for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; CSS = Improvement

HORIZON YEAR WITH PROJECT CONDITIONS

Table 4 summarizes the intersection operations analysis results for EAPC traffic conditions form the 2022 Traffic Study along with the proposed Project distribution changes. As shown on Table 4, there are no changes to the findings as compared to the 2022 Traffic Study as all 3 intersections are anticipated to operate at an unacceptable LOS during the peak hours. Peak hour operations analysis results for Horizon Year With Project traffic conditions are included in Attachment C.

TABLE 4: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) CONDITIONS

			2040 WP - Traffic Study				2040 WP			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
#	Intersection	Traffic Control[2]	AM	PM	AM	PM	AM	PM	AM	PM
5	Horsethief Canyon Rd. & Temescal Canyon Rd.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
6	Horsethief Canyon Rd. & De Palma Rd.	AWS	**80.5**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
7	Horsethief Canyon Rd. & Street A	CSS	17.1	**93.8**	C	**F**	**>100.0**	**>100.0**	**F**	**F**

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

[1] 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 LOS for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; CSS = Improvement

INTERSECTION IMPROVEMENTS

Improvement strategies have been recommended at the intersection that has been identified as deficient under EAPC and Horizon Year traffic conditions in an effort to achieve an acceptable LOS. The effectiveness of the recommended improvement strategies to address traffic deficiencies are presented in Table 5. Intersection operations worksheets, with improvements, are provided in Attachment D. The improvements

TABLE 5: INTERSECTION ANALYSIS 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	PM	Level of Service AM	PM
5	Horsethief Canyon Rd. & Temescal Canyon Rd.																	
	- EAPC Conditions	TS	1	0	d	0	0	0	0	1	0	1	1	0	13.0	9.6	B	A
	- Horizon Year With Project	TS	2	0	1	0	0	0	0	2	0	2	2	0	13.5	12.0	B	B
6	Horsethief Canyon Rd. & De Palma Rd.																	
	- EAPC Conditions		Not Applicable															
	- Horizon Year With Project	TS	1	2	0	0	2	0	1	0	1	0	0	0	33.8	47.6	C	D
7	Horsethief Canyon Rd. & Street A																	
	- EAPC Conditions	CSS	1	2	0	1	2	0	0	1	0	0	1	0	33.1	21.5	D	C
	- Horizon Year With Project	TS	1	2	0	1	2	0	0	1	0	0	1	0	18.6	23.0	B	C

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

Improvements shown in Table 5 are consistent with the 2022 Traffic Study (no additional improvements are needed to address the deficiencies), with the exception of the following improvements which are needed under EAPC traffic conditions at Horsethief Canyon Road at Temescal Canyon Road:

- Installation of a Traffic Signal
- Westbound left turn lane

Since the recommendations for Horizon Year (2040) traffic conditions are consistent with the 2022 Traffic Study, only updated Project fair share calculations have been calculated for the applicable study area intersections. Detailed fair share calculations are shown on Table 6.

TABLE 6: PROJECT FAIR SHARE

#	Intersection		Existing	Project	2040 With Project Volume	Total New Traffic	Project % of New Traffic
5	Horsethief Canyon Rd. & Temescal Canyon Rd.						
		AM:	486	433	1,728	1,242	**34.9%**
		PM:	453	473	1,903	1,450	32.6%
6	Horsethief Canyon Rd. & De Palma Rd.						
		AM:	623	509	1,916	1,293	**39.4%**
		PM:	774	563	2,651	1,877	30.0%
7	Horsethief Canyon Rd. & Street A						
		AM:	575	548	1,944	1,369	**40.0%**
		PM:	732	608	2,565	1,833	33.2%

BOLD = Denotes highest fair share percentage.

SITE ACCESS

The site adjacent improvements are also consistent with the 2022 Traffic Study. Table 7 summarizes the revised peak hour queuing analysis for the study area intersections along Horsethief Canyon Road between Temescal Canyon Road and Street A. Attachment E includes the queuing analysis worksheets.

TABLE 7: PEAK HOUR QUEUING SUMMARY FOR HORIZON YEAR (2040) CONDITIONS

		Horizon Year (2040) With Project				
		Available Stacking	95th Percentile Queue		Acceptable?	
Intersection	Movement[1]	Distance	AM Peak Hour	PM Peak Hour	AM	PM
Horsethief Canyon Rd. & Temescal Canyon Rd.	WBL	325	191	141	Yes	Yes
	NBL	Trap	97	324	Yes	Yes
	NBR	125	105	119	Yes	Yes
Horsethief Canyon Rd. & De Palma Rd.	EBL	Trap	80	436	Yes	Yes
	EBR	200	123	174	Yes	Yes
	NBL	250	238	242	Yes	Yes
Horsethief Canyon Rd. & Street A	SBL	TWLTL	219	168	Yes	Yes

[1] NBR = Improvement

[2] Trap = Trap Lane; TWLTL = Two-way left-turn lane

CONCLUSION

This focused traffic assessment demonstrates routing 100% of the Project traffic via Street A on Horsethief Canyon Road would not result in a new deficiency and the same improvements identified in the 2022 Traffic Study are sufficient to accommodate acceptable peak hour operations at the study area intersections for the applicable future traffic analysis scenarios. However, due to the change in travel patterns for the Project, the fair share contribution at each of the study area intersections is anticipated to increase (see Table 6).

If you have any questions or comments, I can be reached at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.

Charlene So

Charlene So, PE
Principal

ATTACHMENT A

EAP CONDITIONS – INTERSECTION ANALYSIS WORKSHEETS

ATTACHMENT B

EAPC CONDITIONS – INTERSECTION ANALYSIS WORKSHEETS

ATTACHMENT C

HORIZON YEAR (2040) CONDITIONS – INTERSECTION ANALYSIS WORKSHEETS

ATTACHMENT D

INTERSECTION ANALYSIS WORKSHEETS, WITH IMPROVEMENTS

ATTACHMENT E

SITE ADJACENT QUEUES