APPENDIX A KDA AF SIERRA MEMO 2 WITH TABLES.PDF

MEMO

To: Stephanie Holloway, Placer County

From: Ken Anderson

Date: **January 26, 2012**

Re: Sierra College Blvd Striping Alternatives

I have been asked to review a conceptual striping plan prepared for Sierra College Blvd from Nightwatch Drive north to El Don Avenue. The plan is intended to illustrate how a second northbound lane might be created by restriping portions of the existing three lanes that are available in the southbound direction. If pursued, the concept would not change the amount of pavement to be constructed along the Amazing Facts Church frontage, but it would create the opportunity to complete a four lane facility from the Roseville city limits to Interstate 80.

Under this concept the configurations of three intersections differs from those identified in the Amazing Facts DEIR traffic study, and I have been asked to determine whether these changes would result in any new traffic impacts or in any difference in Amazing Facts Church's mitigation requirements. To answer this question we re-ran Level of Service calculations for these signalized intersections under both EPAP and Year 2025 conditions with full build out of the Amazing Facts Church Project (i.e., Phases 1 & 2). The results are presented in the two tables which follow.

As shown in the tables, the conceptual striping plan would result in Levels of Service that are the same as those expected following implementation of the mitigation measures originally presented in the Amazing Facts Church DEIR traffic study. Under EPAP plus Project conditions the Nightwatch Drive intersection would operate at LOS C, while the Southside Ranch Drive and El Don Avenue intersections would operate at LOS A.

The tables also note the potential effects on traffic operations at the un-signalized Sierra College Blvd / Ridge Park Drive intersection. While the overall Level of Service will remain LOS A and Amazing Facts Church's impacts remain insignificant at this location, the introduction of a second northbound lane would reduce the length of delays for motorists waiting to turn onto Sierra College Blvd. Adding a second northbound lane could also provide space for deceleration by motorists turning onto Ridge Park Drive or room for acceleration by motorists turning right onto Sierra College Blvd.

TABLE 9 EXISTING PLUS APPROVED PROJECTS PLUS AMAZING FACTS CHURCH SATURDAY PEAK HOUR INTERSECTION LEVELS OF SERVICE

				Existing Plus Approved Projects Plus Amazing Facts Church								
		Ewice	ting Dlug	Without Improvements						With Concept for 4 lanes (1)		
		Existing Plus Approved Projects		0		Phase 1			Phase 2		Phase 2	
				1 Access		2 Access		2 Access		2 access		
Sierra College Blvd Intersection With	Control	LOS	Volume / capacity	LOS	Volume / capacity	LOS	Volume / Capacity	LOS	Volume / Capacity	LOS	Volume / Capacity	
El Don Drive	Signal	A	0.35	A	0.43	A	0.43	A	0.47	A	0.47	
Southside Ranch Rd	Signal	A	0.58	С	0.74	С	0.74	D	<mark>0.82</mark>	A	0.43	
	Mitigated (2)							A	0.43			
Ridge Park Drive (Overall) WB left+right turn	WB Stop	(A)	(0.1 sec)	(A)	(0.1 sec)	(A)	(0.1 sec)	(A)	(0.1 sec)	(A)	(0.1)	
		C	18.2 sec	C	24.7 sec	C	24.7 sec	D	29.6 sec	D	25.3	
	Alternative (2)							C	21.6 sec			
	Alternative (3)						C	24.5 sec				
	Alternative (4)						D	28.9 sec				
	Alternative (5)							C	23.8 sec			
Nightwatch Drive	Signal	A	0.56	D	0.88	D	0.83	E	0.99	C	0.70	
	Mitigated (2)		·	В	0.61	A	0.56	C	0.70			

⁽¹⁾ Drop 3rd SB lane at El Don intersection as right turn lane and carry 2 SB lanes through Nightwatch Drive Add second through lane on Sierra College Blvd (SPRTA) and keep three SB lanes
(3) Restrict movements to right turns only
(4) Widen Ridge Park Drive to separate left and right turns

⁽⁵⁾ Widen Sierra College Blvd to create Southbound left turn Receiving Lane

TABLE 12 CUMULATIVE YEAR 2025 SATURDAY INTERSECTION LEVELS OF SERVICE

				Year 2025 Plus Amazing Facts Church Phase 1 + 2				
		No	Project	No Improvements		With Concept for 4 lanes (1)		
Intersection	Control	LOS	Volume / Capacity	LOS	Volume / Capacity	LOS	Volume / Capacity	
Sierra College Blvd / El Don Dr	Signal	A	0.47	A	0.58	A-B	0.60	
Circus Calless Dist/Cardaida Danida Danid	Signal	D	0.81	<mark>F</mark>	<mark>1.05</mark>	A	0.57	
Sierra College Blvd / Southside Ranch Road	Mitigated (2)	A	0.42	A	0.54			
	W/D Ct	(A)	(0.1 sec)	(A)	(0.2 sec)	(A)	(0.2)	
	WB Stop	D	29.9 sec	F	51.7 sec	E	47.4	
Sierra College Blvd / Ridge Park Drive	Alternative (3)			D	33.1 sec			
WB left+right turn	Alternative (4)			C	15.1 sec			
	Alternative (5)			D	32.5 sec			
	Alternative (6)			С	20.5 sec			
	Signal	С	0.79	<mark>F</mark>	<mark>1.21</mark>	C-D	0.80	
Sierra College Blvd / Nightwatch Drive	Mitigated (2)			C-D	0.80			
	Mitigated (3)			C	0.71			

 $^{^{(1)}}$ Drop 3^{rd} SB lane as right turn lane at El Don Ave, and carry 2 SB lanes through Nightwatch Drive . $^{(2)}$ Add second northbound through lane. (SPRTA) and keep 3 southbound lanes $^{(3)}$ Add second and third northbound through lane on Sierra College Blvd. (SPRTA)

⁽⁴⁾ Add second northbound through lane and restrict access to right turns only.

⁽⁵⁾ Add second and third northbound lanes and widen Ridge Park Drive to separate left and right turns.

⁽⁶⁾ Add second northbound lane and widen Sierra College Blvd to create southbound left turn receiving lane.