APPENDIX I

ADDITIONAL TRAFFIC ANALYSIS SCENARIOS

I. INTRODUCTION

This presents impacts of Phase I and buildout of the Rio del Oro Specific Plan on the adjacent transportation system for 2014 and Cumulative Conditions.

Please note that this information has been superseded with information in the EIR/EIS for the proposed project. However, this information is attached for informational purposes only.

Study Scenarios

Impacts of the proposed project to the surrounding transportation system were evaluated for the following study scenarios:

2014 Conditions:	A near-term planning horizon consisting of traffic volumes from expected development over the next ten years (provided by City Staff). The scenario incorporates roadway improvement projects associated with assumed development projects in the area and Tier I projects identified for completion in the *Metropolitan Transportation Plan* (MTP) by 2014.
2014 With Phase I:	2014 Conditions and completion of Phase I of the proposed specific plan area.
2014 With Specific Plan Buildout:	2014 Conditions and completion of the entire Rio del Oro Specific Plan.
Cumulative Conditions:	Cumulative planning horizon consisting of traffic volumes from expected development by year 2030 (provided by City Staff). The scenario incorporates roadway improvement projects associated with assumed development projects in the area and Tier I projects identified in the MTP. This scenario does *not* assume the extension of Hazel Avenue south to Grant Line Road.
Cumulative With Specific Plan Buildout:	Cumulative Conditions and traffic from buildout of the proposed Rio del Oro Specific Plan. This analysis assumes that Hazel Avenue will not be extended south to Grant Line Road.
Cumulative With Hazel Conditions:	Cumulative Conditions with the extension of Hazel Avenue south, through the GenCorp property, to Grant Line Road. This scenario is presented for informational purposes.
Cumulative With Specific Plan Buildout With Hazel Conditions:	Cumulative With Specific Plan Buildout and the extension of Hazel Avenue to Grant Line Road.

Study Area

Detailed traffic analyses were preformed for the following intersections, roadway segments, freeway facilities, and interchanges:

Intersections

1. State Route (SR) 16/Excelsior Road
2. SR 16/Eagles Nest Road
3. SR 16/Sunrise Boulevard
4. SR 16/Grant Line Road
5. Florin Road/Sunrise Boulevard
6. Grant Line Road/Sunrise Boulevard
7. Grant Line Road/Kiefer Boulevard
8. Douglas Road/Grant Line Road
9. Douglas Road/Sunrise Boulevard
10. Mather Field Road/Folsom Boulevard
11. Mather Field Road/US-50 Westbound Ramps
12. Mather Field Road/US-50 Eastbound Ramps
13. Mather Field Road/International Drive
14. Zinfandel Drive/International Drive
15. Zinfandel Drive/White Rock Road
16. Zinfandel Drive/US-50 Eastbound Ramps
17. Zinfandel Drive/US-50 Westbound Ramps
18. Sunrise Boulevard/White Rock Road
19. Sunrise Boulevard/Folsom Boulevard
20. Sunrise Boulevard/US-50 Eastbound Ramps
21. Sunrise Boulevard/US-50 Westbound Ramps
22. Sunrise Boulevard/Zinfandel Drive
23. Hazel Avenue/Folsom Boulevard
24. Hazel Avenue/US-50 Eastbound Ramps
25. Hazel Avenue/US-50 Westbound Ramps
26. White Rock Road/Grant Line Road
27. Sunrise Boulevard/Kiefer Boulevard – 2014 and Cumulative scenarios only
28. Eagles Nest/Kiefer Boulevard – 2014 and Cumulative scenarios only
29. Sunrise Boulevard/International Drive – 2014 and Cumulative scenarios only
30. Sunrise Reliever/White Rock Road – Cumulative scenario only
31. Sunrise Reliever/US-50 Eastbound Ramps – Cumulative scenario only
32. Sunrise Reliever/US-50 Westbound Ramps – Cumulative scenario only
33. Douglas Road/Jaeger Road – Cumulative scenario only
34. Douglas Road/Americanos Boulevard – Cumulative scenario only
35. Chrysanthy Boulevard/Sunrise Boulevard – Cumulative scenario only
36. Chrysanthy Boulevard/Jaeger Road – Cumulative scenario only
37. Chrysanthy Boulevard/Americanos Boulevard – Cumulative scenario only
38. Kiefer Boulevard/Jaeger Road – Cumulative scenario only
39. White Rock Road/Americanos Boulevard – Cumulative scenario only

Roadways

SR 16 – Excelsior Road to Eagles Nest Road

SR 16 – Sunrise Boulevard to Grant Line Road
Kiefer Boulevard – Grant Line Road to SR 16
Mather Boulevard – Femoyer Street to Douglas Road
Douglas Road – Mather Boulevard to Sunrise Boulevard
Douglas Road – Sunrise Boulevard to Grant Line Road
International Drive – South White Rock Road to Zinfandel Drive
International Drive – Zinfandel Drive to Kilgore Road
White Rock Road – Zinfandel Drive to Sunrise Boulevard
White Rock Road – Sunrise Boulevard to Grant Line Road
Folsom Boulevard – Zinfandel Drive to Sunrise Boulevard
Folsom Boulevard – Sunrise Boulevard to Hazel Avenue
Mather Field Road – Folsom Boulevard to US-50 Westbound Ramps
Mather Field Road – US-50 Eastbound Ramps to International Drive
Zinfandel Drive – Folsom Boulevard to US-50 Westbound Ramps
Zinfandel Drive – US-50 Eastbound Ramps to White Rock Road
Zinfandel Drive – White Rock Road to International Drive
Sunrise Boulevard – Gold Country Boulevard to Coloma Road
Sunrise Boulevard – Coloma Road to US-50 Westbound Ramps
Sunrise Boulevard – US-50 Eastbound Ramps to Folsom Boulevard
Sunrise Boulevard – Folsom Boulevard to White Rock Road
Sunrise Boulevard – White Rock Road to Douglas Road
Sunrise Boulevard – Douglas Road to SR 16
Sunrise Boulevard – SR 16 to Grant Line Road
Hazel Avenue – US-50 Westbound Ramps to Winding Way
Grant Line Road – White Rock Road to Douglas Road
Grant Line Road –Douglas Road to SR 16
Grant Line Road – SR 16 to Sunrise Boulevard
Douglas Road – Sunrise to Jaeger Road – 2014 and Cumulative scenarios only
Douglas Road – Americanos Boulevard to Grant Line Road – 2014 and Cumulative scenarios only
Sunrise Boulevard – Douglas to Kiefer Boulevard – 2014 and Cumulative scenarios only
Sunrise Boulevard – Kiefer Boulevard to SR16 – 2014 and Cumulative scenarios only
Douglas Road – Jaeger Road to Americanos Boulevard – Cumulative scenario only
Pyramid Boulevard – Sunrise Boulevard to Jaeger Road – Cumulative scenario only
Pyramid Boulevard – Jaeger Road to Americanos Boulevard – Cumulative scenario only
Kiefer Boulevard – Eagles Nest Road to Sunrise Boulevard – Cumulative scenario only
Kiefer Boulevard – Sunrise Boulevard to Jaeger Road – Cumulative scenario only
Eagles Nest Road – Mather Boulevard to Douglas Road – Cumulative scenario only
Eagles Nest Road – Douglas Road to Kiefer Boulevard – Cumulative scenario only
Eagles Nest Road – Kiefer Boulevard to SR 16 – Cumulative scenario only
Sunrise Boulevard – Douglas Road to Pyramid Boulevard – Cumulative scenario only
Sunrise Boulevard – Pyramid Boulevard to Kiefer Boulevard – Cumulative scenario only
Sunrise Boulevard – Kiefer Boulevard to SR 16 – Cumulative scenario only
Sunrise Reliever – US-50 to White Rock Road – Cumulative scenario only
Jaeger Road – White Rock Road to Douglas Road – Cumulative scenario only

Jaeger Road – Douglas Road to Pyramid Boulevard – Cumulative scenario only
Jaeger Road – Pyramid Boulevard to Kiefer Boulevard – Cumulative scenario only
Americanos Boulevard – White Rock Road to Douglas Road
Americanos Boulevard – Douglas Road to Pyramid Boulevard

Freeway Segments

29. US-50 – Mather Field Road to Zinfandel Boulevard
30. US-50 – Zinfandel Boulevard to Sunrise Boulevard
31. US-50 – Sunrise Boulevard to Hazel Avenue
32. US-50 – Hazel Avenue to Folsom Boulevard
33. US-50 – Sunrise Boulevard to Sunrise Reliever – 2014 and Cumulative Scenarios
34. US-50 – Sunrise Reliever to Hazel Avenue – 2014 and Cumulative Scenarios

Interchanges

1. Mather Field Road interchange at US-50
2. Zinfandel Drive interchange at US-50
3. Sunrise Boulevard interchange at US-50
4. Hazel Avenue interchange at US-50
5. Sunrise Reliever interchange at US-50 – 2014 and Cumulative Scenarios

Report Organization

The remainder of this report contains the following three sections:

Section II – 2014 Conditions
Section III – Cumulative (Year 2030) Conditions
Section IV – Impacts and Mitigation Measures

II. 2014 OPERATING CONDITIONS

The purpose of the 2014 analysis is to determine if implementation of the proposed project, in addition to background growth associated with approved/planned projects in the area over the next ten years, will adversely affect the planned transportation system through the . The following scenarios were analyzed for 2014 Conditions as outlined in Section II.

- 2014 No Project Conditions – Assumes no development on the Rio del Oro site.
- 2014 With Phase I – 2014 No Project Conditions with development from Phase I of the Rio del Oro Specific Plan.
- 2014 With Specific Plan Buildout – 2014 No project Conditions with development of the entire Rio del Oro Specific Plan.

Planned Transportation Improvements

2014 roadway improvements assumed in this analysis are consistent with Tier 1 improvements identified in the MTP for completion prior to 2014 as shown on Figure 3. As shown on Figure 3, the Sunrise Reliever interchange was assumed for 2014 Conditions. The interchange was assumed to be a Type L-7 interchange for westbound US-50, and a traditional diamond interchange for eastbound US-50. The following additional roadway segments and intersections were included in this analysis based on these improvements:

Roadway Segments

1. Douglas Road – Sunrise Boulevard to Jaeger Road
2. Douglas Road – Americanos Boulevard to Grant Line Road
3. Sunrise Boulevard – Douglas Road to Kiefer Boulevard
4. Sunrise Boulevard – Kiefer Boulevard to SR 16

Intersections

Sunrise Boulevard/Kiefer Boulevard
Sunrise Boulevard/International Drive
Eagles Nest Road/Douglas Road

Roadway System Operations

Roadway Segments

2014 Conditions daily traffic volumes were compared to the capacity criteria for roadway segments. Table 1 summarizes the roadway analysis for all 2014 scenarios.

As shown on Table 1, the following segments will operate at LOS F for at least one scenario:

Mather Boulevard – Femoyer Street to Douglas Road (Deficiency (D-1)
Zinfandel Drive – US-50 Eastbound Ramps to White Rock Road (D-2)
Sunrise Boulevard – Gold Country Boulevard to Coloma Road (D-3)
Sunrise Boulevard – Coloma Road to US-50 Westbound Ramps (D-4)
Sunrise Boulevard – US-50 Eastbound Ramps to Folsom Boulevard (D-5)
Sunrise Boulevard – SR-16 to Grant Line Road (D-6)
Hazel Avenue – Winding Way to US-50 Westbound Ramps (D-7)

US-50 – Mather Field Road to Zinfandel Drive (D-8)
Sunrise Boulevard – Douglas Road to Kiefer Boulevard (D-9)
Sunrise Boulevard – Kiefer Boulevard to SR-16 (D-10)

Intersections

2014 Volumes and identified roadway improvements were used to calculate AM and PM peak hour levels of service at the study intersections. The results of the LOS analysis are summarized in Table 2.

The results of the LOS analysis indicate that the following intersections will operate at an unacceptable level during the AM or PM peak hours for at least one scenario:

SR-16/Excelsior Road (D-11)
SR-16/Sunrise Boulevard (D-12)
SR-16/Grant Line Road (D-13)
Florin Road/Sunrise Boulevard (D-14)
Grant Line Road/Sunrise Boulevard (D-15)
Grant Line Road/Kiefer Road (D-16)
Grant Line Road/Douglas Road (D-17)
Douglas Road/Sunrise Boulevard (D-18)
Zinfandel Drive/White Rock Road (D-19)
Zinfandel Drive/US-50 Eastbound Ramps (D-20)
Sunrise Boulevard/White Rock Road (D-21)
Sunrise Boulevard/US-50 Westbound Ramps (D-22)
Sunrise Boulevard/Zinfandel Drive (D-23)
Hazel Avenue/Folsom Boulevard (D-24)
Hazel Avenue/US-50 Eastbound Ramps (D-25)
Hazel Avenue/US-50 Westbound Ramps (D-26)
Sunrise Boulevard/Kiefer Boulevard (D-27)
Sunrise Boulevard/International Drive (D-28)

Signal Warrant Analysis

Peak hour signal warrants were reviewed at the two unsignalized study intersections. The results show that both unsignalized study intersections will satisfy the peak hour volume warrant for traffic signal installation.

Freeway Ramp Merge/Diverge/Weave Analysis

The results of the merge/diverge/weave analysis are summarized in Table 3. The results indicate that the following merge/diverge/weave segments will operate at an unacceptable LOS F during the AM or PM peak hours for all scenarios:

Eastbound Mather Field Road Direct Off-Ramp (D-29)
Eastbound Zinfandel Drive Direct Off-Ramp (D-30)
Eastbound Sunrise Boulevard Loop/Direct On-Ramp (D-31)
Eastbound Sunrise Reliever Direct Off-Ramp (D-32)
Eastbound Sunrise Reliever Direct On-Ramp (D-33)
Westbound Hazel Avenue Direct Off-Ramp (D-34)
Westbound Hazel Avenue Loop On-Ramp (D-35)

TABLE 1
Roadway Segment Levels of Service – 2014 Conditions (2014)

Roadway Segment	Lanes	No Project			With Phase I			With SP Buildout		
		Vol	V/C	LOS	Vol	V/C	LOS	Vol	V/C	LOS
SR 16 – Excelsior Road to Eagles Nest Road	2	16,900	0.94	E	16,900	0.94	E	17,000	0.94	E
SR 16 – Sunrise Boulevard to Grant Line Road	4	16,900	0.47	A	17,800	0.49	A	17,700	0.49	A
Kiefer Boulevard – Grant Line Road to North of SR 16[1]	2	6,100	0.36	D	6,800	0.40	D	7,700	0.45	D
Mather Boulevard – Femoyer Street to Douglas Road	2	22,000	1.22	F	22,100	1.23	F	22,300	1.24	F
Douglas Road – Mather Boulevard to Sunrise Boulevard	6	25,800	0.48	A	28,600	0.53	A	31,200	0.58	A
International Drive – South White Rock Road to Zinfandel Drive	4	12,000	0.33	A	15,800	0.44	A	18,000	0.50	A
International Drive – Zinfandel Drive to Kilgore Road	4	10,100	0.28	A	18,800	0.52	A	23,300	0.65	B
White Rock Road – Zinfandel Drive to Sunrise Boulevard	6	17,900	0.33	A	27,800	0.51	A	32,700	0.61	B
White Rock Road – Sunrise Boulevard to Grant Line Road	4	8,400	0.23	A	11,800	0.33	A	18,200	0.51	A
Folsom Boulevard – Zinfandel Drive to Sunrise Boulevard	4	20,300	0.56	A	20,600	0.57	A	20,700	0.58	A
Folsom Boulevard – Sunrise Boulevard to Hazel Avenue	4	13,300	0.37	A	13,400	0.37	A	13,500	0.38	A
Mather Field Road – Folsom Boulevard to US-50 Westbound Ramps	4	26,400	0.73	C	27,000	0.75	C	27,500	0.76	C
Mather Field Road – US-50 Eastbound Ramps to International Drive	6	37,400	0.69	B	38,100	0.71	C	38,900	0.72	C
Zinfandel Drive – Folsom Boulevard to US-50 Westbound Ramps	4	22,700	0.63	B	23,500	0.65	B	23,700	0.66	B
Zinfandel Drive – US-50 Eastbound Ramps to White Rock Road	6	41,900	0.78	C	**55,700**	**1.03**	**F**	**62,400**	**1.16**	**F**
Zinfandel Drive – White Rock Road to International Drive	6	20,100	0.37	A	24,600	0.46	A	26,800	0.50	A
Sunrise Boulevard – Gold Country Boulevard to Coloma Road	6	75,800	1.40	F	**84,400**	**1.56**	**F**	**89,700**	**1.66**	**F**
Sunrise Boulevard – Coloma Road to US-50 Westbound Ramps	6	82,400	1.53	F	**92,100**	**1.71**	**F**	**97,900**	**1.81**	**F**
Sunrise Boulevard – US-50 Eastbound Ramps to Folsom Boulevard	6	52,100	0.96	E	**61,600**	**1.14**	**F**	**64,100**	**1.19**	**F**
Sunrise Boulevard – Folsom Boulevard to White Rock Road	6	37,200	0.69	B	47,700	0.88	D	50,600	0.94	E
Sunrise Boulevard – White Rock Road to Douglas Road	6	30,500	0.56	A	40,600	0.75	C	43,800	0.81	D
Sunrise Boulevard – SR 16 to Grant Line Road	2	23,900	1.33	F	**29,000**	**1.61**	**F**	**31,800**	**1.77**	**F**
Hazel Avenue – Winding Way to US-50 Westbound Ramps[2]	6	71,100	1.19	F	**75,700**	**1.26**	**F**	**79,800**	**1.33**	**F**
Grant Line Road – White Rock Road to Douglas Road	2	13,200	0.73	C	13,200	0.73	C	13,200	0.73	C
Grant Line Road –Douglas Road to SR 16	2	12,100	0.67	B	12,100	0.67	B	12,200	0.68	B
Grant Line Road – SR 16 to Sunrise Boulevard	2	10,600	0.59	A	10,600	0.59	A	10,900	0.61	B
US-50 – Mather Field Road to Zinfandel Drive	8	176,200	1.10	F	**188,500**	**1.18**	**F**	**197,900**	**1.24**	**F**
US-50 – Zinfandel Drive to Sunrise Boulevard	8	155,100	0.97	E	155,200	0.97	E	158,500	0.99	E
US-50 – Sunrise Boulevard to Hazel Avenue	8	134,100	0.84	D	134,500	0.84	D	142,000	0.89	D
US-50 – Hazel Avenue to Folsom Boulevard	8	119,400	0.75	C	127,400	0.80	D	131,800	0.82	D
Douglas Road – Sunrise Boulevard to Jaeger Road	4	19,700	0.55	A	24,900	0.69	B	27,700	0.77	C
Douglas Road – Americanos Boulevard to Grant Line Road	4	2,600	0.07	A	2,600	0.07	A	2,700	0.08	A
Sunrise Boulevard – Douglas Road to Kiefer Boulevard	4	39,800	1.11	F	**51,100**	**1.42**	**F**	**54,700**	**1.52**	**F**
Sunrise Boulevard – Kiefer Boulevard to SR 16	4	35,800	0.99	E	**43,500**	**1.21**	**F**	**46,900**	**1.30**	**F**

Notes:
Not expected to be a through roadway for 2014 Conditions.
Assumed to have high access control.
Shaded areas indicate deficiency. **Bold** indicates impact.
Source: *Fehr & Peers*, 2005.

TABLE 2
Intersection Levels of Service – 2014 Conditions (2014)

Intersection	Control	No Project				With Phase I				With SP Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C Or Delay	LOS	V/C or Delay	LOS
1. SR 16/Excelsior Road	Signalized	1.66	F	1.24	F	1.70	F	**1.30**	F	**1.73**	F	1.26	F
2. SR 16/Eagles Nest Road	Signalized	0.59	A	0.46	A	0.58	A	0.45	A	0.58	A	0.47	A
3. SR 16/Sunrise Boulevard	Signalized	1.01	F	0.88	D	**1.14**	F	**1.01**	F	**1.21**	F	**1.07**	F
4. SR 16/Grant Line Road	Signalized	1.19	F	1.15	F	1.20	F	1.16	F	**1.27**	F	**1.23**	F
5. Florin Road/Sunrise Boulevard	Signalized	0.67	B	0.87	D	0.78	C	**1.02**	F	0.88	D	**1.10**	F
6. Grant Line Road/Sunrise Boulevard	Signalized	1.54	F	1.64	F	**1.80**	F	**1.89**	F	**1.87**	F	**2.03**	F
7. Grant Line Road/Kiefer Boulevard	All-Way Stop	90	F	110	F	**130**	F	**143**	F	**175**	F	**> 180**	F
8. Douglas Road/Grant Line Road	Side-Street Stop	50	F	36	E	**79**	F	**56**	F	77	F	35	E
9. Douglas Road/Sunrise Boulevard	Signalized	1.10	F	1.17	F	**1.21**	F	**1.41**	F	**1.33**	F	**1.52**	F
10. Mather Field Road/Folsom Boulevard	Signalized	0.76	C	0.97	E	0.76	C	0.98	E	0.74	C	0.95	E
11. Mather Field Road/US-50 Westbound Ramps	Signalized	0.54	A	0.61	B	0.54	A	0.62	B	0.56	A	0.62	B
12. Mather Field Road/US-50 Eastbound Ramps	Signalized	0.82	D	0.61	B	0.83	D	0.66	B	0.85	D	0.64	B
13. Mather Field Road/International Drive	Signalized	0.70	B	0.79	C	0.75	C	0.84	D	0.78	C	0.86	D
14. Zinfandel Drive/International Drive	Signalized	0.47	A	0.44	A	0.62	B	0.62	B	0.71	C	0.65	B
15. Zinfandel Drive/White Rock Road	Signalized	0.65	B	1.00	E	0.87	D	**1.21**	F	0.99	E	**1.32**	F
16. Zinfandel Drive/US-50 Eastbound Ramps	Signalized	0.89	D	1.09	F	**1.03**	F	**1.34**	F	**1.16**	F	**1.47**	F
17. Zinfandel Drive/US-50 Westbound Ramps	Signalized	0.47	A	0.53	A	0.54	A	0.54	A	0.50	A	0.55	A
18. Sunrise Boulevard/White Rock Road	Signalized	0.83	D	0.77	C	0.89	D	0.89	D	**1.01**	F	0.94	E
19. Sunrise Boulevard/Folsom Boulevard	Signalized	0.84	D	0.78	C	0.91	E	0.87	D	0.96	E	0.88	D

TABLE 2 Continued
Intersection Levels of Service – 2014 Conditions (2014)

Intersection	Control	No Project				With Phase I				With SP Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
20. Sunrise Boulevard/US-50 Eastbound Ramps	Signalized	0.55	A	0.62	B	0.63	B	0.68	B	0.65	B	0.69	B
21. Sunrise Boulevard/US-50 Westbound Ramps	Signalized	0.66	B	0.95	E	0.74	C	**1.04**	**F**	0.84	D	**1.09**	**F**
22. Sunrise Boulevard/Zinfandel Drive	Signalized	1.09	F	1.98	F	**1.18**	**F**	**2.08**	**F**	**1.23**	**F**	**2.10**	**F**
23. Hazel Avenue/Folsom Boulevard[4]	Signalized	1.85	F	1.64	F	1.82	F	1.64	F	1.83	F	1.61	F
24. Hazel Avenue/US-50 Eastbound Ramps	Signalized	0.86	D	1.24	F	0.91	E	**1.42**	**F**	**1.00**	**F**	**1.55**	**F**
25. Hazel Avenue/US-50 Westbound Ramps	Signalized	1.63	F	1.07	F	**1.71**	**F**	**1.16**	**F**	**1.77**	**F**	**1.21**	**F**
26. White Rock Road/Grant Line Road	Signalized	0.49	A	0.59	A	0.51	A	0.66	B	0.62	B	0.72	C
27. Sunrise Boulevard/Keifer Boulevard	Signalized	0.86	D	0.76	C	**1.06**	**F**	0.93	E	**1.12**	**F**	1.00	E
28. Eagles Nest Road/Keifer Road	Signalized	0.45	A	0.25	A	0.45	A	0.26	A	0.45	A	0.27	A
29. Sunrise Boulevard/International	Signalized	0.88	D	0.88	D	**1.17**	**F**	**1.50**	**F**	**1.54**	**F**	**1.65**	**F**

Notes: [1] V/C (volume-to-capacity) ratio is shown for signalized intersections. Delay is shown for unsignalized intersections.
[2] Delay for side-street stop unsignalized intersections reported for worst-case approach, for all-way stop intersections average intersection delay reported in seconds per vehicle.
[3] LOS = level of service
[4] The proposed project changes traffic distribution at this intersection such that traffic is added to non-critical movements (traffic is reduced at critical movements). Therefore, V/C of the critical movements decreases with the proposed project.
Shaded areas indicate deficiency. **Bold** indicates impact.
Source: *Fehr & Peers*, 2005.

Westbound Sunrise Reliever Direct Off-Ramp (D-36)
Westbound Sunrise Reliever Direct On-Ramp (D-37)
Westbound Zinfandel Drive Direct Off-Ramp (D-38)
Westbound Zinfandel Drive Direct On-Ramp (D-39)
Westbound Mather Field Road Direct Off-Ramp (D-40)
Westbound Mather Field Road Loop On-Ramp (D-41)
Westbound Mather Field Road Direct On-Ramp (D-42)

Freeway Segments

The results of the freeway segment peak hour analysis are summarized in Table 4. The results indicate that the following two segments will operate at an unacceptable level for 2014 No Project Conditions:

Eastbound US-50, Zinfandel Drive to Sunrise Boulevard
Westbound US-50, West of Mather Field Road

The addition of traffic associated with Phase I or Specific Plan Buildout of the proposed project is expected to degrade peak hour freeway segment operations to an unacceptable level for the following freeway segments:

Eastbound US-50, West of Mather Field Road (D-43)
Eastbound US-50, Mather Field Road to Zinfandel Drive (D-44)
Eastbound US-50, Zinfandel Drive to Sunrise Boulevard (D-45)
Eastbound US-50, Sunrise Boulevard to Sunrise Reliever (D-46)
Eastbound US-50, Sunrise Reliever to Hazel Avenue (D-47)
Eastbound US-50, East of Hazel Avenue (D-48)
Westbound US-50, East of Hazel Avenue (D-49)
Westbound US-50, Hazel Avenue to Sunrise Reliever (D-50)
Westbound US-50, Zinfandel Drive to Mather Field Road (D-51)
Westbound US-50, West of Mather Field Road (D-52)

TABLE 3
Merge/Diverge/Weave Level of Service – 2014 Conditions (2014)

Ramp	Merge, Diverge, or Weave	No Project				With Phase I				With SP Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
EASTBOUND US-50													
Mather Field Road Direct Off-Ramp	Diverge	45	F	41	F	47	F	44	F	51	F	50	F
Mather Field Road Loop On-Ramp	Merge	23	C	24	C	24	C	26	C	26	C	28	C
Mather Field Road Direct On-Ramp	Merge	22	C	22	C	23	C	23	C	25	C	25	C
Zinfandel Drive Direct Off-Ramp	Diverge	24	C	19	B	29	D	24	C	36	F	31	D
Zinfandel Drive Loop On-Ramp	Merge	20	C	26	C	20	C	26	C	20	C	28	D
Zinfandel Drive Direct On-Ramp	Merge	20	B	25	C	20	B	26	C	20	B	27	C
Sunrise Boulevard Direct Off-Ramp	Diverge	22	C	31	D	22	C	31	D	23	C	33	D
Sunrise Boulevard Loop/Direct On-Ramp	Merge	34	D	37	F	34	D	37	F	35	D	42	F
Sunrise Reliever Direct Off-Ramp[3]	Diverge	27	C	40	F	27	C	41	F	29	D	45	F
Sunrise Reliever Direct On-Ramp[3]	Merge	31	D	36	E	39	F	40	F	44	F	47	F
Hazel Avenue Direct Off-Ramp	Diverge	22	C	23	C	24	C	26	C	27	C	32	D
Hazel Avenue Loop/Direct On-Ramp AeroJet Direct Off-Ramp	Weave	N/A	D	N/A	E	N/A	D	N/A	E	N/A	D	N/A	E
Westbound US-50													
Hazel Avenue Direct Off-Ramp	Diverge	44	F	42	F	47	F	45	F	58	F	47	F
Hazel Avenue Loop On-Ramp	Merge	37	E	34	D	38	E	36	E	42	F	38	E
Sunrise Reliever Direct Off-Ramp[3]	Diverge	40	F	32	D	44	F	35	E	49	F	41	F
Sunrise Reliever Loop On-Ramp[3]	Merge	41	F	27	C	42	F	27	C	49	F	29	D
Sunrise Boulevard Direct Off-Ramp	Diverge	23	C	14	B	24	C	14	B	29	D	16	B
Zinfandel Drive Direct Off-Ramp	Diverge	39	E	29	D	39	E	29	D	41	F	29	D
Zinfandel Drive Loop On-Ramp	Merge	29	D	28	C	30	D	29	D	31	D	31	D
Zinfandel Drive Direct On-Ramp	Merge	39	F	37	F	40	F	40	F	44	F	43	F
Mather Field Direct Off-Ramp	Diverge	44	F	37	E	46	F	39	E	51	F	42	F
Mather Field Loop On-Ramp	Merge	36	F	32	D	38	F	33	D	43	F	36	F
Mather Field Direct On-Ramp	Merge	46	F	43	F	49	F	45	F	55	F	49	F

Notes:
Density in passenger cars per mile per lane for merge/diverge analysis only.
LOS = Level of Service. LOS computed using HCS 2000 software for the merge/diverge analysis consistent with HCM 2000 methodologies. Weave analysis evaluated using the Leisch Method for Weaving Analysis.
Sunrise Reliever interchange assumed to have similar geometrics to nearby interchanges. One lane assumed on all ramps (a conservative assumption).
Shaded areas indicate deficiency where calculation indicates demand exceeds capacity.
N/A = Not Applicable.
Source: *Fehr & Peers*, 2005.

TABLE 4
Freeway Segment Level of Service – 2014 Conditions (2014)

Segment	Number of Lanes	No Project				With Phase I				With SP Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]
EASTBOUND US-50													
West of Mather Field Road	4	0.90	E	0.88	D	0.95	E	1.15	F	0.98	E	1.42	F
Mather Field Road to Zinfandel Drive	4	0.77	D	0.88	D	0.82	D	1.17	F	0.84	D	1.48	F
Zinfandel Drive to Sunrise Boulevard	3	0.82	D	1.08	F	0.82	D	1.10	F	0.83	D	1.33	F
Sunrise Boulevard to Sunrise Reliever	3	0.55	B	0.92	E	0.55	C	0.99	E	0.57	C	1.57	F
Sunrise Reliever to Hazel Avenue	3	0.85	D	0.82	D	0.90	D	1.07	F	0.94	E	1.22	F
East of Hazel Avenue	3	0.77	C	0.92	E	0.80	D	1.08	F	0.83	D	1.15	F
Westbound US-50													
East of Hazel Avenue	2	0.97	E	0.80	D	1.02	F	0.89	D	1.05	F	0.93	E
Hazel Avenue to Sunrise Reliever	3	0.92	E	0.61	C	1.01	F	0.83	D	1.06	F	0.97	E
Sunrise Reliever to Sunrise Boulevard	3	0.86	D	0.64	C	0.87	D	0.65	C	0.97	E	0.74	D
Sunrise Boulevard to Zinfandel Drive	4	0.84	D	0.63	C	0.84	D	0.63	C	0.89	D	0.66	C
Zinfandel Drive to Mather Field Road	4	1.00	E	0.85	D	1.05	F	1.06	F	1.13	F	1.16	F
West of Mather Field Road	4	1.01	F	0.97	E	1.07	F	1.17	F	1.14	F	1.27	F

Notes:
V/C = Volume to Capacity ratio. Based on capacities from the Highway Capacity Manual.
LOS = Level of Service.
Excludes HOV lanes.
Shaded areas indicate deficiency where calculation indicates demand exceeds capacity.
Source: *Fehr & Peers*, 2005.

IV. CUMULATIVE OPERATING CONDITIONS

The purpose of the cumulative analysis is to determine if implementation of the proposed project, in addition to cumulative background growth, will adversely affect the planned transportation system through the year 2030. The following scenarios were analyzed for Cumulative Conditions :

Cumulative (Year 2030) Conditions
Cumulative (Year 2030) With Project (Specific Plan Buildout) Conditions
Cumulative (Year 2030) With Hazel Avenue Extension Conditions
Cumulative (Year 2030) With Project (Specific Plan Buildout) and Hazel Avenue Extension Conditions

Planned Transportation Improvements

Cumulative (Year 2030) roadway improvements are consistent with Tier 1 improvements identified in the MTP for 2025.

The timing of the Hazel Avenue extension between Folsom Boulevard and Grant Line Road is uncertain. Therefore, the analysis scenarios for "With Hazel Avenue Extension" are presented for informational purposes only.

The following roadway segments and intersections were included in the Cumulative Analysis:

Roadway Segments:

Douglas Road – Jaeger Road to Americanos Boulevard
Pyramid Boulevard – Sunrise Boulevard to Jaeger Road
Pyramid Boulevard – Jaeger Road to Americanos Boulevard
Kiefer Boulevard – Eagles Nest Road to Sunrise Boulevard
Kiefer Boulevard – Sunrise Boulevard to Jaeger Road
Eagles Nest Road – Mather Boulevard to Douglas Road
Eagles Nest Road – Douglas Road to Kiefer Boulevard
Eagles Nest Road – Kiefer Boulevard to SR 16
Sunrise Boulevard – Douglas Road to Pyramid Boulevard
Sunrise Boulevard – Pyramid Boulevard to Kiefer Boulevard
Sunrise Boulevard – Kiefer Boulevard to SR 16
Sunrise Reliever – US-50 to White Rock Road
Jaeger Road – White Rock Road to Douglas Road
Jaeger Road – Douglas Road to Pyramid Boulevard
Jaeger Road – Pyramid Boulevard to Kiefer Boulevard
Americanos Boulevard – White Rock Road to Douglas Road
Americanos Boulevard – Douglas Road to Pyramid Boulevard

Intersections:

Sunrise Reliever/White Rock Road
Sunrise Reliever/US-50 Eastbound Ramps
Sunrise Reliever/US-50 Westbound Ramps
Douglas Road/Jaeger Road

Douglas Road/Americanos Boulevard
Chrysanthy Boulevard/Sunrise Boulevard
Chrysanthy Boulevard/Jaeger Road
Chrysanthy Boulevard/Americanos Boulevard
Kiefer Boulevard/Jaeger Road
White Rock Road/Americanos Boulevard

Roadway System Operations

The following summarizes traffic operations for Cumulative (Year 2030) Conditions with and without the addition of the Rio del Oro Specific Plan.

Roadway Segments

Cumulative and Cumulative With Specific Plan daily traffic volumes were compared to the capacity criteria for roadway segments. Table 5 summarizes the roadway analysis for Cumulative Conditions without the Hazel Avenue Extension. Results for Cumulative Conditions With Hazel Avenue Extension are summarized in Table 6.

The results indicate that the following roadway segments will operate at an unacceptable LOS F for Cumulative Conditions:

- Mather Boulevard – Femoyer Street to Douglas Road (D-53)
- White Rock Road – Sunrise Boulevard to Grant Line Road – With Hazel Extension Only (D-54)
- Zinfandel Drive – US-50 Eastbound Ramps to White Rock Road (D-55)
- Sunrise Boulevard – Gold Country Road to Coloma Road (D-56)
- Sunrise Boulevard – Coloma Road to US-50 Westbound Ramps (D-57)

TABLE 5
Roadway Segment Levels of Service – Cumulative (2030) Conditions

Roadway Segment	Lanes	No Project			With SP Buildout		
		Vol	V/C	LOS	Vol	V/C	LOS
SR 16 – Excelsior Road to Eagles Nest Road	4	21,800	0.61	B	22,000	0.61	B
SR 16 – Sunrise Boulevard to Grant Line Road	4	22,600	0.63	B	23,300	0.65	B
Kiefer Boulevard – Grant Line Road to North of SR 16	2	9,300	0.61	E	10,700	0.63	E
Mather Boulevard – Femoyer Street to Douglas Road	2	22,900	1.27	F	23,100	1.29	F
Douglas Road – Mather Boulevard to Sunrise Boulevard	6	34,600	0.64	B	40,700	0.75	C
International Drive – South White Rock Road to Zinfandel Drive	4	15,300	0.43	A	23,900	0.66	B
International Drive – Zinfandel Drive to Kilgore Road	4	15,200	0.42	A	27,800	0.77	C
White Rock Road – Zinfandel Drive to Sunrise Boulevard	6	21,700	0.40	A	38,100	0.71	C
White Rock Road – Sunrise Boulevard to Grant Line Road	2	7,900	0.44	A	17,300	0.96	E
Folsom Boulevard – Zinfandel Drive to Sunrise Boulevard	4	23,900	0.66	B	24,600	0.68	B
Folsom Boulevard – Sunrise Boulevard to Hazel Avenue	4	15,500	0.43	A	15,700	0.43	A
Mather Field Road – Folsom Boulevard to US-50 Westbound Ramps	4	26,400	0.73	C	27,500	0.76	C
Mather Field Road – US-50 Eastbound Ramps to International Drive	6	45,500	0.84	D	49,200	0.91	E
Zinfandel Drive – Folsom Boulevard to US-50 Westbound Ramps	4	22,800	0.63	B	24,500	0.68	B
Zinfandel Drive – US-50 Eastbound Ramps to White Rock Road	6	57,300	1.06	F	**75,500**	**1.40**	F
Zinfandel Drive – White Rock Road to International Drive	6	33,600	0.62	B	35,800	0.66	B
Sunrise Boulevard – Gold Country Boulevard to Coloma Road	6	82,000	1.52	F	**92,000**	**1.70**	F
Sunrise Boulevard – Coloma Road to US-50 Westbound Ramps	6	94,200	1.74	F	**106,600**	**1.97**	F
Sunrise Boulevard – US-50 Eastbound Ramps to Folsom Boulevard	6	52,100	0.96	E	**62,800**	**1.16**	F
Sunrise Boulevard – Folsom Boulevard to White Rock Road	6	42,000	0.78	C	**55,000**	**1.02**	F
Sunrise Boulevard – White Rock Road to Douglas Road	6	42,300	0.78	C	**57,100**	**1.06**	F
Sunrise Boulevard – SR 16 to Grant Line Road	4	34,800	0.97	E	**41,800**	**1.16**	F
Hazel Avenue – Winding Way to US-50 Westbound Ramps	6	95,900	1.78	F	**103,200**	**1.91**	F
Grant Line Road – White Rock Road to Douglas Road	2	23,900	1.33	F	23,900	1.33	F
Grant Line Road –Douglas Road to SR 16	4	23,000	0.64	B	23,800	0.66	B
Grant Line Road – SR 16 to Sunrise Boulevard	2	15,900	0.88	D	16,100	0.89	D
US-50 – Mather Field Road to Zinfandel Drive	8	208,000	1.30	F	**224,800**	**1.40**	F
US-50 – Zinfandel Drive to Sunrise Boulevard	8	185,200	1.16	F	186,400	1.17	F
US-50 – Sunrise Boulevard to Sunrise Reliever	6	170,700	1.42	F	173,900	1.45	F
US-50 – Sunrise Reliever to Hazel Avenue	6	185,700	1.55	F	**205,100**	**1.71**	F
US-50 – Hazel Avenue to Folsom Boulevard	4	159,300	1.99	F	**170,800**	**2.13**	F
Douglas Road – Sunrise Boulevard to Jaeger Road	4	29,100	0.81	D	**39,900**	**1.11**	F
Douglas Road – Americanos Boulevard to Grant Line Road	4	18,100	0.50	A	22,300	0.62	B
35. Douglas Road – Jaeger Road to Americanos Boulevard	4	19,700	0.55	A	23,400	0.65	B
36. Chrysanthy Boulevard – Sunrise Boulevard to Jaeger Road	4	20,200	0.56	A	21,800	0.61	B
37. Chrysanthy Boulevard – Jaeger Road to Americanos Boulevard	4	28,500	0.79	C	32,800	0.91	E
38. Kiefer Boulevard – Eagles Nest Road to Sunrise Boulevard	2	21,500	1.19	F	21,900	1.22	F
39. Kiefer Boulevard – Sunrise Boulevard to Jaeger Road	2	18,500	1.03	F	**19,500**	**1.08**	F
40. Eagles Nest Road (Zinfandel Drive) – Mather Boulevard to Douglas Road	6	45,900	0.85	D	46,200	0.86	D
41. Eagles Nest Road – Douglas Road to Kiefer Boulevard	4	16,000	0.44	A	17,200	0.48	A
42. Eagles Nest Road – Kiefer Boulevard to SR 16	4	10,600	0.29	A	10,900	0.30	A
43. Sunrise Boulevard – Douglas Road to Chrysanthy Boulevard	6	68,700	1.27	F	**86,100**	**1.43**	F
44. Sunrise Boulevard – Chrysanthy Boulevard to Kiefer Boulevard	6	54,900	0.92	F	**69,600**	**1.16**	F
45. Sunrise Boulevard – Kiefer Boulevard to SR 16	4	53,900	1.35	F	**64,900**	**1.62**	F
46. Sunrise Reliever – US-50 to Easton Valley Parkway	6	59,800	1.11	F	**82,400**	**1.53**	F
47. Sunrise Reliever – Easton Valley Parkway to White Rock Road	6	46,200	0.86	D	**75,300**	**1.39**	F
47. Jaeger Road – White Rock Road to Douglas Road	4	12,500	0.35	A	28,700	0.80	C
48. Jaeger Road – Douglas Road to Pyramid Boulevard	4	27,800	0.77	C	**43,300**	**1.20**	F
49. Jaeger Road – Pyramid Boulevard to Kiefer Boulevard	4	12,800	0.36	A	16,000	0.45	A
50. Americanos Boulevard – White Rock Road to Douglas Road	4	9,100	0.25	A	16,400	0.46	A
51. Americanos Boulevard – Douglas Road to Pyramid Boulevard	4	22,700	0.63	B	29,200	0.81	D

Notes:
Shaded areas indicate deficiency. **Bold** indicates impact.
Source: *Fehr & Peers*, 2005.

TABLE 6
Roadway Segment Levels of Service – Cumulative (2030) Conditions With Hazel Avenue Extension

Roadway Segment	Lanes	No Project			With SP Buildout		
		Vol	V/C	LOS	Vol	V/C	LOS
1. SR 16 – Excelsior Road to Eagles Nest Road	4	22,100	0.61	B	22,300	0.62	B
2. SR 16 – Sunrise Boulevard to Grant Line Road	4	22,500	0.63	B	23,200	0.65	B
3. Kiefer Boulevard – Grant Line Road to North of SR 16	2	9,600	0.56	D	11,000	0.65	E
4. Mather Boulevard – Femoyer Street to Douglas Road	2	22,500	1.25	F	22,700	1.26	F
5. Douglas Road – Mather Boulevard to Sunrise Boulevard	6	34,400	0.64	B	40,300	0.75	C
6. International Drive – South White Rock Road to Zinfandel Drive	4	14,800	0.41	A	22,900	0.64	B
7. International Drive – Zinfandel Drive to Kilgore Road	4	15,000	0.42	A	27,200	0.76	C
8. White Rock Road – Zinfandel Drive to Sunrise Boulevard	6	22,200	0.41	A	39,000	0.72	C
9. White Rock Road – Sunrise Boulevard to Grant Line Road	2	8,900	0.49	A	**18,800**	**1.04**	F
10. Folsom Boulevard – Zinfandel Drive to Sunrise Boulevard	4	23,700	0.66	B	24,400	0.68	B
11. Folsom Boulevard – Sunrise Boulevard to Hazel Avenue	4	15,000	0.42	A	15,100	0.42	A
12. Mather Field Road – Folsom Boulevard to US-50 Westbound Ramps	4	26,400	0.73	C	27,500	0.76	C
13. Mather Field Road – US-50 Eastbound Ramps to International Drive	6	44,700	0.83	D	47,700	0.88	D
14. Zinfandel Drive – Folsom Boulevard to US-50 Westbound Ramps	4	22,800	0.63	B	24,500	0.68	B
15. Zinfandel Drive – US-50 Eastbound Ramps to White Rock Road	6	57,900	1.07	F	**76,500**	**1.42**	F
16. Zinfandel Drive – White Rock Road to International Drive	6	33,800	0.63	B	35,900	0.67	B
17. Sunrise Boulevard – Gold Country Boulevard to Coloma Road	6	81,700	1.51	F	**91,700**	**1.70**	F
18. Sunrise Boulevard – Coloma Road to US-50 Westbound Ramps	6	93,700	1.74	F	**106,100**	**1.96**	F
19. Sunrise Boulevard – US-50 Eastbound Ramps to Folsom Boulevard	6	52,100	0.96	E	**63,000**	**1.17**	F
20. Sunrise Boulevard – Folsom Boulevard to White Rock Road	6	40,800	0.76	C	**54,100**	**1.00**	F
21. Sunrise Boulevard – White Rock Road to Douglas Road	6	42,000	0.78	C	**56,800**	**1.05**	F
22. Sunrise Boulevard – SR 16 to Grant Line Road	4	34,900	0.97	E	**41,700**	**1.16**	F
23. Hazel Avenue – Winding Way to US-50 Westbound Ramps	6	96,500	1.79	F	**104,000**	**1.93**	F
24. Grant Line Road – White Rock Road to Douglas Road	2	26,200	1.46	F	26,200	1.46	F
25. Grant Line Road –Douglas Road to SR 16	4	22,700	0.63	B	23,400	0.65	B
26. Grant Line Road – SR 16 to Sunrise Boulevard	2	15,400	0.86	D	15,700	0.87	D
27. US-50 – Mather Field Road to Zinfandel Drive	8	208,600	1.30	F	**225,900**	**1.41**	F
28. US-50 – Zinfandel Drive to Sunrise Boulevard	8	184,600	1.15	F	186,000	1.16	F
29. US-50 – Sunrise Boulevard to Sunrise Reliever	6	170,500	1.42	F	173,600	1.45	F
30. US-50 – Sunrise Reliever to Hazel Avenue	6	183,400	1.53	F	**201,500**	**1.68**	F
31. US-50 – Hazel Avenue to Folsom Boulevard	4	160,400	2.01	F	**171,600**	**2.14**	F
32. Douglas Road – Sunrise Boulevard to Jaeger Road	4	29,600	0.82	D	**40,100**	**1.12**	F
33. Douglas Road – Americanos Boulevard to Grant Line Road	4	17,800	0.49	A	21,900	0.61	B
35. Douglas Road – Jaeger Road to Americanos Boulevard	4	18,800	0.52	A	22,500	0.62	B
36. Chrysanthy Boulevard – Sunrise Boulevard to Jaeger Road	4	18,800	0.52	A	20,500	0.57	A
37. Chrysanthy Boulevard – Jaeger Road to Americanos Boulevard	4	28,400	0.79	C	32,600	0.91	E
38. Kiefer Boulevard – Eagles Nest Road to Sunrise Boulevard	2	21,400	1.19	F	21,800	1.21	F
39. Kiefer Boulevard – Sunrise Boulevard to Jaeger Road	2	18,600	1.03	F	**19,500**	**1.08**	F
40. Eagles Nest Road (Zinfandel Drive) – Mather Boulevard to Douglas Road	6	45,100	0.84	D	45,300	0.84	D
41. Eagles Nest Road – Douglas Road to Kiefer Boulevard	4	15,900	0.44	A	17,300	0.48	A
42. Eagles Nest Road – Kiefer Boulevard to SR 16	4	10,700	0.30	A	11,000	0.31	A
43. Sunrise Boulevard – Douglas Road to Chrysanthy Boulevard	6	67,600	1.13	F	**84,700**	**1.41**	F
44. Sunrise Boulevard – Chrysanthy Boulevard to Kiefer Boulevard	6	55,200	0.92	F	**69,500**	**1.16**	F
45. Sunrise Boulevard – Kiefer Boulevard to SR 16	4	54,000	1.35	F	**64,700**	**1.62**	F
46. Sunrise Reliever – US-50 to Easton Valley Parkway	6	59,100	1.09	F	**80,300**	**1.49**	F
47. Sunrise Reliever – Easton Valley Parkway to White Rock Road	6	45,000	0.83	D	**72,800**	**1.35**	F
47. Jaeger Road – White Rock Road to Douglas Road	4	12,300	0.34	A	28,300	0.79	C
48. Jaeger Road – Douglas Road to Pyramid Boulevard	4	28,900	0.80	D	**44,300**	**1.23**	F
49. Jaeger Road – Pyramid Boulevard to Kiefer Boulevard	4	12,700	0.35	A	15,900	0.44	A
50. Americanos Boulevard – White Rock Road to Douglas Road	4	8,300	0.23	A	15,800	0.44	A
51. Americanos Boulevard – Douglas Road to Pyramid Boulevard	4	21,900	0.61	B	28,300	0.79	C

Notes:
Shaded areas indicate deficiency. **Bold** indicates impact.
Source: *Fehr & Peers*, 2005.

- Sunrise Boulevard – US-50 Eastbound Ramps to Folsom Boulevard (D-58)
- Sunrise Boulevard – Folsom Boulevard to White Rock Road (D-59)
- Sunrise Boulevard – White Rock Road to Douglas Road (D-60)
- Sunrise Boulevard – SR-16 to Grant Line Road (D-61)

- Hazel Avenue – Winding Way to US-50 Ramps (D-62)
- Grant Line Road – White Rock Road to Douglas Road (D-63)
- US-50 – Mather Field Road to Zinfandel Drive (D-64)
- US-50 – Zinfandel Drive to Sunrise Boulevard (D-65)
- US-50 – Sunrise Boulevard to Sunrise Reliever (D-66)
- US-50 – Sunrise Reliever to Hazel Avenue (D-67)
- US-50 – Hazel Avenue to Folsom Boulevard (D-68)
- Douglas Road – Sunrise Boulevard to Jaeger Road (D-69)
- Kiefer Boulevard – Eagles Nest Road to Sunrise Boulevard (D-70)
- Kiefer Boulevard – Sunrise Boulevard to Jaeger Road (D-71)
- Sunrise Boulevard – Douglas Road to Chrysanthy Boulevard (D-72)
- Sunrise Boulevard – Chrysanthy Boulevard to Kiefer Boulevard (D-73)
- Sunrise Boulevard – Kiefer Boulevard to SR-16 (D-74)
- Sunrise Reliever – US-50 to Easton Valley Parkway (D-75)
- Sunrise Reliever – Easton Valley Parkway to White Rock Road (D-76)
- Jaeger Road – Douglas Road to Chrysanthy Boulevard (D-77)

Study Intersections

The Cumulative (2030) traffic volumes were used to calculate peak hour levels of service at the study intersections with and without trips from the Rio del Oro Specific Plan. Table 7 summarizes the LOS at each study intersection. Table 8 presents the results of the LOS analysis at the study intersections for Cumulative Conditions with the Hazel Avenue Extension.

The results of analysis without the Hazel Avenue extension indicate that the following roadway segments will operate at an unacceptable LOS F during the AM or PM peak hour for Cumulative No Project or Cumulative With Project Conditions:

- SR 16/Sunrise Boulevard (D-78)
- Florin Road/Sunrise Boulevard (D-79)
- Grant Line Road/Kiefer Boulevard (D-80)
- Douglas Road/Grant Line Road (D-81)
- Douglas Road/Sunrise Boulevard (D-82)
- Mather Field Road/International Drive (D-83)
- Zinfandel Drive/International Drive (D-84)
- Zinfandel Drive/White Rock Road (D-85)
- Zinfandel Drive/US-50 Eastbound Ramps (D-86)
- Sunrise Boulevard/White Rock Road (D-87)
- Sunrise Boulevard/Folsom Boulevard (D-88)
- Sunrise Boulevard/US-50 Westbound Ramps (D-89)
- Sunrise Boulevard/Zinfandel Drive (D-90)
- Hazel Avenue/Folsom Boulevard (D-91)
- Hazel Avenue/US-50 Eastbound Ramps (D-92)
- Hazel Avenue/US-50 Westbound Ramps (D-93)
- White Rock Road/Grant Line Road (D-94)
- Sunrise Boulevard/Keifer Boulevard (D-95)
- Eagles Nest Road/Keifer Road (D-96)
- Sunrise Boulevard/International (D-97)
- Sunrise Reliever/White Rock Road (D-98)
- Sunrise Reliever/US-50 Eastbound Ramps (D-99)
- Douglas Road/Jaeger Road (D-100)
- Douglas Road/Americanos Boulevard (D-101)
- Chrysanthy Boulevard/Sunrise Boulevard (D-102)

TABLE 7
Intersection Levels of Service – Cumulative (2030) Conditions

Intersection	Control	No Project				With SP Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C or Delay[1,2]	LOS[3]	V/C or Delay[1,2]	LOS[3]	V/C or Delay[1,2]	LOS[3]	V/C or Delay[1,2]	LOS[3]
1. SR 16/Excelsior Road	Signalized	0.87	D	0.69	B	0.91	E	0.71	C
2. SR 16/Eagles Nest Road	Signalized	0.80	C	0.74	C	0.79	C	0.75	C
3. SR 16/Sunrise Boulevard	Signalized	1.03	F	1.01	F	**1.14**	F	**1.21**	F
4. SR 16/Grant Line Road	Signalized	0.72	C	0.59	A	0.73	C	0.61	B
5. Florin Road/Sunrise Boulevard	Signalized	0.94	E	0.88	D	**1.09**	F	**1.06**	F
6. Grant Line Road/Sunrise Boulevard	Signalized	0.80	D	0.55	A	0.92	E	0.61	B
7. Grant Line Road/Kiefer Boulevard	All-Way Stop	> 180	F	> 180	F	**> 180**	F	**> 180**	F
8. Douglas Road/Grant Line Road	Side-Street Stop	> 180	F	102	F	**> 180**	F	**> 180**	F
9. Douglas Road/Sunrise Boulevard	Signalized	1.27	F	1.72	F	1.30	F	**2.08**	F
10. Mather Field Road/Folsom Boulevard	Signalized	0.81	D	0.94	E	0.83	D	0.95	E
11. Mather Field Road/US-50 Westbound Ramps	Signalized	0.64	B	0.61	B	0.63	B	0.63	B
12. Mather Field Road/US-50 Eastbound Ramps	Signalized	0.89	E	0.80	D	0.95	E	0.84	D
13. Mather Field Road/International Drive	Signalized	0.71	C	1.03	F	0.81	D	**1.10**	F
14. Zinfandel Drive/International Drive[4]	Signalized	0.79	C	1.00	F	0.86	D	0.83	D
15. Zinfandel Drive/White Rock Road	Signalized	0.97	E	1.11	F	**1.21**	F	**1.40**	F
16. Zinfandel Drive/US-50 Eastbound Ramps	Signalized	1.08	F	1.13	F	**1.30**	F	**1.50**	F
17. Zinfandel Drive/US-50 Westbound Ramps	Signalized	0.63	B	0.58	A	0.64	B	0.59	B
18. Sunrise Boulevard/White Rock Road	Signalized	0.90	D	0.74	D	**1.34**	F	1.08	F
19. Sunrise Boulevard/Folsom Boulevard	Signalized	1.44	F	1.36	F	**1.54**	F	**1.66**	F
20. Sunrise Boulevard/US-50 Eastbound Ramps	Signalized	0.55	A	0.62	B	0.65	B	0.69	B
21. Sunrise Boulevard/US-50 Westbound Ramps	Signalized	0.76	D	1.12	F	0.89	D	**1.24**	F
22. Sunrise Boulevard/Zinfandel Drive	Signalized	1.16	F	2.05	F	**1.27**	F	**2.19**	F
23. Hazel Avenue/Folsom Boulevard[4]	Signalized	1.51	F	2.00	F	1.54	F	2.01	F
24. Hazel Avenue/US-50 Eastbound Ramps	Signalized	1.28	F	1.55	F	**1.43**	F	**1.70**	F
25. Hazel Avenue/US-50 Westbound Ramps	Signalized	1.96	F	1.40	F	**2.07**	F	**1.51**	F
26. White Rock Road/Grant Line Road	Signalized	0.82	D	0.92	E	**1.03**	F	0.94	E
27. Sunrise Boulevard/Keifer Boulevard	Signalized	1.11	F	0.98	E	**1.36**	F	**1.17**	F
28. Eagles Nest Road/Keifer Road	Signalized	1.13	F	1.11	F	**1.18**	F	1.08	F
29. Sunrise Boulevard/International	Signalized	1.02	F	1.15	F	**1.30**	F	**1.53**	F
30. Sunrise Reliever/White Rock Road	Signalized	1.19	F	0.96	E	**2.28**	F	**2.34**	F
31. Sunrise Reliever/US-50 Eastbound Ramps	Signalized	0.95	E	1.20	F	**1.23**	F	**1.64**	F
32. Sunrise Reliever/US-50 Westbound Ramps	Uncontrolled	-	-	-	-	-	-	-	-
33. Douglas Road/Jaeger Road	Signalized	0.82	D	1.00	E	**1.36**	F	**1.30**	F
34. Douglas Road/Americanos Boulevard	Signalized	1.00	E	0.89	D	**1.52**	F	**1.31**	F
35. Chrysanthy Boulevard/Sunrise Boulevard	Signalized	1.42	F	0.87	D	**1.70**	F	**1.12**	F
36. Chrysanthy Boulevard/Jaeger Road	Signalized	0.89	D	0.56	A	**1.14**	F	0.76	C
37. Chrysanthy Boulevard/Americanos Boulevard	Signalized	0.63	B	0.68	B	0.74	C	0.74	C
38. Kiefer Boulevard/Jaeger Road	Signalized	0.73	C	0.66	B	0.79	C	0.68	B
39. White Rock Road/Americanos Boulevard	Signalized	0.66	B	0.77	C	**1.38**	F	**1.76**	F

Notes:
[1] V/C (volume-to-capacity) ratio is shown for signalized intersections. Delay is shown for unsignalized intersections.
[2] Delay for side-street stop unsignalized intersections reported for worst-case approach, for all-way stop intersections average intersection delay reported in seconds per vehicle.
[3] LOS = level of service
[4] The proposed project changes traffic distribution at this intersection such that traffic is added to non-critical movements (traffic is reduced at critical movements). Therefore, V/C of the critical movements decreases with the proposed project.
Shaded areas indicate deficiency. **Bold** indicates impact.

Source: *Fehr & Peers*, 2005.

TABLE 8
Intersection Levels of Service – Cumulative (2030) Conditions With Hazel Avenue Extension

Intersection	Control	No Project				With SP Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C or Delay[1,2]	LOS[3]	V/C or Delay[1,2]	LOS[3]	V/C or Delay[1,2]	LOS[3]	V/C or Delay[1,2]	LOS[3]
1. SR 16/Excelsior Road	Signalized	0.90	D	0.72	C	0.92	E	0.73	C
2. SR 16/Eagles Nest Road	Signalized	0.78	C	0.73	C	0.85	D	0.73	C
3. SR 16/Sunrise Boulevard	Signalized	**1.03**	**F**	**1.02**	**F**	**1.18**	**F**	**1.22**	**F**
4. SR 16/Grant Line Road	Signalized	0.72	C	0.59	A	0.74	C	0.61	B
5. Florin Road/Sunrise Boulevard	Signalized	0.92	E	0.89	D	**1.08**	**F**	**1.02**	**F**
6. Grant Line Road/Sunrise Boulevard	Signalized	0.77	C	0.56	A	0.90	E	0.62	B
7. Grant Line Road/Kiefer Boulevard	All-Way Stop	**> 180**	**F**	**174**	**F**	**> 180**	**F**	**>180**	**F**
8. Douglas Road/Grant Line Road	Side-Street Stop	**> 180**	**F**	**> 180**	**F**	**> 180**	**F**	**> 180**	**F**
9. Douglas Road/Sunrise Boulevard	Signalized	**1.25**	**F**	**1.73**	**F**	**1.43**	**F**	**2.19**	**F**
10. Mather Field Road/Folsom Boulevard[4]	Signalized	0.81	D	0.95	E	0.80	D	0.93	E
11. Mather Field Road/US-50 Westbound Ramps	Signalized	0.64	B	0.61	B	0.66	C	0.63	B
12. Mather Field Road/US-50 Eastbound Ramps	Signalized	0.89	D	0.72	C	0.96	E	0.85	D
13. Mather Field Road/International Drive	Signalized	0.71	C	**1.02**	**F**	0.77	C	**1.12**	**F**
14. Zinfandel Drive/International Drive[4]	Signalized	0.85	D	**1.05**	**F**	0.93	E	0.99	E
15. Zinfandel Drive/White Rock Road	Signalized	**1.03**	**F**	**1.06**	**F**	**1.27**	**F**	**1.33**	**F**
16. Zinfandel Drive/US-50 Eastbound Ramps	Signalized	**1.07**	**F**	**1.20**	**F**	**1.30**	**F**	**1.46**	**F**
17. Zinfandel Drive/US-50 Westbound Ramps	Signalized	0.60	B	0.57	A	0.61	B	0.57	A
18. Sunrise Boulevard/White Rock Road	Signalized	0.89	D	0.76	C	**1.32**	**F**	0.99	E
19. Sunrise Boulevard/Folsom Boulevard	Signalized	**1.46**	**F**	**1.40**	**F**	**1.54**	**F**	**1.85**	**F**
20. Sunrise Boulevard/US-50 Eastbound Ramps	Signalized	0.55	A	0.62	B	0.64	B	0.69	B
21. Sunrise Boulevard/US-50 Westbound Ramps	Signalized	0.77	D	**1.11**	**F**	0.88	E	**1.24**	**F**
22. Sunrise Boulevard/Zinfandel Drive	Signalized	**1.15**	**F**	**2.05**	**F**	**1.26**	**F**	**2.17**	**F**
23. Hazel Avenue/Folsom Boulevard[4]	Signalized	**1.64**	**F**	**2.02**	**F**	**1.67**	**F**	**2.04**	**F**
24. Hazel Avenue/US-50 Eastbound Ramps	Signalized	**1.29**	**F**	**1.57**	**F**	**1.41**	**F**	**1.67**	**F**
25. Hazel Avenue/US-50 Westbound Ramps	Signalized	**1.94**	**F**	**1.47**	**F**	**2.05**	**F**	**1.55**	**F**
26. White Rock Road/Grant Line Road	Signalized	**1.07**	**F**	1.00	E	**1.35**	**F**	**1.19**	**F**
27. Sunrise Boulevard/Keifer Boulevard	Signalized	**1.15**	**F**	0.97	E	**1.36**	**F**	**1.24**	**F**
28. Eagles Nest Road/Keifer Road[4]	Signalized	**1.16**	**F**	**1.10**	**F**	**1.19**	**F**	**1.09**	**F**
29. Sunrise Boulevard/International	Signalized	**1.07**	**F**	**1.07**	**F**	**1.56**	**F**	**1.63**	**F**
30. Sunrise Reliever/White Rock Road	Signalized	**1.16**	**F**	1.00	E	**2.25**	**F**	**2.35**	**F**
31. Sunrise Reliever/US-50 Eastbound Ramps	Signalized	0.96	E	**1.16**	**F**	**1.21**	**F**	**1.64**	**F**
32. Sunrise Reliever/US-50 Westbound Ramps	Uncontrolled	-	-	-	-	-	-	-	-
33. Douglas Road/Jaeger Road	Signalized	0.77	C	**1.05**	**F**	**1.24**	**F**	**1.29**	**F**
34. Douglas Road/Americanos Boulevard	Signalized	**1.02**	**F**	0.94	E	**1.50**	**F**	**1.29**	**F**
35. Chrysanthy Boulevard/Sunrise Boulevard	Signalized	**1.37**	**F**	0.86	D	**1.73**	**F**	**1.12**	**F**
36. Chrysanthy Boulevard/Jaeger Road	Signalized	0.87	D	0.60	A	**1.09**	**F**	0.75	C
37. Chrysanthy Boulevard/Americanos Boulevard	Signalized	0.66	B	0.68	B	0.75	C	0.74	C
38. Kiefer Boulevard/Jaeger Road	Signalized	0.69	B	0.67	B	0.75	C	0.68	B
39. White Rock Road/Americanos Boulevard	Signalized	0.68	B	0.82	D	**1.32**	**F**	**1.74**	**F**

Notes:
[1] V/C (volume-to-capacity) ratio is shown for signalized intersections. Delay is shown for unsignalized intersections.
[2] Delay for side-street stop unsignalized intersections reported for worst-case approach, for all-way stop intersections average intersection delay reported in seconds per vehicle.
[3] LOS = level of service
[4] The proposed project changes traffic distribution at this intersection such that traffic is added to non-critical movements (traffic is reduced at critical movements). Therefore, V/C of the critical movements decreases with the proposed project.
Shaded areas indicate deficiency. **Bold** indicates impact.
Source: *Fehr & Peers*, 2005.

- Chrysanthy Boulevard/Jaeger Road (D-103)
- White Rock Road/Americanos Boulevard (D-104)

Signal Warrants

The peak hour volume warrant for traffic signal installation was reviewed for Cumulative Conditions at the two unsignalized study intersections. The results indicate that both intersections will satisfy the warrant for Cumulative Conditions, with or without the Hazel Avenue Extension.

Freeway Ramp Merge/Diverge/Weave Analysis

The results of the merge/diverge/weave analysis are summarized in Table 9 for Cumulative Conditions without the Hazel Avenue Extension. Table 10 presents the results of the analysis for Cumulative Conditions with the Hazel Avenue Extension.

The results indicate that the following merging/diverging/weaving segments operate at an unacceptable level during for Cumulative Conditions:

Eastbound Mather Field Road Direct Off-Ramp (D-105)
Eastbound Zinfandel Drive Direct Off-Ramp (D-106)
Eastbound Sunrise Boulevard Loop/Direct On-Ramp (D-107)
Eastbound Sunrise Reliever Direct Off-Ramp (D-108)
Eastbound Sunrise Reliever Direct On-Ramp (D-109)
Eastbound Hazel Avenue Direct Off-Ramp (D-110)
Eastbound Hazel Avenue/AeroJet Auxiliary Lane (D-111)
Westbound Hazel Avenue Direct Off-Ramp (D-112)
Westbound Hazel Avenue Loop On-Ramp (D-113)
Westbound Sunrise Reliever Direct Off-Ramp (D-114)
Westbound Sunrise Reliever Loop On-Ramp (D-115)
Westbound Zinfandel Drive Direct Off-Ramp (D-116)
Westbound Zinfandel Drive Direct On-Ramp (D-117)
Westbound Mather Field Road Direct Off-Ramp (D-118)
Westbound Mather Field Road Loop On-Ramp (D-119)
Westbound Mather Field Road Direct On-Ramp (D-120)

Freeway Segment Analysis

The results of the freeway segment peak hour analysis for Cumulative Conditions (Without Hazel Avenue Extension) are summarized in Table 11. Table 12 presents the results of the freeway segment analysis for Cumulative With Hazel Avenue Extension Conditions. The results indicate that the following segments will operate at an unacceptable level during the AM or PM peak hours:

- Eastbound US-50, west of Mather Field Road (D-121)
- Eastbound US-50, Zinfandel Drive to Sunrise Boulevard (D-122)
- Eastbound US-50, Sunrise Reliever to Hazel Avenue (D-123)
- Eastbound US-50, east of Hazel Avenue (D-124)
- Westbound US-50, east of Hazel Avenue (D-125)
- Westbound US-50, Hazel Avenue to Sunrise Reliever (D-126)
- Westbound US-50, Zinfandel Drive to Mather Field Road (D-127)
- Westbound US-50, west of Mather Field Road (D-128)

TABLE 9
Merge/Diverge/Weave Level of Service – Cumulative Conditions (No Hazel Avenue Extension)

Ramp	Merge, Diverge, or Weave	No Project				With Specific Plan Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
EASTBOUND US-50									
Mather Field Road Direct Off-Ramp	Diverge	55	F	48	F	58	F	53	F
Mather Field Road Loop On-Ramp	Merge	27	C	24	C	28	D	26	C
Mather Field Road Direct On-Ramp	Merge	26	C	22	C	27	C	24	C
Zinfandel Drive Direct Off-Ramp	Diverge	30	D	20	B	35	F	22	C
Zinfandel Drive Loop On-Ramp	Merge	25	C	26	C	25	C	27	C
Zinfandel Drive Direct On-Ramp	Merge	24	C	25	C	24	C	26	C
Sunrise Boulevard Direct Off-Ramp	Diverge	31	D	33	D	31	D	34	D
Sunrise Boulevard Loop/Direct On-Ramp	Merge	46	F	37	F	46	F	39	F
Sunrise Reliever Direct Off-Ramp[3]	Diverge	37	E	41	F	37	E	43	F
Sunrise Reliever Direct On-Ramp[3]	Merge	40	F	42	F	55	F	48	F
Hazel Avenue Direct Off-Ramp	Diverge	38	F	27	C	43	F	32	D
Hazel Avenue Loop/Direct On-Ramp AeroJet Direct Off-Ramp	Weave	N/A	F	N/A	E	N/A	F	N/A	F
Westbound US-50									
Hazel Avenue Direct Off-Ramp	Diverge	45	F	67	F	49	F	71	F
Hazel Avenue Loop On-Ramp	Merge	39	F	53	F	43	F	57	F
Sunrise Reliever Direct Off-Ramp[3]	Diverge	42	F	44	F	47	F	50	F
Sunrise Reliever Loop On-Ramp[3]	Merge	42	F	39	F	47	F	39	F
Sunrise Boulevard Direct Off-Ramp	Diverge	26	C	27	C	29	D	27	C
Zinfandel Drive Direct Off-Ramp	Diverge	41	F	38	E	42	F	38	E
Zinfandel Drive Loop On-Ramp	Merge	30	D	31	D	31	D	31	D
Zinfandel Drive Direct On-Ramp	Merge	38	F	45	F	41	F	48	F
Mather Field Direct Off-Ramp	Diverge	44	F	44	F	48	F	47	F
Mather Field Loop On-Ramp	Merge	37	F	37	F	40	F	39	F
Mather Field Direct On-Ramp	Merge	47	F	53	F	52	F	56	F

Notes:
[1] Density in passenger cars per mile per lane for merge/diverge analysis only.
[2] LOS = Level of Service. LOS computed using HCS 2000 software for the merge/diverge analysis consistent with HCM 2000 methodologies. Weave analysis evaluated using the Leisch Method for Weaving Analysis.
[3] Sunrise Reliever interchange assumed to have similar geometrics to nearby interchanges. One lane assumed on all ramps (a conservative assumption).
Shaded areas indicate deficiency where calculation indicates demand exceeds capacity.
N/A = Not Applicable.
Source: *Fehr & Peers*, 2005.

TABLE 10
Merge/Diverge/Weave Level of Service – Cumulative Conditions With Hazel Avenue Extension

Ramp	Merge, Diverge, or Weave	No Project				With Specific Plan Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
EASTBOUND US-50									
Mather Field Road Direct Off-Ramp	Diverge	55	F	45	F	58	F	50	F
Mather Field Road Loop On-Ramp	Merge	27	C	25	C	28	D	27	C
Mather Field Road Direct On-Ramp	Merge	26	C	23	C	37	C	24	C
Zinfandel Drive Direct Off-Ramp	Diverge	30	D	22	C	36	F	28	D
Zinfandel Drive Loop On-Ramp	Merge	25	C	26	C	25	C	27	C
Zinfandel Drive Direct On-Ramp	Merge	24	C	25	C	24	C	26	C
Sunrise Boulevard Direct Off-Ramp	Diverge	31	D	33	E	31	D	35	D
Sunrise Boulevard Loop/Direct On-Ramp	Merge	46	F	37	F	47	F	40	F
Sunrise Reliever Direct Off-Ramp[3]	Diverge	38	E	41	F	38	E	44	F
Sunrise Reliever Direct On-Ramp[3]	Merge	47	F	42	F	53	F	48	F
Hazel Avenue Direct Off-Ramp	Diverge	36	F	26	C	41	F	31	D
Hazel Avenue Loop/Direct On-Ramp AeroJet Direct Off-Ramp	Weave	N/A	F	N/A	E	N/A	F	N/A	F
Westbound US-50									
Hazel Avenue Direct Off-Ramp	Diverge	45	F	67	F	49	F	71	F
Hazel Avenue Loop On-Ramp	Merge	39	F	52	F	43	F	56	F
Sunrise Reliever Direct Off-Ramp[3]	Diverge	42	F	43	F	47	F	48	F
Sunrise Reliever Loop On-Ramp[3]	Merge	42	F	39	F	46	F	40	F
Sunrise Boulevard Direct Off-Ramp	Diverge	24	C	27	C	27	C	27	C
Zinfandel Drive Direct Off-Ramp	Diverge	40	E	41	F	42	F	41	F
Zinfandel Drive Loop On-Ramp	Merge	30	D	31	D	31	D	32	D
Zinfandel Drive Direct On-Ramp	Merge	38	F	45	F	41	F	48	F
Mather Field Direct Off-Ramp	Diverge	44	F	44	F	48	F	47	F
Mather Field Loop On-Ramp	Merge	37	F	37	F	40	F	39	F
Mather Field Direct On-Ramp	Merge	48	F	52	F	52	F	56	F

Notes:
[1] Density in passenger cars per mile per lane for merge/diverge analysis only.
[2] LOS = Level of Service. LOS computed using HCS 2000 software for the merge/diverge analysis consistent with HCM 2000 methodologies. Weave analysis evaluated using the Leisch Method for Weaving Analysis.
[3] Sunrise Reliever interchange assumed to have similar geometrics to nearby interchanges. One lane assumed on all ramps (a conservative assumption).
Shaded areas indicate deficiency where demand exceeds capacity.
N/A = Not Applicable.
Source: *Fehr & Peers*, 2005.

TABLE 11
Freeway Segment Level of Service – Cumulative Conditions (No Hazel Avenue Extension)

Segment	Number of Lanes	No Project				With Specific Plan Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]
EASTBOUND US-50									
West of Mather Field Road	4	1.06	F	0.91	E	1.13	F	1.01	F
Mather Field Road to Zinfandel Drive	4	0.92	E	0.85	D	0.98	E	0.93	E
Zinfandel Drive to Sunrise Boulevard	3	1.03	F	1.06	F	1.03	F	1.09	F
Sunrise Boulevard to Sunrise Reliever	3	0.80	D	0.89	D	0.81	D	0.95	E
Sunrise Reliever to Hazel Avenue	3	1.19	F	0.85	D	1.31	F	0.96	E
East of Hazel Avenue	3	1.00	E	0.92	E	1.07	F	0.98	E
Westbound US-50									
East of Hazel Avenue	2	0.93	E	1.43	F	1.02	F	1.53	F
Hazel Avenue to Sunrise Reliever	3	0.92	E	0.93	E	1.04	F	1.06	F
Sunrise Reliever to Sunrise Boulevard	3	0.82	D	0.91	E	0.90	E	0.92	E
Sunrise Boulevard to Zinfandel Drive	4	0.80	D	0.82	D	0.84	D	0.82	D
Zinfandel Drive to Mather Field Road	4	0.96	E	1.00	E	1.05	F	1.06	F
West of Mather Field Road	4	0.94	E	1.11	F	1.04	F	1.18	F

Notes:
[1] V/C = Volume to Capacity ratio. Based on capacities from the Highway Capacity Manual.
[2] LOS = Level of Service.
[3] Excludes HOV lanes.
Shaded areas indicate deficiency where calculation indicates demand exceeds capacity.
Source: *Fehr & Peers*, 2005.

TABLE 12
Freeway Segment Level of Service – Cumulative Conditions With Hazel Avenue Extension

Segment	Number of Lanes	No Project				With Specific Plan Buildout			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]	V/C[1]	LOS[2]
EASTBOUND US-50									
West of Mather Field Road	4	1.06	F	0.90	E	1.13	F	1.00	F
Mather Field Road to Zinfandel Drive	4	0.91	E	0.87	D	0.98	E	0.96	E
Zinfandel Drive to Sunrise Boulevard	3	1.01	F	1.06	F	1.02	F	1.11	F
Sunrise Boulevard to Sunrise Reliever	3	0.80	D	0.89	D	0.81	D	0.96	E
Sunrise Reliever to Hazel Avenue	3	1.16	F	0.85	D	1.27	F	0.96	E
East of Hazel Avenue	3	1.12	F	0.91	E	1.19	F	0.97	E
Westbound US-50									
East of Hazel Avenue	2	0.94	E	1.43	F	1.02	F	1.52	F
Hazel Avenue to Sunrise Reliever	3	0.73	C	0.91	E	0.85	D	1.02	F
Sunrise Reliever to Sunrise Boulevard	3	0.82	D	0.91	E	0.88	D	0.92	E
Sunrise Boulevard to Zinfandel Drive	4	0.80	D	0.81	D	0.83	D	0.81	D
Zinfandel Drive to Mather Field Road	4	0.96	E	0.99	E	1.05	F	1.06	F
West of Mather Field Road	4	1.01	F	1.10	F	1.11	F	1.18	F

Notes:
[1] V/C = Volume to Capacity ratio. Based on capacities from the Highway Capacity Manual.
[2] LOS = Level of Service.
[3] Excludes HOV lanes.
Shaded areas indicate deficiency where calculation indicates demand exceeds capacity.
Source: *Fehr & Peers*, 2005.

VI. IMPACTS AND MITIGATION MEASURES

This section of the report identifies impacts and mitigation measures associated with Phase I of the proposed project and buildout of the proposed Specific Plan for 2014 and Cumulative (2030) Conditions. First, the project impacts are described based on policies and analyses identified in previous chapters. Then, the significance of identified deficiencies is discussed. Finally, measures to mitigate specific impacts are identified.

2014 Conditions

Significant impacts, identified deficiencies, and proposed mitigation measures for 2014 Conditions are described below.

Roadway Segments

Impact (I) 1: Phase I and buildout of the Specific Plan will increase daily volume-to-capacity (V/C) ratios on area roadway segments for 2014 Conditions. This is considered a ***significant impact.***

Deficiency (D) -1: *Mather Boulevard, Femoyer Street to Douglas Road.* The segment operates at LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Buildout Conditions. However, traffic associated with Phase I and Specific Plan Buildout is not expected to increase the V/C on the segment by 0.05 or more. Therefore, Phase I and buildout of the Specific Plan are expected to result in a less-than-significant impact. Since the impact is less-than-significant, no mitigation is required.

For this segment to operate at an acceptable level, four lanes would be needed on the roadway segment. This is consistent with improvements identified in the Sunrise Douglas II Specific Plan analysis and the City's General Plan.

D-2: *Zinfandel Drive, US 50 Eastbound Ramps to White Rock Road.* The segment operates at LOS C for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the proposed Specific Plan will degrade operations to and unacceptable LOS F. This is considered a significant impact based on the significance criteria.

Mitigation (M) -2: For this segment to operate at an acceptable level, it would need to be widened from six to eight lanes. Implementation of this mitigation measure would reduce the impact to a ***less-than-significant level.*** However, the widening is not consistent with the City's General Plan. The General Plan analysis indicates that, with improved connectivity within the City of Rancho Cordova, the roadway may only need six lanes to serve expected demands.

D-3: *Sunrise Boulevard, Gold Country Boulevard to Coloma Road.* The segment operates at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Buildout Conditions. Traffic associated with Phase I and buildout of the Specific Plan will increase the V/C ratio by more than 0.05. This is considered a significant impact based on the significance criteria.

M-3: Consistent with recommendations in the Sacramento County Mobility Study, this segment could be widened to eight lanes. The additional lanes would have capacity to serve the number of trips added by Phase I and buildout of the Specific Plan and would reduce the impact to a ***less-than-significant level.*** This improvement is consistent with the City's General Plan.

Although the project impact would be reduced to a less-than-significant level, the roadway segment would still operate at an unacceptable LOS F. Therefore, additional measures are needed to reduce the total number of trips on this roadway segment and improve operations. These measures consist of support of alternative travel modes, bus-rapid-transit (BRT) on or parallel to Sunrise Boulevard, and shuttle or bus service supporting BRT route. Additionally, unique treatments could be applied to this segment consisting of signal coordination or other capacity-improving intersection treatments.

D-4: *Sunrise Boulevard, Coloma Road to US-50 Westbound Ramps.* The segment will operate at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will increase V/C ratios by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-4: Consistent with recommendations in the Sacramento County Mobility Study, this segment could be widened to eight lanes. Additionally, pedestrian facilities could be added to improve walkability through the segment which could reduce traffic volumes on the segment. The additional lanes would have capacity to serve the number of trips added by Phase I and buildout of the Specific Plan and would reduce the impact to a ***less-than-significant level.*** This improvement is consistent with the City's General Plan.

Although the project impact would be reduced to a less-than-significant level, the roadway segment would still operate at an unacceptable LOS F. Therefore, additional measures are needed to reduce the total number of trips on this roadway segment and improve operations. These measures consist of support of alternative travel modes, bus-rapid-transit (BRT) on or parallel to Sunrise Boulevard, and shuttle or bus service supporting BRT route. Additionally, unique treatments could be applied to this segment consisting of signal coordination or other capacity-improving intersection treatments.

D-5: *Sunrise Boulevard, US-50 Eastbound Ramps to Folsom Boulevard.* The segment will operate at an acceptable LOS E for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-5: The addition of travel lanes on this segment is considered infeasible due to limited right-of-way. Therefore, the addition of project traffic is expected to result in a ***significant-and-unavoidable impact*** to this roadway segment.

The number of trips added to this roadway segment could be reduced with the implementation of bus-rapid-transit (BRT) on or parallel to Sunrise Boulevard,

shuttle or bus service supporting the BRT route, and shuttle or bus service supporting the LRT station. Additionally, unique treatments could be applied to this segment consisting of signal coordination or other capacity-improving intersection treatments. These improvements are consistent with the City's General Plan, which identifies eight lanes or special roadway treatments on the segment.

D-6: *Sunrise Boulevard, SR-16 to Grant Line Road.* The segment will operate at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will increase V/C ratios by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-6: Consistent with recommendations in the Sunrise Douglas II Specific Plan analysis, this roadway segment could be widened from two to four lanes (the City's General Plan identifies an ultimate cross section of six lanes on this segment. This improvement would provide acceptable roadway operations for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. The improvement would reduce the impact to a ***less-than-significant level.***

D-7: *Hazel Avenue, Winding Way to US-50 Westbound Ramps.* The segment will operate at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. Traffic from Phase I and buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-7: To mitigate impacts, the segment would need to be widened as an eight lane, high access control roadway and is consistent with the City's General Plan. However, this improvement may not be feasible due to right-of-way constraints. Additionally, since the facility is not controlled by the City of Rancho Cordova, the lead agency for this EIR, improvements to the segment cannot be guaranteed. Therefore, the addition traffic from Phase I and buildout of the Specific Plan is expected to result in a ***significant-and-unavoidable impact.***

The number of trips added to this roadway segment could be reduced with the implementation of alternative transportation modes, like BRT on Sunrise Boulevard and connectivity to BRT and LRT. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project.

D-8: *US-50, Mather Field Road to Zinfandel Drive.* The segment will operate at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. Traffic from Phase I and buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-8: To offset impacts associated with the proposed project on this roadway segment, additional lanes would need to be added to US-50 on this segment. The increased capacity (approximately 40,000 ADT) would be more than sufficient to accommodate the additional 12,300 trips added by Phase I and the 21,700 trips

added by buildout of the Specific Plan. However, the only identified improvement for this segment is in the MTP and consists of adding HOV lanes to the segment. Any additional capacity enhancing improvements may not be feasible due to right-of-way constraints. Additionally, since the facility is not controlled by the City of Rancho Cordova, the lead agency for this EIR, improvements to the segment cannot be guaranteed. Based on all of these factors, the addition traffic from Phase I and buildout of the Specific Plan is expected to result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this freeway segment, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project.

D-9: *Sunrise Boulevard, Douglas Road to Kiefer Boulevard.* The segment will operate at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. Traffic from Phase I and buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-9: Consistent with recommendations in the Sunrise Douglas II Specific Plan analysis and the City's General Plan, this roadway segment could be widened from four to six lanes. This improvement would provide acceptable roadway operations for 2014 No Project and 2014 With Phase I Conditions and reduce the impact of Phase I to a ***less-than-significant level.***

However, to provide acceptable operations for 2014 With Specific Plan Conditions, the segment would also need to be high access controlled. With these improvements, the Specific Plan impact would be reduced to a ***less-than-significant level.***

D-10: *Sunrise Boulevard, Kiefer Boulevard to SR-16.* This segment will operate at an acceptable LOS E for 2014 No Project Conditions. The addition of traffic from Phase I or buildout of the Specific Plan will degrade operations of the segment to an unacceptable LOS F and, based on the significance criteria, is considered a significant impact.

M-10: Consistent with recommendations in the Sunrise Douglas II Specific Plan analysis and the City's General Plan, this roadway segment could be widened from four to six lanes. This improvement would provide acceptable roadway operations for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions and reduce the impact to a ***less-than-significant level.***

Intersections

I-2: Phase I and buildout of the Specific Plan will add traffic to area intersections for 2014 Conditions. This is considered a ***significant impact.***

D-11: *SR-16/Excelsior Road.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for 2014, 2014 With Phase I, and 2014 With Specific Plan Conditions. The addition of traffic from Phase I during PM peak hour is expected to increase the V/C ratio by more than 0.05. Traffic from the proposed Specific Plan will increase the V/C ratio by more than 0.05 during the AM peak hour. Therefore, the addition of traffic from Phase I and buildout of the Specific Plan is expected to result in a significant impact based on the significance criteria.

M-11: To mitigate impacts at the intersection, the following lane configuration is needed:

- One left-turn lane and one shared through/right-turn lane on the northbound approach
- One left-turn lane, one through lane, and one right-turn lane on the southbound approach. Provide a southbound right-turn arrow concurrent with the eastbound left-turn movement (otherwise known as an overlap right-turn phase). This would require prohibiting eastbound U-turns at the intersection.
- One left-turn lane, one through lane, and one shared through/right-turn lane on the eastbound and westbound approaches (SR-16 is identified as a four-lane facility in the City's General Plan).

With the above improvements, the intersection would operate at an acceptable LOS E or better during the AM and PM peak hours for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the impact to a less-than-significant level. However, the City of Rancho Cordova does not control the intersection (SR-16 is currently a Caltrans controlled facility). Since Rancho Cordova, as the lead agency, cannot guarantee that these improvements can be incorporated, the impact is considered ***significant-and-unavoidable.***

D-12: *SR-16/Sunrise Boulevard.* The intersection will operate at an unacceptable LOS F during the AM peak hour for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan is expected to degrade operations during the PM peak hour from an acceptable level to an unacceptable LOS F. Traffic from Phase I and buildout of the Specific Plan is expected to increase the V/C ratio at the intersection during the AM peak hour by more than 0.05. This is considered a significant impact based on the significance criteria.

M-12: To mitigate impacts at the intersection, the following lane configuration is needed:

- One left-turn lane, two through lanes, and one shared through/right-turn lane on the northbound approach.
- One left-turn lane, three through lanes, and one right-turn lane with overlap right-turn phase on the southbound approach. This would require prohibiting eastbound U-turns at the intersection.
- One left-turn lane, two through lanes, and one right-turn lane on the eastbound approach.
- One left-turn lane, two through lanes, and one right-turn lane with overlap right-turn phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection.

With the above improvements, the intersection would operate at an acceptable LOS E or better during the AM and PM peak hours for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the impact to a less-than-significant level. However, the City of Rancho Cordova does not control the intersection (SR-16 is currently a Caltrans controlled facility). Since Rancho Cordova, as the lead agency, cannot guarantee that these improvements can be incorporated, the impact is considered ***significant-and-unavoidable.***

The referenced improvements are consistent with the City's General Plan, as six lanes are identified for Sunrise Boulevard, and four lanes are identified for SR-16.

D-13: *SR-16/Grant Line Road.* The intersection will operate at LOS F during the AM and PM peak hour for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions.

The addition of traffic associated with Phase I is expected to increase the V/C ratio by less than 0.05. Therefore, based on the significance criteria, traffic from Phase I is expected to result in a less-than-significant impact to the intersection.

However, the addition of traffic from buildout of the Specific Plan will increase the V/C ratio by 0.05 or more during the AM and PM peak hours. Therefore, traffic from the Specific Plan is expected to result in a significant impact based on the significance criteria.

M-13: To mitigate the Specific Plan impact at the intersection, the following modifications are required on the northbound and southbound approaches:

- Reconfigure both approaches to consist of one left-turn lane, one through lane, and one right-turn lane.
- Provide protected left-turn phasing.

With the above improvements, the intersection would operate at an acceptable LOS D or better during the AM and PM peak hours for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the impact to a less-than-significant level. However, the City of Rancho Cordova does not control the intersection (SR-16 is currently a Caltrans controlled facility). Since Rancho Cordova, as the lead agency, cannot guarantee that these improvements can be incorporated, the impact is considered ***significant-and-unavoidable.*** The City's General Plan identifies additional lanes and unique treatments at the intersection over that identified in this study. This is to accommodate additional traffic that could be at the intersection if Grant Line Road and/or SR-16 are upgraded as expressways, as identified in the General Plan (and not included in this analysis).

D-14: *Florin Road/Sunrise Boulevard.* The intersection is expected to operate at an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the PM peak hour, resulting in a significant impact based on the significance criteria.

M-14: To mitigate impacts at the intersection, the southbound approach would need to be reconfigured to consist of two through lanes and a dedicated right-turn lane. With this improvement, the intersection would operate at an acceptable level during the AM and PM peak hours for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the impact to a less-than-significant level. However, this intersection is outside the City limits, and is controlled by the County of Sacramento. Since the City cannot guarantee implementation of the mitigation measure, the impact is considered ***significant and unavoidable.***

The City's General Plan identifies Sunrise Boulevard as a six-lane facility on this roadway segment, which would be more than adequate to accommodate the identified improvement.

D-15: *Grant Line Road/Sunrise Boulevard.* The intersection will operate at an unacceptable LOS F for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. The addition of traffic from Phase I or buildout of the Specific Plan will increase the V/C ratio at the intersection by 0.05 or more during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-15: Due to substantial southbound right-turns and eastbound left-turns, the following improvements are needed:

- Provide a dedicated southbound right-turn lane with receiving lane on Grant Line Road, creating an uncontrolled (free) right-turn movement.
- Add a second eastbound left-turn lane.

These improvements would allow the intersection to operate at an acceptable level for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the Phase I and Specific Plan buildout impact to a ***less-than-significant level.***

The City's General Plan identifies both roadways as six-lane facilities, which is more than sufficient to accommodate the identified improvements.

D-16: *Grant Line Road/Kiefer Road.* The all-way stop-controlled intersection will operate at an unacceptable LOS F during the AM and PM peak hours for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will increase delays at the intersection by more than five seconds. This is considered a significant impact based on the significance criteria.

M-16: To mitigate impacts at the intersection, a traffic signal could be installed at the intersection with protected left-turn phasing on all approaches. With this improvement, the intersection would operate at an acceptable LOS E or better for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the impact to a ***less-than-significant level.***

The City's General Plan identifies Grant Line Road as an expressway, which would have limited access and grade-separation at major intersections. As such,

the proposed signal has adequate spacing from other intersections to accommodate the expressway.

D-17: *Grant Line Road/Douglas Road.* The intersection operates at an unacceptable LOS F for the following scenarios:

- 2014 No Project Conditions, AM peak hour only.
- 2014 With Phase I Conditions, AM and PM peak hours. Traffic from Phase I is expected to increase intersection delay by more than five seconds.
- 2014 With Specific Plan Conditions, AM peak hour only. Traffic from buildout of the Specific Plan is expected to increase AM peak hour delay by more than five seconds.

Traffic from Phase I and buildout of the Specific Plan is expected to result in a significant impact based on the significance criteria.

M-17: To mitigate impacts at the intersection the following improvements are needed:

- Install traffic signal with protected northbound left-turn phase.
- Modify northbound approach to consist of one left-turn lane and one through lane
- Modify southbound approach to consist of one right-turn lane and one through lane

With these improvements, the intersection would operate at an acceptable level for all 2014 analysis scenarios and would reduce the project impact to a ***less-than-significant level.***

The City's General Plan identifies Grant Line Road as an expressway, which would have limited access and grade-separation at major intersections. As such, the proposed signal has adequate spacing from other intersections to accommodate the expressway.

D-18: *Douglas Road/Sunrise Boulevard.* The intersection operates at an unacceptable level for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions during the AM and PM peak hours. The addition of traffic from Phase I and buildout of the Specific Plan is expected to increase the V/C ratio at the intersection by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-18: To mitigate impacts at the intersection, the following lane configuration is needed:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach
- Two left-turn lanes, three through lanes, and one shared through/right-turn lane on the southbound approach.
- Two left-turn lanes, three through lanes, and two right-turn lanes on the eastbound approach.

- Two left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection.

The intersection would operate at an acceptable LOS E or better during the AM and PM peak hours for 2014 No Project, 2014 With Phase I, and 2014 With Specific Plan Conditions, reducing the impact to a ***less-than-significant level.***

The City's General Plan identifies Douglas Road as a four-lane facility east of Sunrise Boulevard, and a six-lane facility west of Douglas Road. Sunrise Boulevard is identified as a six lane facility. Although the mitigation would require widening the westbound approach to accommodate the additional through lane (compared to the General Plan), the mitigation measure is consistent with that identified in the General Plan.

D-19: *Zinfandel Drive/White Rock Road.* The intersection operates at an acceptable LOS E during the AM and PM peak hours for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations during the PM peak hour to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-19: To mitigate impacts associated with Phase I of the proposed project, the intersection could be modified to consist of the following lane configuration:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
- Three left-turn lanes, two through lanes, and one shared through/right-turn lane on the southbound approach.
- Three left-turn lanes, two through lanes, and one shared through/right-turn lane on the eastbound approach.
- Two left-turn lanes, two through lanes, and two right-turn lanes with overlap right-turn signal phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection

The addition of traffic from buildout of the Specific Plan would require the following lane configuration:

- Two left-turn lanes, three through lanes, and one shared through/right-turn lane on the northbound approach. This would require four receiving lanes north of the intersection.
- Three left-turn lanes, two through lanes, and one shared through/right-turn lane on the southbound approach.
- Three left-turn lanes, two through lanes, and one shared through/right-turn lane on the eastbound approach.
- Two left-turn lanes, two through lanes, and two right-turn lanes with overlap right-turn signal phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection

With the mitigation measures described above, the project impact would be reduced to a ***less-than-significant level.*** The identified measures are consistent with the City's General Plan.

D-20: *Zinfandel Drive/US-50 Eastbound Ramps.* The intersection operates at an unacceptable LOS F during the PM peak hour only for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan is expected to degrade operations during the AM peak hour from an acceptable level to an unacceptable LOS F. Additionally, the V/C ratio during the PM peak hour is expected to increase by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-20: To mitigate impacts associated with Phase I of the proposed project, the intersection could be modified to consist of the following lane configuration:

- Four through lanes and one right-turn lane on the northbound approach.
- Two through lanes and a free (uncontrolled) right-turn lane on the southbound approach.
- One left-turn lane, one share through/left-turn lane, one through lane, and three right-turn lanes on the eastbound approach.
- Three right-turn lanes on the westbound approach.

With these improvements, the intersection would operate at an acceptable level during the AM peak hour, but would continue to operate at an unacceptable LOS F during the PM peak hour. However, the improvements would decrease the V/C ratio at the intersection to a level that is less than that for the No Project Condition and would decrease the impact to less-than-significant level. The identified improvements are consistent with the City's General Plan.

To mitigate Specific Plan buildout impacts, the following configuration would be needed:

- Four through lanes and one shared through/right-turn lane on the northbound approach.
- Two through lanes and a free (uncontrolled) right-turn lane on the southbound approach.
- One left-turn lane, one share through/left-turn lane, one through lane, and three right-turn lanes on the eastbound approach.
- Three right-turn lanes on the westbound approach.

With these improvements, the intersection would operate at an acceptable level during the AM peak hour, but would continue to operate at an unacceptable LOS F during the PM peak hour. However, the improvements would decrease the V/C ratio at the intersection to a level that is less than that for the No Project Condition and would decrease the impact to less-than-significant level. The identified improvements are consistent with the City's General Plan.

This ramp-terminal intersection is controlled by Caltrans. Since Rancho Cordova, as the lead agency, cannot guarantee implementation of the measures described above, the impact is considered ***significant-and-unavoidable.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project. Additionally, improvements of parallel routes, like completion of Kiefer Road or added capacity to White Rock Road or Old Placerville Road, would have the capacity of relieving the projected demand at the interchange.

D-21: *Sunrise Boulevard/White Rock Road.* The intersection is expected to operate at an acceptable level for 2014 No Project Conditions. The addition of traffic from buildout of the Specific Plan is expected to degrade operations during the AM peak hour to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-21: To mitigate impacts at the study intersection, a third southbound left-turn lane would be needed. With this improvement, the intersection would operate at an acceptable LOS E during the AM peak hour and reduce the impact to a ***less-than-significant level.*** The identified improvement is consistent with the City's General Plan.

D-22: *Sunrise Boulevard/US-50 Westbound Ramps.* The intersection will operate at an acceptable level of service for 2014 No Project Conditions. The addition of traffic from Phase I and Specific Plan Buildout will degrade operations to an unacceptable level during the PM peak hour. This is considered a significant impact based on the significance criteria.

M-22: To mitigate impacts at this intersection, a third westbound right-turn lane could be added. With this improvement, the intersection would operate at an acceptable level during the AM and PM peak hours for all 2014 analysis scenarios and would reduce the project impact to a less-than-significant level.

This ramp-terminal intersection is controlled by Caltrans. Since Rancho Cordova, as the lead agency, cannot guarantee implementation of the measure described above, the impact is considered ***significant-and-unavoidable.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento and BRT on or parallel to Sunrise Boulevard. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on Sunrise Boulevard.

D-23: *Sunrise Boulevard/Zinfandel Drive.* The intersection will operate at an unacceptable LOS F for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will increase the V/C ratio at the intersection by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-23: Consistent with improvements identified in the Sacramento County Mobility Study and the City's General Plan, one through lane in the northbound and southbound directions could be added at the intersection. Although the intersection would still operate at an unacceptable LOS F during the PM peak hour, the improvement provides sufficient capacity to offset the addition of Phase I and buildout of the Specific Plan traffic to the intersection and would reduce the impact to a ***less-than-significant level.***

D-24: *Hazel Avenue/Folsom Boulevard.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all 2014 analysis scenarios. The addition of project traffic to the intersection will not increase the V/C ratio by 0.05 or more. Therefore, the addition of traffic from Phase I or buildout of the Specific Plan is expected to result in a less-than-significant impact to the study intersection. Since the impact is less-than-significant, no mitigation is required.

Significant improvements would be needed to improve operations to an acceptable level. These improvements will likely include grade-separation of the intersection and would likely require reconstruction of the Hazel Avenue/US-50 interchange. The City's General Plan also identifies grade-separation at this intersection.

D-25: *Hazel Avenue/US-50 Eastbound Ramps.* The intersection will operate at an unacceptable LOS F during the PM peak hour for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will increase the V/C ratio at the intersection by 0.05 or more during the PM peak hour. The addition of traffic from buildout of the Specific Plan will degrade intersection operations during the AM peak hour from and acceptable level to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-25: To mitigate impacts at the intersection, additional capacity is needed on the freeway over-crossing to serve substantial demand for the northbound through movement and the eastbound left-turn movement. Since the interchange is not controlled by the City of Rancho Cordova, the lead agency for this project, implementation of interchange improvements cannot be guaranteed. Therefore, the addition of traffic from Phase I and buildout of the Specific Plan will result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento and BRT crossings of the American River. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project at the study intersection.

D-26: *Hazel Avenue/US-50 Westbound Ramps.* The intersection operates at an unacceptable LOS F during the AM and PM peak hours for all 2014 Conditions analysis scenarios. The addition of traffic from Phase I and buildout of the Specific Plan is expected to increase the V/C ratio by 0.05 or more during the AM

and PM peak hours. This is considered a significant impact based on the significance criteria.

M-26: To mitigate project impacts, a second northbound left-turn lane is needed. Additionally, a fourth through lane is needed on the northbound and southbound approaches. Since this intersection is not controlled by the City of Rancho Cordova, the lead agency for this project, implementation of interchange improvements cannot be guaranteed. Therefore, the addition of traffic from Phase I and buildout of the Specific Plan will result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento and BRT crossings of the American River. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project at the study intersection.

D-27: *Sunrise Boulevard/Kiefer Boulevard.* The intersection operates at an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations during the AM peak hour to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-27: To mitigate impacts, the intersection could consist of the following configuration:

- One left-turn lane, two through lanes, and one shared through/right-turn lane on the northbound and southbound approaches.
- One left-turn lane, one through lane, one right-turn lane on the eastbound and westbound approaches.

With this configuration, the intersection would operate at an acceptable LOS E or better during the AM and PM peak hours for all 2014 Conditions analysis scenarios, reducing the impact to a ***less-than-significant level.*** The identified configuration is consistent with the City's General Plan.

D-28: *Sunrise Boulevard/International Drive.* The intersection will operate at an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-28: To mitigate project impacts, the intersection could consist of the following geometrics:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
- One left-turn lane, three through lanes, and one right-turn lane on the southbound approach.

- One left-turn lane, one through lane, and two right-turn lanes with overlap right-turn signal phase on the eastbound approach. This would require prohibiting northbound U-turns.
- One left-turn lane, one through lane, and one right-turn lane on the westbound approach.

With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours for all 2014 Conditions analysis scenarios. This would reduce the impact to a ***less-than-significant level.*** The City's General Plan identifies Sunrise Boulevard as having eight-lanes or special treatments near International Drive. Additionally, the General Plan identifies this intersection as a potential location for at-grade intersection improvements.

Freeway Ramp Merge/Diverge/Weave

I-3: Phase I and buildout of the Specific Plan will add traffic to area freeway ramps for 2014 Conditions. This is considered a ***significant impact.***

D-29: *Eastbound Mather Field Road Direct Off-Ramp* – Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all 2014 analysis scenarios. Phase I and buildout of the specific plan are expected to add more than ten trips to the freeway ramp. This is considered a significant impact based on the significance criteria.

M-29: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-30: *Eastbound Zinfandel Drive Direct Off-Ramp* – Ramp operates and an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. Buildout of the Specific Plan is expected to degrade ramp operations to an unacceptable LOS F during the AM peak hour. This is considered a significant impact based on the significance criteria.

M-30: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the

City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-31: *Eastbound Sunrise Boulevard Loop/Direct On-Ramp* – Ramp operates and an unacceptable LOS F during the PM peak hour for all 2014 Conditions analysis scenarios. Phase I and buildout of the Specific Plan are expected to add approximately ten trips to the ramp. Therefore, the impact is considered significant based on the significance criteria.

M-31: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard, White Rock Road, or Easton Valley Parkway could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-32: *Eastbound Sunrise Reliever Direct Off-Ramp* - Ramp operates and an unacceptable level during the PM peak hour for all 2014 Conditions analysis scenarios. Phase I and buildout of the Specific Plan are expected to add more than ten trips to this freeway ramp. This is considered a significant impact based on the significance criteria.

M-32: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-33: *Eastbound Sunrise Reliever Direct On-Ramp* – Ramp operates and an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. Phase I and buildout of the Specific Plan are expected to degrade ramp operations to an unacceptable level during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-33: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-34: *Westbound Hazel Avenue Direct Off-Ramp* - Ramp operates and an unacceptable level during the AM and PM peak hours for all 2014 Conditions analysis scenarios. Phase I and buildout of the Specific Plan are not expected to add traffic to this ramp. Therefore, Phase I and buildout of the Specific Plan are expected to result in a less-than-significant impact to the study freeway ramp.

D-35: *Westbound Hazel Avenue Loop On-Ramp* – The segment operates at an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. The addition of traffic from buildout of the Specific Plan will degrade ramp operations to an unacceptable LOS F during the AM peak hour. Based on the significance criteria, this is considered a significant impact.

M-35: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard, White Rock Road, or Easton Valley Parkway could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-36: *Westbound Sunrise Reliever Direct Off-Ramp* - Ramp operates and an unacceptable level during the AM peak hour for all 2014 Conditions analysis scenarios. Buildout of the Specific Plan is expected to degrade operations to an unacceptable level during the PM peak hour. During the AM peak hour, Phase I and buildout of the Specific Plan are expected to add more than ten trips to this

freeway ramp. This is considered a significant impact based on the significance criteria.

M-36: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-37: *Westbound Sunrise Reliever Loop On-Ramp* - Ramp operates and an unacceptable level during the AM peak hour for all 2014 Conditions analysis scenarios. Phase I and buildout of the Specific Plan are expected to add more than ten trips to this freeway ramp. This is considered a significant impact based on the significance criteria.

M-37: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-38: *Westbound Zinfandel Drive Direct Off-Ramp* - Ramp operates and an acceptable level during the AM and PM peak hours for 2014 No Project Conditions. Buildout of the Specific Plan is expected to degrade ramp operations to an unacceptable level during the AM peak hour. This is considered a significant impact based on the significance criteria.

M-38: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation

modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-39: *Westbound Zinfandel Drive Direct On-Ramp* – Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all 2014 Conditions analysis scenarios. Phase I and Buildout of the Specific Plan will add more than ten peak hour trips to the ramp during the AM peak hour only. This is considered a significant impact based on the significance criteria.

M-39: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-40: *Westbound Mather Field Road Direct Off-Ramp* - Ramp operates and an unacceptable level during the AM peak hour for all 2014 Conditions analysis scenarios. Phase I and buildout of the Specific Plan will add ten or more trips during the AM peak hour. Additionally, buildout of the Specific Plan is expected to degrade ramp operations to an unacceptable level during the PM peak hour. This is considered a significant impact based on the significance criteria.

M-40: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-41: *Westbound Mather Field Road Loop On-Ramp* - Ramp operates and an unacceptable level during the AM peak hour for all 2014 Conditions analysis scenarios. Phase I and buildout of the Specific Plan will add ten or more trips during the AM peak hour. Additionally, buildout of the Specific Plan is expected to

degrade ramp operations to an unacceptable level during the PM peak hour. This is considered a significant impact based on the significance criteria.

M-41: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-42: *Westbound Mather Field Road Direct On-Ramp* - Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all 2014 analysis scenarios. Phase I and buildout of the Specific Plan will add more than ten trips to the freeway ramp during the AM peak hour only. This is considered a significant impact based on the significance criteria.

M-42: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

Freeway Segments

I-4: Phase I and buildout of the Specific Plan will add traffic to area freeway segments during the peak hours for 2014 Conditions. This is considered a ***significant impact.***

D-43: *Eastbound US-50, West of Mather Field Road* – The segment operates at an acceptable level for 2014 Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations during the PM peak hour to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-43: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-44: *Eastbound US-50, Mather Field Road to Zinfandel Drive* – The segment operates at an acceptable level for 2014 Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations during the PM peak hour to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-44: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-45: *Eastbound US-50, Zinfandel Drive to Sunrise Boulevard* – The segment operates at an unacceptable LOS F during the PM peak hour only for all 2014 Conditions analysis scenarios. The addition of traffic from Phase I and buildout of the Specific Plan will add more than ten trips to this freeway segment. This is considered a significant impact based on the significance criteria.

M-45: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the

potential to decrease the amount of traffic generated by the proposed project on US-50.

D-46: *Eastbound US-50, Sunrise Boulevard to Sunrise Reliever* – The segment operates at an acceptable for 2014 No Project Conditions. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable level during the PM peak hour. This is considered a significant impact based on the significance criteria.

M-46: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-47: *Eastbound US-50, Sunrise Reliever to Hazel Avenue* – The segment operates at an acceptable level for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable level during the PM peak hour. This is considered a significant impact based on the significance criteria.

M-47: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-48: *Eastbound US-50, East of Hazel Avenue* – The segment operates at an acceptable level for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable level during the PM peak hour. This is considered a significant impact based on the significance criteria.

M-48: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho

Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-49 *Westbound US-50, East of Hazel Avenue* – The segment operates at an acceptable level for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM peak hour. This is considered a significant impact based on the significance criteria.

M-49: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-50: *Westbound US-50, Hazel Avenue to Sunrise Reliever* – The segment operates at an acceptable level for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM peak hour. This is considered a significant impact based on the significance criteria.

M-50: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-51: *Westbound US-50, Zinfandel Drive to Mather Field Road* – The segment operates at an acceptable level for 2014 No Project Conditions. The addition of traffic from Phase I and buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-51: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-52: *Westbound US-50, West of Mather Field Road* – The segment operates at an unacceptable LOS F for 2014 No Project Conditions during the AM peak hour only. Phase I and buildout of the Specific Plan will add more than ten trips to this segment during the AM peak hour. Traffic from Phase I and buildout of the Specific Plan will also degrade operations during the PM peak hour to an unacceptable level. This is considered a significant impact based on the significance criteria.

M-52: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

Cumulative (2030) Conditions

Significant impacts, identified deficiencies, and proposed mitigation measures for Cumulative Conditions are described below.

Roadway Segments

I-5: Buildout of the Specific Plan will increase daily volume-to-capacity (V/C) ratios on area roadway segments for Cumulative (2030) Conditions. This is considered a ***significant impact.***

D-53: *Mather Boulevard, Femoyer Street to Douglas Road.* The segment operates at LOS F for Cumulative No Project and Cumulative With Specific Plan Buildout Conditions, with and without the Hazel Avenue Extension. However, traffic associated with the Specific Plan is not expected to increase the V/C on the segment by 0.05 or more with or without the Hazel Avenue Extension. Therefore, buildout of the Specific Plan is expected to result in a less-than-significant impact. Since the impact is less-than-significant, no mitigation is required.

For this segment to operate at an acceptable level, four lanes would be needed on the roadway segment. This is consistent with improvements identified in the Sunrise Douglas II Specific Plan analysis and the City's General Plan.

D-54: *White Rock Road, Sunrise Boulevard to Grant Line Road.* The segment operates at an acceptable level for Cumulative (2030) No Project Conditions. However, for Cumulative With Project With Hazel Avenue Conditions, the segment degrades to an unacceptable LOS F. Based on the significance criteria, this constitutes a significant impact.

M-54: For this segment to operate at an acceptable level, it would need to be widened from two to four lanes. Implementation of this mitigation measure would reduce the impact to a ***less-than-significant level.***

The City's General Plan identifies this roadway as a potential six-lane expressway, which would require additional right-of-way than that identified for mitigation in this analysis.

D-55: *Zinfandel Drive, US-50 Eastbound Ramps to White Rock Road.* The segment operates at an acceptable level for Cumulative (2030) No Project Conditions. The addition of traffic from buildout of the Specific Plan will increase the V/C ratio by more than 0.05 with and without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-55: For this segment to operate at an acceptable level, it would need to be widened from six to eight lanes. Implementation of this mitigation measure would reduce the impact to a ***less-than-significant level.***

The City's General Plan identifies this facility as a six-lane facility. The General Plan analysis assumes additional capacity on east-west facilities paralleling US-50, including completion of Kiefer Boulevard and improvements to Old Placerville Road. If implemented, these roadway improvements will shift demand from the study segment.

D-56: *Sunrise Boulevard, Gold Country Boulevard to Coloma Road.* The segment operates at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic associated with buildout of the Specific Plan will increase the V/C ratio by more than 0.05 with and without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-56: Consistent with recommendations in the Sacramento County Mobility Study and the City's General Plan, this segment could be widened to eight lanes. The additional lanes would have capacity to serve the number of trips added by buildout of the Specific Plan and would reduce the impact to a ***less-than-significant level.***

Although the project impact would be reduced to a less-than-significant level, the roadway segment would still operate at an unacceptable LOS F. Therefore, additional measures are needed to reduce the total number of trips on this roadway segment and improve operations. These measures consist of supporting alternative travel modes like BRT on or parallel to Sunrise Boulevard and shuttle or bus service from the project site to BRT stops. Additionally, unique treatments could be applied to this segment consisting of signal coordination or other capacity-improving intersection treatments.

D-57: *Sunrise Boulevard, Coloma Road to US-50 Westbound Ramps.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. The addition of traffic from buildout of the Specific Plan, with and without the Hazel Avenue Extension, will increase V/C ratios by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-57: Consistent with recommendations in the Sacramento County Mobility Study and the City's General Plan, this segment could be widened to eight lanes. Additionally, pedestrian facilities could be added to improve walkability through the segment which would have the potential reduce traffic volumes on the segment. The additional lanes would have capacity to serve the number of trips added by buildout of the Specific Plan and would reduce the impact to a ***less-than-significant level.***

Although the project impact would be reduced to a less-than-significant level, the roadway segment would still operate at an unacceptable LOS F. Therefore, additional measures are needed to reduce the total number of trips on this roadway segment and improve operations. These measures consist of support of alternative travel modes like BRT on or parallel to Sunrise Boulevard and shuttle or bus service from the project site to BRT stops. Additionally, unique treatments could be applied to this segment consisting of signal coordination or other capacity-improving intersection treatments.

D-58: *Sunrise Boulevard, US-50 Eastbound Ramps to Folsom Boulevard.* The segment will operate at an acceptable LOS E for Cumulative (2030) No Project Conditions. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F, with and without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-58: The addition of travel lanes on this segment is considered infeasible due to limited right-of-way. Therefore, the addition of project traffic is expected to result in a ***significant-and-unavoidable impact*** to this roadway segment.

To reduce the number of trips added to this roadway segment, the proposed project should support BRT on or parallel to Sunrise Boulevard by providing

shuttle or bus service to BRT stops, and shuttle or bus service providing access to the LRT station. Additionally, unique treatments could be applied to this segment consisting of signal coordination or other capacity-improving intersection treatments.

D-59: *Sunrise Boulevard, Folsom Boulevard to White Rock Road.* The segment operates at an acceptable level for Cumulative (2030) No Project Conditions. With the addition of traffic generated by buildout of the Specific Plan, the segment will degrade to an unacceptable LOS F, with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-59: The roadway segment could be widened to eight lanes, consistent with City's General Plan. Alternatively, control access could be modified on this segment through driveway consolidation such that the segment would be considered to have high access control. Either of these would reduce the impact to a ***less-than-significant level.***

D-60: *Sunrise Boulevard, White Rock Road to Douglas Road.* The segment operates at an acceptable level for Cumulative (2030) No Project Conditions. With the addition of traffic generated by buildout of the Specific Plan, the segment will degrade to an unacceptable LOS F, with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-60: The roadway segment could be widened to eight lanes. Alternatively, control access could be modified on this segment to be considered to have high access control. Either of these would reduce the impact to a ***less-than-significant level.***

The City's General Plan identifies six- to eight-lanes along this roadway segment. Therefore, the identified mitigation is consistent with the General Plan.

D-61: *Sunrise Boulevard, SR-16 to Grant Line Road.* The segment will operate at an acceptable level for Cumulative (2030) No Project Conditions. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-61: The roadway segment could be widened from four to six lanes and reduce the impact to a ***less-than-significant level.*** This measure is consistent with the City's General Plan.

D-61: *Hazel Avenue, Winding Way to US-50 Westbound Ramps.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic from buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-61: To mitigate impacts, the segment would need to be widened as an eight lane, high access control roadway. However, this improvement may not be feasible due to right-of-way constraints. Additionally, since the facility is not controlled by the City of Rancho Cordova, the lead agency for this EIR, improvements to the

segment cannot be guaranteed. Therefore, the addition traffic from buildout of the Specific Plan will result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this roadway segment, the proposed project should support alternative transportation modes, like BRT on Sunrise Boulevard and connectivity from the project site to BRT and LRT. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project.

D-62: *Grant Line Road, White Rock Road to Douglas Road.* The segment operates at an unacceptable LOS F for Cumulative (2030) No Project Conditions and Cumulative With Specific Plan Conditions, with or without the Hazel Avenue Extension. However, the project will not increase the V/C ratio on this segment by 0.05, with or without the Hazel Avenue Extension. Therefore, the Specific Plan is considered to result in a less-than-significant impact to the roadway segment.

For the segment to operate at an acceptable level, it would need to be widened to a six lane facility, or be maintained as a four-lane facility with high access control. Either of these improvements would provide acceptable operations. The City's General Plan identifies Grant Line Road as a six-lane expressway, which is consistent with the identified mitigation measure.

D-63: *US-50, Mather Field Road to Zinfandel Drive.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic from buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-63: To offset impacts associated with the proposed project on this roadway segment, additional lanes would need to be added to US-50 on this segment. The increased capacity (approximately 40,000 ADT) would be more than sufficient to accommodate the additional 17,350 (with Hazel Avenue Extension) to 16,770 (without Hazel Avenue Extension) trips added by buildout of the Specific Plan. However, the only identified improvement for this segment is in the MTP and consists of adding HOV lanes to the segment. Any additional capacity enhancing improvements may not be feasible due to right-of-way constraints. Additionally, since the facility is not controlled by the City of Rancho Cordova, the lead agency for this EIR, improvements to the segment cannot be guaranteed. Based on all of these factors, the addition traffic from buildout of the Specific Plan is expected to result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this freeway segment, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). Additionally, improvements to parallel facilities, like Kiefer Boulevard or Old Placerville Road, would have the capacity to reduce demand on US-50. These measures have the potential to decrease the amount of traffic generated by the proposed project and could reduce traffic demands on US-50.

D-64: *US-50, Zinfandel Drive to Sunrise Boulevard.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic from buildout of the Specific Plan will not increase the V/C ratio by 0.05 or more, with or without the Hazel Avenue Extension. Therefore, buildout of the Specific Plan will result in a less-than-significant impact based on the significance criteria.

To improve operations on this roadway segment, additional lanes would need to be added to US-50 on this segment. However, the only identified improvement for this segment is in the MTP and consists of adding HOV lanes to the segment. Any additional capacity enhancing improvements may not be feasible due to right-of-way constraints.

To reduce the number of trips added to this freeway segment, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). Additionally, improvements to parallel facilities, like Kiefer Boulevard, Old Placerville Road, International Drive, or White Rock Road would have the capacity to reduce demand on US-50. These measures have the potential to reduce traffic demands on US-50.

D-65: *US-50, Sunrise Boulevard to Sunrise Reliever.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic from buildout of the Specific Plan will not increase the V/C ratio by 0.05 or more, with or without the Hazel Avenue Extension. Therefore, buildout of the Specific Plan will result in a less-than-significant impact based on the significance criteria.

To improve operations on this roadway segment, additional lanes would need to be added to US-50 on this segment. However, the only identified improvement for this segment is in the MTP and consists of adding HOV lanes to the segment. Any additional capacity enhancing improvements may not be feasible due to right-of-way constraints.

To reduce the number of trips added to this freeway segment, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). Additionally, improvements to parallel facilities like White Rock Road would have the capacity to reduce demand on US-50. These measures have the potential to reduce traffic demands on US-50.

D-66: *US-50, Sunrise Reliever to Hazel Avenue.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic from buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-66: To offset impacts associated with the proposed project on this roadway segment, additional lanes would need to be added to US-50 on this segment. The increased capacity (approximately 40,000 ADT) would be more than sufficient to accommodate the additional 19,420 (without Hazel Avenue Extension) to 18,050 (with Hazel Avenue Extension) trips added by buildout of the Specific Plan.

However, there are no identified improvements for this segment and any additional capacity enhancing improvements may not be feasible due to right-of-way constraints. Additionally, since the facility is not controlled by the City of Rancho Cordova, the lead agency for this EIR, improvements to the segment cannot be guaranteed. Based on all of these factors, the addition traffic from buildout of the Specific Plan is expected to result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this freeway segment, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). Additionally, improvements to parallel facilities, like Easton Valley Parkway or White Rock Road, would have the capacity to reduce demand on US-50. These measures have the potential to reduce traffic demands on US-50.

D-67: *US-50, Hazel Avenue to Folsom Boulevard.* The segment will operate at an unacceptable LOS F for Cumulative (2030) No Project Conditions. Traffic from buildout of the Specific Plan will increase the V/C ratio by 0.05 or more. This is considered a significant impact based on the significance criteria.

M-67: To offset impacts associated with the proposed project on this roadway segment, additional lanes would need to be added to US-50 on this segment. The increased capacity (approximately 40,000 ADT) would be more than sufficient to accommodate the additional 11,450 (without Hazel Avenue Extension) to 11,190 (with Hazel Avenue Extension) trips added by buildout of the Specific Plan.

However, there are no identified improvements for this segment and any additional capacity enhancing improvements may not be feasible due to right-of-way constraints. Additionally, since the facility is not controlled by the City of Rancho Cordova, the lead agency for this EIR, improvements to the segment cannot be guaranteed. Based on all of these factors, the addition traffic from buildout of the Specific Plan is expected to result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this freeway segment, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). Additionally, improvements to parallel facilities, like Easton Valley Parkway or White Rock Road, would have the capacity to reduce demand on US-50. These measures have the potential to reduce traffic demands on US-50.

D-68: *Douglas Road, Sunrise Boulevard to Jaeger Road.* This segment operates at an acceptable level for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F with or without the Hazel Avenue Extension. This constitutes a significant impact based on the significance criteria.

M-68: To mitigate impacts for the analysis scenario without the Hazel Avenue Extension, the facility could be designated for high access control. However, with the Hazel Avenue Extension, the roadway would need to be six lanes. These measures would reduce the impact to a ***less-than-significant level.***

Additional east-west connectivity (like the extension of International Drive to Grant Line Road) was assumed in the General Plan analysis that was not assumed in this analysis. Due to the improved connectivity, the roadway segment would require only four lanes, not the six lanes identified in this analysis.

D-69: *Kiefer Boulevard, Eagles Nest Road to Sunrise Boulevard.* The segment operates at LOS F for all Cumulative (2030) Conditions analysis scenarios, with our without the Hazel Avenue Extension. However, the addition of traffic from the Specific Plan will not increase the V/C ratio by 0.05 or more. Therefore, the project impact to the roadway segment is considered to be less-than-significant, based on the significance criteria.

For the segment to operate at an acceptable level, the roadway would need to be widened to four lanes. This is consistent with the City's General Plan.

D-70: *Kiefer Boulevard, Sunrise Boulevard to Jaeger Road.* The segment operates at LOS F for all Cumulative (2030) Conditions analysis scenarios, with our without the Hazel Avenue Extension. The addition of traffic from the Specific Plan will increase the V/C ratio by 0.05 or more with or without the Hazel Avenue Extension. This constitutes a significant impact based on the significance criteria.

M-70: For the segment to operate at an acceptable level, the roadway would need to be widened to four lanes. With this improvement, the roadway would operate at an acceptable level and the impact would be reduced to a ***less-than-significant level.*** The identified improvement is consistent with the City's General Plan.

D-71: *Sunrise Boulevard, Douglas Road to Chrysanthy Boulevard.* The segment operates at an unacceptable LOS F for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of traffic from the Specific Plan will increase the V/C ratio by 0.05 or more. This constitutes a significant impact based on the significance criteria.

M-71: To mitigate project impacts on the roadway segment, the segment could be widened to eight lanes. The additional capacity (approximately 20,000 ADT) would offset the 19,370 (without the Hazel Avenue Extension) and 17,130 (with the Hazel Avenue Extension) trips added to the segment by buildout of the Specific Plan. This would reduce the project impact to a ***less-than-significant level.***

Although the impact would be mitigated, the roadway segment would continue to operate at an unacceptable level. For the segment to operate acceptably, additional parallel facilities are needed. These parallel facilities could include the extension of Jaeger Road south to Grant Line Road, the extension of Chrysanthy Boulevard west to Kiefer Boulevard, and upgrading Grant Line Road to an

expressway. With the improved connectivity, the segment could operate at an acceptable level with a six lane cross section. The additional north-south connectivity is consistent with the City's General Plan, which identifies Sunrise Boulevard as a six-lane facility in this area.

D-72: *Sunrise Boulevard, Chrysanthy Boulevard to Kiefer Boulevard.* The segment operates at an acceptable level for Cumulative No Project Conditions with and without the Hazel Avenue Extension. However, the addition of traffic from the Specific Plan will degrade operations to an unacceptable level. This constitutes a significant impact based on the significance criteria.

M-72: To mitigate project impacts on the roadway segment, the segment could be widened to eight lanes. The additional capacity (approximately 20,000 ADT) would offset the 14,700 (without the Hazel Avenue Extension) and 14,330 (with the Hazel Avenue Extension) trips added to the segment by buildout of the Specific Plan. This would reduce the project impact to a ***less-than-significant level.***

Alternatively, additional parallel facilities could be provided. These parallel facilities could include the extension of Jaeger Road south to Grant Line Road, the extension of Chrysanthy Boulevard west to Kiefer Boulevard, and upgrading Grant Line Road to an expressway. With the improved connectivity, the segment could operate at an acceptable level with a six lane cross section. The additional north-south connectivity is consistent with the City's General Plan, which identifies Sunrise Boulevard as a six-lane facility in this area.

D-73: *Sunrise Boulevard, Kiefer Boulevard to SR-16.* The segment operates at an unacceptable LOS F for all Cumulative (2030) Conditions analysis scenarios. The addition of traffic from the Specific Plan will increase the V/C ratio by 0.05 or more. Based on the significance criteria, this constitutes a significant impact.

M-73: To mitigate project impacts on the roadway segment, the segment could be widened to six lanes. The additional capacity (approximately 20,000 ADT) would offset the 10,970 (without the Hazel Avenue Extension) and 10,710 (with the Hazel Avenue Extension) trips added to the segment by buildout of the Specific Plan. This would reduce the project impact to a ***less-than-significant level.***

Although the impact would be mitigated, the roadway segment would continue to operate at an unacceptable level. For the segment to operate acceptably, additional parallel facilities are needed. These parallel facilities could include the extension of Jaeger Road south to Grant Line Road, the extension of Chrysanthy Boulevard west to Kiefer Boulevard, and upgrading Grant Line Road to an expressway. With the improved connectivity, the segment could operate at an acceptable level with a six lane cross section. The additional north-south connectivity is consistent with the City's General Plan, which identifies Sunrise Boulevard as a six-lane facility in this area.

D-74: *Sunrise Reliever, US-50 to Easton Valley Parkway.* The segment operates at an unacceptable LOS F for all Cumulative (2030) Conditions analysis scenarios. The

addition of traffic from the Specific Plan will increase the V/C ratio by 0.05 or more. Based on the significance criteria, this constitutes a significant impact.

M-74: The segment could be widened to eight lanes and the facility could be designated and controlled as an expressway (with grade-separated intersections) to provide additional capacity. Although the facility could be upgraded, it would still operate at an unacceptable level, and the impact would be ***significant-and-unavoidable.***

Alternatively, parallel facilities could be provided to improve north-south connectivity in the area. These facilities could include a north-south connector from Folsom Boulevard to White Rock Road between the Sunrise Reliever and Hazel Avenue. Additionally, the Hazel Avenue Extension could be aligned north-south (instead of northwest-southeast). This would improve access to the project site and other developments south of Rio del Oro, and shift demand from Sunrise Boulevard and Sunrise Reliever. The additional north-south connectivity is consistent with the City's General Plan, which identifies Sunrise Reliever as a six-lane expressway in this area.

To reduce the number of trips added to this roadway segment, the proposed project should support alternative transportation modes, like BRT on Sunrise Boulevard and connectivity from the project site to BRT and LRT. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project to this roadway segment.

D-75: *Sunrise Reliever, Easton Valley Parkway to White Rock Road.* The segment operates at an acceptable level for Cumulative (2030) No Project Conditions with and without the Hazel Avenue Extension. The addition of traffic from the Specific Plan will degrade operations to an unacceptable LOS F with and without the Hazel Avenue Extension. This constitutes a significant impact based on the significance Criteria.

M-75: To mitigate project impacts, the roadway could be widened to eight lanes with high access control. With this configuration, the facility would operate at an acceptable level and reduce the impact to a ***less-than-significant level.***

Alternatively, this facility could be designed as an expressway, with grade-separated intersections, to increase roadway capacity. Additionally, parallel capacity facilities, like those described in M-74, would have the capacity to reduce traffic on this roadway segment. The additional north-south connectivity is consistent with the City's General Plan, which identifies Sunrise Reliever as a six-lane expressway in this area.

D-76: *Jaeger Road, Douglas Road to Chrysanthy Boulevard.* The segment operates at an acceptable level for Cumulative (2030) No Project Conditions, with and without the Hazel Avenue Extension. The addition of traffic from the Specific Plan will degrade operations to an unacceptable level with and without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-76: To mitigate the project impact, widen the segment to six lanes. This would provide acceptable operations and reduce the impact to a ***less-than-significant level.***

Due to improved north-south and east-west connectivity proposed as part of the City's General Plan (including the extension of Chrysanthy Boulevard to the west), the General Plan identifies this roadway segment as a four-lane facility. The General Plan indicates that, if the additional connectivity is provided, that the proposed mitigation may not be needed.

Intersections

I-6: Buildout of the Specific Plan will add traffic to area intersections for Cumulative Conditions. This is considered a ***significant impact.***

D-77: *SR-16/Sunrise Boulevard.* The intersection operates at an unacceptable LOS F for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. Buildout of the Specific Plan will increase the V/C ratio by 0.05 or more during the AM and PM peak hours, with and without the Hazel Avenue Extension. This constitutes a significant impact based on the significance criteria.

M-77: To mitigate impacts at the intersection, the following lane configuration is needed:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
- Two left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase on the southbound approach. This would require prohibiting eastbound U-turns at the intersection.
- Two left-turn lanes, two through lanes, and one right-turn lane on the eastbound approach.
- Two left-turn lanes, two through lanes, and one right-turn lane with overlap right-turn phase on the eastbound approach. This would require prohibiting southbound U-turns at the intersection.

With this lane configuration, the intersection would operate at an acceptable level during the PM peak hour, with or without the Hazel Avenue Extension. Although, the intersection would still operate at an unacceptable LOS F during the AM peak hour with or without the Hazel Avenue Extension, it would operate at a better level than the Cumulative No Project Condition. This would reduce the impact to a less-than-significant level. However, since the City of Rancho Cordova, the lead agency for the EIR, does not control the intersection (it is a Caltrans controlled facility), the City cannot guarantee implementation of the improvements. Therefore, the impact is considered ***significant and unavoidable.***

For the intersection to operate at an acceptable level during the AM peak hour, the improvements listed above would be needed, and the southbound right-turn would need to be a free (uncontrolled) turning movement. This would require widening SR-16 west of the intersection to provide a receiving lane for the free right-turn movement. The identified improvements are consistent with the City's

General Plan, which identifies Sunrise Boulevard as a six-lane roadway and SR-16 is identified as a six-lane expressway. Additionally, the City's General Plan has identified future at-grade intersection improvements at this location.

D-78: *Florin Road/Sunrise Boulevard.* The intersection operates at an acceptable level for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM and PM peak hours, with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-78: To mitigate project impacts at the intersection, the following intersection lane configuration is needed:

- One left-turn lane and three through lanes on the northbound approach.
- Three through lanes and one right-turn lane with overlap right-turn phase on the southbound approach. This will require prohibiting eastbound U-turns at the intersection.
- Two left-turn lanes and one right-turn lane on the eastbound approach.

With these improvements, the intersection would operate at an acceptable level for Cumulative With Project Conditions, with and without the Hazel Avenue Extension. The improvements would reduce the impact to a less-than-significant level. Additionally, these improvements are consistent with the City's General Plan.

However, this intersection is outside the City limits, and is controlled by the County of Sacramento. Since the City cannot guarantee implementation of the mitigation measure, the impact is considered ***significant and unavoidable.***

D-79: *Grant Line Road/Kiefer Boulevard.* The unsignalized intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. The addition of project-generated traffic will add more than five seconds of delay to the intersection. Based on the significance criteria, this constitutes a significant impact.

M-79: To mitigate impacts, a traffic signal, with protected left-turn phases, would need to be installed at the intersection. With this improvement, the intersection would operate at an acceptable level for all Cumulative Conditions analysis scenarios, with and without the Hazel Avenue Extension, reducing the project impact to a ***less-than-significant level.*** The intersection improvement is consistent with the City's General Plan, which identifies Grant Line Road as a six-lane expressway.

D-80: *Grant Line Road/Douglas Road.* The intersection operates at an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) analysis scenarios, with and without the Hazel Avenue Extension. The addition of project-generated traffic will increase delays at the intersection by more than five sections. This constitutes a significant impact based on the significance criteria.

M-80: To mitigate impacts at the intersection, a traffic signal would need to be installed with protected northbound left-turn phasing. With this improvement, the intersection would operate at an acceptable level, with and without the Hazel Avenue Extension. This would reduce the project impact to a ***less-than-significant level.*** The intersection improvement is consistent with the City's General Plan, which identifies Grant Line Road as a six-lane expressway.

D-81: *Douglas Road/Sunrise Boulevard.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with or with or without the Hazel Avenue Extension. The addition of project-generated traffic will increase the V/C ratio at the intersection by 0.05 or more during both peak hours, with and without the Hazel Avenue Extension. Based on the Significance criteria, this constitutes a significant impact.

M-81: The intersection has substantial traffic volumes that would require significant turn lanes at the intersection. The intersection will continue to operate at an unacceptable LOS F for all Cumulative Conditions analysis scenarios, with and without the Hazel Avenue Extension, with two left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase on all approaches (U-turns would be prohibited). Therefore, the impact is considered ***significant-and-unavoidable.***

Intersection operations would improve if additional east-west connections were provided. The completion of Kiefer Boulevard and the extension of Chrysanthy Boulevard southwest to Kiefer Boulevard and Jackson Highway would have the capacity to alleviate traffic from the study intersection and could mitigate the impact to a less-than-significant level.

The City's General Plan has identified the intersection as a location where alternative intersection treatments, such as triple left-turn lanes or a continuous flow intersection, would be needed. The identified impact is consistent with the City's General Plan.

D-82: *Mather Field Road/International Drive.* The intersection operates at LOS F during the PM peak hour only for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. The addition of project-generated traffic during the PM peak hour will increase the V/C ratio by 0.05 or more with and without the Hazel Avenue Extension. Based on the Significance Criteria, this is considered a significant impact.

M-82: To mitigate impacts at the study intersection, a third northbound left-turn lane would be needed. With this improvement, the intersection would operate at an acceptable level, reducing the impact to a ***less-than-significant level.***

The City's General Plan has identified alternate roadway alignments in this area, which may alleviate the demand for this left-turn movement. However, Mather Field Road is identified as a six-lane roadway, which would be sufficient to accommodate the identified improvement.

D-83: *Zinfandel Drive/International Drive.* The intersection operates at an unacceptable LOS F during the PM peak hour for Cumulative No Project Conditions, with and without the Hazel Avenue Extension. The redistribution of traffic due to new roadways associated with the proposed project will decrease the V/C ratio at the study intersection with and without the Hazel Avenue Extension. Based on the significance criteria, the project will result in a ***less-than-significant impact*** at the study intersection.

D-84: *Zinfandel Drive/White Rock Road.* The intersection is expected to operate at an unacceptable level for the following conditions:

- Cumulative No Project Conditions without the Hazel Avenue Extension – PM peak hour only.
- Cumulative With Project Conditions without the Hazel Avenue Extension – AM and PM peak hours. Project will increase the V/C ratio during the PM peak hour by 0.05 or more.
- Cumulative No Project Conditions with the Hazel Avenue Extension — AM and PM peak hours.
- Cumulative With Project Conditions with the Hazel Avenue Extension – AM and PM peak hours. The addition of project-generated traffic will increase the V/C ratio by 0.05 or more.

Based on the significance criteria, this constitutes a significant impact.

M-84: To mitigate project impact at the study intersection, the following improvements are needed:

Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
Three left-turn lanes, two through lanes, and one shared through/right-turn lane on the southbound approach.
Three left-turn lanes, two through lanes, and one shared through/right-turn lane on the eastbound approach.
Two left-turn lanes, two through lanes, and one free (uncontrolled) right-turn lane. This will require a receiving lane north of the intersection.

With these improvements, the intersection would operate at an acceptable level of all Cumulative Conditions scenarios except the Cumulative With Project Conditions without Hazel Avenue Extension during the PM peak hour only. However, with the improvements, the intersection would operate at a better level then the No Project Conditions. Therefore, the impact would be mitigated to a ***less-than-significant level.***

For the intersection to operate at an acceptable level, a fourth through lane would be needed on the northbound approach.

The City's General Plan identifies this intersection as a location that would need special treatments, such as a continuous flow intersection, triple left-turn lanes, and/or a fourth through lane at the intersection. Therefore, the identified improvements are consistent with the City's General Plan.

D-85: *Zinfandel Drive/US-50 Eastbound Ramps.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) analysis scenarios, with and without the Hazel Avenue Extension. The addition of traffic from the proposed project will increase the V/C ratio by 0.05 or more during the AM and PM peak hours with and without the Hazel Avenue Extension. This constitutes a significant impact based on the significance criteria.

M-85: To mitigate impacts at the intersection, the following configuration would be needed:

- Four through lanes and one shared through/right-turn lane on the northbound approach.
- Two through lanes and a free (uncontrolled) right-turn lane on the southbound approach.
- One left-turn lane, one share through/left-turn lane, one through lane, and three right-turn lanes on the eastbound approach.
- Three right-turn lanes on the westbound approach.

With these improvements, the intersection would continue to operate at unacceptable LOS F during the AM and PM peak hours for the Cumulative With Project Conditions without the Hazel Avenue Extension and during the PM peak hour for Cumulative With Project Conditions with the Hazel Avenue Extension. However, the intersection would operate at a better level with these improvements compared to the No Project scenario, reducing the impact to a less-than significant level.

This ramp-terminal intersection is controlled by Caltrans. Since Rancho Cordova, as the lead agency, cannot guarantee implementation of the measures described above, the impact is considered ***significant-and-unavoidable.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project. Additionally, improvements of parallel routes, like completion of Kiefer Road or added capacity to White Rock Road or Old Placerville Road, would have the capacity of relieving the projected demand at the interchange.

D-86: *Sunrise Boulevard/White Rock Road.* The intersection will operate at an acceptable level for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. The addition of traffic from the proposed project will degrade operations during the AM and PM peak hours to an unacceptable LOS F. Based on the significance criteria this is considered a significant impact.

D-87: To mitigate impacts at the intersection, the following lane configurations are needed:

- Two left-turn lanes, four through lanes, and one right-turn lane on the northbound approach.
- Three left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase on the southbound approach. This would require prohibiting eastbound U-turns.
- Two left-turn lanes, two through lanes, and one right-turn lane on the eastbound approach.
- Two left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase. This would require prohibiting southbound U-turns at the intersection.

With these improvements, the intersection would operate at an acceptable level with or without the Hazel Avenue Extension, reducing the project impact to a ***less-than-significant level.***

The identified improvements are consistent with the City's General Plan, which identifies Sunrise Boulevard as an eight-lane facility or roadway with special treatments. Additionally, the General Plan identifies this intersection as a location for at-grade intersection improvements.

D-88: *Sunrise Boulevard/Folsom Boulevard.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. The addition of traffic from the proposed project will increase the V/C ratio at the intersection by more than 0.05 during the AM and PM peak hours, with or without the Hazel Avenue Extension. This constitutes a significant impact based on the significance criteria.

M-88: To mitigate impacts at the intersection for Cumulative Conditions with or without the Hazel Avenue Extension, the following lane configurations would be needed:

- Two left-turn lanes, four through lanes, and one right-turn lane with overlap right-turn phase on the northbound approach. This would require prohibiting westbound U-turns at the intersection.
- Three left-turn lanes, four through lanes, and one right-turn lane with overlap right-turn phase on the southbound approach. This would require prohibiting eastbound U-turns at the intersection.
- Two left-turn lanes, two through lanes, and one free (uncontrolled) right-turn lane at the intersection. The free right-turn movement would require a receiving lane south of the intersection.
- Three left-turn lanes, one through lane, one shared through/right-turn lane, and one right-turn lane with overlap right-turn phase. This would require prohibiting southbound U-turns at the intersection.

With these improvements, the intersection would continue to operate at unacceptable LOS F during the AM and PM peak hours for the Cumulative With Project Conditions, with or without the Hazel Avenue Extension. However, the intersection would operate at a better level with these improvements compared to the No Project scenario, reducing the impact to a less-than significant level.

Implementation of the above referenced measures maybe infeasible due to geometric constraints at the intersection caused by the grade separated LRT tracks. Due to this geometric constraint, the impact is considered to be ***significant-and-unavoidable.*** This is consistent with the City's General Plan, which identifies this intersection for at-grade enhancements.

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento, by providing effective connectivity to the LRT station (from a shuttle or bus). This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project. Additionally, improvements of parallel routes, like completion of Kiefer Road, would have the capacity of relieving the projected demand at the intersection.

D-89: *Sunrise Boulevard/US-50 Westbound Ramps.* The intersection will operate at an unacceptable level during the PM peak hour only for Cumulative No Project and Cumulative With Project Conditions, with or without the Hazel Avenue Extension. Buildout of the proposed project will increase the V/C ratio during the PM peak hour by 0.05 or more, with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-89: To mitigate impacts at this intersection, a third westbound right-turn lane and a fourth northbound through lane would be needed. With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours for Cumulative With Project Conditions, with or without the Hazel Avenue Extension.

This ramp-terminal intersection is controlled by Caltrans. Since Rancho Cordova, as the lead agency, cannot guarantee implementation of the measure described above, the impact is considered ***significant-and-unavoidable.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento and BRT on or parallel to Sunrise Boulevard. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on Sunrise Boulevard.

D-90: *Sunrise Boulevard/Zinfandel Drive.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of project-generated traffic will increase the V/C ratio at the intersection by 0.05 or more during the AM and PM peak hours, with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-90: Consistent with improvements identified in the Sacramento County Mobility Study, one through lane in the northbound and southbound directions could be added at the intersection. Although the intersection would still operate at an unacceptable

LOS F during the AM and PM peak hours, the improvement provides sufficient capacity to offset the addition of project-generated traffic to the intersection during the AM and PM peak hours, with or without the Hazel Avenue Extension, and would reduce the impact to a ***less-than-significant level.***

The City's General Plan identifies this intersection as a location for potential grade separation. Grade separation will provide additional capacity at the intersection, and will improve operations.

D-91: *Hazel Avenue/Folsom Boulevard.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of project-generated traffic will not increase the V/C ratio by 0.05 or more. Therefore, based on the significance criteria, the proposed project will have a less-than-significant impact to the study intersection and no mitigation is required.

Significant improvements would be needed to improve operations to an acceptable level. These improvements will likely include grade-separation of the intersection and would likely require reconstruction of the Hazel Avenue/US-50 interchange. This is consistent with the City's General Plan.

D-92: *Hazel Avenue/US-50 Eastbound Ramps.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of project-generated traffic will increase the V/C ratio by 0.05 or more during the AM and PM peak hours with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-92: To mitigate impacts at the intersection, additional capacity is needed on the freeway over-crossing to serve substantial demand for the northbound through movement and the eastbound left-turn movement. Since the interchange is not controlled by the City of Rancho Cordova, the lead agency for this project, implementation of interchange improvements cannot be guaranteed. Therefore, the addition of traffic from proposed project will result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento and BRT crossings of the American River. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project at the study intersection.

D-93: *Hazel Avenue/US-50 Westbound Ramps.* The intersection will operate at an unacceptable LOS F during the AM and PM peak hours for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of project-generated traffic will increase the V/C ratio by 0.05 or more during the AM and PM peak hours with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-93: To mitigate project impacts, a second northbound left-turn lane is needed. Additionally, a fourth through lane is needed on the northbound and southbound approaches. With these improvements, the intersection would continue to operate at an unacceptable LOS F during the AM and PM peak hours, with or without the Hazel Avenue Extension. However, the V/C ratio would be lower compared to the Cumulative No Project Condition without the improvements, offsetting the project impact to the intersection.

Since this intersection is not controlled by the City of Rancho Cordova, the lead agency for this project, implementation of interchange improvements cannot be guaranteed. Therefore, the addition of traffic from buildout of the Specific Plan will result in a ***significant-and-unavoidable impact.***

To reduce the number of trips added to this intersection, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento and BRT crossings of the American River. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project at the study intersection.

D-94: *White Rock Road/Grant Line Road.* The intersection will operate at an unacceptable LOS F for the following scenarios:

- Cumulative With Project Conditions without the Hazel Avenue Extension – AM peak hour only
- Cumulative No Project Conditions with the Hazel Avenue Extension — AM peak hour only
- Cumulative With Project Conditions with the Hazel Avenue Extension – AM and PM peak hours. V/C ratio during the AM peak hour increases by 0.05 or more.

Based on the significance criteria, the addition of project-generated traffic will result in a significant impact to the study intersection.

M-94: To mitigate project impacts for Cumulative Conditions without the Hazel Avenue Extension, following lane configurations would be required:

- One left-turn lane and two through lanes on the northbound approach.
- Two through lanes and one right-turn lane with overlap right-turn phase on the southbound approach. This would require prohibiting eastbound U-turns at the intersection.
- Two left-turn lanes and one right-turn lane on the eastbound approach.

With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours for Cumulative With Project Conditions without the Hazel Avenue Extension, reducing the impact to a less-than-significant level.

To mitigate project impacts for Cumulative Conditions with the Hazel Avenue Extension, following lane configurations would be required:

- One left-turn lane, two through lanes, and one right-turn lane with overlap right-turn phase on the northbound approach. This would require prohibiting westbound U-turns at the intersection.
- One left-turn lane, two through lanes, and one right-turn lane on the southbound approach.
- Two left-turn lanes, two through lanes, and one right-turn lane on the eastbound approach.
- Two left-turn lanes, two through lanes, and one right-turn lane on the westbound approach.

With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours for Cumulative With Project Conditions with the Hazel Avenue Extension, reducing the impact to a less-than-significant level. The identified improvements are consistent with the City's General Plan, which identifies both roadways as six-lane expressways.

However, the intersection is not within the City of Rancho Cordova, the lead agency for this EIR (the intersection is controlled by the County of Sacramento). Since the City cannot guarantee implementation of the proposed improvements, the impact is considered ***significant-and-unavoidable.***

D-95: *Sunrise Boulevard/Kiefer Boulevard.* The intersection will operate at an unacceptable LOS F during the AM peak hour only for Cumulative No Project Conditions, with or without the Hazel Avenue Extension. The addition of traffic from the proposed project will degrade operations from an acceptable level to an unacceptable level during the PM peak hour with or without the Hazel Avenue Extension. The addition of project-generated traffic will increase the V/C ratio by 0.05 or more at the intersection during the AM peak hour, with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact with or without the Hazel Avenue Extension.

M-95: To mitigate project impacts, the intersection would need the following lane configuration:

- One left-turn lane, four through lanes, and one right-turn lane on the northbound and southbound approaches.
- Two left-turn lanes, two through lanes, and one right-turn lane on the eastbound approach.
- One left-turn lane, two through lanes, and one right-turn lane with overlap right-turn phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection.

With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours for Cumulative With Project Conditions, with or without the Hazel Avenue Extension, reducing the impact to a ***less-than-significant level.***

The City's General Plan identifies Sunrise Boulevard as a six-lane facility at this location. The additional north-south connectivity identified in the General Plan, like the extension of Chrysanthy Boulevard to SR-16 and the extension of Jaeger

Road to Grant Line Road, may decrease demand at the intersection and require fewer through lanes than identified in the mitigation measure.

D-96: *Eagles Nest/Kiefer Road.* The intersection will operate at an unacceptable level for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension. However, the proposed project will increase the V/C ratio by 0.05 or more during the AM peak hour only without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-96: To mitigate project impacts, the intersection should consist of one left-turn lane, two through lanes, and one right-turn lane on all approaches. With this configuration, the intersection would operate at an acceptable level for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension and would reduce the impact to a less-than-significant level. The identified improvement is consistent with the City's General Plan.

However, the intersection is not within the City of Rancho Cordova, the lead agency for this EIR (the intersection is controlled by the County of Sacramento). Since the City cannot guarantee implementation of the proposed improvements, the impact is considered ***significant-and-unavoidable.***

D-97: *Sunrise Boulevard/International Drive.* The intersection will operate at an unacceptable level during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of traffic from the proposed project will increase the V/C ratio at the intersection by 0.05 or more during the AM and PM peak hours, with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-97: To mitigate impacts, the intersection could consist of the following geometrics:

- Two left-turn lanes, four through lanes, and one right-turn lane on the northbound approach.
- One left-turn lane, four through lanes, and one right-turn lane on the southbound approach.
- Two left-turn lanes, one through lane, and two right-turn lanes with overlap right-turn phase on the eastbound approach. This would require prohibiting northbound U-turns at the intersection.
- Two left-turn lanes, two through lanes, and one right-turn lane on the westbound approach.

With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension. This would reduce the project impact to a *less-than-significant level.* The identified improvements are consistent with the City's General Plan.

D-98: *Sunrise Reliever/White Rock Road.* The intersection operates at an unacceptable level for the following conditions:

- Cumulative No Project Conditions, with or without the Hazel Avenue Extension – AM peak hour only
- Cumulative With Project Conditions, with or without the Hazel Avenue Extension – AM and PM peak hours. Traffic from the proposed project will increase the V/C during the AM peak hour by 0.05 or more.

Based on the significance criteria, the addition of project-generated traffic constitutes a significant impact to the intersection.

M-98: Improvements to this intersection would include the following lane configurations:

- Three left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
- Two left-turn lanes, three through lanes, and two right-turn lanes with overlap right-turn phase on the southbound approach. This would require prohibiting eastbound U-turns.
- Two left-turn lanes, three through lanes, and two right-turn lanes with overlap right-turn phase on the eastbound approach. This would require prohibiting northbound U-turns.
- Two left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase on the westbound approach. This would require prohibiting southbound U-turns.

However, with these improvements, the intersection would continue to operate at an unacceptable LOS F, and the impact would remain ***significant-and-unavoidable.***

Unique intersection control at this location, with higher capacities, could improve operations of the intersection. These treatments could include a continuous flow intersection or grade separation. This is consistent with the City's General Plan, which identifies this location for potential at-grade enhancements.

D-99: *Sunrise Reliever/US-50 Eastbound Ramps.* Intersection operates at an unacceptable level during the PM peak hour for Cumulative No Project Conditions, with or without the Hazel Avenue Extension. The addition of project-generated traffic will degrade operations to an unacceptable level during the AM peak hour, and will increase the V/C ratio during the PM peak hour by 0.05 or more, with or without the Hazel Avenue Extension. Based on the significance criteria, this constitutes a significant impact.

M-99: To mitigate project impacts, an third southbound through lane and a third eastbound right-turn lane could be added to the intersection. With this improvement, the intersection would operate at an acceptable level during the AM peak hour, with or without the Hazel Avenue Extension. Although the intersection would continue to operate at an unacceptable level during the PM peak hour with or without the Hazel Avenue Extension, the V/C ratio would be lower than the No Project Conditions, mitigating the impact to a less-than-significant level.

However, the intersection is not within the City of Rancho Cordova, the lead agency for this EIR (the intersection will be controlled by Caltrans). Since the City cannot guarantee implementation of the proposed improvements, the impact is considered ***significant-and-unavoidable.***

A project study report (PSR) is currently underway for the Sunrise Reliever interchange which will include a detailed simulation analysis of the interchange.

The interchange should be configured such that acceptable operations are provided.

D-100: *Douglas Road/Jaeger Road.* The intersection operates at an acceptable level for Cumulative No Project Conditions without the Hazel Avenue Extension. The addition of project-generated traffic will degrade operations to an unacceptable level. Based on the significance criteria, this constitutes a significant impact.

The intersection will operate at an unacceptable level during the PM peak hour only for Cumulative No Project Conditions with the Hazel Avenue Extension. The addition of project-generated traffic will degrade operations during the AM peak hour to an unacceptable level. During the PM peak hour, the V/C ratio will increase by 0.05 or more. Based on the significance criteria, this constitutes a significant impact.

M-100: To mitigate project impacts for Cumulative Conditions, with or without the Hazel Avenue Extension, the intersection would require the following lane configuration:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
- Two left-turn lanes, three through lanes, and one right-turn lane on the southbound approach.
- Two left-turn lanes, three through lanes, and one right-turn lane with overlap right-turn phase on the eastbound approach. This would require prohibiting northbound U-turns.
- Two left-turn lanes, three through lanes, and two right-turn lanes with overlap right-turn phase on the westbound approach. This would require prohibiting southbound u-turns at the intersection.

With these improvements, the intersection would operate at an acceptable level, reducing the project impact to a ***less-than-significant level***, with or without the Hazel Avenue Extension. The identified improvements are consistent with the City's General Plan, which identifies both roadways as four-lane facilities.

D-101: *Douglas Road/Americanos Boulevard.* The intersection operates at an acceptable level during the AM and PM peak hours for Cumulative No Project Conditions without the Hazel Avenue Extension. The addition of traffic from the proposed project will degrade operations to an unacceptable level. Based on the significance criteria, this is considered a significant impact.

The intersection will operate at an unacceptable level for Cumulative No Project Conditions during the AM peak hour only with the Hazel Avenue Extension. The addition of project-generated traffic will increase the V/C ratio during the AM peak hour by 0.05 or more. Project-generated traffic will also degrade operations from an acceptable level to an unacceptable level during the PM peak hour. This constitutes a significant impact based on the significance criteria.

M-101: To mitigate impacts, the intersection could be improved to consist of the following lane configuration:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound approach.
- Three left-turn lanes, three through lanes, and one right-turn lane on the southbound approach.

- Two left-turn lanes, two through lanes, and two right-turn lanes with overlap right-turn phase on the eastbound approach. This would require prohibiting northbound U-turns at the intersection.
- Two left-turn lanes, two through lanes, and two right-turn lanes with overlap right-turn phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection.

With these improvements, the intersection would operate at an acceptable level during the AM and PM peak hours with or without the Hazel Avenue Extension. This would reduce the impact to a ***less-than-significant level.*** The City's General Plan identifies both roadways as four-lane facilities. Although the intersection approaches on Douglas Road are consistent with the City's General Plan, the lane configurations on Americanos Boulevard are not. The intersection may need additional capacity at the intersection, or improved connectivity identified in the General Plan may reduce demand at the intersection.

D-102: *Chrysanthy Boulevard/Sunrise Boulevard.* The intersection will operate at an unacceptable level during the AM peak hour only, with or without the Hazel Avenue Extension. The addition of project-generated traffic will degrade operations during the PM peak hour from an acceptable level to an unacceptable level, with or without the Hazel Avenue Extension. Project traffic will also increase the V/C ratio by 0.05 or more during the AM peak hour. This constitutes a significant impact based on the significance criteria.

M-102: To mitigate project impacts, the following lane configuration is needed at the intersection:

- Three through lanes and a right-turn lane on the northbound approach.
- Four through lanes and two left-turn lanes on the southbound approach.
- Two left-turn lanes and two right-turn lanes with overlap right-turn phase on the westbound approach. This would require prohibiting southbound U-turns at the intersection.

With these improvements, the intersection would operate at an acceptable level, reducing the impact to a ***less-than-significant level.*** The City's General Plan identifies Sunrise Boulevard as a six-lane facility at the intersection and is not consistent with the City's General Plan. The additional capacity may not be required with additional connectivity identified in the General Plan, like the extension of Chrysanthy Boulevard to SR-16, or the extension of Jaeger Road to Grant Line Road.

D-103: *Chrysanthy Boulevard/Jaeger Road.* The intersection will operate at an acceptable level during the AM and PM peak hours for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. The addition of project-generated traffic will degrade operations during the AM peak hour to an unacceptable LOS F. Based on the significance criteria, this constitutes a significant impact.

M-103: For the intersection to operate at an acceptable level, and to mitigate project impacts, a second westbound right-turn lane with overlap right-turn phase is needed. This would require prohibiting northbound U-turns at the intersection. This is consistent with the City's General Plan, which identifies both roadways as four-lane facilities.

With this improvement, the intersection would operate at an acceptable level during the AM and PM peak hours for all Cumulative Conditions analysis scenarios, with and without the Hazel Avenue Extension. This would reduce the impact to a ***less-than-significant level.***

D-104: *White Rock Road/Americanos Boulevard.* The intersection will operate at an acceptable level for Cumulative (2030) No Project Conditions, with and without the Hazel Avenue Extension. The addition of project-generated traffic will degrade operations to an unacceptable level during the AM and PM peak hours. Based on the significance criteria this constitutes a significant impact.

M-104: For the intersection to operate at an acceptable level, the following intersection geometrics are needed:

- Two left-turn lanes, three through lanes, and one right-turn lane on the northbound and southbound approaches.
- One left-turn lane, two through lanes, and two right-turn lanes with overlap right-turn phase on the eastbound approach. This would require prohibiting northbound U-turns.
- One left-turn lane, two through lanes, and one right-turn lane on the westbound approach.

With these improvements, the intersection would operate at an acceptable level for all Cumulative Conditions analysis scenarios, with or without the Hazel Avenue Extension. This would reduce the impact to a ***less-than-significant level.*** These improvements are consistent with the City's General Plan.

Freeway Ramp Merge/Diverge/Weave Analysis

I-7 Buildout of the Specific Plan will add traffic to area freeway ramps for Cumulative Conditions. This is considered a ***significant impact.***

D-105: *Eastbound Mather Field Road Direct Off-Ramp* – Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten trips to the freeway ramp. This is considered a significant impact based on the significance criteria.

M-105: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-106: *Zinfandel Drive Direct Off-Ramp* – Ramp operates at an acceptable level for Cumulative (2030) No project Conditions with or without the Hazel Avenue Extension. The addition of project-generated traffic will reduce operations to an unacceptable level. This is considered a significant impact based on the significance criteria.

M-106: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard, Old Placerville Road, or White Rock Road, could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-107: *Eastbound Sunrise Boulevard Loop/Direct On-Ramp* – Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. buildout of the Specific Plan is expected to add approximately ten trips to the ramp during the AM and PM peak hours with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-107: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard, White Rock Road, or Easton Valley Parkway could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-108: *Eastbound Sunrise Reliever Direct Off-Ramp* - Ramp operates and an unacceptable level during the PM peak hour for all Cumulative (2030) Conditions analysis scenarios. Buildout of the Specific Plan is expected to add more than ten trips to this freeway ramp. This is considered a significant impact based on the significance criteria.

M-108: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-109: *Eastbound Sunrise Reliever Direct On-Ramp* – Ramp operates and an unacceptable level for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. Buildout of the Specific Plan is expected to add more than ten trips to the ramp during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-109: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-110: *Eastbound Hazel Avenue Direct Off-Ramp* - Ramp operates and an unacceptable level during the AM peak hour only for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten trips to this ramp. This constitutes a significant impact based on the significance criteria.

M-110: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered significant-and-unavoidable.

Capacity improvements to parallel facilities, such as Easton Valley Parkway, or White Rock Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-111: *Eastbound Hazel Avenue Loop/Direct On-Ramp to AeroJet Direct Off-Ramp Weave Segment* – Weaving section operates at an unacceptable level during the AM peak hour only for Cumulative (2030) No Project Conditions, with or without

the Hazel Avenue Extension. The addition of project-generated traffic to the mainline and the auxiliary lane will degrade operations during the PM peak hour from an acceptable level to an unacceptable level. The proposed project will add ten or more trips to the auxiliary lane during the AM and PM peak hours. Based on the significance criteria, this constitutes a significant impact.

M-111: Poor operations to the weaving section occur due to increased traffic in the auxiliary lane and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or additional auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered significant-and-unavoidable.

Capacity improvements to parallel facilities, such as Easton Valley Parkway, or White Rock Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-112: *Westbound Hazel Avenue Direct Off-Ramp* - Ramp operates and an unacceptable level during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. Buildout of the Specific Plan will add approximately ten trips to this ramp during the AM and PM peak hours for the with Hazel Avenue Extension analysis scenario only. Therefore, buildout of the Specific Plan will result in a significant impact to the study freeway ramp.

M-112: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Easton Valley Parkway, or White Rock Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-113: *Westbound Hazel Avenue Loop On-Ramp* – The ramp operates at an unacceptable level during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. Project-generated traffic will add more than ten trips to the ramp during the AM and PM peak hours. Based on the significance criteria, this is considered a significant impact.

M-113: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard, White Rock Road, or Easton Valley Parkway could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-114: *Westbound Sunrise Reliever Direct Off-Ramp* - Ramp operates and an unacceptable level during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten trips to the freeway ramp during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-114: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-115: *Westbound Sunrise Reliever Loop On-Ramp* - Ramp operates and an unacceptable level during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten trips to the freeway ramp during the AM and PM peak hours, with and without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-115: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Options to provide acceptable operations of the interchange will be considered in the project study report (PSR) that is currently underway for the Sunrise Reliever interchange.

D-116: *Westbound Zinfandel Drive Direct Off-Ramp* - Ramp operates and an unacceptable level for the following analysis scenarios:

- Cumulative No Project Conditions without the Hazel Avenue Extension – AM peak hour only.
- Cumulative With Project Conditions without the Hazel Avenue Extension – AM peak hour only. Buildout of the Specific Plan will add approximately ten trips to the ramp during the AM peak hour.
- Cumulative No Project Conditions with the Hazel Avenue Extension — PM peak hour only.
- Cumulative With Project Conditions with the Hazel Avenue Extension – AM and PM peak hours. Buildout of the Specific Plan will add approximately ten trips to the ramp during the PM peak hour.

Based on the significance criteria, this constitutes a significant impact.

M-116: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-117: *Westbound Zinfandel Drive Direct On-Ramp* – Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten peak hour trips to the ramp during the AM and PM peak hours. This is considered a significant impact based on the significance criteria.

M-117: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and

Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-118: *Westbound Mather Field Road Direct Off-Ramp* - Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. Buildout of the Specific Plan will add ten or more trips during the AM and PM peak hour with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-118: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-119: *Westbound Mather Field Road Loop On-Ramp* - Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030) Conditions analysis scenarios, with and without the Hazel Avenue Extension. Buildout of the Specific Plan will add ten or more trips to the ramp during the AM and PM peak hours, with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-119: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-120: *Westbound Mather Field Road Direct On-Ramp* - Ramp operates and an unacceptable LOS F during the AM and PM peak hours for all Cumulative (2030)

analysis scenarios, with or without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten trips to the freeway ramp during the AM peak hour only. This is considered a significant impact based on the significance criteria.

M-120: Poor operations to the freeway ramp occur due to increased traffic on the ramp and congestion on the freeway mainline segment. Mainline improvements (such as lane additions or creation of auxiliary lanes) or ramp improvements (such as lane additions) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline and freeway ramp. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

Freeway Segments

I-8: Buildout of the Specific Plan will add traffic to area freeway segments during the peak hours for Cumulative Conditions. This is considered a ***significant impact.***

D-121: *Eastbound US-50, West of Mather Field Road* – The segment operates at an unacceptable LOS F during the AM peak hour only for Cumulative (2030) Conditions, with or without the Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will degrade operations during the PM peak hour to an unacceptable LOS F. Additionally, the proposed project will add more than ten trips to this segment during the AM peak hour. This is considered a significant impact based on the significance criteria.

M-121: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-122: *Eastbound US-50, Zinfandel Drive to Sunrise Boulevard* – The segment operates at an unacceptable LOS F during the AM and PM peak hours only for all Cumulative (2030) Conditions analysis scenarios, with or without the Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will add more than ten trips to this freeway segment. This is considered a significant impact based on the significance criteria.

M-122: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-123: *Eastbound US-50, Sunrise Reliever to Hazel Avenue* – The segment operates at an unacceptable LOS F during the AM peak hour only for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. Buildout of the Specific Plan will add more than ten trips to the segment. This is considered a significant impact based on the significance criteria.

M-123: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-124: *Eastbound US-50, East of Hazel Avenue* – The segment operates at an unacceptable level for the following Cumulative (2030) Conditions:

- Cumulative (2030) With Project Conditions without Hazel Avenue Extension – AM peak hour only.
- Cumulative No Project Conditions with Hazel Avenue Extension – AM Peak hour only.
- Cumulative With Project Conditions with Hazel Avenue Extension – AM peak hour only. Project adds more than ten trips to the segment.

This is considered a significant impact based on the significance criteria.

M-124: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline.

Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-125: *Westbound US-50, East of Hazel Avenue* – The segment operates at an acceptable level during the AM peak hour for Cumulative (2030) No Project Conditions with or without the Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM peak hour with or without the Hazel Avenue Extension. The segment will operate at LOS F during the PM peak hour for Cumulative No Project and Cumulative With Project Conditions, with or with out the Hazel Avenue Extension. There are more than ten project-generated trips on the segment during both peak hours, with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-125: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-126: *Westbound US-50, Hazel Avenue to Sunrise Reliever* – The segment operates at an acceptable level for Cumulative (2030) No Project Conditions with or without eh Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM peak hour without the Hazel Avenue Extension. With the Hazel Avenue Extension, operations will degrade to an unacceptable LOS F. This is considered a significant impact based on the significance criteria.

M-126: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-127: *Westbound US-50, Zinfandel Drive to Mather Field Road* – The segment operates at an acceptable level for Cumulative (2030) No Project Conditions, with or without the Hazel Avenue Extension. The addition of traffic from buildout of the Specific Plan will degrade operations to an unacceptable LOS F during the AM and PM peak hours, with or without the Hazel Avenue Extension. This is considered a significant impact based on the significance criteria.

M-127: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.

D-128: *Westbound US-50, West of Mather Field Road* – The segment operates at an unacceptable LOS F for the following Cumulative (2030) Conditions analysis scenarios:

- Cumulative No Project Conditions without the Hazel Avenue Extension – PM peak hour only.
- Cumulative With Project Conditions without the Hazel Avenue Extension – AM and PM peak hours. Project adds more than ten trips during the PM peak hour.
- Cumulative No Project Conditions with the Hazel Avenue Extension – AM and PM peak hours.
- Cumulative With Project Conditions with the Hazel Avenue Extension – AM and PM peak hours. Project adds more than ten trips during the AM and PM peak hours.

This is considered a significant impact based on the significance criteria.

M-128: Mainline improvements (such as lane additions or creation of auxiliary lanes) would improve operations. However, since the lead agency (the City of Rancho Cordova) cannot guarantee improvements, the impact is considered ***significant-and-unavoidable.***

Capacity improvements to parallel facilities, such as Kiefer Boulevard or Old Placerville Road, could reduce traffic demands on the freeway mainline. Additionally, the proposed project should contribute to and support alternative transportation modes, like LRT from Rancho Cordova to Folsom and Sacramento. This will improve the effectiveness of alternative transportation modes and has the potential to decrease the amount of traffic generated by the proposed project on US-50.