

June 25, 2015

Mr. Jay Petrek Assistant Planning Director City of Escondido 201 N. Broadway Escondido, CA 92025

LLG Reference: 3-14-2336

Subject: Centerpointe 78 Traffic Mitigation Review

City of Escondido

Dear Jay:

As requested, LLG has prepared this letter report summarizing our review of the significant traffic impacts and proposed traffic mitigation for the Centerpointe 78 project in the City of Escondido. LLG reviewed the August 2014 Traffic Impact Study (TIS) for the project and subsequent emails from the applicant's traffic consultant. This report also presents LLG's independent evaluation that verifies the appropriateness and preliminary feasibility of the proposed mitigation measures.

SIGNIFICANT IMPACTS

Based on the findings shown in the August 2014 TIS, the Centerpointe 78 project is calculated to result in significant impacts at five (5) intersections and eleven (11) street segments. *Table 1* shows a summary of the significant impacts occurring under Existing + Project, Opening Year (2016) + Project and Horizon Year (2035) + Project scenarios.

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TABLE 1
SIGNIFICANT IMPACTS SUMMARY

		Analysis Scenarios	
Impacted Location and # from TIA	Existing + Project	Opening Year (2016) + Project	Horizon Year (2035) + Project
	Intersections		
6. Escondido Boulevard/ El Norte Parkway	✓	✓	✓
7. Escondido Boulevard/ Lincoln Avenue	✓	✓	✓
11. North Broadway/ Lincoln Avenue	✓	✓	✓
12. SR 78/ Lincoln Parkway/ North Broadway	✓	✓	✓
15. Fig Street/ Lincoln Avenue	_	_	✓
S	treet Segments		
3. Escondido Boulevard – El Norte Parkway to Decatur Way	✓	✓	✓
4. Escondido Boulevard – Decatur Way to Lincoln Avenue	_	✓	✓
6. Escondido Boulevard - Mission Avenue to Washington Avenue	✓	✓	✓
9. Fig Street – Lincoln Avenue to Mission Avenue	✓	✓	✓
11. El Norte Parkway – Centre City Parkway to Escondido Boulevard	_	✓	_
12. Lincoln Avenue – Escondido Boulevard to North Broadway	_	_	✓
15. Lincoln Avenue – Garrick Way to Fig Street	✓	✓	✓
16. Lincoln Avenue – Fig Street to Ash Street	_	_	✓
17. Lincoln Avenue – Ash Street to Harding Street	✓	✓	✓
18. Lincoln Avenue – Harding Street to Rose Street	✓	✓	✓
21. Mission Avenue – Centre City Parkway to Escondido Boulevard	_	_	✓

FIELD REVIEW

LLG conducted a field review on June 4, 2015 at each of the impacted locations to assess the appropriateness and preliminary feasibility of the proposed migration and also determine if additional or changes to the mitigation measures were required to mitigate the project's significant impacts.

Based on our field review, LLG generally agrees with the proposed mitigation. However, additional or revised mitigation measures are proposed at a few locations. *Table 2* compares the proposed mitigation measures included in the Traffic Impact Study and LLG's proposed recommendations.

Figure A graphically illustrates the LLG's recommended mitigation measures under the Existing + Project scenario, *Figure B* shows the mitigation measures under the Opening Day (Year 2016) + Project scenario and *Figure C* shows the mitigation measures under the Horizon Year (Year 2035) + Project scenario.

TABLE 2
MITIGATION MEASURES COMPARISON

Impacted Location and # from TIA	TIA Mitigation	LLG Recommendations
	Intersections	
6. Escondido Boulevard/ El Norte Parkway	 Install raised median on El Norte Parkway Restrict Escondido Boulevard/ El Norte Parkway intersection to right-in/right-out only Extend westbound left-turn pocket at Centre City Parkway/ El Norte Parkway intersection to 370' 	 Install raised median on El Norte Parkway Restrict Escondido Boulevard/ El Norte Parkway intersection to allow certain movements. SB left-turns, SB thru movements, NB left-turns, NB thru movements and EB left-turns at this intersection will be prohibited. Install a dedicated EB right-turn lane (Horizon Year only)
7. Escondido Boulevard/ Lincoln Avenue	 Install a traffic signal Restripe intersection to include: One (1) westbound left-turn lane and one (1) westbound shared thru/right-turn lane Restrict parking along westbound approach 	 Install a traffic signal only No restriping recommended on the westbound approach to avoid intersection offset and on-street parking issues
11. North Broadway/ Lincoln Avenue	 Install a traffic signal Restripe intersection to include: One (1) eastbound left-turn lane and one (1) eastbound shared thru/right-turn lane One (1) westbound left-turn lane and one (1) westbound shared thru/right-turn lane 	 Install a traffic signal Restripe eastbound and westbound approaches to include a shared thru/left-turn lane and dedicated right-turn lane Install a "Keep Clear" sign at the intersection
12. SR 78/ Lincoln Parkway/ North Broadway	 Install a southbound right-turn overlap (thereby restrict EB u-turns) Restripe southbound thru lane to be a shared thru/right-turn lane. Remove sidewalk on the west side of North Broadway (north of SR 78) 	 Provide a dedicated SB right-turn lane Install a southbound right-turn overlap (prohibit EB U-turns)
15. Fig Street/ Lincoln Avenue	 Restripe northbound to include an additional exclusive left-turn and shared thru/right-turn movement 	 Restripe northbound to include two dedicated left-turn lanes and a shared thru/right-turn lane. However, including a dual northbound (NB) left-turn lane creates an intersection offset issue with the southbound (SB) approach. Therefore, to accommodate the dual NB left-turns, the SB approach would need to be "shadowed" accordingly. This would require loss of on-street parking on the east curb of southbound Fig Street. Approx. 8 spaces will be lost.
	Street Segments	
3. Escondido Boulevard – El Norte Parkway to Decatur Way	 Prohibit parking on the east side of Escondido Boulevard and install one 12-foot wide center turn lane. Convert Escondido Boulevard/ El Norte Parkway intersection to allow northbound and southbound right-turn movements only. 	 Prohibit parking on the east side of Escondido Boulevard to reduce friction and increase roadway capacity by installing a two-way left-turn lane. Approx. 22 spaces will be lost. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.

Table 2
MITIGATION MEASURES COMPARISON

Impacted Location and # from TIA	TIA Mitigation	LLG Recommendations
5. Escondido Boulevard –Decatur Way to Lincoln Avenue	■ Widen to 4 lanes	 This segment is planned as a 4-lane Collector on the City of Escondido's Circulation Element. Prohibit parking on the both sides of Escondido Boulevard to reduce friction and increase roadway capacity by restriping to four (4) travel lanes. Approx. 52 spaces will be lost. If this loss of parking is deemed excessive, alternatively, prohibit parking on one side (approx. 24 spaces) and provide an additional travel
		lane to increase roadway capacity. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated. Prohibit parking on the east side of Escondido Boulevard to reduce
6. Escondido Boulevard – Mission Avenue to Washington Avenue	 Prohibit parking 	friction and increase roadway capacity. Approx. 14 spaces will be lost. If this loss of parking is deemed excessive, this impact would remain
		significant and unmitigated.
9. Fig Street – Lincoln Avenue to Mission Avenue	Prohibit parking and restripe 10 foot wide two-way left-turn median.	Prohibit parking on the both sides of Fig Street to reduce friction and increase roadway capacity by installing a two-way left- turn lane. Approx. 2 spaces will be lost.
11. El Norte Parkway – Centre City Parkway to Escondido Boulevard	No mitigation proposed. Significant and unmitigable impact.	Install a raised median on El Norte Parkway between Centre City Parkway and Escondido Boulevard. SB left-turns, SB thru movements, NB left-turns, NB thru movements and EB left-turns at El Norte Parkway/Escondido Boulevard intersection will be prohibited to increase roadway capacity.
12. <i>Lincoln Avenue</i> – Escondido Blvd to North Broadway	■ Prohibit parking	 Provide a dedicated WB left-turn lane into the project driveway on Lincoln Avenue. This would require loss of the loading/unloading zone fronting the school (approx. 13 spaces) and parking on south side of Lincoln Avenue (approx. 8 spaces). Restrict easterly driveway to allow right-in/right-out movements only.
15. Lincoln Avenue – Garrick Way to Fig Street	 Re-time traffic signals at Lincoln Avenue/ Garrick Way and Lincoln Avenue/ Fig Street with optimal signal timing. 	Install a dedicated WB right-turn lane at Lincoln Avenue/ Garrick Way intersection and a dedicated EB right-turn lane at Lincoln Avenue/ Fig Street intersection. Re-time traffic signals at these intersections as needed.
16. Lincoln Avenue –Fig Street to Ash Street	■ Widen to 6 lanes	Contribute a fair-share towards widening of this roadway to 6-lanes.

Table 2
MITIGATION MEASURES COMPARISON

Impacted Location and # from TIA	TIA Mitigation	LLG Recommendations
17. Lincoln Avenue – Ash Street to Harding Street	 Requires restricting on-street parking and restripe 10 foot wide two-way left-turn median. 	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 30 spaces will be lost. However, dedicated left-turn pockets on Lincoln Avenue at Harding Street and Pioneer Elementary School are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.
18. <i>Lincoln Avenue</i> –Harding Street to Rose Street	 Requires restricting on-street parking and restripe 10 foot wide two-way left-turn median. 	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 61 spaces will be lost. However, dedicated left-turn pockets on Lincoln Avenue at Harding Street are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.
21. Mission Avenue – Centre City Parkway to Escondido Boulevard	Traffic signal coordination	Contribute a fair-share towards future improvements of this roadway.

ANALYSIS APPROACH AND METHODOLOGY

This letter report analyzes the Centerpointe 78 project impacts at intersections and street segments only as the project is calculated to have no significant impacts at the freeway mainlines and freeway on-ramp meters. The section below provides a general description on the analysis approach and methodology used in the post mitigation analysis.

Intersections

Intersections were analyzed under AM, Mid-day (under Existing + Project and Opening Day + Project scenarios only) and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in the 2010 Highway Capacity Manual (HCM), with the assistance of the Synchro (version 9.0) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

Street Segments

Street segment analyses were based upon the comparison of daily traffic volumes (ADTs) to the City of Escondido's *Roadway Classification, Level of Service, and ADT Table*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The City of Escondido's *Roadway Classification, Level of Service, and ADT Table* is included below in *Table 3*.

TABLE 3
CITY OF ESCONDIDO ROADWAY CLASSIFICATION TABLE

Roadway	Number	Cross Section	Level of Service							
Classification	of Lanes	Cross Section	A	В	C	D	E			
Prime Arterial	8	116/136 NP	23,800	37,800	51,800	62,300	70,000			
Prime Arteriai	6	106/126 NP	20,400	32,400	44,400	53,400	60,000			
36: 47:1	6	90/110 NP	17,000	27,000	37,000	44,500	50,000			
Major Arterial	4	82/102 NP	12,600	20,000	27,400	32,900	37,000			
Collector	4	64/84 NP	11,600	18,500	25,300	30,400	34,200			
Conector	4	64/84 WP	6,800	10,800	14,800	17,800	20,000			
	2	42/66 NP	5,100	8,100	11,100	13,400	15,000			
Local Collector	2	42/66 P/NP/LT	4,250	6,750	9,250	11,150	12,500			
	2	42/66 WP	3,400	5,400	7,400	8,900	10,000			

Source: City of Escondido "Traffic Impact Analysis Guideline".

SIGNIFICANCE CRITERIA

The Centerpointe 78 project is located within the City of Escondido, which follows the SANTEC/ITE Guidelines for identifying significant traffic impacts. In accordance with "SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region", the following thresholds shall be used to identify if a project is of significant traffic impact under any scenario. Based on SANTEC/ITE guidelines, if now or in the future, the project's traffic impact causes the values in *Table 4* below to be exceeded in a roadway segment or an intersection that is operating at LOS D or worse, it is determined to be a significant impact and the project shall identify mitigation measures.

TABLE 4
CITY OF ESCONDIDO TRAFFIC IMPACT SIGNIFICANCE THRESHOLDS

Level of Service With Project	Allowable Change due to Project Impact									
	Roadway Segments	Intersections								
	V/C	Delay (sec.)								
D, E, or F	0.02	2.0								

 $Source: \ City\ of\ Escondido\ ``Traffic\ Impact\ Analysis\ Requirement\ Guidelines"$

POST MITIGATION ANALYSIS

This section summarizes the mitigation analysis for the impacted intersections and street segments based on LLG's recommendations shown in *Table 2*.

Existing + Project

As shown in *Table 5A*, the proposed intersection improvements would reduce the project impacts to below a level of significance and thereby mitigating all the intersection impacts.

As shown in *Table 5B*, the proposed street segment improvements would reduce the project impacts to below a level of significance and thereby mitigating all the street segment impacts.

Opening Year (2016) + Project

As shown in *Table 6A*, the proposed intersection improvements would reduce the project impacts to below a level of significance and thereby mitigating all the intersection impacts.

As shown in *Table 6B*, the proposed street segment improvements would reduce the project impacts to below a level of significance and thereby mitigating all the street segment impacts.

Horizon Year (2035) + Project

As shown in *Table 7A*, the proposed intersection improvements would reduce the project impacts below a level of significance and thereby mitigating all the intersection impacts.

As shown in *Table 7B*, the proposed street segment improvements would reduce the project impacts to below a level of significance and thereby mitigating all the street segment impacts.

TABLE 5A EXISTING + PROJECT INTERSECTION MITIGATION ANALYSIS

Intersection	Peak Hour	Existing		Existing + Project			ng + Proj Mitigatio		Mitigation	Mitigated to below a level of significance?	
		Delaya	LOSb	Delay	LOS	Delay	LOS	Δ^{c}		g	
	AM	42.3	D	42.4	D	43.9	D	1.6	Install a raised median on El Norte		
4. Centre City Parkway/ El Norte Parkway	MID	44.9	D	45.1	D	45.8	D	0.9	Parkway between Centre City Parkway and Escondido Boulevard. Restrict Escondido		
Li Noite I aikway	PM	53.2	D	53.9	D	53.8	D	0.6	Boulevard/ El Norte Parkway intersection		
	AM	178.1	F	>200.0	F	16.5	С	(161.6)	to allow certain movements. SB left-turns, SB thru movements, NB left-turns, NB	Yes	
6. Escondido Boulevard/	MID	33.4	D	44.4	E	16.3	C	(17.1)	thru movements and EB left-turns at this intersection will be prohibited. Rerouted		
El Norte Parkway	PM	181.6	F	>200.0	F	126.0	F	(55.6)	traffic will make U-turns at Centre City Parkway.		
	AM	26.5	D	78.3	F	8.4	A	(18.1)			
7. Escondido Boulevard/ Lincoln Avenue	MID	31.0	D	>200.0	F	13.7	В	(17.3)	Install a traffic signal	Yes	
Emcom Avenue	PM	21.7	C	>200.0	F	9.2	A	(12.5)			
	AM	77.6	F	>200.0	F	19.2	В	(58.4)	Install a traffic signal. Restripe EB and		
11. North Broadway/	MID	155.5	F	>200.0	F	41.4	D	(114.1)	WB approaches to include a shared thru/left-turn lane and a dedicated right-	Yes	
Lincoln Avenue	PM	130.4	F	>200.0	F	19.0	В	(111.4)	turn lane. Install a "Keep Clear" sign at the intersection.		
12. North Broadway/	AM	52.8	D	57.7	E	52.0	D	(0.8)	Restripe SB approach to include a		
Lincoln Parkway/	MID	56.5	E	67.5	E	54.7	D	(1.8)	dedicated right-turn lane and install SB	Yes	
SR 78	PM	63.2	E	76.4	E	52.9	D	(10.3)	right-turn overlap.		

a. Average delay expressed in seconds per vehicle.b. Level of Service.

c. Δ denotes an increase or (decrease) in delay due to project mitigation.

General Notes:
1. Bold indicates intersection operating at LOS D or worse per City of Escondido's significance criteria.

SIGNALIZI	ED	UNSIGNALI	UNSIGNALIZED					
DELAY/LOS THR	ESHOLDS	DELAY/LOS THR	DELAY/LOS THRESHOLDS					
Delay	LOS	Delay	LOS					
$0.0 \le 10.0$	A	$0.0 \le 10.0$	A					
10.1 to 20.0	В	10.1 to 15.0	В					
20.1 to 35.0	C	15.1 to 25.0	C					
35.1 to 55.0	D	25.1 to 35.0	D					
55.1 to 80.0	E	35.1 to 50.0	E					
> 80.1	F	> 50.1	F					

TABLE 5B
EXISTING + PROJECT STREET SEGMENT MITIGATION ANALYSIS

Roadway Segment	Classification	Capacity ^a	I	Existing		Exis	sting + Pr	oject	Mitigation	Classification Conseits		sting + P Mitiga		vith	Mitigation	Mitigated to below a level of
			ADT ^b	V/C ^c	LOSd	ADT	V/C	LOS	Classification	Сараспу	ADT	V/C	LOS	Δe		significance?
Escondido Boulevard 3. El Norte Parkway to Decatur Way	2-ln Local Collector (with parking)	10,000	7,400	0.740	С	8,935	0.894	E	2-ln Local Collector (no parking on east side)	12,500 ^f	8,935	0.715	С	(0.025) Boul a tw lost	Prohibit parking on the east side of Escondido alevard and increase roadway capacity by installing wo-way left- turn lane. Approx. 22 spaces will be st. If this loss of parking is deemed excessive, this	Yes
6. Mission Avenue to Washington Avenue	4-ln Collector (with parking)	20,000	15,302	0.765	D	15,947	0.797	D	4-ln Collector (no parking)	34,200	15,947	0.466	В	I Boul (0.299) spa	Prohibit parking on the east side of Escondido elevard and increase roadway capacity. Approx. 14 aces will be lost. If this loss of parking is deemed cessive, this impact would remain significant and unmitigated.	Yes
Fig Street 9. Lincoln Avenue to Mission Avenue	2-ln Local Collector (with parking)	10,000	8,980	0.898	E	9,268	0.927	E	2-In Collector (with two-way left-turn lane)	15,000	9,268	0.618	С		ohibit parking on the both sides of Fig Street and ease roadway capacity by installing a two-way left-turn lane. Approx. 2 spaces will be lost.	- Yes
Lincoln Parkway/ Lincoln Avenue									44.34						nstall a dedicated WB right-turn lane at Lincoln	
15. Garrick Way to Fig Street	4-ln Major (no parking)	37,000	31,589	0.854	D	32,966	0.891	E	4-ln Major (with future improvements)	40,000g	32,966	0.824	D	(0.030)	enue/ Garrick Way intersection and a dedicated EB right-turn lane at Lincoln Avenue/ Fig Street intersection. Re-time traffic signals at these intersections as needed. estriping to provide a two-way left-turn lane loses	Yes
17. Ash Street to Harding Street	2-ln Local Collector (with parking)	10,000	15,314	1.531	F	15,844	1.584	F	2-ln Local Collector (with left-turn pockets)	12,500 ^f	15,844	1.268	F	(0.263) exc H Av	deessive parking. Approx. 30 spaces will be lost. However, dedicated left-turn pockets on Lincoln venue at Harding Street and Pioneer Elementary School are recommended to increase roadway acity. The provision of left-turn pockets would not require loss of parking.	Yes

TABLE 5B EXISTING + PROJECT STREET SEGMENT MITIGATION ANALYSIS

Roadway Segment	Classification	Capacity ^a	Existing			Existing + Project				Mitigation	Exis	Existing + Project with Mitigation		vith	Mitigation	Mitigated to below a level of
, o			ADT ^b	V/C ^c I	LOSd	ADT	V/C	LOS	Classification	Capacity	ADT	V/C	LOS Ae		C	significance?
18. Harding Street to Rose Street	2-ln Local Collector (with parking)	10,000	12,591	1.259	F	12,961	1.296	F	2-ln Local Collector (with left-turn pockets)	12,500 ^f	12,961	1.037	F	(0.222)	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 61 spaces will be lost . However, dedicated left-turn pockets on Lincoln Avenue at Harding Street are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.	

- a. Capacity based on City of Escondido's roadway classification operating at LOS E.
 b. Average Daily Traffic.
 c. Volume to Capacity.
 d. Level of Service.

- e. Δ denotes a project mitigation-induced increase or (decrease) in the Volume to Capacity ratio.
 f. 2-ln Collector (no parking on one side) or 2-lane Collector (with left-turn pockets) capacity of 12,500 interpolated.
 g. Future proposed improvements assumed to increase capacity by 3,000 ADT.

General Notes:1. Bold indicates street segment operating at LOS D or worse per City of Escondido's significance criteria

TABLE 6A OPENING YEAR (2016) + PROJECT INTERSECTION MITIGATION ANALYSIS

Intersection	Peak Hour	Opening Year (2016)		Opening Year (2016) + Project		Opening Ye with	ar (2016) Mitigatio	•	Mitigation	Mitigated to below a level of significance?	
		Delaya	LOSb	Delay	LOS	Delay	LOS	Δ ^c		significance.	
	AM	44.7	D	45.3	D	46.4	D	1.7	Install a raised median on El Norte		
 Centre City Parkway/ El Norte Parkway 	MID	46.7	D	48.0	D	48.2	D	1.5	Parkway between Centre City Parkway and Escondido Boulevard, Restrict Escondido		
Li Worte i arkway	PM	53.5	D	55.2	E	54.8	D	1.3	Boulevard/ El Norte Parkway intersection		
	AM	>200.0	F	>200.0	F	17.5	С	(258.0)	to allow certain movements. SB left-turns, SB thru movements, NB left-turns, NB thru		
6. Escondido Boulevard/ El Norte Parkway	MID	38.7	E	55.2	F	17.9	C	(20.8)	movements and EB left-turns at this		
	PM	>200.0	F	>200.0	F	172.9	F	(146.7)	intersection will be prohibited. Rerouted traffic will make U-turns at Centre City Parkway.		
	AM	29.0	D	92.7	F	8.6	A	(20.4)			
7. Escondido Boulevard/ Lincoln Avenue	MID	35.1	E	>200.0	F	14.0	В	(21.1)	Install a traffic signal	Yes	
Emoom Tivenae	PM	22.9	C	>200.0	F	9.4	A	(13.5)			
	AM	108.3	F	>200.0	F	20.1	С	(88.2)	Install a traffic signal. Restripe EB and WB		
11. North Broadway/	MID	>200.0	F	>200.0	F	43.1	D	(194.0)	approaches to include a shared thru/left- turn lane and a dedicated right-turn lane.	Yes	
Lincoln Avenue	PM	193.2	F	>200.0	F	19.5	В	(173.7)	Install a "Keep Clear" sign at the intersection.		
12. North Broadway/	AM	58.0	E	63.6	E	52.7	D	(5.3)	Restripe SB approach to include a		
Lincoln Parkway/	MID	61.4	E	73.8	E	58.2	E	(3.2)	dedicated right-turn lane and install SB	Yes	
SR 78	PM	67.0	E	82.7	E	53.7	D	(13.3)	right-turn overlap.		

- Footnotes:

 a. Average delay expressed in seconds per vehicle.
 b. Level of Service.
- c. $\quad \Delta$ denotes an increase or (decrease) in delay due to project mitigation.

General Notes:Bold indicates intersection operating at LOS D or worse per City of Escondido's significance criteria.

SIGNALIZ	ED	UNSIGNALI	UNSIGNALIZED					
DELAY/LOS THR	ESHOLDS	DELAY/LOS THRESHOLDS						
Delay	LOS	Delay	LOS					
$0.0 \le 10.0$	A	$0.0 \le 10.0$	A					
10.1 to 20.0	В	10.1 to 15.0	В					
20.1 to 35.0	C	15.1 to 25.0	C					
35.1 to 55.0	D	25.1 to 35.0	D					
55.1 to 80.0	E	35.1 to 50.0	E					
≥ 80.1	F	≥ 50.1	F					

Table 6B
OPENING YEAR (2016) + PROJECT STREET SEGMENT MITIGATION ANALYSIS

Roadway Segment	Classification	Capacitya	Opening Year (2016)			Opening Year (2016) + Project			Mitigation	Mitigation	Openi	ng Year (with Mi		+ Project n	Mitigation	Mitigated to below a level of
Trong may segment	C1435111441011	cupacity	ADT ^b	V/C ^c	LOSd	ADT	V/C	LOS	Classification	Capacity	ADT	V/C				significance?
Escondido Boulevard																
3. El Norte Parkway to Decatur Way	2-ln Local Collector (with parking)	10,000	7,624	0.762	D	9,159	0.916	E	2-ln Local Collector (no parking on east side)	12,500 ^f	9,159	0.733	С	(0.030)	Prohibit parking on the east side of Escondido Boulevard and increase roadway capacity by installing a two-way left- turn lane. Approx. 22 spaces will be lost. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.	Yes
4. Decatur Way to Lincoln Avenue	2-ln Local Collector (with two-way left-turn lane)	15,000	9,909	0.661	С	11,471	0.765	D	4-ln Collector (no parking)	34,200	11,471	0.335	A	(0.325)	Prohibit parking on both sides of Escondido Boulevard and increase roadway capacity by restriping to 4-lanes. Approx.52 spaces will be lost. If this loss of parking is deemed excessive, alternatively, prohibit parking on one side (approx. 24 spaces) and provide an additional travel lane to increase roadway capacity. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.	Yes
6. Mission Avenue to Washington Avenue	4-In Collector (with parking)	20,000	15,766	0.788	D	16,411	0.821	D	4-ln Collector (no parking)	34,200	16,411	0.480	В	(0.308)	Prohibit parking on the east side of Escondido Boulevard and increase roadway capacity. Approx. 14 spaces will be lost. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.	Yes
Fig Street																
9. Lincoln Avenue to Mission Avenue	2-ln Local Collector (with parking)	10,000	9,270	0.927	E	9,558	0.956	E	2-ln Collector (with two-way left- turn lane)	15,000	9,558	0.637	С	(0.290)	Prohibit parking on the both sides of Fig Street and increase roadway capacity by installing a two-way left-turn lane. Approx. 2 spaces will be lost.	Yes
El Norte Parkway																
11. Centre City Parkway to Escondido Boulevard	4-ln Major (no parking)	37,000	26,870	0.726	С	28,287	0.765	D	5-ln Major	43,500	28,287	0.650	С	(0.076)	Install a raised median on El Norte Parkway between Centre City Parkway and Escondido Boulevard. SB left-turns, SB thru movements, NB left-turns, NB thru movements and EB left-turns at El Norte Parkway/Escondido Boulevard intersection will be prohibited to increase roadway capacity.	Yes

TABLE 6B OPENING YEAR (2016) + PROJECT STREET SEGMENT MITIGATION ANALYSIS

Roadway Segment	Classification	Capacity ^a					ing Year (2 Project		Mitigation Classification	Mitigation Capacity		ng Year with M		+ Project n	Mitigation	Mitigated to below a level of
	ADTb V/Cc LOSd ADT V/C LOS Classification C		Сараспу	ADT	V/C	LOS	Δe		significance?							
Lincoln Parkway/ Lincoln Avenue																
15. Garrick Way to Fig Street	4-ln Major (no parking)	37,000	33,026	0.893	E	34,403	0.930	E	4-In Major (with future improvements)	40,000 ^g	34,403	0.860	D	(0.033)	Install a dedicated WB right-turn lane at Lincoln Avenue/ Garrick Way intersection and a dedicated EB right-turn lane at Lincoln Avenue/ Fig Street intersection. Re-time traffic signals at these intersections as needed.	Yes
17. Ash Street to Harding Street	2-ln Local Collector (with parking)	10,000	15,914	1.591	F	16,444	1.644	F	2-ln Local Collector (with left-turn pockets)	12,500 ^f	16,444	1.316	F	(0.276)	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 30 spaces will be lost. However, dedicated left-turn pockets on Lincoln Avenue at Harding Street and Pioneer Elementary School are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.	Yes
18, Harding Street to Rose Street	2-In Local Collector (with parking)	10,000	13,109	1.311	F	13,479	1.348	F	2-ln Local Collector (with left-turn pockets)	12,500 ^f	13,479	1.078	F	(0.233)	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 61 spaces will be lost. However, dedicated left-turn pockets on Lincoln Avenue at Harding Street are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.	Yes

- a. Capacity based on roadway classification operating at LOS E.
 b. Average Daily Traffic.
 c. Volume to Capacity.

- d. Level of Service.
- e. Δ denotes a project mitigation-induced increase or (decrease) in the Volume to Capacity ratio.
 f. 2-ln Collector (no parking on one side) or 2-lane Collector (with left-turn pockets) capacity of 12,500 interpolated.
- g. Future proposed improvements assumed to increase capacity by 3,000 ADT.

General Notes:

1. **Bold** indicates street segment operating at LOS D or worse per City of Escondido's significance criteria.

TABLE 7A HORIZON YEAR (2035) + PROJECT INTERSECTION MITIGATION ANALYSIS

Intersection	Peak Hour	Horizo (20)		Horizon (2035) + 1			on Year et with M	(2035) + itigation	Mitigation	Mitigated to below a level of significance?
		Delaya	LOSb	Delay	LOS	Delay	LOS	Δ^{c}		
4. Centre City Parkway/	AM	57.9	E	58.4	E	58.6	E	0.7	Install a raised median on El Norte Parkway between Centre	
El Norte Parkway	PM	52.9	D	53.5	D	53.2	D	0.3	City Parkway and Escondido Boulevard. Restrict Escondido Boulevard/ El Norte Parkway intersection to allow certain	
6. Escondido Boulevard/ El Norte Parkway	AM PM	>200.0	F F	>200.0	F F	>200.0	F F	(1,321.3)	movements. SB left-turns, SB thru movements, NB left-turns, NB thru movements and EB left-turns at this intersection will be prohibited. Rerouted traffic will make U-turns at Centre City Parkway. Install a dedicated EB right-turn lane at Escondido Boulevard/ El Norte Parkway intersection.	Yes
7. Escondido Boulevard/	AM	>200.0	F	>200.0	F	10.0	В	(4,179.8)	7 . 11	
Lincoln Avenue	PM	30.2	D	110.0	F	7.1	A	(23.1)	Install a traffic signal	Yes
11. North Broadway/	AM	>200.0	F	>200.0	F	27.9	С	(651.3)	Install a traffic signal. Restripe EB and WB approaches to	
Lincoln Avenue	PM	>200.0	F	>200.0	F	25.4	С	(363.9)	include a shared thru/left-turn lane and a dedicated right-turn lane. Install a "Keep Clear" sign at the intersection.	Yes
12. North Broadway /	AM	>200.0	F	>200.0	F	>200.0	F	(53.4)	Restripe SB approach to include a dedicated right-turn lane and	
Lincoln Parkway/ SR 78	PM	135.1	F	152.1	F	114.1	F	(21.0)	install SB right-turn overlap.	Yes
15. Fig Street/	AM	104.9	F	109.1	F	84.7	F	(20.2)	Restripe northbound to include two dedicated left-turn lanes	•
Lincoln Avenue	PM	32.6	С	34.4	D	27.2	С	(5.4)	and a shared thru/right-turn lane. Restripe the SB approach to "shadow" the dual NB left-turn lanes.	Yes

General Notes:1. Bold indicates intersection operating at LOS D or worse per City of Escondido's significance criteria.

SIGNALIZ	ŒD	UNSIGNALI	UNSIGNALIZED							
DELAY/LOS THR	ESHOLDS	DELAY/LOS THR	ESHOLDS							
Delay	LOS	Delay	LOS							
$0.0 \leq 10.0$	A	$0.0 \le 10.0$	A							
10.1 to 20.0	В	10.1 to 15.0	В							
20.1 to 35.0	C	15.1 to 25.0	C							
35.1 to 55.0	D	25.1 to 35.0	D							
55.1 to 80.0	E	35.1 to 50.0	E							
≥ 80.1	F	≥ 50.1	F							

<sup>Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase or (decrease) in delay due to project mitigation.</sup>

Table 7B
Horizon Year (2035) + Project Street Segment Mitigation Analysis

Roadway Segment Classification		Capacity	Horiz	zon Year (Horizon Year (2035) + Project			Mitigation	Mitigation	Horizon Year (2035) + Pr Mitigation			oject with	Mitigation	Mitigated to below a level of	
	0-1000	- up	ADT ^b	V/C ^c	LOSd	ADT	V/C	LOS	Classification	Capacity	ADT	V/C	LOS	Δ^{e}		significance?
Escondido Boulevard 3. El Norte Parkway to Decatur Way	2-ln Local Collector (with parking)	10,000	12,565	1.257	F	14,100	1.410	F	2-ln Local Collector (no parking on east side)	12,500 ^f	14,100	1.128	F	(0.129)	Prohibit parking on the east side of Escondido Boulevard and increase roadway capacity by installing a two-way left- turn lane. Approx. 22 spaces will be lost. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.	Yes
4. Decatur Way to Lincoln Avenue	2-ln Local Collector (with two-way left-turn lane)	15,000	11,838	0.789	D	13,400	0.893	D	4-ln Collector (no parking)	34,200	13,400	0.392	В	(0.397)	Prohibit parking on both sides of Escondido Boulevard and increase roadway capacity by restriping to 4-lanes. Approx.52 spaces will be lost. If this loss of parking is deemed excessive, alternatively, prohibit parking on one side (approx. 24 spaces) and provide an additional travel lane to increase roadway capacity. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.	
6. Mission Avenue to Washington Avenue	4-ln Collector (with parking)	20,000	16,832	0.842	D	17,477	0.874	D	4-ln Collector (no parking)	34,200	17,477	0.511	В	(0.331)	Prohibit parking on the east side of Escondido Boulevard and increase roadway capacity. Approx. 14 spaces will be lost. If this loss of parking is deemed excessive, this impact would remain significant and unmitigated.	Yes
Fig Street																
9. Lincoln Avenue to Mission Avenue	2-ln Local Collector (with parking)	10,000	9,812	0.981	E	10,100	1.010	F	2-In Collector (with two-way left- turn lane)	15,000	10,100	0.673	С	(0.308)	Prohibit parking on the both sides of Fig and increase roadway capacity by installing a two-way left- turn lane. Approx. 2 spaces will be lost.	Yes
Lincoln Parkway/ Lincoln Avenue																
12. Escondido Boulevard to North Broadway	2-ln Local Collector (with parking)	10,000	3,262	0.326	A	7,800	0.780	D	2-ln Local Collector (no parking)	12,500 ^f	7,800	0.624	С	0.298	Provide a dedicated WB left-turn lane into the project driveway on Lincoln Avenue and prohibit on-street parking on both sides between North Broadway and project driveway. Approx. 40 spaces will be lost.	Voc
15.Garrick Way to Fig Street	4-ln Major (no parking)	37,000	39,023	1.055	F	40,400	1.092	F	4-In Major (with future improvements)	40,000g	40,400	1.010	F	(0.045)	Install a dedicated WB right-turn lane at Lincoln Avenue/ Garrick Way intersection and a dedicated EB right-turn lane at Lincoln Avenue/ Fig Street intersection. Re-time traffic signals at these intersections as needed.	Yes

TABLE 7B HORIZON YEAR (2035) + PROJECT STREET SEGMENT MITIGATION ANALYSIS

Roadway Segment Classification		Capacity ⁵	Horizon Year (2035)			Horizon Year (2035) + Project			Mitigation Classification	Mitigation Capacity	Horizo		2035) + Pi tigation	oject with	Mitigation	Mitigated to below a level of
, -			ADT ^b	V/C ^c	LOSd	ADT	V/C	LOS	Ciassification	Capacity	ADT	V/C	LOS	Δ^{e}		significance?
16. Fig Street to Ash Street	4-ln Major (no parking)	37,000	37,691	1.019	F	38,600	1.043	F	6-ln Prime	60,000	38,600	0.643	С	(0.376)	Contribute a fair-share towards widening of this roadway to 6-lanes.	Yes
17. Ash Street to Harding Street	2-ln Local Collector (with parking)	10,000	29,570	2.957	F	30,100	3.010	F	2-ln Local Collector (with left-turn pockets)	12,500 ^f	30,100	2.408	F	(0.549)	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 30 spaces will be lost . However, dedicated left-turn pockets on Lincoln Avenue at Harding Street and Pioneer Elementary School are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.	Vac
18. Harding Street to Rose Street	2-ln Local Collector (with parking)	10,000	23,430	2.343	F	23,800	2.380	F	2-ln Local Collector (with left-turn pockets)	12,500 ^f	23,800	1.904	F	(0.439)	Restriping to provide a two-way left-turn lane loses excessive parking. Approx. 61 spaces will be lost . However, dedicated left-turn pockets on Lincoln Avenue at Harding Street are recommended to increase roadway capacity. The provision of left-turn pockets would not require loss of parking.	Yes
Mission Avenue 21. Centre City Parkway to Escondido Boulevard	4-ln Major (no parking)	37,000	29,281	0.791	D	30,400	0.822	D	4-ln Major (with future improvements)	40,000g	30,400	0.760	С	(0.031)	Contribute a fair-share towards future improvements of this roadway.	Yes

- Capacity based on roadway classification operating at LOS E. Average Daily Traffic.
- Volume to Capacity. Level of Service.

- Δ denotes a project mitigation-induced increase or (decrease) in the Volume to Capacity ratio.
 2-In Collector (no parking on one side) or 2-lane Collector (with left-turn pockets) capacity of 12,500 interpolated.
 Future proposed improvements assumed to increase capacity by 3,000 ADT.

General Notes:

Bold indicates street segment operating at LOS D or worse per City of Escondido's significance criteria.

CONCLUSIONS

This letter report summarizes our review of the significant traffic impacts and proposed mitigation measures identified in the TIS for the Centerpointe 78 Project. This report also presents LLG's independent evaluation that verifies the appropriateness of the proposed mitigation measures and presents revisions to those measures as needed.

Based on our field review, LLG generally agrees with the proposed mitigation identified in the TIS. However, additional or revised mitigation measures are proposed at a few locations based on our review and analysis.

The proposed LLG intersection and segment improvements would reduce the project impacts to below a level of significance and thereby mitigating all of the significant intersection and street segment impacts under the Existing + Project, Opening Year (2016) + Project and Horizon Year (2035) + Project scenarios.

Please call us if you have any questions.

Sincerely,

Linscott, Law & Greenspan, Engineers

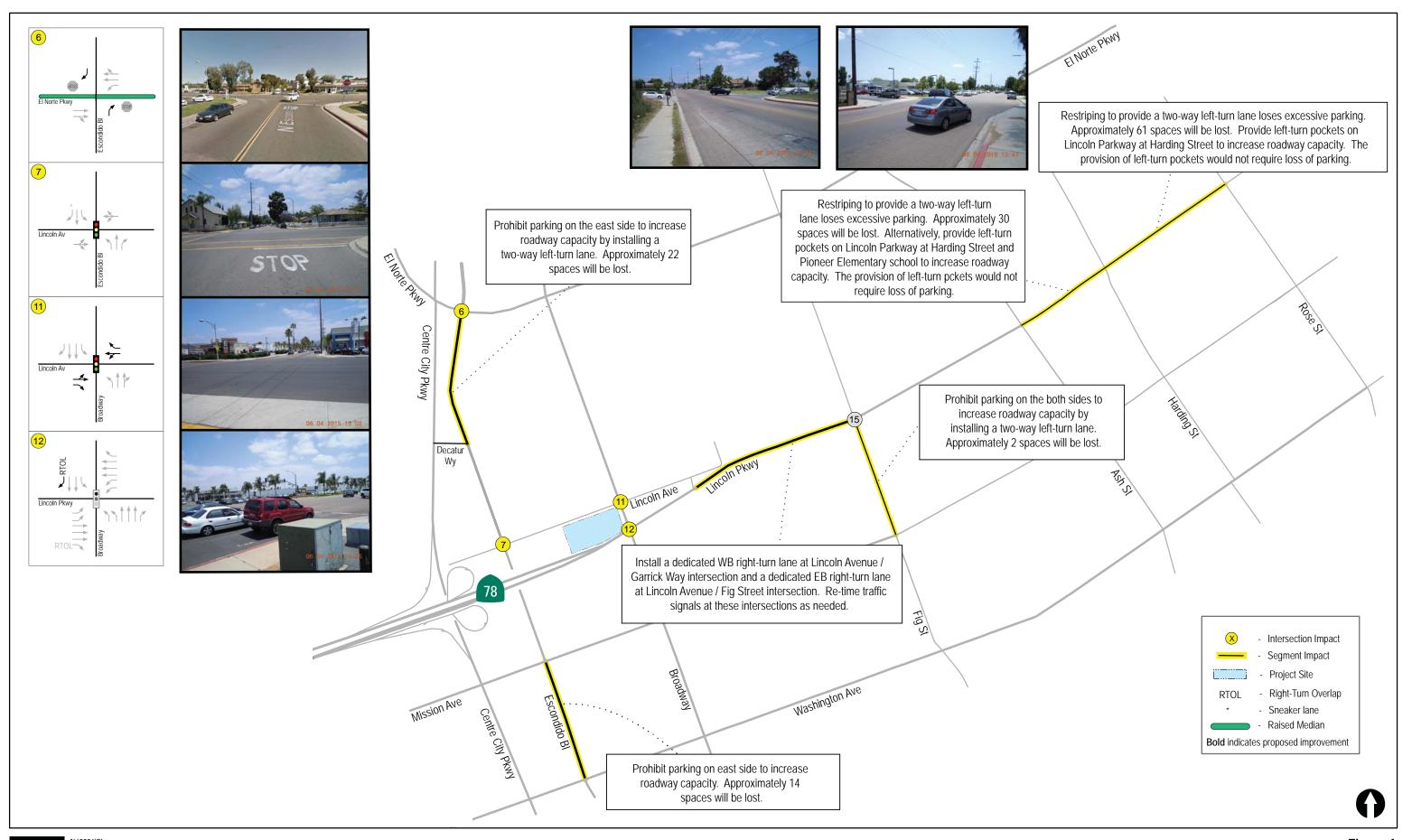
John Boarman, P.E.

Principal

Shankar R., P.E.

Senior Transportation Engineer

cc: File



LINSCOTT Date: 06/25/15
LAW &
GREENSPAN

Figure A



