

## MEMORANDUM

Date: June 15, 2017  
To: Matt Mogenson, City of Fountain Valley  
From: Paul Herrmann, P.E.  
Subject: **Fountain Valley Crossings Specific Plan Transportation Impact Analysis Errata**

*OC14-0332*

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Fehr & Peers has updated the Crossings Specific Plan (CSP) transportation impact analysis to incorporate an additional cumulative scenario that reflects the maximum buildout potential of the Southpark Specific Plan (SPSP). This analysis was prepared in response to correspondence regarding inadequate buildout assumptions for the SPSP. Specifically, representatives of the SPSP stated that the potential trip generation of their site based on their approved "trip budget" was not reflected in the analysis. As explained in the Final Environmental Impact Report (EIR), future year (2035) traffic forecasts were developed based on regional growth projections from the Southern California Association of Governments (SCAG) land use forecasts and the Costa Mesa Traffic Analysis Model, which resulted in 11-13% increases in traffic volumes from base year to future year conditions. While the travel demand models reflect regional growth assumptions, they do not account for the full buildout potential of the SPSP site based on their identified trip budget. The results of the intersection level of service analysis have been updated to reflect the full buildout potential of the SPSP accordingly, and the results indicate no changes to the ultimate impact determination for the CSP.

### **Approach**

Fehr & Peers derived a conservative estimate for the trip generation of the buildout of the SPSP by comparing various trip generation rates to the available trip budget. The SPSP trips were then applied to the roadway network and study intersections on top of the previously developed Year (2035) No Project Traffic Conditions volumes to create a new future baseline. The CSP "project only" trips were then applied on top of the updated future baseline volumes to develop updated Buildout Year (2035) Plus Project Traffic Conditions volumes. These two scenarios were then compared to



determine if any new significant impacts resulted from the increased traffic volumes in the study area.

### Trip Generation

The SPSP has 1,013 KSF of development remaining to be considered in the full buildout of the project. The project is approved for 108 KSF of retail space and the rest is approved for office, research and development, and warehousing. Retail space is a high generator of peak hour trips so as a conservative approach the retail space is assumed to build out to the full 108 KSF. The remaining 905 KSF was tested as warehouse, general office, and research and development office. As shown in **Table 1**, the general office space has the highest trip generation and therefore was chosen to represent the remaining 905 KSF of developable area. The final trip generation estimate for the buildout of the SPSP is shown in **Table 2**.

**TABLE 1 TRIP GENERATION COMPARISON**

Land Use	ITE Code	Size	Units	Daily	AM Peak			PM Peak		
					In	Out	Total	In	Out	Total
General Office	710	905	KSF	7,003	981	134	1,115	186	906	1,092
Research and Development Office	760	905	KSF	6,252	733	150	883	123	698	821
Warehousing	150	905	KSF	3,277	219	58	277	61	183	244

Source: Trip Generation, 9th Edition (ITE, 2012).



**TABLE 2 SPSP PRELIMINARY TRIP GENERATION ESTIMATES**

Land Use	ITE Code	Size	Units	Daily	AM Peak			PM Peak		
					In	Out	Total	In	Out	Total
Shopping Center	820	108	KSF	7,139	101	62	163	303	328	631
General Office	760	905	KSF	7,003	981	134	1,115	186	906	1,092
<b>Total</b>				<b>14,142</b>	<b>1,082</b>	<b>196</b>	<b>1,278</b>	<b>488</b>	<b>1,234</b>	<b>1,723</b>

Source: *Trip Generation, 9th Edition (ITE, 2012).*

This trip generation estimate was compared back to the “trip budget” and trip generation data the SPSP calculated in the *Southpark Specific Plan Traffic Counts Analysis, 2004*. The SPSP had driveway counts conducted to estimate the actual trip generation of the project to be 3,215 PM peak hour trips of their allowable 5,375 PM peak hour “trip budget,” indicating that the SPSP could still support 2,160 PM peak hour trips. Since 2004, 260 KSF of warehousing was built on the SPSP site, which was estimated to generate 110 PM peak hour trips. This results in the SPSP having 2,050 net remaining PM peak hour trips. As a conservative approach, 2,050 was used as the final PM peak hour trip generation estimate, as shown in **Table 3**.

**TABLE 3 FINAL SPSP TRIP GENERATION ESTIMATES**

Land Use	ITE Code	Size	Units	Daily	AM Peak			PM Peak		
					In	Out	Total	In	Out	Total
Shopping Center	820	108	KSF	7,139	101	62	163	303	328	631
Remaining Development Potential Under Trip Budget (using office trip rates)	760	905	KSF	7,003	981	134	1,115	213	1,206	1,419
<b>Total Remaining Trip Budget Estimate</b>				<b>14,142</b>	<b>1,082</b>	<b>196</b>	<b>1,278</b>	<b>516</b>	<b>1,534</b>	<b>2,050</b>

Note: General Office PM peak hour trip generation was overridden to account for the 2,050 net remaining PM peak hour trips in the SPSP “trip budget.”

Source: *Trip Generation, 9th Edition (ITE, 2012).*



### **Trip Assignment**

The SPSP trips were then assigned to the roadway network. The retail component of the SPSP was assumed to attract mostly local traffic and the office space is assumed to have a regional draw.

### **Roadway Network Improvements**

Consistent with the buildout of the SPSP, additional roadway improvements were assumed in the level of service (LOS) analysis. These improvements were identified in the 1987 letter from Weston Pringle and Associates that conducted the traffic impact analysis for the project. These improvements are as follows:

- An additional eastbound through lane at the intersection of Euclid Street and Slater Avenue
- A restriping of the westbound right turn lane to a through-right turn lane at the intersection of Talbert Avenue and Ward Street
- An additional westbound through lane at the intersection of Brookhurst Street and Talbert Avenue

### **Intersection Operations Analysis**

Intersection LOS results for the updated Buildout Year (2035) No Project Conditions reflecting the full SPSP trip budget are summarized in **Table 4**. LOS sheets are provided in **Appendix A**. The following intersections perform at a deficient LOS under Buildout Year (2035) Conditions:

- Slater Avenue & Euclid Street – PM Peak Hour (LOS E)
- MacArthur Boulevard & Harbor Boulevard – AM and PM Peak Hour (LOS E)
- Euclid Street & Newhope Street/Northbound I-405 Ramps – PM Peak Hour (LOS D)



**TABLE 4 INTERSECTION LEVEL OF SERVICE BUILDOUT YEAR (2035) (WITH FULL SPSP TRIP BUDGET) NO PROJECT CONDITIONS**

	Intersection	Control	AM Peak		PM Peak	
			V/C <sup>1</sup> or Delay <sup>2</sup>	LOS	V/C <sup>1</sup> or Delay <sup>2</sup>	LOS
1.	Warner Ave & Brookhurst St	Signal	0.847	D	0.852	D
2.	Warner Ave & Euclid St	Signal	0.844	D	0.877	D
3.	Slater Ave & Ward St	Signal	0.697	B	0.812	D
4.	Slater Ave & Euclid St	Signal	0.787	C	<b>0.988</b>	<b>E</b>
5.	Slater Ave & Newhope St	Signal	0.632	B	0.786	C
6.	Talbert Ave & Bushard St	Signal	0.833	D	0.812	D
7.	Talbert Ave & Brookhurst St	Signal	0.814	D	0.775	C
8.	Talbert Ave & Ward St	Signal	0.716	C	0.819	D
9.	Talbert Ave & Hyundai Way	Signal	0.605	B	0.681	B
10.	Talbert Ave & Euclid St	Signal	0.722	C	0.841	D
11.	Talbert Ave & Newhope St	Signal	0.838	D	0.835	D
12.	Talbert Ave & Mt. Washington St	Signal	0.792	C	0.884	D
13.	MacArthur Blvd & Harbor Blvd	Signal	<b>0.939</b>	<b>E</b>	<b>0.957</b>	<b>E</b>
14.	MacArthur Blvd & Fairview St	Signal	0.764	C	0.853	D
15.	Euclid St & Newhope St/NB I-405 Ramps	Signal	23.9	C	<b>41.4</b>	<b>D</b>
16.	Euclid St & Condor Ave	Signal	0.423	A	0.678	B
17.	Ellis Ave & Brookhurst St	Signal	0.739	C	0.787	C



**TABLE 4 INTERSECTION LEVEL OF SERVICE BUILDOUT YEAR (2035) (WITH FULL SPSP TRIP BUDGET) NO PROJECT CONDITIONS**

Intersection	Control	AM Peak		PM Peak	
		V/C <sup>1</sup> or Delay <sup>2</sup>	LOS	V/C <sup>1</sup> or Delay <sup>2</sup>	LOS
18. Ellis Ave & Ward St	Signal	0.842	D	0.693	B
19. Ellis Ave/Euclid St & SB I-405 Ramps	Signal	14.1	B	13.6	B
20. Brookhurst St & Garfield Ave	Signal	0.669	B	0.701	C

Notes:

- 1- V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix 8.0 software. V/C = Volume / Capacity Ratio.
- 2- Delay is average intersection delay (seconds) based on application of the Highway Capacity Manual 2010 methodology using Synchro 8 software.
- 3- Intersections operating below acceptable LOS are shown in bold.

*Source: Fehr & Peers, 2017*

Traffic generated by the proposed CSP was then added to the study area roadway network. Intersection LOS results for Buildout Year (2035) Plus Project Conditions are summarized in **Table 5**. LOS sheets are provided in **Appendix A**. The following intersections perform at a deficient LOS under Buildout Year (2035) Plus Project Conditions:

- Slater Avenue & Euclid Street – PM Peak Hour (LOS E)
- Talbert Avenue & Mt. Washington Street – PM Peak Hour (LOS E)
- MacArthur Boulevard & Harbor Boulevard – AM and PM Peak Hour (LOS E)
- Euclid Street & Newhope Street/Northbound I-405 Ramps – PM Peak Hour (LOS D)
- Ellis Avenue & Ward Street – AM Peak Hour (LOS E)



**TABLE 5 INTERSECTION LEVEL OF SERVICE BUILDOUT YEAR (2035) PLUS PROJECT CONDITIONS**

	Intersection	Control	AM Peak		PM Peak	
			V/C <sup>1</sup> or Delay <sup>2</sup>	LOS	V/C <sup>1</sup> or Delay <sup>2</sup>	LOS
1.	Warner Ave & Brookhurst St	Signal	0.851	D	0.861	D
2.	Warner Ave & Euclid St	Signal	0.857	D	0.892	D
3.	Slater Ave & Ward St	Signal	0.701	C	0.835	D
4.	Slater Ave & Euclid St	Signal	0.797	C	<b>0.997</b>	<b>E</b>
5.	Slater Ave & Newhope St	Signal	0.649	B	0.798	C
6.	Talbert Ave & Bushard St	Signal	0.845	D	0.825	D
7.	Talbert Ave & Brookhurst St	Signal	0.819	D	0.775	C
8.	Talbert Ave & Ward St	Signal	0.765	C	0.842	D
9.	Talbert Ave & Hyundai Way	Signal	0.609	B	0.685	B
10.	Talbert Ave & Euclid St	Signal	0.734	C	0.852	D
11.	Talbert Ave & Newhope St	Signal	0.869	D	0.860	D
12.	Talbert Ave & Mt. Washington St	Signal	0.807	D	<b>0.904</b>	<b>E</b>
13.	MacArthur Blvd & Harbor Blvd	Signal	<b>0.939</b>	<b>E</b>	<b>0.975</b>	<b>E</b>
14.	MacArthur Blvd & Fairview St	Signal	0.769	C	0.865	D
15.	Euclid St & Newhope St/NB I-405 Ramps	Signal	30.3	C	<b>47.7</b>	<b>D</b>
16.	Euclid St & Condor Ave	Signal	0.532	A	0.745	C
17.	Ellis Ave & Brookhurst St	Signal	0.761	C	0.804	D



**TABLE 5 INTERSECTION LEVEL OF SERVICE BUILDOUT YEAR (2035) PLUS PROJECT CONDITIONS**

Intersection	Control	AM Peak		PM Peak	
		V/C <sup>1</sup> or Delay <sup>2</sup>	LOS	V/C <sup>1</sup> or Delay <sup>2</sup>	LOS
18. Ellis Ave & Ward St	Signal	<b>0.901</b>	<b>E</b>	0.727	C
19. Ellis Ave/Euclid St & SB I-405 Ramps	Signal	18.9	B	15.1	B
20. Brookhurst St & Garfield Ave	Signal	0.677	B	0.709	C

Notes:

- 1- V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix 8.0 software. V/C = Volume / Capacity Ratio.
- 2- Delay is average intersection delay (seconds) based on application of the Highway Capacity Manual 2010 methodology using Synchro 8 software.
- 3- Intersections operating below acceptable LOS are shown in bold.

*Source: Fehr & Peers, 2017*

As shown in **Table 6**, the addition of project traffic will cause a significant impact at the following four signalized intersections in the Buildout Year (2035).

- Talbert Avenue & Mt. Washington Street – PM Peak Hour (LOS E)
- MacArthur Boulevard & Harbor Boulevard – PM Peak Hour (LOS E)
- Euclid Street & Newhope Street/Northbound I-405 Ramps –PM Peak Hour (LOS D)
- Ellis Avenue & Ward Street – AM Peak Hour (LOS E)

These are the same four impacted locations as originally identified in the EIR. Please note that due to the City of Fountain Valley significant impact criteria, since the CSP project traffic does not increase the V/C ratio by 0.01 at an intersection operating at LOS E, a significant impact does not occur at the intersection of Slater Avenue and Euclid Street.





**TABLE 6 BUILDOUT YEAR (2035) PLUS PROJECT INTERSECTION IMPACTS**

Intersection	Control	Peak Hour	Buildout (2035)		Buildout (2035) Plus Project		Change	Significant Impact?
			V/C <sup>1</sup> or Delay <sup>2</sup>	LOS	V/C <sup>1</sup> or Delay <sup>2</sup>	LOS		
4. Slater Ave & Euclid St	Signal	AM	0.787	C	0.797	C	0.010	No
		PM	0.988	E	0.997	E	0.009	No
12. Talbert Ave & Mt. Washington St	Signal	AM	0.792	C	0.808	D	0.016	No
		PM	0.884	D	0.904	E	<b>0.020</b>	<b>Yes</b>
13. MacArthur Blvd & Harbor Blvd	Signal	AM	0.939	E	0.939	E	0	No
		PM	0.957	E	0.975	E	<b>0.018</b>	<b>Yes</b>
15. Euclid St/Newhope St & NB I-405 Ramps	Signal	AM	23.9	C	30.3	C	6.4	No
		PM	41.4	D	47.7	D	<b>6.3</b>	<b>Yes</b>
18. Ellis Avenue & Ward Street	Signal	AM	0.842	D	0.901	E	<b>0.059</b>	<b>Yes</b>
		PM	0.693	B	0.727	C	0.034	No

Notes:

- 1- V/C for signalized intersections is based on application of the Intersection Capacity Utilization methodology using Traffix 8.0 software. V/C = Volume / Capacity Ratio.
- 2- Delay is average intersection delay (seconds) based on application of the Highway Capacity Manual 2010 methodology using Synchro 8 Build 806 software.

Source: Fehr & Peers, 2017



## **Mitigation Measures**

The previously identified mitigation measures were tested to verify that the improvements identified would still mitigate the significant impacts to a less-than-significant level. Mitigation LOS reports are provided in **Appendix B**.

### ***Talbert Avenue & Mt. Washington Street***

Consistent with the analysis conducted in the EIR, restriping the westbound right turn lane to a shared through-right lane would improve operations at the intersection to acceptable LOS D and would mitigate the impact to a **less-than-significant** level.

### ***MacArthur Boulevard & Harbor Boulevard***

Consistent with the analysis conducted in the EIR, this intersection will operate at LOS E with or without the addition of project traffic, and the built-out environment surrounding the intersection make capacity improvements infeasible. In addition, the intersection is also in City of Costa Mesa jurisdiction and the City cannot guarantee the implementation of the mitigation measures. As such, the impact remains **significant and unavoidable**.

### ***Euclid Street & Newhope Street/Northbound I-405 Ramps***

Consistent with the analysis conducted in the EIR, optimization of the PM peak hour traffic signal cycle lengths and splits within the coordinated signal timing plan would improve operations at the intersection to better than pre-project conditions. Traffic signal timing adjustments are considered standard maintenance for local and state agencies and it is assumed the owner/operator of this intersection (Caltrans) can implement this improvement if updated signal timings are provided. As such, this impact can be mitigated to a **less-than-significant** level.

### ***Ellis Avenue & Ward Street***

Consistent with the analysis conducted in the EIR, capacity improvements are required in order to mitigate the project impact. The previously identified restriping of the northbound approach with two right turn lanes improves the intersection operations to acceptable LOS D. As such, the impact would be mitigated to a **less-than-significant** level.



## **Appendices**

**Appendix A - Buildout Year (2035) No Project Conditions and Buildout Year (2035) Plus Project Conditions LOS Results**

**Appendix B - Mitigation LOS Results**



**Appendix A - Buildout Year (2035) No Project Conditions and  
Buildout Year (2035) Plus Project Conditions LOS Results**

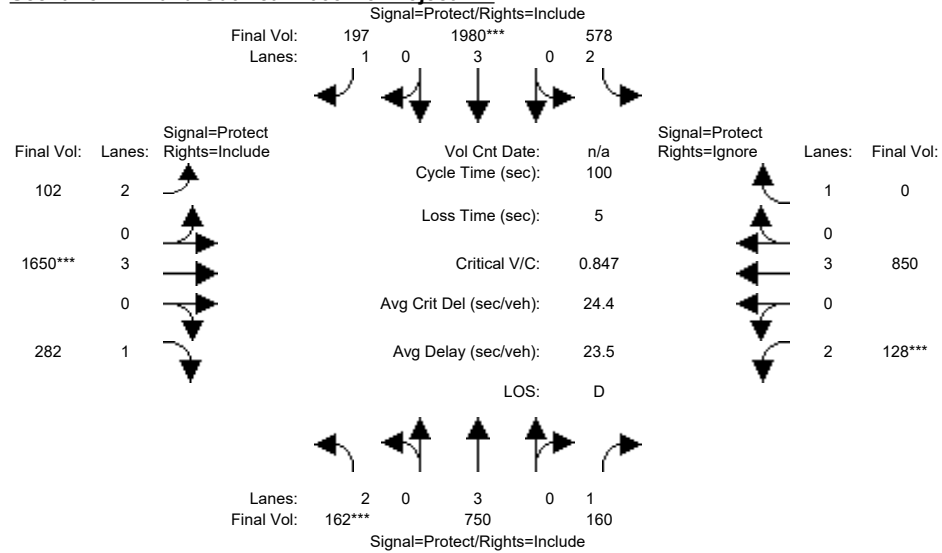
Summary Scenario Comparison Report (With Average Critical Delay)  
Future Volume Alternative

Intersection	Build Out Year 2035 No Project AM				Build Out Year 2035 Plus Project AM				Build Out Year 2035 No Project PM					Build Out Year 2035 Plus Project PM				
	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#1 Warner Av & Brookhurst St	D	23.5	0.847	24.4	D	23.7	0.851	24.6	D	24.4	0.852	+ 0.001	25.9	+ 1.4	D	24.7	0.861	26.5
#2 Warner Av & Euclid St	D	23.4	0.844	23.0	D	23.8	0.857	23.7	D	25.5	0.877	+ 0.021	28.7	+ 5.0	D	26.2	0.892	29.7
#3 Slater Av & Ward St	B	20.4	0.697	21.7	C	21.2	0.701	21.9	D	23.7	0.812	+ 0.112	22.0	+ 0.2	D	24.9	0.835	23.5
#4 Slater Av & Euclid St	C	24.5	0.787	22.2	C	24.6	0.797	22.4	E	38.2	0.988	+ 0.191	46.8	+ 24.4	E	39.7	0.997	49.2
#5 Slater Av & Newhope St	B	21.7	0.632	19.5	B	22.2	0.649	20.2	C	23.5	0.786	+ 0.136	25.5	+ 5.3	C	23.8	0.798	25.9
#6 Talbert Av & Bushard St	D	25.5	0.833	26.6	D	25.8	0.845	27.1	D	22.5	0.812	- 0.033	23.8	- 3.3	D	22.7	0.825	24.2
#7 Talbert Av & BrookhurstSt	D	23.3	0.814	27.9	D	23.4	0.819	28.0	C	22.6	0.775	- 0.044	25.3	- 2.7	C	22.7	0.775	25.3
#8 Talbert Av & Ward St	C	23.6	0.716	25.6	C	25.6	0.765	28.0	D	20.7	0.819	+ 0.053	17.9	- 10.0	D	23.5	0.842	19.7
#9 Talbert Av & Hyundai Way	B	9.2	0.605	11.9	B	9.0	0.609	11.8	B	4.4	0.681	+ 0.072	4.3	- 7.5	B	4.3	0.685	4.4
#10 Talbert Av & Euclid St	C	23.8	0.722	24.0	C	24.0	0.734	24.2	D	23.7	0.841	+ 0.108	24.8	+ 0.6	D	24.0	0.852	25.3
#11 Talbert Av & Newhope St	D	23.2	0.838	24.4	D	24.9	0.869	26.8	D	23.0	0.835	- 0.035	21.3	- 5.4	D	24.5	0.860	23.1
#12 Talbert Av & Condor Av	C	95548.2	0.792	51.5	D	98324.5	0.807	54.8	D	106547.3	0.884	+ 0.076	72.6	+ 17.7	E	918.9	0.904	45.4
#13 MacArthur Bl & Harbor Bl	E	27.9	0.939	32.4	E	28.0	0.939	32.4	E	30.8	0.957	+ 0.018	34.1	+ 1.8	E	32.6	0.975	37.2
#14 MacArthur Bl & Fairview St	C	22.9	0.764	23.5	C	22.9	0.769	23.7	D	24.3	0.853	+ 0.084	26.1	+ 2.5	D	24.7	0.865	26.9
#16 Euclid St & Condor Av	A	3.1	0.423	2.6	A	4.7	0.532	4.1	B	13.3	0.678	+ 0.146	13.6	+ 9.5	C	16.7	0.745	16.8
#17 Ellis Av & Brookhurst St	C	22.4	0.739	23.8	C	23.1	0.761	24.7	C	25.0	0.787	+ 0.026	25.6	+ 1.0	D	25.7	0.804	26.2
#18 Ellis Av & Ward St	D	24.5	0.842	26.4	E	28.2	0.901	32.2	B	20.3	0.693	- 0.208	25.9	- 6.3	C	22.3	0.727	26.8
#20 Brookhurst St & Garfield Av	B	22.3	0.669	21.5	B	22.4	0.677	21.5	C	22.5	0.701	+ 0.024	25.3	+ 3.8	C	22.5	0.709	25.3

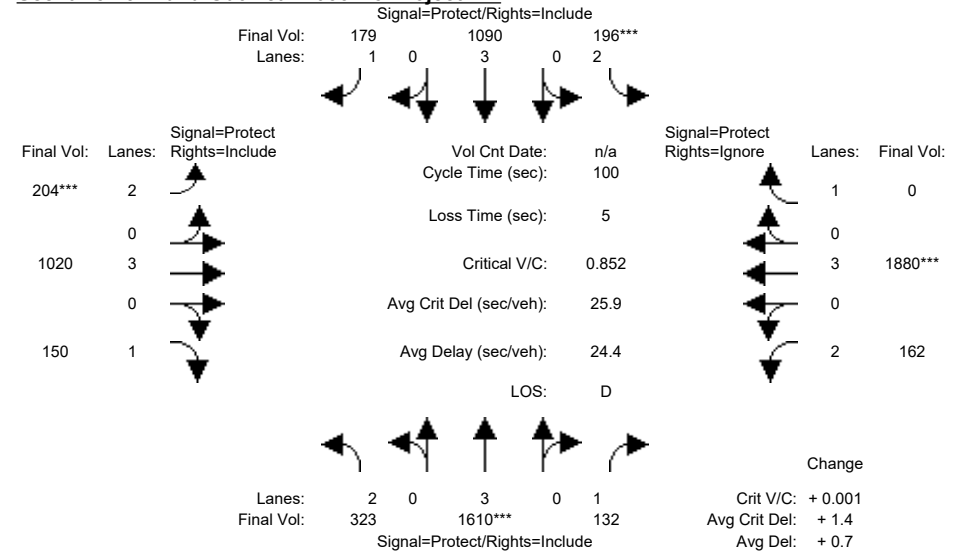
Detailed Scenario Comparison Report  
 ICU 1 (Loss as Cycle Length %) (Future Volume Alternative)

Intersection #1: Warner Av & Brookhurst St

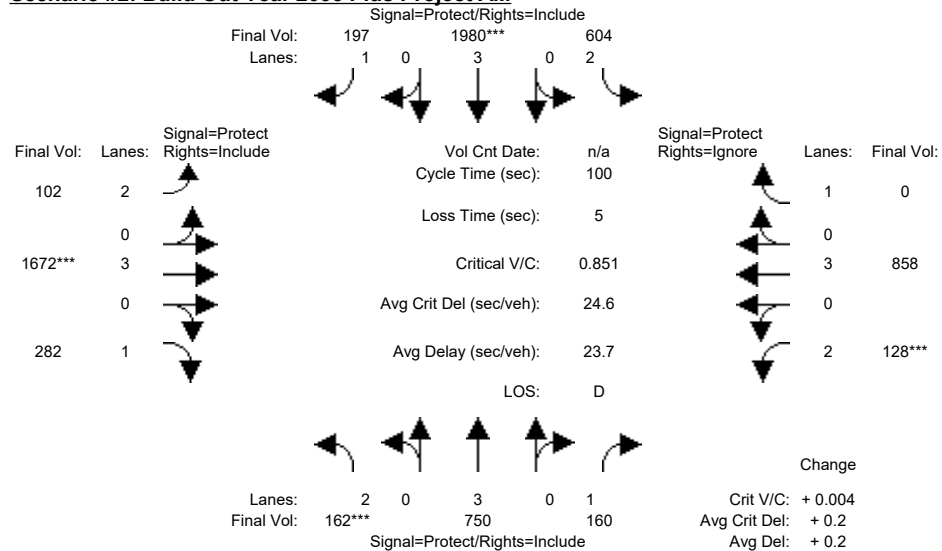
**Scenario #1: Build Out Year 2035 No Project AM**



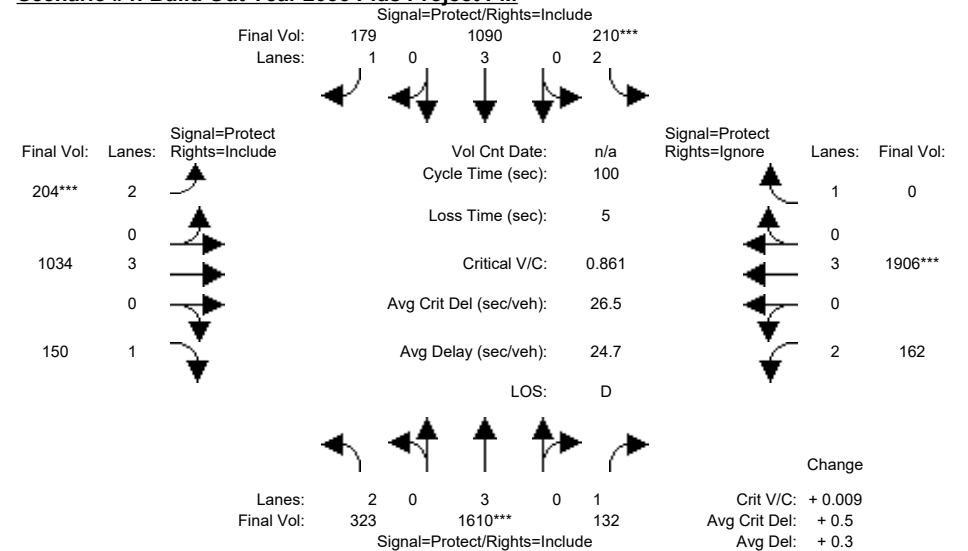
**Scenario #3: Build Out Year 2035 No Project PM**



**Scenario #2: Build Out Year 2035 Plus Project AM**



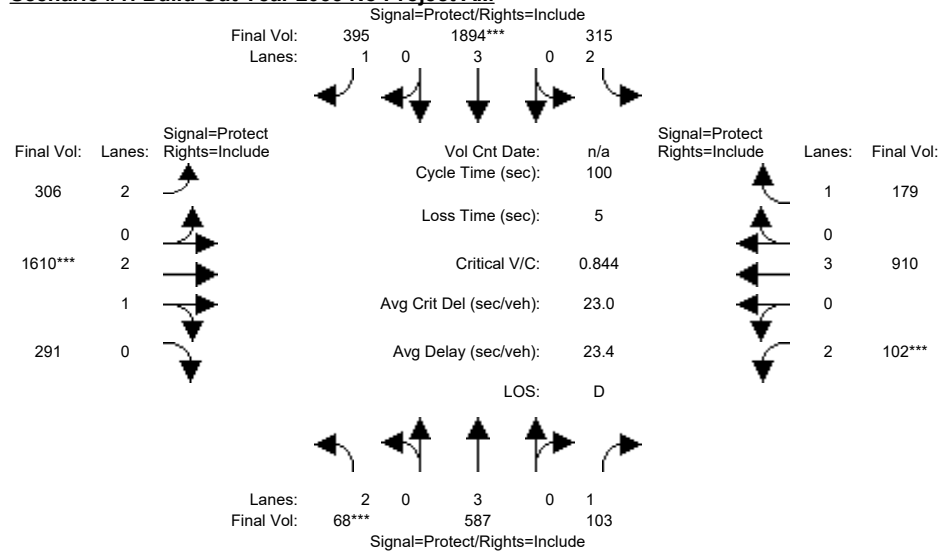
**Scenario #4: Build Out Year 2035 Plus Project PM**



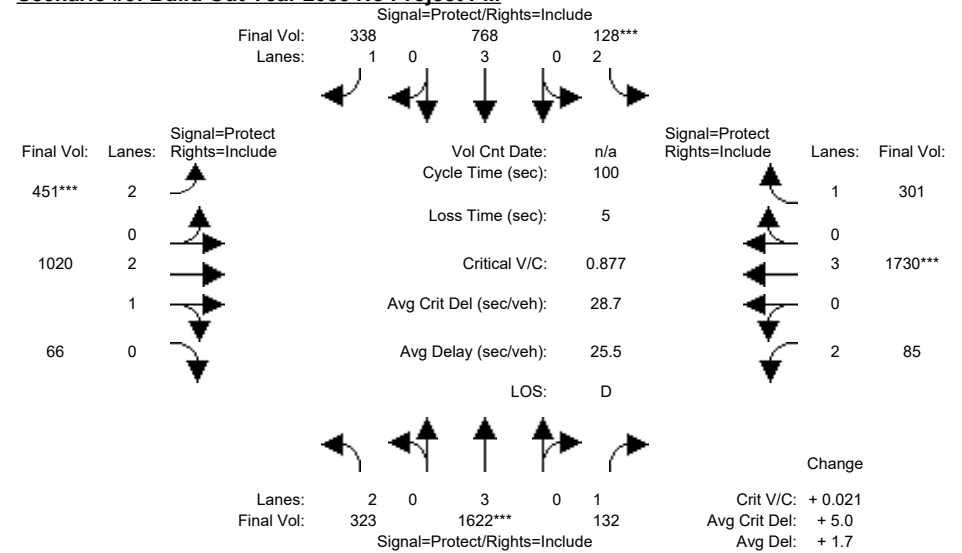
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #2: Warner Av & Euclid St

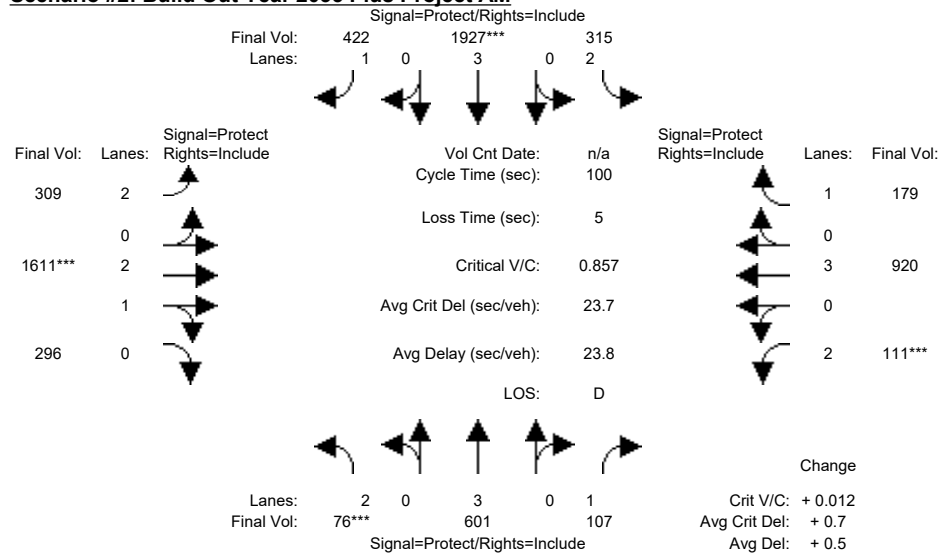
**Scenario #1: Build Out Year 2035 No Project AM**



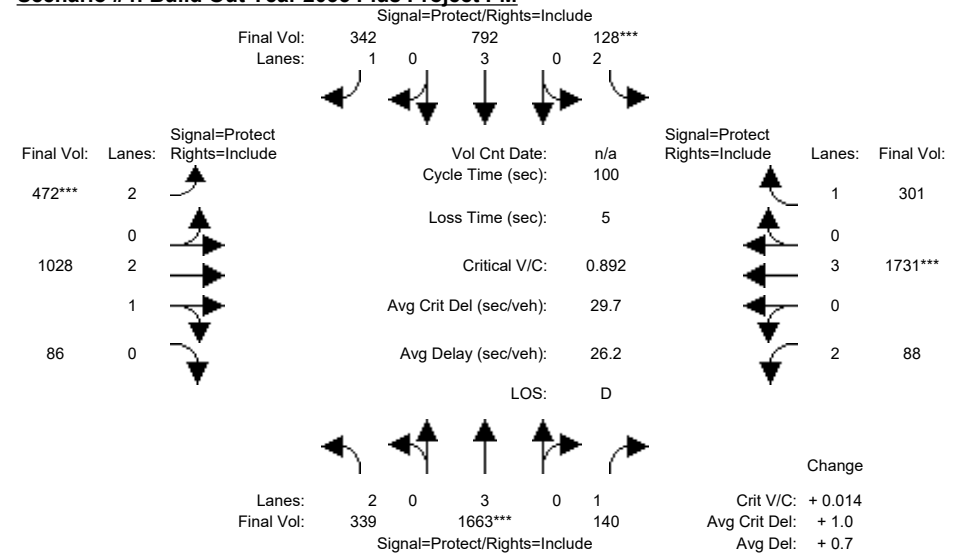
**Scenario #3: Build Out Year 2035 No Project PM**



**Scenario #2: Build Out Year 2035 Plus Project AM**



**Scenario #4: Build Out Year 2035 Plus Project PM**





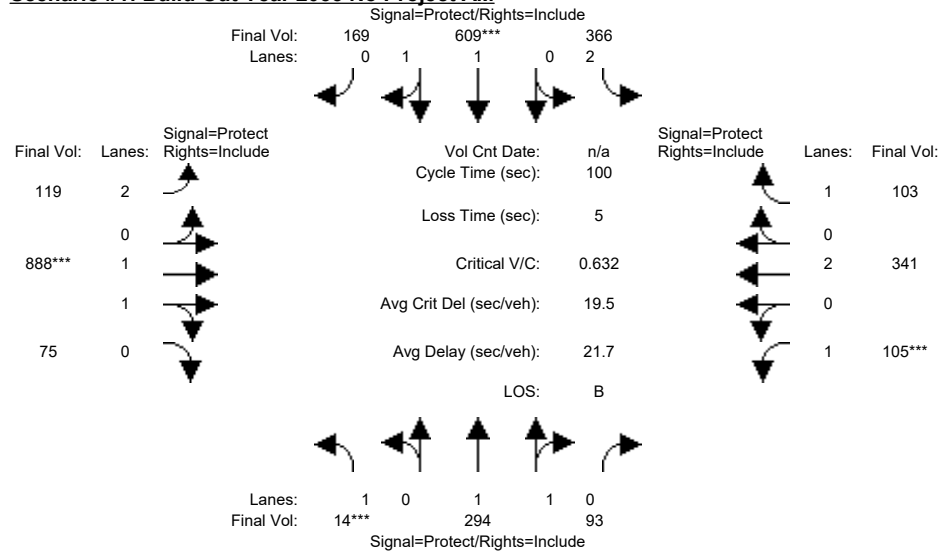




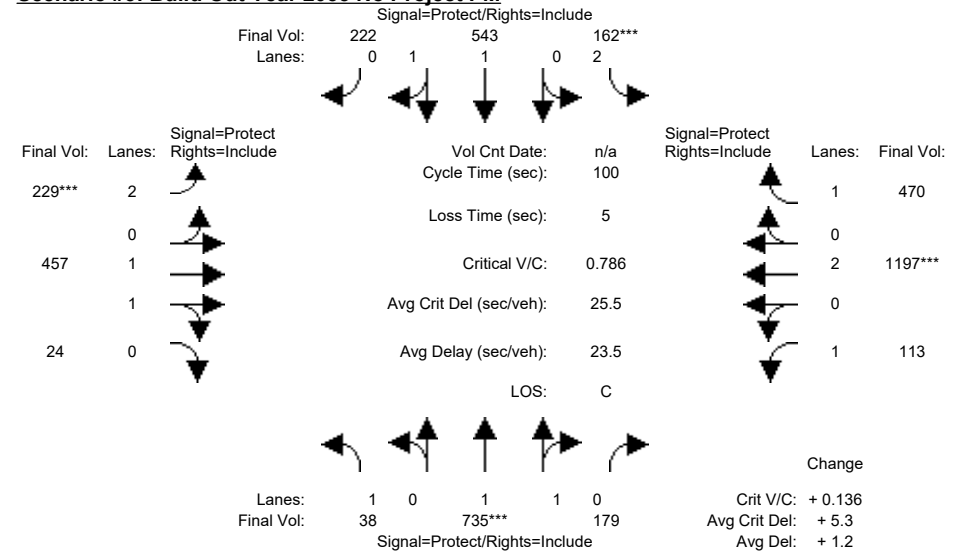
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #5: Slater Av & Newhope St

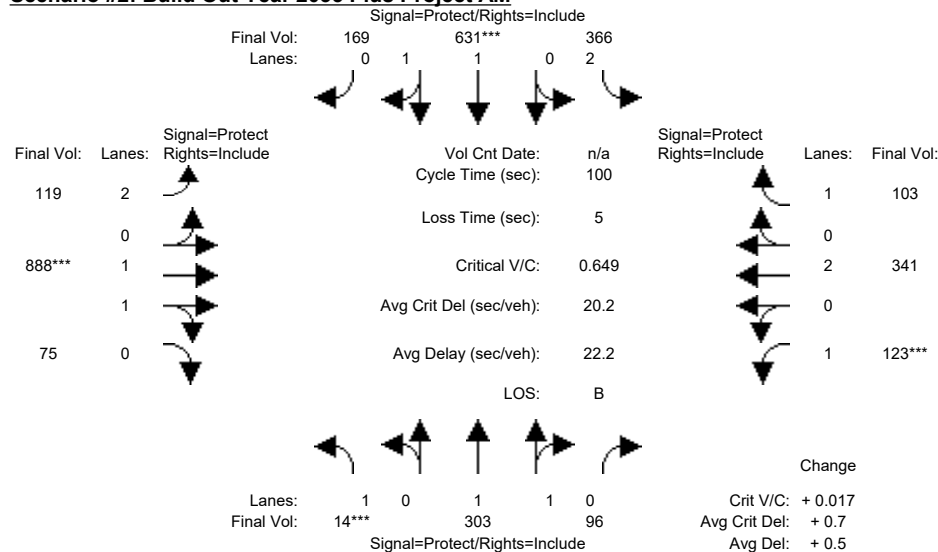
Scenario #1: Build Out Year 2035 No Project AM



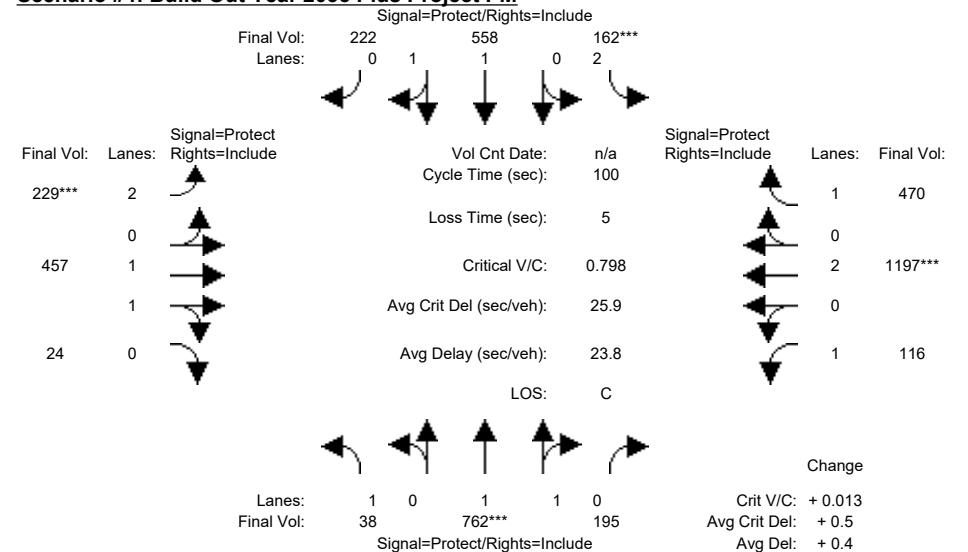
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



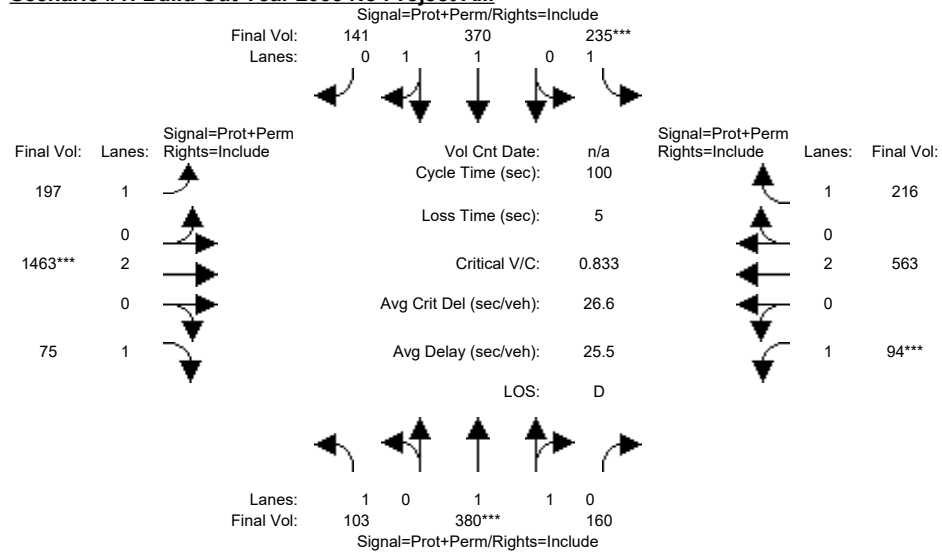
Scenario #4: Build Out Year 2035 Plus Project PM



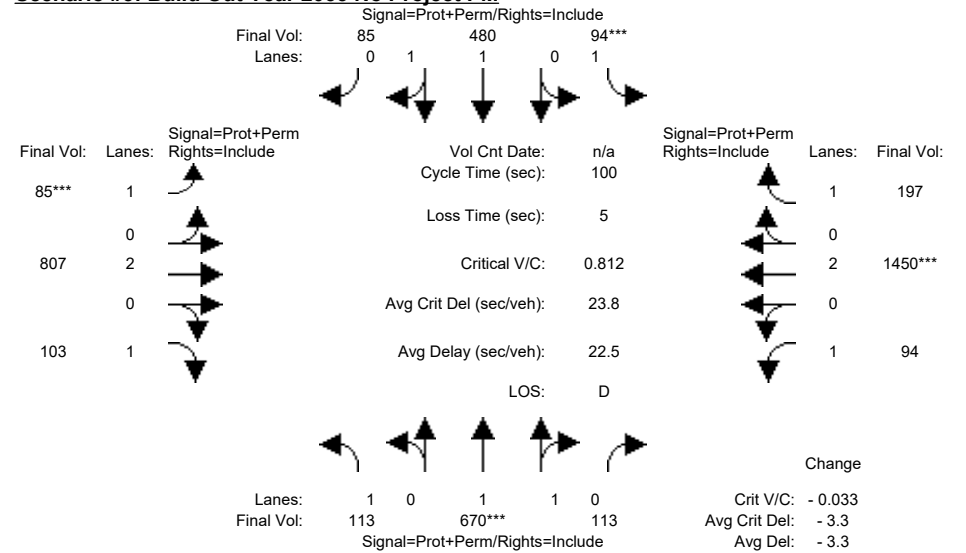
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #6: Talbert Av & Bushard St

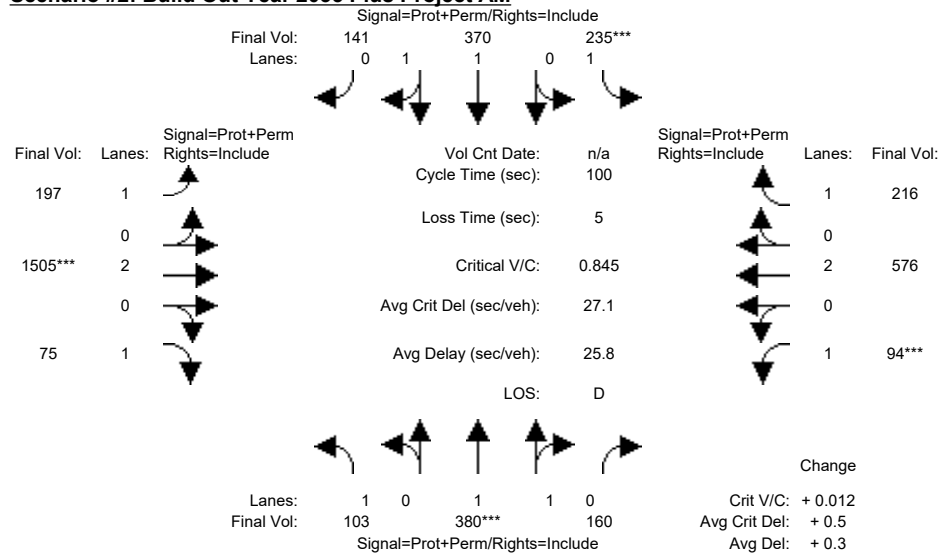
Scenario #1: Build Out Year 2035 No Project AM



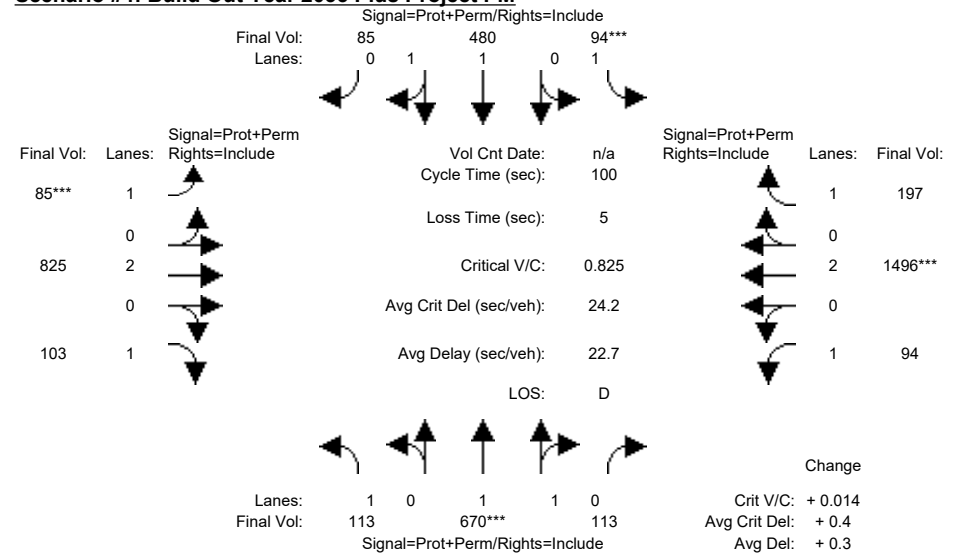
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



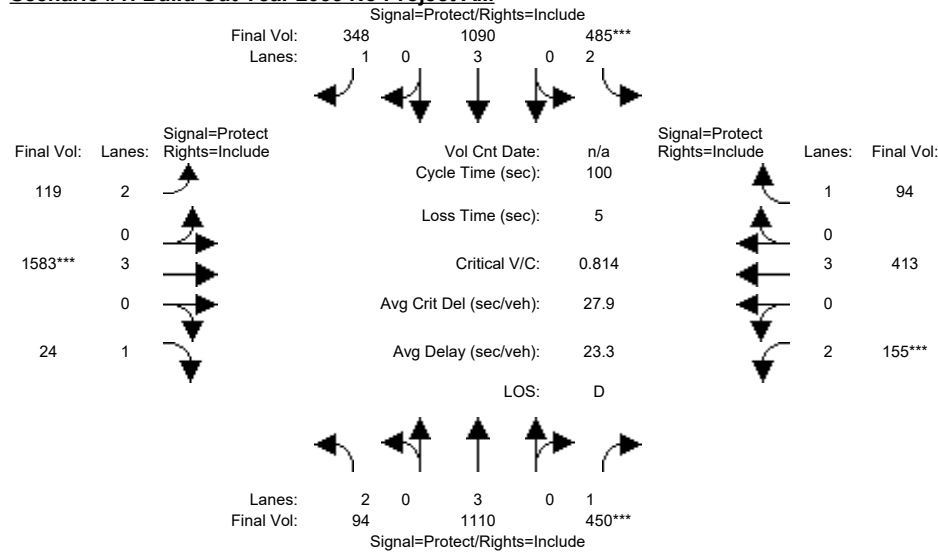
Scenario #4: Build Out Year 2035 Plus Project PM



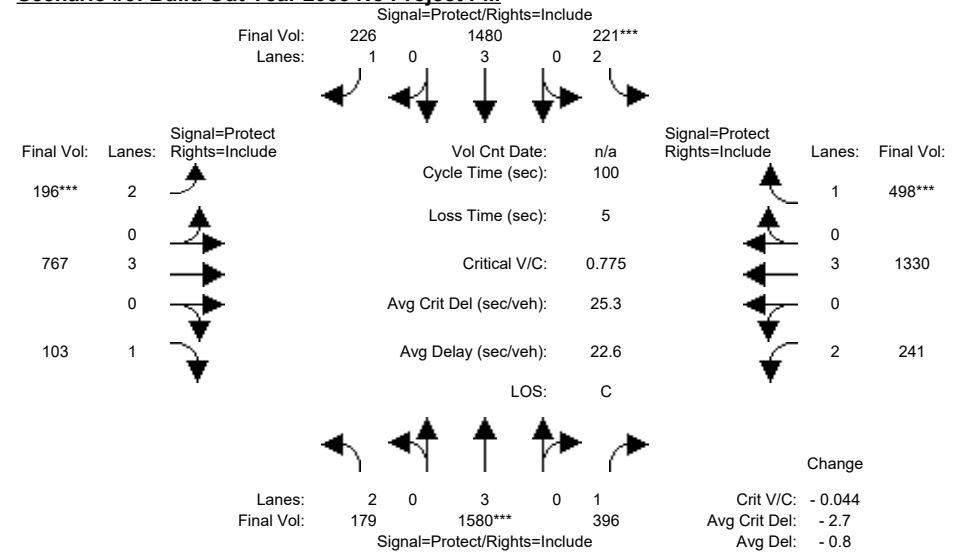
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #7: Talbert Av & BrookhurstSt

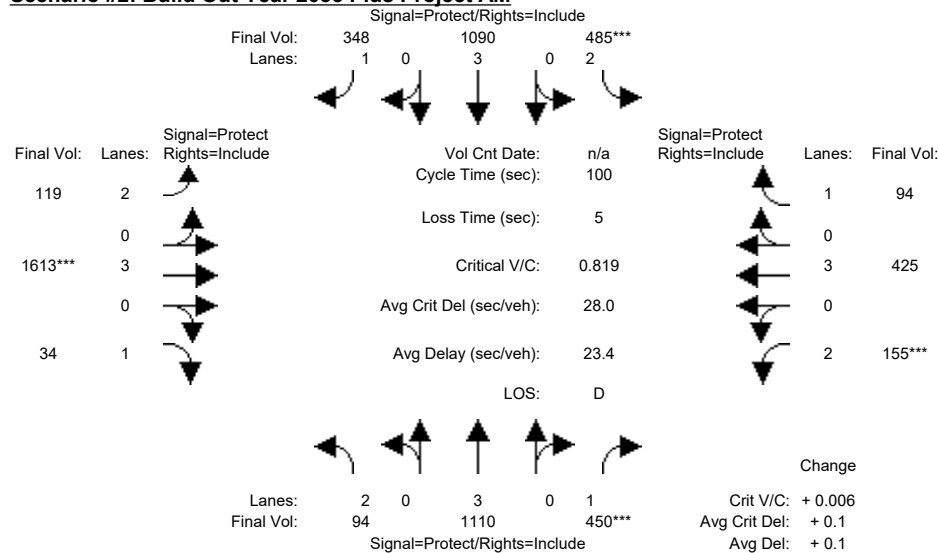
**Scenario #1: Build Out Year 2035 No Project AM**



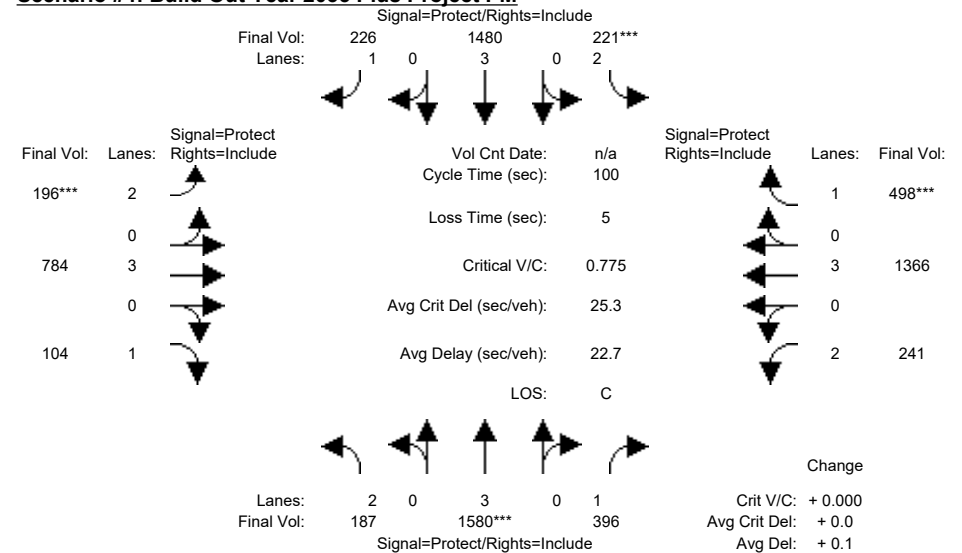
**Scenario #3: Build Out Year 2035 No Project PM**



**Scenario #2: Build Out Year 2035 Plus Project AM**



**Scenario #4: Build Out Year 2035 Plus Project PM**



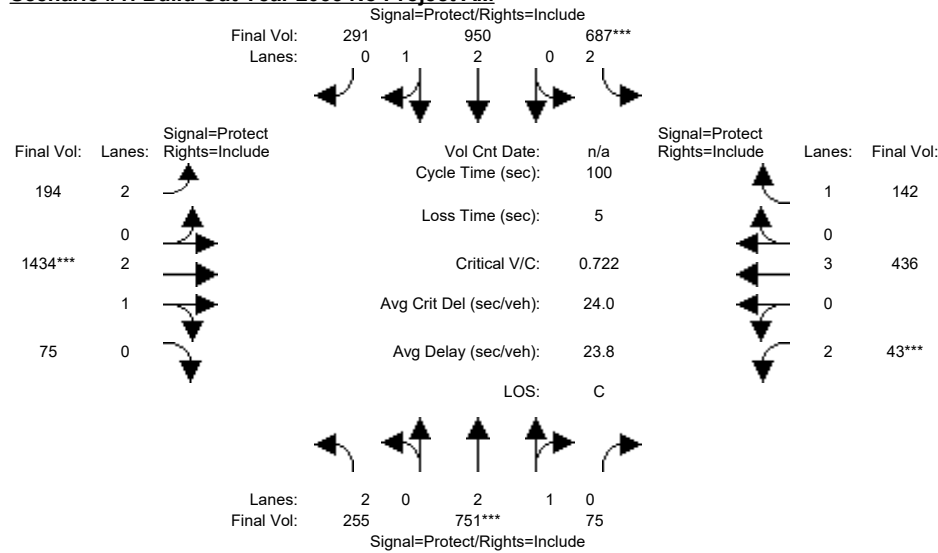




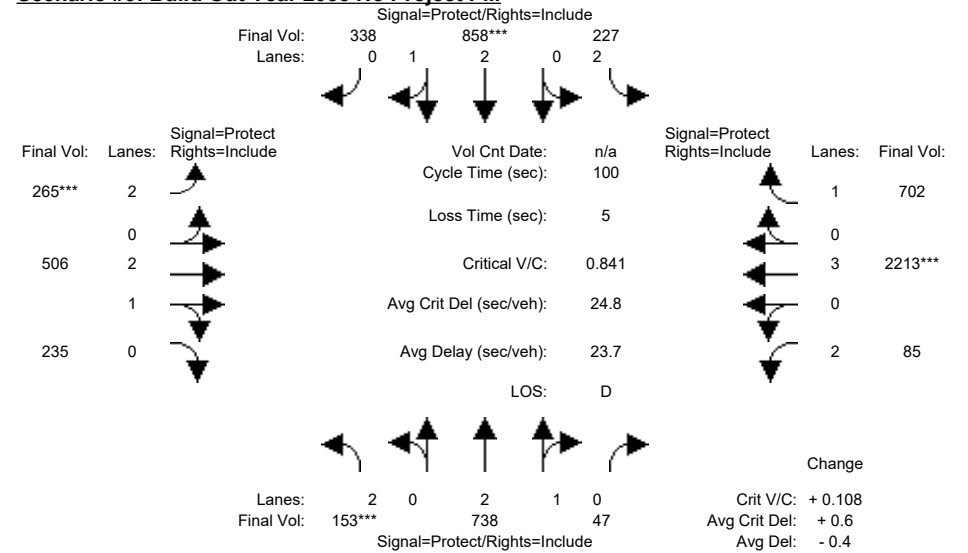
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #10: Talbert Av & Euclid St

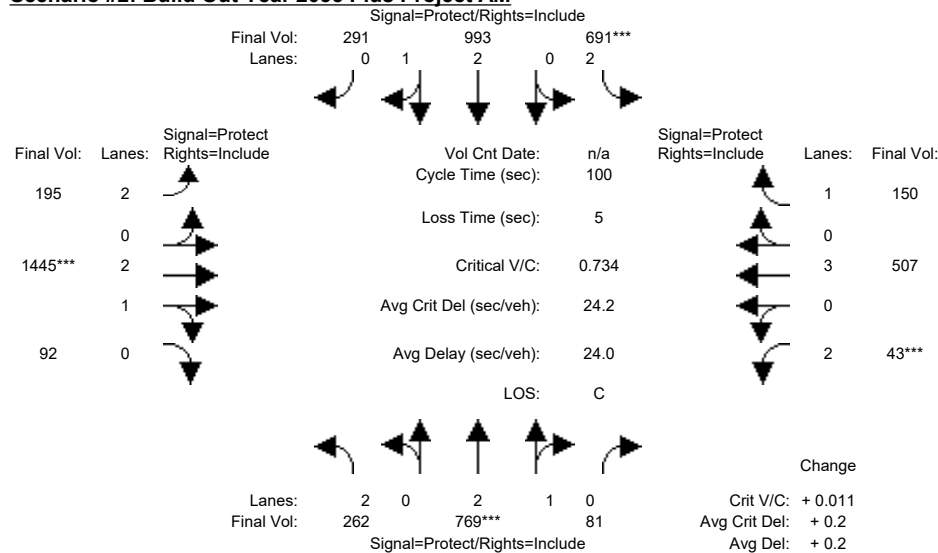
Scenario #1: Build Out Year 2035 No Project AM



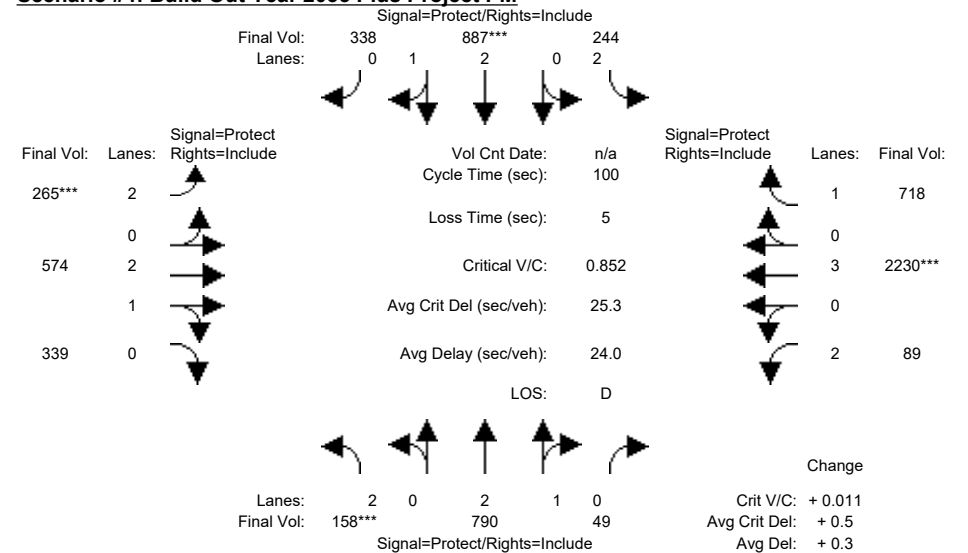
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



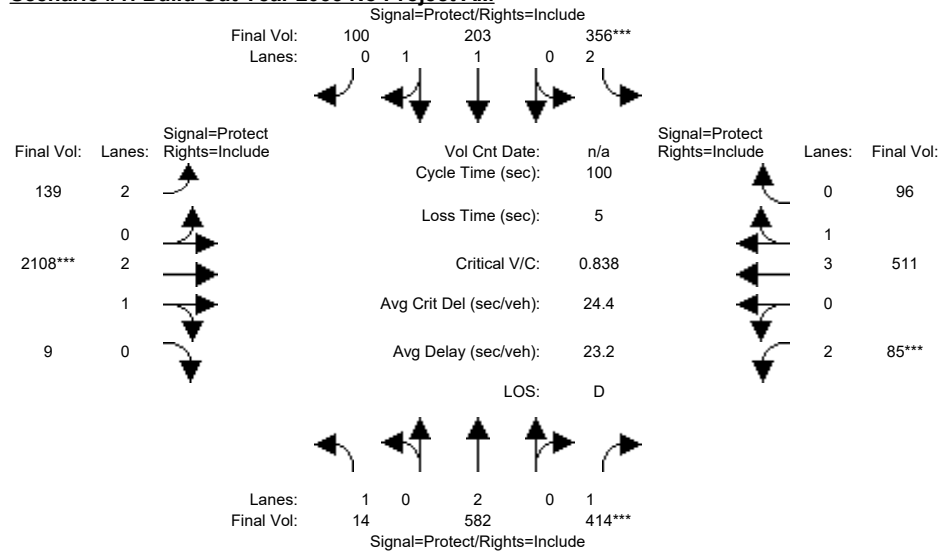
Scenario #4: Build Out Year 2035 Plus Project PM



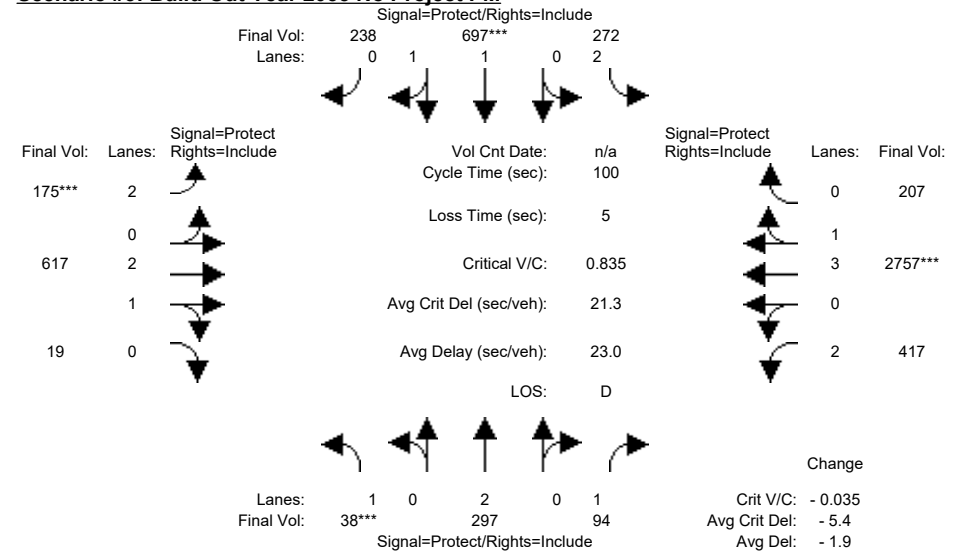
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #11: Talbert Av & Newhope St

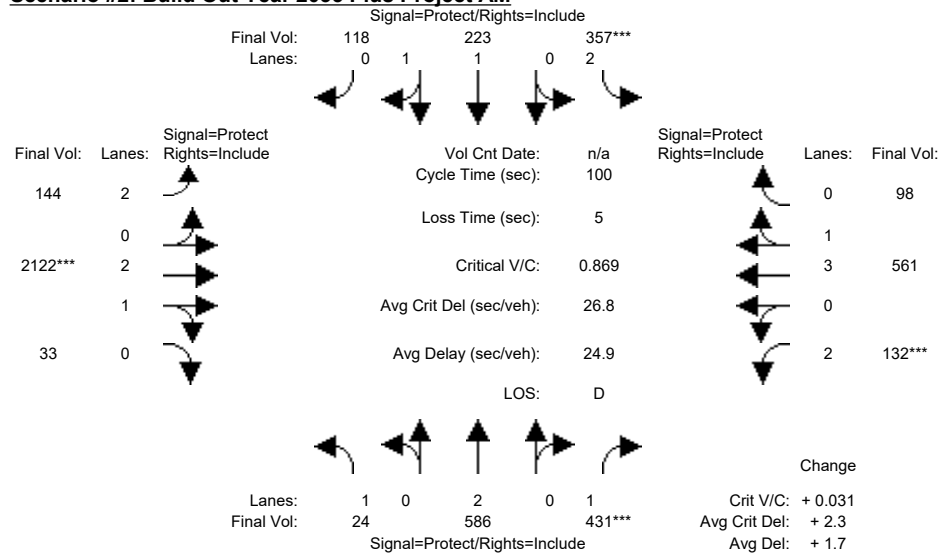
Scenario #1: Build Out Year 2035 No Project AM



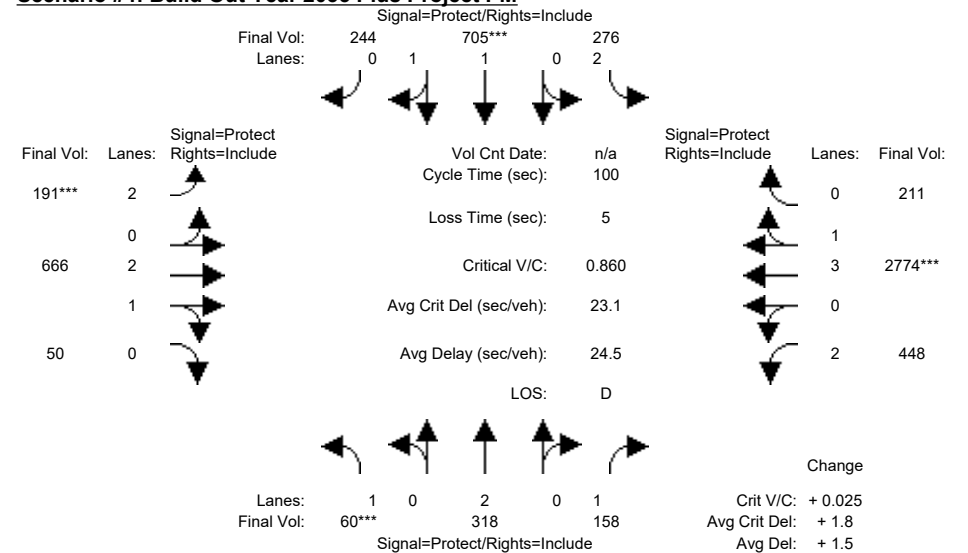
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



Scenario #4: Build Out Year 2035 Plus Project PM

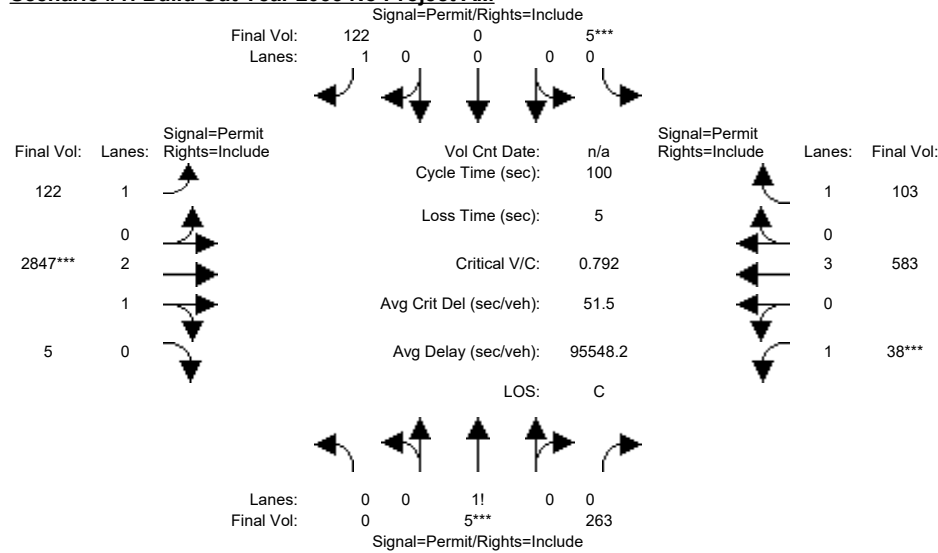




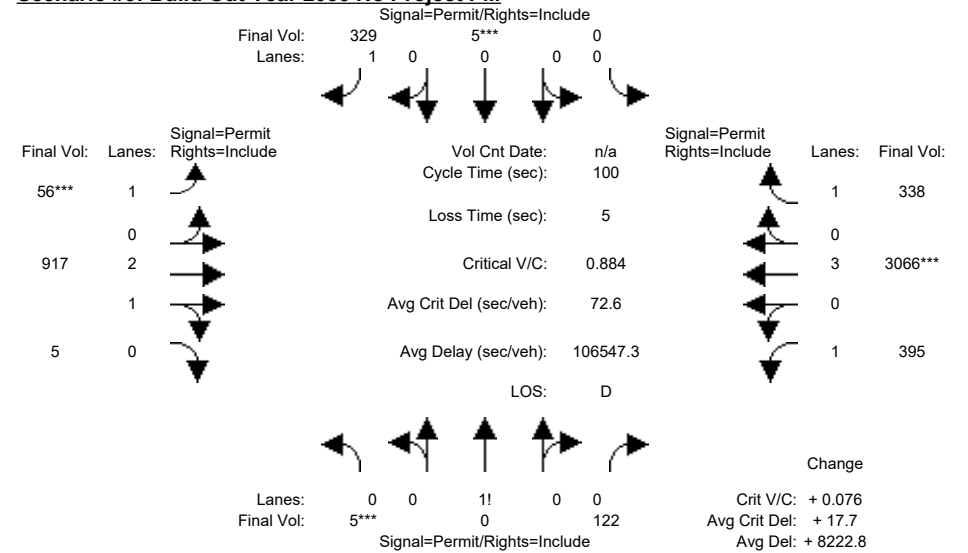
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #12: Talbert Av & Condor Av

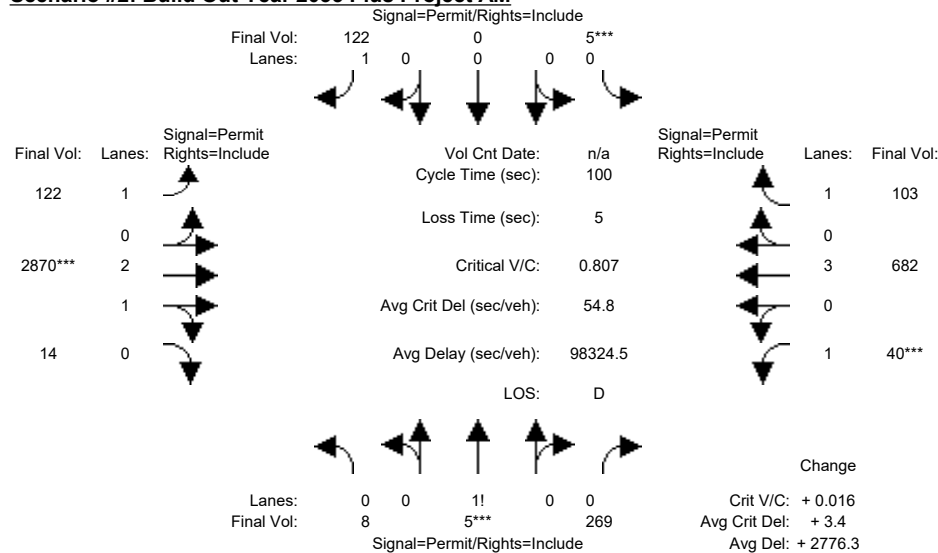
Scenario #1: Build Out Year 2035 No Project AM



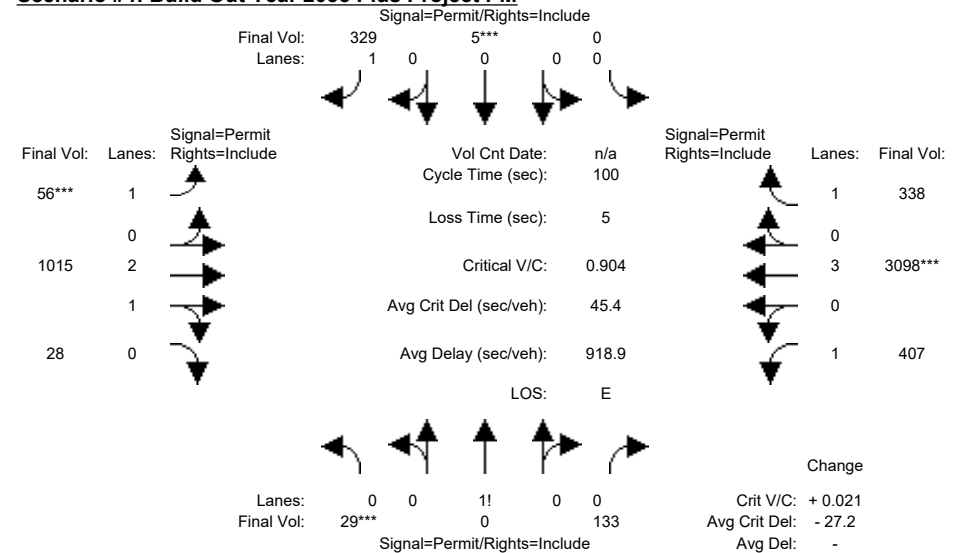
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



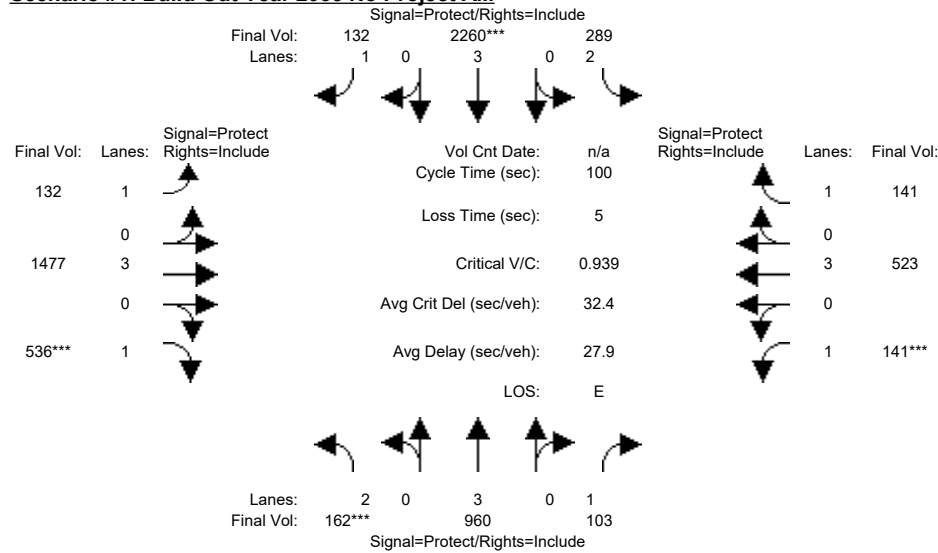
Scenario #4: Build Out Year 2035 Plus Project PM



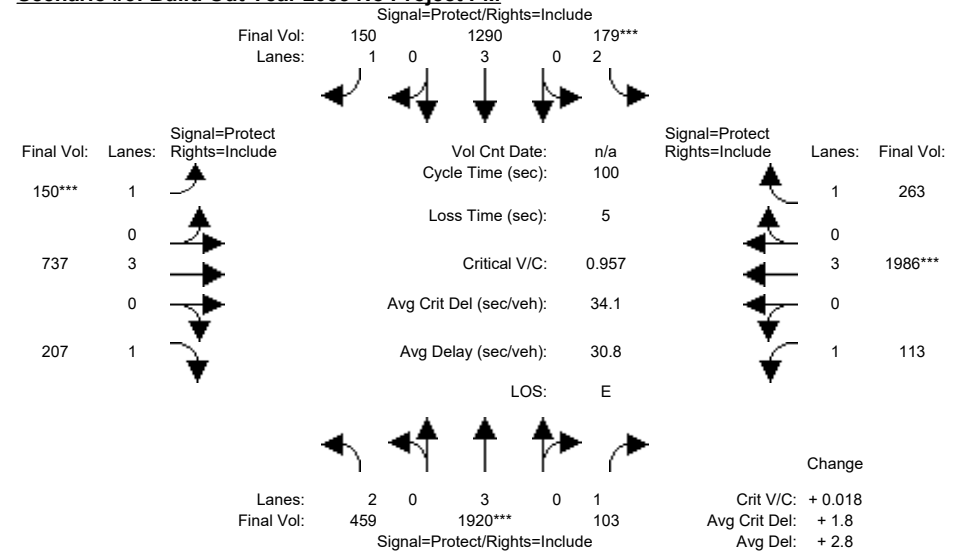
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #13: MacArthur Bl & Harbor Bl

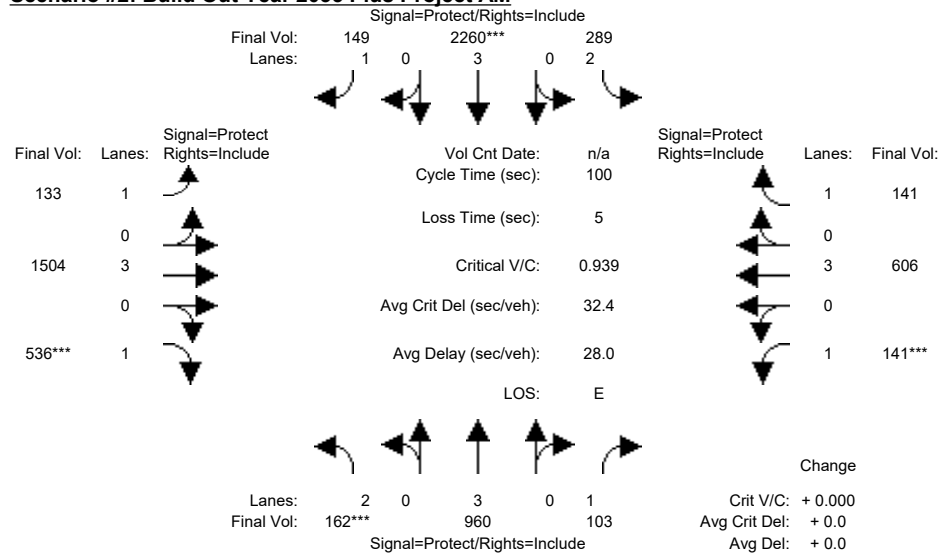
Scenario #1: Build Out Year 2035 No Project AM



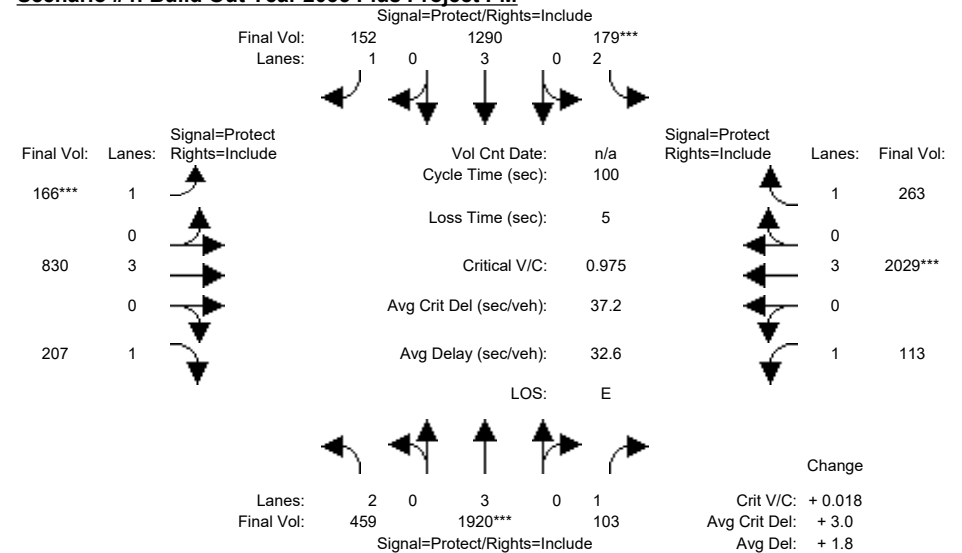
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



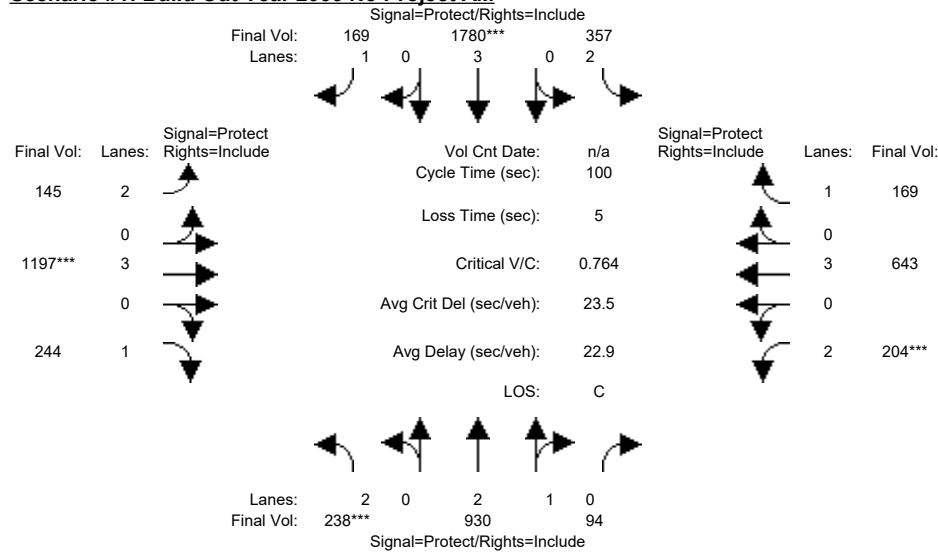
Scenario #4: Build Out Year 2035 Plus Project PM



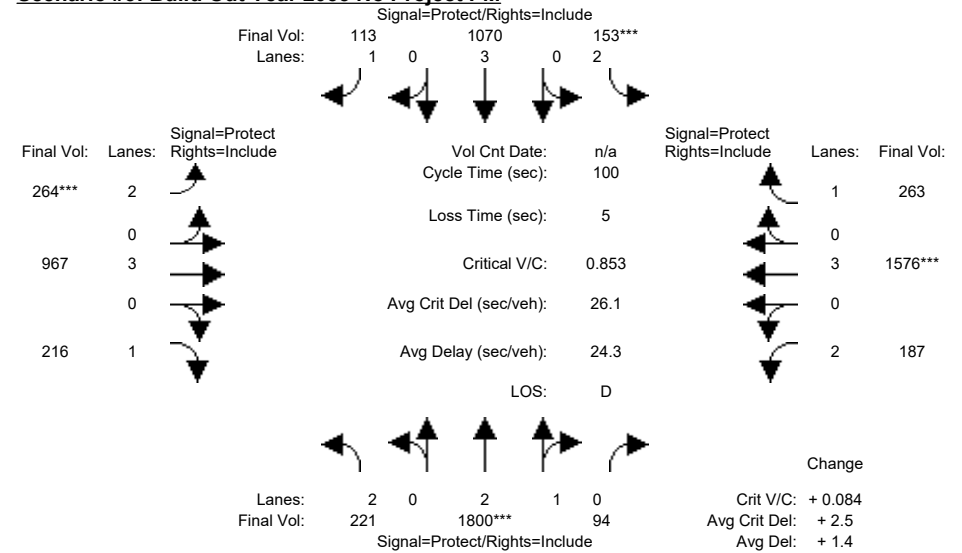
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #14: MacArthur Bl & Fairview St

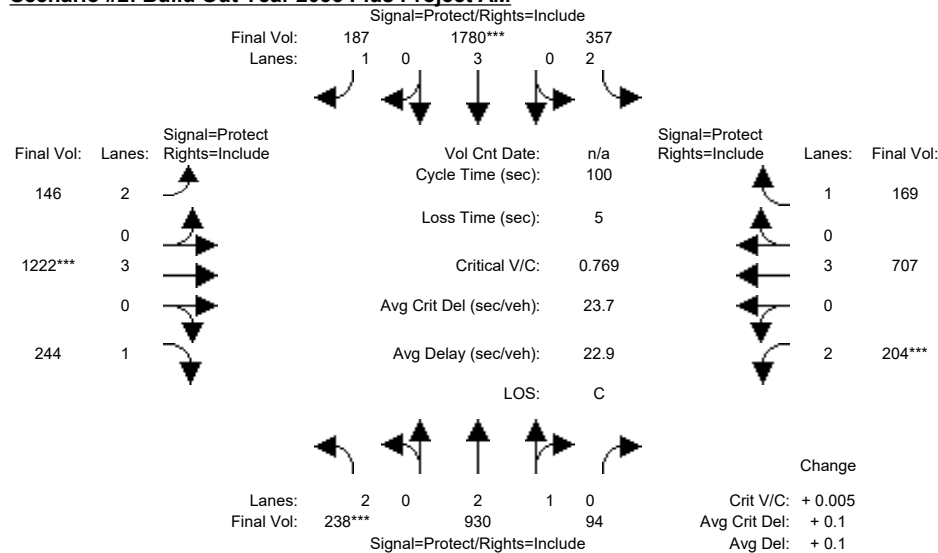
Scenario #1: Build Out Year 2035 No Project AM



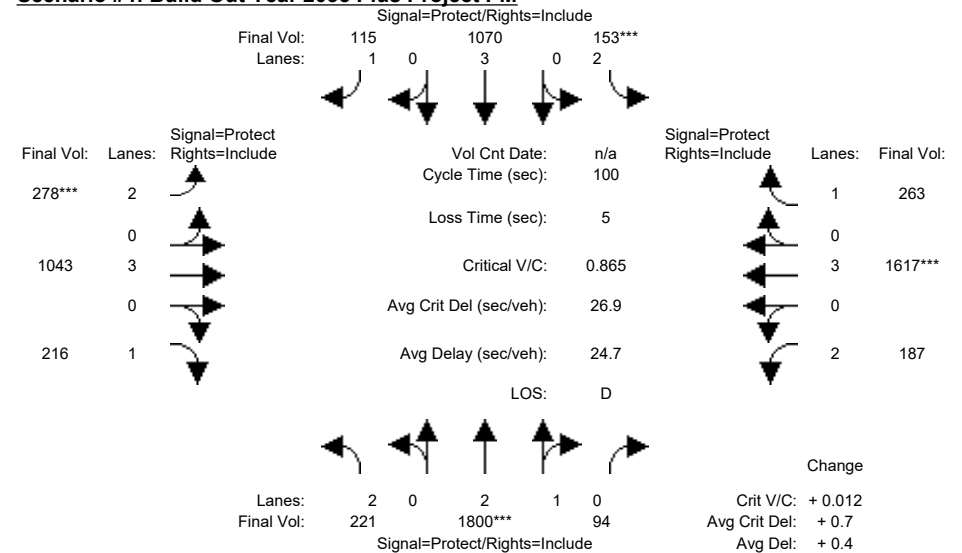
Scenario #3: Build Out Year 2035 No Project PM



Scenario #2: Build Out Year 2035 Plus Project AM



Scenario #4: Build Out Year 2035 Plus Project PM

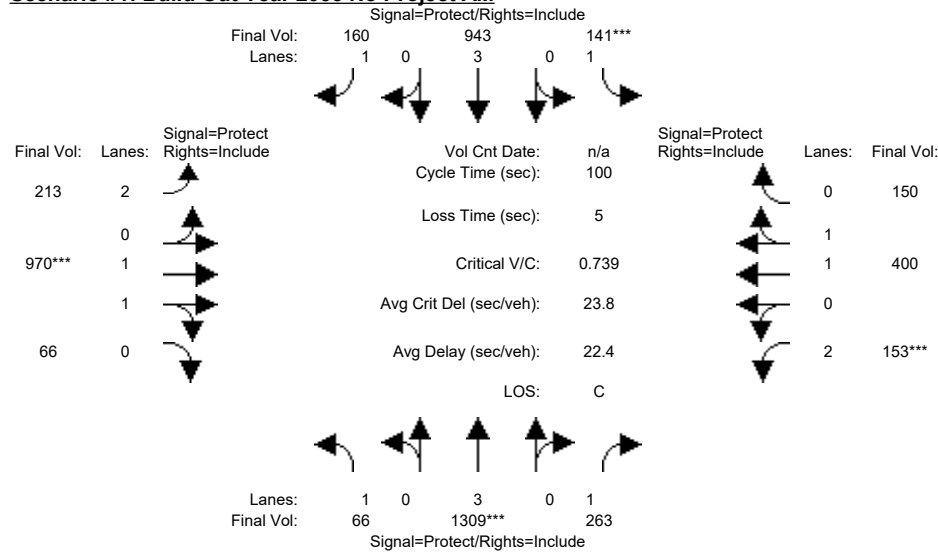




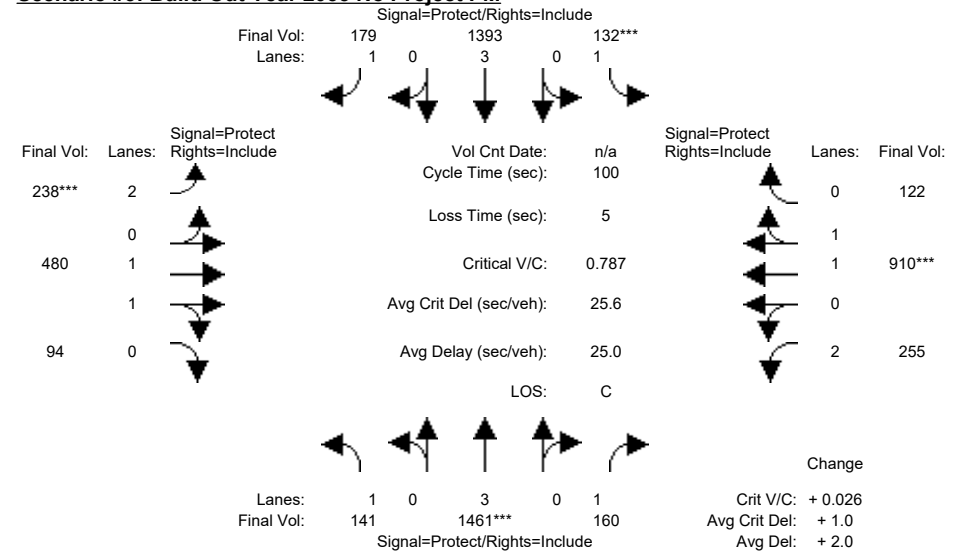
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #17: Ellis Av & Brookhurst St

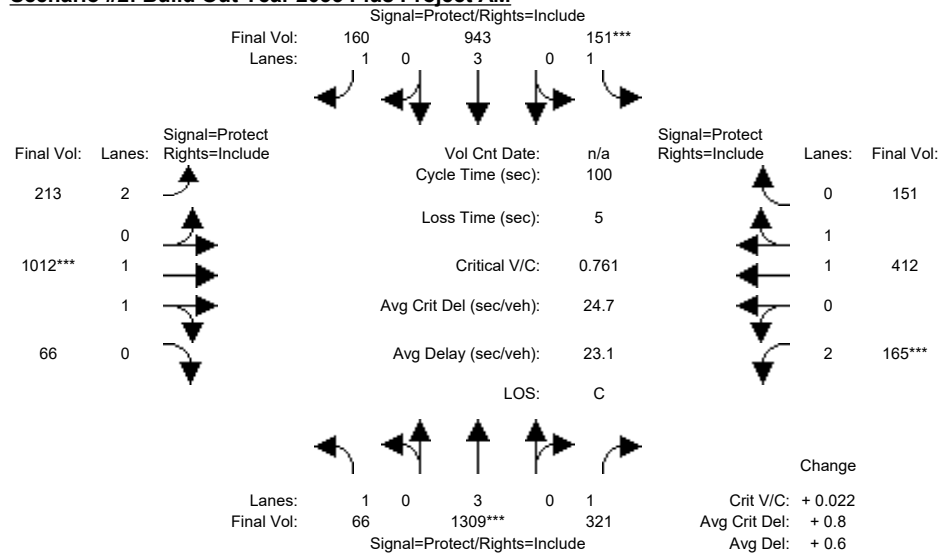
**Scenario #1: Build Out Year 2035 No Project AM**



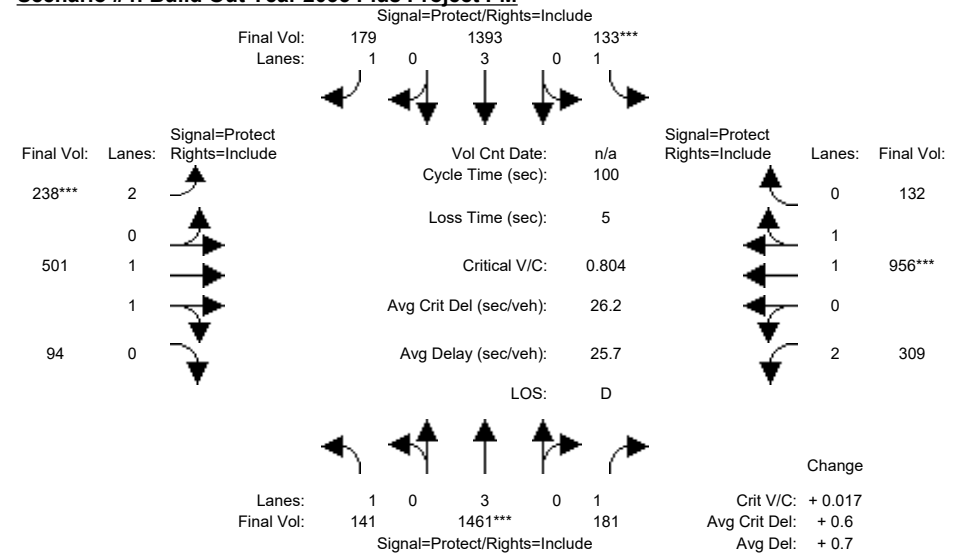
**Scenario #3: Build Out Year 2035 No Project PM**



**Scenario #2: Build Out Year 2035 Plus Project AM**



**Scenario #4: Build Out Year 2035 Plus Project PM**

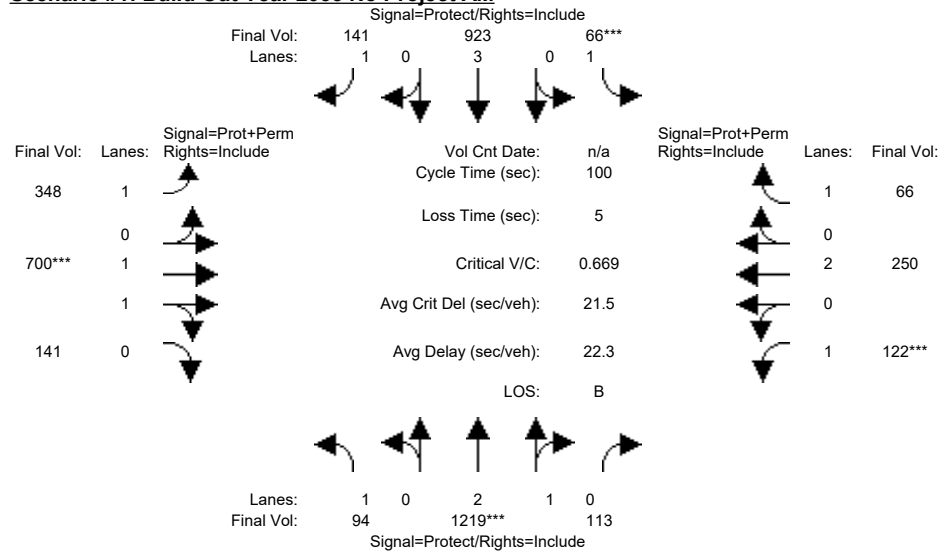




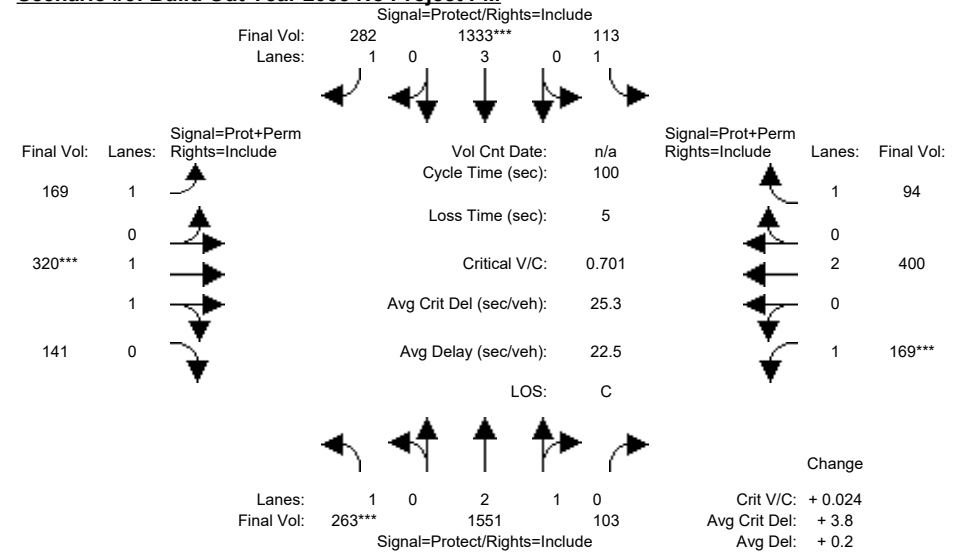
Detailed Scenario Comparison Report  
ICU 1(Loss as Cycle Length %) (Future Volume Alternative)

Intersection #20: Brookhurst St & Garfield Av

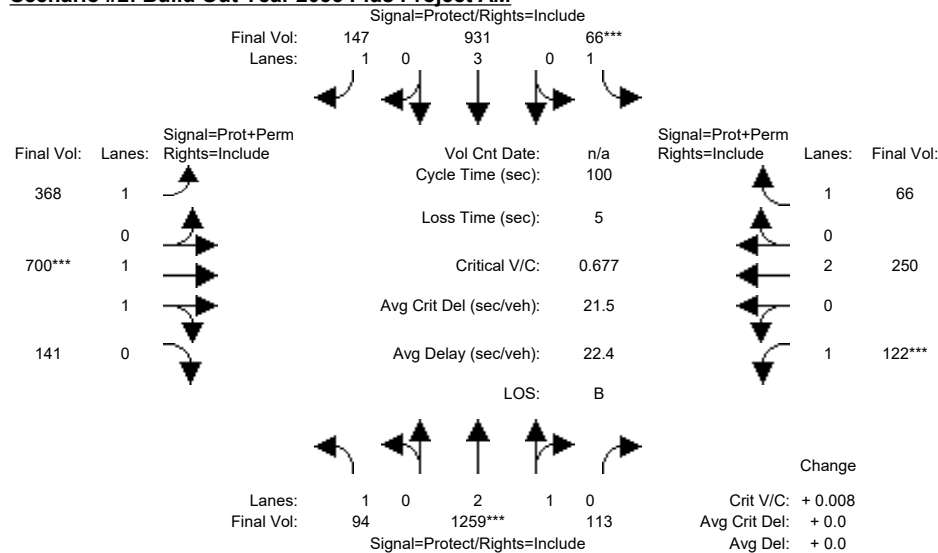
**Scenario #1: Build Out Year 2035 No Project AM**



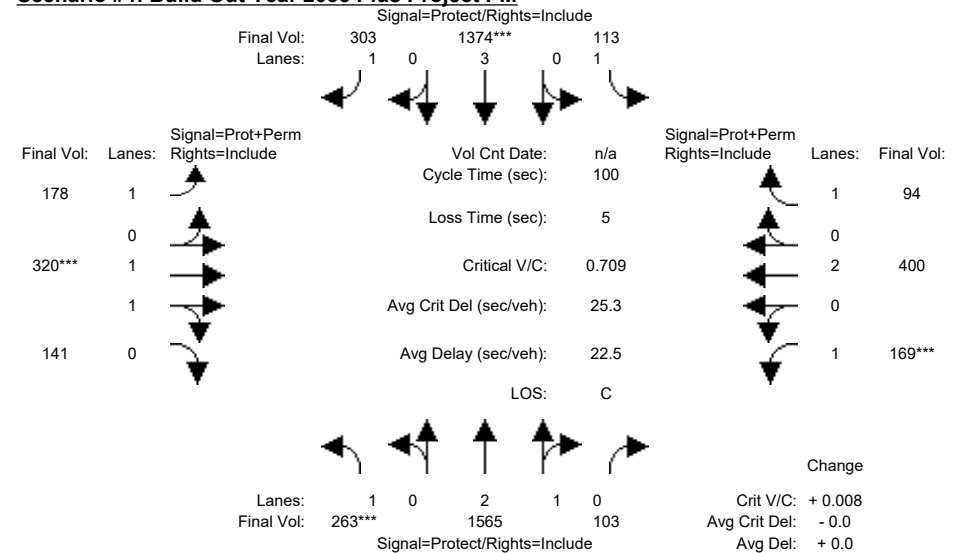
**Scenario #3: Build Out Year 2035 No Project PM**



**Scenario #2: Build Out Year 2035 Plus Project AM**
























**Scenario #4: Build Out Year 2035 Plus Project PM**



HCM 2010 Signalized Intersection Summary  
 15: Euclid St & I-405 NB Ramps/Newhope St






















Buildout (2035) Conditions  
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	666	402	610	215	58	15	25	455	641	0	958	82
Future Volume (veh/h)	666	402	610	215	58	15	25	455	641	0	958	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	0	1863	1863
Adj Flow Rate, veh/h	701	564	259	226	61	0	26	479	443	0	1008	46
Adj No. of Lanes	2	2	1	2	2	0	2	3	0	0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	809	841	358	305	306	0	94	1722	804	0	2392	678
Arrive On Green	0.23	0.23	0.23	0.09	0.09	0.00	0.03	0.51	0.51	0.00	0.43	0.43
Sat Flow, veh/h	3548	3725	1583	3442	3632	0	3442	3390	1583	0	5588	1583
Grp Volume(v), veh/h	701	564	259	226	61	0	26	479	443	0	1008	46
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	0	1721	1695	1583	0	1863	1583
Q Serve(g_s), s	15.2	11.0	12.1	5.1	1.3	0.0	0.6	6.5	15.3	0.0	10.1	1.4
Cycle Q Clear(g_c), s	15.2	11.0	12.1	5.1	1.3	0.0	0.6	6.5	15.3	0.0	10.1	1.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	809	841	358	305	306	0	94	1722	804	0	2392	678
V/C Ratio(X)	0.87	0.67	0.72	0.74	0.20	0.00	0.28	0.28	0.55	0.00	0.42	0.07
Avail Cap(c_a), veh/h	1064	1397	594	323	597	0	215	1722	804	0	2392	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.00	0.97	0.97	0.97	0.00	0.66	0.66
Uniform Delay (d), s/veh	29.7	28.3	28.7	35.6	34.0	0.0	38.1	11.3	13.4	0.0	16.0	13.5
Incr Delay (d2), s/veh	5.0	0.7	2.1	7.0	0.1	0.0	0.6	0.4	2.6	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	5.7	5.5	2.7	0.6	0.0	0.3	3.1	7.2	0.0	5.2	0.6
LnGrp Delay(d),s/veh	34.7	28.9	30.8	42.6	34.1	0.0	38.7	11.7	16.1	0.0	16.3	13.6
LnGrp LOS	C	C	C	D	C		D	B	B		B	B
Approach Vol, veh/h		1524			287			948			1054	
Approach Delay, s/veh		31.9			40.8			14.5			16.2	
Approach LOS		C			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		45.6	11.8	22.6	6.4	39.2	22.9	11.4				
Change Period (Y+Rc), s		5.0	* 4.7	4.5	* 4.2	5.0	* 4.7	4.5				
Max Green Setting (Gmax), s		28.3	* 7.5	30.0	* 5	19.1	* 24	13.5				
Max Q Clear Time (g_c+I1), s		17.3	7.1	14.1	2.6	12.1	17.2	3.3				
Green Ext Time (p_c), s		9.7	0.0	4.0	0.0	6.4	1.0	3.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.9									
HCM 2010 LOS			C									
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 19: Ellis Av/Euclid St & I405 SB Ramps

Buildout (2035) Conditions  
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1110	70	40	830	843	5	50	15	306	5	30
Future Volume (veh/h)	0	1110	70	40	830	843	5	50	15	306	5	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	1168	72	42	874	616	5	53	1	326	0	1
Adj No. of Lanes	0	2	0	1	2	1	0	1	1	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1933	119	67	2340	1047	7	77	72	428	0	191
Arrive On Green	0.00	0.57	0.57	0.04	0.66	0.66	0.05	0.05	0.05	0.12	0.00	0.12
Sat Flow, veh/h	0	3480	209	1774	3539	1583	160	1695	1583	3548	0	1583
Grp Volume(v), veh/h	0	610	630	42	874	616	58	0	1	326	0	1
Grp Sat Flow(s),veh/h/ln	0	1770	1826	1774	1770	1583	1855	0	1583	1774	0	1583
Q Serve(g_s), s	0.0	18.1	18.1	1.9	8.9	17.3	2.5	0.0	0.0	7.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.1	18.1	1.9	8.9	17.3	2.5	0.0	0.0	7.1	0.0	0.0
Prop In Lane	0.00		0.11	1.00		1.00	0.09		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1010	1042	67	2340	1047	85	0	72	428	0	191
V/C Ratio(X)	0.00	0.60	0.60	0.62	0.37	0.59	0.68	0.00	0.01	0.76	0.00	0.01
Avail Cap(c_a), veh/h	0	1010	1042	113	2340	1047	118	0	101	976	0	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.2	11.3	37.9	6.1	7.5	37.6	0.0	36.5	34.1	0.0	31.0
Incr Delay (d2), s/veh	0.0	2.7	2.6	3.3	0.4	2.3	3.6	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.4	9.9	1.0	4.4	8.0	1.3	0.0	0.0	3.5	0.0	0.0
LnGrp Delay(d),s/veh	0.0	13.9	13.9	41.2	6.5	9.8	41.2	0.0	36.5	35.1	0.0	31.0
LnGrp LOS		B	B	D	A	A	D		D	D		C
Approach Vol, veh/h		1240			1532			59			327	
Approach Delay, s/veh		13.9			8.8			41.1			35.1	
Approach LOS		B			A			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.2	50.7		14.2		57.9		7.9				
Change Period (Y+Rc), s	* 4.2	5.0		4.6		5.0		4.2				
Max Green Setting (Gmax), s	* 5.1	29.8		22.0		39.1		5.1				
Max Q Clear Time (g_c+I1), s	3.9	20.1		9.1		19.3		4.5				
Green Ext Time (p_c), s	0.0	9.1		0.5		17.7		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.1								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 15: Euclid St & I-405 NB Ramps/Newhope St

Buildout (2035) Conditions  
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	524	138	550	579	559	20	180	474	309	15	989	329
Future Volume (veh/h)	524	138	550	579	559	20	180	474	309	15	989	329
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	552	145	196	609	588	19	189	499	222	16	1334	40
Adj No. of Lanes	2	1	2	2	2	0	2	3	0	0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	640	416	708	570	730	24	199	1582	679	50	1809	552
Arrive On Green	0.18	0.22	0.22	0.17	0.21	0.21	0.06	0.45	0.45	0.35	0.35	0.35
Sat Flow, veh/h	3548	1863	3167	3442	3499	113	3442	3490	1498	26	5187	1583
Grp Volume(v), veh/h	552	145	196	609	297	310	189	484	237	473	877	40
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1843	1721	1695	1598	1823	1695	1583
Q Serve(g_s), s	13.6	5.9	4.6	14.9	14.4	14.4	4.9	8.2	8.6	2.2	20.5	1.5
Cycle Q Clear(g_c), s	13.6	5.9	4.6	14.9	14.4	14.4	4.9	8.2	8.6	20.1	20.5	1.5
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.94	0.03		1.00
Lane Grp Cap(c), veh/h	640	416	708	570	369	385	199	1536	724	677	1182	552
V/C Ratio(X)	0.86	0.35	0.28	1.07	0.80	0.81	0.95	0.32	0.33	0.70	0.74	0.07
Avail Cap(c_a), veh/h	816	621	1056	570	476	496	199	1536	724	677	1182	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	0.97	0.97	0.97	0.86	0.86	0.86
Uniform Delay (d), s/veh	35.8	29.4	28.9	37.5	33.9	33.9	42.3	15.7	15.8	25.6	25.8	19.6
Incr Delay (d2), s/veh	6.5	0.4	0.2	53.7	4.7	4.6	48.4	0.5	1.2	5.1	3.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	3.1	2.0	11.3	7.5	7.8	3.7	3.9	4.0	11.2	10.1	0.7
LnGrp Delay(d),s/veh	42.2	29.8	29.1	91.3	38.6	38.5	90.7	16.2	17.0	30.7	29.4	19.8
LnGrp LOS	D	C	C	F	D	D	F	B	B	C	C	B
Approach Vol, veh/h		893			1216			910			1390	
Approach Delay, s/veh		37.3			65.0			31.9			29.6	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		45.8	19.6	24.6	9.4	36.4	20.9	23.3				
Change Period (Y+Rc), s		5.0	* 4.7	4.5	* 4.2	5.0	* 4.7	4.5				
Max Green Setting (Gmax), s		30.9	* 15	30.0	* 5.2	21.5	* 21	24.2				
Max Q Clear Time (g_c+I1), s		10.6	16.9	7.9	6.9	22.5	15.6	16.4				
Green Ext Time (p_c), s		17.2	0.0	3.6	0.0	0.0	0.6	2.4				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			41.4									
HCM 2010 LOS			D									
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 19: Ellis Av/Euclid St & I405 SB Ramps

Buildout (2035) Conditions  
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	510	5	15	1340	1098	25	70	80	223	5	90
Future Volume (veh/h)	0	510	5	15	1340	1098	25	70	80	223	5	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	537	5	16	1411	767	26	74	5	239	0	6
Adj No. of Lanes	0	2	0	1	2	1	0	1	1	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2226	21	32	2423	1084	34	96	111	326	0	146
Arrive On Green	0.00	0.62	0.62	0.02	0.68	0.68	0.07	0.07	0.07	0.09	0.00	0.09
Sat Flow, veh/h	0	3686	33	1774	3539	1583	478	1361	1583	3548	0	1583
Grp Volume(v), veh/h	0	264	278	16	1411	767	100	0	5	239	0	6
Grp Sat Flow(s),veh/h/ln	0	1770	1857	1774	1770	1583	1839	0	1583	1774	0	1583
Q Serve(g_s), s	0.0	6.0	6.0	0.8	18.8	26.7	4.8	0.0	0.3	5.9	0.0	0.3
Cycle Q Clear(g_c), s	0.0	6.0	6.0	0.8	18.8	26.7	4.8	0.0	0.3	5.9	0.0	0.3
Prop In Lane	0.00		0.02	1.00		1.00	0.26		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1096	1150	32	2423	1084	129	0	111	326	0	146
V/C Ratio(X)	0.00	0.24	0.24	0.49	0.58	0.71	0.77	0.00	0.04	0.73	0.00	0.04
Avail Cap(c_a), veh/h	0	1096	1150	99	2423	1084	141	0	121	867	0	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.7	7.7	43.8	7.5	8.7	41.1	0.0	39.0	39.8	0.0	37.2
Incr Delay (d2), s/veh	0.0	0.5	0.5	3.1	0.8	2.9	18.8	0.0	0.1	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	3.2	0.4	9.3	12.4	3.1	0.0	0.1	2.9	0.0	0.1
LnGrp Delay(d),s/veh	0.0	8.2	8.2	46.9	8.2	11.6	59.9	0.0	39.1	41.0	0.0	37.3
LnGrp LOS		A	A	D	A	B	E		D	D		D
Approach Vol, veh/h		542			2194			105			245	
Approach Delay, s/veh		8.2			9.7			58.9			40.9	
Approach LOS		A			A			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	5.8	60.8		12.9		66.6		10.5				
Change Period (Y+Rc), s	* 4.2	5.0		4.6		5.0		4.2				
Max Green Setting (Gmax), s	* 5	38.1		22.0		47.3		6.9				
Max Q Clear Time (g_c+I1), s	2.8	8.0		7.9		28.7		6.8				
Green Ext Time (p_c), s	0.0	25.7		0.4		16.8		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.6								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 15: Euclid St & I-405 NB Ramps/Newhope St

Buildout (2035) Plus Project Conditions  
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	667	413	907	306	72	20	64	469	656	0	1007	98
Future Volume (veh/h)	667	413	907	306	72	20	64	469	656	0	1007	98
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	0	1863	1863
Adj Flow Rate, veh/h	702	435	666	322	76	5	67	494	459	0	1060	63
Adj No. of Lanes	2	1	2	2	2	0	2	3	0	0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	801	540	919	323	533	35	167	1487	695	0	1888	535
Arrive On Green	0.23	0.29	0.29	0.09	0.16	0.16	0.05	0.44	0.44	0.00	0.34	0.34
Sat Flow, veh/h	3548	1863	3167	3442	3374	220	3442	3390	1583	0	5588	1583
Grp Volume(v), veh/h	702	435	666	322	40	41	67	494	459	0	1060	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1824	1721	1695	1583	0	1863	1583
Q Serve(g_s), s	15.3	17.3	15.1	7.5	1.5	1.6	1.5	7.7	18.3	0.0	12.4	2.2
Cycle Q Clear(g_c), s	15.3	17.3	15.1	7.5	1.5	1.6	1.5	7.7	18.3	0.0	12.4	2.2
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	801	540	919	323	279	288	167	1487	695	0	1888	535
V/C Ratio(X)	0.88	0.81	0.73	1.00	0.14	0.14	0.40	0.33	0.66	0.00	0.56	0.12
Avail Cap(c_a), veh/h	962	699	1188	323	349	360	215	1487	695	0	1888	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	0.89	0.89	0.89	0.00	0.43	0.43
Uniform Delay (d), s/veh	29.9	26.3	25.5	36.2	29.0	29.0	36.9	14.8	17.7	0.0	21.6	18.3
Incr Delay (d2), s/veh	7.1	4.8	1.3	48.4	0.1	0.1	0.5	0.5	4.3	0.0	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	9.5	6.7	5.7	0.8	0.8	0.7	3.7	8.7	0.0	6.5	1.0
LnGrp Delay(d),s/veh	36.9	31.1	26.9	84.7	29.1	29.1	37.5	15.3	22.1	0.0	22.2	18.5
LnGrp LOS	D	C	C	F	C	C	D	B	C		C	B
Approach Vol, veh/h		1803			403			1020			1123	
Approach Delay, s/veh		31.8			73.5			19.8			22.0	
Approach LOS		C			E			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		40.1	12.2	27.7	8.1	32.0	22.8	17.1				
Change Period (Y+Rc), s		5.0	* 4.7	4.5	* 4.2	5.0	* 4.7	4.5				
Max Green Setting (Gmax), s		28.3	* 7.5	30.0	* 5	19.1	* 22	15.8				
Max Q Clear Time (g_c+I1), s		20.3	9.5	19.3	3.5	14.4	17.3	3.6				
Green Ext Time (p_c), s		7.3	0.0	3.9	0.0	4.4	0.8	4.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.3									
HCM 2010 LOS			C									
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 19: Ellis Av/Euclid St & I405 SB Ramps

Buildout (2035) Plus Project Conditions  
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1142	70	40	1243	899	5	50	15	323	5	269
Future Volume (veh/h)	0	1142	70	40	1243	899	5	50	15	323	5	269
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	1202	72	42	1308	675	5	53	1	344	0	252
Adj No. of Lanes	0	2	0	1	2	1	0	1	1	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1704	102	67	2098	938	7	77	72	671	0	299
Arrive On Green	0.00	0.50	0.50	0.04	0.59	0.59	0.05	0.05	0.05	0.19	0.00	0.19
Sat Flow, veh/h	0	3487	203	1774	3539	1583	160	1695	1583	3548	0	1583
Grp Volume(v), veh/h	0	626	648	42	1308	675	58	0	1	344	0	252
Grp Sat Flow(s),veh/h/ln	0	1770	1827	1774	1770	1583	1855	0	1583	1774	0	1583
Q Serve(g_s), s	0.0	21.8	21.9	1.9	19.1	24.2	2.5	0.0	0.0	7.0	0.0	12.3
Cycle Q Clear(g_c), s	0.0	21.8	21.9	1.9	19.1	24.2	2.5	0.0	0.0	7.0	0.0	12.3
Prop In Lane	0.00		0.11	1.00		1.00	0.09		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	889	918	67	2098	938	85	0	72	671	0	299
V/C Ratio(X)	0.00	0.70	0.71	0.62	0.62	0.72	0.68	0.00	0.01	0.51	0.00	0.84
Avail Cap(c_a), veh/h	0	889	918	113	2098	938	118	0	101	976	0	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.3	15.4	37.9	10.5	11.6	37.6	0.0	36.5	29.1	0.0	31.3
Incr Delay (d2), s/veh	0.0	4.7	4.6	2.7	1.1	3.6	3.6	0.0	0.0	0.2	0.0	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.8	12.1	1.0	9.6	11.5	1.3	0.0	0.0	3.4	0.0	5.9
LnGrp Delay(d),s/veh	0.0	20.0	19.9	40.6	11.6	15.2	41.2	0.0	36.5	29.3	0.0	37.9
LnGrp LOS		C	B	D	B	B	D		D	C		D
Approach Vol, veh/h		1274			2025			59			596	
Approach Delay, s/veh		20.0			13.4			41.1			32.9	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.2	45.2		19.7		52.4		7.9				
Change Period (Y+Rc), s	* 4.2	5.0		4.6		5.0		4.2				
Max Green Setting (Gmax), s	* 5.1	29.8		22.0		39.1		5.1				
Max Q Clear Time (g_c+I1), s	3.9	23.9		14.3		26.2		4.5				
Green Ext Time (p_c), s	0.0	5.8		0.9		12.4		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.9								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 15: Euclid St & I-405 NB Ramps/Newhope St

Buildout (2035) Plus Project Conditions  
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	526	144	569	683	586	24	256	524	319	112	1058	489
Future Volume (veh/h)	526	144	569	683	586	24	256	524	319	112	1058	489
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	554	152	216	719	617	23	269	552	233	118	1326	263
Adj No. of Lanes	2	1	2	2	2	0	2	3	0	0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	643	456	775	516	742	28	341	1586	651	151	1314	478
Arrive On Green	0.18	0.24	0.24	0.15	0.21	0.21	0.10	0.45	0.45	0.30	0.30	0.30
Sat Flow, veh/h	3548	1863	3167	3442	3480	130	3442	3543	1453	331	4354	1583
Grp Volume(v), veh/h	554	152	216	719	314	326	269	528	257	412	1032	263
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1840	1721	1695	1606	1295	1695	1583
Q Serve(g_s), s	13.6	6.0	5.0	13.5	15.2	15.3	6.9	9.2	9.5	25.2	27.2	12.5
Cycle Q Clear(g_c), s	13.6	6.0	5.0	13.5	15.2	15.3	6.9	9.2	9.5	27.2	27.2	12.5
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.90	0.29		1.00
Lane Grp Cap(c), veh/h	643	456	775	516	378	393	341	1517	719	442	1023	478
V/C Ratio(X)	0.86	0.33	0.28	1.39	0.83	0.83	0.79	0.35	0.36	0.93	1.01	0.55
Avail Cap(c_a), veh/h	832	621	1056	516	440	458	382	1517	719	442	1023	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.41	0.41	0.41	0.92	0.92	0.92	0.41	0.41	0.41
Uniform Delay (d), s/veh	35.7	28.0	27.6	38.3	33.8	33.9	39.6	16.3	16.4	31.7	31.4	26.3
Incr Delay (d2), s/veh	6.1	0.3	0.1	181.7	4.3	4.2	7.6	0.6	1.3	15.3	20.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	3.1	2.2	19.4	7.9	8.2	3.6	4.4	4.5	12.1	15.5	5.7
LnGrp Delay(d),s/veh	41.9	28.3	27.7	219.9	38.1	38.0	47.2	16.8	17.6	47.0	51.5	28.2
LnGrp LOS	D	C	C	F	D	D	D	B	B	D	F	C
Approach Vol, veh/h		922			1359			1054			1707	
Approach Delay, s/veh		36.3			134.3			24.8			46.8	
Approach LOS		D			F			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		45.3	18.2	26.5	13.1	32.2	21.0	23.7				
Change Period (Y+Rc), s		5.0	* 4.7	4.5	* 4.2	5.0	* 4.7	4.5				
Max Green Setting (Gmax), s		32.3	* 14	30.0	* 10	18.1	* 21	22.4				
Max Q Clear Time (g_c+I1), s		11.5	15.5	8.0	8.9	29.2	15.6	17.3				
Green Ext Time (p_c), s		18.9	0.0	3.8	0.1	0.0	0.7	1.9				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			63.9									
HCM 2010 LOS			E									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Ellis Av/Euclid St & I405 SB Ramps

Buildout (2035) Plus Project Conditions  
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	592	5	45	1340	1178	25	307	330	223	5	90
Future Volume (veh/h)	0	592	5	45	1340	1178	25	307	330	223	5	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	623	5	47	1411	851	26	323	268	239	0	6
Adj No. of Lanes	0	2	0	1	2	1	0	1	1	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	2014	16	72	2310	1033	11	137	127	337	0	150
Arrive On Green	0.00	0.56	0.56	0.04	0.65	0.65	0.08	0.08	0.08	0.09	0.00	0.09
Sat Flow, veh/h	0	3692	29	1774	3539	1583	138	1718	1583	3548	0	1583
Grp Volume(v), veh/h	0	306	322	47	1411	851	349	0	268	239	0	6
Grp Sat Flow(s),veh/h/ln	0	1770	1858	1774	1770	1583	1856	0	1583	1774	0	1583
Q Serve(g_s), s	0.0	7.4	7.4	2.1	18.4	32.3	6.4	0.0	6.4	5.2	0.0	0.3
Cycle Q Clear(g_c), s	0.0	7.4	7.4	2.1	18.4	32.3	6.4	0.0	6.4	5.2	0.0	0.3
Prop In Lane	0.00		0.02	1.00		1.00	0.07		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	990	1039	72	2310	1033	148	0	127	337	0	150
V/C Ratio(X)	0.00	0.31	0.31	0.65	0.61	0.82	2.35	0.00	2.12	0.71	0.00	0.04
Avail Cap(c_a), veh/h	0	990	1039	111	2310	1033	148	0	127	976	0	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.36	0.36	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.4	9.4	37.8	8.0	10.4	36.8	0.0	36.8	35.1	0.0	32.9
Incr Delay (d2), s/veh	0.0	0.8	0.8	1.4	0.4	2.9	628.2	0.0	527.7	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	4.0	1.0	9.0	14.5	29.2	0.0	21.4	2.6	0.0	0.1
LnGrp Delay(d),s/veh	0.0	10.2	10.2	39.2	8.5	13.3	665.0	0.0	564.5	36.2	0.0	32.9
LnGrp LOS		B	B	D	A	B	F		F	D		C
Approach Vol, veh/h		628			2309			617			245	
Approach Delay, s/veh		10.2			10.9			621.4			36.1	
Approach LOS		B			B			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.4	49.8		12.2		57.2		10.6				
Change Period (Y+Rc), s	* 4.2	5.0		4.6		5.0		4.2				
Max Green Setting (Gmax), s	* 5	28.6		22.0		37.8		6.4				
Max Q Clear Time (g_c+I1), s	4.1	9.4		7.2		34.3		8.4				
Green Ext Time (p_c), s	0.0	17.7		0.4		3.4		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				111.5								
HCM 2010 LOS				F								
<b>Notes</b>												



## **Appendix B - Mitigation LOS Results**



Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #12 Talbert Av & Condor Av

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.802
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: D

\*\*\*\*\*

Table with columns for Street Name (Condor Av, Talbert Av), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.






















Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

\*\*\*\*\*

HCM 2010 Signalized Intersection Summary Buildout (2035) Plus Project Mitigated Conditions  
 15: Euclid St & I-405 NB Ramps/Newhope St

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	188	626	598	565	22	340	543	406	19	1016	433
Future Volume (veh/h)	534	188	626	598	565	22	340	543	406	19	1016	433
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	562	198	276	629	595	21	358	572	324	20	1268	213
Adj No. of Lanes	2	1	2	2	2	0	2	3	0	0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	628	355	603	666	722	25	418	1650	771	47	1680	518
Arrive On Green	0.18	0.19	0.19	0.19	0.21	0.21	0.12	0.49	0.49	0.33	0.33	0.33
Sat Flow, veh/h	3548	1863	3167	3442	3488	123	3442	3390	1583	40	5133	1583
Grp Volume(v), veh/h	562	198	276	629	302	314	358	572	324	445	843	213
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1841	1721	1695	1583	1783	1695	1583
Q Serve(g_s), s	17.0	10.6	8.5	19.8	17.9	18.0	11.2	11.5	14.5	6.5	24.5	11.5
Cycle Q Clear(g_c), s	17.0	10.6	8.5	19.8	17.9	18.0	11.2	11.5	14.5	23.9	24.5	11.5
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	0.04		1.00
Lane Grp Cap(c), veh/h	628	355	603	666	366	381	418	1650	771	618	1109	518
V/C Ratio(X)	0.89	0.56	0.46	0.94	0.82	0.82	0.86	0.35	0.42	0.72	0.76	0.41
Avail Cap(c_a), veh/h	706	484	823	666	450	469	463	1650	771	618	1109	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.36	0.36	0.36	0.84	0.84	0.84	0.45	0.45	0.45
Uniform Delay (d), s/veh	44.3	40.3	39.5	43.8	41.7	41.7	47.4	17.4	18.2	32.8	33.1	28.8
Incr Delay (d2), s/veh	12.1	1.0	0.4	10.4	3.1	3.0	10.8	0.5	1.4	3.3	2.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	5.5	3.8	10.4	9.1	9.5	5.9	5.4	6.6	12.5	11.8	5.2
LnGrp Delay(d),s/veh	56.3	41.4	39.9	54.1	44.8	44.7	58.2	17.9	19.6	36.0	35.4	29.8
LnGrp LOS	E	D	D	D	D	D	E	B	B	D	D	C
Approach Vol, veh/h		1036			1245			1254			1501	
Approach Delay, s/veh		49.1			49.5			29.9			34.8	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		58.5	26.0	25.5	17.6	41.0	24.2	27.3				
Change Period (Y+Rc), s		5.0	* 4.7	4.5	* 4.2	5.0	* 4.7	4.5				
Max Green Setting (Gmax), s		45.9	* 21	28.6	* 15	26.9	* 22	28.0				
Max Q Clear Time (g_c+I1), s		16.5	21.8	12.6	13.2	26.5	19.0	20.0				
Green Ext Time (p_c), s		25.0	0.0	3.9	0.1	0.4	0.4	2.8				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			40.1									
HCM 2010 LOS			D									
<b>Notes</b>												

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #18 Ellis Av & Ward St

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.868  
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 72 Level Of Service: D

\*\*\*\*\*

Street Name:		Ward St						Ellis AV					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit			
Rights:	Ovl			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1	

Volume Module:

Base Vol:	13	410	812	110	331	115	258	1146	16	316	422	308
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	410	812	110	331	115	258	1146	16	316	422	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	410	812	110	331	115	258	1146	16	316	422	308
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	410	812	110	331	115	258	1146	16	316	422	308
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	0.94	1.00	1.00	0.94	1.00	0.94	0.94	1.00	0.94	0.94	1.00	0.94
FinalVolume:	12	410	812	103	331	108	243	1146	15	297	422	290
OvlAdjVol:	218											

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	2.00	1.00	1.51	0.49	1.00	1.97	0.03	1.00	1.19	0.81
Final Sat.:	1700	1700	3400	1700	2563	837	1700	3356	44	1700	2017	1383

Capacity Analysis Module:

Vol/Sat:	0.01	0.24	0.24	0.06	0.13	0.13	0.14	0.34	0.34	0.17	0.21	0.21
OvlAdjV/S:	0.06											
Crit Moves:	****			****			****			****		

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