Appendix K Transportation & Traffic

Appendix K-1 Traffic Impact Study Report

Riverbend Sand & Gravel Facility

Traffic Impact Study Report

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Riverbend Sand & Gravel Facility Traffic Impact Study Report

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Executive Summary

This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the proposed Riverbend Sand and Gravel Facility (Project) which includes mining activities on approximately 619 acres. The proposed aggregate mining facility is located north and south of Goodfellow Avenue between the Kings River and Riverbend Avenue approximately 1.5 miles southeast of the City of Sanger.

The proposed Project lies within the central portion of the San Joaquin Valley. The proposed Project is located on the Valley floor at an elevation of approximately 375 feet above sea level with the surrounding area mostly flat.

The proposed Project includes portions of Sections 25 and 36 of T14S/R22E, Section 1 of T15S/R22E, and sections 19, 30, and 31 of T14S/R23E. The entire Project site is approximately 833 acres, which includes 619 acres to be used for mining activities and 214 acres of existing riparian habitat along the Kings River that is excluded from the Project. The Project site is relatively flat and currently consists of orchards and vineyards. The Hanke Ditch is piped and runs through the eastern portion of the Project site north of Goodfellow Avenue and is an open ditch along the east side of the Project site south of Goodfellow Avenue.

There will be one (1) access point to the proposed Project to be located along Goodfellow Avenue west of Riverbend Avenue.

This report includes analysis of the following intersections:

- SR 180 (Kings Canyon Road) / McCall Avenue
- Jensen Avenue / McCall Avenue
- North Avenue / McCall Avenue
- Goodfellow Avenue / Riverbend Avenue
- Central Avenue / Newmark Avenue
- Central Avenue / Academy Avenue
- Central Avenue / Bethel Avenue
- Central Avenue / McCall Avenue
- Central Avenue / SR 99 NB On-Ramp
- Central Avenue / SR 99 SB Off-Ramp
- Goodfellow Avenue / Project Driveway
- Manning Avenue / SR 99 Interchange

This report includes analysis of the following roadway segments:

- SR 180 between:
  - McCall Avenue to Highland Avenue
  - Highland Avenue to De Wolf Avenue
  - De Wolf Avenue to Temperance Avenue

- McCall Avenue between:
  - Central Avenue to North Avenue
  - North Avenue to Jensen Avenue
  - Jensen Avenue to SR 180 (Kings Canyon Road)
- Goodfellow Avenue between:
  - Riverbend Avenue to Newmark Avenue
- Central Avenue between:
  - Newmark Avenue to Academy Avenue
  - Academy Avenue to Bethel Avenue
  - Bethel Avenue to McCall Avenue
  - SR 99 NB On-Ramp to SR 99 SB Off-Ramp

The study time periods include the weekday AM and PM peak hours determined between 7:00 and 9:00 AM and between 4:00 and 6:00 PM. The peak hours were analyzed for the following conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Existing Plus Approved/Pending Conditions
- Existing Plus Project Plus Approve/Pending Conditions
- Year 2015 (Phase 1 of the Project) Conditions
- Year 2017 (Phase 2 of the Project) Conditions
- Year 2019 (Phase 3 of the Project) Conditions
- Cumulative 2035 No Project Conditions
- Cumulative 2035 Plus Project Conditions

The traffic expected to be generated by other pending projects in the vicinity of the Project site are included in the analyses. Approved/Pending projects included in this TIS include the operating Vulcan Materials project located off of SR 180, the approved but not currently operating Carmelita Mine & Reclamation project located just west of Reed Avenue between Annadale Avenue and Goodfellow Avenue, and the approved Calaveras Materials Inc. (CMI) Kings River Sand and Gravel project located south of Goodfellow Avenue and east of Riverbend Avenue. CMI has started on-site operations and began generating truck traffic from the site in February of 2014.

Generally-accepted traffic engineering principles and methods were employed to estimate the amount of traffic expected to be generated by the Project and to analyze the traffic conditions expected to exist in the future. The conclusion of this traffic impact study is that the existing road network is generally either adequate or can be mitigated to accommodate the proposed development through the year 2035. The traffic impact analyses based on projections of cumulative and future traffic volumes through the year 2035 result in the conclusions and recommendations described below.

IMPACTS

Intersections

Results of the LOS intersection analysis along the street and highway system in the project area from Existing

through the Cumulative 2035 With Project scenario are reflected in Table E-1. Table E-1 shows the intersections that are expected to fall short of desirable operating conditions for various scenarios. Of the 11 studied intersections, 6 in the long term will experience significant traffic impacts in the Cumulative Year 2035 scenarios. However, the long term impacts would occur due to cumulative growth, with or without the Project.

Segments

Results of the LOS segment analysis along the street and highway system in the project area from Existing through the Cumulative 2035 With Project scenario are reflected in Table E-2.Table E-2 shows the roadway segments that are expected to fall short of desirable operating conditions for various scenarios. Of the 11 segments analyzed, 5 will experience significant traffic impacts in the Cumulative Year 2035 scenarios. These impacts would occur with or without the Project, with the exception of the roadway segment along McCall Avenue between Jensen Avenue and North Avenue and the roadway segment along SR 180 between De Wolf Avenue and Temperance Avenue.

TABLE E-1

Intersection Operations

INTERSECTION	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
		DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
McCall Avenue / SR-180	AM	30.1	C	**56.1**	**E**	33.9	C	**57.8**	**E**	**63.3**	**E**	**87.3**	**F**	**79.1**	**E**	**102.8**	**F**	**89.2**	**F**	**116.1**	**F**	**200.8**	**F**	**221.2**	**F**
	PM	28.9	C	30.0	C	29.0	C	30.2	C	**62.9**	**E**	**64.9**	**E**	**75.4**	**E**	**77.4**	**E**	**89.5**	**F**	**91.2**	**F**	**229.9**	**F**	**231.1**	**F**
McCall Avenue / Jensen Avenue	AM	26.9	C	33.5	C	26.9	C	33.5	C	33.8	C	**42.2**	**D**	**40.2**	**D**	**51.2**	**D**	**46.3**	**D**	**60.0**	**E**	**138.2**	**F**	**160.3**	**F**
	PM	25.9	C	26.2	C	25.9	C	26.2	C	31.4	C	31.7	C	**36.5**	**D**	**37.0**	**D**	**42.0**	**D**	**42.4**	**D**	**168.3**	**F**	**167.7**	**F**
McCall Avenue / North Avenue	AM	11.9	B	--	C*	11.9	B	--	C*	14.1	B	--	C*	15.9	C	--	C*	18.3	C	--	C*	**59.9+**	**F+**	**154.3+**	**F+**
	PM	11.1	B	11.3	B	11.1	B	11.3	B	13.1	B	13.5	B	14.8	B	15.4	C	17.1	C	18.0	C	**104.4+**	**F+**	**110.8+**	**F+**
Academy Avenue / Central Avenue	AM	10.1	B	18.9	C	11.5	B	--	C*	13.9	B	--	C*	15.5	C	--	C*	17.8	C	**77.3+**	**F+**	**62.8+**	**F+**	**143.7+**	**F+**
	PM	12.9	B	13.5	B	14.1	B	14.7	B	18.9	C	20.1	C	23.9	C	--	C*	--	C*	**35.2+**	**E+**	**126.5+**	**F+**	**133.8+**	**F+**
McCall Avenue / Central Avenue	AM	9.7	A	19.4	C	10.5	B	24.6	C	11.7	B	--	C*	12.6	B	--	C*	13.6	B	--	C*	19.2	C	**78.1+**	**F+**
	PM	9.4	A	9.5	A	9.7	A	9.8	A	10.6	B	10.8	B	10.5	B	11.5	B	11.9	B	12.2	B	--	C*	**30.1**	**D**
SR-99 SB Off-Ramp / Central Avenue	AM	--	C**	--	C*	--	C*	--	C*	**134.1++**	**F++**	**137.8++**	**F++**	**149.6++**	**F++**	**152.6++**	**F++**	**164.6++**	**F++**	**168.4++**	**F++**	**153.9++**	**F++**	**157.7++**	**F++**
	PM	19.0	C	19.0	C	21.4	C	21.4	C	23.9	C	23.9	C	**25.4++**	**D++**	**25.4++**	**D++**	**26.8++**	**D++**	**26.8++**	**D++**	**27.1++**	**D++**	**27.1++**	**D++**

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized and all-way stop controlled intersections, delay results show the average for the entire intersection. For one-way and two-way stop controlled

* Traffic signal not warranted. Level of service C assumed.

+ Meets peak hour signal warrants.

++ Meets four-hour signal warrants.

TABLE E-2

Segment Operations

STREET SEGMENT	DIRECTION	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
			VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS
SR 180 [1]																										
McCall Avenue to Highland Avenue	EB	AM	839	A	984	A	992	A	1,137	B	1,124	B	1,269	B	1,190	B	1,335	B	1,255	B	1,400	B	1,752	B	1,897	B
		PM	1,353	B	1,363	B	1,362	B	1,372	B	1,494	B	1,504	B	1,559	B	1,569	B	1,625	B	1,635	B	2,151	C	2,161	C
	WB	AM	1,554	B	1,698	B	1,698	B	1,842	C	1,864	C	2,008	C	1,947	C	2,091	C	2,030	C	2,174	C	2,695	C	**2,839**	**D**
		PM	904	A	914	A	925	A	935	A	1,057	A	1,067	A	1,123	A	1,133	A	1,189	B	1,199	B	1,717	B	1,727	B
Highland Avnue to De Wolf Avenue	EB	AM	843	A	988	A	996	A	1,141	B	1,159	B	1,304	B	1,240	B	1,385	B	1,321	B	1,466	B	1,971	C	2,116	C
		PM	1,390	B	1,400	B	1,399	B	1,409	B	1,542	B	1,552	B	1,614	B	1,624	B	1,685	B	1,695	B	2,257	C	2,267	C
	WB	AM	1,567	B	1,711	B	1,711	B	1,855	B	1,901	C	2,045	C	1,995	C	2,139	C	2,090	C	2,234	C	**2,848**	**D**	**2,992**	**D**
		PM	879	A	889	A	900	A	910	A	1,066	A	1,076	A	1,148	A	1,158	B	1,231	B	1,241	B	1,893	B	1,903	B
De Wolf Avenue to Temperance Avenue[2]	EB	AM	865	A	1,010	A	1,018	A	1,163	B	1,155	A	1,300	B	1,223	B	1,368	B	1,291	B	1,436	B	1,838	B	1,983	B
		PM	1,450	B	1,460	B	1,459	B	1,469	B	1,566	B	1,576	B	1,619	B	1,629	B	1,672	B	1,682	B	2,099	C	2,109	C
	WB	AM	1,630	B	1,774	B	1,774	B	1,918	B	1,957	B	2,101	C	2,049	C	2,193	C	2,140	C	2,284	C	2,873	C	**3,017**	**D**
		PM	899	A	909	A	920	A	930	A	1,064	A	1,074	A	1,135	A	1,145	A	1,207	A	1,217	A	1,781	B	1,791	B
McCall Avenue																										
SR-180 to Jensen Avenue	NB	AM	338	B	489	C	338	B	489	C	403	B	554	C	436	B	587	C	470	C	621	C	736	C	**887**	**F**
		PM	397	B	407	B	397	B	407	B	463	C	473	C	495	C	505	C	529	C	539	C	**808**	**F**	**818**	**F**
	SB	AM	403	B	555	C	403	B	555	C	469	C	621	C	503	C	655	C	538	C	690	C	**820**	**F**	**972**	**F**
		PM	370	B	380	B	370	B	380	B	423	B	433	B	448	B	458	B	475	C	485	C	698	C	708	C
Jensen Avnue to North Avenue	NB	AM	324	B	479	C	324	B	479	C	385	B	540	C	413	B	568	C	443	B	598	C	670	C	**825**	**F**
		PM	320	B	330	B	320	B	330	B	390	B	400	B	422	B	432	B	454	B	464	C	699	C	709	C
	SB	AM	296	B	452	B	296	B	452	B	347	B	503	C	372	B	528	C	396	B	552	C	551	C	707	C
		PM	285	B	295	B	285	B	295	B	346	B	356	B	377	B	387	B	406	B	416	B	654	C	664	C

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

(1) Segment Analysis was performed using HCM Methodologies

(2) Freeway Segment

MITIGATION

This section describes potential improvements to mitigate the traffic impacts of the Project. Described below are potential improvements at study area intersections and segments for various scenarios that would result in acceptable levels of service. In order to mitigate the Project's impacts, it is recommended that the Project contribute traffic impact fees, as determined by Fresno County in accordance with County policy. The payment of these fair-share fees would be used to help fund the applicant's fair-share percentage of the improvements discussed below to mitigate the Project's traffic impacts to less than significant levels. Tables 4-4 through 4-6 provide the Project's fair share to improvements discussed below.

EXISTING CONDITIONS

For this scenario, no improvements are recommended.

EXISTING PLUS PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

Caltrans has indicated that the improvements identified for the northbound approach shall be implemented prior to the Project's opening day.

EXISTING PLUS APPROVED/PENDING CONDITIONS

For this scenario, no improvements are recommended.

EXISTING PLUS PROJECT PLUS APPROVED/PENDING CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

YEAR 2015 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left

turn lane).

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

YEAR 2015 PLUS PHASE 1 CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).
- Widen the southbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).

YEAR 2017 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

McCall Avenue at Jensen Avenue

- Adjust signal timing

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

YEAR 2017 PLUS PHASE 2 CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at SR 180

- Widen the southbound approach to 1 left turn lane, 1 through lane, and 1 right turn lane (adding 1 right turn lane).

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).
- Widen the southbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).

YEAR 2019 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).
- Widen the southbound approach to 1 left turn lane, 1 through lane, and 1 right turn lane (adding 1 right turn lane).

McCall Avenue at Jensen Avenue

- Widen the westbound approach to 1 left turn lane, 2 through lanes, and 1 right turn lane (adding 1 right turn lane).

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

YEAR 2019 PLUS PHASE 3 CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).
- Widen the southbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).

Academy Avenue at Central Avenue

- Install Traffic Signal

CUMULATIVE YEAR 2035 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane, 1 through lane, and 1 right turn lane).
- Widen the southbound approach to 1 left turn lane, 2 through lane, and 1 right turn lane (adding 1 through lane and 1 right turn lane).

McCall Avenue at Jensen Avenue

- Widen the eastbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane and 1 right turn lane).
- Widen the westbound approach to 1 left turn lane, 2 through lanes, and 1 right turn lane (adding 1 right turn lane).
- Widen the northbound approach to 2 left turn lanes, 1 through lane, and 1 right turn lane (adding 1 left turn lane and 1 right turn lane).
- Widen the southbound approach to 2 left turn lanes, 1 through lane, and 1 right turn lane (adding 1 left turn lane and 1 right turn lane).

McCall Avenue at North Avenue

- Install Traffic Signal

Academy Avenue at Central Avenue

- Install Traffic Signal

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

McCall Avenue between SR 180 and Jensen Avenue

- 2 travel lanes in the northbound direction (adding 1 travel lane)
- 2 travel lanes in the southbound direction (adding 1 travel lane)

CUMULATIVE YEAR 2035 PLUS PROJECT CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane, 1 through lanes, and 1 right turn lane).
- Widen the southbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane, 1 through lane, and 1 right turn lane).

McCall Avenue at Central Avenue

- Install Traffic Signal

McCall Avenue between Jensen Avenue and North Avenue

- 2 travel lanes in the northbound direction (adding 1 travel lane)

POST-MITIGATION LEVEL OF SIGNIFICANCE

The level of service resulting from the potential improvements identified above is shown in Table E-3 for study area intersections and Table E-4 for study segments. The post-mitigation result, once mitigation is implemented, would be less than significant. However, traffic impacts should be considered significant and unavoidable because the precise timing for traffic mitigation, given fair share contribution requirements, cannot be precisely determined. Once the traffic mitigation is actually and fully implemented in the future, the traffic impacts would then be less than significant. The resulting Cumulative 2035 lane geometry is shown in Figure E-1.

Caltrans has indicated that there are no plans to widen SR 180 between McCall Avenue and Temperance Avenue in the foreseeable future. Therefore, no improvements along the SR 180 mainline were recommended even though widening SR 180 beyond its current configuration would reduce the intersection/segment LOS in the study area from LOS 'D' to LOS 'C'.

TABLE E-3

Intersection Operations With Mitigation

INTERSECTION	PEAK HOUR	EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
		DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
McCall Avenue / SR-180	AM	28.1	C			29.3	C	30.0	C	34.5	C	33.8	C	32.8	C	29.3	C	32.9	C	**36.8**	**D***	**40.3**	**D***
	PM	25.1	C			25.1	C	29.0	C	28.7	C	32.6	C	30.8	C	33.3	C	33.6	C	**51.5**	**D***	**52.0**	**D***
McCall Avenue / Jensen Avenue	AM									27.6	C	34.8	C	30.5	C	32.7	C	28.6	C	33.0	C	27.7	C
	PM									24.9	C	33.4	C	26.8	C	34.8	C	26.8	C	32.8	C	25.8	C
McCall Avenue / North Avenue	AM																			14.9	B	20.2	C
	PM																			14.7	B	15.0	B
Academy Avenue / Central Avenue	AM																	18.6	B	17.4	B	22.0	C
	PM																	15.0	B	18.6	B	19.0	B
McCall Avenue / Central Avenue	AM																					18.1	B
	PM																					11.0	B
SR-99 SB Off-Ramp / Central Avenue	AM							11.8	B	11.9	B	12.0	B	12.1	B	12.1	B	14.0	B	11.6	B	14.0	B
	PM							10.9	B	10.9	B	11.1	B	11.1	B	11.2	B	11.2	B	11.7	B	11.7	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

* Caltrans is not currently planning to widen SR 180 from 4 to 6 lanes in the foreseeable future.

TABLE E-4

Segment Operations With Mitigation

STREET SEGMENT	DIRECTION	PEAK HOUR	CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
			VOLUME	LOS	VOLUME	LOS
SR 180 [1]						
McCall Avenue to Highland Avenue	EB	AM				
		PM				
	WB	AM			**2,839**	**D ***
		PM			1,727	B
Highland Avnue to De Wolf Avenue	EB	AM				
		PM				
	WB	AM	**2,848**	**D ***	**2,992**	**D ***
		PM	1,893	B	1,903	B
De Wolf Avenue to Temperance Avenue[2]	EB	AM				
		PM				
	WB	AM			**3,017**	**D ***
		PM			1,791	B
McCall Avenue						
SR-180 to Jensen Avenue	NB	AM	736	B	887	B
		PM	808	B	818	B
	SB	AM	820	B	972	B
		PM	698	B	708	B
Jensen Avnue to North Avenue	NB	AM			825	B
		PM			709	B
	SB	AM				
		PM				

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

(1) Segment Analysis was performed using HCM Methodologies

(2) Freeway Segment

* Caltrans is not currently planning to widen SR 180 from 4 to 6 lanes in the foreseeable future.

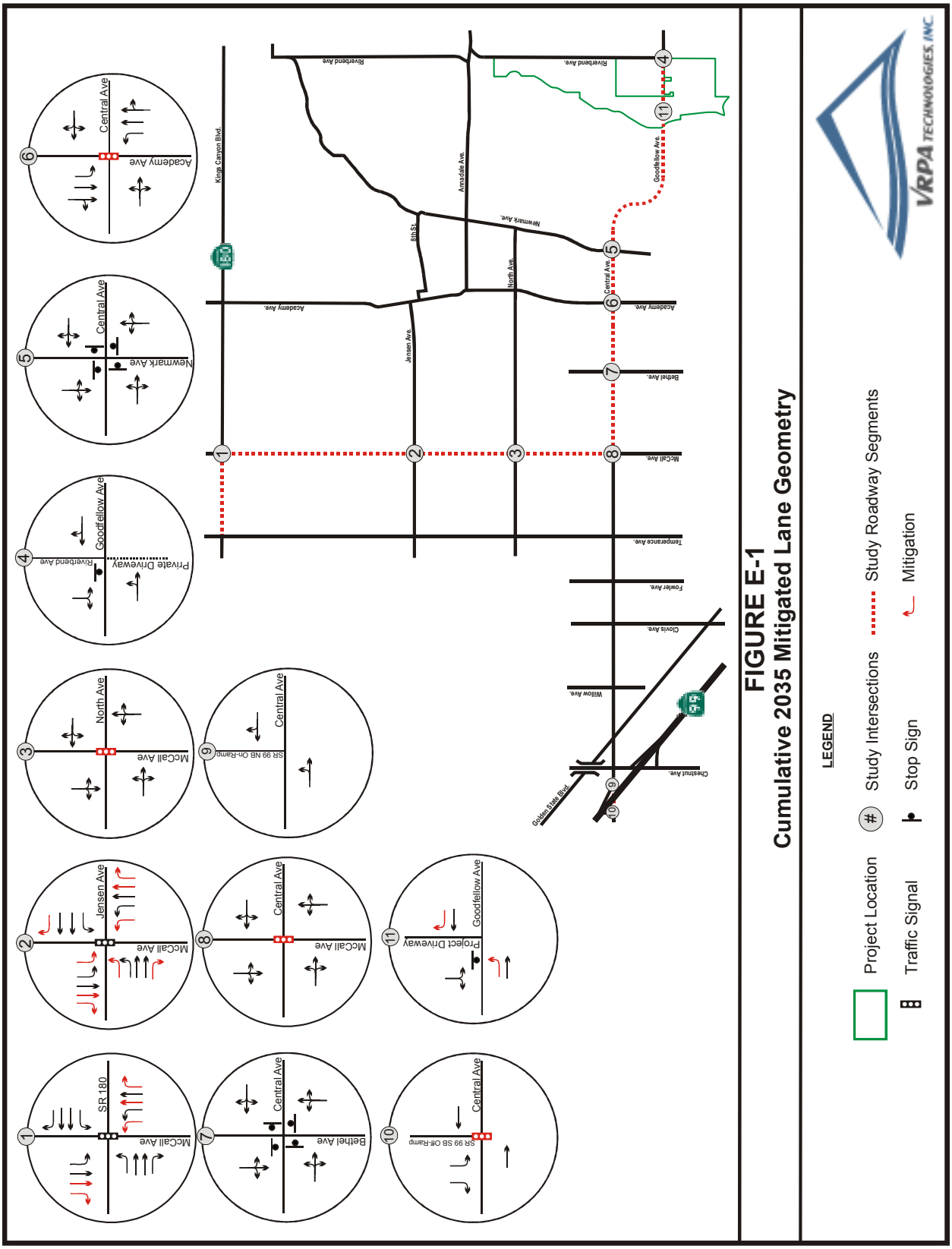


FIGURE E-1
Cumulative 2035 Mitigated Lane Geometry
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Mitigation
VRPA TECHNOLOGIES, INC.
Riverbend Ave.
Kings Canyon Blvd.
Armadale Ave.
Newmark Ave.
8th St.
Goodfellow Ave.
Central Ave.
Academy Ave.
North Ave.
Jensen Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
99
180
SR 180
McCall Ave
Jensen Ave
Central Ave
Bethel Ave
Goodfellow Ave
Project Driveway
North Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Private Driveway

This Traffic Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the proposed Riverbend Sand and Gravel Facility (Project) which includes mining activities on approximately 619 acres. The proposed aggregate mining facility is located north and south of Goodfellow Avenue between the Kings River and Riverbend Avenue approximately 1.5 miles southeast of the City of Sanger.

1.0 Introduction

1.1 Description of the Region/Project

The proposed Project lies within the central portion of the San Joaquin Valley. The proposed Project is located on the Valley floor at an elevation of approximately 375 feet above sea level with the surrounding area mostly flat. Figures 1-1 and 1-2 show the location of the Project along with major roadways and highways.

The proposed Project location is approximately 1.5 miles southeast of the City of Sanger, and includes portions of Sections 25 and 36 of T14S/R22E, Section 1 of T15S/R22E, and sections 19, 30, and 31 of T14S/R23E. The entire Project site is approximately 833 acres, which includes 619 acres to be used for mining activities and 214 acres of existing riparian habitat along the Kings River that is excluded from the Project. The Project site is relatively flat and currently consists of orchards and vineyards. The Hanke Ditch is piped and runs through the eastern portion of the Project site north of Goodfellow Avenue and is an open ditch along the east side of the Project site south of Goodfellow Avenue.

1.1.1 *Project Access*

There will be one (1) access point to the proposed Project to be located along Goodfellow Avenue west of Riverbend Avenue.

1.1.2 *Study Area*

The following intersections and roadway segments included in this TIS were determined in consultation with Fresno County and California Department of Transportation (Caltrans) and include:

Intersections

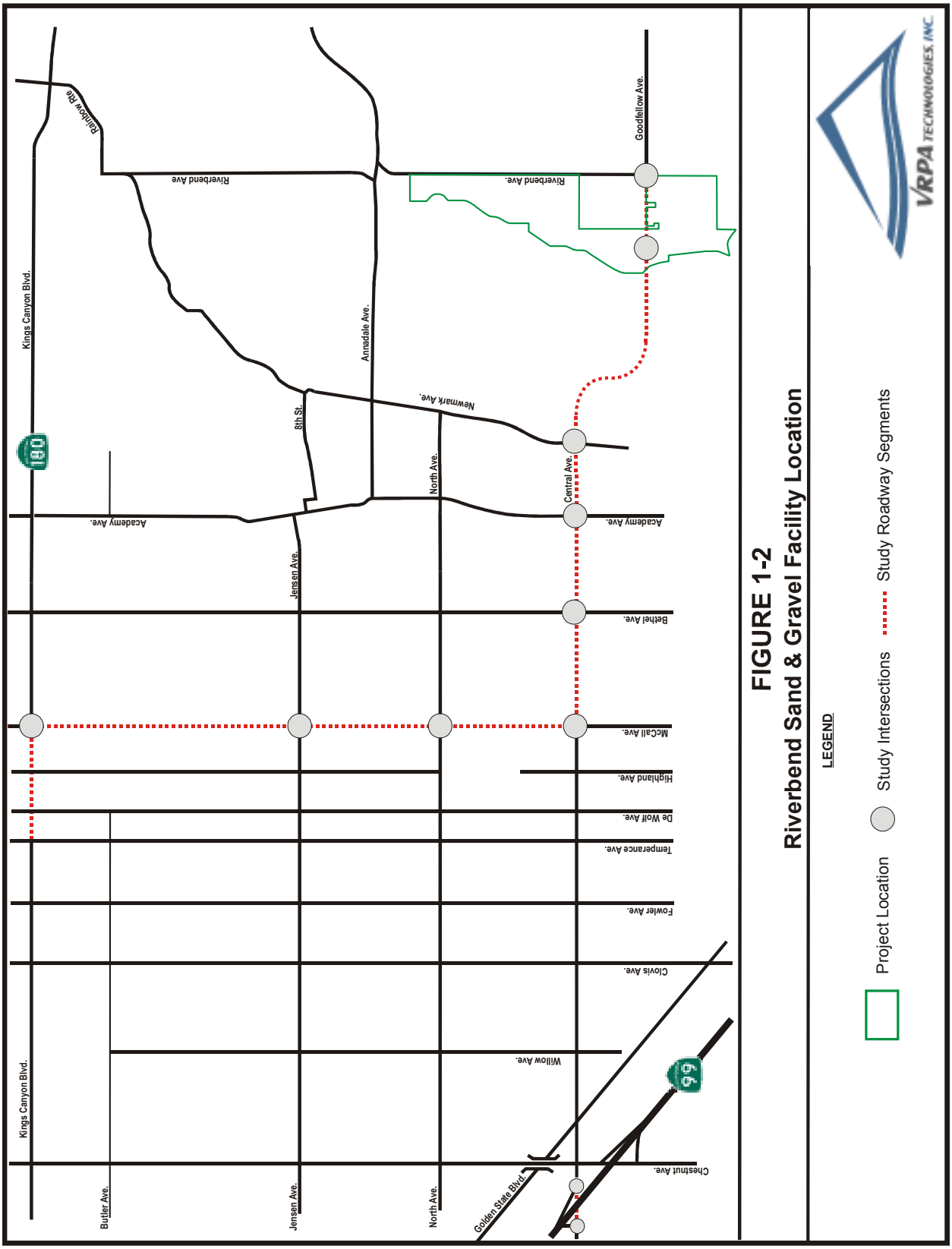
- SR 180 (Kings Canyon Road) / McCall Avenue
- Jensen Avenue / McCall Avenue
- North Avenue / McCall Avenue
- Goodfellow Avenue / Riverbend Avenue
- Central Avenue / Newmark Avenue
- Central Avenue / Academy Avenue
- Central Avenue / Bethel Avenue
- Central Avenue / McCall Avenue
- Central Avenue / SR 99 NB On-Ramp
- Central Avenue / SR 99 SB Off-Ramp
- Goodfellow Avenue / Project Driveway
- Manning Avenue / SR 99 Interchange

FIGURE 1-1
Regional Location

LEGEND

★ Project Location

VRPA TECHNOLOGIES INC.


Rainbow Rd
Riverbend Ave
Goodfellow Ave.
Kings Canyon Blvd.
Annadale Ave.
8th St.
Newmark Ave.
North Ave.
Central Ave.
Academy Ave.
Jensen Ave.
Bethel Ave.
McCall Ave.
Highland Ave.
De Wolf Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
Butler Ave.
99
66
FIGURE 1-2
Riverbend Sand & Gravel Facility Location
LEGEND
Project Location
Study Intersections
Study Roadway Segments
VRPA TECHNOLOGIES, INC.

Roadway Segments

- SR 180 between:
  - McCall Avenue to Highland Avenue
  - Highland Avenue to De Wolf Avenue
  - De Wolf Avenue to Temperance Avenue
- McCall Avenue between:
  - Central Avenue to North Avenue
  - North Avenue to Jensen Avenue
  - Jensen Avenue to SR 180 (Kings Canyon Road)
- Goodfellow Avenue between:
  - Riverbend Avenue to Newmark Avenue
- Central Avenue between:
  - Newmark Avenue to Academy Avenue
  - Academy Avenue to Bethel Avenue
  - Bethel Avenue to McCall Avenue
  - SR 99 NB On-Ramp to SR 99 SB Off-Ramp

1.1.3 *Study Scenarios*

The Traffic Technical Report completed for the proposed Project included level of service (LOS) analysis for the following traffic scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Existing Plus Approved/Pending Conditions
- Existing Plus Project Plus Approve/Pending Conditions
- Year 2015 (Phase 1 of the Project) Conditions
- Year 2017 (Phase 2 of the Project) Conditions
- Year 2019 (Phase 3 of the Project) Conditions
- Cumulative 2035 No Project Conditions
- Cumulative 2035 Plus Project Conditions

1.2 Methodology

When preparing a TIS, guidelines set by affected agencies are followed. In analyzing street and intersection capacities the Level of Service (LOS) methodologies are applied. LOS standards are applied by transportation agencies to quantitatively assess a street and highway system's performance. In addition, safety concerns are analyzed to determine the need for appropriate mitigation resulting from increased traffic, the need for dedicated ingress and egress access lanes to the project, and other evaluations such as the need for signalized intersections or other improvements.

Intersection Level of Service

Intersection LOS analysis was conducted using the Synchro traffic signal timing program. Levels of Service

can be determined for both signalized and unsignalized intersections. Two (2) of the study intersections are currently signalized, while nine (9) are unsignalized.

Tables 1-1 and 1-2 indicate the ranges in the amounts of average delay for a vehicle at signalized and unsignalized intersections for the various levels of service ranging from LOS "A" to "F".

The signalized LOS standards applied to calculate intersection LOS are in accordance with the current edition of the Highway Capacity Manual (HCM). Intersection turning movement counts and roadway geometrics used to develop LOS calculations were obtained from field review findings and count data provided from the traffic count sources identified in Section 2.1.

When an unsignalized intersection does not meet acceptable LOS standards, the investigation of the need for a traffic signal shall be evaluated. The California Manual on Uniform Traffic Control Devises for Streets and Highways dated January 13, 2012 (CMUTCD), introduces standards for determining the need for traffic signals. The CMUTCD indicates that the satisfaction of one or more traffic signal warrants does not in itself require the installation of a traffic signal. In addition to the warrant analysis, an engineering study of the current or expected traffic conditions should be conducted to determine whether the installation of a traffic signal is justified. The CMUTCD Peak Hour Warrant (Warrant 3) was used to determine if a traffic signal is warranted at unsignalized intersections that fall below current LOS standards.

Segment Level of Service

According to the HCM, LOS is categorized by two parameters of traffic: uninterrupted and interrupted flow. Uninterrupted flow facilities do not have fixed elements such as traffic signals that cause interruptions in traffic flow. Interrupted flow facilities do have fixed elements that cause an interruption in the flow of traffic, such as stop signs and signalized intersections along arterial roads. A roadway segment is defined as a stretch of roadway generally located between signalized or controlled intersections.

Segment LOS is important in order to understand whether the capacity of a roadway can accommodate future traffic volumes. Table 1-3 provides a definition of segment LOS. The performance criteria used for evaluating volumes and capacities on the road and highway system were estimated using the Modified HCM-Based LOS Tables (Florida Tables) for County facilities. The tables consider the capacity of individual road and highway segments based on numerous roadway variables (design speed, passing opportunities, signalized intersections per mile, number of lanes, saturation flow, etc.). These variables were identified and applied to reflect segment LOS conditions. Additional information is included in Appendix A. The performance criteria used for evaluating volumes and capacities on the road and highway system for Caltrans facilities were estimated using HCM methodologies (HCS 2010).

TABLE 1-1

Signalized Intersections
Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	Describes operations with very low delay. This level of service occurs when there is no conflicting traffic for a minor street.	≤ 10.0
B	Describes operations with moderately low delay. This level generally occurs with a small amount of conflicting traffic causing higher levels of average delay.	> 10.0 - 20.0
C	Describes operations with average delays. These higher delays may result from a moderate amount of minor street traffic. Queues begin to get longer.	> 20.0 - 35.0
D	Describes a crowded operation, with below average delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from shorter gaps on the mainline and an increase of minor street traffic. The queues of vehicles are increasing.	> 35.0 - 55.0
E	Describes operations at or near capacity. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor gaps for the minor street to cross and large queues.	> 55.0 - 80.0
F	Describes operations that are at the failure point. This level, considered to be unacceptable to most drivers, often occurs with over- saturation, that is, when arrival flow rates exceed the capacity of the intersection. Insufficient gaps of suitable size exist to allow minor traffic to cross the intersection safely.	> 80.0

TABLE 1-2

Unsignalized Intersections
Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	No delay for stop-controlled approaches.	0 - 10.0
B	Describes operations with minor delay.	> 10.0 - 15.0
C	Describes operations with moderate delays.	> 15.0 - 25.0
D	Describes operations with some delays.	> 25.0 - 35.0
E	Describes operations with high delays and long queues.	> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50.0

TABLE 1-3

Segment Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION
A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.
B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.
D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
E	Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
F	Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point where the amount of traffic exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.

1.3 Policies to Maintain Level of Service

An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Fresno County, the City of Sanger, and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs.

Fresno County's 2000 General Plan, policy number TR-A.2, identifies a minimum LOS standard of D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county.

The City of Sanger's 2025 General Plan, goal number 4-2, identifies a minimum LOS standard of C along all major streets and highways except that LOS D may be allowed at intersections of any major street, highway or along street and highway segments where additional improvements are not feasible.

Caltrans identifies' a minimum LOS is C, except where the existing LOS is D or below, according to information specified in the Caltrans, "A Guide For Traffic Impact Studies".

Given the LOS standards of the various agencies in the Project area, the goal of the Project was to provide LOS results that met the goals of the individual agencies for intersections and street segments within their spheres of influence.

Table 1-4 shows the General Plan target LOS for each intersection based upon its jurisdictional location.

1.4 Agency Responsibilities and Regional Transportation Planning

Transportation planning and transportation system operations and management in the Project area is the responsibility of three public agencies: Fresno County, the City of Sanger, and Caltrans. Each of the agencies has specific responsibilities and jurisdictional limits, which are defined below.

1.4.1 *Fresno County*

The Transportation and Circulation Element of the Fresno County General Plan guides the continued development and improvement of the circulation system to support existing and planned development. The Circulation Element addresses the circulation improvements needed to provide adequate capacity for future land uses. The Element establishes a hierarchy of transportation routes with typical development standards described for each roadway category. The County also includes additional standards, plans and programs that apply to the evaluation of transportation impacts of the Project. These standards cover the primary aspects of the transportation system

1.4.2 *City of Sanger*

The City of Sanger completed an update of its General Plan in November of 2003, including the Circulation Element. A number of issues, goals, policies, and implementation strategies are included in the General Plan Circulation Element.

1.4.3 *California Department of Transportation (Caltrans)*

The California Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's State highway system, including rail and mass transit. Within the Project study area, Caltrans is responsible for State Route 99 and State Route 180. State Route 99 (freeway) provides the primary regional access linking the Cities of Fresno, Madera (in Madera County), and several small cities along the State Route 99 corridor. State Route 99 is designated as an "Interregional Route of Significance" and a "Focus Route" for federal and State funding. State Route 180 is a state highway, which runs through the heart of the San Joaquin Valley from Mendota through Fresno to Kings Canyon National Park, with an unbuilt segment defined west to Paicines.

TABLE 1-4

General Plan Target LOS by Intersection

INTERSECTION	JURISDICTION	TARGET LOS[1]
1. SR 180 (Kings Canyon Road) / McCall Avenue[2]	Caltrans / Fresno County	C
2. Jensen Avenue / McCall Avenue[2]	Fresno County	C
3. North Avenue / McCall Avenue[3]	Fresno County	C
4. Goodfellow Avenue / Riverbend Avenue[4]	Fresno County	C
5. Central Avenue / Newmark Avenue[3]	City of Sanger / Fresno County	C
6. Central Avenue / Academy Avenue[3]	City of Sanger / Fresno County	C
7. Central Avenue / Bethel Avenue[3]	Fresno County	C
8. Central Avenue / McCall Avenue[3]	Fresno County	C
9. Central Avenue / SR 99 NB On-Ramp[5]	Caltrans	C
10. Central Avenue / SR 99 SB Off-Ramp[4]	Caltrans	C
11. Goodfellow Avenue / Project Driveway[4]	Fresno County	C

(1) Based on respective jurisdiction General Plan Standards

(2) Signalized Intersection.

(3) Four-Way Stop Intersection.

(4) One-Way Stop Intersection.

(5) One-Way Yield Intersection.

2.0 Existing Conditions

2.1 Existing Traffic Counts and Roadway Geometrics

The first step toward assessing Project traffic impacts is to assess existing traffic conditions. Existing AM and PM peak hour turning movements were collected at each Project intersection by National Data and Surveying Services. Traffic counts were conducted for the peak hour periods of 7:00-9:00 AM and 4:00-6:00 PM for all key intersections on Tuesday, December 13, 2011. Traffic count data worksheets are provided in Appendix B. Seasonal adjustment factors for the count dates shown above were provided by Fresno County staff. For Tuesday, December 13, 2011, the season adjustment factor is 0.96. As a result, seasonal adjustment factors were not applied to the counts because applying the factors to the counts would result in lower intersection and segment volumes. Traffic counts were also conducted on January 30, 2014 at SR 180 and Highland Avenue and SR 180 and De Wolf Avenue for the purposes of determining segment impacts along SR 180 between Highland Avenue and Temperance Avenue.

2.2 Existing Functional Roadway Classification System

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and highways do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads.

The current hierarchical system of roadways consists of the following six (6) basic classifications:

- **State Routes** - are roadway facilities maintained by Caltrans. Caltrans manages more than 50,000 miles of California's highway and freeway systems.

    - **State Route 99 –** currently exists as a six-lane freeway with a posted speed limit of 70 mph. According to the California Department of Transportation's website, the average annual daily traffic (AADT) along SR 99 in this area consisted of approximately 84,500 trips in 2010.
    - **State Route 180 –** currently exists as a four-lane highway from Academy Avenue to De Wolf Avenue with a posted speed limit of 65 mph. According to the California Department of Transportation's website, the average annual daily traffic (AADT) along SR 180 in this area consisted of approximately 16,600 trips in 2010.

- **Expressways** – are high-speed, two- to six-lane divided roadways, primarily servicing through and cross-town traffic, with no direct access to abutting property and at-grade intersections located at approximately half-mile intervals.

    - **Jensen Avenue (West of the City of Sanger) -** currently a divided four-lane road with and without bike lanes, with a posted speed limit of 55 to 65 mph.

- **Super Arterials** – Four-to six-lane divided roadways with a primary purpose of moving traffic to and from major traffic generators and between community plan areas. Access will typically be limited to right-turn entrance and exit vehicular movements.

- **Arterials** – Four- to six-lane divided roadways, with somewhat limited access to abutting properties, and with the primary purpose of moving traffic within and between community plan areas and to and from freeways and expressways.

    - **Academy Avenue –** currently a divided four-lane road with bike lanes in various places, with a posted speed limit between 30 and 40 mph.
    - **North Avenue –** currently an undivided two-lane road without bike lanes, with a posted speed limit between 35 to 55 mph.
    - **Bethel Avenue -** currently an undivided two-lane road without bike lanes, with a posted speed limit of 55 mph.
    - **Goodfellow Avenue –** currently an undivided two-lane road without bike lanes, with a posted speed limit of 55 mph.
    - **Jensen Avenue (Within the City of Sanger) –** currently an undivided four-lane road without bike lanes, with a posted speed limit of 30 mph within the City of Sanger.
    - **McCall Avenue –** currently an undivided two-lane road without bike lanes, with a speed limit of 55 mph.
    - **Newmark Avenue –** currently an undivided two-lane road without bike lanes, with a posted speed limit of 55 mph.
    - **Central Avenue (SR 99 to Clovis Avenue and Academy Avenue to Newmark Avenue) -** currently an undivided two-lane road without bike lanes, with a posted speed limit of 55 mph.

- **Collectors** – Two to four-lane undivided roadways, with the primary function of connecting local streets and arterials and neighborhood traffic generators and providing access to abutting properties.

    - **Central Avenue (Clovis Avenue to Academy Avenue) –** currently an undivided two-lane road without bike lanes, with a posted speed limit between 45 and 55 mph.

- **Local Streets** – Two- to three-lane public or private roadways designed to provide direct access to properties while discouraging through traffic between major streets. They are intended to carry low volumes of traffic and support unrestricted on-street parking.

2.3 Affected Streets and Highways

Street and highway intersections and segments near and adjacent to the Project site were analyzed to determine levels of service utilizing HCM-based methodologies described previously. The study intersections and street and highway segments included in this Traffic Technical Report are listed below. Counts were taken on Tuesday, December 13, 2011 and Thursday, August 22, 2013.

Intersections:

- SR 180 (Kings Canyon Road) / McCall Avenue
- Jensen Avenue / McCall Avenue
- North Avenue / McCall Avenue

- Goodfellow Avenue / Riverbend Avenue
- Central Avenue / Newmark Avenue
- Central Avenue / Academy Avenue
- Central Avenue / Bethel Avenue
- Central Avenue / McCall Avenue
- Central Avenue / SR 99 NB On-Ramp
- Central Avenue / SR 99 SB Off-Ramp
- Goodfellow Avenue / Project Driveway
- Manning Avenue / SR 99 Interchange

Roadway Segments

- SR 180 between:
  - McCall Avenue to Highland Avenue
  - Highland Avenue to De Wolf Avenue
  - De Wolf Avenue to Temperance Avenue
- McCall Avenue between:
  - Central Avenue to North Avenue
  - North Avenue to Jensen Avenue
  - Jensen Avenue to SR 180 (Kings Canyon Road)
- Goodfellow Avenue between:
  - Riverbend Avenue to Newmark Avenue
- Central Avenue between:
  - Newmark Avenue to Academy Avenue
  - Academy Avenue to Bethel Avenue
  - Bethel Avenue to McCall Avenue
  - SR 99 NB On-Ramp to SR 99 SB Off-Ramp

The existing lane geometry at key study area intersections is shown in Figure 2-1. Two (2) of the study intersections are currently signalized, while nine (9) are unsignalized. Figures 2-2 and 2-3 show existing traffic volumes for the AM and PM peak hours in the study area.

2.4 Level of Service

Intersection Capacity Analysis

All intersection LOS analyses were estimated using Synchro 7 Software. Various roadway geometrics, traffic and pedestrian volumes, and properties (signal timing, peak hour factors, etc) were input into the Synchro 7 Software program in order to accurately determine the travel delay and LOS for each Study scenario. The intersection LOS and delays reported represent the Synchro outputs. Synchro assumptions, listed below, show the various Synchro inputs and methodologies used in the analysis.

- LANE GEOMETRY
  - Storage lengths for turn lanes for existing intersections were measured in the field and rounded to the nearest 25 feet.

- Storage lengths for turn lanes for future intersections were estimated based on traffic forecasts.

♦ TRAFFIC CONDITIONS

- The peak hour factor for existing conditions were determined using existing counts based on approach of movement.
- The peak hour factor for future scenarios is 0.92.
- Roadway link speeds were evaluated in the field and input into the Synchro network.
- The Right Turn on Red parameter was set to 'Yes'.

♦ SIGNAL TIMING PARAMETERS

- Signal timing sheets (provided by the City of Fresno and Caltrans) were used to input walk time, don't walk time, minimum initial time, maximum limit time, yellow times, and red times for each study intersection. Signal timing sheets can be found in Appendix C.
- Signal phasing remained constant throughout scenarios unless the project or any other planned improvements are specifically changing an intersection. Lead-Lag Optimize was set to "fixed" for all scenarios.
- When conducting Synchro optimizations, the Allow Uncoordinated option was set to Always, the Allow Half Cycle Option was turned off, Offset Optimization was set at Medium, and the Automatic Optimization option was used.

♦ TRUCK PERCENTAGE

Truck counts were conducted during the week of December 12, 2011 along the segments of Central Avenue between Golden State Boulevard and Willow Avenue and between Academy Avenue and Newmark Avenue, McCall Avenue between Jensen Avenue and North Avenue, and SR 180 between McCall Avenue and Del Rey Avenue. Truck counts are provided in Appendix B.

After reviewing the truck counts, the following truck percentages were determined:

- Central Avenue between Golden State and Willow Avenue – 13%
- Central Avenue between Academy Avenue and Newmark Avenue – 3%
- McCall Avenue between Jensen Avenue and North Avenue – 2%
- SR 180 between McCall Avenue and Del Rey Avenue – 8%

Based on these findings, VRPA recommended that along Central Avenue between McCall Avenue and Academy Avenue the input for truck percentage in Synchro 7 is 13% and along SR 180 between McCall Avenue and Temperance Avenue the input for truck percentage in Synchro 7 is 8%, which is a conservative estimate. For all other streets the truck percentage input is 3%. The recommended truck percentages were used for the existing conditions analysis and all other analysis scenarios.

Results of the analysis show that none of the study intersections is operating worse than the minimum level of service. It should be noted that the intersection of Central Avenue at SR 99 SB Off-Ramp does not meet traffic signal warrants during the AM peak hour. Table 2-1 shows the intersection LOS for the existing conditions. Synchro 7 Worksheets are provided in Appendix D.

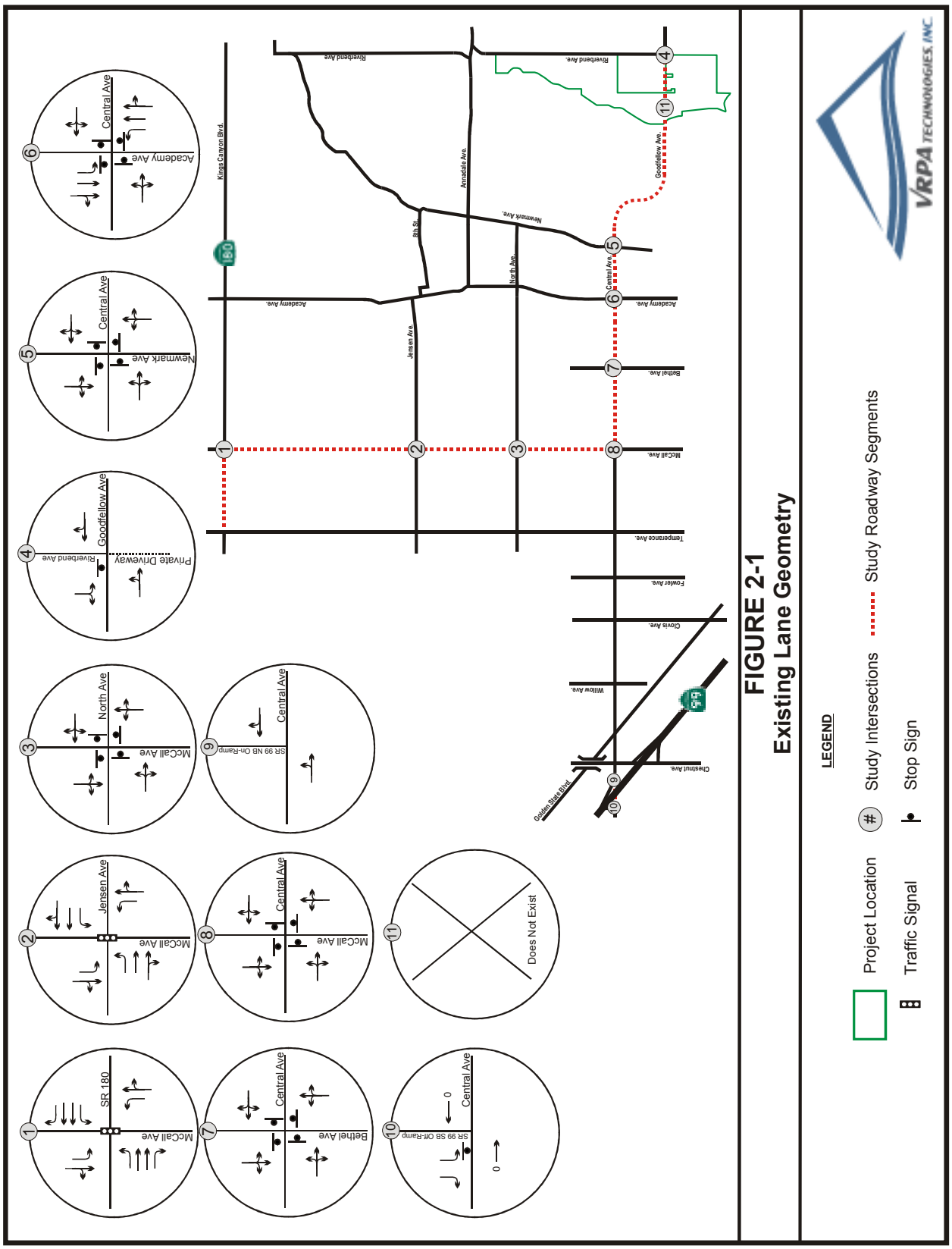


FIGURE 2-1
Existing Lane Geometry
LEGEND
Project Location
Study Intersections
Study Roadway Segments
Traffic Signal
Stop Sign
VRPA TECHNOLOGIES, INC
Does Not Exist

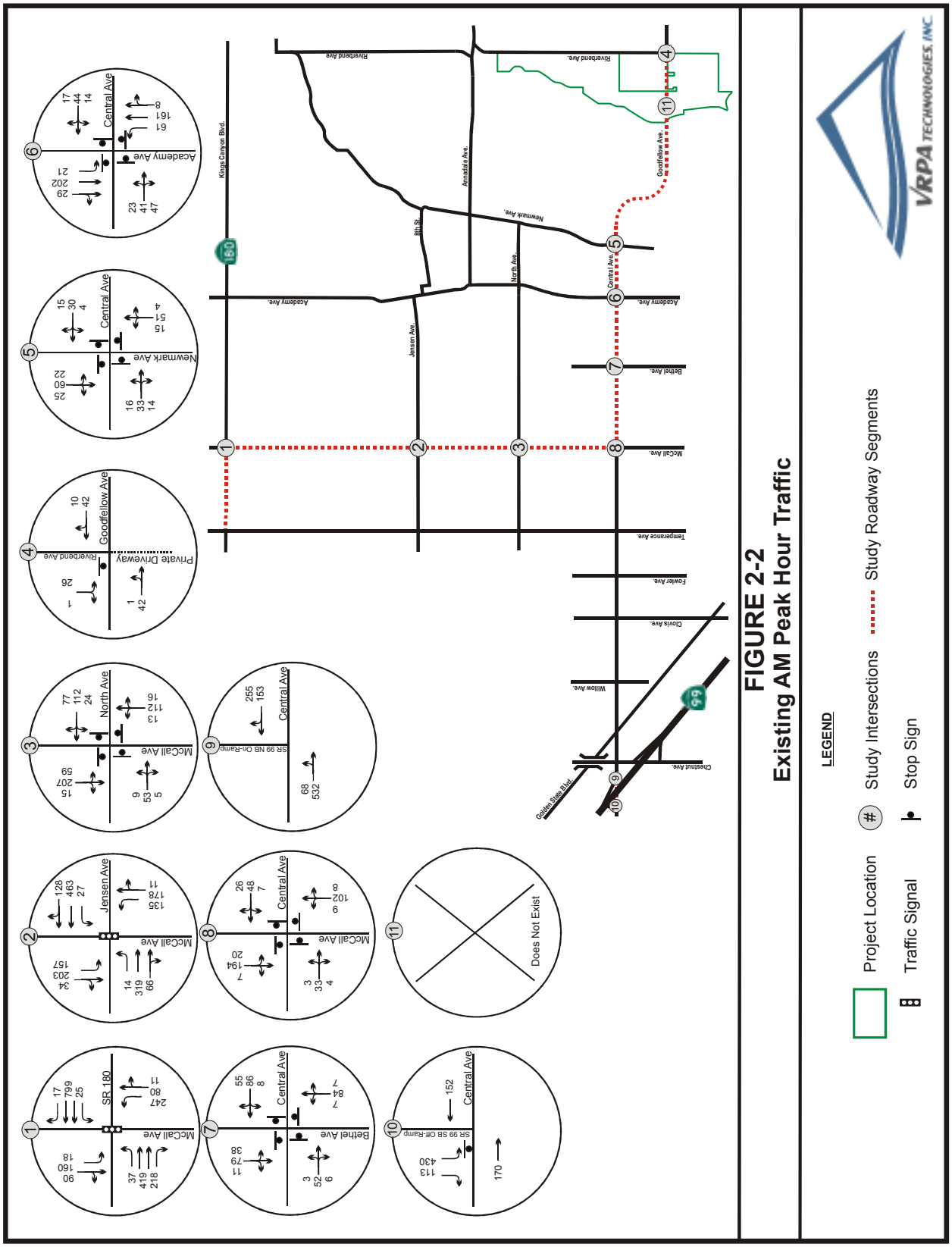


FIGURE 2-2
Existing AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
VRPA TECHNOLOGIES, INC
Does Not Exist
McCall Ave
SR 180
Jensen Ave
North Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Central Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Kings Canyon Blvd.
Golden State Blvd.
Chestnut Ave.
Willow Ave.
Clovis Ave.
Fowler Ave.
Temperance Ave.
McCall Ave.
Bethel Ave.
Academy Ave.
Central Ave.
North Ave.
Jensen Ave.
Annadale Ave.
8th St.
Goodfellow Ave.

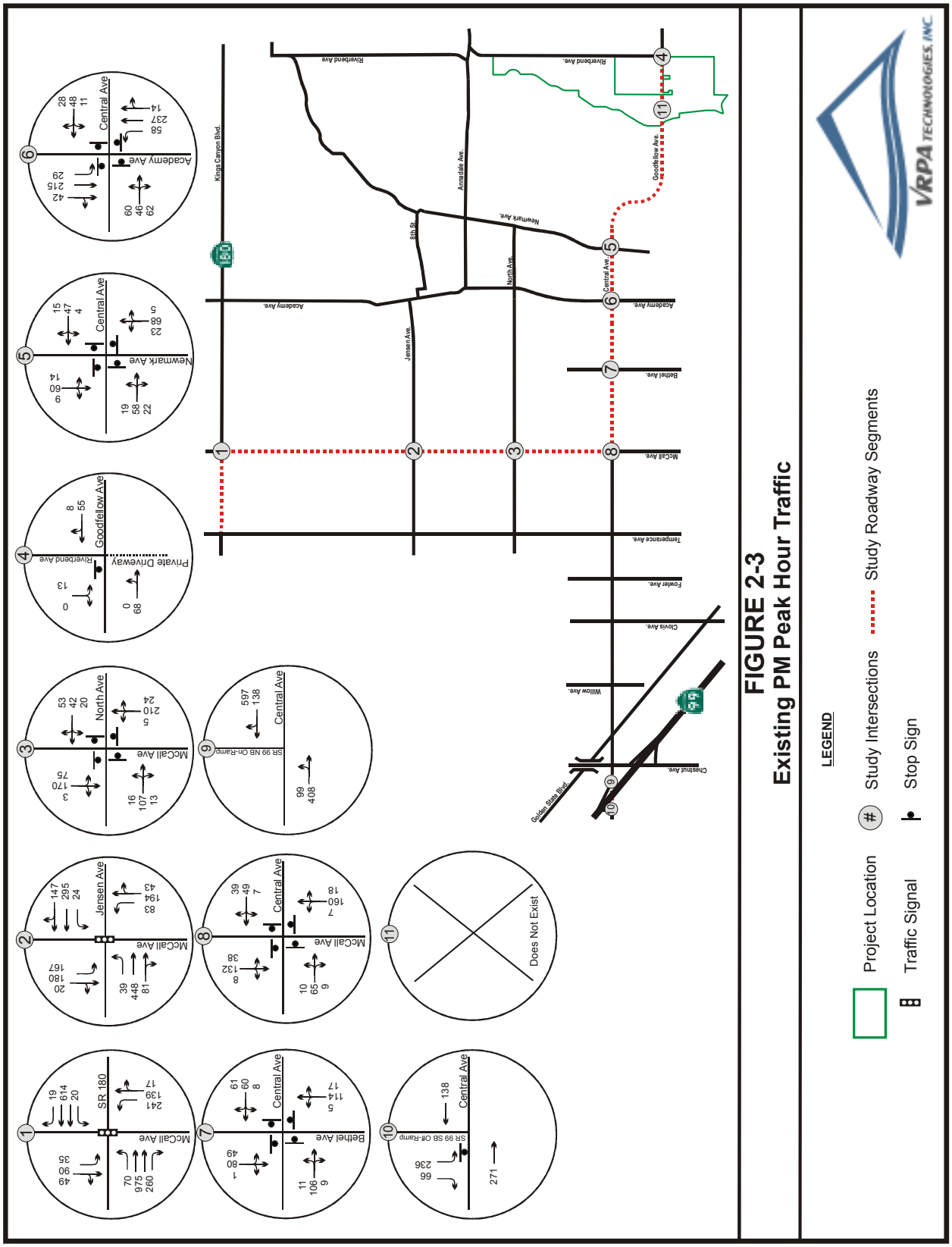


FIGURE 2-3
Existing PM Peak Hour Traffic
LEGEND
Project Location
Study Intersections
Study Roadway Segments
Traffic Signal
Stop Sign
VRPA TECHNOLOGIES, INC
Does Not Exist
Central Ave
McCall Ave
Jensen Ave
North Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Academy Ave
Bethel Ave
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Kings Canyon Blvd
Golden State Blvd
Chestnut Ave
Willow Ave
Clovis Ave
Fowler Ave
Temperance Ave
McCall Ave
Bethel Ave
Academy Ave
Central Ave
North Ave
8th St
Newmark Ave
Amedee Ave
Jensen Ave
Goodfellow Ave
Riverbend Ave

Segment Analysis

Results of the AM and PM peak hour LOS segment analysis along the existing street and highway system are reflected in Table 2-2. Street segment capacity for Fresno County facilities were determined using information shown in Table 2-3, which comes from the Modified Arterial Level of Service Tables included in Appendix A. The performance criteria used for evaluating volumes and capacities on the road and highway system for Caltrans facilities were estimated using HCM methodologies (HCS 2010) and analysis worksheets are provided in Appendix E.

TABLE 2-1

Existing Intersection Operations

INTERSECTION	CONTROL	PEAK HOUR	EXISTING	
			DELAY	LOS
1. McCall Avenue / SR-180	Signalized	AM	30.1	C
		PM	28.9	C
2. McCall Avenue / Jensen Avenue	Signalized	AM	26.9	C
		PM	25.9	C
3. McCall Avenue / North Avenue	All-Way Stop Sign	AM	11.9	B
		PM	11.1	B
4. Riverbend Avenue / Goodfellow Avenue	One-Way Stop Sign	AM	9.4	A
		PM	9.4	A
5. Newmark Avenue / Central Avenue	All-Way Stop Sign	AM	8.1	A
		PM	8.2	A
6. Academy Avenue / Central Avenue	All-Way Stop Sign	AM	10.1	B
		PM	12.9	B
7. Bethel Avenue / Central Avenue	All-Way Stop Sign	AM	9.1	A
		PM	9.4	A
8. McCall Avenue / Central Avenue	All-Way Stop Sign	AM	9.7	A
		PM	9.4	A
9. SR-99 NB On-Ramp / Central Avenue	EB Left - Yield	AM	1.5	A
		PM	2.3	A
10. SR-99 SB Off-Ramp / Central Avenue	One-Way Stop Sign	AM	--	C*
		PM	19.0	C

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized and all-way stop controlled intersections, delay results show the average for the entire intersection. For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.

* Traffic signal not warranted; LOS C assumed

TABLE 2-2

Existing Street Segment Operations

STREET SEGMENT	DIRECTION	PEAK HOUR	EXISTING	
			VOLUME	LOS
SR 180 [1]				
McCall Avenue to Highland Avenue	EB	AM	839	A
		PM	1,353	B
	WB	AM	1,554	B
		PM	904	A
Highland Avenue to De Wolf Avenue	EB	AM	843	A
		PM	1,390	B
	WB	AM	1,567	B
		PM	879	A
De Wolf Avenue to Temperance Avenue[2]	EB	AM	865	A
		PM	1,450	B
	WB	AM	1,630	B
		PM	899	A
McCall Avenue				
SR-180 to Jensen Avenue	NB	AM	338	B
		PM	397	B
	SB	AM	403	B
		PM	370	B
Jensen Avnue to North Avenue	NB	AM	324	B
		PM	320	B
	SB	AM	296	B
		PM	285	B
North Avenue to Central Avenue	NB	AM	141	B
		PM	239	B
	SB	AM	236	B
		PM	203	B
Central Avenue				
SR-99 NB On-Ramp to SR-99 SB Off-Ramp	EB	AM	600	C
		PM	507	C
	WB	AM	153	B
		PM	138	B
McCall Avenue to Bethel Avenue	EB	AM	61	B
		PM	126	B
	WB	AM	104	B
		PM	95	B
Bethel Avenue to Academy Avenue	EB	AM	111	B
		PM	172	B
	WB	AM	149	B
		PM	148	B
Academy Avenue to Newmark Avenue	EB	AM	70	B
		PM	99	B
	WB	AM	75	B
		PM	87	B
Goodfellow Avenue				
Newmark Avenue to Riverbend Avenue	EB	AM	59	B
		PM	77	B
	WB	AM	49	B
		PM	66	B

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

(1) Segment Analysis was performed using HCM Methodologies

(2) Freeway Segment

TABLE 2-3

Peak Hour One-Way Volumes

Level of Service					
Lanes	Divided	B	C	D	E
Freeways					
2	Divided	2,200	3,020	3,720	4,020
3	Divided	3,300	4,580	5,580	6,200
4	Divided	4,400	6,080	7,420	8,400
State Roadways					
1	Undivided	510	820	880	**
2	Divided	1,560	1,890	1,960	**
3	Divided	2,400	2,860	2,940	**
4	Divided	3,240	3,830	3,940	**
Non-State Roadways					
1	Undivided	459	738	792	**
2	Divided	1,404	1,701	1,764	**
3	Divided	2,160	2,574	2,646	**
4	Divided	2,916	3,447	3,546	**

** Not applicable for that level of service letter grade. Volumes greater than level of service D become F because intersection capacities have been reached.

3.0 Traffic Impacts

This chapter provides an assessment of the traffic the Project is expected to generate and the impact of that traffic on the surrounding street system.

3.1 Trip Generation

To assess the impacts that the Project may have on the surrounding street and highway segments and intersections, the first step is to determine Project trip generation. Project trip generation is shown in Table 3-1. Daily and Peak hour Project truck trip generation was provided by Riverbend Sand and Gravel staff representatives. Peak Hourly sales of each product are based on the maximum hourly production capacity of each plant and the maximum loading capacity of the mobile loading equipment (loaders). The plants will be constructed with the maximum hourly production capacity. Therefore, while annual production may increase the peak hour sales capacity is the same throughout the life of the Project. A daily "trip" is defined as a "one-way" trip. AM and PM peak hour percentages and splits are based on information provided by Project staff representatives. Information on Project production levels and phased Project production is included in Appendix F of this report.

TABLE 3-1

Project Daily and Peak Hour Volumes

USE	TOTAL SALES[3]	AVERAGE DAILY TRIP ENDS[1]	AM PEAK HOUR[2]				PM PEAK HOUR[2]			
		VOLUME	IN:OUT SPLIT	VOLUME			IN:OUT SPLIT	VOLUME		
				IN	OUT	TOTAL		IN	OUT	TOTAL
Phase 1 (Year 2015)	0.35 Million Tons/Year	162 Truck Trips	50:50	72	72	144	50:50	4	4	8
		62 Other Trips[4]	86:14	2	0	2	20:80	1	6	7
Phase 2 (Year 2017)	0.70 Million Tons/Year	308 Truck Trips	50:50	72	72	144	50:50	4	4	8
		86 Other Trips[4]	86:14	2	0	2	20:80	1	6	7
Phase 3 (Year 2019)	1.25 Million Tons/Year[5]	516 Truck Trips	50:50	72	72	144	50:50	4	4	8
		90 Other Trips[4]	86:14	2	0	2	20:80	1	6	7
TOTAL PROJECT TRIPS[5]				**74**	**72**	**146**		**5**	**10**	**15**
TOTAL PROJECT TRIPS W/ PCE[6]				**182**	**180**	**362**		**11**	**16**	**27**

1 A "trip" is defined as a "one-way" trip

2 Based on Riverbend Peak Hour Operations

3 Aggregate sales includes aggregate for on-site asphalt and ready-mix plants

4 Employees, Outside Services, and Misc Visitors. Estimate of AM and PM Peak hour trips and splits based on ITE Land Use 130 and Riverbend Operations

5 Project Build-Out. AM Peak: Aggregate Trucks (50), asphalt trucks (40), ready-mix trucks (42), recycle trucks (6), liquid asphalt trucks (2), cement (4) trucks, and other trips (2)

6 PCE of 2.5:1 was applied to truck trips

3.2 Trip Distribution

To facilitate the estimation of trip distribution for this Project, Riverbend Sand and Gravel representatives were contacted. Project representatives provided the truck trip distribution for the proposed Project. The expected distribution was obtained from aggregate industry professionals experienced in the eastern Fresno County market area and is based on the following:

- Estimated sales projections
- The most direct and quickest routes to product destinations within the eastern Fresno County market area.

Typically, Fresno Council of Governments (Fresno COG) would be contacted for the purpose of determining a Project's trip distribution. However, Fresno COG does not model mining or sand and gravel type project's since their trips are driven by sales/demand for the material. VRPA reviewed the applicant's sales projections and corresponding trip distribution and believes that it is an accurate representation of the Project's trip distribution based upon the planned development within Fresno County and the surrounding area. VRPA staff also performed travel time runs for various truck routes in the Project study area to confirm the Project's trip distribution. Employee and other trips generated by the Project were distributed using engineering judgment and typical operating hours of each plant. Trip distribution for Existing Plus Project, Existing Plus Project Plus Approved/Pending, Year 2015, 2017, 2019, and Cumulative Year 2035 conditions are shown in Figures 3-1 and 3-2.

3.3 Project Traffic

Project traffic as shown in Table 3-1 was distributed to the roadway system using the trip distribution percentages shown in Figures 3-1 and 3-2. A graphical representation of the resulting AM and PM peak hour Project trips used is shown in Figures 3-3 and 3-4. The Project trips represented in Figures 3-3 and 3-4 include the Passenger Car Equivalency (PCE) factor for Project truck trips as shown in Table 3-1.

The capacity analysis for all analysis scenarios was performed assuming a PCE of 2.5:1 for all Project truck trips entering and exiting the facility, which is consistent with Caltrans staff recommendations. The PCE's are reflected in the figures and segment operations tables included in this TIS report.

3.4 Existing Plus Project Traffic Conditions

An Existing Plus Project Scenario was analyzed to include existing traffic plus traffic generated by the Project. The resulting traffic is shown in Figures 3-5 and 3-6. (Note: The Project will not be operational until 2015.)

3.5 Approved/Pending Project Traffic

Traffic impact analyses typically require the analysis of approved/pending projects in addition to the proposed Project. Approved/Pending projects included in this TIS include the operating Vulcan Materials project located off of SR 180, the approved but not currently operating Carmelita Mine & Reclamation project located just west of Reed Avenue between Annadale Avenue and Goodfellow Avenue, and the approved Calaveras Materials Inc. (CMI) Kings River Sand and Gravel project located south of Goodfellow Avenue and east of Riverbend Avenue. CMI has started on-site operations and began generating truck traffic from the site in February of 2014. Trip generation and distribution information for the approved/pending projects was based on information found in their corresponding TIS reports. Trip generation and distribution information are provided in Appendix G. Figure 3-7 shows the locations of the approved/pending projects with respect to the proposed Riverbend Sand & Gravel Facility. Figures 3-8 and 3-9 show the AM and PM peak hour trips for approved/pending project traffic.

The PCE factors used in the respective TIS's for the approved/pending projects are reflected in the Existing Plus Approved/Pending scenario, the Existing Plus Project Plus Approved/Pending scenario and the Year

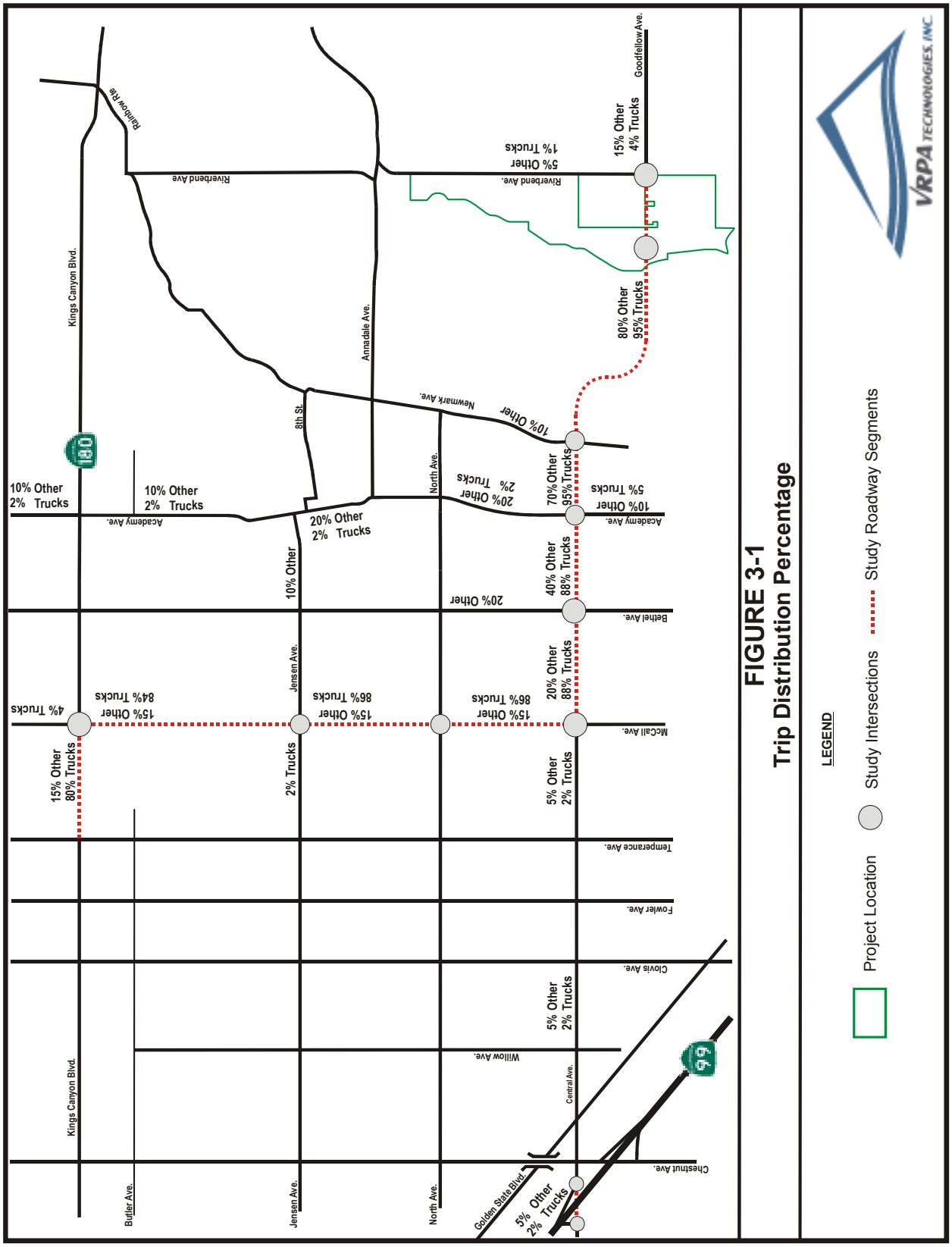
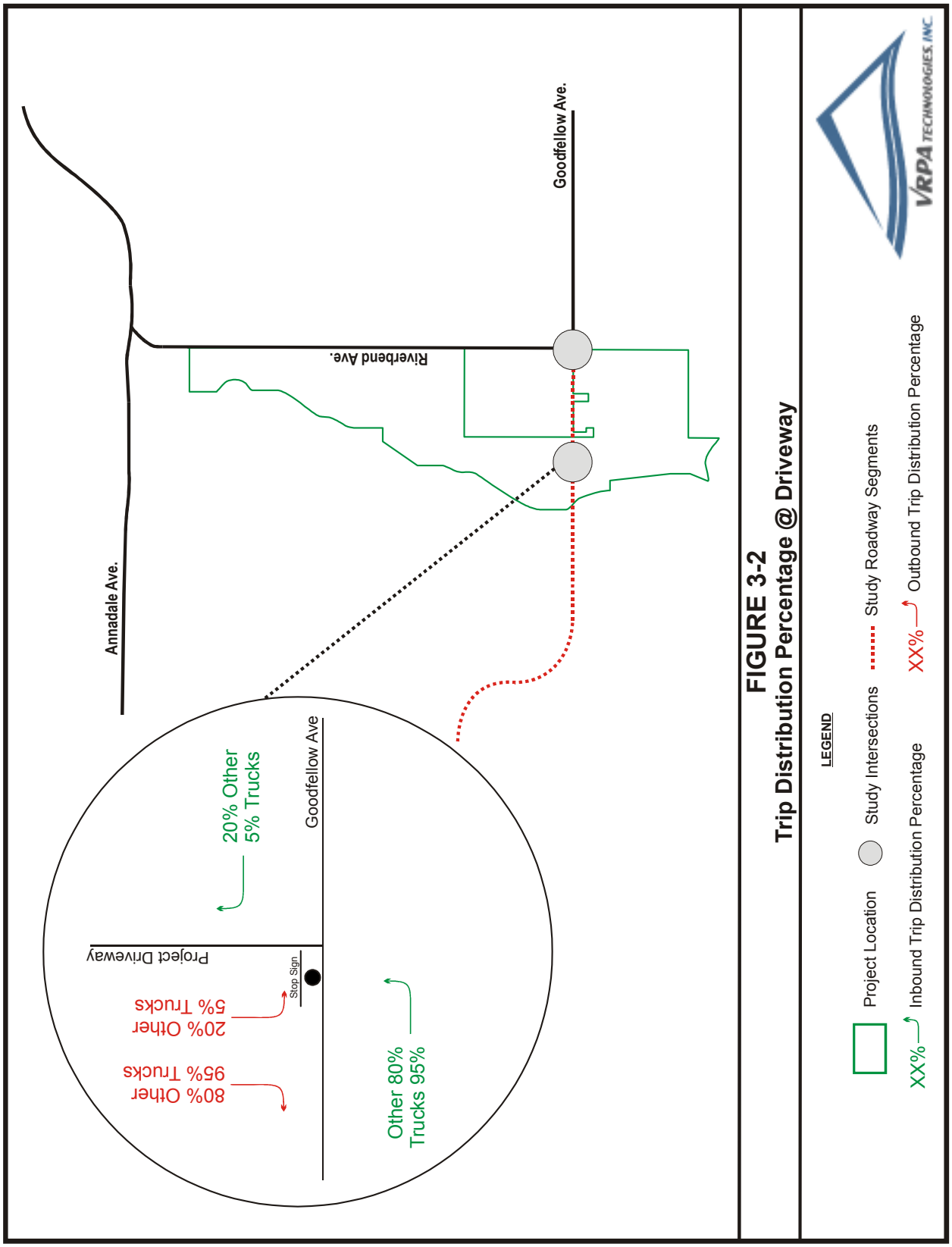


FIGURE 3-1
Trip Distribution Percentage
LEGEND
Project Location
Study Intersections
Study Roadway Segments
VRPA TECHNOLOGIES, INC
Goodfellow Ave.
15% Other
4% Trucks
Riverbend Ave.
5% Other
1% Trucks
Rainbow Rte
Kings Canyon Blvd.
Annadale Ave.
80% Other
95% Trucks
8th St.
Newmark Ave.
10% Other
North Ave.
20% Other
2% Trucks
70% Other
95% Trucks
10% Other
Academy Ave.
10% Other
2% Trucks
10% Other
2% Trucks
20% Other
2% Trucks
40% Other
88% Trucks
20% Other
Bethel Ave.
Jensen Ave.
20% Other
88% Trucks
McCall Ave.
4% Trucks
15% Other
84% Trucks
15% Other
86% Trucks
15% Other
86% Trucks
15% Other
80% Trucks
2% Trucks
5% Other
2% Trucks
Temperance Ave.
Fowler Ave.
Clovis Ave.
5% Other
2% Trucks
Willow Ave.
Central Ave.
Chestnut Ave.
Golden State Blvd.
5% Other
2% Trucks
Butler Ave.
Jensen Ave.
North Ave.
Kings Canyon Blvd.


Goodfellow Ave.
Riverbend Ave.
Annadale Ave.
Goodfellow Ave
Project Driveway
Stop Sign
20% Other
5% Trucks
80% Other
95% Trucks
Other 80%
Trucks 95%
FIGURE 3-2
Trip Distribution Percentage @ Driveway
LEGEND
Project Location
Study Intersections
Study Roadway Segments
XX%
Inbound Trip Distribution Percentage
XX%
Outbound Trip Distribution Percentage
VRPA TECHNOLOGIES, INC

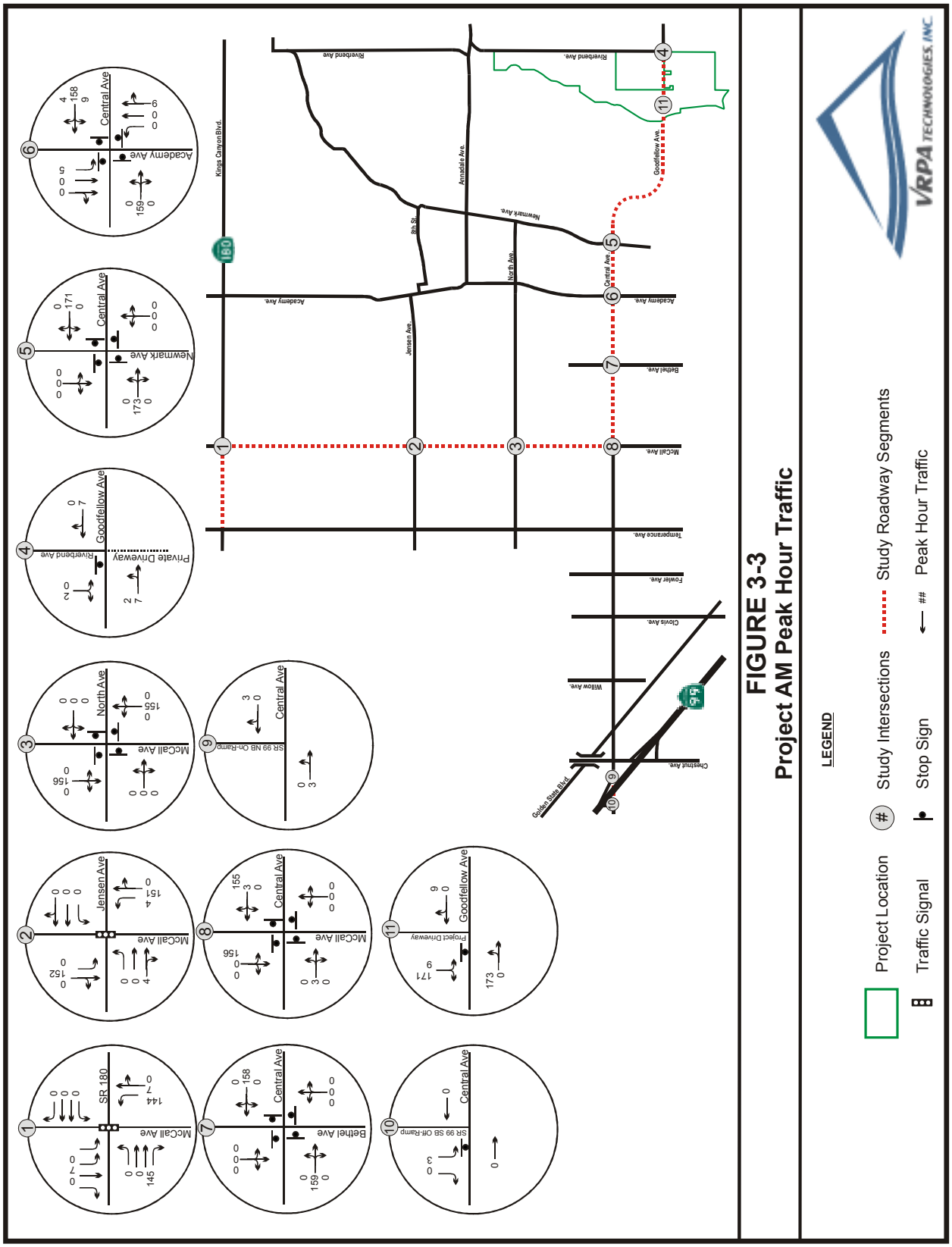


FIGURE 3-3
Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
8th St.
Armadale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
180
99
McCall Ave
SR 180
Jensen Ave
North Ave
Private Driveway
Goodfellow Ave
Central Ave
Newmark Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway

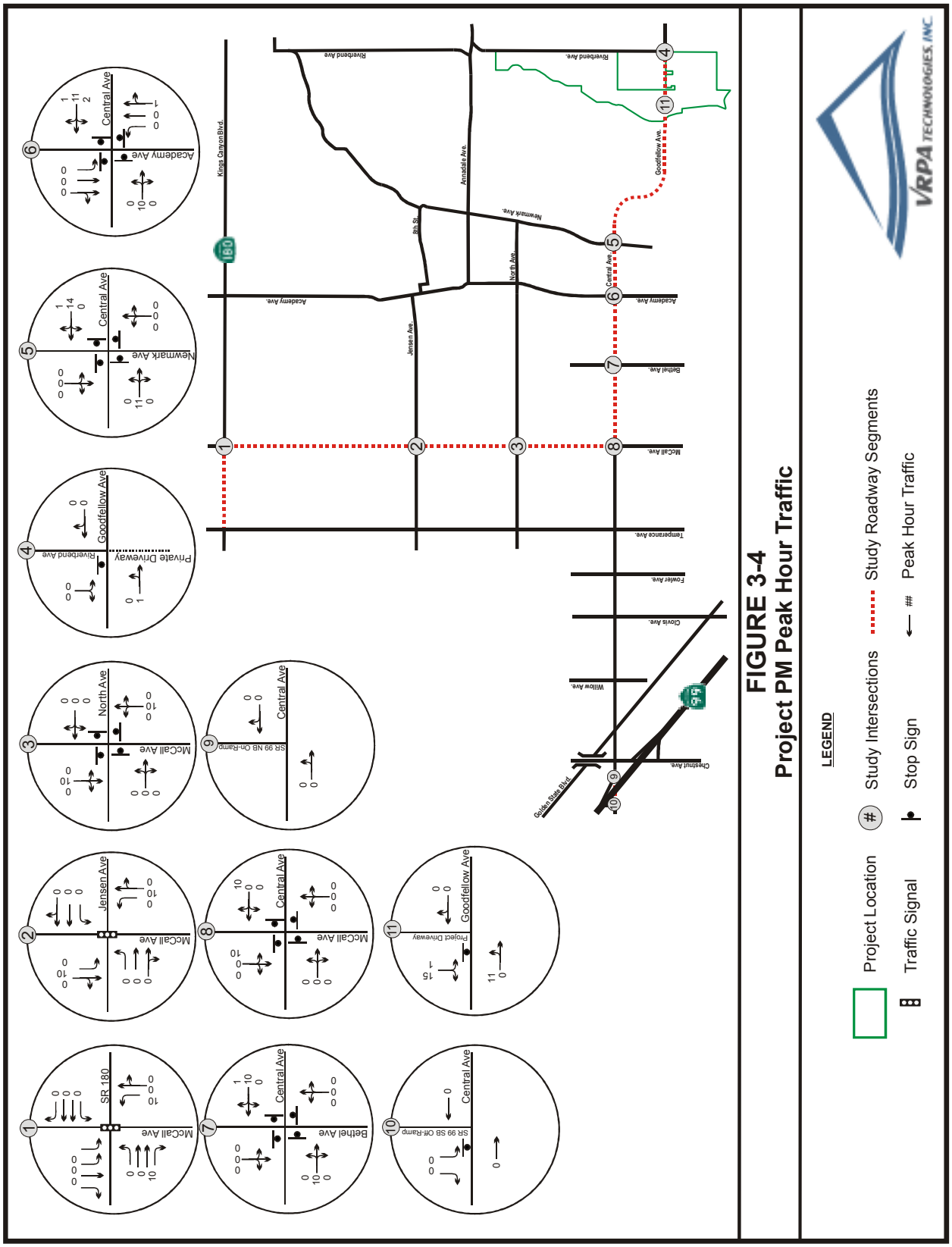


FIGURE 3-4
Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Armadale Ave.
Newmark Ave.
Goodfellow Ave.
Academy Ave.
Jensen Ave.
North Ave.
Central Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Private Driveway

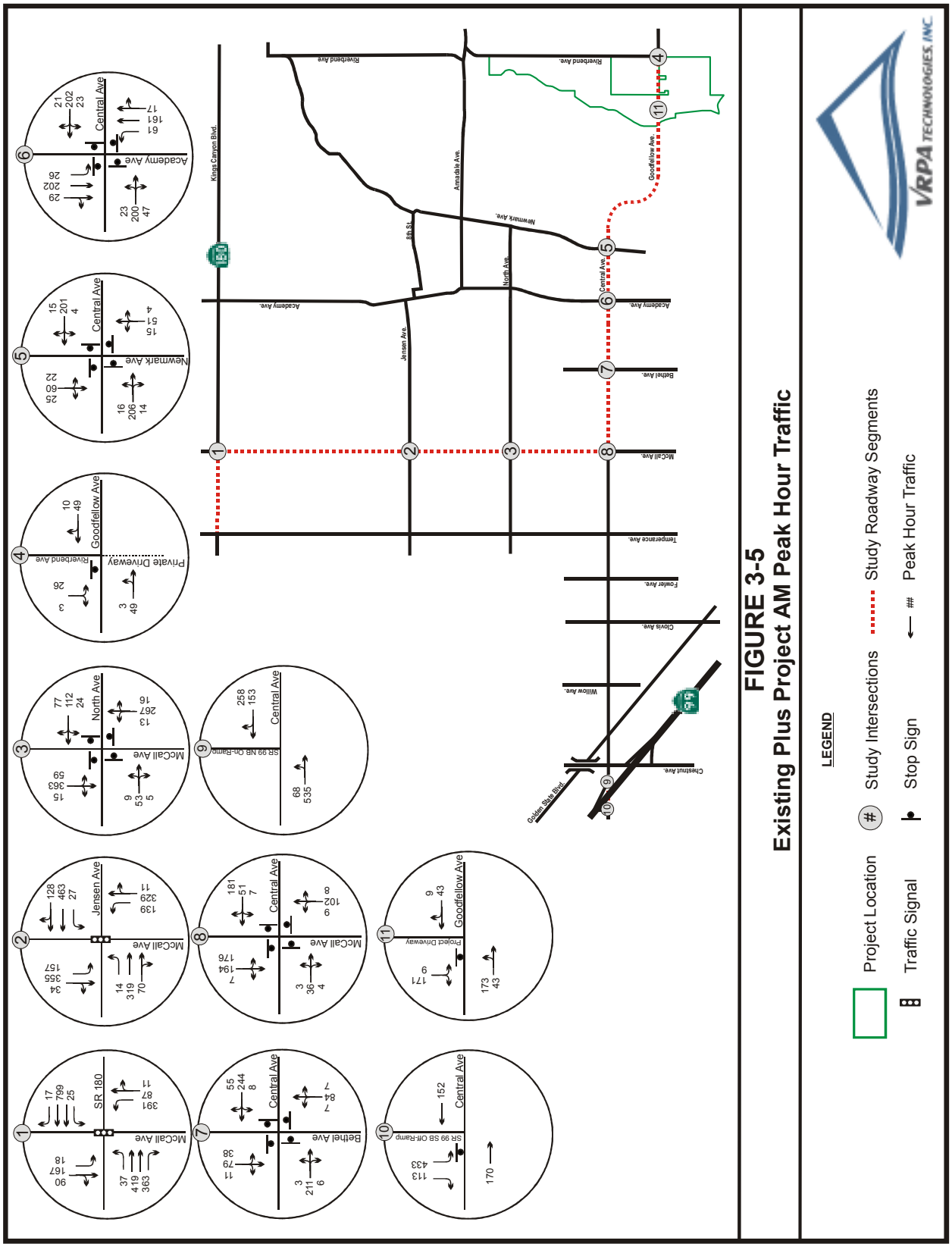


FIGURE 3-5
Existing Plus Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
McCall Ave
SR 180
Jensen Ave
North Ave
Central Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Goodfellow Ave
Newmark Ave
Academy Ave
Riverbend Ave
Private Driveway
Kings Canyon Blvd
Amsdale Ave
Jensen Ave
8th St
North Ave
Central Ave
Academy Ave
Bethel Ave
McCall Ave
Temperance Ave
Fowler Ave
Clovis Ave
Willow Ave
Chestnut Ave
Golden State Blvd
Goodfellow Ave
Riverbend Ave
99
180

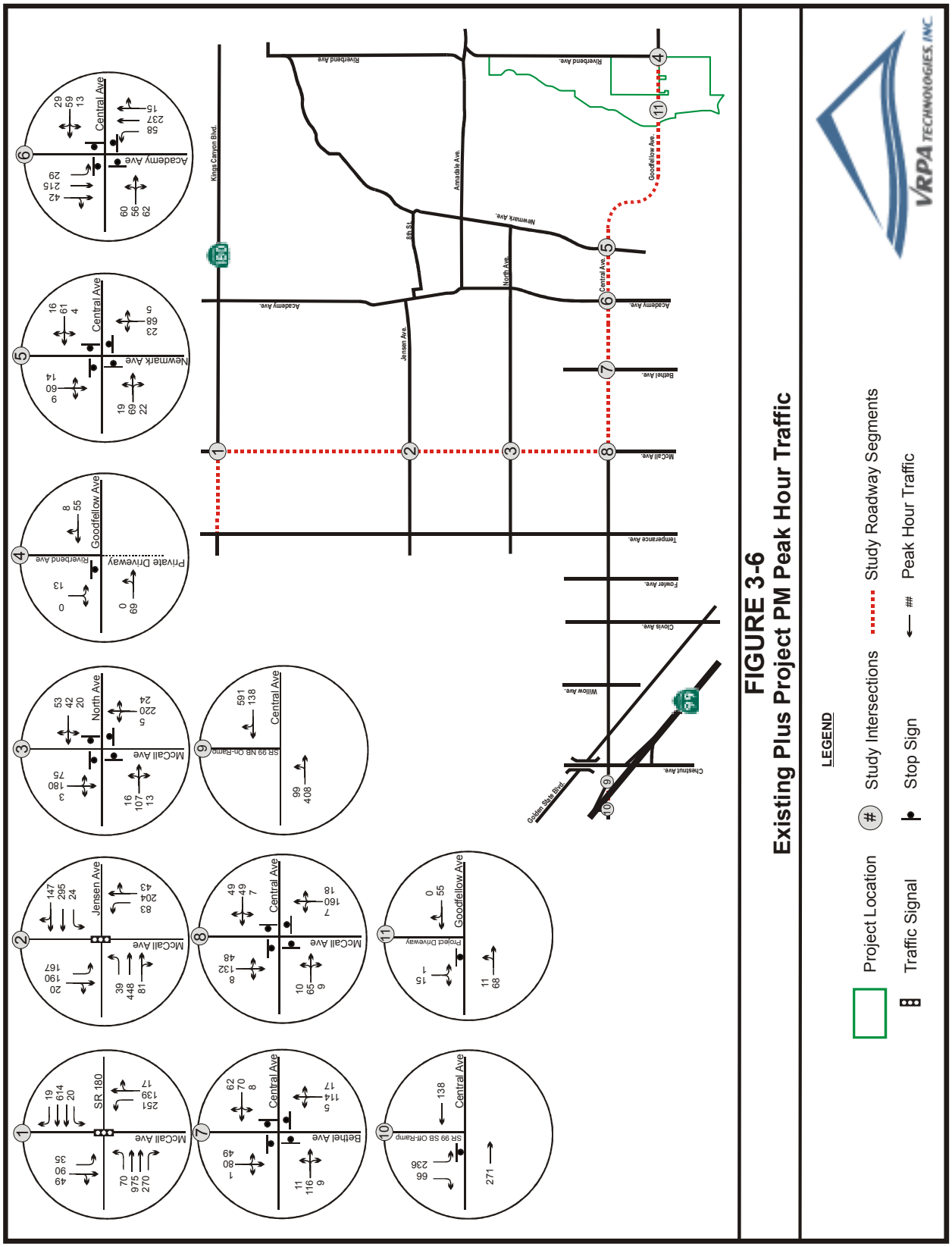
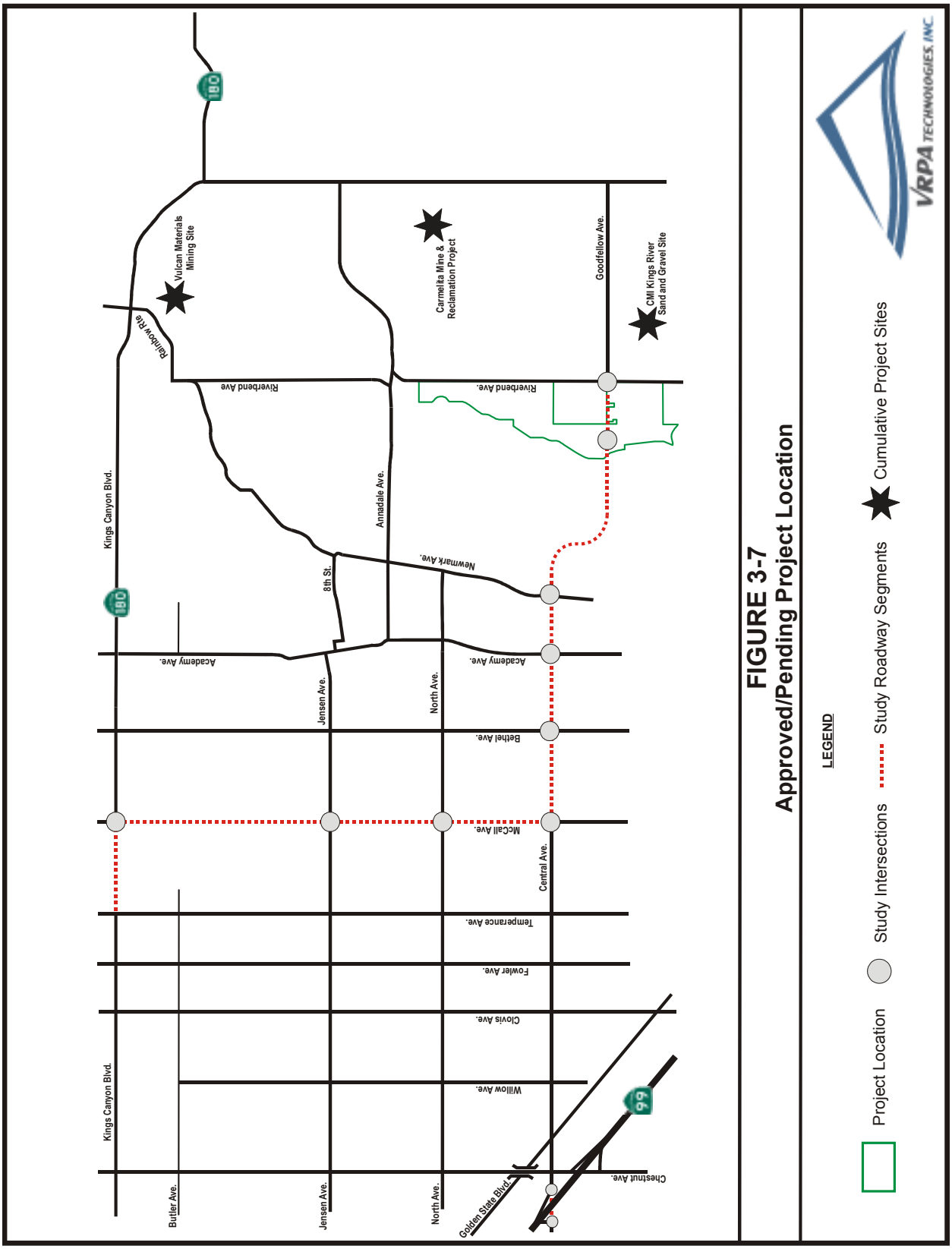


FIGURE 3-6
Existing Plus Project PM Peak Hour Traffic
LEGEND
Project Location
Study Intersections
Study Roadway Segments
Traffic Signal
Stop Sign
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Academy Ave.
Central Ave.
Newmark Ave.
Jensen Ave.
North Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
Goodfellow Ave.
Project Driveway
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
SR 180
99
41
5


180
Vulcan Materials Mining Site
Carmelita Mine & Reclamation Project
CMI Kings River Sand and Gravel Site
Goodfellow Ave.
Rainbow Rte
Riverbend Ave
Riverbend Ave.
Kings Canyon Blvd.
Annadale Ave.
8th St.
Newmark Ave.
180
Academy Ave.
Academy Ave.
Jensen Ave.
North Ave.
Bethel Ave.
McCall Ave.
Central Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Kings Canyon Blvd.
99
Butler Ave.
Jensen Ave.
North Ave.
Golden State Blvd.
Chestnut Ave.
FIGURE 3-7
Approved/Pending Project Location
LEGEND
Project Location
Study Intersections
Study Roadway Segments
Cumulative Project Sites
VRPA TECHNOLOGIES, INC.

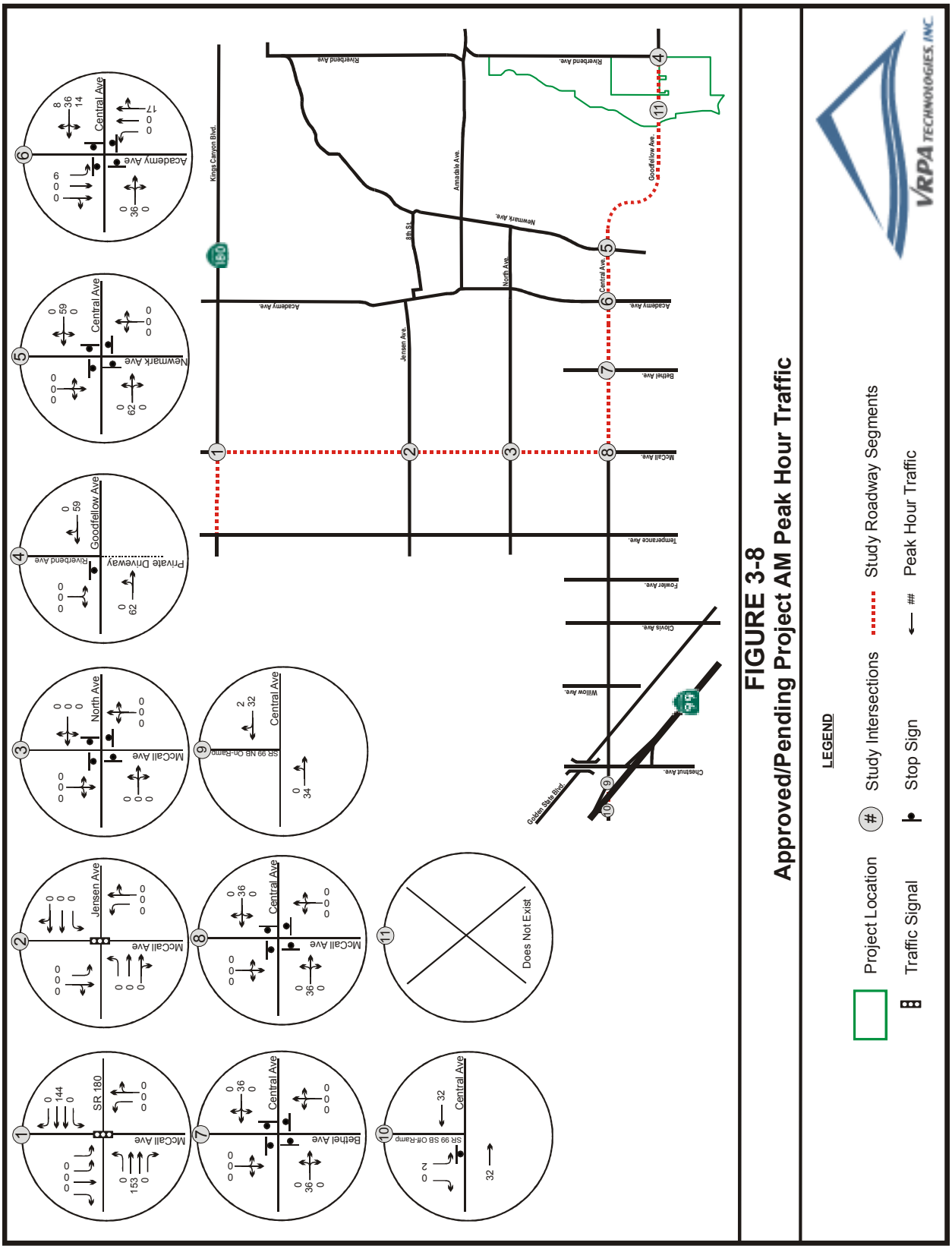


FIGURE 3-8
Approved/Pending Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC.
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
Fifth St.
Amsterdia Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
99
180
SR 180
McCall Ave
Jensen Ave
North Ave
Goodfellow Ave
Private Driveway
Newmark Ave
Central Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Does Not Exist

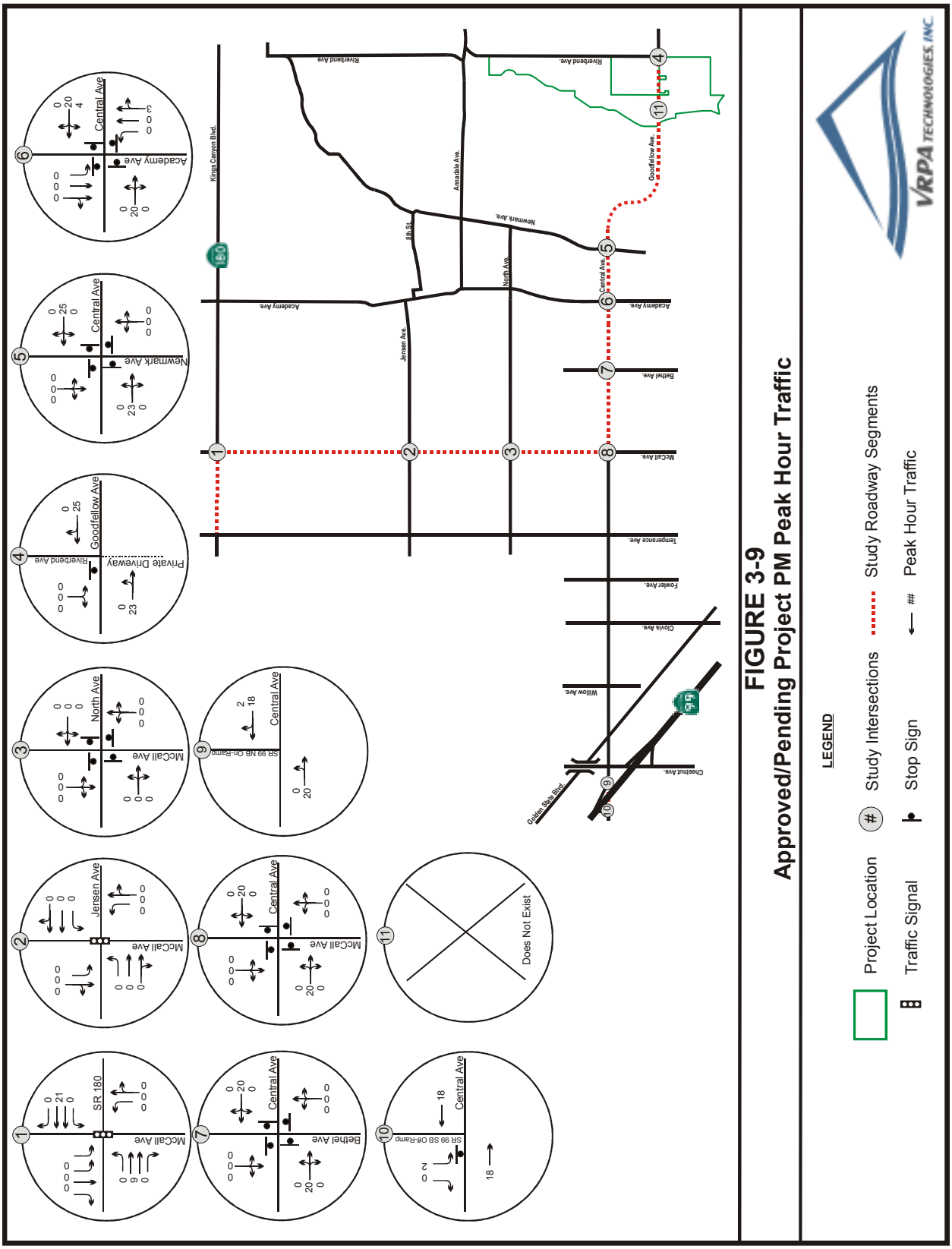


FIGURE 3-9
Approved/Pending Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC.
Does Not Exist
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
Fifth St.
Amsdale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
SR 99
Private Driveway

2015, 2017, 2019, and Cumulative 2035 No Project and Plus Project Scenarios.

3.6 Existing Plus Approved/Pending Traffic Conditions

An Existing Plus Approved/Pending Scenario was analyzed to include existing traffic plus traffic generated by the Approved/Pending Projects analyzed in this TIS. The resulting traffic is shown in Figures 3-10 and 3-11.

3.7 Existing Plus Project Plus Approved/Pending Conditions

An Existing Plus Project Plus Approved/Pending Scenario was analyzed to include existing traffic plus traffic generated by the Project and traffic generated by approved/pending projects as discussed in Section 3.5. The resulting traffic is shown in Figures 3-12 and 3-13.

3.8 Year 2015 Traffic Conditions

The first of Project operation is expected to be no sooner than the Year 2015. Traffic conditions without the Project in the Year 2015 were estimated by utilizing the incremental method and the TurnsW32 program. Interpolating between the existing and 2035 segment volumes of the regional travel models determined the 2015 street segment volumes. The TurnsW32 program calculated the forecasted turning movement volumes for the year 2015 by utilizing these 2015 segment volumes along with the existing traffic volumes for all turning movements. TurnsW32 worksheets are provided in Appendix H. The resulting traffic is shown in Figures 3-14 and 3-15.

Phase 1 project trips were added to forecasted 2015 traffic conditions and analyzed in the Phase 1 traffic conditions scenario. The resulting traffic is shown in Figures 3-16 and 3-17.

3.9 Year 2017 Traffic Conditions

Traffic conditions without the Project in the Year 2017 were estimated by utilizing the incremental method and the TurnsW32 program. Interpolating between the existing and 2035 segment volumes of the regional travel models determined the 2017 street segment volumes. The TurnsW32 program calculated the forecasted turning movement volumes for the year 2017 by utilizing these 2017 segment volumes along with the existing traffic volumes for all turning movements. The resulting traffic is shown in Figures 3-18 and 3-19.

Phase 2 Project trips were added to forecasted 2017 traffic conditions and analyzed in the Phase 2 traffic conditions scenario. The resulting traffic is shown in Figures 3-20 and 3-21.

3.10 Year 2019 Traffic Conditions

Traffic conditions without the Project in the Year 2019 were estimated by utilizing the incremental method and the TurnsW32 program. Interpolating between the existing and 2035 segment volumes of the regional travel models determined the 2019 street segment volumes. The TurnsW32 program calculated the forecasted turning movement volumes for the year 2019 by utilizing these 2019 segment volumes along with the existing traffic volumes for all turning movements. The resulting traffic is shown in Figures 3-22 and 3-23.

Phase 3 project trips were added to forecasted 2019 traffic conditions and analyzed in the Phase 3 traffic conditions scenario. The resulting traffic is shown in Figures 3-24 and 3-25.

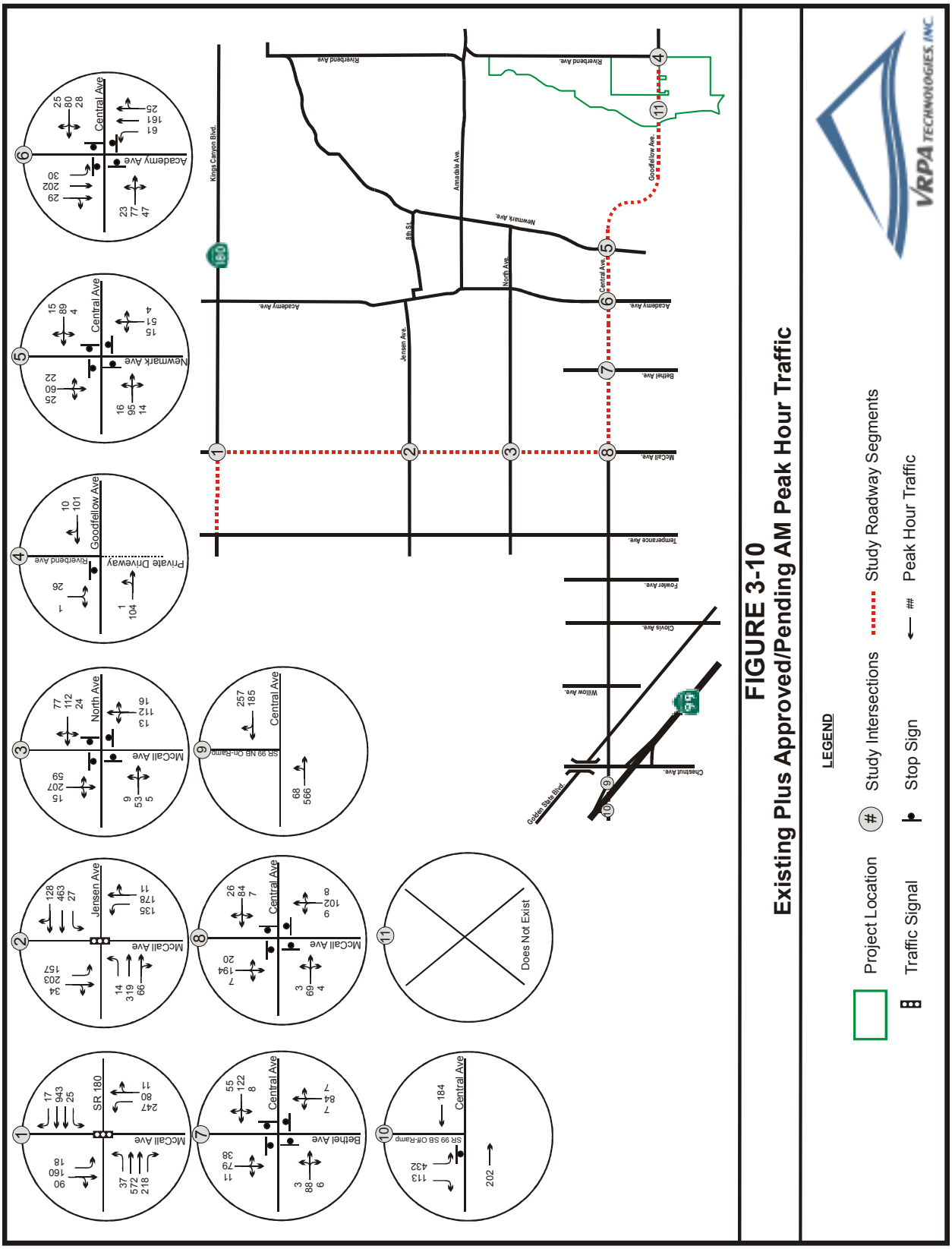


FIGURE 3-10
Existing Plus Approved/Pending AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC.
Does Not Exist
McCall Ave
SR 180
Jensen Ave
North Ave
Central Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Kings Canyon Blvd.
Amsterdie Ave.
Fifth St.
North Ave.
Jensen Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
Goodfellow Ave.
99
180

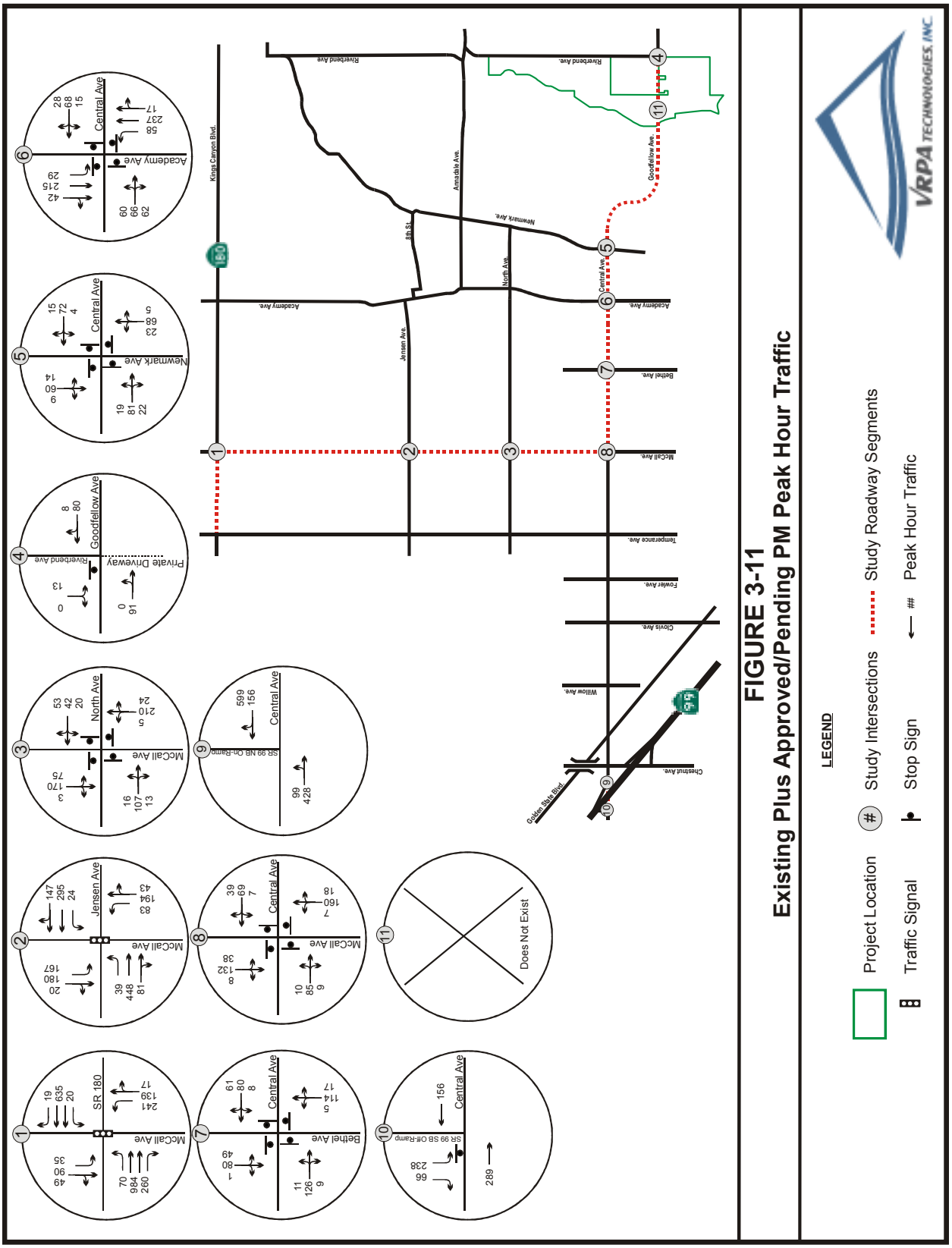


FIGURE 3-11
Existing Plus Approved/Pending PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC.
Does Not Exist
McCall Ave
SR 180
Jensen Ave
North Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Central Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Kings Canyon Blvd.
Amsdale Ave.
Fifth St.
North Ave.
Jensen Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
Goodfellow Ave.

3.11 Cumulative 2035 No Project Traffic Conditions

The impacts of the Project were analyzed considering future traffic conditions, approximately twenty years after the assumed opening day of the Project, or in this case the year 2035. The levels of traffic expected in 2035 relate to the cumulative effect of traffic increases resulting from the implementation of the General Plans of local agencies, including the City of Fresno and Fresno County. Traffic conditions without the Project in the Year 2035 were estimated using the Fresno COG regional travel model. Future traffic forecasts along study area roadway segments were estimated by utilizing methodologies published by Fresno COG using the TurnsW32 program. This process can be summarized as follows:

- The Fresno COG model for the year 2011 and 2035 was used to estimate the future traffic forecasts for study area roadway segments.

- Existing AM and PM peak hour turning movements and the adjusted 2035 roadway segment traffic forecasts were input to the TurnsW32 program and the program calculated 2035 AM and PM peak hour turning movements, as described in Fresno COG guidelines for determining future year turning movement forecasts (Incremental Method).

For reference, the Fresno COG model outputs are provided in Technical Appendix I. Traffic conditions resulting from this scenario are shown in Figures 3-26 and 3-27.

3.12 Cumulative 2035 Plus Project Traffic Conditions

The addition of Project trips, which were distributed to the roadway system using the trip distribution percentages shown in Figures 3-1 and 3-2 (Section 3.3), were added to Cumulative 2035 No Project traffic volumes. This leads to the results shown in Figures 3-28 and 3-29.

3.13 Impacts

INTERSECTION LOS

Table 3-2 shows intersections that are expected to fall short of desirable operating conditions for various scenarios. Potential mitigation measures are discussed in Chapter 4 of this report.

SEGMENT LOS

Table 3-3 shows roadway segments that are expected to fall short of desirable operating conditions for various scenarios. Potential mitigation measures are discussed in Chapter 4 of this report.

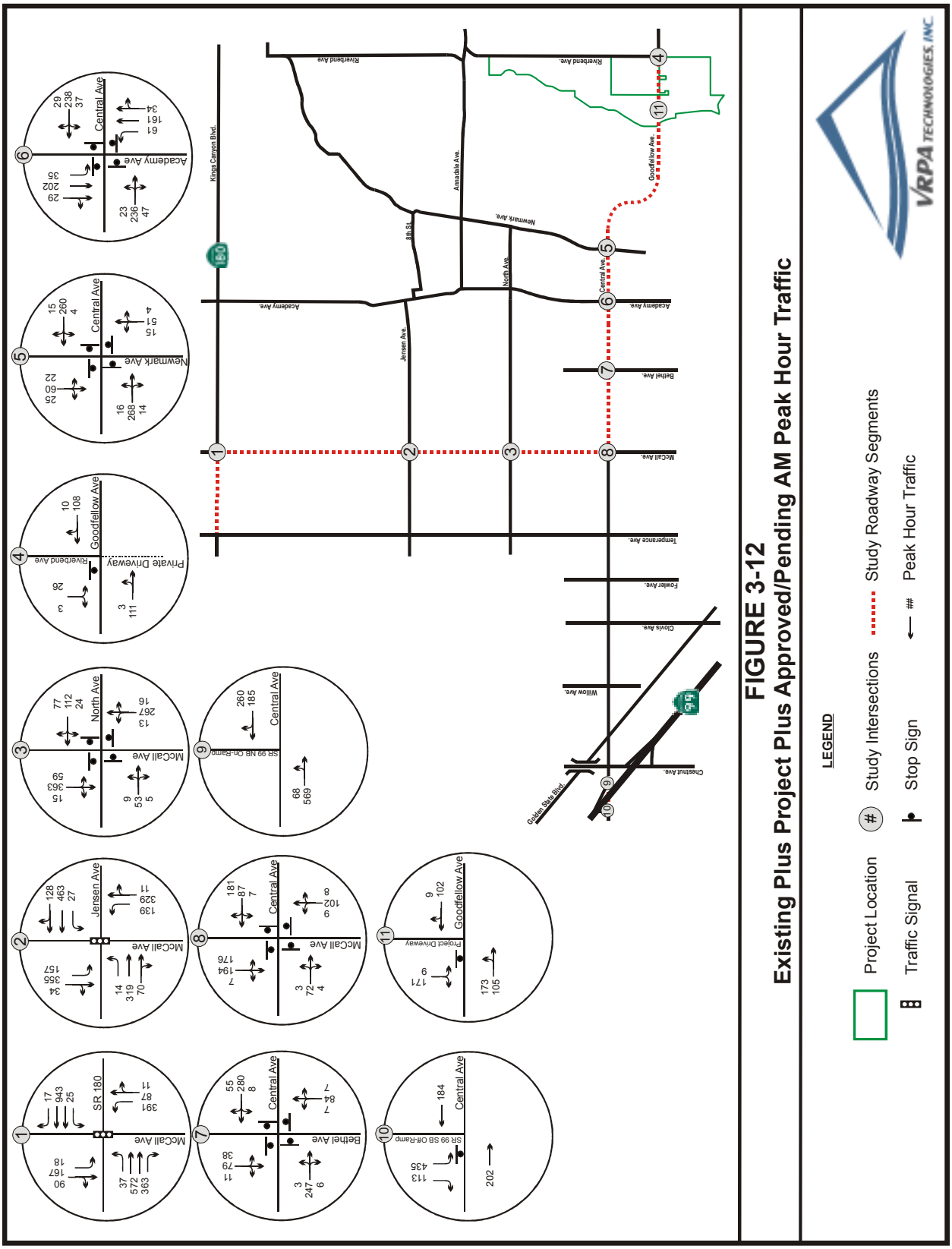


FIGURE 3-12
Existing Plus Project Plus Approved/Pending AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC.
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
5th St.
Amsdale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Private Driveway
SR 180

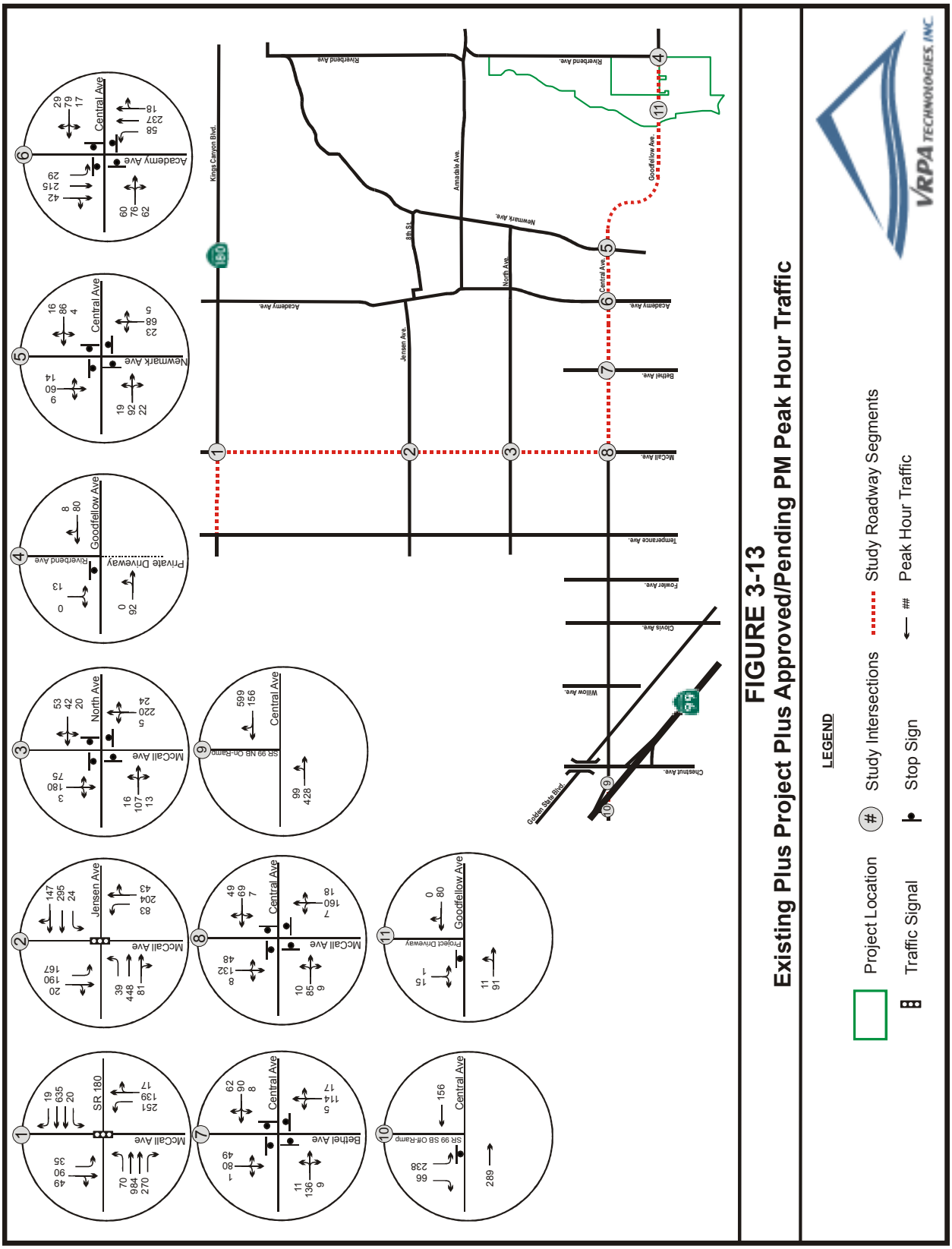


FIGURE 3-13
Existing Plus Project Plus Approved/Pending PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC.
McCall Ave
SR 180
Jensen Ave
North Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Central Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Temperance Ave
Fowler Ave
Clovis Ave
Willow Ave
Chestnut Ave
Golden State Blvd
Kings Canyon Blvd
Amsterdis Ave
Fifth St
North Ave
Jensen Ave

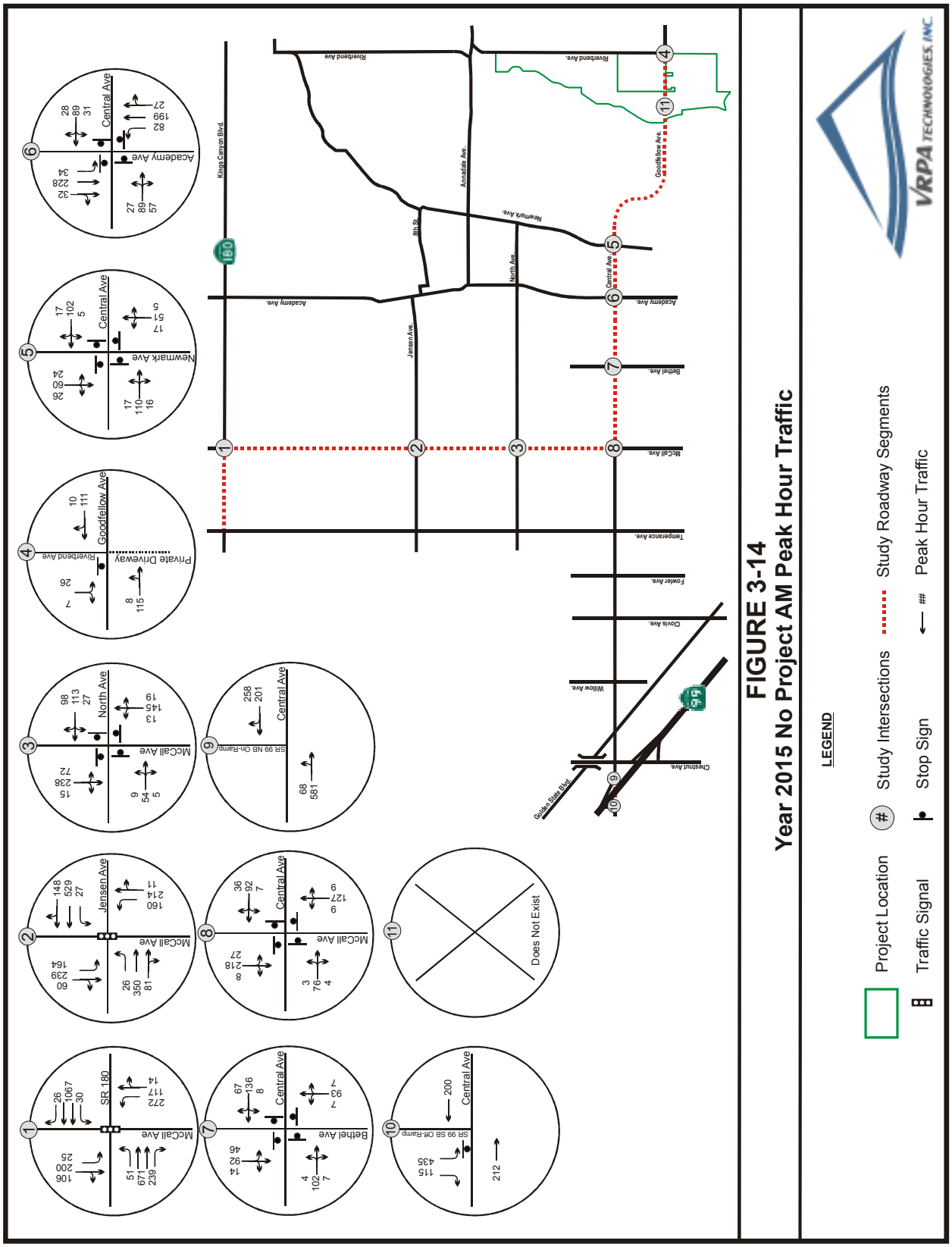


FIGURE 3-14
Year 2015 No Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
McCall Ave
SR 180
Jensen Ave
North Ave
Goodfellow Ave
Riverbend Ave
Private Driveway
Newmark Ave
Central Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Does Not Exist
Kings Canyon Blvd.
Riverbend Ave.
Annadale Ave.
Newmark Ave.
8th St.
North Ave.
Central Ave.
Goodfellow Ave.
Academy Ave.
Jensen Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
180
99

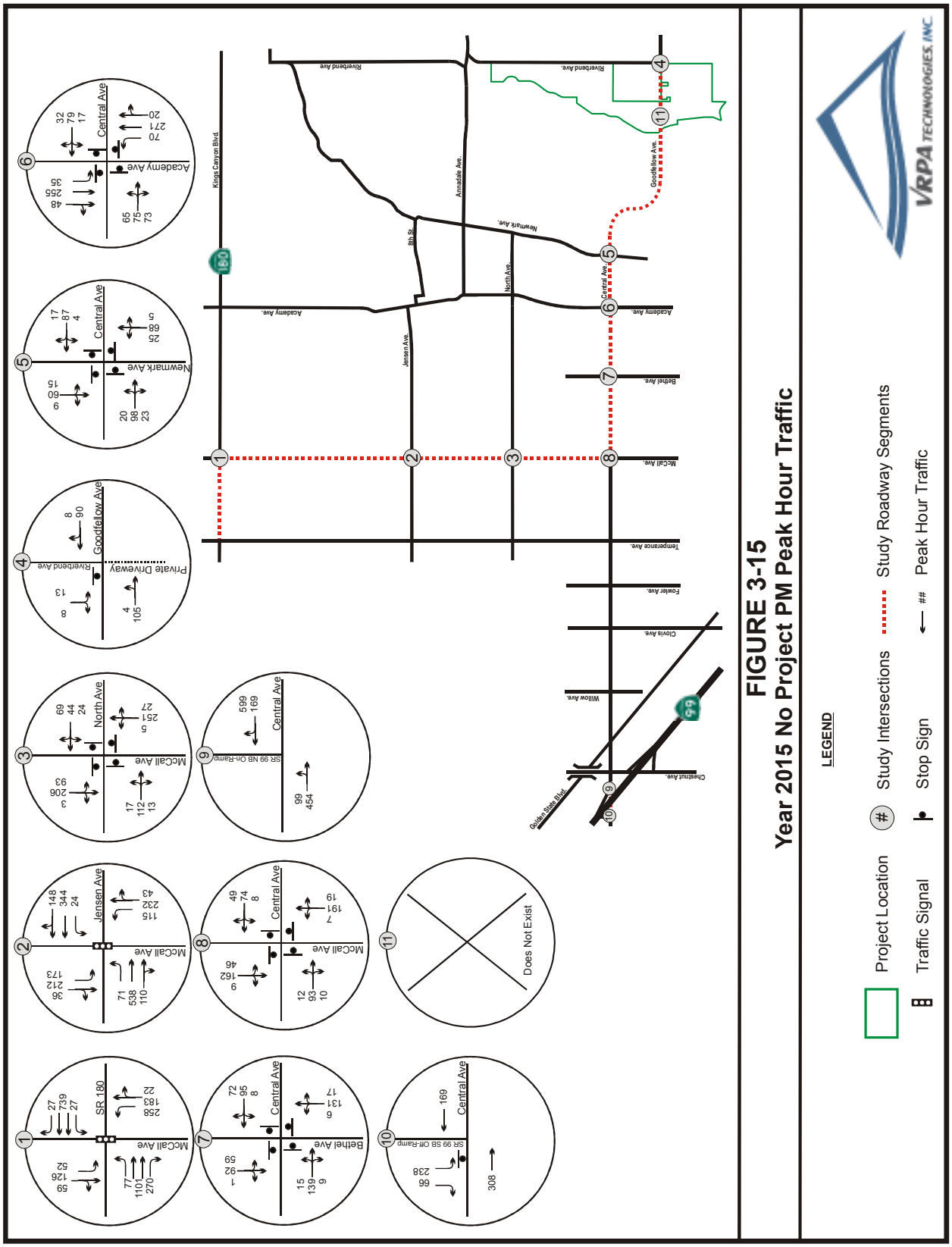


FIGURE 3-15
Year 2015 No Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Does Not Exist
McCall Ave
SR 180
Jensen Ave
North Ave
Central Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Kings Canyon Blvd
Annadale Ave
8th St
Jensen Ave
North Ave
Central Ave
Goodfellow Ave
Riverbend Ave
Academy Ave
Bethel Ave
McCall Ave
Temperance Ave
Fowler Ave
Clovis Ave
Willow Ave
Chestnut Ave
Golden State Blvd
99
180

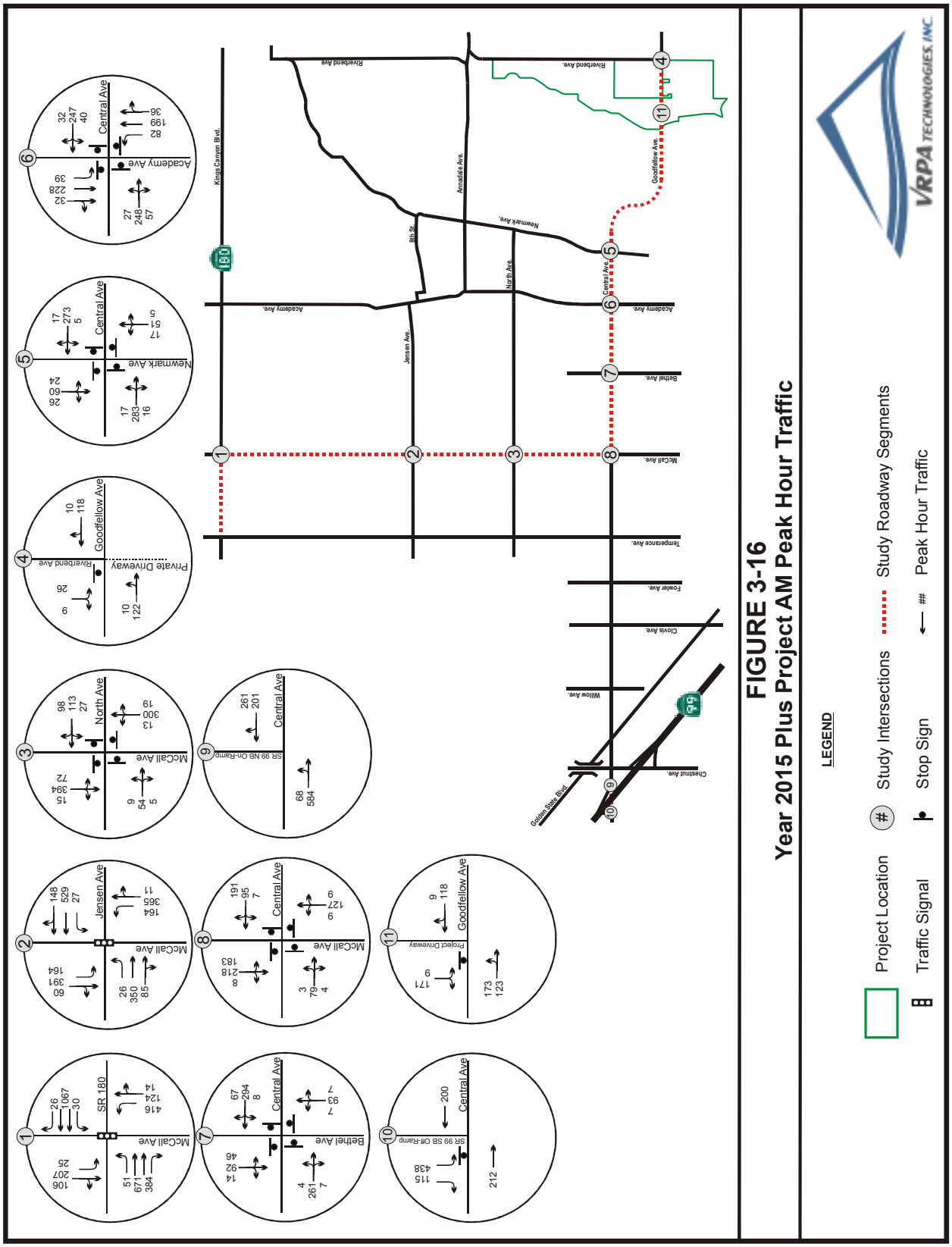


FIGURE 3-16
Year 2015 Plus Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Goodfellow Ave.
Central Ave.
Academy Ave.
Newmark Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
Kings Canyon Blvd.
Annadale Ave.
Jensen Ave.
North Ave.
9th St.
SR 180
SR 99
Project Driveway
Private Driveway
SR 99 NB On-Ramp
SR 99 SB Off-Ramp

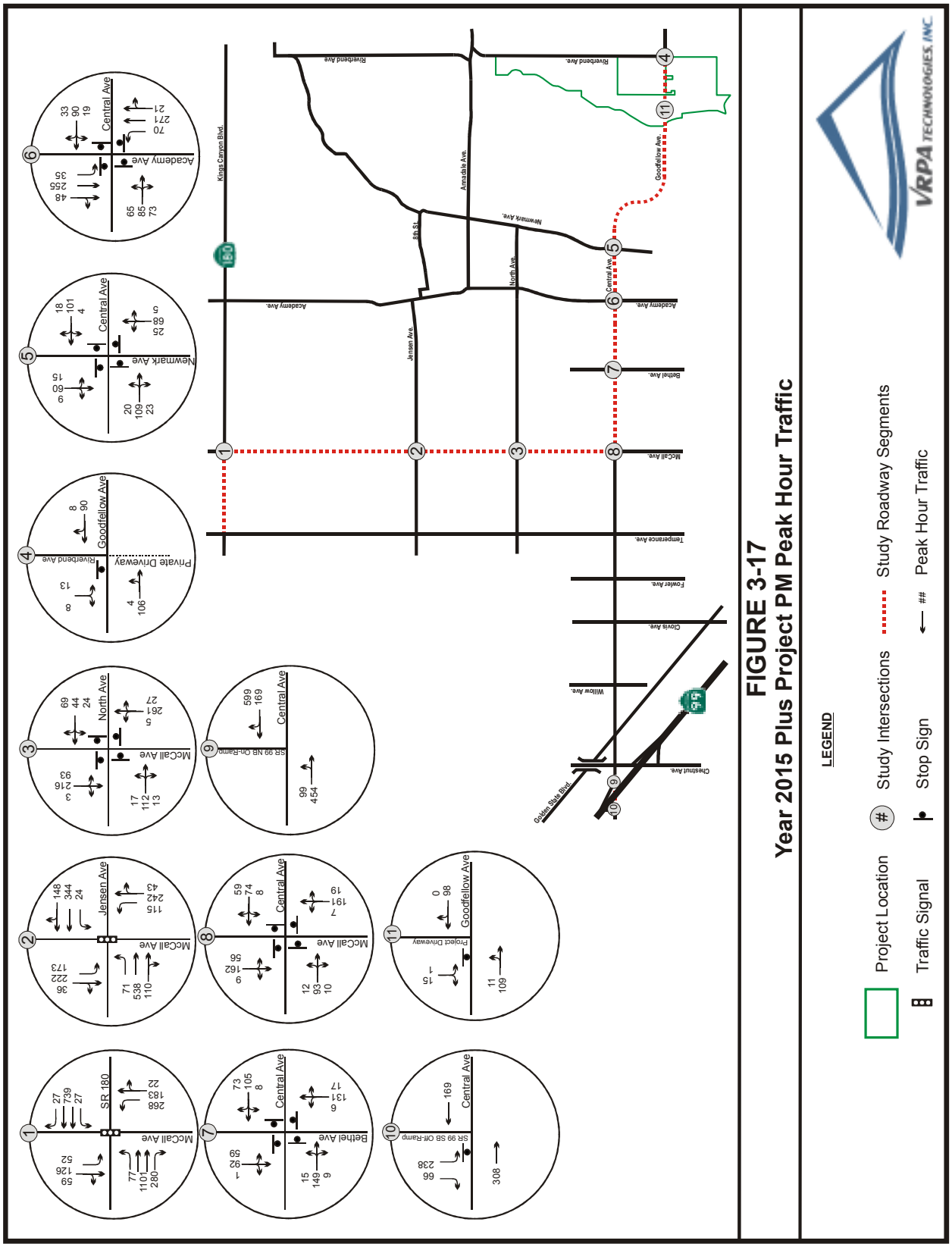


FIGURE 3-17
Year 2015 Plus Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
McCall Ave
SR 180
Jensen Ave
North Ave
Goodfellow Ave
Private Driveway
Riverbend Ave
Central Ave
Bethel Ave
Project Driveway
SR 99 SB Off-Ramp
SR 99 NB On-Ramp
Academy Ave
Newmark Ave
Kings Canyon Blvd
Golden State Blvd
Chestnut Ave
Willow Ave
Clovis Ave
Fowler Ave
Temperance Ave
McCall Ave
Belmont Ave
Central Ave
North Ave
5th St
Jensen Ave
Amaditio Ave
Newmark Ave
Goodfellow Ave
Riverbend Ave
99
180
5

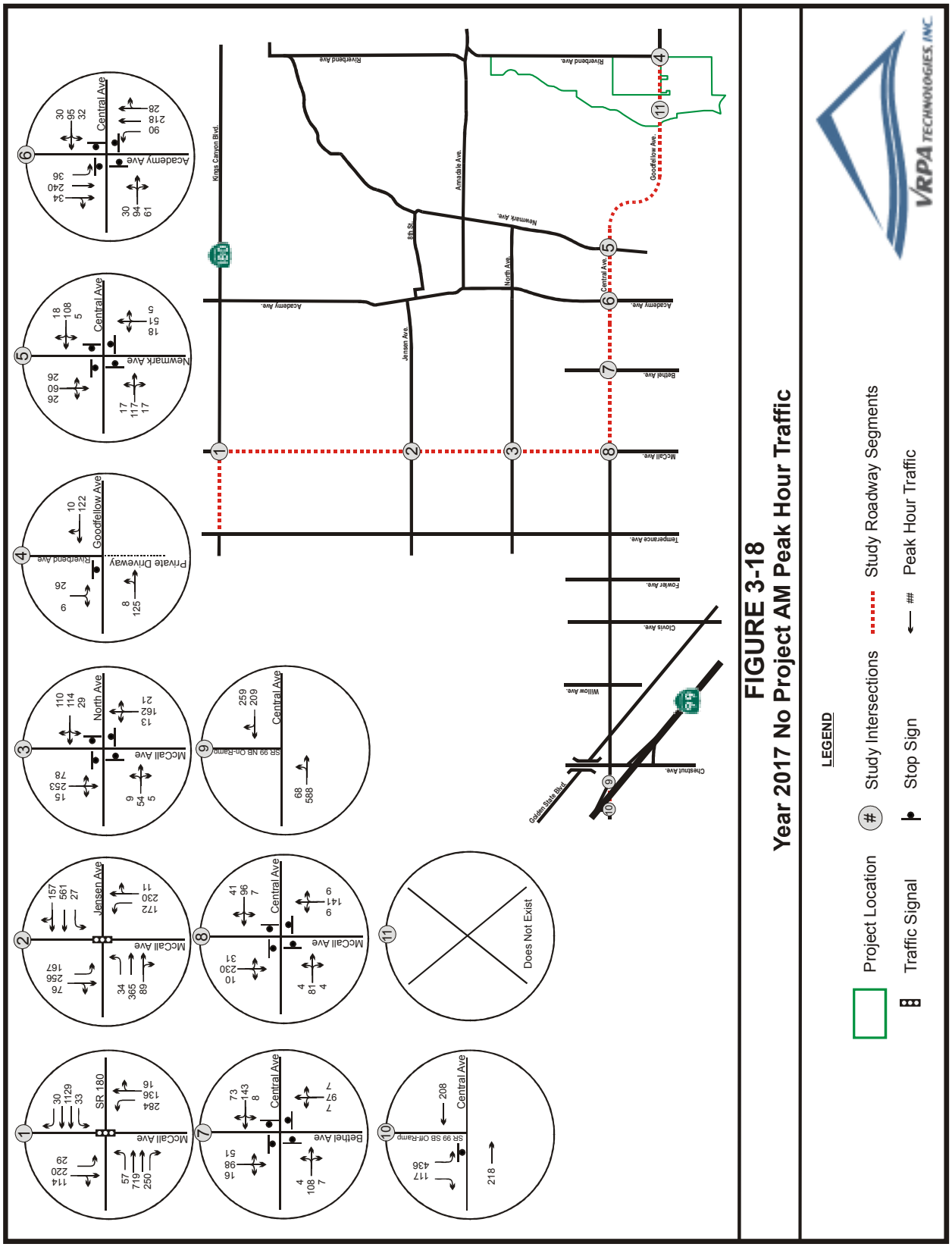


FIGURE 3-18
Year 2017 No Project AM Peak Hour Traffic
LEGEND
Project Location
Study Intersections
Study Roadway Segments
Traffic Signal
Stop Sign
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
8th St.
Amsdale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
99
180
Does Not Exist

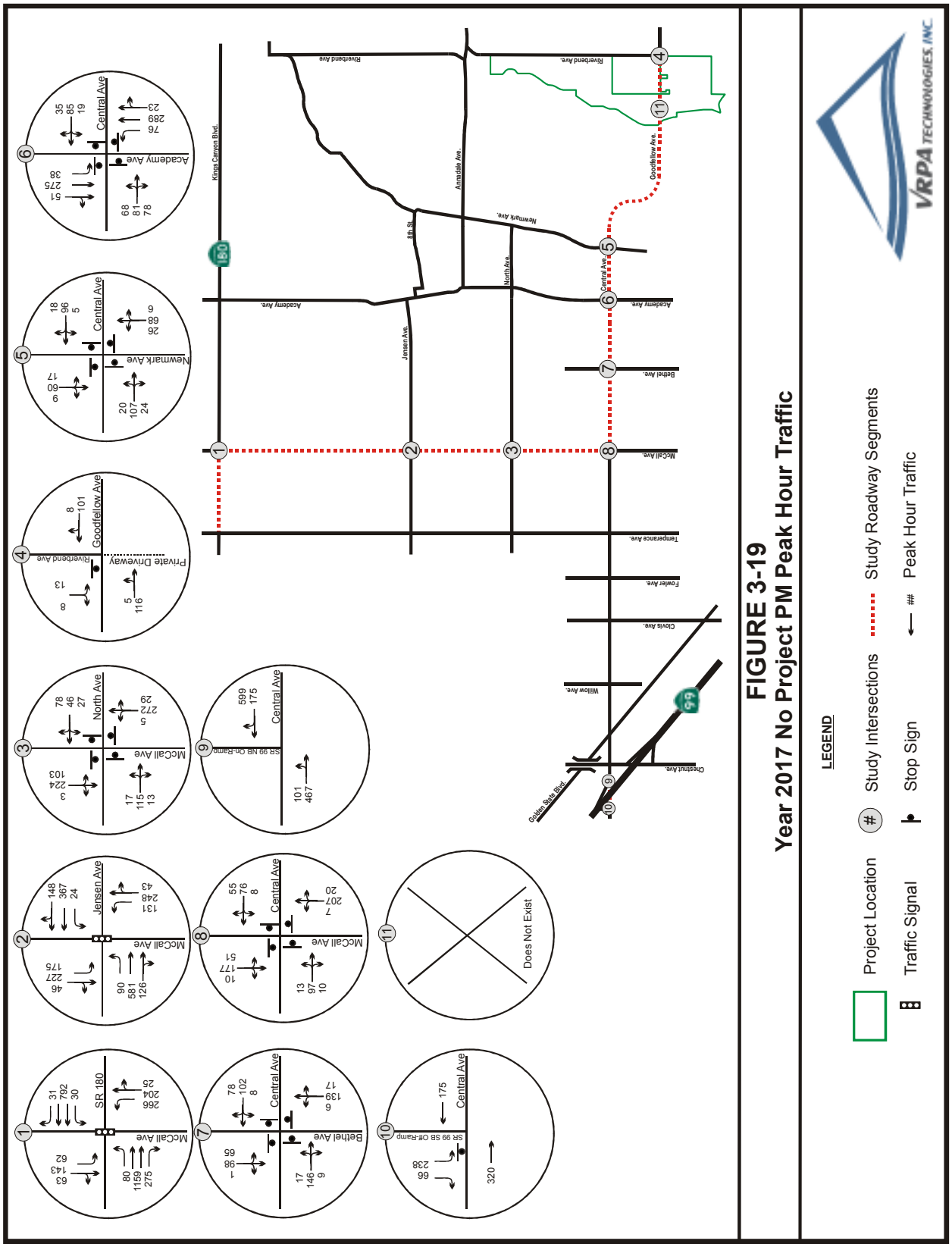


FIGURE 3-19
Year 2017 No Project PM Peak Hour Traffic
LEGEND
Project Location
Study Intersections
Study Roadway Segments
Traffic Signal
Stop Sign
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Does Not Exist

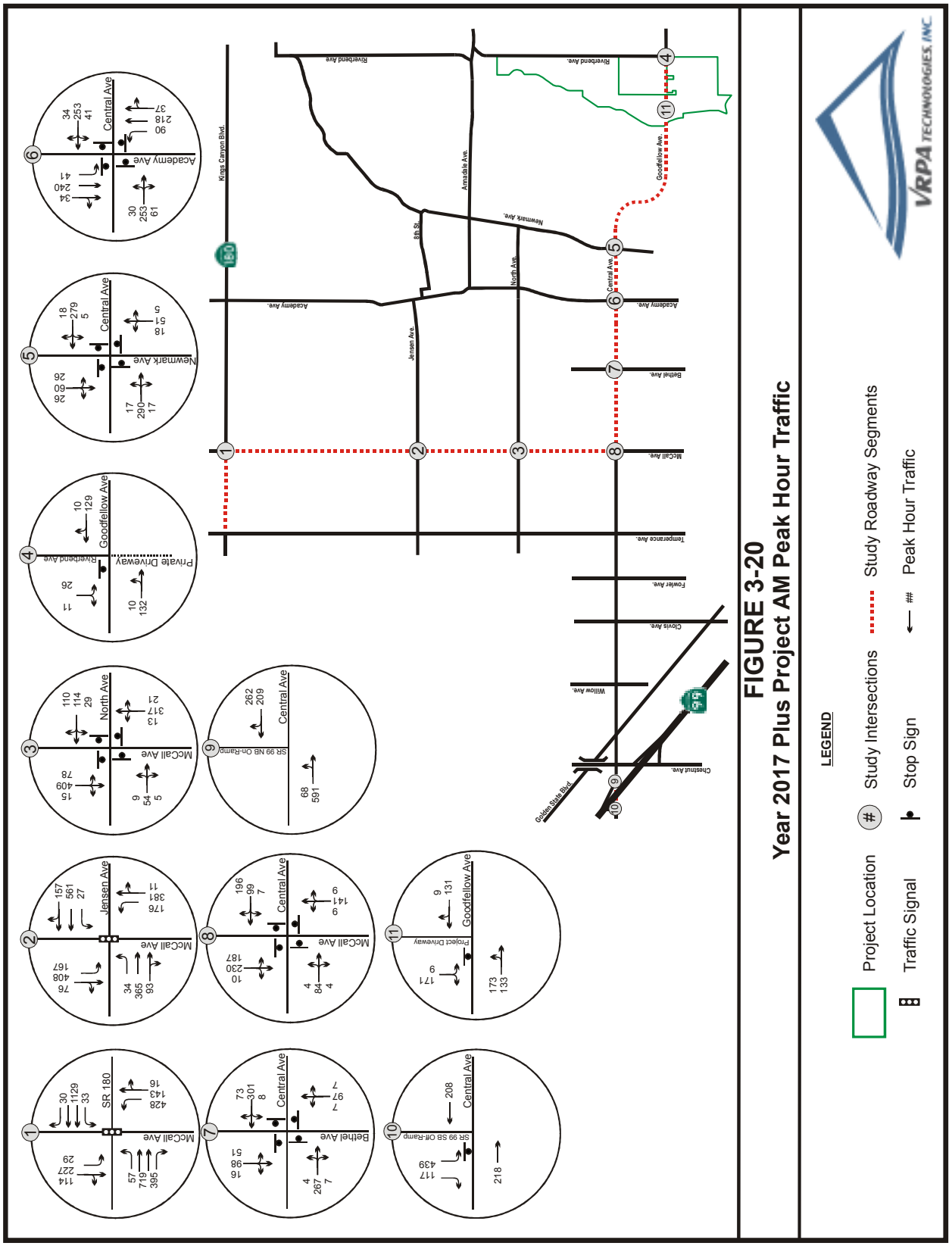


FIGURE 3-20
Year 2017 Plus Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
5th St.
Amsdale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Private Driveway
SR 180

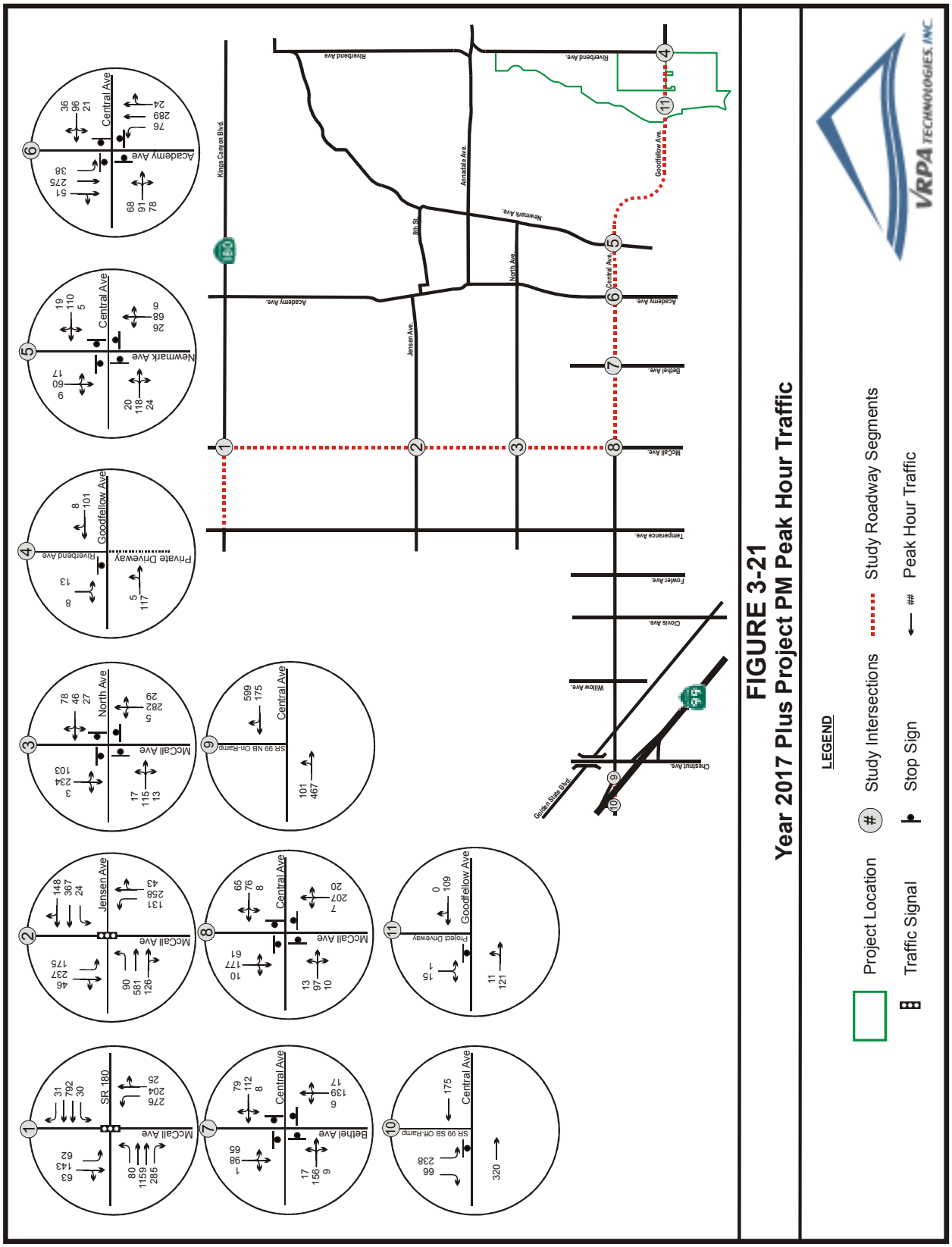


FIGURE 3-21
Year 2017 Plus Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
Armadale Ave.
8th St.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Private Driveway

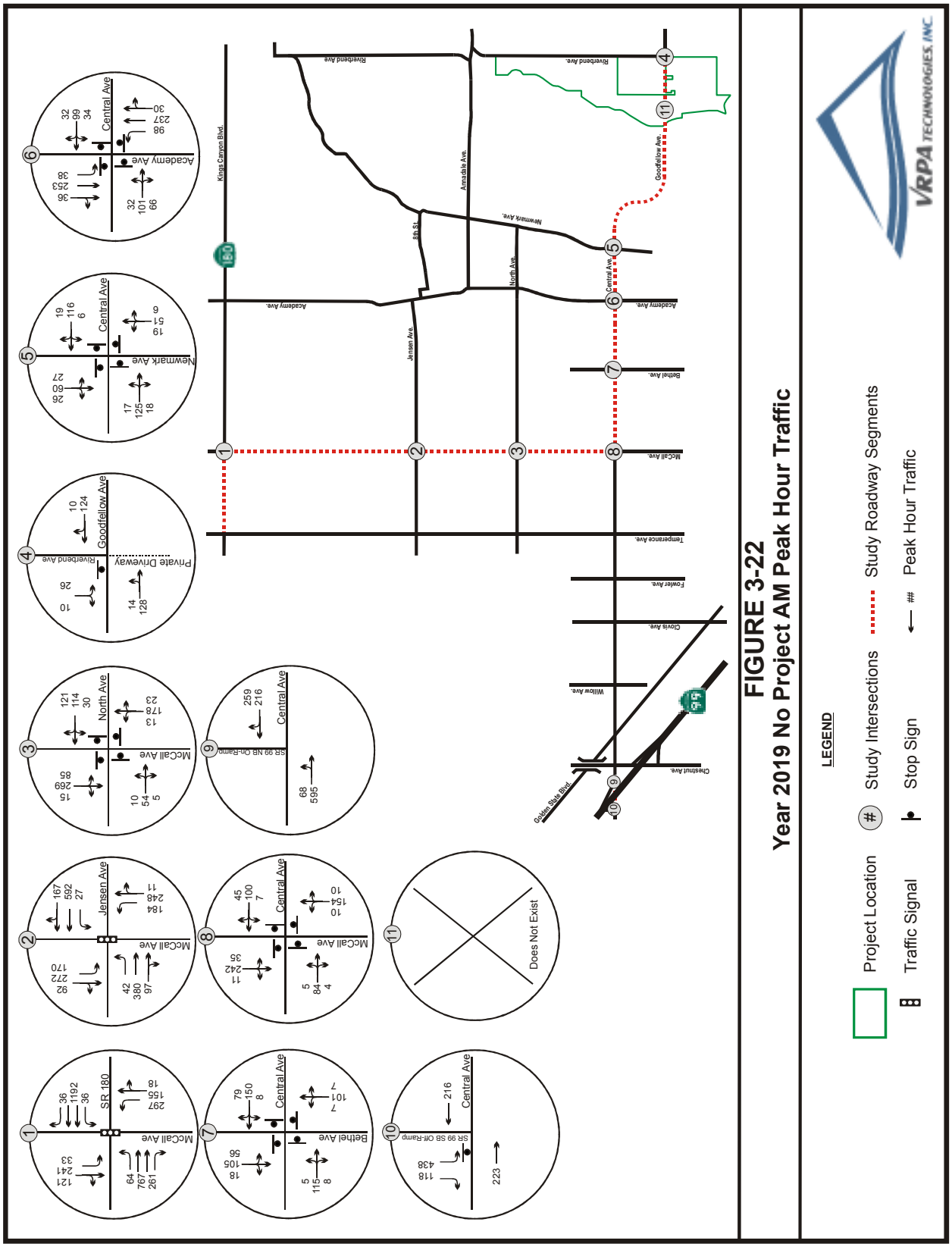


FIGURE 3-22
Year 2019 No Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Does Not Exist
Kings Canyon Blvd.
Riverbend Ave.
Academy Ave.
Jensen Ave.
5th St.
Amsdale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Private Driveway

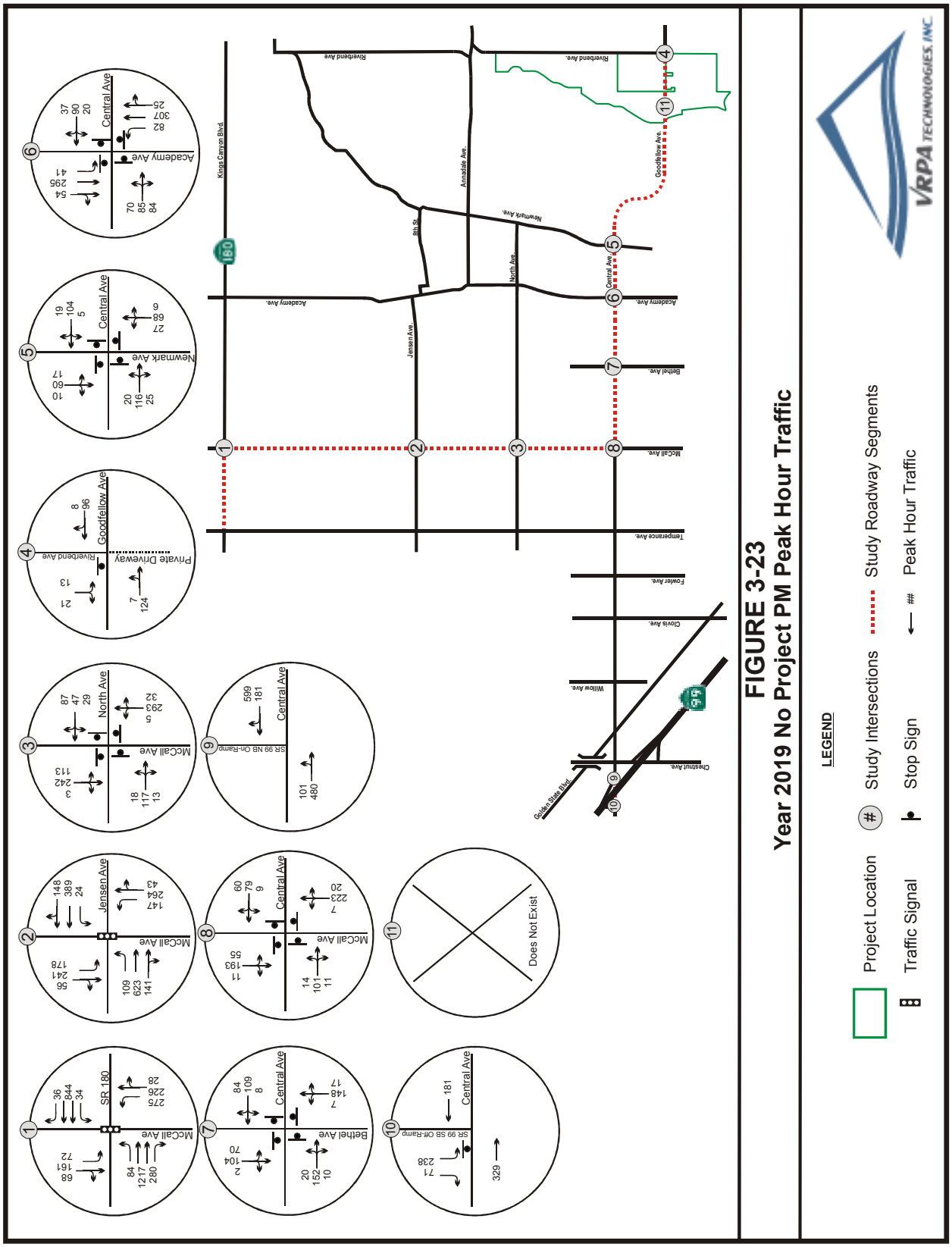


FIGURE 3-23
Year 2019 No Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
8th St.
Annadale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
180
99
Does Not Exist

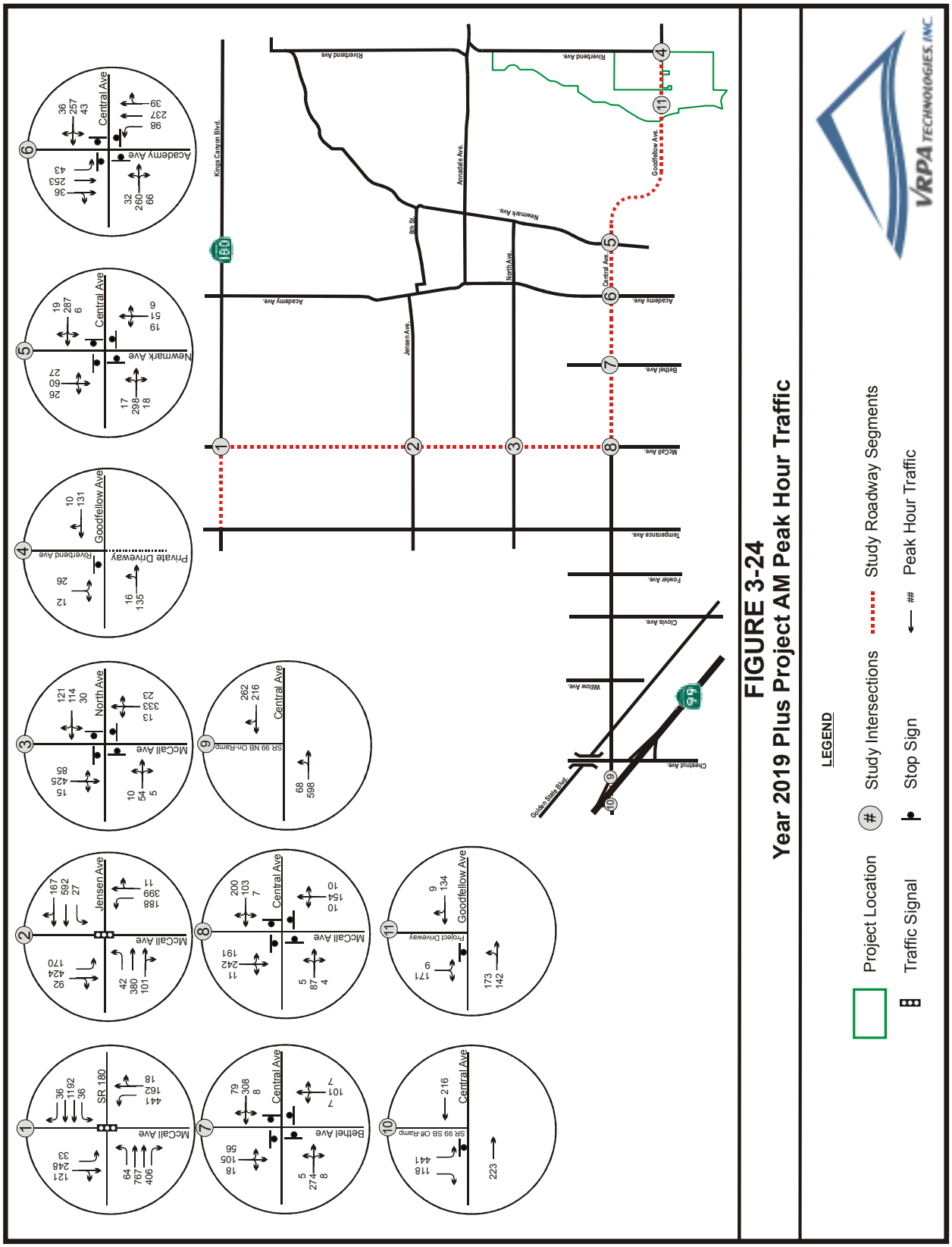


FIGURE 3-24
Year 2019 Plus Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Kings Canyon Blvd.
Riverbend Ave.
Academy Ave.
Jensen Ave.
8th St.
Newmark Ave.
Annadale Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 180
Jensen Ave
McCall Ave
North Ave
Central Ave
Goodfellow Ave
Private Driveway
Project Driveway
Newmark Ave
Academy Ave
Bethel Ave
SR 99 NB On-Ramp
SR 99 SB Off-Ramp

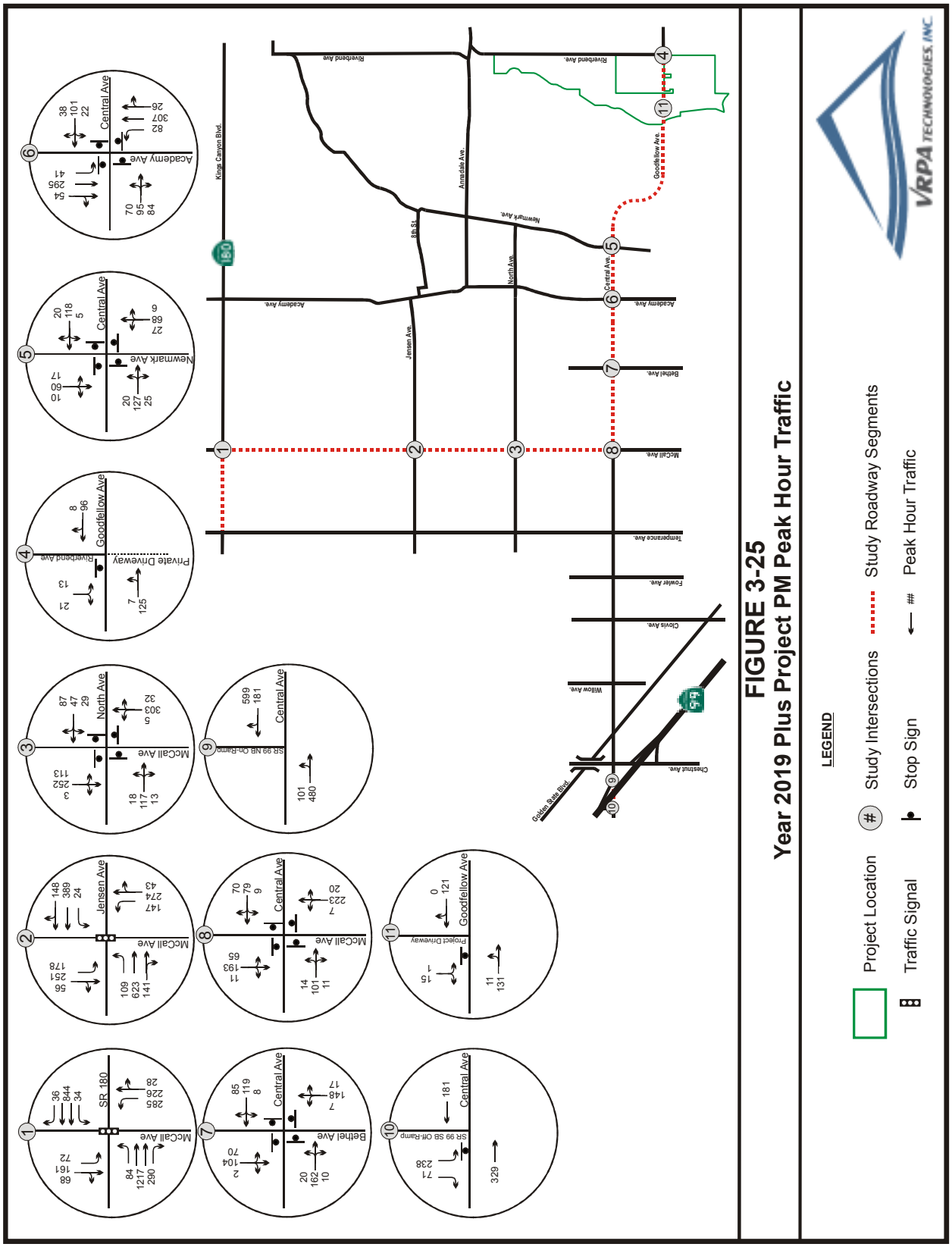


FIGURE 3-25
Year 2019 Plus Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
8th St.
Annadale Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Project Driveway
Private Driveway

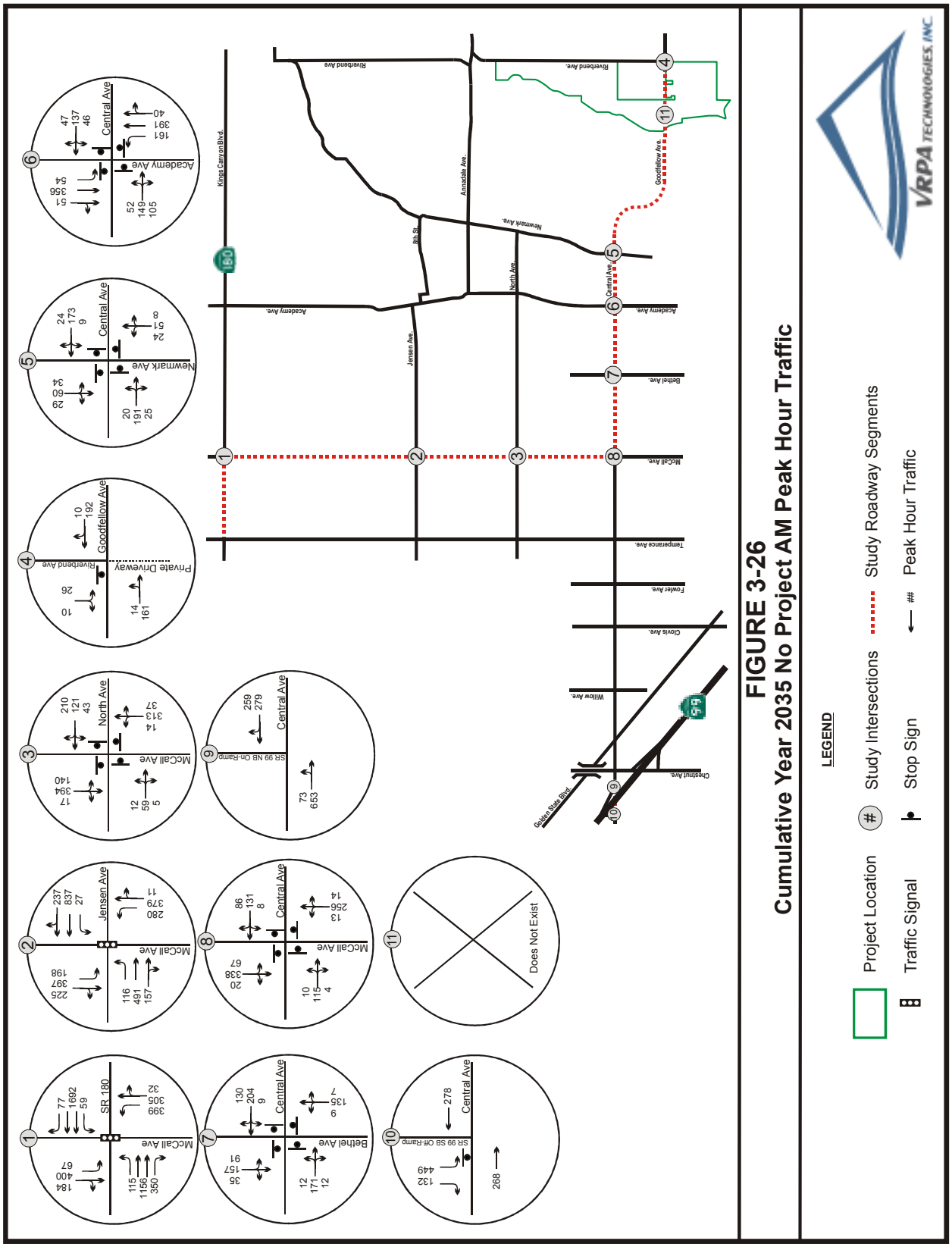


FIGURE 3-26
Cumulative Year 2035 No Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
McCall Ave
SR 180
Jensen Ave
North Ave
Central Ave
Bethel Ave
SR 99 SB Off-Ramp
SR 99 NB On-Ramp
Goodfellow Ave
Private Driveway
Riverbend Ave
Newmark Ave
Academy Ave
Does Not Exist
Kings Canyon Blvd.
Riverbend Ave.
Armadale Ave.
Goodfellow Ave.
Rth St.
Newmark Ave.
North Ave.
Central Ave.
Jensen Ave.
Academy Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.

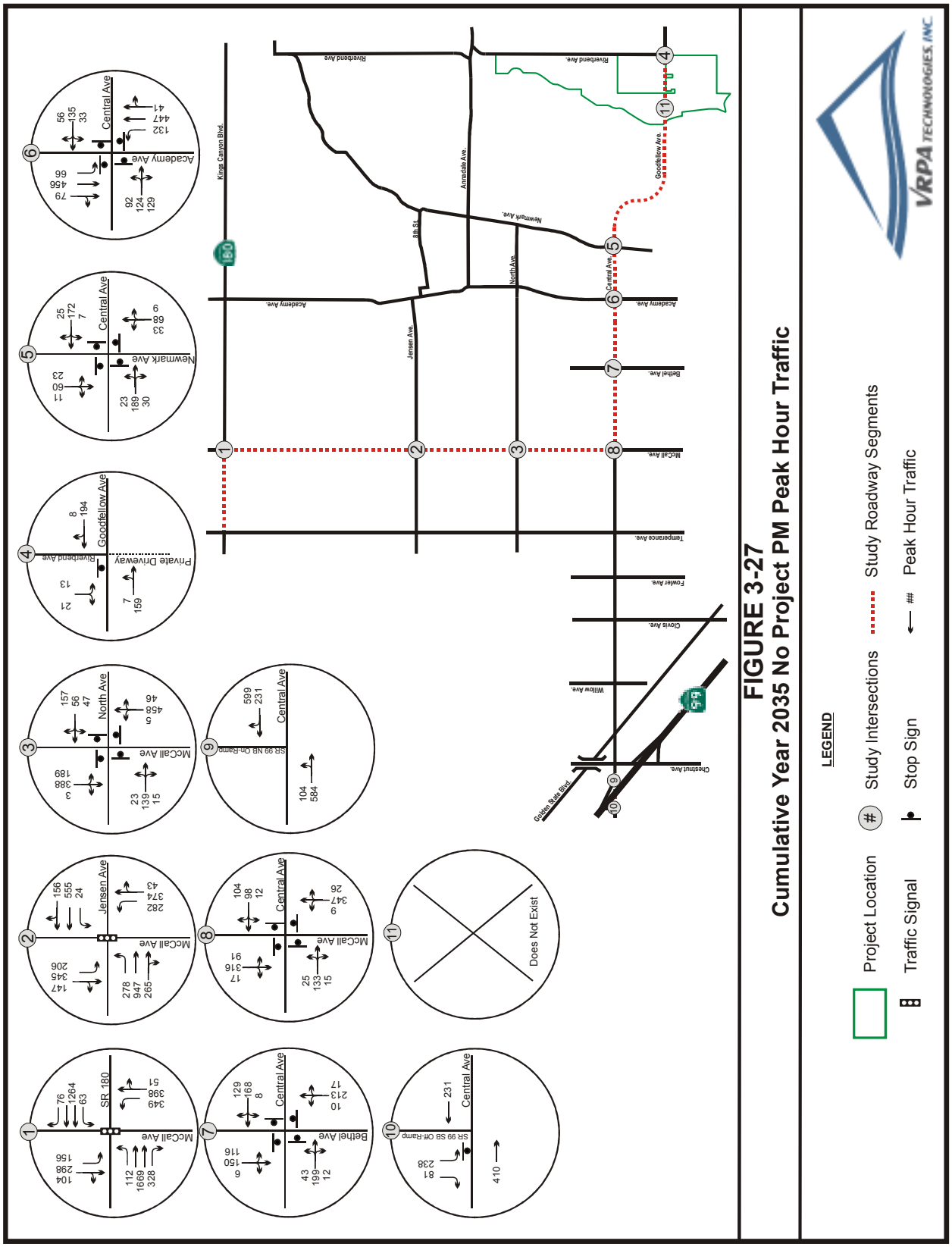


FIGURE 3-27
Cumulative Year 2035 No Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Does Not Exist

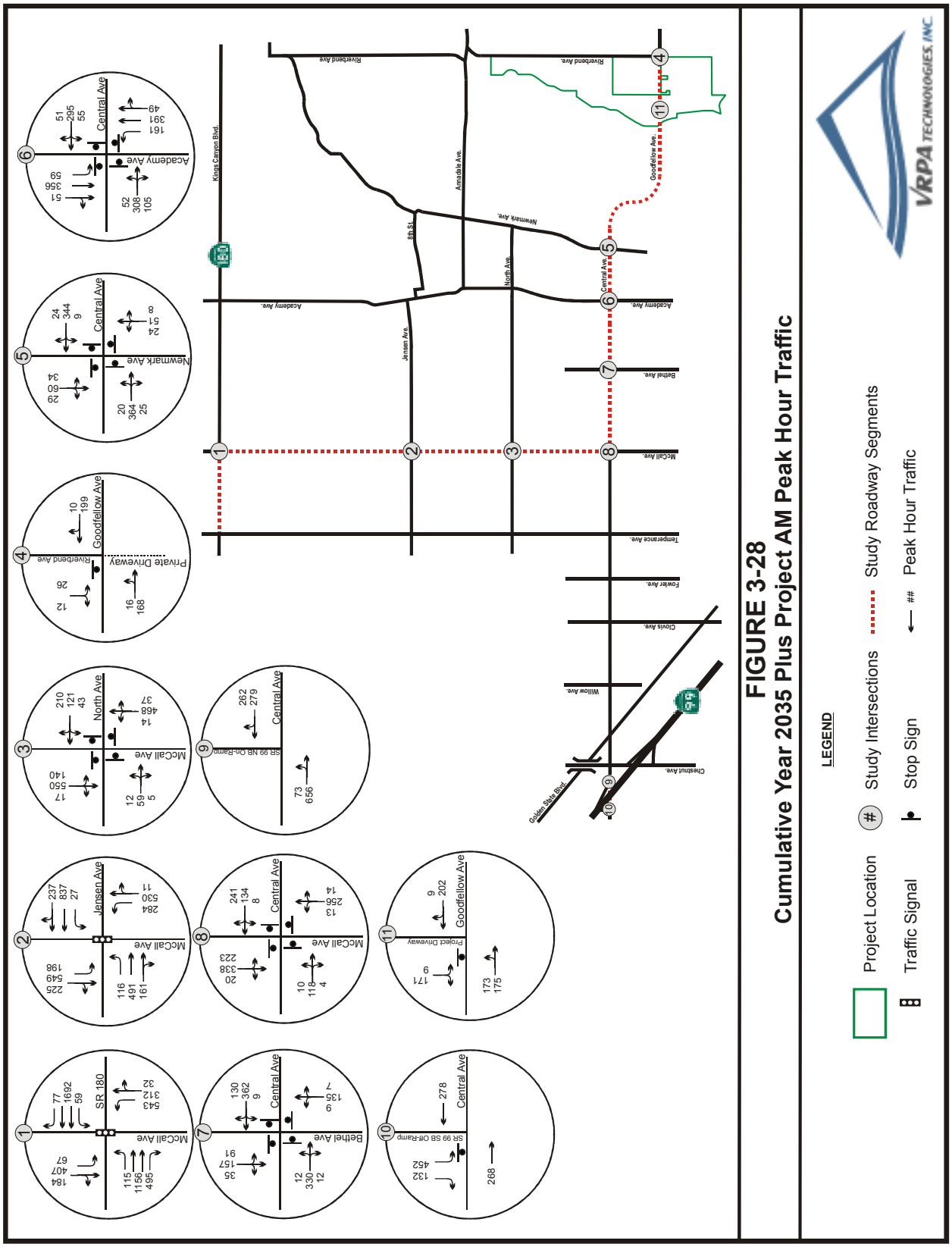


FIGURE 3-28
Cumulative Year 2035 Plus Project AM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave.
Kings Canyon Blvd.
Academy Ave.
Jensen Ave.
8th St.
Amaudio Ave.
Newmark Ave.
North Ave.
Central Ave.
Goodfellow Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
99
180
1 McCall Ave & SR 180
2 McCall Ave & Jensen Ave
3 McCall Ave & North Ave
4 Private Driveway & Goodfellow Ave
5 Newmark Ave & Central Ave
6 Academy Ave & Central Ave
7 Bethel Ave & Central Ave
8 McCall Ave & Central Ave
9 SR 99 NB On-Ramp & Central Ave
10 SR 99 SB Off-Ramp & Central Ave
11 Project Driveway & Goodfellow Ave

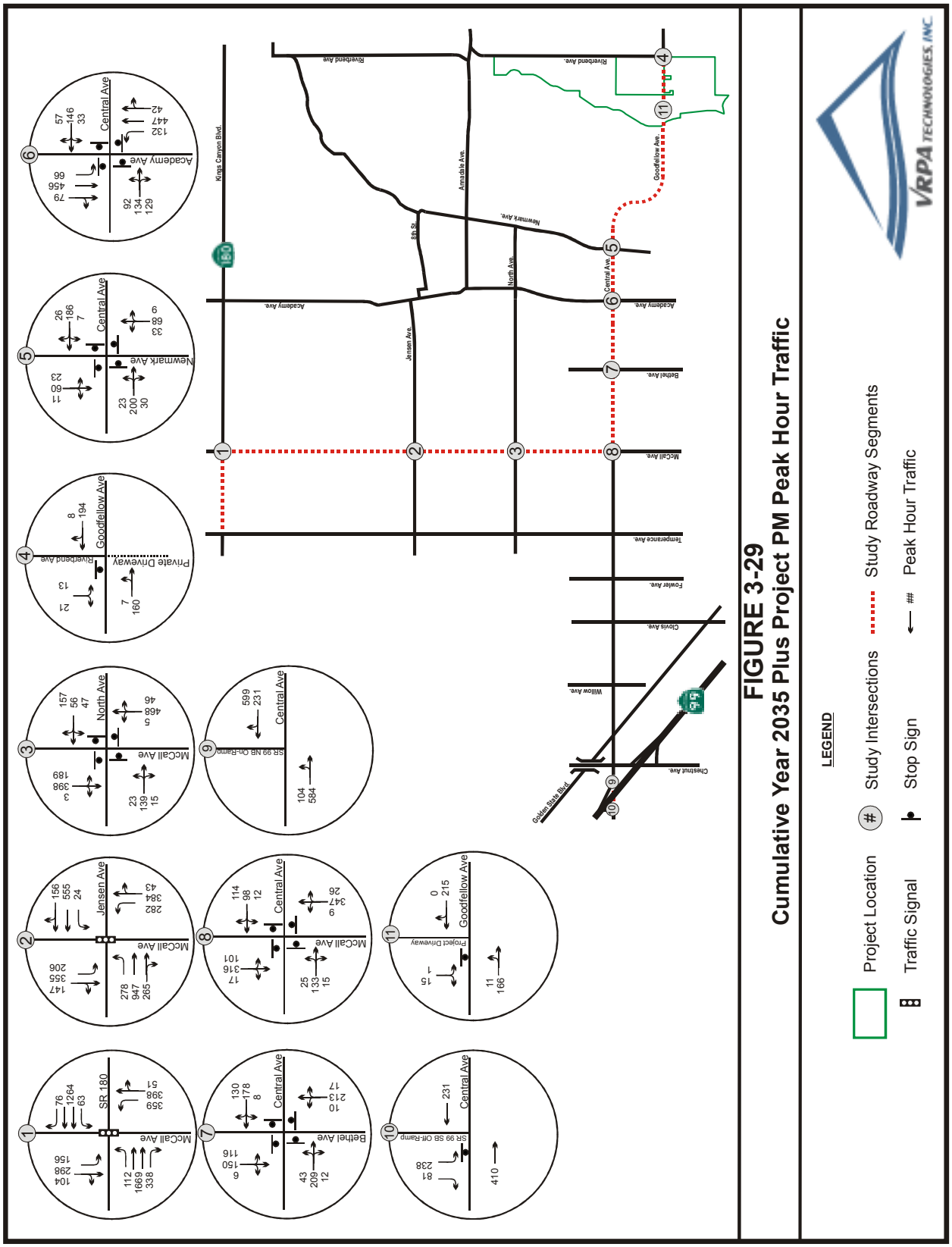


FIGURE 3-29
Cumulative Year 2035 Plus Project PM Peak Hour Traffic
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Peak Hour Traffic
VRPA TECHNOLOGIES, INC
Riverbend Ave
Kings Canyon Blvd
Academy Ave
Jensen Ave
8th St
Armadale Ave
Newmark Ave
North Ave
Central Ave
Goodfellow Ave
Bethel Ave
McCall Ave
Temperance Ave
Fowler Ave
Clovis Ave
Willow Ave
Chestnut Ave
Golden State Blvd
Private Driveway
Project Driveway
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
SR 180

3.14 Queuing Analysis

Table 3-4 provides a queue length summary for left and right turn lanes at the study intersections for the Existing Plus Project, Existing Plus Approved/Pending, Existing Plus Project Plus Approved/Pending, Year 2015, Year 2017, Year 2019, and Cumulative Year 2035 scenarios. The queuing analyses for the study intersections are located in Appendix J.

Queuing analysis was completed using information found in the Synchro outputs. Synchro provides 50th and 95th percentile maximum queue lengths in feet. The 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes[4]. The queues shown in Table 3-5 represent the 95th percentile queue lengths for the respective lane movements.

3.15 Traffic Index

The traffic impact analysis included an evaluation of the project's impact to the Traffic Index (TI) along all of the roadway segments analyzed as part of this TIS. Fresno County has established significance criteria for the purpose of determining if a project has an impact to the traffic index of County facilities. If truck traffic generated by the project results in the TI increasing by a factor of 0.5, the project is required to mitigate the roadway structural section to accommodate the increase in truck traffic. TI calculations are included in Appendix K of this report.

The analysis of the TI was determined by using existing Average Daily Truck Counts (ADTT) and Chapter 610 of Caltrans' Highway Design Manual. The Cumulative Year 2035 With and Without Project scenarios were analyzed in order to determine Project impacts to the TI. Results of the analysis are shown in Table 3-5. Results show that the proposed Project will impact seven (7) out of eleven (11) of the roadways analyzed because the Project's truck traffic results in the TI increasing by a factor of 0.5 or greater. Impacts to State facilities are not shown because Caltrans has not established significance criteria for impacts to the traffic index of State facilities.

4: Synchro Studio 7 "Traffic Signal Software" – User Guide

TABLE 3-2

Intersection Operations

INTERSECTION	PEAK HOUR	EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
		DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
1. McCall Avenue / SR-180	AM	**56.1**	**E**	33.9	C	**57.8**	**E**	**63.3**	**E**	**87.3**	**F**	**79.1**	**E**	**102.8**	**F**	**89.2**	**F**	**116.1**	**F**	**200.8**	**F**	**221.2**	**F**
	PM	30.0	C	29.0	C	30.2	C	**62.9**	**E**	**64.9**	**E**	**75.4**	**E**	**77.4**	**E**	**89.5**	**F**	**91.2**	**F**	**229.9**	**F**	**231.1**	**F**
2. McCall Avenue / Jensen Avenue	AM	33.5	C	26.9	C	33.5	C	33.8	C	**42.2**	**D**	**40.2**	**D**	**51.2**	**D**	**46.3**	**D**	**60.0**	**E**	**138.2**	**F**	**160.3**	**F**
	PM	26.2	C	25.9	C	26.2	C	31.4	C	31.7	C	**36.5**	**D**	**37.0**	**D**	**42.0**	**D**	**42.4**	**D**	**168.3**	**F**	**167.7**	**F**
3. McCall Avenue / North Avenue	AM	--	C*	11.9	B	--	C*	14.1	B	--	C*	15.9	C	--	C*	18.3	C	--	C*	**59.9+**	**F+**	**154.3+**	**F+**
	PM	11.3	B	11.1	B	11.3	B	13.1	B	13.5	B	14.8	B	15.4	C	17.1	C	18.0	C	**104.4+**	**F+**	**110.8+**	**F+**
4. Riverbend Avenue / Goodfellow Avenue	AM	9.5	A	10.5	B	10.7	B	10.8	B	10.9	B	10.9	B	11.1	B	11.1	B	11.3	B	11.1	B	11.2	B
	PM	9.5	A	9.8	A	9.8	A	9.7	A	9.7	A	9.9	A	9.9	A	10.7	B	9.7	A	10.3	B	10.3	B
5. Newmark Avenue / Central Avenue	AM	11.3	B	8.8	A	13.9	B	9.1	A	15.1	C	9.3	A	15.8	C	9.5	A	16.7	C	9.9	A	15.7	C
	PM	8.3	A	8.4	A	8.5	A	8.6	A	8.7	A	8.7	A	8.9	A	8.8	A	9.0	A	9.9	A	10.1	B
6. Academy Avenue / Central Avenue	AM	18.9	C	11.5	B	--	C*	13.9	B	--	C*	15.5	C	--	C*	17.8	C	**77.3+**	**F+**	**62.8+**	**F+**	**143.7+**	**F+**
	PM	13.5	B	14.1	B	14.7	B	18.9	C	20.1	C	23.9	C	--	C*	--	C*	**35.2+**	**E+**	**126.5+**	**F+**	**133.8+**	**F+**
7. Bethel Avenue / Central Avenue	AM	14.7	B	9.8	A	18.1	C	10.6	B	23.1	C	11.0	B	--	C*	11.6	B	--	C*	15.3	C	--	C*
	PM	9.6	A	9.7	A	9.9	A	10.6	B	10.8	B	11.0	B	11.3	B	11.6	B	11.9	B	17.6	C	18.5	C
8. McCall Avenue / Central Avenue	AM	19.4	C	10.5	B	24.6	C	11.7	B	--	C*	12.6	B	--	C*	13.6	B	--	C*	19.2	C	**78.1+**	**F+**
	PM	9.5	A	9.7	A	9.8	A	10.6	B	10.8	B	10.5	B	11.5	B	11.9	B	12.2	B	--	C*	**30.1**	**D**
9. SR-99 NB On-Ramp / Central Avenue	AM	1.5	A	1.6	A	1.6	A	1.6	A	1.6	A	1.6	A	1.6	A	1.6	A	1.6	A	1.7	A	1.7	A
	PM	2.3	A	2.3	A	2.3	A	2.3	A	2.3	A	2.3	A	2.3	A	2.3	A	2.3	A	2.2	A	2.2	A
10. SR-99 SB Off-Ramp / Central Avenue	AM	--	C*	--	C*	--	C*	**134.1++**	**F++**	**137.8++**	**F++**	**149.6++**	**F++**	**152.6++**	**F++**	**164.6++**	**F++**	**168.4++**	**F++**	**153.9++**	**F++**	**157.7++**	**F++**
	PM	19.0	C	21.4	C	21.4	C	23.9	C	23.9	C	**25.4++**	**D++**	**25.4++**	**D++**	**26.8++**	**D++**	**26.8++**	**D++**	**27.1++**	**D++**	**27.1++**	**D++**
11. Project Driveway / Goodfellow Avenue	AM	9.7	A			10.3	B			10.4	B			10.6	B			10.6	B			11.4	B
	PM	8.7	A			8.8	A			8.9	A			9.0	A			9.1	A			9.7	A

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized and all-way stop controlled intersections, delay results show the average for the entire intersection. For one-

* Traffic signal not warranted. Level of service C assumed.

\+ Meets peak hour signal warrants.

++ Meets four-hour signal warrants.

TABLE 3-3

Segment Operations

STREET SEGMENT	DIRECTION	PEAK HOUR	EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
			VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS
SR 180 [1]																								
McCall Avenue to Highland Avenue	EB	AM	984	A	992	A	1,137	B	1,124	B	1,269	B	1,190	B	1,335	B	1,255	B	1,400	B	1,752	B	1,897	B
		PM	1,363	B	1,362	B	1,372	B	1,494	B	1,504	B	1,559	B	1,569	B	1,625	B	1,635	B	2,151	C	2,161	C
	WB	AM	1,698	B	1,698	B	1,842	C	1,864	C	2,008	C	1,947	C	2,091	C	2,030	C	2,174	C	2,695	C	**2,839**	**D**
		PM	914	A	925	A	935	A	1,057	A	1,067	A	1,123	A	1,133	A	1,189	B	1,199	B	1,717	B	1,727	B
Highland Avnue to De Wolf Avenue	EB	AM	988	A	996	A	1,141	B	1,159	B	1,304	B	1,240	B	1,385	B	1,321	B	1,466	B	1,971	C	2,116	C
		PM	1,400	B	1,399	B	1,409	B	1,542	B	1,552	B	1,614	B	1,624	B	1,685	B	1,695	B	2,257	C	2,267	C
	WB	AM	1,711	B	1,711	B	1,855	B	1,901	C	2,045	C	1,995	C	2,139	C	2,090	C	2,234	C	**2,848**	**D**	**2,992**	**D**
		PM	889	A	900	A	910	A	1,066	A	1,076	A	1,148	A	1,158	B	1,231	B	1,241	B	1,893	B	1,903	B
De Wolf Avenue to Temperance Avenue[2]	EB	AM	1,010	A	1,018	A	1,163	B	1,155	A	1,300	B	1,223	B	1,368	B	1,291	B	1,436	B	1,838	B	1,983	B
		PM	1,460	B	1,459	B	1,469	B	1,566	B	1,576	B	1,619	B	1,629	B	1,672	B	1,682	B	2,099	C	2,109	C
	WB	AM	1,774	B	1,774	B	1,918	B	1,957	B	2,101	C	2,049	C	2,193	C	2,140	C	2,284	C	2,873	C	**3,017**	**D**
		PM	909	A	920	A	930	A	1,064	A	1,074	A	1,135	A	1,145	A	1,207	A	1,217	A	1,781	B	1,791	B
McCall Avenue																								
SR-180 to Jensen Avenue	NB	AM	489	C	338	B	489	C	403	B	554	C	436	B	587	C	470	C	621	C	736	C	**887**	**F**
		PM	407	B	397	B	407	B	463	C	473	C	495	C	505	C	529	C	539	C	**808**	**F**	**818**	**F**
	SB	AM	555	C	403	B	555	C	469	C	621	C	503	C	655	C	538	C	690	C	**820**	**F**	**972**	**F**
		PM	380	B	370	B	380	B	423	B	433	B	448	B	458	B	475	C	485	C	698	C	708	C
Jensen Avnue to North Avenue	NB	AM	479	C	324	B	479	C	385	B	540	C	413	B	568	C	443	B	598	C	670	C	**825**	**F**
		PM	330	B	320	B	330	B	390	B	400	B	422	B	432	B	454	B	464	C	699	C	709	C
	SB	AM	452	B	296	B	452	B	347	B	503	C	372	B	528	C	396	B	552	C	551	C	707	C
		PM	295	B	285	B	295	B	346	B	356	B	377	B	387	B	406	B	416	B	654	C	664	C
North Avenue to Central Avenue	NB	AM	296	B	141	B	296	B	177	B	332	B	196	B	351	B	214	B	369	B	364	B	519	C
		PM	249	B	239	B	249	B	283	B	293	B	306	B	316	B	330	B	340	B	509	C	519	C
	SB	AM	392	B	236	B	392	B	270	B	426	B	287	B	443	B	304	B	460	C	442	B	598	C
		PM	213	B	203	B	213	B	243	B	253	B	264	B	274	B	284	B	294	B	450	B	460	C

TABLE 3-3 (Continued)

Segment Operations

STREET SEGMENT	DIRECTION	PEAK HOUR	EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
			VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME	LOS
Central Avenue																								
SR-99 NB On-Ramp to SR-99 SB Off-Ramp	EB	AM	603	C	634	C	637	C	649	C	652	C	656	C	659	C	663	C	666	C	726	C	729	C
		PM	507	C	528	C	528	C	553	C	553	C	568	C	568	C	581	C	581	C	688	C	688	C
	WB	AM	156	B	185	B	188	B	201	B	204	B	209	B	212	B	216	B	219	B	279	B	282	B
		PM	138	B	156	B	156	B	169	B	169	B	175	B	175	B	181	B	181	B	231	B	231	B
McCall Avenue to Bethel Avenue	EB	AM	220	B	97	B	256	B	113	B	272	B	121	B	280	B	129	B	288	B	196	B	355	B
		PM	136	B	146	B	156	B	163	B	173	B	172	B	182	B	182	B	192	B	254	B	264	B
	WB	AM	262	B	140	B	298	B	157	B	315	B	166	B	324	B	152	B	310	B	248	B	406	B
		PM	105	B	115	B	125	B	131	B	141	B	139	B	149	B	148	B	158	B	214	B	224	B
Bethel Avenue to Academy Avenue	EB	AM	270	B	147	B	306	B	173	B	332	B	185	B	344	B	199	B	358	B	306	B	465	C
		PM	182	B	192	B	202	B	215	B	225	B	228	B	238	B	239	B	249	B	349	B	359	B
	WB	AM	307	B	185	B	343	B	211	B	369	B	224	B	382	B	237	B	395	B	349	B	507	C
		PM	159	B	168	B	179	B	197	B	208	B	212	B	223	B	226	B	237	B	346	B	357	B
Academy Avenue to Newmark Avenue	EB	AM	243	B	132	B	305	B	150	B	323	B	158	B	331	B	169	B	342	B	243	B	416	B
		PM	110	B	122	B	133	B	141	B	152	B	151	B	162	B	161	B	172	B	242	B	253	B
	WB	AM	246	B	133	B	304	B	148	B	319	B	157	B	328	B	165	B	336	B	230	B	401	B
		PM	101	B	111	B	125	B	128	B	142	B	139	B	153	B	147	B	161	B	224	B	238	B
Goodfellow Avenue																								
Newmark Avenue to Riverbend Avenue	EB	AM	232	B	121	B	294	B	139	B	312	B	148	B	321	B	158	B	331	B	233	B	406	B
		PM	88	B	100	B	111	B	118	B	129	B	130	B	141	B	139	B	150	B	244	B	255	B
	WB	AM	220	B	108	B	279	B	124	B	295	B	131	B	302	B	141	B	312	B	206	B	377	B
		PM	81	B	91	B	106	B	108	B	123	B	119	B	134	B	128	B	143	B	215	B	230	B

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

(1) Segment Analysis was performed using HCM Methodologies

(2) Freeway Segment

TABLE 3-4

Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
			AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue	AM Queue	PM Queue
McCall Avenue / SR-180	EB Left	500	43	70	43	70	43	70	55	75	55	75	60	77	60	77	65	80	65	80	120	108	120	108
	EB Right	500	60	56	50	55	60	56	52	56	62	57	53	57	62	57	53	57	63	58	67	61	184	62
	WB Left	500	31	28	31	28	31	28	36	35	36	35	38	37	38	37	40	40	40	40	60	63	60	63
	WB Right	500	13	16	13	16	13	16	16	19	16	19	17	21	17	21	18	22	18	22	33	31	33	31
	NB Left	200	411	282	239	268	411	282	269	289	441	302	285	299	455	312	299	311	470	323	417	395	579	407
	SB Left	400	26	41	26	41	26	41	33	55	33	55	37	63	37	63	39	71	39	71	67	176	67	176
McCall Avenue / Jensen Avenue	EB Left	150	24	47	23	47	24	47	36	101	36	103	44	132	44	134	52	163	52	163	174	392	174	392
	WB Left	150	38	33	36	33	38	33	38	34	38	35	38	35	38	35	38	36	38	36	38	36	38	36
	NB Left	75	166	77	148	77	166	77	195	125	201	126	212	152	219	154	227	177	233	177	361	364	366	364
	SB Left	100	201	197	185	195	201	197	208	211	210	213	215	220	215	222	219	228	219	228	253	265	253	265

Queue is measured in feet

TABLE 3-5

Traffic Index

STREET SEGMENT	DIRECTION	YEAR 2035 NO PROJECT	YEAR 2035 PLUS PROJECT	INCREASE	CUMULATIVE YEAR 2035 NO PROJECT	INCREASE	CUMULATIVE YEAR 2035 PLUS PROJECT	INCREASE
		TRAFFIC INDEX (TI)						
Central Avenue								
SR 99 SB Off-Ramp and SR 99 NB On-Ramp	EB	10.0	10.0	0.0	10.5	0.5*	10.5	0.5*
	WB	10.0	10.0	0.0	10.5	0.5*	10.5	0.5*
McCall Avenue and Bethel Avenue	EB	7.5	10.5	**3.0**	10.0	**2.5**	11.0	**3.5**
	WB	7.5	10.5	**3.0**	10.0	**2.5**	11.0	**3.5**
Bethel Avenue and Academy Avenue	EB	7.5	10.5	**3.0**	10.0	**2.5**	11.5	**4.0**
	WB	8.0	10.5	**2.5**	10.0	**2.0**	11.5	**3.5**
Academy Avenue and Newmark Avenue	EB	7.5	10.5	**3.0**	10.5	**3.0**	11.0	**3.5**
	WB	7.5	10.5	**3.0**	10.5	**3.0**	11.5	**4.0**
Newmark Avenue and Riverbend Avenue	EB	7.0	10.5	**3.5**	10.0	**3.0**	11.0	**4.0**
	WB	7.0	10.5	**3.5**	10.5	**3.5**	11.0	**4.0**
McCall Avenue								
SR 180 (Kings Canyon) and Jensen Avenue	NB	8.0	10.5	**2.5**	8.0	0.0	10.5	**2.5**
	SB	8.0	10.5	**2.5**	8.0	0.0	10.5	**2.5**
Jensen Avenue and North Avenue	NB	8.0	10.5	**2.5**	8.0	0.0	10.5	**2.5**
	SB	8.0	10.5	**2.5**	8.0	0.0	10.5	**2.5**
North Avenue and Central Avenue	NB	8.0	10.5	**2.5**	8.0	0.0	10.5	**2.5**
	SB	7.5	10.5	**3.0**	7.5	0.0	10.5	**3.0**
SR 180								
McCall Avenue and Highland Avenue	EB	10.5	11.0	0.5*	11.5	1.0*	12.0	1.5*
	WB	10.5	11.0	0.5*	11.5	1.0*	12.0	1.5*
Highland Avenue and DeWolf Avenue	EB	10.5	11.0	0.5*	11.5	1.0*	12.0	1.5*
	WB	10.5	11.0	0.5*	11.5	1.0*	12.0	1.5*
DeWolf Avenue and Temperance Avneue	EB	10.5	11.0	0.5*	11.5	1.0*	12.0	1.5*
	WB	10.5	11.0	0.5*	11.5	1.0*	12.0	1.5*

Bold denotes standard has been exceeded

* Caltrans has not established significance criteria

3.16 Evaluation of Bicycle and Pedestrian Facilities

The traffic impact analysis included an evaluation of the Project's impact to bicycle and pedestrian facilities within the Project's study area. There is a Class I Bicycle/Recreational Trail planned within the study area based on information provided in Fresno County's Bicycle/Trail Master Plan. As shown in the maps included in Appendix L, there is a planned Class I facility along Academy Avenue at Central Avenue. All planned bicycle/pedestrian facilities will be designed in accordance with Fresno County policy and should eliminate any and all potential significant hazards to bicyclists and pedestrians.

The Class I and Class II facilities crossing Central/Goodfellow Avenue within the study area do so at traffic controlled intersections. There is a four-way (all-way) stop at Central/Goodfellow Avenue at Academy Avenue and Newmark Avenue. Though traffic within the study area is expected to increase over time, these traffic control devices will help maintain pedestrian and bicycle safety within the study area. The proposed Project does not significantly impact the existing or planned bicycle and pedestrian facilities in the Project study area and therefore does not trigger any fair-share contribution for bicycle or pedestrian improvements.

4.0 Mitigation

This chapter describes potential improvements to mitigate the traffic impacts of the Project. Described below are potential improvements at study area intersections and segments for various scenarios that would result in acceptable levels of service. In order to mitigate the Project's impacts, it is recommended that the Project contribute traffic impact fees, as determined by Fresno County in accordance with County policy (Please refer to Section 4.4 for explanation of the fair share formulas). The payment of these fair-share fees would be used to help fund the applicant's fair-share percentage of the improvements discussed below to mitigate the Project's traffic impacts to less than significant levels. Tables 4-4 through 4-6 provide the Project's fair share to improvements discussed below.

4.1 Recommended Improvements

EXISTING CONDITIONS

For this scenario, no improvements are recommended.

EXISTING PLUS PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

Caltrans has indicated that the improvements identified for the northbound approach shall be implemented prior to the Project's opening day.

EXISTING PLUS APPROVED/PENDING CONDITIONS

For this scenario, no improvements are recommended.

EXISTING PLUS PROJECT PLUS APPROVED/PENDING CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

YEAR 2015 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

YEAR 2015 PLUS PHASE 1 CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).
- Widen the southbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).

YEAR 2017 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).

McCall Avenue at Jensen Avenue

- Adjust signal timing

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

YEAR 2017 PLUS PHASE 2 CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at SR 180

- Widen the southbound approach to 1 left turn lane, 1 through lane, and 1 right turn lane (adding 1 right turn lane).

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).
- Widen the southbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).

YEAR 2019 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes and 1 through lane with a shared right (adding 1 left turn lane).
- Widen the southbound approach to 1 left turn lane, 1 through lane, and 1 right turn lane (adding 1 right turn lane).

McCall Avenue at Jensen Avenue

- Widen the westbound approach to 1 left turn lane, 2 through lanes, and 1 right turn lane (adding 1 right turn lane).

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

YEAR 2019 PLUS PHASE 3 CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).
- Widen the southbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 through lane).

Academy Avenue at Central Avenue

- Install Traffic Signal

CUMULATIVE YEAR 2035 NO PROJECT CONDITIONS

For this scenario, the following improvements are recommended:

McCall Avenue at SR 180

- Widen the northbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane, 1 through lane, and 1 right turn lane).
- Widen the southbound approach to 1 left turn lane, 2 through lane, and 1 right turn lane (adding 1 through lane and 1 right turn lane).

McCall Avenue at Jensen Avenue

- Widen the eastbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane and 1 right turn lane).
- Widen the westbound approach to 1 left turn lane, 2 through lanes, and 1 right turn lane (adding 1 right turn lane).
- Widen the northbound approach to 2 left turn lanes, 1 through lane, and 1 right turn lane (adding 1 left turn lane and 1 right turn lane).
- Widen the southbound approach to 2 left turn lanes, 1 through lane, and 1 right turn lane (adding 1 left turn lane and 1 right turn lane).

McCall Avenue at North Avenue

- Install Traffic Signal

Academy Avenue at Central Avenue

- Install Traffic Signal

SR 99 SB Off-Ramp at Central Avenue

- Install Traffic Signal

McCall Avenue between SR 180 and Jensen Avenue

- 2 travel lanes in the northbound direction (adding 1 travel lane)
- 2 travel lanes in the southbound direction (adding 1 travel lane)

CUMULATIVE YEAR 2035 PLUS PROJECT CONDITIONS

For this scenario, the following additional improvements are recommended:

McCall Avenue at Jensen Avenue

- Widen the northbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane, 1 through lane, and 1 right turn lane).
- Widen the southbound approach to 2 left turn lanes, 2 through lanes, and 1 right turn lane (adding 1 left turn lane, 1 through lane, and 1 right turn lane).

McCall Avenue at Central Avenue

- Install Traffic Signal

McCall Avenue between Jensen Avenue and North Avenue

- 2 travel lanes in the northbound direction (adding 1 travel lane)

POST-MITIGATION LEVEL OF SIGNIFICANCE

The level of service resulting from the potential improvements identified above is shown in Table 4-1 for study area intersections and Table 4-2 for study segments. The post-mitigation result, once mitigation is implemented, would be less than significant. However, traffic impacts should be considered significant and unavoidable because the precise timing for traffic mitigation, given fair share contribution requirements, cannot be precisely determined. Once the traffic mitigation is actually and fully implemented in the future, the traffic impacts would then be less than significant. The resulting Cumulative 2035 lane geometry is shown in Figure 4-1.

Caltrans has indicated that there are no plans to widen SR 180 between McCall Avenue and Temperance Avenue in the foreseeable future. Therefore, no improvements along the SR 180 mainline were recommended even though widening SR 180 beyond its current configuration would reduce the intersection/segment LOS in the study area from LOS 'D' to LOS 'C'.

In addition to the proposed improvements identified above, Table 4-3 identifies left turn and right pocket lengths required for the Cumulative Year 2035 scenario. The determination of the recommended storage length was determined by the queuing analysis shown in Chapter 3 and Chapter 400 of Caltrans' Highway Design Manual.

4.2 Site Access

There will be one (1) access point to the proposed Project to be located along Goodfellow Avenue west of Riverbend Avenue. As shown in Table 3-2, the LOS in the Cumulative Year 2035 Plus Phase 3 at Goodfellow Avenue and the Project Driveway is LOS 'B' and 'A' in the AM and PM peak hour, respectively. In addition, the segment analysis for Goodfellow Avenue between Riverbend Avenue and Newmark Avenue shows that the AM and PM peak hours LOS for the Cumulative Year 2035 Plus Phase 3 will be LOS B. Therefore, no recommended improvements were identified in Section 4.1 above.

Access to the Riverbend Sand and Gravel Project as stated above would be provided via Goodfellow Avenue which is classified as an Arterial in the Fresno County General Plan. The General Plan specifies that new developments along arterials are required to abide by the following:

- Direct access from an arterial to abutting property to maintain highway capacity and safety shall be restricted through application of design requirements of new development which may provide for frontage roads, deceleration/ acceleration lanes, restricted turn movements, access to other roads or driveways, or limits on the number and/ or location of points of direct access.

- Turnaround facilities shall be provided on parcels having direct access to arterials so that vehicles do not back out onto the roadway.

- Direct access points shall be located at sufficient intervals from each other and from public roads to maintain the safety and the traffic carrying capacity of the roadway. Wherever possible, direct access points shall be located to allow existing parcels one (1) direct access to an arterial. In some instances, where there is not sufficient frontage, two (2) or more parcels may be required to share one access point. In some instances where there is sufficient frontage, more than one direct access from a single parcel may be permitted.

- Existing direct access may be relocated, subject to the same standards as for new access.

- Access to a divided arterial may be restricted to right turn movements and median crossing may be prohibited.

- Access to an arterial may occur at intersections with expressways, super arterials, other arterials, and collectors. Access from local streets may be restricted through the use of islands and turn lanes.

As a result of the specifications shown above, an eastbound left turn and westbound right turn at the Project Driveway at Goodfellow Avenue is recommended. The storage length requirements for the eastbound left turn lane and the westbound right turn lane are shown in Table 4-3. In addition to the left turn and right turn lanes, there will be a need for a westbound acceleration lane for trucks exiting the site due to safety considerations. Fresno County has indicated that all improvements at the driveway shall be designed in accordance with the Caltrans Highway Design Manual and shall be constructed prior to Project opening day.

4.3 Impacts to Traffic Index

Fresno County has established significance criteria for the purpose of determining if a project has an impact to the traffic index of State facilities. If truck traffic generated by the project results in the TI increasing by a factor of 0.5, the project is required to mitigate the roadway structural section to accommodate the increase in truck traffic. Table 3-5 in Chapter 3 indicates that the TI for several street segments will increase by a factor of 0.5 or greater with the addition of the proposed Project truck traffic. As a result, the proposed Project will contribute its fair share cost for the purposes of improving the structural section of the impacted street segments.

TABLE 4-1

Intersection Operations With Mitigation

INTERSECTION	PEAK HOUR	EXISTING PLUS PROJECT		EXISTING PLUS APPROVED / PENDING		EXISTING PLUS PROJECT PLUS APPROVED / PENDING		YEAR 2015 NO PROJECT		YEAR 2015 PLUS PHASE 1		YEAR 2017 NO PROJECT		YEAR 2017 PLUS PHASE 2		YEAR 2019 NO PROJECT		YEAR 2019 PLUS PHASE 3		CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
		DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS
McCall Avenue /	AM	28.1	C			29.3	C	30.0	C	34.5	C	33.8	C	32.8	C	29.3	C	32.9	C	**36.8**	**D***	**40.3**	**D***
SR-180	PM	25.1	C			25.1	C	29.0	C	28.7	C	32.6	C	30.8	C	33.3	C	33.6	C	**51.5**	**D***	**52.0**	**D***
McCall Avenue /	AM									27.6	C	34.8	C	30.5	C	32.7	C	28.6	C	33.0	C	27.7	C
Jensen Avenue	PM									24.9	C	33.4	C	26.8	C	34.8	C	26.8	C	32.8	C	25.8	C
McCall Avenue /	AM																			14.9	B	20.2	C
North Avenue	PM																			14.7	B	15.0	B
Academy Avenue /	AM																	18.6	B	17.4	B	22.0	C
Central Avenue	PM																	15.0	B	18.6	B	19.0	B
McCall Avenue /	AM																					18.1	B
Central Avenue	PM																					11.0	B
SR-99 SB Off-Ramp /	AM							11.8	B	11.9	B	12.0	B	12.1	B	12.1	B	14.0	B	11.6	B	14.0	B
Central Avenue	PM							10.9	B	10.9	B	11.1	B	11.1	B	11.2	B	11.2	B	11.7	B	11.7	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

* Caltrans is not currently planning to widen SR 180 from 4 to 6 lanes in the foreseeable future.

TABLE 4-2

Segment Operations With Mitigation

STREET SEGMENT	DIRECTION	PEAK HOUR	CUMULATIVE YEAR 2035 NO PROJECT		CUMULATIVE YEAR 2035 PLUS PROJECT	
			VOLUME	LOS	VOLUME	LOS
SR 180 [1]						
McCall Avenue to Highland Avenue	EB	AM				
		PM				
	WB	AM			**2,839**	**D ***
		PM			1,727	B
Highland Avnue to De Wolf Avenue	EB	AM				
		PM				
	WB	AM	**2,848**	**D ***	**2,992**	**D ***
		PM	1,893	B	1,903	B
De Wolf Avenue to Temperance Avenue[2]	EB	AM				
		PM				
	WB	AM			**3,017**	**D ***
		PM			1,791	B
McCall Avenue						
SR-180 to Jensen Avenue	NB	AM	736	B	887	B
		PM	808	B	818	B
	SB	AM	820	B	972	B
		PM	698	B	708	B
Jensen Avnue to North Avenue	NB	AM			825	B
		PM			709	B
	SB	AM				
		PM				

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

(1) Segment Analysis was performed using HCM Methodologies

(2) Freeway Segment

* Caltrans is not currently planning to widen SR 180 from 4 to 6 lanes in the foreseeable future.

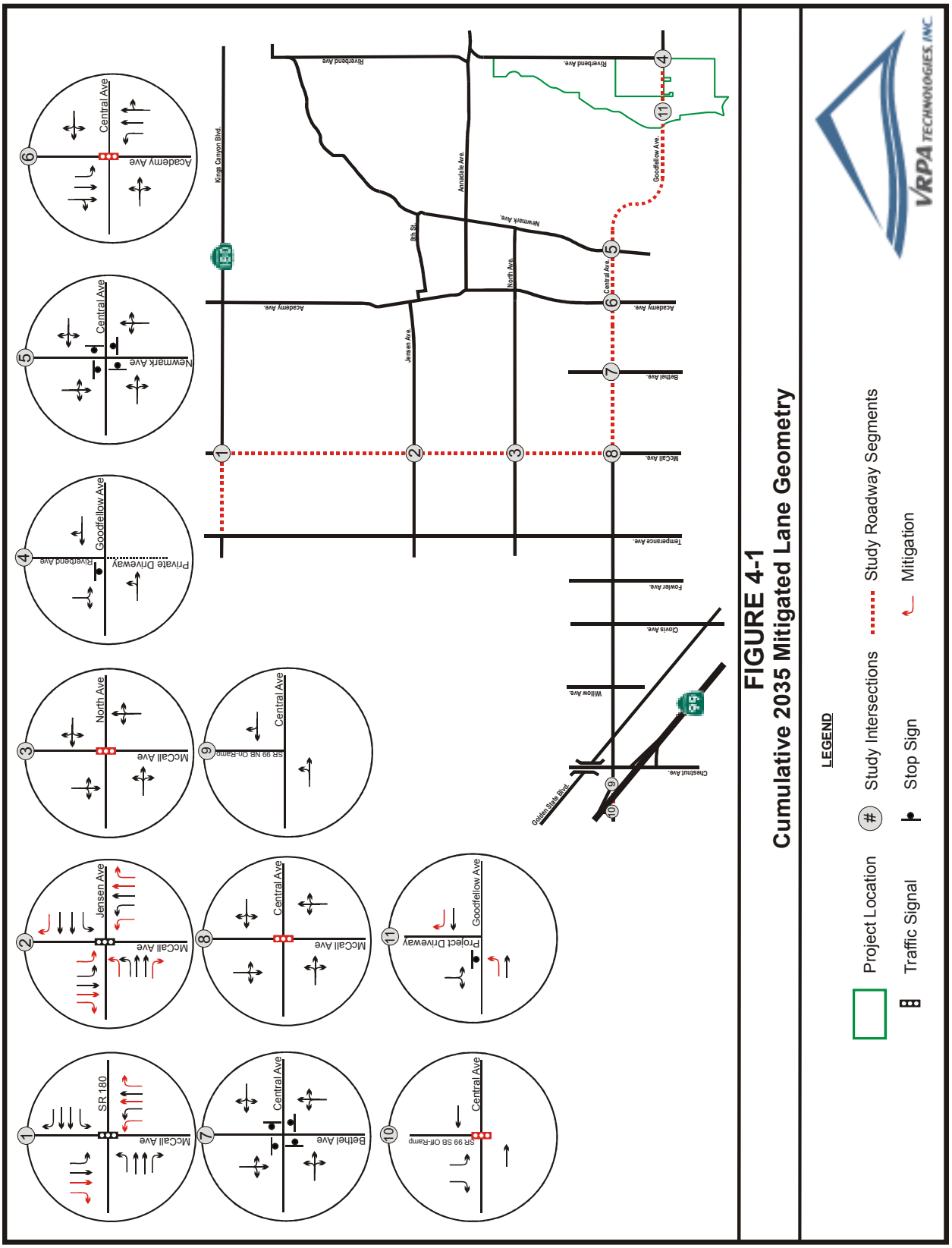


FIGURE 4-1
Cumulative 2035 Mitigated Lane Geometry
LEGEND
Project Location
Traffic Signal
Study Intersections
Stop Sign
Study Roadway Segments
Mitigation
VRPA TECHNOLOGIES, INC.
Riverbend Ave.
Goodfellow Ave.
Central Ave.
Academy Ave.
Bethel Ave.
McCall Ave.
Temperance Ave.
Fowler Ave.
Clovis Ave.
Willow Ave.
Chestnut Ave.
Golden State Blvd.
Kings Canyon Blvd.
Annadale Ave.
Newmark Ave.
8th St.
North Ave.
Jensen Ave.
SR 180
SR 99 NB On-Ramp
SR 99 SB Off-Ramp
Private Driveway
Project Driveway

TABLE 4-3

Left Turn and Right Turn Storage Requirements

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		CUMULATIVE 2035 WITH PROJECT RECOMMENDED STORAGE LENGTH (ft.)
McCall Avenue / SR-180	EB Left	500	500
	EB Right	500	500
	WB Left	500	500
	WB Right	500	500
	NB Left	200	2 @ 250
	NB Right	--	435
	SB Left	400	400
	SB Right	--	435
McCall Avenue / Jensen Avenue	EB Left	150	2 @ 150
	EB Right	--	100
	WB Left	150	150
	WB Right	--	100
	NB Left	75	200
	NB Right	--	100
	SB Left	100	125
	SB Right	--	100
Academy Avenue / Central Avenue	NB Left	200	200
	SB Left	200	200
SR 99 SB Off-Ramp / Central Avenue	SB Left	50	225
	SB Right	50	50
Project Driveway / Goodfellow Avenue	EB Left	--	550
	WB Right	--	550

4.4 Equitable Fair-Share Responsibility

According to the Caltrans "Guide for the Preparation of Traffic Impact Studies, " the intent of determining the equitable responsibility for mitigation measures is to provide a starting point for early discussions to address traffic mitigation equitability and to calculate the equitable share for mitigating traffic impacts. The formulas used to calculate the equitable share responsibility to Caltrans and Fresno County facilities is as follows:

Caltrans

Equitable Share = (Project Trips)/(Future Year Plus Project Traffic – Existing Traffic)

Fresno County

Equitable Share = (Project Trips)/(Future Year Plus Project Traffic)

Table 4-4 shows the equitable share responsibility for improvements to Caltrans and Fresno County facilities as described above, with the exception of the improvements identified at the SR 99 at Central Avenue interchange. Caltrans has already identified improvements at the interchange and the Project's fair-share to those improvements are discussed below. The equitable share responsibility shown in Table 4-4 is the result of LOS enhancements related to capacity. Caltrans has also determined that its facilities at Manning Avenue and SR 99 would require improvements in order to accommodate projected future demand and has required that the proposed Project identify trips to the Manning Avenue at SR 99 interchange. Table 4-5 identifies the number of trips generated by the Project that will impact Caltrans' facilities at the SR 99 at Manning Avenue and Central Avenue interchanges and the corresponding fee that the Project is responsible for. Table 4-6 shows the equitable share responsibility to Fresno County facilities related to pavement structure.

San Joaquin Valley Air Pollution Control District Rule 8061.5.1.1.1.1 requires new paved roads or modifications to existing paved roads, with projected annual average daily vehicle trips of 500 vehicles or more, to be constructed with paved shoulders. Therefore, fair-share costs for road improvements that meet the definition of such rule will include paved shoulders.

TABLE 4-4

Equitable Fair-Share Responsibility

INTERSECTION	EXISTING	PROJECT TRIPS	CUMULATIVE YEAR 2035 PLUS PROJECT	FAIR SHARE PERCENTAGE
McCall Avenue / Jensen Avenue • Eastbound approach: add 1 left turn lane and 1 right turn lane • Westbound approach: add 1 right turn lane • Northbound approach: add 1 left turn lane, 1 through lane, and 1 right turn lane • Southbound approach: add 1 left turn lane, 1 through lane, and 1 right turn lane	1,735	311	3,666	8.5%
McCall Avenue / North Avenue • Install Traffic Signal	702	311	1,676	18.6%
Academy Avenue / Central Avenue • Install Traffic Signal	668	344	1,933	17.8%
McCall Avenue / Central Avenue • Install Traffic Signal	461	317	1,379	23.0%
McCall Avenue / SR 180 • Northbound approach: add 1 left turn lane, 1 through lane, and 1 right turn lane • Southbound approach: add 1 through lane and 1 right turn lane	2,121	303	5,139	10.0%
SEGMENTS				
McCall Avenue				
SR 180 to Jensen Avenue • Northbound direction: add 1 travel lane • Southbound direction: add 1 travel lane	741	303	1,859	16.3%
Jensen Avenue to North Avenue • Northbound direction: add 1 travel lane	324	311	825	37.7%

TABLE 4-5

Project's Fair Share Cost to SR 99 at Manning Avenue and Central Avenue Interchanges

IMPROVEMENT	NUMBER OF PROJECT TRIPS IMPACTING FACILTIY	COST PER TRIP	FAIR SHARE COST
Manning Avenue			
SR 99 NB Off-Ramp to Manning Avenue - Traffic Signal	18	$420	$7,560
SR 99 SB Off-Ramp to Manning Avenue - Traffic Signal	9	$250	$2,250
Manning Avenue between SR 99 SB Off-Ramp and SR 99 NB Off-Ramp - Widen overcrossing, WB Left at NB Ramps	9	$1,860	$16,740
Central Avenue			
SR 99 SB Off-Ramp to Central Avenue - Traffic Signal and dedicated right turn lane	3	$800	$2,400

TABLE 4-6

Equitable Fair-Share Responsibility for Traffic Index (TI) Impacts

SEGMENTS	PROJECT TRIPS (AADTT)	CUMULATIVE YEAR 2035 PLUS PROJECT (AADTT)	FAIR SHARE PERCENTAGE
Central Avenue			
McCall Avenue and Bethel Avenue	342	743	46.0%
Bethel Avenue and Academy Avenue	342	806	42.4%
Academy Avenue and Newmark Avenue	370	946	39.1%
Newmark Avenue and Riverbend Avenue	370	919	40.3%
McCall Avenue			
SR 180 (Kings Canyon) and Jensen Avenue	327	533	61.4%
Jensen Avenue and North Avenue	335	502	66.7%
North Avenue and Central Avenue	335	454	73.8%

AADTT = Annual Average Daily Truck Traffic

APPENDIX A

Modified HCM-Based Tables (Florida Tables)

TABLE 7

Generalized **Peak Hour Directional** Volumes for Florida's **Urbanized Areas**[1]

10/4/10

STATE SIGNALIZED ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Median	B	C	D	E
1	Undivided	510	820	880	***
2	Divided	1,560	1,890	1,960	***
3	Divided	2,400	2,860	2,940	***
4	Divided	3,240	3,830	3,940	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Median	B	C	D	E
1	Undivided	**	560	810	860
2	Divided	**	1,330	1,770	1,870
3	Divided	**	2,080	2,680	2,830
4	Divided	**	2,830	3,590	3,780

Class III/IV (more than 4.50 signalized intersections per mile)

Lanes	Median	B	C	D	E
1	Undivided	**	270	630	790
2	Divided	**	670	1,500	1,700
3	Divided	**	1,050	2,330	2,570
4	Divided	**	1,440	3,170	3,450

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Major City/County Roadways	- 10%
Other Signalized Roadways	- 35%

State & Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Divided/Undivided & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding volumes in this table by 1.20.

FREEWAYS

Lanes	B	C	D	E
2	2,200	3,020	3,720	4,020
3	3,300	4,580	5,580	6,200
4	4,400	6,080	7,420	8,400
5	5,500	7,680	9,320	10,580
6	7,560	10,220	12,080	12,780

Freeway Adjustments

Auxiliary Lanes	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	400	800	1,140	1,440
2	Divided	1,770	2,560	3,320	3,760
3	Divided	2,660	3,840	4,980	5,650

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	B	C	D	E
0-49%	**	170	650	>650
50-84%	130	200	>200	***
85-100%	340	>340	***	***

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	**	**	270	770
50-84%	**	100	600	1000
85-100%	**	610	1000	>1000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	>5	≥4	≥3	≥2
85-100%	>4	≥3	≥2	≥1

[1] Values shown are presented as hourly directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. To convert to annual average daily traffic volumes, these volumes must be divided by appropriate D and K factors. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

** Cannot be achieved using table input value defaults.

*** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults

Source:
Florida Department of Transportation
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450

APPENDIX B

Traffic Count Data Sheets

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_015 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	SR-99 SB Off-Ramp			SR-99 SB Off-Ramp			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	0	1	0	0	1	0	
7:00 AM				85		13		29			30		157
7:15 AM				113		19		25			22		179
7:30 AM				117		22		42			37		218
7:45 AM				125		36		51			52		264
8:00 AM				94		25		40			26		185
8:15 AM				94		30		37			37		198
8:30 AM				68		20		44			29		161
8:45 AM				92		25		51			48		216
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	788	0	190	0	319	0	0	281	0	1578
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	80.57%	0.00%	19.43%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	430	0	113	0	170	0	0	152	0	865
PEAK HR FACTOR :		0.000			0.843			0.833			0.731		0.819

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_015 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	SR-99 SB Off-Ramp			SR-99 SB Off-Ramp			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	0	1	0	0	1	0	
4:00 PM				56		17		56			34		163
4:15 PM				53		15		66			29		163
4:30 PM				70		23		79			36		208
4:45 PM				56		14		52			46		168
5:00 PM				57		14		74			27		172
5:15 PM				53		14		52			18		137
5:30 PM				50		9		41			20		120
5:45 PM				32		14		40			19		105
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	427	0	120	0	460	0	0	229	0	1236
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	78.06%	0.00%	21.94%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	236	0	66	0	271	0	0	138	0	711
PEAK HR FACTOR :	0.000			0.812			0.858			0.750			0.855

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_014 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	SR-99 NB On-Ramp			SR-99 NB On-Ramp			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	0	0	1	0	0	1	1	
7:00 AM							11	102			32	50	195
7:15 AM							9	129			21	53	212
7:30 AM							17	144			38	74	273
7:45 AM							17	158			54	54	283
8:00 AM							13	120			24	60	217
8:15 AM							21	110			37	67	235
8:30 AM							18	94			29	85	226
8:45 AM							22	121			48	63	254
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	128	978	0	0	283	506	1895
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	11.57%	88.43%	0.00%	0.00%	35.87%	64.13%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	68	532	0	0	153	255	1008
PEAK HR FACTOR :		0.000			0.000			0.857			0.911		0.890

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_014 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	SR-99 NB On-Ramp			SR-99 NB On-Ramp			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	0	0	1	0	0	1	1	
4:00 PM							24	88			34	135	281
4:15 PM							31	88			29	119	267
4:30 PM							20	129			36	191	376
4:45 PM							19	88			46	137	290
5:00 PM							29	103			27	150	309
5:15 PM							21	84			17	113	235
5:30 PM							15	76			21	91	203
5:45 PM							17	54			19	76	166
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	176	710	0	0	229	1012	2127
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	19.86%	80.14%	0.00%	0.00%	18.45%	81.55%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	99	408	0	0	138	597	1242
PEAK HR FACTOR :		0.000			0.000			0.851			0.809		0.826

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_005 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	McCall Ave			McCall Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	3	8	4	10	23	4	1	5	1	0	13	4	76
7:15 AM	0	19	0	8	42	1	1	4	1	0	8	5	89
7:30 AM	1	35	5	1	45	3	1	13	1	4	10	4	123
7:45 AM	3	21	2	8	66	2	1	8	0	1	19	7	138
8:00 AM	5	27	1	3	41	1	0	8	2	2	11	10	111
8:15 AM	0	16	1	6	32	3	1	3	1	2	8	5	78
8:30 AM	0	23	3	3	23	1	2	7	0	1	8	3	74
8:45 AM	1	35	3	3	27	0	1	7	1	0	8	4	90
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	13	184	19	42	299	15	8	55	7	10	85	42	779
APPROACH %'s :	6.02%	85.19%	8.80%	11.80%	83.99%	4.21%	11.43%	78.57%	10.00%	7.30%	62.04%	30.66%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	9	102	8	20	194	7	3	33	4	7	48	26	461
PEAK HR FACTOR :		0.726			0.727			0.667			0.750		0.835

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_005 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	McCall Ave			McCall Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	2	39	6	8	37	3	3	17	2	3	16	10	146
4:15 PM	3	41	6	10	27	1	4	12	4	2	14	12	136
4:30 PM	2	34	3	7	29	3	2	16	1	2	7	9	115
4:45 PM	0	46	3	13	39	1	1	20	2	0	12	8	145
5:00 PM	2	46	3	8	32	0	0	9	6	5	11	9	131
5:15 PM	1	45	1	5	41	1	3	12	3	1	4	4	121
5:30 PM	0	43	1	6	43	0	5	23	5	0	9	5	140
5:45 PM	3	26	0	9	36	0	2	13	1	0	5	9	104
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	13	320	23	66	284	9	20	122	24	13	78	66	1038
APPROACH %'s :	3.65%	89.89%	6.46%	18.38%	79.11%	2.51%	12.05%	73.49%	14.46%	8.28%	49.68%	42.04%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	7	160	18	38	132	8	10	65	9	7	49	39	542
PEAK HR FACTOR :		0.925			0.840			0.913			0.819		0.928

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_004 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	Bethel Ave			Bethel Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	2	5	1	12	14	0	1	18	1	1	13	3	71
7:15 AM	2	16	3	10	16	3	0	11	2	2	13	10	88
7:30 AM	3	27	0	12	18	5	1	12	2	2	18	21	121
7:45 AM	2	30	2	10	23	2	2	20	1	2	28	19	141
8:00 AM	0	11	2	6	22	1	0	9	1	2	27	5	86
8:15 AM	0	10	1	3	15	0	1	13	0	0	17	7	67
8:30 AM	2	6	3	6	18	1	3	9	1	1	14	5	69
8:45 AM	1	11	1	5	11	3	1	9	0	1	7	4	54
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	12	116	13	64	137	15	9	101	8	11	137	74	697
APPROACH %'s :	8.51%	82.27%	9.22%	29.63%	63.43%	6.94%	7.63%	85.59%	6.78%	4.95%	61.71%	33.33%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	7	84	7	38	79	11	3	52	6	8	86	55	436
PEAK HR FACTOR :		0.721			0.914			0.663			0.760		0.773

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_004 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	Bethel Ave			Bethel Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	0	25	2	6	19	0	8	23	3	2	32	9	129
4:15 PM	1	23	3	8	20	1	1	30	2	1	19	10	119
4:30 PM	3	28	8	8	18	0	7	22	0	4	16	12	126
4:45 PM	1	31	5	10	20	1	3	34	2	2	19	14	142
5:00 PM	3	29	0	12	14	0	3	24	3	1	15	8	112
5:15 PM	1	23	3	18	24	0	3	15	2	3	11	20	123
5:30 PM	0	31	9	9	22	0	2	33	2	2	15	19	144
5:45 PM	2	19	0	8	10	0	0	19	1	4	13	14	90
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	11	209	30	79	147	2	27	200	15	19	140	106	985
APPROACH %'s :	4.40%	83.60%	12.00%	34.65%	64.47%	0.88%	11.16%	82.64%	6.20%	7.17%	52.83%	40.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	5	114	17	49	80	1	11	106	9	8	60	61	521
PEAK HR FACTOR :		0.850			0.774			0.808			0.896		0.905

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_003 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/ EW Streets:	Academy Ave			Academy Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
7:00 AM	12	30	3	3	26	6	10	11	16	2	9	3	131
7:15 AM	17	29	3	0	44	2	5	11	20	2	11	3	147
7:30 AM	24	49	3	6	52	6	6	14	15	7	10	8	200
7:45 AM	23	45	1	3	57	7	7	12	13	5	13	1	187
8:00 AM	10	30	2	7	49	10	3	8	6	2	8	5	140
8:15 AM	10	37	2	5	44	6	7	7	13	0	13	3	147
8:30 AM	3	36	4	8	29	5	6	6	8	3	9	4	121
8:45 AM	11	29	0	9	29	4	6	8	8	4	4	7	119
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	110	285	18	41	330	46	50	77	99	25	77	34	1192
APPROACH %'s :	26.63%	69.01%	4.36%	9.83%	79.14%	11.03%	22.12%	34.07%	43.81%	18.38%	56.62%	25.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	67	161	8	21	202	29	23	41	47	14	44	17	674
PEAK HR FACTOR :		0.776			0.940			0.793			0.750		0.843

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_003 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	Academy Ave			Academy Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
4:00 PM	18	63	5	11	46	9	10	9	8	1	18	5	203
4:15 PM	17	72	4	11	48	11	16	13	9	4	9	9	223
4:30 PM	14	49	3	4	56	14	12	11	14	5	12	5	199
4:45 PM	14	60	5	9	38	9	23	15	17	0	15	4	209
5:00 PM	13	56	2	5	73	8	9	7	22	2	12	10	219
5:15 PM	15	57	5	3	54	10	7	8	17	2	16	5	199
5:30 PM	15	58	2	9	61	12	13	12	9	1	10	1	203
5:45 PM	17	61	1	7	53	8	13	10	10	0	3	2	185
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	123	476	27	59	429	81	103	85	106	15	95	41	1640
APPROACH %'s :	19.65%	76.04%	4.31%	10.37%	75.40%	14.24%	35.03%	28.91%	36.05%	9.93%	62.91%	27.15%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	58	237	14	29	215	42	60	46	62	11	48	28	850
PEAK HR FACTOR :		0.831			0.831			0.764			0.906		0.953

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_002 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	Newmark Ave			Newmark Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	2	9	1	6	9	7	4	11	1	0	3	3	56
7:15 AM	1	8	0	4	17	6	5	2	3	1	7	3	57
7:30 AM	8	21	2	5	18	7	3	13	4	1	11	3	96
7:45 AM	4	13	1	7	16	5	4	7	6	2	9	6	80
8:00 AM	5	10	0	2	15	3	2	7	1	0	5	3	53
8:15 AM	8	4	0	3	14	3	3	1	5	0	5	3	49
8:30 AM	4	8	1	3	6	2	6	6	3	1	4	2	46
8:45 AM	2	7	0	3	5	5	2	5	6	0	5	2	42
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	34	80	5	33	100	38	29	52	29	5	49	25	479
APPROACH %'s :	28.57%	67.23%	4.20%	19.30%	58.48%	22.22%	26.36%	47.27%	26.36%	6.33%	62.03%	31.65%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	15	51	4	22	60	25	16	33	14	4	30	15	289
PEAK HR FACTOR :		0.565			0.892			0.788			0.721		0.753

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_002 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	Newmark Ave			Newmark Ave			Central Ave			Central Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	6	25	1	2	17	1	3	14	5	0	13	4	91
4:15 PM	4	16	1	4	15	5	5	17	5	1	12	5	90
4:30 PM	6	15	1	4	13	3	6	9	8	1	10	5	81
4:45 PM	7	12	2	4	15	0	5	18	4	2	12	1	82
5:00 PM	7	22	2	4	14	3	2	6	3	1	11	4	79
5:15 PM	4	19	0	3	13	1	6	7	6	1	13	5	78
5:30 PM	5	19	0	6	15	2	1	15	7	1	4	7	82
5:45 PM	1	12	1	1	3	2	4	8	3	0	5	3	43
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	40	140	8	28	105	17	32	94	41	7	80	34	626
APPROACH %'s :	21.28%	74.47%	4.26%	18.67%	70.00%	11.33%	19.16%	56.29%	24.55%	5.79%	66.12%	28.10%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	23	68	5	14	60	9	19	58	22	4	47	15	344
PEAK HR FACTOR :	0.750			0.865			0.917			0.917			0.945

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_001 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	Riverbend Ave			Riverbend Ave			Goodfellow Ave			Goodfellow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM		0	0	2		0	0	12			6	1	21
7:15 AM		0	0	2		1	0	7			11	3	24
7:30 AM		1	0	10		0	1	15			9	2	38
7:45 AM		0	0	8		0	0	13			16	2	39
8:00 AM		0	1	6		0	0	7			6	3	23
8:15 AM		0	0	5		0	1	1			9	0	16
8:30 AM		0	0	6		0	0	11			4	2	23
8:45 AM		0	0	7		0	0	7			7	3	24

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	1	46	0	1	2	73	0	0	68	16	208
APPROACH %'s :	0.00%	50.00%	50.00%	97.87%	0.00%	2.13%	2.67%	97.33%	0.00%	0.00%	80.95%	19.05%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	1	26	0	1	1	42	0	0	42	10	124
PEAK HR FACTOR :		0.500			0.675			0.672			0.722		0.795

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_001 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	Riverbend Ave			Riverbend Ave			Goodfellow Ave			Goodfellow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM			0	5			0	20		0	18	1	44
4:15 PM			0	2			0	21		0	9	2	34
4:30 PM			0	3			0	11		0	16	4	34
4:45 PM			1	3			0	16		0	12	1	33
5:00 PM			0	4			0	18		1	10	2	35
5:15 PM			0	2			0	6		0	18	1	27
5:30 PM			0	1			1	20		0	13	1	36
5:45 PM			0	6			0	10		0	5	3	24

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	26	0	0	1	122	0	1	101	15	267
APPROACH %'s :	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	0.81%	99.19%	0.00%	0.85%	86.32%	12.82%	

PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	1	13	0	0	0	68	0	0	55	8	145
PEAK HR FACTOR :		0.250			0.650			0.810			0.788		0.824

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_006 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	McCall Ave			McCall Ave			North Ave			North Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	1	14	0	6	39	3	2	10	0	1	22	17	115
7:15 AM	8	17	4	13	47	3	2	11	0	6	27	14	152
7:30 AM	1	42	4	12	55	3	1	19	2	10	37	17	203
7:45 AM	1	23	5	21	57	8	2	15	2	5	28	25	192
8:00 AM	3	30	3	13	48	1	4	8	1	3	20	21	155
8:15 AM	1	26	2	8	39	3	0	8	0	6	14	10	117
8:30 AM	3	23	3	12	12	2	1	5	2	5	8	16	92
8:45 AM	1	25	3	9	23	6	2	9	1	7	10	9	105
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	19	200	24	94	320	29	14	85	8	43	166	129	1131
APPROACH %'s :	7.82%	82.30%	9.88%	21.22%	72.23%	6.55%	13.08%	79.44%	7.48%	12.72%	49.11%	38.17%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	13	112	16	59	207	15	9	53	5	24	112	77	702
PEAK HR FACTOR :		0.750			0.817			0.761			0.832		0.865

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_006 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	McCall Ave			McCall Ave			North Ave			North Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	2	46	6	13	34	1	5	18	5	6	13	11	160
4:15 PM	3	49	12	14	32	4	1	29	2	3	12	9	170
4:30 PM	2	46	6	8	30	1	4	31	3	4	12	17	164
4:45 PM	2	54	5	25	47	0	5	28	5	6	8	8	193
5:00 PM	2	46	10	11	31	0	3	27	5	4	14	20	173
5:15 PM	0	58	3	18	52	2	6	31	2	2	9	10	193
5:30 PM	1	52	6	21	40	1	2	21	1	8	11	15	179
5:45 PM	1	32	6	12	32	4	7	22	2	5	12	14	149
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	13	383	54	122	298	13	33	207	25	38	91	104	1381
APPROACH %'s :	2.89%	85.11%	12.00%	28.18%	68.82%	3.00%	12.45%	78.11%	9.43%	16.31%	39.06%	44.64%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	5	210	24	75	170	3	16	107	13	20	42	53	738
PEAK HR FACTOR :		0.980			0.861			0.872			0.757		0.956

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_007 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	McCall Ave			McCall Ave			Jensen Ave			Jensen Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 0	5L 1	ST 1	5R 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	17	20	5	39	33	11	0	42	17	5	85	20	294
7:15 AM	19	33	0	45	51	11	0	93	15	4	111	26	408
7:30 AM	33	45	4	50	48	7	6	95	23	11	145	28	495
7:45 AM	50	52	4	40	59	9	5	92	18	3	112	34	478
8:00 AM	33	48	3	22	45	7	3	39	10	9	95	40	354
8:15 AM	5	29	4	29	30	2	5	51	7	4	82	19	267
8:30 AM	17	33	6	15	21	2	2	45	3	4	61	25	234
8:45 AM	5	28	8	12	35	5	5	30	5	7	54	19	213
	NL	NT	NR	5L	ST	5R	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	179	288	34	252	322	54	26	487	98	47	745	211	2743
APPROACH %'s :	35.73%	57.49%	6.79%	40.13%	51.27%	8.60%	4.26%	79.71%	16.04%	4.69%	74.28%	21.04%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	135	178	11	157	203	34	14	319	66	27	463	128	1735
PEAK HR FACTOR :		0.764			0.912			0.804			0.840		0.876

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_007 **Day:** TUESDAY

City: City of Fresno **UTURNS** **Date:** 12/13/2011

AM

NS/ EW Streets:	McCall Ave			McCall Ave			Jensen Ave			Jensen Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	0	1	2	0	
7:00 AM													
7:15 AM													
7:30 AM													
7:45 AM													
8:00 AM													
8:15 AM													
8:30 AM													
8:45 AM													
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_007 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	McCall Ave			McCall Ave			Jensen Ave			Jensen Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	20	51	10	22	36	6	12	85	16	9	60	25	352
4:15 PM	20	50	12	38	39	7	11	123	11	2	65	27	405
4:30 PM	18	43	6	31	26	1	10	97	14	4	78	36	364
4:45 PM	19	52	7	43	54	7	11	120	25	5	78	40	461
5:00 PM	23	46	6	36	33	6	10	88	15	7	78	48	396
5:15 PM	17	48	19	50	54	3	10	134	23	6	72	37	473
5:30 PM	24	48	11	38	39	4	8	106	18	6	67	22	391
5:45 PM	13	35	12	31	41	5	3	105	13	6	51	32	347
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	154	373	83	289	322	39	75	858	135	45	549	267	3189
APPROACH %'s :	25.25%	61.15%	13.61%	44.46%	49.54%	6.00%	7.02%	80.34%	12.64%	5.23%	63.76%	31.01%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	83	194	43	167	180	20	39	448	81	24	295	147	1721
PEAK HR FACTOR :		0.952			0.857			0.850			0.876		0.910

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_007 **Day:** TUESDAY

City: City of Fresno **UTURNS** **Date:** 12/13/2011

PM

NS/EW Streets:	McCall Ave			McCall Ave			Jensen Ave			Jensen Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	0	1	2	0	
4:00 PM										4			4
4:15 PM										1			1
4:30 PM										0			
4:45 PM										2			2
5:00 PM										0			
5:15 PM										0			
5:30 PM										3			3
5:45 PM										6			6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	16	0	0	16
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	9	0	0	9
PEAK HR FACTOR :		0.000			0.000			0.000			0.375		0.375

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_008 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

AM

NS/EW Streets:	McCall Ave			McCall Ave			SR-180 (Kings Canyon Blvd)			SR-180 (Kings Canyon Blvd)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 2	ER 1	WL 0	WT 2	WR 1	TOTAL
7:00 AM	28	5	2	3	33	20	3	103	46	5	167	8	423
7:15 AM	49	14	2	7	53	18	3	111	69	9	183	6	524
7:30 AM	64	20	2	0	42	25	12	120	61	10	271	3	630
7:45 AM	61	23	3	4	28	24	9	93	53	5	181	5	489
8:00 AM	73	23	4	7	37	23	13	95	35	1	164	3	478
8:15 AM	46	17	2	0	25	19	11	101	28	2	178	5	434
8:30 AM	41	10	6	2	11	15	7	85	19	1	155	2	354
8:45 AM	40	16	4	7	20	14	7	83	32	5	131	4	363
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	402	128	25	30	249	158	65	791	343	38	1430	36	3695
APPROACH %'s :	72.43%	23.06%	4.50%	6.86%	56.98%	36.16%	5.42%	65.97%	28.61%	2.53%	95.08%	2.39%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	247	80	11	18	160	90	37	419	218	25	799	17	2121
PEAK HR FACTOR :		0.845			0.859			0.873			0.740		0.842

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA11_8084_008 **Day:** TUESDAY

City: City of Fresno **Date:** 12/13/2011

PM

NS/EW Streets:	McCall Ave			McCall Ave			SR-180 (Kings Canyon Blvd)			SR-180 (Kings Canyon Blvd)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 2	ER 1	WL 0	WT 2	WR 1	TOTAL
4:00 PM	50	17	11	5	28	13	15	182	44	1	165	4	535
4:15 PM	52	35	7	8	19	10	15	216	49	3	137	4	555
4:30 PM	52	35	4	6	15	14	23	191	61	0	162	5	568
4:45 PM	72	37	7	10	18	13	18	237	65	5	143	5	630
5:00 PM	58	34	2	10	26	12	19	229	63	6	156	7	622
5:15 PM	57	39	5	7	27	11	15	277	70	3	174	3	688
5:30 PM	54	29	3	8	19	13	18	232	62	6	141	4	589
5:45 PM	50	22	0	9	14	13	13	227	65	3	116	1	533
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	445	248	39	63	166	99	136	1791	479	27	1194	33	4720
APPROACH %'s :	60.79%	33.88%	5.33%	19.21%	50.61%	30.18%	5.65%	74.44%	19.91%	2.15%	95.22%	2.63%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	241	139	17	35	90	49	70	975	260	20	614	19	2529
PEAK HR FACTOR :		0.856			0.906			0.901			0.907		0.919

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-8013-001 **Day:** Thursday

City: Sanger **Date:** 1/30/2014

AM

NS/EW Streets:	Highland Ave			Highland Ave			SR-180 (Kings Canyon Blvd)			SR-180 (Kings Canyon Blvd)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	2	1	
7:00 AM	0	0	1	0	0	3	2	194	3	2	287	0	492
7:15 AM	4	1	1	0	4	3	0	250	1	2	410	0	676
7:30 AM	3	0	0	0	0	2	0	184	2	3	442	1	637
7:45 AM	6	0	5	1	0	1	0	203	2	1	406	0	625
8:00 AM	1	1	0	0	2	1	1	162	3	3	279	0	453
8:15 AM	2	0	0	0	0	2	0	161	2	1	281	1	450
8:30 AM	1	0	3	1	0	0	4	144	1	1	239	0	394
8:45 AM	1	0	0	0	0	1	1	151	1	0	239	0	394
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	18	2	10	2	6	13	8	1449	15	13	2583	2	4121
APPROACH %'s :	60.00%	6.67%	33.33%	9.52%	28.57%	61.90%	0.54%	98.44%	1.02%	0.50%	99.42%	0.08%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	13	1	7	1	4	9	2	831	8	8	1545	1	2430
PEAK HR FACTOR :		0.477			0.500			0.838			0.871		0.899

CONTROL : 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-8013-001 **Day:** Thursday

City: Sanger **Date:** 1/30/2014

PM

NS/EW Streets:	Highland Ave			Highland Ave			SR-180 (Kings Canyon Blvd)			SR-180 (Kings Canyon Blvd)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	2	1	
4:00 PM	2	0	0	1	0	1	4	262	3	1	177	0	451
4:15 PM	1	0	0	0	0	0	5	283	1	1	235	0	526
4:30 PM	3	0	0	0	0	0	5	287	1	0	184	0	480
4:45 PM	1	0	2	0	0	0	4	312	1	0	206	0	526
5:00 PM	6	0	0	0	1	1	2	322	2	0	186	0	520
5:15 PM	1	0	0	0	0	2	11	392	3	0	215	0	624
5:30 PM	4	0	0	0	0	1	2	325	0	0	239	0	571
5:45 PM	1	1	2	0	0	1	3	294	0	0	218	1	521
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	19	1	4	1	1	6	36	2477	11	2	1660	1	4219
APPROACH %'s :	79.17%	4.17%	16.67%	12.50%	12.50%	75.00%	1.43%	98.14%	0.44%	0.12%	99.82%	0.06%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	12	0	2	0	1	4	19	1351	6	0	846	0	2241
PEAK HR FACTOR :		0.583			0.625			0.847			0.885		0.898

CONTROL : 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-8013-002 **Day:** Thursday

City: Fresno **Date:** 1/30/2014

AM

NS/EW Streets:	De Wolf Ave			De Wolf Ave			SR 180 (Kings Canyon Blvd)			SR 180 (Kings Canyon Blvd)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	1	1	2	1	
7:00 AM	10	1	3	1	1	7	4	193	7	1	280	0	508
7:15 AM	13	1	3	0	5	4	3	252	3	0	436	2	722
7:30 AM	14	3	0	2	3	6	3	190	3	2	425	2	653
7:45 AM	18	3	0	0	8	8	3	199	5	4	409	1	658
8:00 AM	12	1	1	0	1	3	1	157	2	0	301	0	479
8:15 AM	6	0	1	0	0	6	2	160	2	1	275	0	453
8:30 AM	11	4	2	1	0	8	4	146	2	0	242	0	420
8:45 AM	3	0	1	0	1	7	1	151	1	0	247	1	413
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	87	13	11	4	19	49	21	1448	25	8	2615	6	4306
APPROACH %'s :	78.38%	11.71%	9.91%	5.56%	26.39%	68.06%	1.41%	96.92%	1.67%	0.30%	99.47%	0.23%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	55	8	6	3	17	25	13	834	18	7	1550	5	2541
PEAK HR FACTOR :		0.821			0.703			0.838			0.892		0.880

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-8013-002 **Day:** Thursday

City: Fresno **Date:** 1/30/2014

PM

NS/EW Streets:	De Wolf Ave			De Wolf Ave			SR 180 (Kings Canyon Blvd)			SR 180 (Kings Canyon Blvd)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	0	1	1	1	1	2	1	1	2	1	
4:00 PM	8	4	1	1	1	3	7	279	7	1	186	2	500
4:15 PM	4	0	0	0	2	1	10	302	6	1	215	2	543
4:30 PM	7	0	0	0	1	3	5	273	4	0	197	0	490
4:45 PM	6	4	1	0	0	2	5	325	6	1	200	2	552
5:00 PM	4	5	0	0	2	2	7	330	12	0	192	0	554
5:15 PM	5	2	1	0	1	3	8	399	6	0	239	1	665
5:30 PM	3	2	2	0	0	3	11	332	9	4	240	0	606
5:45 PM	9	3	0	0	1	1	4	289	6	0	218	0	531
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	46	20	5	1	8	18	57	2529	56	7	1687	7	4441
APPROACH %'s :	64.79%	28.17%	7.04%	3.70%	29.63%	66.67%	2.16%	95.72%	2.12%	0.41%	99.18%	0.41%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	18	13	4	0	3	10	31	1386	33	5	871	3	2377
PEAK HR FACTOR :		0.795			0.813			0.878			0.901		0.894

CONTROL : Signalized

Prepared by NDS/ATD

VOLUME

Central Ave between SR-99 SB Off-Ramp & SR-99 NB On-Ramp

Day: Tuesday
Date: 12/13/2011

City: Fresno
Project #: CA11_8085_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,766	1,997	9,763

AM Period	NB	SB	EB		WB		TOTAL	
00:00			22		7		29	
00:15			29		8		37	
00:30			25		6		31	
00:45			22	98	2	23	24	121
01:00			22		13		35	
01:15			10		1		11	
01:30			26		5		31	
01:45			28	86	1	20	29	106
02:00			25		6		31	
02:15			19		2		21	
02:30			30		6		36	
02:45			32	106	3	17	35	123
03:00			19		4		23	
03:15			24		8		32	
03:30			29		11		40	
03:45			32	104	18	41	50	145
04:00			31		7		38	
04:15			36		3		39	
04:30			47		8		55	
04:45			64	178	7	25	71	203
05:00			34		10		44	
05:15			61		9		70	
05:30			69		13		82	
05:45			101	265	13	45	114	310
06:00			86		31		117	
06:15			124		18		142	
06:30			134		30		164	
06:45			145	489	36	115	181	604
07:00			114		27		141	
07:15			136		19		155	
07:30			158		42		200	
07:45			168	576	54	142	222	718
08:00			141		29		170	
08:15			135		35		170	
08:30			111		30		141	
08:45			146	533	46	140	192	673
09:00			115		31		146	
09:15			105		36		141	
09:30			124		37		161	
09:45			121	465	31	135	152	600
10:00			99		35		134	
10:15			132		34		166	
10:30			120		39		159	
10:45			114	465	37	145	151	610
11:00			162		31		193	
11:15			133		31		164	
11:30			128		36		164	
11:45			128	551	39	137	167	688
TOTALS				3916		985		4901
SPLIT %				79.9%		20.1%		50.2%

PM Period	NB	SB	EB		WB		TOTAL	
12:00			129		29		158	
12:15			107		32		139	
12:30			127		39		166	
12:45			138	501	32	132	170	633
13:00			112		30		142	
13:15			115		36		151	
13:30			121		28		149	
13:45			118	466	35	129	153	595
14:00			127		29		156	
14:15			139		38		177	
14:30			132		41		173	
14:45			141	539	35	143	176	682
15:00			130		40		170	
15:15			147		37		184	
15:30			133		29		162	
15:45			114	524	32	138	146	662
16:00			116		33		149	
16:15			117		33		150	
16:30			148		36		184	
16:45			103	484	39	141	142	625
17:00			133		25		158	
17:15			103		17		120	
17:30			93		25		118	
17:45			76	405	20	87	96	492
18:00			70		16		86	
18:15			68		27		95	
18:30			51		12		63	
18:45			65	254	19	74	84	328
19:00			47		17		64	
19:15			54		13		67	
19:30			53		9		62	
19:45			39	193	12	51	51	244
20:00			35		11		46	
20:15			39		14		53	
20:30			34		6		40	
20:45			26	134	8	39	34	173
21:00			26		4		30	
21:15			42		8		50	
21:30			36		6		42	
21:45			44	148	7	25	51	173
22:00			24		9		33	
22:15			31		4		35	
22:30			26		3		29	
22:45			20	101	9	25	29	126
23:00			25		8		33	
23:15			27		6		33	
23:30			24		3		27	
23:45			25	101	11	28	36	129
TOTALS				3850		1012		4862
SPLIT %				79.2%		20.8%		49.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,766	1,997	9,763

AM Peak Hour			07:15	07:30	07:30
AM Pk Volume			603	160	762
Pk Hr Factor			0.897	0.741	0.858
7 - 9 Volume	0	0	1109	282	1391
7 - 9 Peak Hour			07:15	07:30	07:30
7 - 9 Pk Volume	0	0	603	160	762
Pk Hr Factor	0.000	0.000	0.897	0.741	0.858

PM Peak Hour			14:45	14:15	14:30
PM Pk Volume			551	154	703
Pk Hr Factor			0.937	0.939	0.955
4 - 6 Volume	0	0	889	228	1117
4 - 6 Peak Hour			16:15	16:00	16:15
4 - 6 Pk Volume	0	0	501	141	634
Pk Hr Factor	0.000	0.000	0.846	0.904	0.861

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: Central Ave btwn Academy Ave & Newmark Ave

City: Fresno
Project #: 11-8085-001e

East Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	4	1	0	1	0	0	0	0	0	0	0	0	6
05:00	0	8	2	0	4	0	0	0	0	0	0	0	0	14
06:00	0	28	4	0	7	0	0	0	1	0	0	0	0	40
07:00	0	38	13	1	10	0	0	1	0	0	0	0	0	63
08:00	0	39	12	0	11	1	0	1	3	0	0	0	0	67
09:00	0	31	9	0	11	0	0	1	1	0	0	0	0	53
10:00	0	43	20	0	10	0	0	0	2	0	0	0	0	75
11:00	0	50	13	1	12	0	0	0	3	0	0	0	0	79
12:00 PM	0	46	16	0	14	1	0	1	3	0	0	0	0	81
13:00	0	50	15	0	17	0	0	2	2	0	0	0	0	86
14:00	0	41	13	0	15	0	0	1	0	0	1	0	0	71
15:00	0	50	18	0	14	0	0	0	1	0	1	0	0	84
16:00	0	64	21	0	15	1	0	0	1	0	0	0	0	102
17:00	0	39	16	0	13	0	0	0	2	0	0	0	0	70
18:00	0	23	7	0	4	0	0	1	0	0	0	0	0	35
19:00	0	18	4	0	5	0	0	0	1	0	0	0	0	28
20:00	0	10	3	0	1	0	0	0	0	0	0	0	0	14
21:00	0	12	5	0	2	0	0	0	0	0	0	0	0	19
22:00	0	11	2	0	0	0	0	0	0	0	0	0	0	13
23:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
Totals		**614**	**196**	**2**	**169**	**3**		**8**	**20**		**2**			**1014**
% of Totals		61%	19%	0%	17%	0%		1%	2%		0%			100%
	0	245	75	2	68	1	0	3	10	0	0	0	0	404
% AM		24%	7%	0%	7%	0%		0%	1%					40%
AM Peak Hour		11:00	10:00	07:00	11:00	08:00		07:00	08:00					11:00
Volume		50	20	1	12	1		1	3					79
	0	369	121	0	101	2	0	5	10	0	2	0	0	610
% PM		36%	12%		10%	0%		0%	1%		0%			60%
PM Peak Hour		16:00	16:00		13:00	12:00		13:00	12:00		14:00			16:00
Volume		64	21		17	1		2	3		1			102

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	130 ⟷	13%	167 ⟷	16%	172 ⟷	17%	545 ⟷	54%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: Central Ave btwn Academy Ave & Newmark Ave

City: Fresno
Project #: 11-8085-001w

West Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
01:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
02:00	0	0	1	0	2	0	0	0	0	0	0	0	0	3
03:00	0	3	1	0	1	0	0	0	0	0	0	0	0	5
04:00	0	6	3	0	3	0	0	0	0	0	0	0	0	12
05:00	0	24	7	0	8	0	0	1	0	0	0	0	0	40
06:00	0	39	10	0	12	0	0	0	0	0	0	0	0	61
07:00	0	40	13	0	10	0	0	1	2	0	0	0	0	66
08:00	0	40	15	0	11	1	0	0	3	0	0	0	0	70
09:00	0	37	11	0	14	0	0	1	2	0	1	0	0	66
10:00	0	45	18	0	11	2	0	1	1	0	0	0	0	78
11:00	0	44	14	0	9	1	0	1	1	0	0	0	0	70
12:00 PM	0	43	16	1	13	0	0	1	4	0	0	0	0	78
13:00	0	52	16	0	18	0	0	0	3	0	1	0	0	90
14:00	0	53	19	0	19	0	0	1	3	0	0	0	0	95
15:00	0	55	20	0	15	0	0	1	1	0	0	0	0	92
16:00	0	50	18	0	12	0	0	0	2	0	1	0	0	83
17:00	0	34	15	0	13	0	0	0	0	0	0	0	0	62
18:00	0	20	5	0	4	0	0	0	1	0	0	0	0	30
19:00	0	16	4	0	4	0	0	1	1	0	0	0	0	26
20:00	0	12	4	0	3	0	0	0	0	0	0	0	0	19
21:00	0	6	1	0	1	0	0	1	0	0	0	0	0	9
22:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
23:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
Totals		**630**	**215**	**1**	**185**	**4**		**10**	**24**		**3**			**1072**
% of Totals		59%	20%	0%	17%	0%		1%	2%		0%			100%
	0	281	95	0	82	4	0	5	9	0	1	0	0	477
% AM		26%	9%		8%	0%		0%	1%		0%			44%
AM Peak Hour		10:00	10:00		09:00	10:00		05:00	08:00		09:00			10:00
Volume		45	18		14	2		1	3		1			78
	0	349	120	1	103	0	0	5	15	0	2	0	0	595
% PM		33%	11%	0%	10%			0%	1%		0%			56%
PM Peak Hour		15:00	15:00	12:00	14:00			12:00	12:00		13:00			14:00
Volume		55	20	1	19			1	4		1			95

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	136 ⟷	13%	168 ⟷	16%	145 ⟷	14%	623 ⟷	58%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: Central Ave btwn Academy Ave & Newmark Ave

City: Fresno
Project #: 11-8085-001

SUMMARY

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	4	3	0	1	0	0	0	0	0	0	0	0	8
01:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3
02:00	0	0	1	0	3	0	0	0	0	0	0	0	0	4
03:00	0	4	1	0	1	0	0	0	0	0	0	0	0	6
04:00	0	10	4	0	4	0	0	0	0	0	0	0	0	18
05:00	0	32	9	0	12	0	0	1	0	0	0	0	0	54
06:00	0	67	14	0	19	0	0	0	1	0	0	0	0	101
07:00	0	78	26	1	20	0	0	2	2	0	0	0	0	129
08:00	0	79	27	0	22	2	0	1	6	0	0	0	0	137
09:00	0	68	20	0	25	0	0	2	3	0	1	0	0	119
10:00	0	88	38	0	21	2	0	1	3	0	0	0	0	153
11:00	0	94	27	1	21	1	0	1	4	0	0	0	0	149
12:00 PM	0	89	32	1	27	1	0	2	7	0	0	0	0	159
13:00	0	102	31	0	35	0	0	2	5	0	1	0	0	176
14:00	0	94	32	0	34	0	0	2	3	0	1	0	0	166
15:00	0	105	38	0	29	0	0	1	2	0	1	0	0	176
16:00	0	114	39	0	27	1	0	0	3	0	1	0	0	185
17:00	0	73	31	0	26	0	0	0	2	0	0	0	0	132
18:00	0	43	12	0	8	0	0	1	1	0	0	0	0	65
19:00	0	34	8	0	9	0	0	1	2	0	0	0	0	54
20:00	0	22	7	0	4	0	0	0	0	0	0	0	0	33
21:00	0	18	6	0	3	0	0	1	0	0	0	0	0	28
22:00	0	16	3	0	1	0	0	0	0	0	0	0	0	20
23:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
Totals		**1244**	**411**	**3**	**354**	**7**		**18**	**44**		**5**			**2086**
% of Totals		60%	20%	0%	17%	0%		1%	2%		0%			100%
	0	526	170	2	150	5	0	8	19	0	1	0	0	881
% AM		25%	8%	0%	7%	0%		0%	1%		0%			42%
AM Peak Hour		11:00	10:00	07:00	09:00	08:00		07:00	08:00		09:00			10:00
Volume		94	38	1	25	2		2	6		1			153
	0	718	241	1	204	2	0	10	25	0	4	0	0	1205
% PM		34%	12%	0%	10%	0%		0%	1%		0%			58%
PM Peak Hour		16:00	16:00	12:00	13:00	12:00		12:00	12:00		13:00			16:00
Volume		114	39	1	35	1		2	7		1			185

Peak Period Totals	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	266 ⟷	13%	335 ⟷	16%	317 ⟷	15%	1168 ⟷	56%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: McCall Ave btwn Jensen Ave & North Ave

City: Fresno
Project #: 11-8085-003n

North Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	5	3	0	1	0	0	0	0	0	0	0	0	9
01:00	0	15	4	0	3	0	0	0	1	0	0	0	0	23
02:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
03:00	0	4	1	0	1	0	0	0	0	0	0	0	0	6
04:00	0	19	5	0	3	0	0	0	0	0	0	0	0	27
05:00	0	48	16	0	15	0	0	0	1	0	0	0	0	80
06:00	0	94	23	0	16	0	0	0	4	0	0	0	0	137
07:00	0	151	50	1	43	0	0	0	6	0	0	0	0	251
08:00	0	116	45	1	39	0	0	0	3	0	1	0	0	205
09:00	0	72	30	0	22	0	0	0	3	0	0	0	0	127
10:00	0	78	35	0	26	0	0	0	1	0	0	0	0	140
11:00	0	80	29	1	25	0	0	0	3	0	1	0	0	139
12:00 PM	0	79	34	0	21	0	0	0	4	0	1	0	0	139
13:00	0	94	31	1	26	0	0	0	3	0	0	0	0	155
14:00	0	120	46	0	37	0	0	0	4	0	0	0	0	207
15:00	0	158	56	0	40	0	0	0	7	0	0	0	0	261
16:00	0	177	60	1	48	0	0	0	6	0	0	0	0	292
17:00	0	180	42	0	44	0	0	0	2	0	0	0	0	268
18:00	0	104	34	0	22	0	0	0	2	0	0	0	0	162
19:00	0	59	19	0	19	0	0	0	1	0	0	0	0	98
20:00	0	42	16	0	7	0	0	0	1	0	0	0	0	66
21:00	0	35	9	0	4	0	0	0	0	0	0	0	0	48
22:00	0	21	8	0	3	0	0	0	0	0	0	0	0	32
23:00	0	18	5	0	4	0	0	0	0	0	0	0	0	27
Totals		**1774**	**603**	**5**	**469**				**52**		**3**			**2906**
% of Totals		61%	21%	0%	16%				2%		0%			100%
	0	687	243	3	194	0	0	0	22	0	2	0	0	1151
% AM		24%	8%	0%	7%				1%		0%			40%
AM Peak Hour		07:00	07:00	07:00	07:00				07:00		08:00			07:00
Volume		151	50	1	43				6		1			251
	0	1087	360	2	275	0	0	0	30	0	1	0	0	1755
% PM		37%	12%	0%	9%				1%		0%			60%
PM Peak Hour		17:00	16:00	13:00	16:00				15:00		12:00			16:00
Volume		180	60	1	48				7		1			292

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	456 ⟷	16%	294 ⟷	10%	560 ⟷	19%	1596 ⟷	55%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: McCall Ave btwn Jensen Ave & North Ave

City: Fresno
Project #: 11-8085-003s

South Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	7	5	0	1	0	0	0	1	0	0	0	0	14
01:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
02:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03:00	0	9	3	0	1	0	0	0	0	0	0	0	0	13
04:00	0	15	5	0	3	0	0	0	0	0	0	0	0	23
05:00	0	70	22	0	20	0	0	0	2	0	0	0	0	114
06:00	0	121	33	1	23	0	0	0	5	0	0	0	0	183
07:00	0	159	51	0	46	0	0	0	5	0	0	0	0	261
08:00	0	92	38	1	34	0	0	0	3	0	0	0	0	168
09:00	0	68	30	1	23	0	0	0	3	0	0	0	0	125
10:00	0	60	29	0	21	0	0	0	2	0	0	0	0	112
11:00	0	66	25	0	19	0	0	0	1	0	1	0	0	112
12:00 PM	0	72	28	1	23	0	0	0	0	0	0	0	0	124
13:00	0	95	32	0	30	0	0	0	2	0	0	0	0	159
14:00	0	122	44	1	36	0	0	0	5	0	0	0	0	208
15:00	0	128	48	1	33	0	0	0	6	0	1	0	0	217
16:00	0	144	50	0	38	0	0	0	5	0	0	0	0	237
17:00	0	157	35	0	41	0	0	0	2	0	0	0	0	235
18:00	0	94	28	1	19	0	0	0	2	0	0	0	0	144
19:00	0	53	19	0	16	0	0	0	1	0	0	0	0	89
20:00	0	55	17	0	10	0	0	0	1	0	0	0	0	83
21:00	0	45	13	0	8	0	0	0	1	0	0	0	0	67
22:00	0	31	10	0	6	0	0	0	0	0	0	0	0	47
23:00	0	21	6	0	5	0	0	0	0	0	0	0	0	32
Totals		**1696**	**574**	**7**	**457**				**47**		**2**			**2783**
% of Totals		61%	21%	0%	16%				2%		0%			100%
	0	679	244	3	192	0	0	0	22	0	1	0	0	1141
% AM		24%	9%	0%	7%				1%		0%			41%
AM Peak Hour		07:00	07:00	06:00	07:00				06:00		11:00			07:00
Volume		159	51	1	46				5		1			261
	0	1017	330	4	265	0	0	0	25	0	1	0	0	1642
% PM		37%	12%	0%	10%				1%		0%			59%
PM Peak Hour		17:00	16:00	12:00	17:00				15:00		15:00			16:00
Volume		157	50	1	41				6		1			237

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	429 ←→	15%	283 ←→	10%	472 ←→	17%	1599 ←→	57%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: McCall Ave btwn Jensen Ave & North Ave

City: Fresno
Project #: 11-8085-003

SUMMARY

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	12	8	0	2	0	0	0	1	0	0	0	0	23
01:00	0	23	6	0	4	0	0	0	1	0	0	0	0	34
02:00	0	9	3	0	0	0	0	0	0	0	0	0	0	12
03:00	0	13	4	0	2	0	0	0	0	0	0	0	0	19
04:00	0	34	10	0	6	0	0	0	0	0	0	0	0	50
05:00	0	118	38	0	35	0	0	0	3	0	0	0	0	194
06:00	0	215	56	1	39	0	0	0	9	0	0	0	0	320
07:00	0	310	101	1	89	0	0	0	11	0	0	0	0	512
08:00	0	208	83	2	73	0	0	0	6	0	1	0	0	373
09:00	0	140	60	1	45	0	0	0	6	0	0	0	0	252
10:00	0	138	64	0	47	0	0	0	3	0	0	0	0	252
11:00	0	146	54	1	44	0	0	0	4	0	2	0	0	251
12:00 PM	0	151	62	1	44	0	0	0	4	0	1	0	0	263
13:00	0	189	63	1	56	0	0	0	5	0	0	0	0	314
14:00	0	242	90	1	73	0	0	0	9	0	0	0	0	415
15:00	0	286	104	1	73	0	0	0	13	0	1	0	0	478
16:00	0	321	110	1	86	0	0	0	11	0	0	0	0	529
17:00	0	337	77	0	85	0	0	0	4	0	0	0	0	503
18:00	0	198	62	1	41	0	0	0	4	0	0	0	0	306
19:00	0	112	38	0	35	0	0	0	2	0	0	0	0	187
20:00	0	97	33	0	17	0	0	0	2	0	0	0	0	149
21:00	0	80	22	0	12	0	0	0	1	0	0	0	0	115
22:00	0	52	18	0	9	0	0	0	0	0	0	0	0	79
23:00	0	39	11	0	9	0	0	0	0	0	0	0	0	59
Totals		**3470**	**1177**	**12**	**926**				**99**		**5**			**5689**
% of Totals		61%	21%	0%	16%				2%		0%			100%
	0	1366	487	6	386	0	0	0	44	0	3	0	0	2292
% AM		24%	9%	0%	7%				1%		0%			40%
AM Peak Hour		07:00	07:00	08:00	07:00				07:00		11:00			07:00
Volume		310	101	2	89				11		2			512
	0	2104	690	6	540	0	0	0	55	0	2	0	0	3397
% PM		37%	12%	0%	9%				1%		0%			60%
PM Peak Hour		17:00	16:00	12:00	16:00				15:00		12:00			16:00
Volume		337	110	1	86				13		1			529

Peak Period Totals	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	885		16%	577		10%	1032		18%	3195		56%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: Kings Canyon Rd btwn McCall Ave & Del Rey Ave

City: Fresno
Project #: 11-8085-002e

East Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	43	12	0	6	0	0	0	1	0	0	0	0	62
01:00	0	25	10	0	3	0	0	0	1	0	0	0	0	39
02:00	0	14	7	0	2	0	0	0	0	0	0	0	0	23
03:00	0	17	7	0	2	0	0	0	0	0	0	0	0	26
04:00	0	33	10	0	4	0	0	0	1	0	0	0	0	48
05:00	0	57	18	0	7	0	0	0	1	0	0	0	0	83
06:00	0	160	55	0	17	0	0	0	5	0	0	0	0	237
07:00	1	297	82	2	23	0	0	0	7	0	0	0	0	412
08:00	0	283	85	1	29	1	0	1	5	0	1	0	0	406
09:00	0	258	81	1	34	0	0	1	6	0	1	0	0	382
10:00	0	250	75	0	32	0	0	1	4	0	0	0	0	362
11:00	0	250	82	1	31	0	0	0	6	0	0	0	0	370
12:00 PM	1	298	86	1	31	1	0	0	7	0	0	0	0	425
13:00	0	313	102	1	49	1	0	1	8	0	0	0	0	475
14:00	0	372	124	0	39	0	0	0	8	0	0	0	0	543
15:00	1	454	134	1	58	0	0	2	14	0	1	0	0	665
16:00	2	613	166	2	64	1	0	2	17	0	2	0	0	869
17:00	1	722	174	1	67	2	0	1	13	0	1	0	0	982
18:00	1	384	107	1	36	1	0	0	8	0	0	0	0	538
19:00	0	262	78	0	25	0	0	0	5	0	0	0	0	370
20:00	0	230	69	1	20	0	0	1	6	0	0	0	0	327
21:00	0	218	65	0	23	0	0	0	4	0	0	0	0	310
22:00	0	164	56	0	15	0	0	0	3	0	0	0	0	238
23:00	0	93	27	0	8	0	0	0	2	0	0	0	0	130
Totals	**7**	**5810**	**1712**	**13**	**625**	**7**		**10**	**132**		**6**			**8322**
% of Totals	0%	70%	21%	0%	8%	0%		0%	2%		0%			100%
	1	1687	524	5	190	1	0	3	37	0	2	0	0	2450
% AM	0%	20%	6%	0%	2%	0%		0%	0%		0%			29%
AM Peak Hour	07:00	07:00	08:00	07:00	09:00	08:00		08:00	07:00		08:00			07:00
Volume	1	297	85	2	34	1		1	7		1			412
	6	4123	1188	8	435	6	0	7	95	0	4	0	0	5872
% PM	0%	50%	14%	0%	5%	0%		0%	1%		0%			71%
PM Peak Hour	16:00	17:00	17:00	16:00	17:00	17:00		15:00	16:00		16:00			17:00
Volume	2	722	174	2	67	2		2	17		2			982

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	818 ⟷	10%	900 ⟷	11%	1851 ⟷	22%	4753 ⟷	57%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: Kings Canyon Rd btwn McCall Ave & Del Rey Ave

City: Fresno
Project #: 11-8085-002w

West Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	19	8	0	6	0	0	0	4	0	0	0	0	37
01:00	0	23	5	0	3	0	0	0	2	0	0	0	0	33
02:00	0	11	4	0	1	0	0	0	0	0	0	0	0	16
03:00	0	28	7	0	5	1	0	1	0	0	0	0	0	42
04:00	0	57	17	0	9	0	0	0	0	0	0	0	0	83
05:00	0	156	61	0	20	0	0	0	4	0	0	0	0	241
06:00	0	372	123	0	55	0	0	0	5	0	1	0	0	556
07:00	1	627	172	1	50	0	0	0	12	0	2	0	0	865
08:00	1	466	128	2	45	0	0	2	11	0	0	0	0	655
09:00	2	388	108	2	50	1	0	1	9	0	0	0	0	561
10:00	0	371	109	1	46	0	0	2	10	0	1	0	0	540
11:00	0	292	95	2	46	1	0	1	6	0	1	0	0	444
12:00 PM	1	316	96	1	38	1	0	0	8	0	1	0	0	462
13:00	1	306	119	2	39	0	0	2	9	0	0	0	0	478
14:00	0	327	110	1	53	0	0	0	7	0	0	0	0	498
15:00	1	382	141	0	39	0	0	2	10	0	1	0	0	576
16:00	0	451	133	2	45	1	0	1	7	0	1	0	0	641
17:00	1	477	114	2	44	0	0	1	5	0	1	0	0	645
18:00	0	280	55	0	26	0	0	0	3	0	0	0	0	364
19:00	0	195	53	0	14	0	0	0	2	0	1	0	0	265
20:00	0	134	24	0	9	0	0	0	2	0	0	0	0	169
21:00	0	118	27	0	12	0	0	0	3	0	0	0	0	160
22:00	0	48	13	0	4	0	0	0	0	0	0	0	0	65
23:00	0	43	8	0	2	0	0	0	0	0	0	0	0	53
Totals	**8**	**5887**	**1730**	**16**	**661**	**5**		**13**	**119**		**10**			**8449**
% of Totals	0%	70%	20%	0%	8%	0%		0%	1%		0%			100%
	4	2810	837	8	336	3	0	7	63	0	5	0	0	4073
% AM	0%	33%	10%	0%	4%	0%		0%	1%		0%			48%
AM Peak Hour	09:00	07:00	07:00	08:00	06:00	03:00		08:00	07:00		07:00			07:00
Volume	2	627	172	2	55	1		2	12		2			865
	4	3077	893	8	325	2	0	6	56	0	5	0	0	4376
% PM	0%	36%	11%	0%	4%	0%		0%	1%		0%			52%
PM Peak Hour	12:00	17:00	15:00	13:00	14:00	12:00		13:00	15:00		12:00			17:00
Volume	1	477	141	2	53	1		2	10		1			645

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1520 ⟷	18%	940 ⟷	11%	1286 ⟷	15%	4703 ⟷	56%

Day: TUESDAY
Date: 12/13/11

Classification Report / Prepared by: National Data & Surveying Services
Location: Kings Canyon Rd btwn McCall Ave & Del Rey Ave

City: Fresno
Project #: 11-8085-002

SUMMARY

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	62	20	0	12	0	0	0	5	0	0	0	0	99
01:00	0	48	15	0	6	0	0	0	3	0	0	0	0	72
02:00	0	25	11	0	3	0	0	0	0	0	0	0	0	39
03:00	0	45	14	0	7	1	0	1	0	0	0	0	0	68
04:00	0	90	27	0	13	0	0	0	1	0	0	0	0	131
05:00	0	213	79	0	27	0	0	0	5	0	0	0	0	324
06:00	0	532	178	0	72	0	0	0	10	0	1	0	0	793
07:00	2	924	254	3	73	0	0	0	19	0	2	0	0	1277
08:00	1	749	213	3	74	1	0	3	16	0	1	0	0	1061
09:00	2	646	189	3	84	1	0	2	15	0	1	0	0	943
10:00	0	621	184	1	78	0	0	3	14	0	1	0	0	902
11:00	0	542	177	3	77	1	0	1	12	0	1	0	0	814
12:00 PM	2	614	182	2	69	2	0	0	15	0	1	0	0	887
13:00	1	619	221	3	88	1	0	3	17	0	0	0	0	953
14:00	0	699	234	1	92	0	0	0	15	0	0	0	0	1041
15:00	2	836	275	1	97	0	0	4	24	0	2	0	0	1241
16:00	2	1064	299	4	109	2	0	3	24	0	3	0	0	1510
17:00	2	1199	288	3	111	2	0	2	18	0	2	0	0	1627
18:00	1	664	162	1	62	1	0	0	11	0	0	0	0	902
19:00	0	457	131	0	39	0	0	0	7	0	1	0	0	635
20:00	0	364	93	1	29	0	0	1	8	0	0	0	0	496
21:00	0	336	92	0	35	0	0	0	7	0	0	0	0	470
22:00	0	212	69	0	19	0	0	0	3	0	0	0	0	303
23:00	0	136	35	0	10	0	0	0	2	0	0	0	0	183
Totals	**15**	**11697**	**3442**	**29**	**1286**	**12**		**23**	**251**		**16**			**16771**
% of Totals	0%	70%	21%	0%	8%	0%		0%	1%		0%			100%
	5	4497	1361	13	526	4	0	10	100	0	7	0	0	6523
% AM	0%	27%	8%	0%	3%	0%		0%	1%		0%			39%
AM Peak Hour	07:00	07:00	07:00	07:00	09:00	03:00		08:00	07:00		07:00			07:00
Volume	2	924	254	3	84	1		3	19		2			1277
	10	7200	2081	16	760	8	0	13	151	0	9	0	0	10248
% PM	0%	43%	12%	0%	5%	0%		0%	1%		0%			61%
PM Peak Hour	12:00	17:00	16:00	16:00	17:00	12:00		15:00	15:00		16:00			17:00
Volume	2	1199	299	4	111	2		4	24		3			1627

Peak Period Totals	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	2338		14%	1840		11%	3137		19%	9456		56%

APPENDIX C

Traffic Signal Timing Sheets

0125

SIGNAL TIMING CARD (FOR 332 CABINET)

Jensen and McCall DATE 10-15-08

	Phase	1	2	3	4	5	6	7	8	9
	Direction	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB	Clock
0	Walk		7		14		7		14	
1	Ped Clear		11		7		11		8	
2	Min Green	3	8	3	8	3	8	3	8	
3										
4	Add / Veh									
5	Veh Ext	2	2	2	2	2	2	2	2	
6	Max Gap	2	2	2	2	2	2	2	2	
7	Min Gap	2	2	2	2	2	2	2	2	
8	Max Ext	20	40	20	26	20	40	20	26	
9										Year
A										Month
b										Date
C	Reduce By									Day
d	Reduce Every									Hour
E	Veh Clear	3	5.8	3	5.0	3	5.8	3	5.0	Minute
F	All Red	0.5	1.9	0.5	1.0	0.5	1.6	0.3	1.0	Second

Remarks

Power Down: E06d > 1.5 Sec, E07d < 1.0 Sec

Jensen and McCall

Pre-Empt			Phase Functions	EB LT	WB	SB LT	NB	WB LT	EB	NB LT	SB
E			F	1	2	3	4	5	6	7	8
0	RR1 Delay		Permit	☒	☒	☒	☒	☒	☒	☒	☒
1	RR1 Clearance		Red Lock	☒	☐	☒	☐	☒	☐	☒	☐
2	EVA Delay		Yel Lock	☐	☐	☐	☐	☐	☐	☐	☐
*3	EVA Clearance		Veh Recall	☐	☒	☐	☐	☐	☒	☐	☐
4	EVB Delay		Ped Recall	☐	☐	☐	☐	☐	☐	☐	☐
*5	EVC Clearance		Ped Phases	☐	☒	☐	☒	☐	☒	☐	☒
6	EVC Delay		Overlap A	☐	☐	☐	☐	☐	☐	☐	☐
*7	EVB Clearance		Overlap B	☐	☐	☐	☐	☐	☐	☐	☐
8	EVD Delay		Double Entry	☐	☐	☐	☒	☐	☐	☐	☒
*9	EVD Clearance			☐	☐	☐	☐	☐	☐	☐	☐
A	RR2 Delay		Lag Phases	☐	☒	☐	☒	☐	☒	☐	☒
b	RR2 Clearance		Red Rest	☐	☐	☐	☐	☐	☐	☐	☐
C	EV Clearance Timer		Non-Act	☐	☐	☐	☐	☐	☐	☐	☐
d	EV Delay Timer		CALL/ACTIVE LIGHT ON 1=RR 2=LOCAL COORD 3=MAST COORD	1	2	3	☐	☐	☐	☐	☐
E	RR Clearance Timer		Yel Start	☐	☒	☐	☐	☐	☒	☐	☐
F	RR Delay Timer		Key	☐	☐	☐	☐	☐	☐	☐	☐

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
"I"	U	Ø1 E,CT D10 D30	Ø2 E,CT D11 D31 D51	Ø2E,CT D13 D33 1.5 D53	Ø2 Call D15 D35	Ø3E,CT D16 D36	Ø4E,CT D17 D37 D57	Ø4E,CT D19 D39 1.5 D59	Ø4 Call D18 D38	Ø1 E,CT D1C D3C D5C	NA	ADV	Ø2 PED	Ø6 PED	FLH
	L	D50	Ø2 E,CT D12 D32 D52	Ø2E D14 D34 1.5	—	D56	Ø4E,CT D18 D38 D58	Ø4E D1A D3A 1.5	—	Ø3E,CT D1D D30 D50	NA	SPI	Ø4 PED	Ø8 PED	STOP TIME
"J"	U	Ø5E,CT D20 D40	Ø6E,CT D21 D41 D61	Ø6E,CT D23 D43 1.5 D63	Ø6 Call D25 D45	Ø7E,CT D26 D46	Ø8E,CT D27 D47 D67	Ø8E,CT D29 D49 1.5 D69	Ø8 Call D28 D48	Ø5E,CT D2C D4C D6C	NA	SP2	EVA	EVC	RRI
	L	D60	Ø6E,CT D22 D42 D62	Ø6E D24 D44 1.5 D64	—	D66	Ø8E,CT D28 D48 D68	Ø8E D2A D4A 1.5 D6A	—	Ø7E,CT D2D D4D D6D	NA	SP3	EVB	EVD	RR2

ADV-Advance/CT-Count/E-Extension/EV-Emer. Veh./FLH-Flash Sense/PED-Ped. Push Button/RR-RR Pre-Empt/SP-Spare/NA-Not Assigned

* MUST BE MINIMUM OF ONE SECOND. CAN NOT BE ZERO.

CALTRAN'S C-8 PROGRAM Version 3

F - P A G E

CO/RTE/PM: Fre-180-PM68.6
Location: SR 180 and McCall Ave
Timing By: DAVID C ARIAS
Reviewed By: DCA **Date:** ###############

Card installed: **09/28/11**
Signal installed: **09/28/11**

	Direction	WBLT	EB	NBLT	SB	EBLT	WB	SBLT	NB
	Det. Dist.		555		427		560		411
	Phase	1	2	3	4	5	6	7	8
0	Walk								
1	D. Walk								
2	Min Grn	8	10	8	10	8	10	8	10
3	Type III		20		20		20		20
4	Add Intial								
5	Passage	2.0	6.0	2.0	6.0	2.0	6.0	2.0	6.0
6	Max Gap	2.0	8.3	2.0	8.2	2.0	8.3	2.0	8.2
7	Min Gap	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
8	Max 1	15	50	15	20	15	50	15	20
9	Max 2	25	60	25	30	25	60	25	30
A	Max 3								
B									
C	Red by		0.1		0.1		0.1		0.1
D	Every		0.5		0.4		0.5		0.4
E	Yellow	3.6	5.8	3.6	5.0	3.6	5.8	3.6	5.0
F	Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
*	C/O w/mid		0.9		0.5		0.0		0.3
	Speed	25	65	25	55	25	65	25	55

9	C	D	E	F
	Gap Set = 3	TB Select = 1	EV Select	Permitted Veh. Ph's
	Max Set = 2	TB Hour	RR1 TrClr	Red Lock
	C Serve Min	TB Min	EVA Delay	Yellow Lock
	Max Type	Ped Select=	EVA Hold	Vehicle Recall
		7-wire Select	EV-B Delay	Ped Recall
			EV-B Hold	Permitted Ped Ph's
			EV-C Delay	"A" Arrow
			EV-C Hold	"B" Arrow
Max Grn Tmr		Offset Seek = 1	EV-D Delay	Double Entry
Year			EV-D Hold	Max 2 Extension
Month	OL-A Grn=		EV Max Timer	Lag Phases
Date	OL-B Grn=		RR2 TRCLR	Red Rest
DOW	OL-C Grn=		EV Clr Tmr	Coord Walk
Hour	OL-D Grn=		EV DelayTimer	Max 3 Extension
Minute			RR Clr Timer	Yellow Start
Seconds	RAM ADD		EV Timer	First Serve

* - FOR INFO ONLY

PERMITTED PHASES

LIGHTS	1	2	3	4	5	6	7	8	
0	1	2	3	4	5	6	7	8	0
1									1
2									2
3		2				6			3
4									4
5									5
6									6
7									7
8				4				8	8
9	1	2	3	4	5	6	7	8	9
A	**OBSERVATION ONLY**								A
B									B
C									C
D									D
E				4				8	E
F		2				6			F

CALTRANS C-PAGE FOR C-8 PROGRAM

09/28/11

CO\RTE\PM: Fre-180-PM68.6

LOCATION: SR 180 and McCall Ave

09 If Master Controller, enter the number of Slaves at RAM location at D-0-0 =

DCA #

	0		CONTROL PLANS 1	2	3	4	5	6	7	8	9	TIMERS A	B	Y-COORD C	D	E	F	LAG PHASES 1\2	3\4	5\6	7\8	
0	Local # 0	Cycle Length										LOCAL TIMER	MASTER TIMER	RAM TEST		TB Timer	FREE	2	4	6	8	0
1	Manual CP	Ph. 1 Green										Force Off Phase 1	Perm. Phase 1	INTIAL FLASH		Gapout CP 1	CP 1	2	4	6	8	1
2	Master CP											Force Off Phase 2		QuicNet 7		Gapout CP 2	CP2	2	4	6	8	2
3	Current CP	Ph. 3 Green										Force Off Phase 3	Perm. Phase 3	Y-COORD "C"	"D"	Gapout CP 3	CP 3	2	4	6	8	3
4	Last CP	Ph. 4 Green										Force Off Phase 4	Perm. Phase 4	Perm. Time	Perm. Time	Gapout CP 4	CP 4	2	4	6	8	4
5	Type Flash	Ph. 5 Green										Force Off Phase 5	Perm. Phase 5	Lag O/S	Lag O/S	Gapout CP 5	CP 5	2	4	6	8	5
6	Current Offset											Force Off Phase 6		Force Off	Force Off	Gapout CP 6	CP 6	2	4	6	8	6
7	Trans CP	Ph. 7 Green										Force Off Phase 7	Perm. Phase 7	Long Grn	Long Grn	Gapout CP 7	CP 7	2	4	6	8	7
8	Flash Start	Ph. 8 Green										Force Off Phase 8	Perm. Phase 8	No Grn	No Grn	Gapout CP 8	CP 8	2	4	6	8	8
9	CP Index	Multi Cycle												Perm Timer	Perm Timer	Gapout CP 9	CP 9	2	4	6	8	9
A		Offset A										Present Offset	Desired Offset	Grn O/S	Grn O/S		Y-COORD "C"					A
B	Observe Offset	Offset B												Offset Timer	Offset Timer		Y-COORD "D"					B
C														Lag Grn Timer	Lag Grn Timer		COORD PHASES	2		6		C
D	Manual Offset	Phase 3 Extension												Forceoff Timer	Forceoff Timer		HOLD					D
E		Phase 7 Extension												Long Grn Timer	Long Grn Timer		NEXT PHASE					E
F		Offset Interrupt												No Green Timer	No Green Timer		FORCE OFF					F

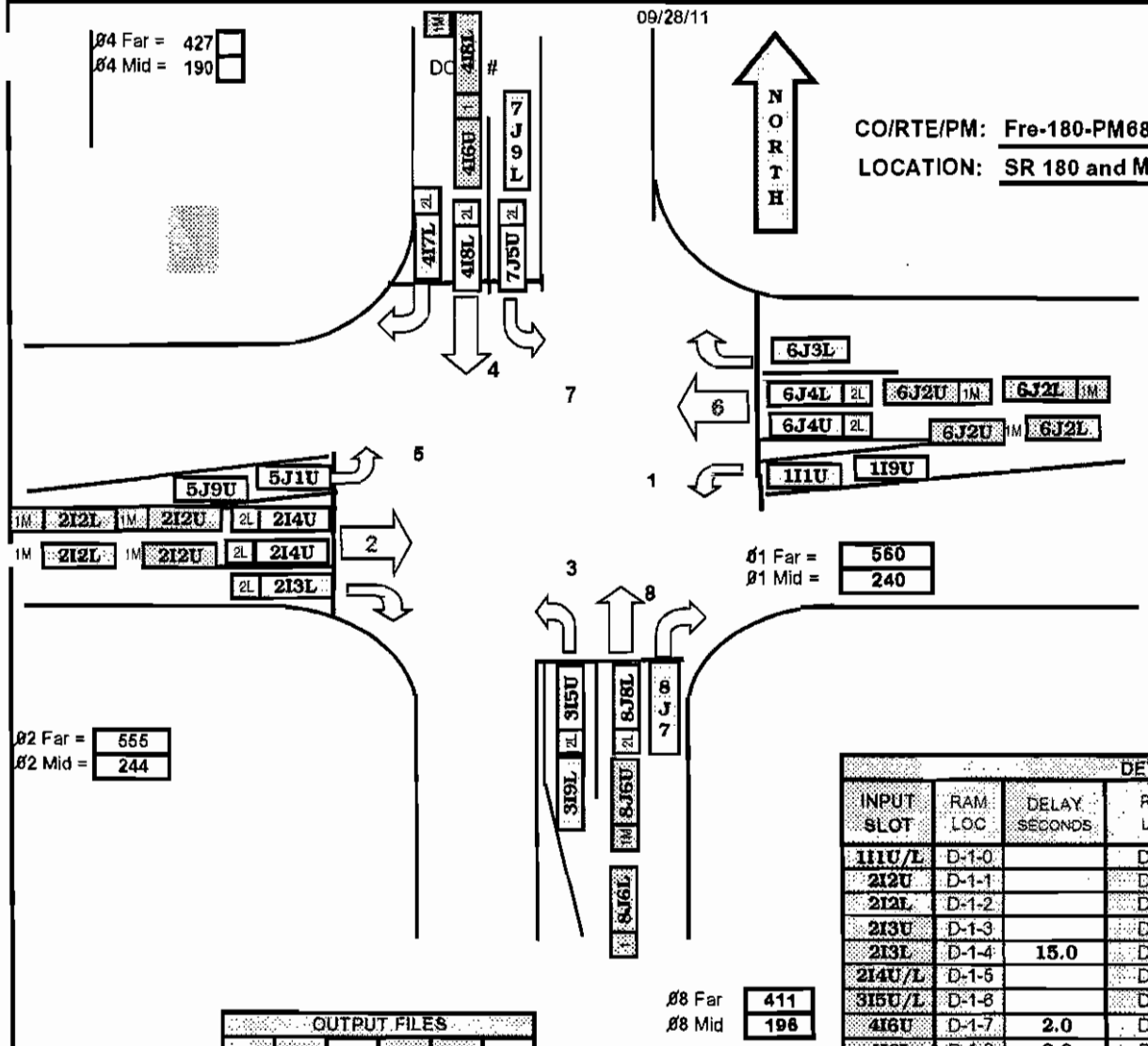
SW. ON

4	1	
1	2	
2	3	
	4	
P	5	
R	6	
O	7	
M	8	
D	1	
I	2	
P	3	
	4	
S	5	
W	6	
C	7	
H	8	

LOCATION PROM

FEATURES

09/28/11



332 CABINET - INPUT FILE LAYOUT														
SLOT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
"I" UPPER	1 E	2 E	2 E	2 C	3 E	4 E	4 E	4 C	1 E		ADV	Ped 2	Ped 6	FLH
"I" LOWER	1 E	2 E	2 E	2 C	3 E	4 E	4 E	4 C	3 E		SP1	Ped 4	Ped8	Stop Time
"J" UPPER	5 E	6 E	6 E	6 C	7 E	8 E	8 E	8 C	5 E		SP2	EVA	EVB	RR1
"J" LOWER	5 E	6 E	6 E	6 C	7 E	8 E	8 E	8 C	7 E		SP3	EVC	EVD	RR2

OUTPUT FILES					
1	2	2P	3	4	4P
5	6	6P	7	8	8P
C	D		A	B	

DETECTOR SETTINGS CONTROL CODE "D"									
INPUT SLOT	RAM LOC	DELAY SECONDS	RAM LOC	CARRY OVER	INPUT SLOT	RAM LOC	DELAY SECONDS	RAM LOC	CARRY OVER
1I1U/L	D-1-0		D-3-0	1.0	5J1U/L	D-2-0		D-4-0	1.0
2I2U	D-1-1		D-3-1		6J2U	D-2-1		D-4-1	
2I2L	D-1-2		D-3-2	0.9	6J2L	D-2-2		D-4-2	
2I3U	D-1-3		D-3-3		6J3U	D-2-3		D-4-3	
2I3L	D-1-4	15.0	D-3-4		6J3L	D-2-4	15.0	D-4-4	
2I4U/L	D-1-5		D-3-5	2.0	6J4U/L	D-2-5		D-4-5	2.0
3I5U/L	D-1-6		D-3-6	1.0	7J5U/L	D-2-6		D-4-6	1.0
4I6U	D-1-7	2.0	D-3-7		8J6U	D-2-7	2.0	D-4-7	
4I6L	D-1-8	2.0	D-3-8		8J6L	D-2-8	2.0	D-4-8	
4I7U	D-1-9		D-3-9		8J7U	D-2-9		D-4-9	
4I7L	D-1-A	15.0	D-3-A		8J7L	D-2-A	15.0	D-4-A	
4I8U/L	D-1-B		D-3-B	2.0	8J8U/L	D-2-B		D-4-B	2.0
1I9U	D-1-C		D-3-C		5J9U	D-2-C		D-4-C	
3I9L	D-1-D		D-3-D		7J9L	D-2-D		D-4-D	

CO\RTE\PM: Fre-180-PM68.6 LOCATION: SR 180 and McCall Ave

DCA 9/28/2011

DETECTOR ASSIGNMENTS

T	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
UPPER	Ph 1 Cnt&Ext T2-1&2 WB LT LL	Ph 2 Cnt&Ext T2-5&6 EB mid 2L	Ph 2 Cnt&Ext T2-9&10	Ph 2 Call&TP3 T4-1&2 EB near 1	Ph 3 Cnt&Ext T4-5&6 NB LT LL	Ph 4 Cnt&Ext T4-9&10 SB mid	Ph 4 Cnt&Ext T6-1&2	Ph 4 Call&TP3 T6-5&6 SB near	Ph 1 Cnt&Ext T6-9&10 WB LT UP	
LOWER	Ph 1 Cnt&Ext T2-3&4	Ph 2 Cnt&Ext T2-7&8 EB far 2L	Ph 2 Ext T2-11&12 EB RT	Ph 2 Call&TP3 T4-3&4 EB near 2	Ph 3 Cnt&Ext T4-7&8	Ph 4 Cnt&Ext T4-11&12 SB far	Ph 4 Ext T6-3&4 SB RT	Ph 4 Call&TP3 T6-7&8	Ph 3 Cnt&Ext T6-11&12 NB LT UP	

J	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10
UPPER	Ph 5 Cnt&Ext T3-1&2 EB LT LL	Ph 6 Cnt&Ext T3-5&6 WB mid 2L	Ph 6 Cnt&Ext T3-9&10	Ph 6 Call&TP3 T5-1&2 WB near 1	Ph 7 Cnt&Ext T5-5&6 SB LT LL	Ph 8 Cnt&Ext T5-9&10 NB mid	Ph 8 Cnt&Ext T7-1&2	Ph 8 Call&TP3 T7-5&6 NB near	Ph 5 Cnt&Ext T7-9&10 EB LT UP	
LOWER	Ph 5 Cnt&Ext T3-3&4	Ph 6 Cnt&Ext T3-7&8 WB far 2L	Ph 6 Cnt&Ext T3-11&12 WB RT	Ph 6 Call&TP3 T5-3&4 WB RT 2	Ph 7 Cnt&Ext T5-7&8	Ph 8 Cnt&Ext T5-11&12 NB far	Ph 8 Ext T7-3&4 NB RT	Ph 8 Call&TP3 T7-7&8	Ph 7 Cnt&Ext T7-11&12 SB LT UP	

ISOLATORS

	I11	I12	I13	I14
UPPER	Manual ADV T8-1 COM 3	Ph 2 PPB T8-4 COM 6	Ph 8 PPB T8-7 COM 9	FLASH SENSE T8-10 CO 12
LOWER	T8-2 COM 3	Ph 4 PPB T8-5 COM 6	Ph 8 PPB T8-8 COM 9	STOP TIMING T8-11 COM 12

	J11	J12	J13	J14
UPPER	T9-1 COM 3	EMER A Ph 2 + 5 T9-4 COM 6	EMER C Ph 4 +7 T9-7 COM 9	RR1 FLASH T9-10 COM 12
LOWER	T9-2 COM 3	EMER B Ph 1 + 6 T9-5 COM 6	EMER D Ph 3 + 8 T9-8 COM 9	RR2 LTD OP T9-11 COM 12

COMMENTS:

09/28/11
09/28/11

ASSIGNABLE DETECTION

09/28/11

When location F-C-F = "123" all detector inputs may be reassigned. Each detector can be assigned to one or more phases with selectable functions using the call\active lights on the 170 controller. Columns "C" and "E" are assigned to detector phases while columns "D" and "F" are assigned to detector functions. To change either the assigned phase or detector functions, simply "flag" the phase(s) and\or the function(s) into the corresponding RAM locations. Remember to reset Location F-C-F back to "0".

	DATE	COMMENTS
1		
2		
3		
4		
5		
6		
7		
8		
9		

DETECTOR FUNCTIONS

LIGHT	FUNCTION
1	RED LOCK (RL)
2	YELLOW LOCK (YL)
5	EXTENSION (EX)
6	COUNT (CT)
7	CALL (CA)
8	TYPE 3 (T3)

PHASE AND DETECTOR SETTINGS

CONTROL CODE "E" (Set F-C-F to 123.)

INPUT FILE		C Phase Display								D (Function Display)								INPUT FILE		E Phase Display								F (Function Display)							
		1	2	3	4	5	6	7	8	RL 1	YL 2	3	4	EX 5	CO 6	CA 7	T3 8			1	2	3	4	5	6	7	8	RL 1	YL 2	3	4	EX 5	CT 6	CA 7	T3 8
0	I1	*												*	*			0	J1					*								*	*		
1	I2U		*											*	*			1	J2U						*							*	*		
2	I2L		*											*	*			2	J2L						*							*	*		
3	I3U		*											*	*			3	J3U						*							*	*		
4	I3L		*											*				4	J3L						*							*			
5	I4		*													*	*	5	J4						*									*	*
6	I5			*										*	*			6	J5							*						*	*		
7	I6U				*									*	*			7	J6U								*					*	*		
8	I6L				*									*	*			8	J6L								*					*	*		
9	I7U				*									*	*			9	J7U								*					*	*		
A	I7L				*									*				A	J7L								*					*			
B	I8				*											*	*	B	J8								*							*	*
C	I9U	*												*	*			C	J9U					*								*	*		
D	I9L			*										*	*			D	J9L							*						*	*		

C-8 PROGRAM

09/28/11

CO\RTE\PM: Fre-180-PM68.6

09/2(LOCATIONS: SR 180 and McCall Ave

CONTROL CODE "D"

	D	PHASE FLAG								E	PHASE FLAG								F	PHASE FLAG								
	MAX RECALL	1	2	3	4	5	6	7	8	MIN RECALL	1	2	3	4	5	6	7	8	PED RECALL	1	2	3	4	5	6	7	8	
1	CP 1									CP 1									CP 1									1
2	CP 2									CP 2									CP 2									2
3	CP 3									CP 3									CP 3									3
4	CP 4									CP 4									CP 4									4
5	CP 5									CP 5									CP 5									5
6	CP 6									CP 6									CP 6									6
7	CP 7									CP 7									CP 7									7
8	CP 8									CP 8									CP 8									8
9	CP 9									CP 9									CP 9									9
																			TOD RECALLS	1	2	3	4	5	6	7	8	
																			MAX. RECALL 1									A
																			MAX. RECALL 2									B

POWER FAILURE
F-0-C = LONG
F-0-D = SHORT

Max Green Timers
F-A-8= Ring A 1234
F-B-8= Ring B 5678

TIME LAST FLASH
D-A-F = HOUR
D-B-F = MINUTE
D-C-F = DAY

LAST PWR FAIL
D-A-E = HOUR
D-B-E = MINUTE
D-C-E = DAY

CONTROL CODE "E"

	F	PHASE FLAGS								
		1	2	3	4	5	6	7	8	
0	COND SERV 1									0
1	COND SERV 2									1
5	⌀2 PED OUTPUT		*							5
6	⌀6 PED OUTPUT						*			6
7	⌀4 PED OUTPUT				*					7
8	⌀8 PED OUTPUT								*	8

		E	PHASE FLAGS								F	PHASE FLAGS								
		1	2	3	4	5	6	7	8	"NOT"	1	2	3	4	5	6	7	8	"ON"	1	2	3	4	5	6	7	8	
A										OL "A"									OL "A"									A
B										OL "B"									OL "B"									B
C										OL "C"									OL "C"									C
D										OL "D"									OL "D"									D

PDC: MDM-89 MODEM				
ON\UP	1			
OFF\DWN		2	3	4

GDI MODEM					
UP		2		4	
DOWN	1		3		5

To set TOD Max Recalls go to "7-Page" and set either Activity Code "9" for *Max Recall 1* or Code "B" for *Max Recall 2* by time of dey.

To set Overlaps or reassign peds set C-C-1 to "1", this will put the signal in "flash".

09/28/11

7 and 9 Pages - Time of Day Settings

09/28/11

CO\RTE\PM: Fre-180-PM68.6 LOCATION: SR 180 and McCall Ave

DCA ###

CONTROL CODE "7"

	HR (HH)	MIN (MM)	ACT		ON 0	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	05	30	A	E	X	X	X	X	X	X	X	X
1	22	30	A	E		X	X	X	X	X	X	X
2				E								
3				E								
4				E								
5				E								
6				E								
7				E								
8				E								
9				E								
A				E								
B				E								
C				E								
D				E								
E				E								
F				E								

ACTIVITY CODES (CONTROL "7")

1 = SIMULTANEOUS PHASE TERMINATION
2 = MAX 2
3 = MAX 3
4 = CONDITIONAL SERVICE (1st SELECT)
5 = CONDITIONAL SERVICE (2nd SELECT)
6 = ENERGIZE AUXILIARY OUTPUT
7 = ENERGIZE AUXILIARY OUTPUT
8 = ENERGIZE AUXILIARY OUTPUT
9 = MAX RECALL 1
A = TRAFFIC ACTUATED MAX 2 OPERATION
B = MAX RECALL 2
C = YELLOW YIELD COORDINATION
D = YELLOW YIELD COORDINATION
E = FREE OPERATION
F = FLASHING OPERATION

COMMENTS

CONTROL CODE "9" (C-0-9 = 0 OR 1)

	HR (HH)	MIN (MM)	CP		OFS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0					E							
1					E							
2					E							
3					E							
4					E							
5					E							
6					E							
7					E							
8					E							
9					E							
A					E							
B					E							
C					E							
D					E							
E					E							
F					E							

CONTROL CODE "9" (C - 0 - 9 = 2)

	HR (HH)	MIN (MM)	CP		OFS	1 S	2 M	3 T	4 W	5 T	6 F	7 S
0					E							
1					E							
2					E							
3					E							
4					E							
5					E							
6					E							
7					E							
8					E							
9					E							
A					E							
B					E							
C					E							
D					E							
E					E							
F					E							

APPENDIX D

SYNCHRO 7 Worksheets

EXISTING WORKSHEETS

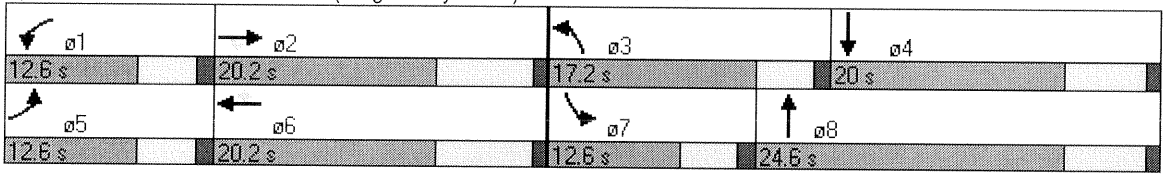
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	419	218	25	799	17	247	80	11	18	160	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.946	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1811	0	1752	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1811	0	1752	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			251			23		10			36	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	43	482	251	34	540	23	291	94	13	21	186	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	482	251	34	540	23	291	107	0	21	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.6	13.6	12.7	27.9		8.1	12.8	
Actuated g/C Ratio	0.13	0.25	0.25	0.13	0.21	0.21	0.20	0.44		0.13	0.20	
v/c Ratio	0.19	0.58	0.43	0.15	0.76	0.07	0.83	0.13		0.09	0.77	
Control Delay	30.1	26.2	6.6	29.6	33.7	11.2	50.1	14.0		28.9	37.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	30.1	26.2	6.6	29.6	33.7	11.2	50.1	14.0		28.9	37.7	
LOS	C	C	A	C	C	B	D	B		C	D	
Approach Delay		20.0			32.6			40.4			37.1	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 63.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 30.1 Intersection LOS: C
Intersection Capacity Utilization 64.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



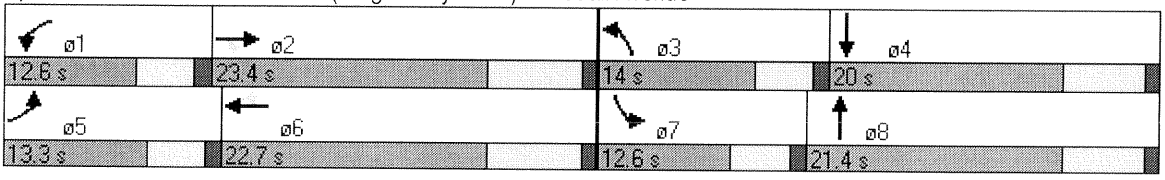
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	975	260	20	614	19	241	139	17	35	90	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			289			21		8			35	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	78	1083	289	22	337	21	280	162	20	38	99	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1083	289	22	337	21	280	182	0	38	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.7	24.2	24.2	8.4	16.9	16.9	10.5	17.4		8.4	11.6	
Actuated g/C Ratio	0.14	0.39	0.39	0.14	0.27	0.27	0.17	0.28		0.14	0.19	
v/c Ratio	0.32	0.83	0.37	0.09	0.37	0.05	0.94	0.35		0.16	0.43	
Control Delay	31.3	27.5	4.5	28.2	22.6	10.2	74.7	22.1		29.2	24.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.3	27.5	4.5	28.2	22.6	10.2	74.7	22.1		29.2	24.2	
LOS	C	C	A	C	C	B	E	C		C	C	
Approach Delay		23.1			22.2			54.0			25.2	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 61.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 28.9 Intersection LOS: C
Intersection Capacity Utilization 73.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



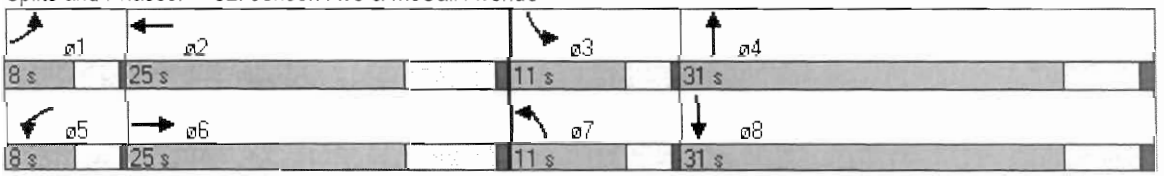
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	319	66	27	463	128	135	178	11	157	203	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.968			0.992			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3414	0	1752	3393	0	1752	1830	0	1752	1806	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3414	0	1752	3393	0	1752	1830	0	1752	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			44			4			12	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	18	399	82	32	551	152	178	234	14	173	223	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	481	0	32	703	0	178	248	0	173	260	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	18.5		4.6	19.9		7.6	13.3		7.6	13.3	
Actuated g/C Ratio	0.08	0.31		0.08	0.34		0.13	0.23		0.13	0.23	
v/c Ratio	0.13	0.44		0.24	0.60		0.78	0.59		0.76	0.62	
Control Delay	31.6	18.1		33.4	19.0		55.0	26.7		52.7	26.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.6	18.1		33.4	19.0		55.0	26.7		52.7	26.9	
LOS	C	B		C	B		E	C		D	C	
Approach Delay		18.6			19.6			38.6			37.2	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 58.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 26.9 Intersection LOS: C
Intersection Capacity Utilization 56.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	52	6	8	86	55	7	84	7	38	79	11
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	5	79	9	11	113	72	10	117	10	42	87	12

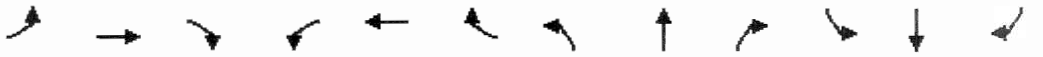
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	92	196	136	141
Volume Left (vph)	5	11	10	42
Volume Right (vph)	9	72	10	12
Hadj (s)	0.17	0.01	0.02	0.06
Departure Headway (s)	5.0	4.7	4.8	4.9
Degree Utilization, x	0.13	0.26	0.18	0.19
Capacity (veh/h)	661	713	695	688
Control Delay (s)	8.8	9.4	8.9	9.0
Approach Delay (s)	8.8	9.4	8.9	9.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	1	42	42	10	26	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	1	63	58	14	38	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	72				131	65
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	72				131	65
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	100
cM capacity (veh/h)	1521				860	996

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	64	72	40
Volume Left	1	0	38
Volume Right	0	14	1
cSH	1521	1700	864
Volume to Capacity	0.00	0.04	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.2	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	0.2	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	33	14	4	30	15	15	51	4	22	60	25
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	20	42	18	6	42	21	26	89	7	25	67	28

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	80	68	123	120
Volume Left (vph)	20	6	26	25
Volume Right (vph)	18	21	7	28
Hadj (s)	-0.03	-0.12	0.06	-0.05
Departure Headway (s)	4.5	4.4	4.4	4.3
Degree Utilization, x	0.10	0.08	0.15	0.14
Capacity (veh/h)	744	755	775	787
Control Delay (s)	8.0	7.8	8.2	8.1
Approach Delay (s)	8.0	7.8	8.2	8.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.1		
HCM Level of Service	A		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	33	4	7	48	26	9	102	8	20	194	7
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	4	49	6	9	64	35	12	140	11	27	266	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	60	108	163	303
Volume Left (vph)	4	9	12	27
Volume Right (vph)	6	35	11	10
Hadj (s)	0.18	0.05	0.03	0.05
Departure Headway (s)	5.4	5.2	4.7	4.6
Degree Utilization, x	0.09	0.15	0.21	0.39
Capacity (veh/h)	603	633	719	748
Control Delay (s)	8.9	9.1	9.0	10.5
Approach Delay (s)	8.9	9.1	9.0	10.5
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.7		
HCM Level of Service	A		
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	532	153	255	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	619	168	280	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	168				1085	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168				1085	308
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1345				226	732

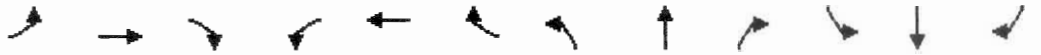
Direction, Lane #	EB 1	WB 1
Volume Total	698	448
Volume Left	79	0
Volume Right	0	280
cSH	1345	1700
Volume to Capacity	0.06	0.26
Queue Length 95th (ft)	5	0
Control Delay (s)	1.5	0.0
Lane LOS	A	
Approach Delay (s)	1.5	0.0
Approach LOS		

ntersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	170	152	0	430	113
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	205	208	0	512	135
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	208				413	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	208				413	208
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				11	83
cM capacity (veh/h)	1300				575	805

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	205	208	646
Volume Left	0	0	512
Volume Right	0	0	135
cSH	1700	1700	644
Volume to Capacity	0.12	0.12	1.00
Queue Length 95th (ft)	0	0	393
Control Delay (s)	0.0	0.0	61.7
Lane LOS			F
Approach Delay (s)	0.0	0.0	61.7
Approach LOS			F

Intersection Summary			
Average Delay	37.6		
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	53	5	24	112	77	13	112	16	59	207	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	70	7	29	135	93	17	149	21	72	252	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	257	188	343
Volume Left (vph)	12	29	17	72
Volume Right (vph)	7	93	21	18
Hadj (s)	0.03	-0.14	0.00	0.06
Departure Headway (s)	5.8	5.4	5.4	5.2
Degree Utilization, x	0.14	0.38	0.28	0.50
Capacity (veh/h)	536	618	602	650
Control Delay (s)	9.8	11.6	10.6	13.4
Approach Delay (s)	9.8	11.6	10.6	13.4
Approach LOS	A	B	B	B

Intersection Summary			
Delay	11.9		
HCM Level of Service	B		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Central Avenue & Academy Avenue

12/23/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	41	47	14	44	17	61	161	8	21	202	29
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	29	52	59	19	59	23	78	206	10	22	215	31

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	141	100	78	217	22	246
Volume Left (vph)	29	19	78	0	22	0
Volume Right (vph)	59	23	0	10	0	31
Hadj (s)	0.01	0.12	0.55	0.02	0.55	-0.04
Departure Headway (s)	5.5	5.7	6.1	5.6	6.1	5.5
Degree Utilization, x	0.22	0.16	0.13	0.33	0.04	0.38
Capacity (veh/h)	594	568	565	621	557	623
Control Delay (s)	10.0	9.8	8.8	10.1	8.2	10.7
Approach Delay (s)	10.0	9.8	9.8		10.5	
Approach LOS	B	A	A		B	

Intersection Summary			
Delay	10.1		
HCM Level of Service	B		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

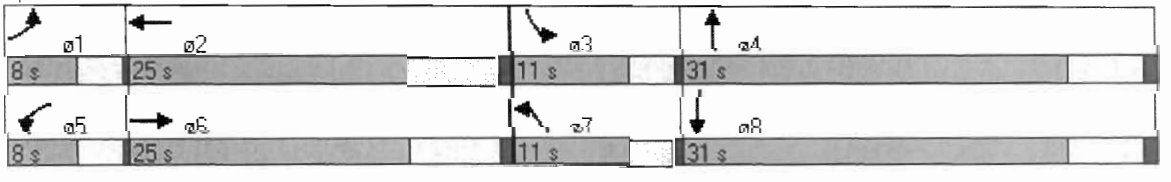
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	448	81	24	295	147	83	194	43	167	180	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.950			0.973			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3424	0	1752	3330	0	1752	1795	0	1752	1817	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3424	0	1752	3330	0	1752	1795	0	1752	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			109			16			8	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	46	527	95	27	335	167	87	204	45	194	209	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	622	0	27	502	0	87	249	0	194	232	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

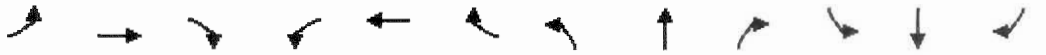
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.0		4.6	18.5		7.1	13.1		7.6	18.3	
Actuated g/C Ratio	0.08	0.33		0.08	0.31		0.12	0.22		0.13	0.30	
v/c Ratio	0.35	0.54		0.20	0.46		0.42	0.62		0.87	0.42	
Control Delay	37.0	19.2		33.4	16.0		34.0	27.4		68.3	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.0	19.2		33.4	16.0		34.0	27.4		68.3	21.6	
LOS	D	B		C	B		C	C		E	C	
Approach Delay		20.5			16.9			29.1			42.9	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 60.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 57.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	106	9	8	60	61	5	114	17	49	80	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	14	131	11	9	67	68	6	134	20	64	104	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	143	160	169
Volume Left (vph)	14	9	6	64
Volume Right (vph)	11	68	20	1
Hadj (s)	0.20	-0.05	-0.02	0.12
Departure Headway (s)	5.1	4.9	4.9	5.0
Degree Utilization, x	0.22	0.20	0.22	0.24
Capacity (veh/h)	649	675	685	668
Control Delay (s)	9.6	9.1	9.3	9.6
Approach Delay (s)	9.6	9.1	9.3	9.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	68	55	8	13	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	0	84	70	10	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	80				159	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	80				159	75
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1512				830	984

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	84	80	20
Volume Left	0	0	20
Volume Right	0	10	0
cSH	1512	1700	830
Volume to Capacity	0.00	0.05	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	9.4
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.4
Approach LOS			A

ntersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization		13.6%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	58	22	4	47	15	23	68	5	14	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	21	63	24	4	51	16	31	91	7	16	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	108	72	128	95
Volume Left (vph)	21	4	31	16
Volume Right (vph)	24	16	7	10
Hadj (s)	-0.04	-0.07	0.07	0.02
Departure Headway (s)	4.5	4.5	4.5	4.5
Degree Utilization, x	0.13	0.09	0.16	0.12
Capacity (veh/h)	764	750	762	756
Control Delay (s)	8.2	7.9	8.4	8.1
Approach Delay (s)	8.2	7.9	8.4	8.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.2		
HCM Level of Service	A		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	60	46	62	11	48	28	58	237	14	29	215	42
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	79	61	82	12	53	31	70	286	17	35	259	51

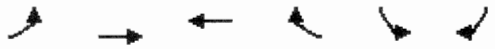
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	221	96	70	302	35	310
Volume Left (vph)	79	12	70	0	35	0
Volume Right (vph)	82	31	0	17	0	51
Hadj (s)	0.07	0.05	0.55	0.01	0.55	-0.06
Departure Headway (s)	6.1	6.4	6.6	6.1	6.6	6.0
Degree Utilization, x	0.37	0.17	0.13	0.51	0.06	0.52
Capacity (veh/h)	540	485	518	569	512	572
Control Delay (s)	12.7	10.7	9.4	14.0	8.9	14.1
Approach Delay (s)	12.7	10.7	13.1		13.6	
Approach LOS	B	B	B		B	

Intersection Summary			
Delay	12.9		
HCM Level of Service	B		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	65	9	7	49	39	7	160	18	38	132	8
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	11	71	10	9	60	48	8	172	19	45	157	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	92	116	199	212
Volume Left (vph)	11	9	8	45
Volume Right (vph)	10	48	19	10
Hadj (s)	0.18	-0.01	0.00	0.07
Departure Headway (s)	5.3	5.0	4.7	4.8
Degree Utilization, x	0.13	0.16	0.26	0.28
Capacity (veh/h)	621	651	722	713
Control Delay (s)	9.1	9.0	9.4	9.6
Approach Delay (s)	9.1	9.0	9.4	9.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	408	138	597	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	116	480	170	737	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	170				1252	539
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	24				1224	433
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	92				100	100
cM capacity (veh/h)	1371				163	561

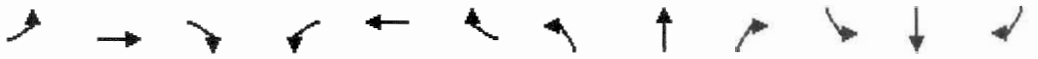
Direction, Lane #	EB 1	WB 1
Volume Total	596	907
Volume Left	116	0
Volume Right	0	737
cSH	1371	1700
Volume to Capacity	0.08	0.53
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	271	138	0	236	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	315	184	0	291	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	184				499	184
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	184				499	184
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				43	90
cM capacity (veh/h)	1327				512	831

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	315	184	373
Volume Left	0	0	291
Volume Right	0	0	81
cSH	1700	1700	623
Volume to Capacity	0.19	0.11	0.60
Queue Length 95th (ft)	0	0	99
Control Delay (s)	0.0	0.0	19.0
Lane LOS			C
Approach Delay (s)	0.0	0.0	19.0
Approach LOS			C

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	107	13	20	42	53	5	210	24	75	170	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	18	123	15	26	55	70	5	214	24	87	198	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	151	244	288
Volume Left (vph)	18	26	5	87
Volume Right (vph)	15	70	24	3
Hadj (s)	0.02	-0.19	-0.01	0.10
Departure Headway (s)	5.6	5.4	5.2	5.3
Degree Utilization, x	0.24	0.23	0.35	0.42
Capacity (veh/h)	575	591	635	644
Control Delay (s)	10.4	10.0	11.1	12.0
Approach Delay (s)	10.4	10.0	11.1	12.0
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.1		
HCM Level of Service	B		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

EXISTING PLUS PROJECT WORKSHEETS

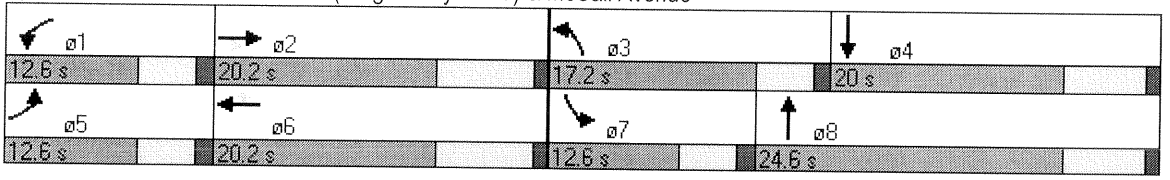
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	419	363	25	799	17	391	87	11	18	167	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			417			23		9			35	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	43	482	417	34	540	23	460	102	13	21	194	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	482	417	34	540	23	460	115	0	21	299	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.6	13.6	12.8	28.1		8.1	12.9	
Actuated g/C Ratio	0.13	0.25	0.25	0.13	0.21	0.21	0.20	0.44		0.13	0.20	
v/c Ratio	0.19	0.58	0.59	0.15	0.76	0.07	1.31	0.14		0.09	0.78	
Control Delay	30.1	26.2	7.1	29.6	33.9	11.2	187.0	14.2		28.9	39.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	30.1	26.2	7.1	29.6	33.9	11.2	187.0	14.2		28.9	39.3	
LOS	C	C	A	C	C	B	F	B		C	D	
Approach Delay		17.9			32.8			152.5			38.6	
Approach LOS		B			C			F			D	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 63.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 56.1 Intersection LOS: E
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



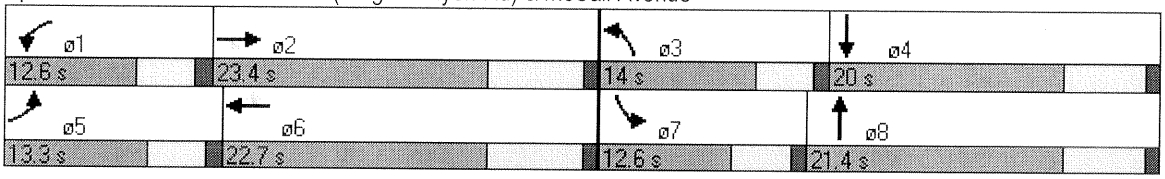
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	975	270	20	614	19	251	139	17	35	90	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			21		8			35	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	78	1083	300	22	337	21	292	162	20	38	99	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1083	300	22	337	21	292	182	0	38	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.7	24.2	24.2	8.4	16.9	16.9	10.5	17.4		8.4	11.6	
Actuated g/C Ratio	0.14	0.39	0.39	0.14	0.27	0.27	0.17	0.28		0.14	0.19	
v/c Ratio	0.32	0.83	0.38	0.09	0.37	0.05	0.98	0.35		0.16	0.43	
Control Delay	31.3	27.5	4.4	28.2	22.6	10.2	83.9	22.1		29.2	24.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.3	27.5	4.4	28.2	22.6	10.2	83.9	22.1		29.2	24.2	
LOS	C	C	A	C	C	B	F	C		C	C	
Approach Delay		22.9			22.2			60.1			25.2	
Approach LOS		C			C			E			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 61.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 30.0
Intersection LOS: C
Intersection Capacity Utilization 74.2%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



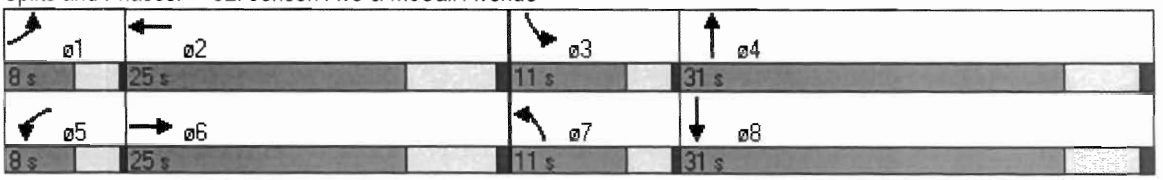
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	319	70	27	463	128	139	329	11	157	355	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.968			0.995			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1752	3393	0	1752	1835	0	1752	1821	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3393	0	1752	1835	0	1752	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			44			2			7	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	18	399	88	32	551	152	183	433	14	173	390	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	487	0	32	703	0	183	447	0	173	427	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	18.5		4.6	19.9		7.6	19.7		7.6	19.7	
Actuated g/C Ratio	0.07	0.28		0.07	0.31		0.12	0.30		0.12	0.30	
v/c Ratio	0.15	0.49		0.26	0.66		0.89	0.80		0.84	0.77	
Control Delay	35.3	21.7		37.8	23.6		75.9	33.5		67.9	30.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.3	21.7		37.8	23.6		75.9	33.5		67.9	30.8	
LOS	D	C		D	C		E	C		E	C	
Approach Delay		22.2			24.2			45.8			41.5	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	7	72		12	113		69	147		65	137	
Queue Length 95th (ft)	24	124		38	196		#166	223		#201	268	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	123	991		123	1066		205	716		205	714	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.15	0.49		0.26	0.66		0.89	0.62		0.84	0.60	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 65.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 33.5 Intersection LOS: C
Intersection Capacity Utilization 64.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



HCM Unsignalized Intersection Capacity Analysis
2: Central Avenue & Bethel Avenue

10/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	211	6	8	244	55	7	84	7	38	79	11
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	5	320	9	11	321	72	10	117	10	42	87	12

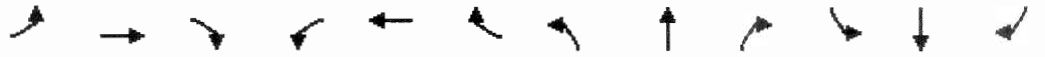
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	333	404	136	141
Volume Left (vph)	5	11	10	42
Volume Right (vph)	9	72	10	12
Hadj (s)	0.21	0.12	0.02	0.06
Departure Headway (s)	5.7	5.5	6.3	6.3
Degree Utilization, x	0.53	0.62	0.24	0.25
Capacity (veh/h)	600	629	490	491
Control Delay (s)	14.8	16.8	11.3	11.4
Approach Delay (s)	14.8	16.8	11.3	11.4
Approach LOS	B	C	B	B

Intersection Summary			
Delay	14.7		
HCM Level of Service	B		
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	3	49	49	10	26	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	4	73	68	14	38	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	82				157	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	82				157	75
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1509				829	984

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	78	82	43
Volume Left	4	0	38
Volume Right	0	14	4
cSH	1509	1700	843
Volume to Capacity	0.00	0.05	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.4	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	0.4	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	15.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	206	14	4	201	15	15	51	4	22	60	25
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	20	261	18	6	279	21	26	89	7	25	67	28

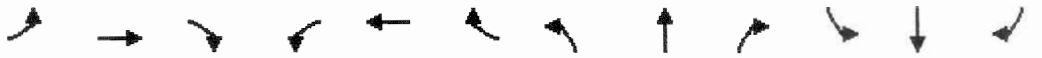
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	299	306	123	120
Volume Left (vph)	20	6	26	25
Volume Right (vph)	18	21	7	28
Hadj (s)	0.03	0.01	0.06	-0.05
Departure Headway (s)	5.1	5.1	5.7	5.6
Degree Utilization, x	0.42	0.43	0.20	0.19
Capacity (veh/h)	667	674	550	562
Control Delay (s)	11.8	11.8	10.1	10.0
Approach Delay (s)	11.8	11.8	10.1	10.0
Approach LOS	B	B	B	A

Intersection Summary			
Delay	11.3		
HCM Level of Service	B		
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	200	47	23	202	21	61	161	17	26	202	29
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	29	253	59	31	269	28	78	206	22	28	215	31

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	342	328	78	228	28	246
Volume Left (vph)	29	31	78	0	28	0
Volume Right (vph)	59	28	0	22	0	31
Hadj (s)	0.13	0.19	0.55	-0.02	0.55	-0.04
Departure Headway (s)	6.9	7.0	8.2	7.6	8.2	7.6
Degree Utilization, x	0.65	0.64	0.18	0.48	0.06	0.52
Capacity (veh/h)	484	480	397	432	400	430
Control Delay (s)	21.9	21.3	11.7	16.2	10.6	17.3
Approach Delay (s)	21.9	21.3	15.0		16.6	
Approach LOS	C	C	C		C	

Intersection Summary			
Delay	18.9		
HCM Level of Service	C		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	36	4	7	51	181	9	102	8	176	194	7
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	4	54	6	9	68	241	12	140	11	241	266	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	64	319	163	516
Volume Left (vph)	4	9	12	241
Volume Right (vph)	6	241	11	10
Hadj (s)	0.18	-0.23	0.03	0.13
Departure Headway (s)	6.7	5.7	6.0	5.5
Degree Utilization, x	0.12	0.51	0.27	0.79
Capacity (veh/h)	468	579	535	635
Control Delay (s)	10.7	14.5	11.2	26.0
Approach Delay (s)	10.7	14.5	11.2	26.0
Approach LOS	B	B	B	D

Intersection Summary			
Delay	19.4		
HCM Level of Service	C		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	535	153	258	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	622	168	284	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	168				1090	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168				1090	310
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1345				224	730

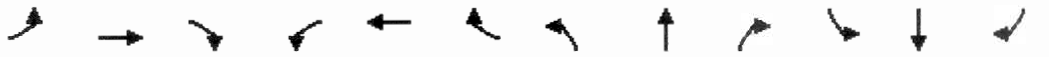
Direction, Lane #	EB 1	WB 1
Volume Total	701	452
Volume Left	79	0
Volume Right	0	284
cSH	1345	1700
Volume to Capacity	0.06	0.27
Queue Length 95th (ft)	5	0
Control Delay (s)	1.5	0.0
Lane LOS	A	
Approach Delay (s)	1.5	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	170	152	0	433	113
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	205	208	0	515	135
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	208				413	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	208				413	208
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				10	83
cM capacity (veh/h)	1300				575	805

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	205	208	650
Volume Left	0	0	515
Volume Right	0	0	135
cSH	1700	1700	644
Volume to Capacity	0.12	0.12	1.01
Queue Length 95th (ft)	0	0	400
Control Delay (s)	0.0	0.0	63.3
Lane LOS			F
Approach Delay (s)	0.0	0.0	63.3
Approach LOS			F

Intersection Summary			
Average Delay	38.7		
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	53	5	24	112	77	13	267	16	59	363	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	70	7	29	135	93	17	356	21	72	443	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	257	395	533
Volume Left (vph)	12	29	17	72
Volume Right (vph)	7	93	21	18
Hadj (s)	0.03	-0.14	0.03	0.06
Departure Headway (s)	7.6	6.8	6.2	6.0
Degree Utilization, x	0.19	0.48	0.68	0.89
Capacity (veh/h)	411	497	551	585
Control Delay (s)	12.3	15.9	21.5	38.8
Approach Delay (s)	12.3	15.9	21.5	38.8
Approach LOS	B	C	C	E

Intersection Summary			
Delay	27.0		
HCM Level of Service	D		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	173	43	42	9	9	171
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	47	46	10	10	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55				473	51
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55				473	51
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				98	82
cM capacity (veh/h)	1549				483	1018

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	235	55	196
Volume Left	188	0	10
Volume Right	0	10	186
cSH	1549	1700	964
Volume to Capacity	0.12	0.03	0.20
Queue Length 95th (ft)	10	0	19
Control Delay (s)	6.3	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	6.3	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

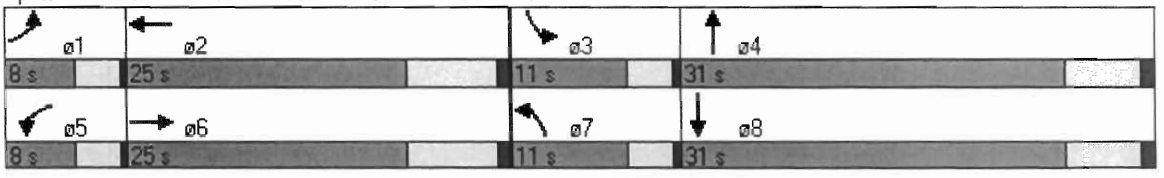
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	448	81	24	295	147	83	204	43	167	190	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.950			0.974			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3424	0	1752	3330	0	1752	1797	0	1752	1819	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3424	0	1752	3330	0	1752	1797	0	1752	1819	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			109			15			7	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	46	527	95	27	335	167	87	215	45	194	221	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	622	0	27	502	0	87	260	0	194	244	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

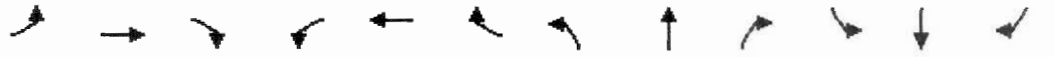
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.0		4.6	18.5		7.1	13.5		7.6	18.7	
Actuated g/C Ratio	0.08	0.33		0.08	0.31		0.12	0.22		0.13	0.31	
v/c Ratio	0.35	0.54		0.20	0.46		0.43	0.63		0.88	0.43	
Control Delay	37.4	19.5		33.8	16.2		34.4	27.8		69.6	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	19.5		33.8	16.2		34.4	27.8		69.6	21.8	
LOS	D	B		C	B		C	C		E	C	
Approach Delay		20.8			17.1			29.5			43.0	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 60.6
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.2 Intersection LOS: C
Intersection Capacity Utilization 58.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	116	9	8	70	62	5	114	17	49	80	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	14	143	11	9	78	69	6	134	20	64	104	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	168	156	160	169
Volume Left (vph)	14	9	6	64
Volume Right (vph)	11	69	20	1
Hadj (s)	0.20	-0.03	-0.02	0.12
Departure Headway (s)	5.2	5.0	5.0	5.1
Degree Utilization, x	0.24	0.21	0.22	0.24
Capacity (veh/h)	645	667	670	655
Control Delay (s)	9.8	9.3	9.4	9.7
Approach Delay (s)	9.8	9.3	9.4	9.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.6		
HCM Level of Service	A		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	69	55	8	13	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	0	85	70	10	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	80				160	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	80				160	75
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1512				829	984

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	85	80	20
Volume Left	0	0	20
Volume Right	0	10	0
cSH	1512	1700	829
Volume to Capacity	0.00	0.05	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	9.5
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	13.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	69	22	4	61	15	23	68	5	14	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	21	75	24	4	66	16	31	91	7	16	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	120	87	128	95
Volume Left (vph)	21	4	31	16
Volume Right (vph)	24	16	7	10
Hadj (s)	-0.03	-0.05	0.07	0.02
Departure Headway (s)	4.5	4.5	4.6	4.6
Degree Utilization, x	0.15	0.11	0.16	0.12
Capacity (veh/h)	748	743	747	740
Control Delay (s)	8.3	8.1	8.5	8.2
Approach Delay (s)	8.3	8.1	8.5	8.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.3		
HCM Level of Service	A		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	60	56	62	13	59	29	58	237	15	29	215	42
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	79	74	82	14	65	32	70	286	18	35	259	51

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	234	111	70	304	35	310
Volume Left (vph)	79	14	70	0	35	0
Volume Right (vph)	82	32	0	18	0	51
Hadj (s)	0.08	0.07	0.55	0.01	0.55	-0.06
Departure Headway (s)	6.2	6.5	6.7	6.2	6.8	6.2
Degree Utilization, x	0.40	0.20	0.13	0.52	0.07	0.53
Capacity (veh/h)	523	469	506	556	500	548
Control Delay (s)	13.3	11.1	9.6	14.6	9.1	14.7
Approach Delay (s)	13.3	11.1	13.6		14.1	
Approach LOS	B	B	B		B	

Intersection Summary			
Delay	13.5		
HCM Level of Service	B		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	65	9	7	49	49	7	160	18	48	132	8
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	11	71	10	9	60	60	8	172	19	57	157	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	92	128	199	224
Volume Left (vph)	11	9	8	57
Volume Right (vph)	10	60	19	10
Hadj (s)	0.18	-0.05	0.00	0.08
Departure Headway (s)	5.3	5.0	4.8	4.8
Degree Utilization, x	0.14	0.18	0.26	0.30
Capacity (veh/h)	613	649	712	705
Control Delay (s)	9.2	9.1	9.5	9.9
Approach Delay (s)	9.2	9.1	9.5	9.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.5		
HCM Level of Service	A		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	408	138	597	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	116	480	170	737	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	170				1252	539
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	24				1224	433
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	92				100	100
cM capacity (veh/h)	1371				163	561

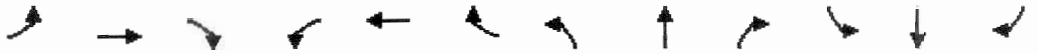
Direction, Lane #	EB 1	WB 1
Volume Total	596	907
Volume Left	116	0
Volume Right	0	737
cSH	1371	1700
Volume to Capacity	0.08	0.53
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	271	138	0	236	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	315	184	0	291	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	184				499	184
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	184				499	184
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				43	90
cM capacity (veh/h)	1327				512	831

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	315	184	373
Volume Left	0	0	291
Volume Right	0	0	81
cSH	1700	1700	623
Volume to Capacity	0.19	0.11	0.60
Queue Length 95th (ft)	0	0	99
Control Delay (s)	0.0	0.0	19.0
Lane LOS			C
Approach Delay (s)	0.0	0.0	19.0
Approach LOS			C

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	107	13	20	42	53	5	220	24	75	180	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	18	123	15	26	55	70	5	224	24	87	209	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	151	254	300
Volume Left (vph)	18	26	5	87
Volume Right (vph)	15	70	24	3
Hadj (s)	0.02	-0.19	0.00	0.10
Departure Headway (s)	5.7	5.5	5.3	5.3
Degree Utilization, x	0.25	0.23	0.37	0.44
Capacity (veh/h)	566	581	632	642
Control Delay (s)	10.5	10.1	11.3	12.4
Approach Delay (s)	10.5	10.1	11.3	12.4
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.3		
HCM Level of Service	B		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	68	55	0	1	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	74	60	0	1	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60				158	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60				158	60
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1544				827	1006

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	86	60	17
Volume Left	12	0	1
Volume Right	0	0	16
cSH	1544	1700	992
Volume to Capacity	0.01	0.04	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	1.1	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

EXISTING PLUS CUMULATIVE WORKSHEETS

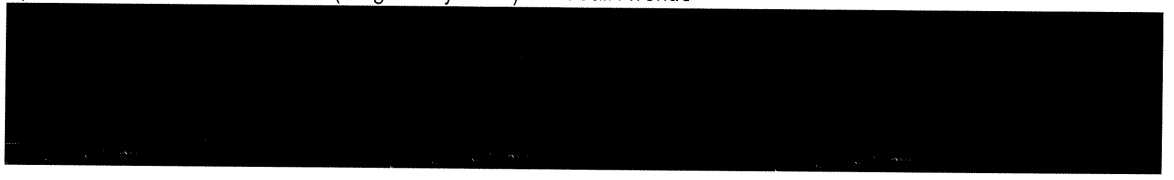
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	572	218	25	943	17	247	80	11	18	160	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.982			0.946	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1811	0	1752	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1811	0	1752	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			251			23		10			36	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	43	657	251	34	637	23	291	94	13	21	186	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	657	251	34	637	23	291	107	0	21	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.8	20.8	12.6	20.8	20.8	16.6	24.0	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	29.7%	29.7%	18.0%	29.7%	29.7%	23.7%	34.3%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	14.0	14.0	8.0	14.0	14.0	12.0	18.0		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	16.5	16.5	8.1	14.2	14.2	12.2	27.4		8.1	12.8	
Actuated g/C Ratio	0.13	0.26	0.26	0.13	0.22	0.22	0.19	0.43		0.13	0.20	
v/c Ratio	0.19	0.76	0.42	0.15	0.85	0.06	0.87	0.14		0.09	0.77	
Control Delay	30.1	32.0	6.4	29.6	39.6	10.9	56.1	14.4		28.9	37.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	30.1	32.0	6.4	29.6	39.6	10.9	56.1	14.4		28.9	37.8	
LOS	C	C	A	C	D	B	E	B		C	D	
Approach Delay		25.1			38.1			44.9			37.2	
Approach LOS		C			D			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 63.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 33.9 Intersection LOS: C
Intersection Capacity Utilization 68.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	984	260	20	635	19	241	139	17	35	90	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			289			21		8			35	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	78	1093	289	22	349	21	280	162	20	38	99	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1093	289	22	349	21	280	182	0	38	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

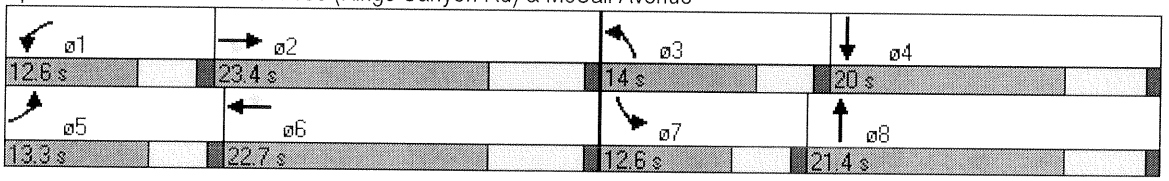
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.7	24.2	24.2	8.4	16.9	16.9	10.5	17.4		8.4	11.6	
Actuated g/C Ratio	0.14	0.39	0.39	0.14	0.27	0.27	0.17	0.28		0.14	0.19	
v/c Ratio	0.32	0.83	0.37	0.09	0.38	0.05	0.94	0.35		0.16	0.43	
Control Delay	31.3	27.8	4.5	28.2	22.7	10.2	74.7	22.1		29.2	24.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.3	27.8	4.5	28.2	22.7	10.2	74.7	22.1		29.2	24.2	
LOS	C	C	A	C	C	B	E	C		C	C	
Approach Delay		23.4			22.3			54.0			25.2	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 61.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 29.0
Intersection Capacity Utilization 73.9%
Analysis Period (min) 15

Intersection LOS: C
ICU Level of Service D

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



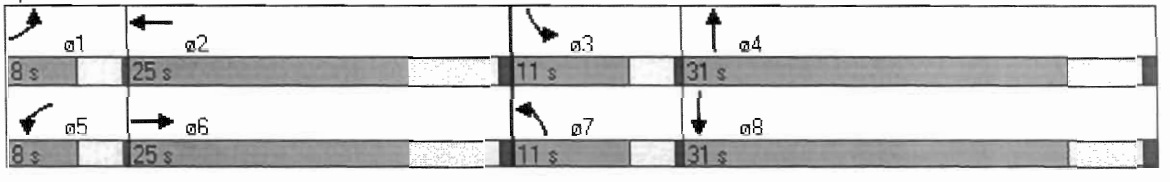
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	319	66	27	463	128	135	178	11	157	203	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.968			0.992			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3414	0	1752	3393	0	1752	1830	0	1752	1806	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3414	0	1752	3393	0	1752	1830	0	1752	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			44			4			12	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	18	399	82	32	551	152	178	234	14	173	223	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	481	0	32	703	0	178	248	0	173	260	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	18.5		4.6	19.9		7.6	13.3		7.6	13.3	
Actuated g/C Ratio	0.08	0.31		0.08	0.34		0.13	0.23		0.13	0.23	
v/c Ratio	0.13	0.44		0.24	0.60		0.78	0.59		0.76	0.62	
Control Delay	31.6	18.1		33.4	19.0		55.0	26.7		52.7	26.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.6	18.1		33.4	19.0		55.0	26.7		52.7	26.9	
LOS	C	B		C	B		E	C		D	C	
Approach Delay		18.6			19.6			38.6			37.2	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 58.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 26.9 Intersection LOS: C
Intersection Capacity Utilization 56.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



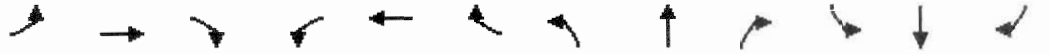
HCM Unsignalized Intersection Capacity Analysis
2: Central Avenue & Bethel Avenue

10/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	88	6	8	122	55	7	84	7	38	79	11
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	5	133	9	11	161	72	10	117	10	42	87	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	243	136	141
Volume Left (vph)	5	11	10	42
Volume Right (vph)	9	72	10	12
Hadj (s)	0.19	0.05	0.02	0.06
Departure Headway (s)	5.2	4.9	5.1	5.2
Degree Utilization, x	0.21	0.33	0.19	0.20
Capacity (veh/h)	644	691	642	636
Control Delay (s)	9.5	10.3	9.4	9.5
Approach Delay (s)	9.5	10.3	9.4	9.5
Approach LOS	A	B	A	A

Intersection Summary			
Delay	9.8		
HCM Level of Service	A		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	95	14	4	89	15	15	51	4	22	60	25
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	20	120	18	6	124	21	26	89	7	25	67	28

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	158	150	123	120
Volume Left (vph)	20	6	26	25
Volume Right (vph)	18	21	7	28
Hadj (s)	0.01	-0.02	0.06	-0.05
Departure Headway (s)	4.7	4.7	4.9	4.8
Degree Utilization, x	0.21	0.20	0.17	0.16
Capacity (veh/h)	714	718	688	698
Control Delay (s)	8.9	8.8	8.8	8.7
Approach Delay (s)	8.9	8.8	8.8	8.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.8		
HCM Level of Service	A		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	77	47	28	80	25	61	161	25	30	202	29
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	29	97	59	37	107	33	78	206	32	32	215	31

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	186	177	78	238	32	246
Volume Left (vph)	29	37	78	0	32	0
Volume Right (vph)	59	33	0	32	0	31
Hadj (s)	0.06	0.15	0.55	-0.04	0.55	-0.04
Departure Headway (s)	6.0	6.1	6.6	6.0	6.7	6.1
Degree Utilization, x	0.31	0.30	0.14	0.40	0.06	0.42
Capacity (veh/h)	549	539	512	565	504	558
Control Delay (s)	11.6	11.6	9.5	11.8	8.9	12.2
Approach Delay (s)	11.6	11.6	11.2		11.8	
Approach LOS	B	B	B		B	

Intersection Summary			
Delay	11.5		
HCM Level of Service	B		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	69	4	7	84	26	9	102	8	20	194	7
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	4	103	6	9	112	35	12	140	11	27	266	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	156	163	303
Volume Left (vph)	4	9	12	27
Volume Right (vph)	6	35	11	10
Hadj (s)	0.20	0.10	0.03	0.05
Departure Headway (s)	5.6	5.4	5.1	5.0
Degree Utilization, x	0.18	0.23	0.23	0.42
Capacity (veh/h)	584	608	654	690
Control Delay (s)	9.8	10.0	9.7	11.5
Approach Delay (s)	9.8	10.0	9.7	11.5
Approach LOS	A	B	A	B

Intersection Summary			
Delay	10.5		
HCM Level of Service	B		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	566	185	257	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	658	203	282	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	203				1161	345
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	203				1161	345
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1305				203	698

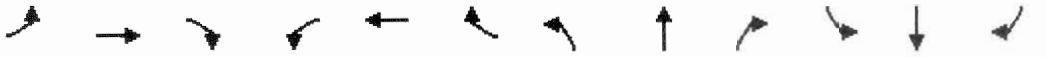
Direction, Lane #	EB 1	WB 1
Volume Total	737	486
Volume Left	79	0
Volume Right	0	282
cSH	1305	1700
Volume to Capacity	0.06	0.29
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	202	184	0	432	113
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	243	252	0	514	135
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	252				495	252
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	252				495	252
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	82
cM capacity (veh/h)	1252				514	760

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	243	252	649
Volume Left	0	0	514
Volume Right	0	0	135
cSH	1700	1700	569
Volume to Capacity	0.14	0.15	1.14
Queue Length 95th (ft)	0	0	534
Control Delay (s)	0.0	0.0	107.9
Lane LOS			F
Approach Delay (s)	0.0	0.0	107.9
Approach LOS			F

Intersection Summary			
Average Delay	61.2		
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	53	5	24	112	77	13	112	16	59	207	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	70	7	29	135	93	17	149	21	72	252	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	257	188	343
Volume Left (vph)	12	29	17	72
Volume Right (vph)	7	93	21	18
Hadj (s)	0.03	-0.14	0.00	0.06
Departure Headway (s)	5.8	5.4	5.4	5.2
Degree Utilization, x	0.14	0.38	0.28	0.50
Capacity (veh/h)	536	618	602	650
Control Delay (s)	9.8	11.6	10.6	13.4
Approach Delay (s)	9.8	11.6	10.6	13.4
Approach LOS	A	B	B	B

Intersection Summary			
Delay	11.9		
HCM Level of Service	B		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

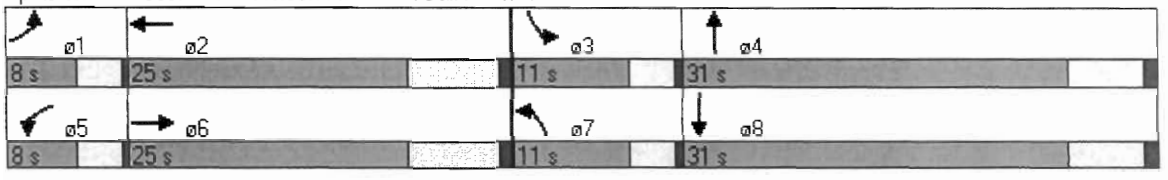
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	448	81	24	295	147	83	194	43	167	180	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.950			0.973			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3424	0	1752	3330	0	1752	1795	0	1752	1817	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3424	0	1752	3330	0	1752	1795	0	1752	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			109			16			8	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	46	527	95	27	335	167	87	204	45	194	209	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	622	0	27	502	0	87	249	0	194	232	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

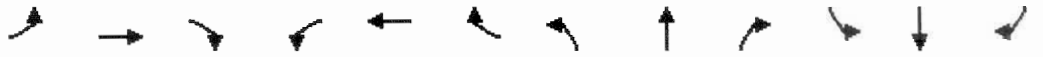
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.0		4.6	18.5		7.1	13.1		7.6	18.3	
Actuated g/C Ratio	0.08	0.33		0.08	0.31		0.12	0.22		0.13	0.30	
v/c Ratio	0.35	0.54		0.20	0.46		0.42	0.62		0.87	0.42	
Control Delay	37.0	19.2		33.4	16.0		34.0	27.4		68.3	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.0	19.2		33.4	16.0		34.0	27.4		68.3	21.6	
LOS	D	B		C	B		C	C		E	C	
Approach Delay		20.5			16.9			29.1			42.9	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 60.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 57.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	126	9	8	80	61	5	114	17	49	80	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	14	156	11	9	89	68	6	134	20	64	104	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	180	166	160	169
Volume Left (vph)	14	9	6	64
Volume Right (vph)	11	68	20	1
Hadj (s)	0.20	-0.01	-0.02	0.12
Departure Headway (s)	5.2	5.0	5.0	5.2
Degree Utilization, x	0.26	0.23	0.22	0.24
Capacity (veh/h)	640	660	658	642
Control Delay (s)	10.0	9.5	9.5	9.8
Approach Delay (s)	10.0	9.5	9.5	9.8
Approach LOS	B	A	A	A

Intersection Summary			
Delay	9.7		
HCM Level of Service	A		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	91	80	8	13	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	0	112	101	10	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	111				219	106
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	111				219	106
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1472				767	945

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	112	111	20
Volume Left	0	0	20
Volume Right	0	10	0
cSH	1472	1700	767
Volume to Capacity	0.00	0.07	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	9.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	81	22	4	72	15	23	68	5	14	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	21	88	24	4	78	16	31	91	7	16	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	133	99	128	95
Volume Left (vph)	21	4	31	16
Volume Right (vph)	24	16	7	10
Hadj (s)	-0.03	-0.04	0.07	0.02
Departure Headway (s)	4.5	4.6	4.6	4.6
Degree Utilization, x	0.17	0.13	0.16	0.12
Capacity (veh/h)	743	737	733	726
Control Delay (s)	8.4	8.2	8.5	8.3
Approach Delay (s)	8.4	8.2	8.5	8.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	60	66	62	15	68	28	58	237	17	29	215	42
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	79	87	82	16	75	31	70	286	20	35	259	51

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	247	122	70	306	35	310
Volume Left (vph)	79	16	70	0	35	0
Volume Right (vph)	82	31	0	20	0	51
Hadj (s)	0.09	0.10	0.55	0.00	0.55	-0.06
Departure Headway (s)	6.3	6.6	6.9	6.3	6.9	6.3
Degree Utilization, x	0.43	0.23	0.13	0.54	0.07	0.54
Capacity (veh/h)	526	462	497	535	490	536
Control Delay (s)	14.0	11.6	9.8	15.3	9.2	15.4
Approach Delay (s)	14.0	11.6	14.3		14.8	
Approach LOS	B	B	B		B	

Intersection Summary			
Delay	14.1		
HCM Level of Service	B		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	85	9	7	69	39	7	160	18	38	132	8
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	11	93	10	9	84	48	8	172	19	45	157	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	114	140	199	212
Volume Left (vph)	11	9	8	45
Volume Right (vph)	10	48	19	10
Hadj (s)	0.19	0.03	0.00	0.07
Departure Headway (s)	5.3	5.1	4.9	4.9
Degree Utilization, x	0.17	0.20	0.27	0.29
Capacity (veh/h)	613	638	695	687
Control Delay (s)	9.4	9.4	9.7	9.9
Approach Delay (s)	9.4	9.4	9.7	9.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.7		
HCM Level of Service	A		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	428	156	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	116	504	193	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	193				1299	562
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				1271	431
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1352				149	548

Direction, Lane #	EB 1	WB 1
Volume Total	620	932
Volume Left	116	0
Volume Right	0	740
cSH	1352	1700
Volume to Capacity	0.09	0.55
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	289	156	0	238	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	336	208	0	294	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	208				544	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	208				544	208
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				39	90
cM capacity (veh/h)	1300				482	805

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	336	208	375
Volume Left	0	0	294
Volume Right	0	0	81
cSH	1700	1700	586
Volume to Capacity	0.20	0.12	0.64
Queue Length 95th (ft)	0	0	114
Control Delay (s)	0.0	0.0	21.4
Lane LOS			C
Approach Delay (s)	0.0	0.0	21.4
Approach LOS			C

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	107	13	20	42	53	5	210	24	75	170	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	18	123	15	26	55	70	5	214	24	87	198	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	151	244	288
Volume Left (vph)	18	26	5	87
Volume Right (vph)	15	70	24	3
Hadj (s)	0.02	-0.19	-0.01	0.10
Departure Headway (s)	5.6	5.4	5.2	5.3
Degree Utilization, x	0.24	0.23	0.35	0.42
Capacity (veh/h)	575	591	635	644
Control Delay (s)	10.4	10.0	11.1	12.0
Approach Delay (s)	10.4	10.0	11.1	12.0
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.1		
HCM Level of Service	B		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

EXISTING PLUS PROJECT PLUS CUMULATIVE WORKSHEETS

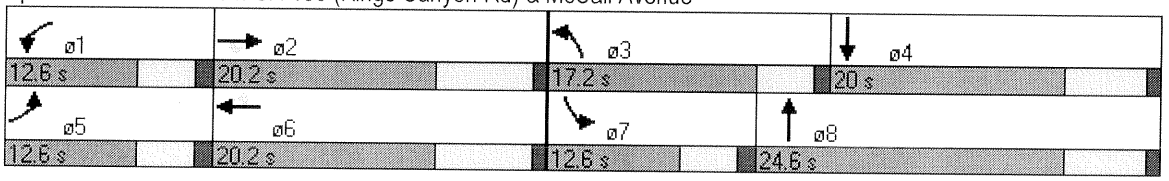
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	572	363	25	943	17	391	87	11	18	167	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			417			23		9			35	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	43	657	417	34	637	23	460	102	13	21	194	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	657	417	34	637	23	460	115	0	21	299	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.6	13.6	12.8	28.1		8.1	12.9	
Actuated g/C Ratio	0.13	0.25	0.25	0.13	0.21	0.21	0.20	0.44		0.13	0.20	
v/c Ratio	0.19	0.79	0.59	0.15	0.89	0.07	1.31	0.14		0.09	0.78	
Control Delay	30.1	34.3	7.1	29.6	44.7	11.2	187.0	14.2		28.9	39.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	30.1	34.3	7.1	29.6	44.7	11.2	187.0	14.2		28.9	39.3	
LOS	C	C	A	C	D	B	F	B		C	D	
Approach Delay		24.0			42.8			152.5			38.6	
Approach LOS		C			D			F			D	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 63.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 57.8 Intersection LOS: E
Intersection Capacity Utilization 76.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



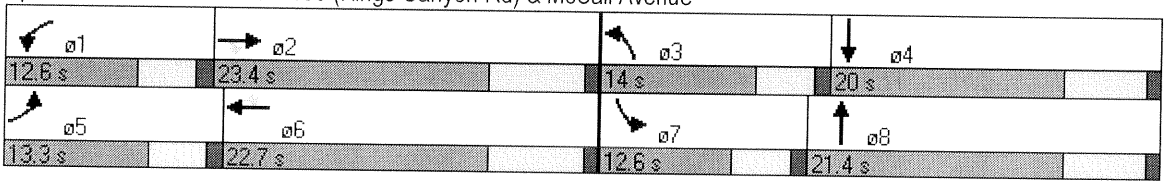
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	984	270	20	635	19	251	139	17	35	90	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			21		8			35	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	78	1093	300	22	349	21	292	162	20	38	99	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1093	300	22	349	21	292	182	0	38	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.7	24.2	24.2	8.4	16.9	16.9	10.5	17.4		8.4	11.6	
Actuated g/C Ratio	0.14	0.39	0.39	0.14	0.27	0.27	0.17	0.28		0.14	0.19	
v/c Ratio	0.32	0.83	0.38	0.09	0.38	0.05	0.98	0.35		0.16	0.43	
Control Delay	31.3	27.8	4.4	28.2	22.7	10.2	83.9	22.1		29.2	24.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.3	27.8	4.4	28.2	22.7	10.2	83.9	22.1		29.2	24.2	
LOS	C	C	A	C	C	B	F	C		C	C	
Approach Delay		23.3			22.3			60.1			25.2	
Approach LOS		C			C			E			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 61.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 30.2
Intersection LOS: C
Intersection Capacity Utilization 74.4%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



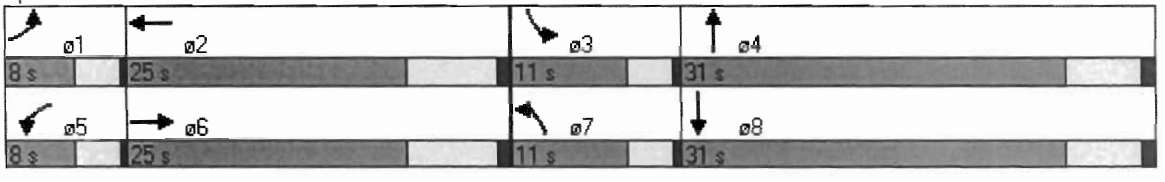
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	319	70	27	463	128	139	329	11	157	355	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.968			0.995			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1752	3393	0	1752	1835	0	1752	1821	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3393	0	1752	1835	0	1752	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			44			2			7	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	18	399	88	32	551	152	183	433	14	173	390	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	487	0	32	703	0	183	447	0	173	427	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

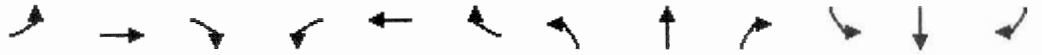
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	18.5		4.6	19.9		7.6	19.7		7.6	19.7	
Actuated g/C Ratio	0.07	0.28		0.07	0.31		0.12	0.30		0.12	0.30	
v/c Ratio	0.15	0.49		0.26	0.66		0.89	0.80		0.84	0.77	
Control Delay	35.3	21.7		37.8	23.6		75.9	33.5		67.9	30.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.3	21.7		37.8	23.6		75.9	33.5		67.9	30.8	
LOS	D	C		D	C		E	C		E	C	
Approach Delay		22.2			24.2			45.8			41.5	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 65.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 33.5 Intersection LOS: C
Intersection Capacity Utilization 64.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	247	6	8	280	55	7	84	7	38	79	11
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	5	374	9	11	368	72	10	117	10	42	87	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	388	451	136	141
Volume Left (vph)	5	11	10	42
Volume Right (vph)	9	72	10	12
Hadj (s)	0.21	0.13	0.02	0.06
Departure Headway (s)	5.9	5.7	6.7	6.7
Degree Utilization, x	0.63	0.71	0.25	0.26
Capacity (veh/h)	588	614	453	451
Control Delay (s)	18.4	21.5	12.0	12.1
Approach Delay (s)	18.4	21.5	12.0	12.1
Approach LOS	C	C	B	B

Intersection Summary			
Delay	18.1		
HCM Level of Service	C		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	3	111	108	10	26	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	4	166	150	14	38	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	164				332	157
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	164				332	157
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	100
cM capacity (veh/h)	1408				659	886

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	170	164	43
Volume Left	4	0	38
Volume Right	0	14	4
cSH	1408	1700	677
Volume to Capacity	0.00	0.10	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.2	0.0	10.7
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	10.7
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	268	14	4	260	15	15	51	4	22	60	25
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	20	339	18	6	361	21	26	89	7	25	67	28

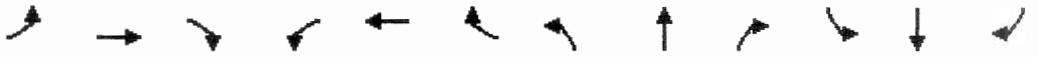
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	377	387	123	120
Volume Left (vph)	20	6	26	25
Volume Right (vph)	18	21	7	28
Hadj (s)	0.03	0.02	0.06	-0.05
Departure Headway (s)	5.3	5.3	6.2	6.1
Degree Utilization, x	0.56	0.57	0.21	0.21
Capacity (veh/h)	646	653	493	501
Control Delay (s)	14.7	15.0	10.9	10.7
Approach Delay (s)	14.7	15.0	10.9	10.7
Approach LOS	B	B	B	B

Intersection Summary			
Delay	13.9		
HCM Level of Service	B		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	236	47	37	238	29	61	161	34	35	202	29
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	29	299	59	49	317	39	78	206	44	37	215	31

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	387	405	78	250	37	246
Volume Left (vph)	29	49	78	0	37	0
Volume Right (vph)	59	39	0	44	0	31
Hadj (s)	0.14	0.19	0.55	-0.07	0.55	-0.04
Departure Headway (s)	7.6	7.6	9.1	8.4	9.2	8.5
Degree Utilization, x	0.82	0.86	0.20	0.58	0.09	0.58
Capacity (veh/h)	451	456	357	392	370	397
Control Delay (s)	37.3	41.8	13.1	21.4	11.9	21.6
Approach Delay (s)	37.3	41.8	19.4		20.3	
Approach LOS	E	E	C		C	

Intersection Summary			
Delay	31.0		
HCM Level of Service	D		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	72	4	7	87	181	9	102	8	176	194	7
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	4	107	6	9	116	241	12	140	11	241	266	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	118	367	163	516
Volume Left (vph)	4	9	12	241
Volume Right (vph)	6	241	11	10
Hadj (s)	0.20	-0.17	0.03	0.13
Departure Headway (s)	7.2	6.2	6.6	6.0
Degree Utilization, x	0.23	0.63	0.30	0.86
Capacity (veh/h)	454	548	487	588
Control Delay (s)	12.3	19.0	12.5	35.2
Approach Delay (s)	12.3	19.0	12.5	35.2
Approach LOS	B	C	B	E

Intersection Summary			
Delay	24.6		
HCM Level of Service	C		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	569	185	260	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	662	203	286	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	203				1166	346
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	203				1166	346
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1305				201	697

Direction, Lane #	EB 1	WB 1
Volume Total	741	489
Volume Left	79	0
Volume Right	0	286
cSH	1305	1700
Volume to Capacity	0.06	0.29
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	202	184	0	435	113
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	243	252	0	518	135
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	252				495	252
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	252				495	252
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	82
cM capacity (veh/h)	1252				514	760

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	243	252	652
Volume Left	0	0	518
Volume Right	0	0	135
cSH	1700	1700	569
Volume to Capacity	0.14	0.15	1.15
Queue Length 95th (ft)	0	0	543
Control Delay (s)	0.0	0.0	110.4
Lane LOS			F
Approach Delay (s)	0.0	0.0	110.4
Approach LOS			F

Intersection Summary			
Average Delay	62.8		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	53	5	24	112	77	13	267	16	59	363	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	70	7	29	135	93	17	356	21	72	443	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	257	395	533
Volume Left (vph)	12	29	17	72
Volume Right (vph)	7	93	21	18
Hadj (s)	0.03	-0.14	0.03	0.06
Departure Headway (s)	7.6	6.8	6.2	6.0
Degree Utilization, x	0.19	0.48	0.68	0.89
Capacity (veh/h)	411	497	551	585
Control Delay (s)	12.3	15.9	21.5	38.8
Approach Delay (s)	12.3	15.9	21.5	38.8
Approach LOS	B	C	C	E

Intersection Summary			
Delay	27.0		
HCM Level of Service	D		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	173	105	102	9	9	171
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	114	111	10	10	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121				606	116
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121				606	116
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				98	80
cM capacity (veh/h)	1467				401	937

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	302	121	196
Volume Left	188	0	10
Volume Right	0	10	186
cSH	1467	1700	878
Volume to Capacity	0.13	0.07	0.22
Queue Length 95th (ft)	11	0	21
Control Delay (s)	5.3	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	5.3	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

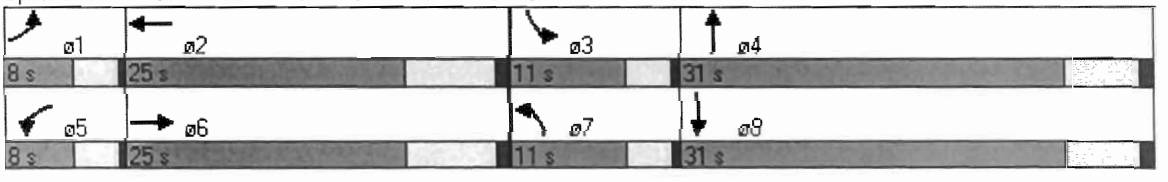
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	448	81	24	295	147	83	204	43	167	190	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.950			0.974			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3424	0	1752	3330	0	1752	1797	0	1752	1819	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3424	0	1752	3330	0	1752	1797	0	1752	1819	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			109			15			7	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	46	527	95	27	335	167	87	215	45	194	221	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	622	0	27	502	0	87	260	0	194	244	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.0		4.6	18.5		7.1	13.5		7.6	18.7	
Actuated g/C Ratio	0.08	0.33		0.08	0.31		0.12	0.22		0.13	0.31	
v/c Ratio	0.35	0.54		0.20	0.46		0.43	0.63		0.88	0.43	
Control Delay	37.4	19.5		33.8	16.2		34.4	27.8		69.6	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	19.5		33.8	16.2		34.4	27.8		69.6	21.8	
LOS	D	B		C	B		C	C		E	C	
Approach Delay		20.8			17.1			29.5			43.0	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 60.6
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.2 Intersection LOS: C
Intersection Capacity Utilization 58.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	136	9	8	90	62	5	114	17	49	80	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	14	168	11	9	100	69	6	134	20	64	104	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	193	178	160	169
Volume Left (vph)	14	9	6	64
Volume Right (vph)	11	69	20	1
Hadj (s)	0.20	0.00	-0.02	0.12
Departure Headway (s)	5.2	5.1	5.1	5.2
Degree Utilization, x	0.28	0.25	0.23	0.25
Capacity (veh/h)	636	655	645	631
Control Delay (s)	10.3	9.7	9.6	9.9
Approach Delay (s)	10.3	9.7	9.6	9.9
Approach LOS	B	A	A	A

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	92	80	8	13	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	0	114	101	10	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	111				220	106
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	111				220	106
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1472				766	945

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	114	111	20
Volume Left	0	0	20
Volume Right	0	10	0
cSH	1472	1700	766
Volume to Capacity	0.00	0.07	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	9.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	92	22	4	86	16	23	68	5	14	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	21	100	24	4	93	17	31	91	7	16	69	10

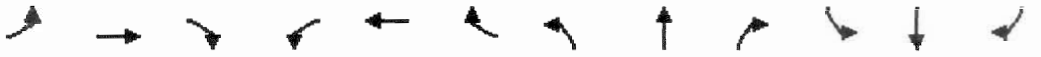
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	145	115	128	95
Volume Left (vph)	21	4	31	16
Volume Right (vph)	24	17	7	10
Hadj (s)	-0.02	-0.03	0.07	0.02
Departure Headway (s)	4.6	4.6	4.7	4.7
Degree Utilization, x	0.18	0.15	0.17	0.12
Capacity (veh/h)	737	733	719	711
Control Delay (s)	8.6	8.4	8.7	8.4
Approach Delay (s)	8.6	8.4	8.7	8.4
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.5		
HCM Level of Service	A		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	60	76	62	17	79	29	58	237	18	29	215	42
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	79	100	82	19	87	32	70	286	22	35	259	51

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	261	137	70	307	35	310
Volume Left (vph)	79	19	70	0	35	0
Volume Right (vph)	82	32	0	22	0	51
Hadj (s)	0.09	0.11	0.55	0.00	0.55	-0.06
Departure Headway (s)	6.4	6.8	7.0	6.5	7.1	6.5
Degree Utilization, x	0.46	0.26	0.14	0.55	0.07	0.56
Capacity (veh/h)	510	457	485	523	478	523
Control Delay (s)	14.8	12.1	10.0	16.0	9.4	16.1
Approach Delay (s)	14.8	12.1	14.9		15.4	
Approach LOS	B	B	B		C	

Intersection Summary			
Delay	14.7		
HCM Level of Service	B		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	85	9	7	69	49	7	160	18	48	132	8
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	11	93	10	9	84	60	8	172	19	57	157	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	114	152	199	224
Volume Left (vph)	11	9	8	57
Volume Right (vph)	10	60	19	10
Hadj (s)	0.19	0.00	0.00	0.08
Departure Headway (s)	5.4	5.1	4.9	5.0
Degree Utilization, x	0.17	0.22	0.27	0.31
Capacity (veh/h)	604	637	683	679
Control Delay (s)	9.5	9.6	9.8	10.2
Approach Delay (s)	9.5	9.6	9.8	10.2
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.8		
HCM Level of Service	A		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	428	156	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	116	504	193	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	193				1299	562
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				1271	431
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1352				149	548

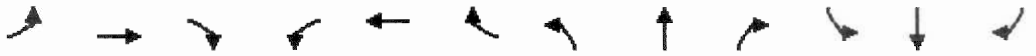
Direction, Lane #	EB 1	WB 1
Volume Total	620	932
Volume Left	116	0
Volume Right	0	740
cSH	1352	1700
Volume to Capacity	0.09	0.55
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	289	156	0	238	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	336	208	0	294	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	208				544	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	208				544	208
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				39	90
cM capacity (veh/h)	1300				482	805

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	336	208	375
Volume Left	0	0	294
Volume Right	0	0	81
cSH	1700	1700	586
Volume to Capacity	0.20	0.12	0.64
Queue Length 95th (ft)	0	0	114
Control Delay (s)	0.0	0.0	21.4
Lane LOS			C
Approach Delay (s)	0.0	0.0	21.4
Approach LOS			C

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	107	13	20	42	53	5	220	24	75	180	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	18	123	15	26	55	70	5	224	24	87	209	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	151	254	300
Volume Left (vph)	18	26	5	87
Volume Right (vph)	15	70	24	3
Hadj (s)	0.02	-0.19	0.00	0.10
Departure Headway (s)	5.7	5.5	5.3	5.3
Degree Utilization, x	0.25	0.23	0.37	0.44
Capacity (veh/h)	566	581	632	642
Control Delay (s)	10.5	10.1	11.3	12.4
Approach Delay (s)	10.5	10.1	11.3	12.4
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.3		
HCM Level of Service	B		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	91	80	0	1	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	99	87	0	1	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	87				210	87
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87				210	87
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1509				772	972

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	111	87	17
Volume Left	12	0	1
Volume Right	0	0	16
cSH	1509	1700	956
Volume to Capacity	0.01	0.05	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	0.9	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	0.9	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

YEAR 2015 CONDITIONS WORKSHEETS

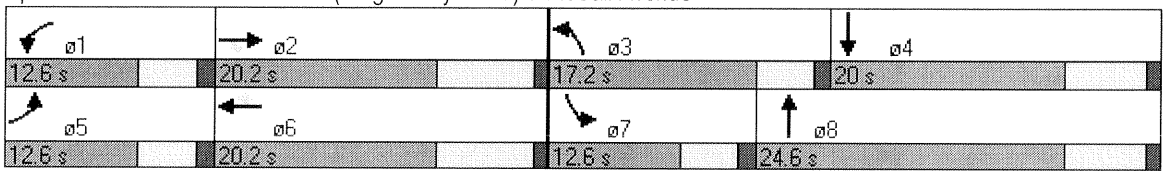
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	671	239	30	1067	26	272	117	14	25	200	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1749	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			275			35		8			34	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	59	771	275	41	721	35	320	138	16	29	233	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	771	275	41	721	35	320	154	0	29	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	13.5	13.5	8.1	13.5	13.5	12.7	26.8		8.1	14.1	
Actuated g/C Ratio	0.12	0.21	0.21	0.12	0.21	0.21	0.20	0.41		0.12	0.22	
v/c Ratio	0.27	1.11	0.50	0.19	1.04	0.10	0.93	0.20		0.13	0.87	
Control Delay	31.5	96.4	7.3	30.1	73.6	9.9	65.6	16.8		29.4	49.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.5	96.4	7.3	30.1	73.6	9.9	65.6	16.8		29.4	49.2	
LOS	C	F	A	C	E	A	E	B		C	D	
Approach Delay		70.8			68.6			49.8			47.7	
Approach LOS		E			E			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 64.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 63.3 Intersection LOS: E
Intersection Capacity Utilization 75.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



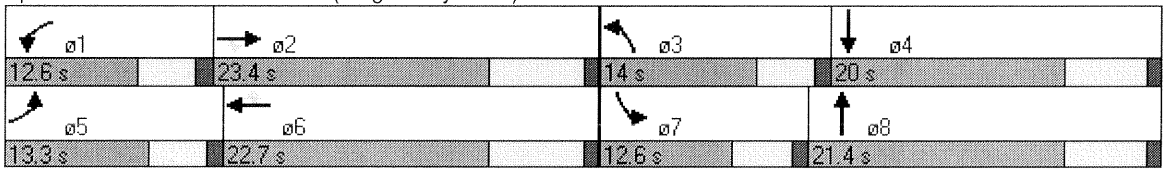
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1101	270	27	739	27	258	183	22	52	126	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1756	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			30		8			30	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	86	1223	300	30	406	30	300	213	26	57	138	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1223	300	30	406	30	300	239	0	57	203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.5	21.6	21.6	8.1	16.2	16.2	9.5	19.1		8.1	12.1	
Actuated g/C Ratio	0.13	0.33	0.33	0.12	0.25	0.25	0.15	0.29		0.12	0.19	
v/c Ratio	0.38	1.11	0.42	0.14	0.49	0.07	1.18	0.45		0.26	0.58	
Control Delay	33.3	88.3	5.2	29.4	24.8	9.3	145.6	25.0		31.5	29.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	33.3	88.3	5.2	29.4	24.8	9.3	145.6	25.0		31.5	29.0	
LOS	C	F	A	C	C	A	F	C		C	C	
Approach Delay		69.8			24.1			92.1			29.5	
Approach LOS		E			C			F			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.18
Intersection Signal Delay: 62.9 Intersection LOS: E
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



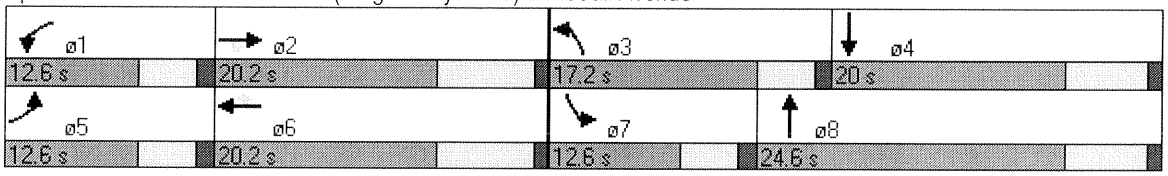
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	671	384	30	1067	26	416	124	14	25	207	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.985			0.949	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1817	0	1752	1751	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1817	0	1752	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			441			35		8			33	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	59	771	441	41	721	35	489	146	16	29	241	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	771	441	41	721	35	489	162	0	29	364	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	13.5	13.5	8.1	13.5	13.5	12.7	26.8		8.1	14.1	
Actuated g/C Ratio	0.12	0.21	0.21	0.12	0.21	0.21	0.20	0.41		0.12	0.22	
v/c Ratio	0.27	1.11	0.65	0.19	1.04	0.10	1.43	0.21		0.13	0.89	
Control Delay	31.5	96.6	8.2	30.1	73.8	9.9	234.0	16.9		29.4	52.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.5	96.6	8.2	30.1	73.8	9.9	234.0	16.9		29.4	52.0	
LOS	C	F	A	C	E	A	F	B		C	D	
Approach Delay		62.9			68.7			180.0			50.3	
Approach LOS		E			E			F			D	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.43
Intersection Signal Delay: 87.3 Intersection LOS: F
Intersection Capacity Utilization 84.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



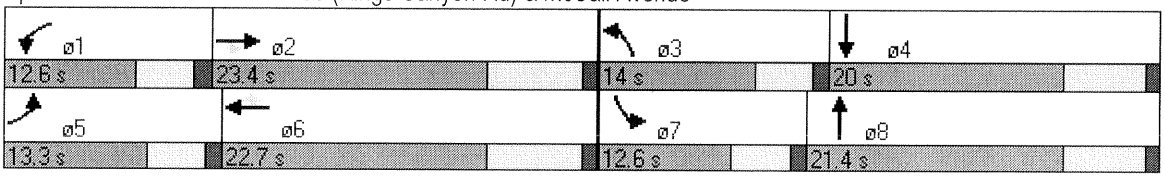
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1101	280	27	739	27	268	183	22	52	126	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1756	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			311			30		8			30	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	86	1223	311	30	406	30	312	213	26	57	138	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1223	311	30	406	30	312	239	0	57	203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.5	21.6	21.6	8.1	16.2	16.2	9.5	19.1		8.1	12.1	
Actuated g/C Ratio	0.13	0.33	0.33	0.12	0.25	0.25	0.15	0.29		0.12	0.19	
v/c Ratio	0.38	1.11	0.43	0.14	0.49	0.07	1.23	0.45		0.26	0.58	
Control Delay	33.3	88.3	5.3	29.4	24.8	9.3	162.6	25.0		31.5	29.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	33.3	88.3	5.3	29.4	24.8	9.3	162.6	25.0		31.5	29.0	
LOS	C	F	A	C	C	A	F	C		C	C	
Approach Delay		69.4			24.1			102.9			29.5	
Approach LOS		E			C			F			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 64.9 Intersection LOS: E
Intersection Capacity Utilization 80.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



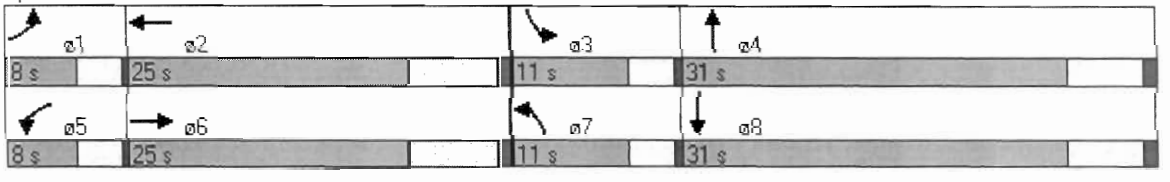
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	350	81	27	529	148	160	214	11	164	239	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.967			0.993			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3407	0	1752	3389	0	1752	1832	0	1752	1789	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3407	0	1752	3389	0	1752	1832	0	1752	1789	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			45			4			18	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	32	438	101	32	630	176	211	282	14	180	263	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	539	0	32	806	0	211	296	0	180	329	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

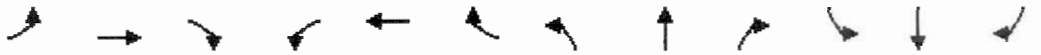
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	18.6		4.6	18.6		7.6	15.8		7.6	15.8	
Actuated g/C Ratio	0.07	0.30		0.07	0.30		0.12	0.26		0.12	0.26	
v/c Ratio	0.24	0.51		0.24	0.76		0.97	0.62		0.83	0.69	
Control Delay	35.6	20.4		35.6	26.8		87.7	26.3		62.2	27.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.6	20.4		35.6	26.8		87.7	26.3		62.2	27.9	
LOS	D	C		D	C		F	C		E	C	
Approach Delay		21.2			27.1			51.8			40.0	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 61.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 33.6 Intersection LOS: C
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	102	7	8	136	67	7	93	7	46	92	14
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	6	155	11	11	179	88	10	129	10	51	101	15

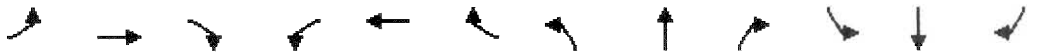
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	171	278	149	167
Volume Left (vph)	6	11	10	51
Volume Right (vph)	11	88	10	15
Hadj (s)	0.19	0.04	0.02	0.06
Departure Headway (s)	5.4	5.1	5.4	5.4
Degree Utilization, x	0.26	0.39	0.22	0.25
Capacity (veh/h)	615	664	596	606
Control Delay (s)	10.3	11.4	10.0	10.2
Approach Delay (s)	10.3	11.4	10.0	10.2
Approach LOS	B	B	A	B

Intersection Summary			
Delay	10.6		
HCM Level of Service	B		
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	115	111	10	26	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	12	172	154	14	38	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	168				357	161
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168				357	161
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1404				634	881

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	184	168	49
Volume Left	12	0	38
Volume Right	0	14	10
cSH	1404	1700	674
Volume to Capacity	0.01	0.10	0.07
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.6	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	0.6	0.0	10.8
Approach LOS			B

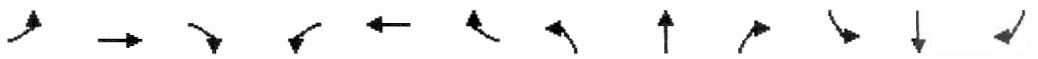
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	110	16	5	102	17	17	51	5	24	60	26
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	22	139	20	7	142	24	30	89	9	27	67	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	181	172	128	124
Volume Left (vph)	22	7	30	27
Volume Right (vph)	20	24	9	29
Hadj (s)	0.01	-0.02	0.06	-0.05
Departure Headway (s)	4.8	4.8	5.0	4.9
Degree Utilization, x	0.24	0.23	0.18	0.17
Capacity (veh/h)	703	707	664	674
Control Delay (s)	9.3	9.2	9.1	8.9
Approach Delay (s)	9.3	9.2	9.1	8.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	27	89	57	31	89	28	82	199	27	34	228	32
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	34	113	72	41	119	37	105	255	35	36	243	34

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	219	197	105	290	36	277
Volume Left (vph)	34	41	105	0	36	0
Volume Right (vph)	72	37	0	35	0	34
Hadj (s)	0.05	0.15	0.55	-0.03	0.55	-0.04
Departure Headway (s)	6.5	6.6	7.1	6.5	7.2	6.6
Degree Utilization, x	0.39	0.36	0.21	0.52	0.07	0.51
Capacity (veh/h)	507	493	485	523	470	509
Control Delay (s)	13.6	13.3	10.7	15.1	9.5	15.0
Approach Delay (s)	13.6	13.3	13.9		14.3	
Approach LOS	B	B	B		B	

Intersection Summary			
Delay	13.9		
HCM Level of Service	B		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	76	4	7	92	36	9	127	9	27	218	8
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	4	113	6	9	123	48	12	174	12	37	299	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	124	180	199	347
Volume Left (vph)	4	9	12	37
Volume Right (vph)	6	48	12	11
Hadj (s)	0.20	0.07	0.03	0.05
Departure Headway (s)	5.9	5.7	5.4	5.2
Degree Utilization, x	0.20	0.28	0.30	0.50
Capacity (veh/h)	541	575	622	661
Control Delay (s)	10.4	10.9	10.6	13.2
Approach Delay (s)	10.4	10.9	10.6	13.2
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.7		
HCM Level of Service	B		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	581	201	258	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	676	221	284	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	221				1196	363
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	221				1196	363
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1286				193	682

Direction, Lane #	EB 1	WB 1
Volume Total	755	504
Volume Left	79	0
Volume Right	0	284
cSH	1286	1700
Volume to Capacity	0.06	0.30
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	212	200	0	435	115
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	255	274	0	518	137
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	274				529	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	274				529	274
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	81
cM capacity (veh/h)	1228				491	739

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	255	274	655
Volume Left	0	0	518
Volume Right	0	0	137
cSH	1700	1700	543
Volume to Capacity	0.15	0.16	1.21
Queue Length 95th (ft)	0	0	604
Control Delay (s)	0.0	0.0	134.1
Lane LOS			F
Approach Delay (s)	0.0	0.0	134.1
Approach LOS			F

Intersection Summary			
Average Delay	74.1		
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	54	5	27	113	98	13	145	19	72	238	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	71	7	33	136	118	17	193	25	88	290	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	89	287	236	396
Volume Left (vph)	12	33	17	88
Volume Right (vph)	7	118	25	18
Hadj (s)	0.03	-0.17	0.00	0.07
Departure Headway (s)	6.3	5.7	5.7	5.5
Degree Utilization, x	0.16	0.45	0.38	0.61
Capacity (veh/h)	473	579	572	621
Control Delay (s)	10.5	13.3	12.1	16.7
Approach Delay (s)	10.5	13.3	12.1	16.7
Approach LOS	B	B	B	C

Intersection Summary			
Delay	14.1		
HCM Level of Service	B		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

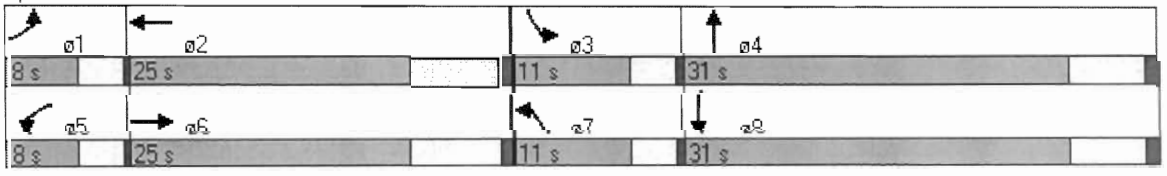
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	538	110	24	344	148	115	232	43	173	212	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.955			0.977			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3417	0	1752	3347	0	1752	1802	0	1752	1804	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3417	0	1752	3347	0	1752	1802	0	1752	1804	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			85			13			12	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	84	633	129	27	391	168	121	244	45	201	247	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	762	0	27	559	0	121	289	0	201	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

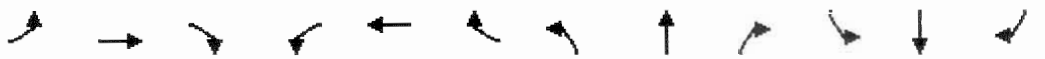
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	21.6		4.6	18.5		7.4	14.9		7.6	17.7	
Actuated g/C Ratio	0.07	0.34		0.07	0.29		0.12	0.23		0.12	0.28	
v/c Ratio	0.67	0.64		0.21	0.54		0.60	0.67		0.96	0.57	
Control Delay	60.2	22.6		35.0	19.6		43.5	29.4		87.8	25.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.2	22.6		35.0	19.6		43.5	29.4		87.8	25.5	
LOS	E	C		D	B		D	C		F	C	
Approach Delay		26.3			20.3			33.6			51.0	
Approach LOS		C			C			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 63.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 31.3 Intersection LOS: C
Intersection Capacity Utilization 63.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	139	9	8	95	72	6	131	17	59	92	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	19	172	11	9	106	80	7	154	20	77	119	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	201	194	181	197
Volume Left (vph)	19	9	7	77
Volume Right (vph)	11	80	20	1
Hadj (s)	0.21	-0.02	-0.01	0.12
Departure Headway (s)	5.5	5.3	5.3	5.4
Degree Utilization, x	0.31	0.28	0.27	0.30
Capacity (veh/h)	608	628	613	612
Control Delay (s)	10.9	10.4	10.3	10.7
Approach Delay (s)	10.9	10.4	10.3	10.7
Approach LOS	B	B	B	B

Intersection Summary			
Delay	10.6		
HCM Level of Service	B		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	105	90	8	13	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	5	130	114	10	20	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124				258	119
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124				258	119
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1457				726	930

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	135	124	32
Volume Left	5	0	20
Volume Right	0	10	12
cSH	1457	1700	792
Volume to Capacity	0.00	0.07	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.3	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	98	23	4	87	17	25	68	5	15	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	22	107	25	4	95	18	33	91	7	17	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	153	117	131	97
Volume Left (vph)	22	4	33	17
Volume Right (vph)	25	18	7	10
Hadj (s)	-0.02	-0.04	0.07	0.02
Departure Headway (s)	4.6	4.6	4.7	4.7
Degree Utilization, x	0.20	0.15	0.17	0.13
Capacity (veh/h)	735	729	712	705
Control Delay (s)	8.7	8.4	8.7	8.4
Approach Delay (s)	8.7	8.4	8.7	8.4
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.6		
HCM Level of Service	A		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	65	75	73	17	79	32	70	271	20	35	255	48
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	86	99	96	19	87	35	84	327	24	42	307	58

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	280	141	84	351	42	365
Volume Left (vph)	86	19	84	0	42	0
Volume Right (vph)	96	35	0	24	0	58
Hadj (s)	0.08	0.10	0.55	0.00	0.55	-0.06
Departure Headway (s)	6.8	7.3	7.4	6.9	7.5	6.8
Degree Utilization, x	0.53	0.29	0.17	0.67	0.09	0.69
Capacity (veh/h)	480	415	463	499	459	502
Control Delay (s)	17.4	13.3	10.8	21.4	10.0	22.6
Approach Delay (s)	17.4	13.3	19.3		21.3	
Approach LOS	C	B	C		C	

Intersection Summary			
Delay	18.9		
HCM Level of Service	C		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	93	10	8	74	49	7	191	19	46	162	9
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	13	102	11	10	90	60	8	205	20	55	193	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	126	160	233	258
Volume Left (vph)	13	10	8	55
Volume Right (vph)	11	60	20	11
Hadj (s)	0.19	0.01	0.00	0.07
Departure Headway (s)	5.7	5.4	5.1	5.1
Degree Utilization, x	0.20	0.24	0.33	0.37
Capacity (veh/h)	572	601	661	659
Control Delay (s)	10.1	10.1	10.6	11.1
Approach Delay (s)	10.1	10.1	10.6	11.1
Approach LOS	B	B	B	B

Intersection Summary			
Delay	10.6		
HCM Level of Service	B		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	454	169	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	116	534	209	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	209				1345	578
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30				1324	451
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1330				138	534

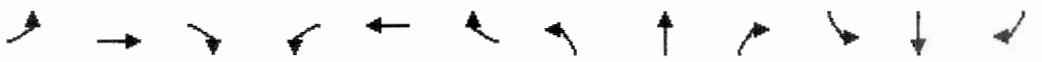
Direction, Lane #	EB 1	WB 1
Volume Total	651	948
Volume Left	116	0
Volume Right	0	740
cSH	1330	1700
Volume to Capacity	0.09	0.56
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	308	169	0	238	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	358	225	0	294	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	225				583	225
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225				583	225
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				36	90
cM capacity (veh/h)	1281				456	787

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	358	225	375
Volume Left	0	0	294
Volume Right	0	0	81
cSH	1700	1700	556
Volume to Capacity	0.21	0.13	0.67
Queue Length 95th (ft)	0	0	127
Control Delay (s)	0.0	0.0	23.9
Lane LOS			C
Approach Delay (s)	0.0	0.0	23.9
Approach LOS			C

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	112	13	24	44	69	5	251	27	93	206	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	20	129	15	32	58	91	5	256	28	108	240	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	163	180	289	351
Volume Left (vph)	20	32	5	108
Volume Right (vph)	15	91	28	3
Hadj (s)	0.02	-0.22	0.00	0.11
Departure Headway (s)	6.1	5.8	5.6	5.6
Degree Utilization, x	0.28	0.29	0.45	0.54
Capacity (veh/h)	510	543	600	613
Control Delay (s)	11.4	11.2	12.9	14.9
Approach Delay (s)	11.4	11.2	12.9	14.9
Approach LOS	B	B	B	B

Intersection Summary			
Delay	13.1		
HCM Level of Service	B		
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

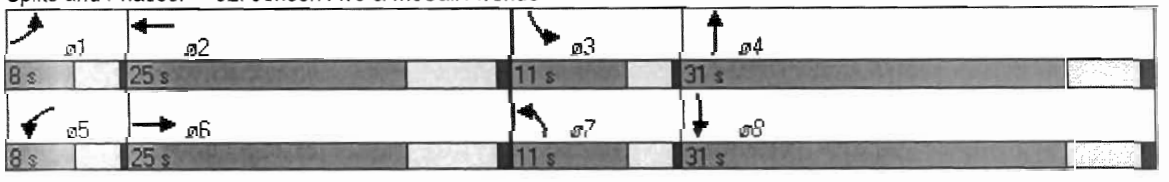
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	350	85	27	529	148	164	365	11	164	391	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.967			0.996			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3403	0	1752	3389	0	1752	1837	0	1752	1808	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3403	0	1752	3389	0	1752	1837	0	1752	1808	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			45			2			11	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	32	438	106	32	630	176	216	480	14	180	430	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	544	0	32	806	0	216	494	0	180	496	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

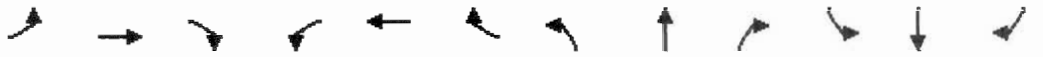
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	18.4		4.6	18.4		7.6	21.3		7.6	21.3	
Actuated g/C Ratio	0.07	0.28		0.07	0.28		0.11	0.32		0.11	0.32	
v/c Ratio	0.27	0.56		0.27	0.83		1.09	0.84		0.90	0.85	
Control Delay	38.4	23.2		38.4	32.7		122.6	36.1		78.7	36.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.4	23.2		38.4	32.7		122.6	36.1		78.7	36.5	
LOS	D	C		D	C		F	D		E	D	
Approach Delay		24.1			32.9			62.4			47.7	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 66.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 42.2 Intersection LOS: D
Intersection Capacity Utilization 69.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	261	7	8	294	67	7	93	7	46	92	14
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	6	395	11	11	387	88	10	129	10	51	101	15

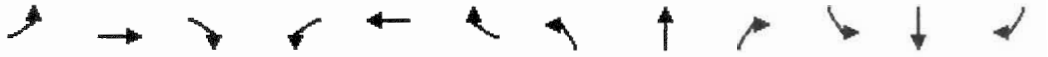
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	412	486	149	167
Volume Left (vph)	6	11	10	51
Volume Right (vph)	11	88	10	15
Hadj (s)	0.21	0.12	0.02	0.06
Departure Headway (s)	6.2	6.0	7.1	7.1
Degree Utilization, x	0.71	0.81	0.30	0.33
Capacity (veh/h)	556	580	442	449
Control Delay (s)	23.0	29.6	13.1	13.6
Approach Delay (s)	23.0	29.6	13.1	13.6
Approach LOS	C	D	B	B

Intersection Summary			
Delay	23.1		
HCM Level of Service	C		
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	122	118	10	26	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	15	182	164	14	38	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	178				383	171
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	178				383	171
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	98
cM capacity (veh/h)	1392				611	870

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	197	178	51
Volume Left	15	0	38
Volume Right	0	14	13
cSH	1392	1700	662
Volume to Capacity	0.01	0.10	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.7	0.0	10.9
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	10.9
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	283	16	5	273	17	17	51	5	24	60	26
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	22	358	20	7	379	24	30	89	9	27	67	29

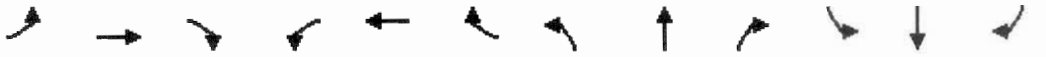
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	400	410	128	124
Volume Left (vph)	22	7	30	27
Volume Right (vph)	20	24	9	29
Hadj (s)	0.03	0.02	0.06	-0.05
Departure Headway (s)	5.4	5.4	6.4	6.3
Degree Utilization, x	0.60	0.61	0.23	0.22
Capacity (veh/h)	635	642	477	474
Control Delay (s)	16.2	16.5	11.3	11.1
Approach Delay (s)	16.2	16.5	11.3	11.1
Approach LOS	C	C	B	B

Intersection Summary			
Delay	15.1		
HCM Level of Service	C		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	27	248	57	40	247	32	82	199	36	39	228	32
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	34	314	72	53	329	43	105	255	46	41	243	34

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	420	425	105	301	41	277
Volume Left (vph)	34	53	105	0	41	0
Volume Right (vph)	72	43	0	46	0	34
Hadj (s)	0.13	0.19	0.55	-0.06	0.55	-0.04
Departure Headway (s)	8.4	8.7	9.6	9.0	9.8	9.2
Degree Utilization, x	0.99	1.03	0.28	0.76	0.11	0.71
Capacity (veh/h)	422	425	368	391	360	382
Control Delay (s)	69.6	81.3	15.1	33.8	12.8	30.5
Approach Delay (s)	69.6	81.3	29.0		28.2	
Approach LOS	F	F	D		D	

Intersection Summary			
Delay	53.9		
HCM Level of Service	F		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	79	4	7	95	191	9	127	9	183	218	8
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	4	118	6	9	127	255	12	174	12	251	299	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	128	391	199	560
Volume Left (vph)	4	9	12	251
Volume Right (vph)	6	255	12	11
Hadj (s)	0.20	-0.17	0.03	0.13
Departure Headway (s)	7.9	6.7	7.2	6.4
Degree Utilization, x	0.28	0.72	0.40	1.00
Capacity (veh/h)	426	536	472	554
Control Delay (s)	13.9	25.2	14.8	62.7
Approach Delay (s)	13.9	25.2	14.8	62.7
Approach LOS	B	D	B	F

Intersection Summary			
Delay	38.9		
HCM Level of Service	E		
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	584	201	261	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	679	221	287	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	221				1201	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	221				1201	364
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1286				192	681

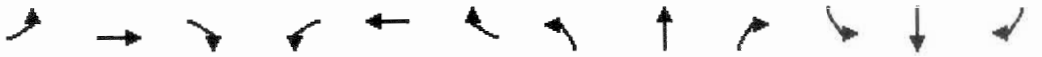
Direction, Lane #	EB 1	WB 1
Volume Total	758	508
Volume Left	79	0
Volume Right	0	287
cSH	1286	1700
Volume to Capacity	0.06	0.30
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	212	200	0	438	115
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	255	274	0	521	137
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	274				529	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	274				529	274
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	81
cM capacity (veh/h)	1228				491	739

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	255	274	658
Volume Left	0	0	521
Volume Right	0	0	137
cSH	1700	1700	541
Volume to Capacity	0.15	0.16	1.22
Queue Length 95th (ft)	0	0	616
Control Delay (s)	0.0	0.0	137.8
Lane LOS			F
Approach Delay (s)	0.0	0.0	137.8
Approach LOS			F

Intersection Summary			
Average Delay	76.4		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	54	5	27	113	98	13	300	19	72	394	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	71	7	33	136	118	17	400	25	88	480	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	89	287	443	587
Volume Left (vph)	12	33	17	88
Volume Right (vph)	7	118	25	18
Hadj (s)	0.03	-0.17	0.02	0.06
Departure Headway (s)	8.1	7.0	6.5	6.4
Degree Utilization, x	0.20	0.56	0.80	1.04
Capacity (veh/h)	392	488	543	549
Control Delay (s)	13.1	18.6	30.4	73.2
Approach Delay (s)	13.1	18.6	30.4	73.2
Approach LOS	B	C	D	F

Intersection Summary			
Delay	44.8		
HCM Level of Service	E		
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	173	123	118	9	9	171
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	134	128	10	10	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	138				643	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	138				643	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				97	80
cM capacity (veh/h)	1446				381	916

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	322	138	196
Volume Left	188	0	10
Volume Right	0	10	186
cSH	1446	1700	856
Volume to Capacity	0.13	0.08	0.23
Queue Length 95th (ft)	11	0	22
Control Delay (s)	5.1	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	5.1	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

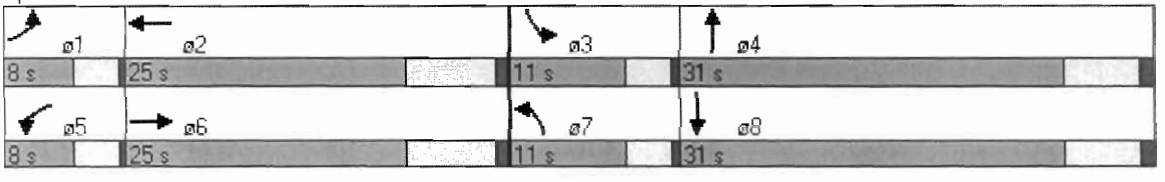
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	538	110	24	344	148	115	242	43	173	222	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.955			0.978			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3417	0	1752	3347	0	1752	1804	0	1752	1806	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3417	0	1752	3347	0	1752	1804	0	1752	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			85			13			12	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	84	633	129	27	391	168	121	255	45	201	258	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	762	0	27	559	0	121	300	0	201	300	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	21.7		4.6	18.5		7.4	15.4		7.6	18.1	
Actuated g/C Ratio	0.07	0.34		0.07	0.29		0.12	0.24		0.12	0.28	
v/c Ratio	0.67	0.65		0.22	0.55		0.60	0.68		0.97	0.58	
Control Delay	60.9	22.9		35.4	19.9		44.0	29.6		89.5	25.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.9	22.9		35.4	19.9		44.0	29.6		89.5	25.6	
LOS	E	C		D	B		D	C		F	C	
Approach Delay		26.7			20.6			33.7			51.2	
Approach LOS		C			C			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 64.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 31.7 Intersection LOS: C
Intersection Capacity Utilization 64.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



HCM Unsignalized Intersection Capacity Analysis
2: Central Avenue & Bethel Avenue

10/18/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	149	9	8	105	73	6	131	17	59	92	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	19	184	11	9	117	81	7	154	20	77	119	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	214	207	181	197
Volume Left (vph)	19	9	7	77
Volume Right (vph)	11	81	20	1
Hadj (s)	0.21	-0.01	-0.01	0.12
Departure Headway (s)	5.5	5.3	5.4	5.5
Degree Utilization, x	0.33	0.31	0.27	0.30
Capacity (veh/h)	604	623	601	601
Control Delay (s)	11.2	10.6	10.4	10.9
Approach Delay (s)	11.2	10.6	10.4	10.9
Approach LOS	B	B	B	B

Intersection Summary			
Delay	10.8		
HCM Level of Service	B		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	106	90	8	13	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	5	131	114	10	20	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124				260	119
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124				260	119
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1457				724	930

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	136	124	32
Volume Left	5	0	20
Volume Right	0	10	12
cSH	1457	1700	791
Volume to Capacity	0.00	0.07	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.3	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	109	23	4	101	18	25	68	5	15	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	22	118	25	4	110	20	33	91	7	17	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	165	134	131	97
Volume Left (vph)	22	4	33	17
Volume Right (vph)	25	20	7	10
Hadj (s)	-0.01	-0.03	0.07	0.02
Departure Headway (s)	4.6	4.6	4.8	4.8
Degree Utilization, x	0.21	0.17	0.17	0.13
Capacity (veh/h)	729	725	699	690
Control Delay (s)	8.9	8.6	8.8	8.5
Approach Delay (s)	8.9	8.6	8.8	8.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	65	85	73	19	90	33	70	271	21	35	255	48
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	86	112	96	21	99	36	84	327	25	42	307	58

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	293	156	84	352	42	365
Volume Left (vph)	86	21	84	0	42	0
Volume Right (vph)	96	36	0	25	0	58
Hadj (s)	0.08	0.11	0.55	0.00	0.55	-0.06
Departure Headway (s)	7.0	7.5	7.6	7.0	7.6	7.0
Degree Utilization, x	0.57	0.32	0.18	0.69	0.09	0.71
Capacity (veh/h)	473	409	452	487	448	490
Control Delay (s)	18.8	14.1	11.0	22.9	10.2	24.2
Approach Delay (s)	18.8	14.1	20.6		22.8	
Approach LOS	C	B	C		C	

Intersection Summary			
Delay	20.1		
HCM Level of Service	C		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	93	10	8	74	59	7	191	19	56	162	9
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	13	102	11	10	90	72	8	205	20	67	193	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	126	172	233	270
Volume Left (vph)	13	10	8	67
Volume Right (vph)	11	72	20	11
Hadj (s)	0.19	-0.02	0.00	0.08
Departure Headway (s)	5.7	5.4	5.2	5.2
Degree Utilization, x	0.20	0.26	0.34	0.39
Capacity (veh/h)	564	599	651	652
Control Delay (s)	10.2	10.4	10.8	11.5
Approach Delay (s)	10.2	10.4	10.8	11.5
Approach LOS	B	B	B	B

Intersection Summary			
Delay	10.8		
HCM Level of Service	B		
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	454	169	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	116	534	209	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	209				1345	578
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30				1324	451
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1330				138	534

Direction, Lane #	EB 1	WB 1
Volume Total	651	948
Volume Left	116	0
Volume Right	0	740
cSH	1330	1700
Volume to Capacity	0.09	0.56
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	308	169	0	238	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	358	225	0	294	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	225				583	225
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225				583	225
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				36	90
cM capacity (veh/h)	1281				456	787

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	358	225	375
Volume Left	0	0	294
Volume Right	0	0	81
cSH	1700	1700	556
Volume to Capacity	0.21	0.13	0.67
Queue Length 95th (ft)	0	0	127
Control Delay (s)	0.0	0.0	23.9
Lane LOS			C
Approach Delay (s)	0.0	0.0	23.9
Approach LOS			C

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
48: North Ave & McCall Avenue

1/17/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	112	13	24	44	69	5	261	27	93	216	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	20	129	15	32	58	91	5	266	28	108	251	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	163	180	299	363
Volume Left (vph)	20	32	5	108
Volume Right (vph)	15	91	28	3
Hadj (s)	0.02	-0.22	0.00	0.10
Departure Headway (s)	6.2	5.9	5.6	5.6
Degree Utilization, x	0.28	0.30	0.46	0.56
Capacity (veh/h)	502	524	597	611
Control Delay (s)	11.5	11.4	13.3	15.5
Approach Delay (s)	11.5	11.4	13.3	15.5
Approach LOS	B	B	B	C

Intersection Summary			
Delay	13.5		
HCM Level of Service	B		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	109	98	0	1	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	118	107	0	1	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	107				249	107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	107				249	107
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1484				734	948

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	130	107	17
Volume Left	12	0	1
Volume Right	0	0	16
cSH	1484	1700	931
Volume to Capacity	0.01	0.06	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	0.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

YEAR 2017 CONDITIONS WORKSHEETS

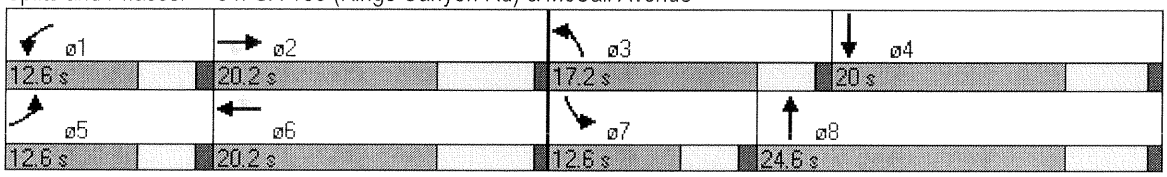
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	719	250	33	1129	30	284	136	16	29	220	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.949	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1751	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			287			41		8			33	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	66	826	287	45	763	41	334	160	19	34	256	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	826	287	45	763	41	334	179	0	34	389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	13.5	13.5	8.1	13.5	13.5	12.7	26.8		8.1	14.1	
Actuated g/C Ratio	0.12	0.21	0.21	0.12	0.21	0.21	0.20	0.41		0.12	0.22	
v/c Ratio	0.30	1.19	0.52	0.21	1.10	0.11	0.97	0.24		0.16	0.96	
Control Delay	32.1	126.1	7.4	30.4	92.6	9.6	74.5	17.1		29.7	63.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	32.1	126.1	7.4	30.4	92.6	9.6	74.5	17.1		29.7	63.2	
LOS	C	F	A	C	F	A	E	B		C	E	
Approach Delay		92.0			85.3			54.5			60.5	
Approach LOS		F			F			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 79.1 Intersection LOS: E
Intersection Capacity Utilization 79.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



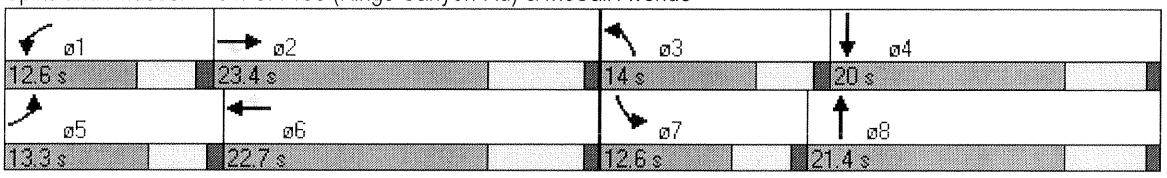
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1159	275	30	792	31	266	204	25	62	143	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1760	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			306			34		8			28	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	89	1288	306	33	435	34	309	237	29	68	157	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1288	306	33	435	34	309	266	0	68	226	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.5	21.5	21.5	8.1	16.2	16.2	9.5	19.5		8.1	12.4	
Actuated g/C Ratio	0.13	0.33	0.33	0.12	0.25	0.25	0.14	0.30		0.12	0.19	
v/c Ratio	0.39	1.18	0.43	0.15	0.53	0.08	1.22	0.49		0.32	0.64	
Control Delay	33.9	114.4	5.3	29.8	25.5	9.0	161.1	25.9		32.8	31.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	33.9	114.4	5.3	29.8	25.5	9.0	161.1	25.9		32.8	31.3	
LOS	C	F	A	C	C	A	F	C		C	C	
Approach Delay		90.3			24.7			98.5			31.6	
Approach LOS		F			C			F			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65.8
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 75.4 Intersection LOS: E
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



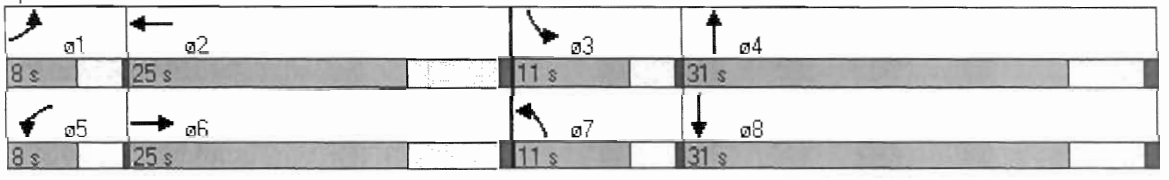
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	365	89	27	561	157	172	230	11	167	256	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.967			0.993			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3403	0	1752	3389	0	1752	1832	0	1752	1780	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3403	0	1752	3389	0	1752	1832	0	1752	1780	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			45			3			22	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	42	456	111	32	668	187	226	303	14	184	281	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	567	0	32	855	0	226	317	0	184	365	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.1		4.6	18.6		7.6	17.3		7.6	17.3	
Actuated g/C Ratio	0.07	0.31		0.07	0.29		0.12	0.27		0.12	0.27	
v/c Ratio	0.34	0.52		0.26	0.85		1.09	0.64		0.88	0.74	
Control Delay	39.9	20.9		37.6	33.2		122.7	27.3		74.1	30.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.9	20.9		37.6	33.2		122.7	27.3		74.1	30.1	
LOS	D	C		D	C		F	C		E	C	
Approach Delay		22.2			33.3			67.0			44.9	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 64.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	108	7	8	143	73	7	97	7	51	98	16
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	6	164	11	11	188	96	10	135	10	56	108	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	180	295	154	181
Volume Left (vph)	6	11	10	56
Volume Right (vph)	11	96	10	18
Hadj (s)	0.19	0.03	0.03	0.05
Departure Headway (s)	5.5	5.2	5.5	5.5
Degree Utilization, x	0.28	0.42	0.24	0.28
Capacity (veh/h)	600	652	580	593
Control Delay (s)	10.6	12.0	10.3	10.6
Approach Delay (s)	10.6	12.0	10.3	10.6
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.0		
HCM Level of Service	B		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

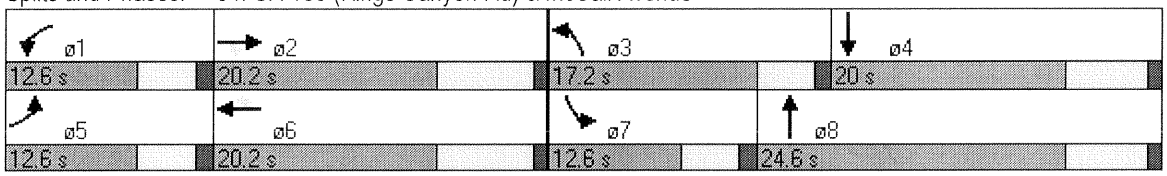
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	719	395	33	1129	30	428	143	16	29	227	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.985			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1817	0	1752	1752	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1817	0	1752	1752	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			454			41		8			32	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	66	826	454	45	763	41	504	168	19	34	264	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	826	454	45	763	41	504	187	0	34	397	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	13.5	13.5	8.1	13.5	13.5	12.7	26.8		8.1	14.1	
Actuated g/C Ratio	0.12	0.21	0.21	0.12	0.21	0.21	0.20	0.41		0.12	0.22	
v/c Ratio	0.30	1.19	0.66	0.21	1.10	0.11	1.47	0.25		0.16	0.98	
Control Delay	32.1	126.1	8.3	30.4	92.6	9.6	252.4	17.2		29.7	68.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	32.1	126.1	8.3	30.4	92.6	9.6	252.4	17.2		29.7	68.2	
LOS	C	F	A	C	F	A	F	B		C	E	
Approach Delay		81.8			85.3			188.7			65.1	
Approach LOS		F			F			F			E	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.47
Intersection Signal Delay: 102.8 Intersection LOS: F
Intersection Capacity Utilization 87.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



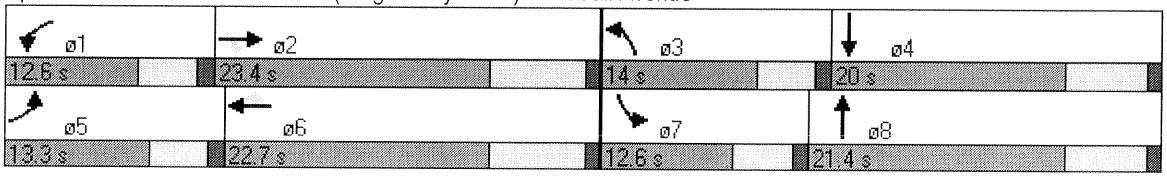
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1159	285	30	792	31	276	204	25	62	143	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1760	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			317			34		8			28	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	89	1288	317	33	435	34	321	237	29	68	157	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1288	317	33	435	34	321	266	0	68	226	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.5	21.5	21.5	8.1	16.2	16.2	9.5	19.5		8.1	12.4	
Actuated g/C Ratio	0.13	0.33	0.33	0.12	0.25	0.25	0.14	0.30		0.12	0.19	
v/c Ratio	0.39	1.18	0.44	0.15	0.53	0.08	1.27	0.49		0.32	0.64	
Control Delay	33.9	114.4	5.3	29.8	25.5	9.0	178.9	25.9		32.8	31.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	33.9	114.4	5.3	29.8	25.5	9.0	178.9	25.9		32.8	31.3	
LOS	C	F	A	C	C	A	F	C		C	C	
Approach Delay		89.8			24.7			109.5			31.6	
Approach LOS		F			C			F			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 65.8
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 77.4 Intersection LOS: E
Intersection Capacity Utilization 83.7% ICU Level of Service E
Analysis Period (min) 15

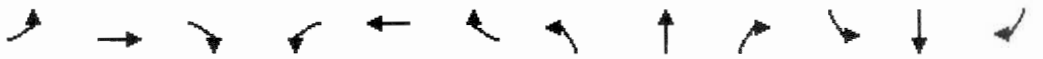
Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	125	122	10	26	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	12	187	169	14	38	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	183				387	176
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	183				387	176
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	98
cM capacity (veh/h)	1386				609	864

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	199	183	51
Volume Left	12	0	38
Volume Right	0	14	13
cSH	1386	1700	659
Volume to Capacity	0.01	0.11	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.5	0.0	10.9
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	10.9
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	117	17	5	108	18	18	51	5	26	60	26
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	22	148	22	7	150	25	32	89	9	29	67	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	191	182	130	126
Volume Left (vph)	22	7	32	29
Volume Right (vph)	22	25	9	29
Hadj (s)	0.01	-0.02	0.06	-0.04
Departure Headway (s)	4.8	4.8	5.1	5.0
Degree Utilization, x	0.26	0.24	0.18	0.17
Capacity (veh/h)	699	702	654	661
Control Delay (s)	9.5	9.3	9.2	9.0
Approach Delay (s)	9.5	9.3	9.2	9.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.3		
HCM Level of Service	A		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	94	61	32	95	30	90	218	28	36	240	34
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	38	119	77	43	127	40	115	279	36	38	255	36

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	234	209	115	315	38	291
Volume Left (vph)	38	43	115	0	38	0
Volume Right (vph)	77	40	0	36	0	36
Hadj (s)	0.06	0.15	0.55	-0.03	0.55	-0.04
Departure Headway (s)	6.7	6.9	7.3	6.7	7.5	6.9
Degree Utilization, x	0.44	0.40	0.23	0.59	0.08	0.55
Capacity (veh/h)	479	462	470	508	454	490
Control Delay (s)	14.9	14.4	11.3	17.6	9.9	16.9
Approach Delay (s)	14.9	14.4	15.9		16.1	
Approach LOS	B	B	C		C	

Intersection Summary			
Delay	15.5		
HCM Level of Service	C		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	81	4	7	96	41	9	141	9	31	230	10
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	6	121	6	9	128	55	12	193	12	42	315	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	133	192	218	371
Volume Left (vph)	6	9	12	42
Volume Right (vph)	6	55	12	14
Hadj (s)	0.20	0.06	0.03	0.05
Departure Headway (s)	6.1	5.9	5.5	5.3
Degree Utilization, x	0.23	0.31	0.33	0.55
Capacity (veh/h)	510	553	594	645
Control Delay (s)	10.9	11.5	11.3	14.6
Approach Delay (s)	10.9	11.5	11.3	14.6
Approach LOS	B	B	B	B

Intersection Summary			
Delay	12.6		
HCM Level of Service	B		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	588	209	259	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	684	230	285	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	230				1214	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	230				1214	372
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1276				188	674

Direction, Lane #	EB 1	WB 1
Volume Total	763	514
Volume Left	79	0
Volume Right	0	285
cSH	1276	1700
Volume to Capacity	0.06	0.30
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	218	208	0	436	117
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	263	285	0	519	139
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	285				548	285
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	285				548	285
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	81
cM capacity (veh/h)	1217				479	729

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	263	285	658
Volume Left	0	0	519
Volume Right	0	0	139
cSH	1700	1700	529
Volume to Capacity	0.15	0.17	1.24
Queue Length 95th (ft)	0	0	644
Control Delay (s)	0.0	0.0	149.6
Lane LOS			F
Approach Delay (s)	0.0	0.0	149.6
Approach LOS			F

Intersection Summary			
Average Delay	81.7		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	54	5	29	114	110	13	162	21	78	253	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	71	7	35	137	133	17	216	28	95	309	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	89	305	261	422
Volume Left (vph)	12	35	17	95
Volume Right (vph)	7	133	28	18
Hadj (s)	0.03	-0.19	0.00	0.07
Departure Headway (s)	6.7	5.9	5.9	5.7
Degree Utilization, x	0.17	0.50	0.43	0.67
Capacity (veh/h)	443	561	556	605
Control Delay (s)	11.0	14.7	13.3	19.5
Approach Delay (s)	11.0	14.7	13.3	19.5
Approach LOS	B	B	B	C

Intersection Summary			
Delay	15.9		
HCM Level of Service	C		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

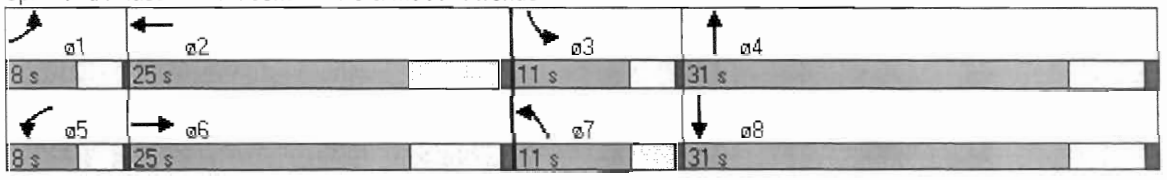
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	581	126	24	367	148	131	248	43	175	227	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.957			0.978			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1752	3354	0	1752	1804	0	1752	1799	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3354	0	1752	1804	0	1752	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			76			12			14	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	106	684	148	27	417	168	138	261	45	203	264	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	832	0	27	585	0	138	306	0	203	317	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

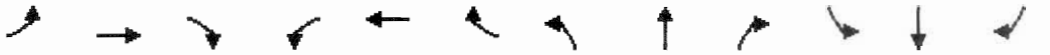
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.3		4.5	18.3		7.5	16.3		7.5	16.3	
Actuated g/C Ratio	0.07	0.35		0.07	0.28		0.11	0.25		0.11	0.25	
v/c Ratio	0.89	0.68		0.23	0.60		0.70	0.68		1.03	0.70	
Control Delay	95.5	24.5		36.3	21.9		51.0	29.7		105.7	30.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	95.5	24.5		36.3	21.9		51.0	29.7		105.7	30.6	
LOS	F	C		D	C		D	C		F	C	
Approach Delay		32.5			22.5			36.3			59.9	
Approach LOS		C			C			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 66.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 36.4 Intersection LOS: D
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	146	9	8	102	78	6	139	17	65	98	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	21	180	11	9	113	87	7	164	20	84	127	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	212	209	191	213
Volume Left (vph)	21	9	7	84
Volume Right (vph)	11	87	20	1
Hadj (s)	0.21	-0.02	0.00	0.13
Departure Headway (s)	5.6	5.4	5.5	5.5
Degree Utilization, x	0.33	0.31	0.29	0.33
Capacity (veh/h)	592	612	596	597
Control Delay (s)	11.4	10.8	10.7	11.2
Approach Delay (s)	11.4	10.8	10.7	11.2
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.0		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	116	101	8	13	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	6	143	128	10	20	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	138				288	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	138				288	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1440				697	914

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	149	138	32
Volume Left	6	0	20
Volume Right	0	10	12
cSH	1440	1700	766
Volume to Capacity	0.00	0.08	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.3	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	107	24	5	96	18	26	68	6	17	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	22	116	26	5	104	20	35	91	8	20	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	164	129	133	99
Volume Left (vph)	22	5	35	20
Volume Right (vph)	26	20	8	10
Hadj (s)	-0.02	-0.03	0.07	0.03
Departure Headway (s)	4.6	4.7	4.8	4.8
Degree Utilization, x	0.21	0.17	0.18	0.13
Capacity (veh/h)	729	723	701	692
Control Delay (s)	8.9	8.6	8.8	8.5
Approach Delay (s)	8.9	8.6	8.8	8.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	68	81	78	19	85	35	76	289	23	38	275	51
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	89	107	103	21	93	38	92	348	28	46	331	61

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	299	153	92	376	46	393
Volume Left (vph)	89	21	92	0	46	0
Volume Right (vph)	103	38	0	28	0	61
Hadj (s)	0.07	0.10	0.55	0.00	0.55	-0.06
Departure Headway (s)	7.2	7.8	7.8	7.2	7.8	7.2
Degree Utilization, x	0.60	0.33	0.20	0.76	0.10	0.79
Capacity (veh/h)	459	391	444	480	441	484
Control Delay (s)	20.5	14.7	11.5	28.1	10.5	30.6
Approach Delay (s)	20.5	14.7	24.8		28.5	
Approach LOS	C	B	C		D	

Intersection Summary			
Delay	23.9		
HCM Level of Service	C		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	13	97	10	8	76	55	7	207	20	51	117	10
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	14	107	11	10	93	67	8	223	22	61	139	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	132	170	252	212
Volume Left (vph)	14	10	8	61
Volume Right (vph)	11	67	22	12
Hadj (s)	0.19	0.00	0.01	0.07
Departure Headway (s)	5.6	5.4	5.1	5.2
Degree Utilization, x	0.21	0.25	0.36	0.31
Capacity (veh/h)	580	612	657	644
Control Delay (s)	10.1	10.1	10.9	10.5
Approach Delay (s)	10.1	10.1	10.9	10.5
Approach LOS	B	B	B	B

Intersection Summary			
Delay	10.5		
HCM Level of Service	B		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	467	175	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	119	549	216	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	216				1373	586
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39				1355	460
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1321				132	529

Direction, Lane #	EB 1	WB 1
Volume Total	668	956
Volume Left	119	0
Volume Right	0	740
cSH	1321	1700
Volume to Capacity	0.09	0.56
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	320	175	0	238	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	372	233	0	294	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	233				605	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233				605	233
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				34	90
cM capacity (veh/h)	1272				443	779

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	372	233	375
Volume Left	0	0	294
Volume Right	0	0	81
cSH	1700	1700	540
Volume to Capacity	0.22	0.14	0.69
Queue Length 95th (ft)	0	0	135
Control Delay (s)	0.0	0.0	25.4
Lane LOS			D
Approach Delay (s)	0.0	0.0	25.4
Approach LOS			D

Intersection Summary			
Average Delay	9.7		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	115	13	27	46	78	5	272	29	103	224	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	20	132	15	36	61	103	5	278	30	120	260	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	167	199	312	384
Volume Left (vph)	20	36	5	120
Volume Right (vph)	15	103	30	3
Hadj (s)	0.02	-0.22	0.00	0.11
Departure Headway (s)	6.4	6.1	5.8	5.8
Degree Utilization, x	0.30	0.34	0.50	0.61
Capacity (veh/h)	483	508	579	596
Control Delay (s)	12.1	12.2	14.5	17.5
Approach Delay (s)	12.1	12.2	14.5	17.5
Approach LOS	B	B	B	C

Intersection Summary			
Delay	14.8		
HCM Level of Service	B		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

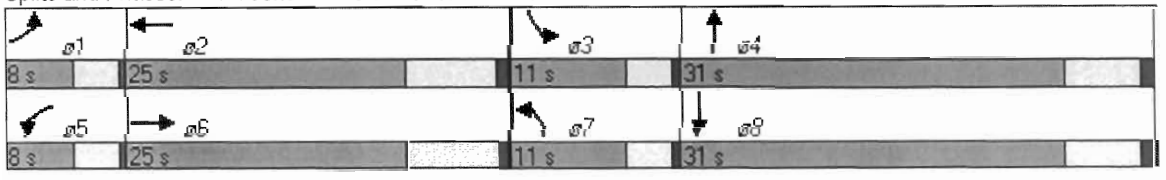
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	365	93	27	561	157	176	381	11	167	408	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.967			0.996			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3400	0	1752	3389	0	1752	1837	0	1752	1800	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3400	0	1752	3389	0	1752	1837	0	1752	1800	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			45			2			14	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	42	456	116	32	668	187	232	501	14	184	448	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	572	0	32	855	0	232	515	0	184	532	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	19.9		4.5	18.4		7.6	22.7		7.6	22.7	
Actuated g/C Ratio	0.06	0.29		0.06	0.26		0.11	0.33		0.11	0.33	
v/c Ratio	0.37	0.57		0.28	0.92		1.21	0.86		0.96	0.89	
Control Delay	43.0	23.5		40.0	42.6		169.0	38.4		94.6	41.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	43.0	23.5		40.0	42.6		169.0	38.4		94.6	41.9	
LOS	D	C		D	D		F	D		F	D	
Approach Delay		24.8			42.6			79.0			55.4	
Approach LOS		C			D			E			E	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 69.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 51.2 Intersection LOS: D
Intersection Capacity Utilization 77.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	267	7	8	301	73	7	97	7	51	98	16
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	6	405	11	11	396	96	10	135	10	56	108	18

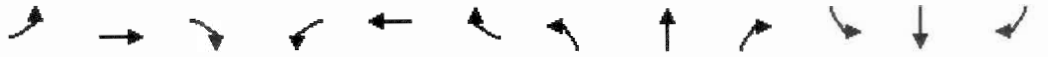
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	421	503	154	181
Volume Left (vph)	6	11	10	56
Volume Right (vph)	11	96	10	18
Hadj (s)	0.21	0.11	0.03	0.05
Departure Headway (s)	6.4	6.2	7.4	7.3
Degree Utilization, x	0.75	0.86	0.32	0.37
Capacity (veh/h)	540	568	433	446
Control Delay (s)	26.1	36.0	13.8	14.5
Approach Delay (s)	26.1	36.0	13.8	14.5
Approach LOS	D	E	B	B

Intersection Summary			
Delay	26.9		
HCM Level of Service	D		
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	132	129	10	26	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	15	197	179	14	38	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	193				413	186
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	193				413	186
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				93	98
cM capacity (veh/h)	1374				587	853

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	212	193	54
Volume Left	15	0	38
Volume Right	0	14	16
cSH	1374	1700	647
Volume to Capacity	0.01	0.11	0.08
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.6	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	0.6	0.0	11.1
Approach LOS			B

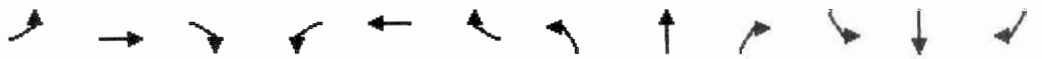
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	290	17	5	279	18	18	51	5	26	60	26
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	22	367	22	7	388	25	32	89	9	29	67	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	410	419	130	126
Volume Left (vph)	22	7	32	29
Volume Right (vph)	22	25	9	29
Hadj (s)	0.03	0.02	0.06	-0.04
Departure Headway (s)	5.4	5.4	6.5	6.4
Degree Utilization, x	0.62	0.63	0.23	0.22
Capacity (veh/h)	631	637	470	467
Control Delay (s)	16.9	17.3	11.5	11.3
Approach Delay (s)	16.9	17.3	11.5	11.3
Approach LOS	C	C	B	B

Intersection Summary			
Delay	15.8		
HCM Level of Service	C		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	253	61	41	253	34	90	218	37	41	240	34
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	38	320	77	55	337	45	115	279	47	44	255	36

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	435	437	115	327	44	291
Volume Left (vph)	38	55	115	0	44	0
Volume Right (vph)	77	45	0	47	0	36
Hadj (s)	0.13	0.18	0.55	-0.05	0.55	-0.04
Departure Headway (s)	8.7	8.7	9.7	9.1	9.9	9.3
Degree Utilization, x	1.05	1.06	0.31	0.83	0.12	0.76
Capacity (veh/h)	412	411	366	390	356	379
Control Delay (s)	88.1	91.5	15.8	42.1	13.1	34.8
Approach Delay (s)	88.1	91.5	35.3		32.0	
Approach LOS	F	F	E		D	

Intersection Summary			
Delay	63.4		
HCM Level of Service	F		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	84	4	7	99	196	9	141	9	187	230	10
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	6	125	6	9	132	261	12	193	12	256	315	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	137	403	218	585
Volume Left (vph)	6	9	12	256
Volume Right (vph)	6	261	12	14
Hadj (s)	0.20	-0.16	0.03	0.12
Departure Headway (s)	7.9	6.7	7.2	6.6
Degree Utilization, x	0.30	0.75	0.44	1.07
Capacity (veh/h)	416	527	465	538
Control Delay (s)	14.2	26.8	15.6	82.4
Approach Delay (s)	14.2	26.8	15.6	82.4
Approach LOS	B	D	C	F

Intersection Summary			
Delay	47.9		
HCM Level of Service	E		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	591	209	262	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	687	230	288	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	230				1219	374
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	230				1219	374
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1276				187	673

Direction, Lane #	EB 1	WB 1
Volume Total	766	518
Volume Left	79	0
Volume Right	0	288
cSH	1276	1700
Volume to Capacity	0.06	0.30
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	218	208	0	439	117
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	263	285	0	523	139
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	285				548	285
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	285				548	285
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	81
cM capacity (veh/h)	1217				479	729

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	263	285	662
Volume Left	0	0	523
Volume Right	0	0	139
cSH	1700	1700	529
Volume to Capacity	0.15	0.17	1.25
Queue Length 95th (ft)	0	0	654
Control Delay (s)	0.0	0.0	152.6
Lane LOS			F
Approach Delay (s)	0.0	0.0	152.6
Approach LOS			F

Intersection Summary			
Average Delay	83.5		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
48: North Ave & McCall Avenue

1/17/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	54	5	29	114	110	13	317	21	78	409	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	12	71	7	35	137	133	17	423	28	95	499	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	89	305	468	612
Volume Left (vph)	12	35	17	95
Volume Right (vph)	7	133	28	18
Hadj (s)	0.03	-0.19	0.02	0.06
Departure Headway (s)	8.3	7.1	6.6	6.6
Degree Utilization, x	0.21	0.60	0.86	1.12
Capacity (veh/h)	387	483	537	550
Control Delay (s)	13.4	20.3	37.5	98.7
Approach Delay (s)	13.4	20.3	37.5	98.7
Approach LOS	B	C	E	F

Intersection Summary			
Delay	57.9		
HCM Level of Service	F		
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	173	133	131	9	9	171
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	145	142	10	10	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	152				668	147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				668	147
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				97	79
cM capacity (veh/h)	1429				368	900

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	333	152	196
Volume Left	188	0	10
Volume Right	0	10	186
cSH	1429	1700	839
Volume to Capacity	0.13	0.09	0.23
Queue Length 95th (ft)	11	0	23
Control Delay (s)	5.0	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	5.0	0.0	10.6
Approach LOS			B

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

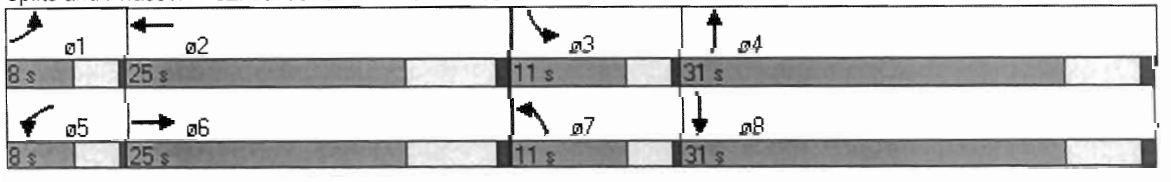
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	581	126	24	367	148	131	258	43	175	237	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.957			0.979			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1752	3354	0	1752	1806	0	1752	1800	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3354	0	1752	1806	0	1752	1800	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			76			12			14	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	106	684	148	27	417	168	138	272	45	203	276	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	832	0	27	585	0	138	317	0	203	329	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

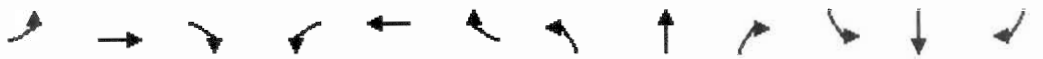
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.4		4.5	18.3		7.5	16.8		7.5	16.8	
Actuated g/C Ratio	0.07	0.35		0.07	0.27		0.11	0.25		0.11	0.25	
v/c Ratio	0.90	0.69		0.23	0.60		0.70	0.69		1.03	0.71	
Control Delay	97.3	25.0		36.7	22.3		51.9	29.8		108.0	30.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	97.3	25.0		36.7	22.3		51.9	29.8		108.0	30.8	
LOS	F	C		D	C		D	C		F	C	
Approach Delay		33.1			22.9			36.5			60.3	
Approach LOS		C			C			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 67.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	156	9	8	112	79	6	139	17	65	98	1
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	21	193	11	9	124	88	7	164	20	84	127	1

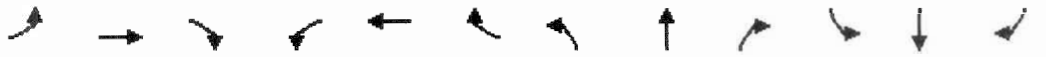
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	225	221	191	213
Volume Left (vph)	21	9	7	84
Volume Right (vph)	11	88	20	1
Hadj (s)	0.21	-0.01	0.00	0.13
Departure Headway (s)	5.7	5.5	5.6	5.6
Degree Utilization, x	0.35	0.33	0.29	0.33
Capacity (veh/h)	588	607	584	586
Control Delay (s)	11.7	11.2	10.8	11.4
Approach Delay (s)	11.7	11.2	10.8	11.4
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.3		
HCM Level of Service	B		
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	117	101	8	13	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	6	144	128	10	20	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	138				290	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	138				290	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1440				696	914

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	151	138	32
Volume Left	6	0	20
Volume Right	0	10	12
cSH	1440	1700	765
Volume to Capacity	0.00	0.08	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.3	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.9
Approach LOS			A

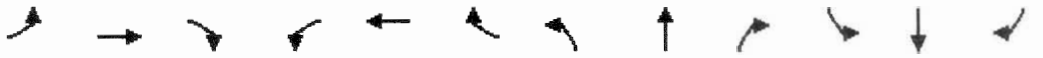
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	118	24	5	110	19	26	68	6	17	60	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	22	128	26	5	120	21	35	91	8	20	69	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	176	146	133	99
Volume Left (vph)	22	5	35	20
Volume Right (vph)	26	21	8	10
Hadj (s)	-0.01	-0.03	0.07	0.03
Departure Headway (s)	4.7	4.7	4.9	4.9
Degree Utilization, x	0.23	0.19	0.18	0.13
Capacity (veh/h)	723	719	688	678
Control Delay (s)	9.0	8.8	9.0	8.6
Approach Delay (s)	9.0	8.8	9.0	8.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.9		
HCM Level of Service	A		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	68	91	78	21	96	36	76	289	24	38	275	51
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	89	120	103	23	105	40	92	348	29	46	331	61

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	312	168	92	377	46	393
Volume Left (vph)	89	23	92	0	46	0
Volume Right (vph)	103	40	0	29	0	61
Hadj (s)	0.08	0.11	0.55	0.00	0.55	-0.06
Departure Headway (s)	7.4	8.0	8.0	7.4	8.0	7.4
Degree Utilization, x	0.64	0.37	0.20	0.78	0.10	0.81
Capacity (veh/h)	451	394	431	467	430	471
Control Delay (s)	22.7	15.7	11.9	30.9	10.8	33.6
Approach Delay (s)	22.7	15.7	27.2		31.2	
Approach LOS	C	C	D		D	

Intersection Summary			
Delay	26.1		
HCM Level of Service	D		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	13	97	10	8	76	65	7	207	20	61	177	10
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	14	107	11	10	93	79	8	223	22	73	211	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	132	182	252	295
Volume Left (vph)	14	10	8	73
Volume Right (vph)	11	79	22	12
Hadj (s)	0.19	-0.03	0.01	0.08
Departure Headway (s)	5.9	5.6	5.3	5.3
Degree Utilization, x	0.22	0.28	0.37	0.44
Capacity (veh/h)	540	578	626	639
Control Delay (s)	10.5	10.8	11.4	12.3
Approach Delay (s)	10.5	10.8	11.4	12.3
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.5		
HCM Level of Service	B		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	467	175	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	119	549	216	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	216				1373	586
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39				1355	460
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1321				132	529

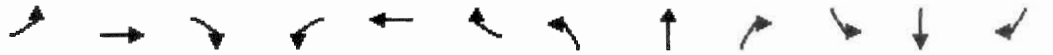
Direction, Lane #	EB 1	WB 1
Volume Total	668	956
Volume Left	119	0
Volume Right	0	740
cSH	1321	1700
Volume to Capacity	0.09	0.56
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↗
Volume (veh/h)	0	320	175	0	238	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	372	233	0	294	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	233				605	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233				605	233
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				34	90
cM capacity (veh/h)	1272				443	779

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	372	233	375
Volume Left	0	0	294
Volume Right	0	0	81
cSH	1700	1700	540
Volume to Capacity	0.22	0.14	0.69
Queue Length 95th (ft)	0	0	135
Control Delay (s)	0.0	0.0	25.4
Lane LOS			D
Approach Delay (s)	0.0	0.0	25.4
Approach LOS			D

Intersection Summary			
Average Delay	9.7		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	115	13	27	46	78	5	282	29	103	234	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	20	132	15	36	61	103	5	288	30	120	272	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	167	199	322	395
Volume Left (vph)	20	36	5	120
Volume Right (vph)	15	103	30	3
Hadj (s)	0.02	-0.22	0.00	0.11
Departure Headway (s)	6.5	6.2	5.8	5.8
Degree Utilization, x	0.30	0.34	0.52	0.64
Capacity (veh/h)	474	500	573	593
Control Delay (s)	12.3	12.4	15.1	18.5
Approach Delay (s)	12.3	12.4	15.1	18.5
Approach LOS	B	B	C	C

Intersection Summary			
Delay	15.4		
HCM Level of Service	C		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	121	109	0	1	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	132	118	0	1	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	118				274	118
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118				274	118
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1470				710	933

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	143	118	17
Volume Left	12	0	1
Volume Right	0	0	16
cSH	1470	1700	915
Volume to Capacity	0.01	0.07	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	0.7	0.0	9.0
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	9.0
Approach LOS			A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

YEAR 2019 CONDITIONS
WORKSHEETS

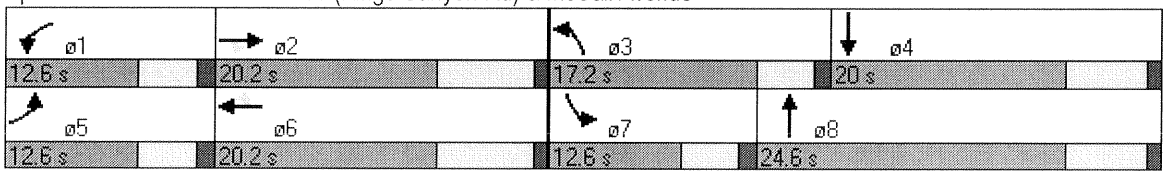
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	767	261	36	1192	36	297	155	18	33	241	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1752	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1815	0	1752	1752	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			49		8			32	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	74	882	300	49	805	49	349	182	21	38	280	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	882	300	49	805	49	349	203	0	38	421	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.5	13.5	12.7	26.5		8.1	14.1	
Actuated g/C Ratio	0.12	0.24	0.24	0.12	0.20	0.20	0.19	0.39		0.12	0.21	
v/c Ratio	0.35	1.12	0.50	0.23	1.21	0.14	1.06	0.28		0.18	1.08	
Control Delay	34.0	99.8	6.8	31.4	134.7	9.0	98.6	18.2		30.5	96.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	34.0	99.8	6.8	31.4	134.7	9.0	98.6	18.2		30.5	96.2	
LOS	C	F	A	C	F	A	F	B		C	F	
Approach Delay		73.7			122.3			69.0			90.8	
Approach LOS		E			F			E			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 89.2 Intersection LOS: F
Intersection Capacity Utilization 82.7% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



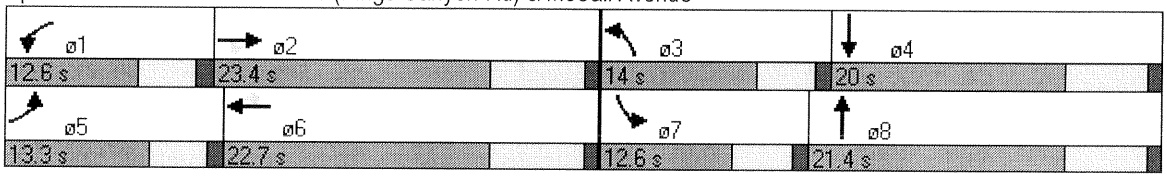
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	1217	280	34	844	36	275	226	28	72	161	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1762	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			311			40		8			27	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	93	1352	311	37	464	40	320	263	33	79	177	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	1352	311	37	464	40	320	296	0	79	252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.5	21.5	21.5	8.1	16.2	16.2	9.5	17.4		8.1	12.9	
Actuated g/C Ratio	0.13	0.32	0.32	0.12	0.24	0.24	0.14	0.26		0.12	0.19	
v/c Ratio	0.41	1.25	0.43	0.17	0.57	0.10	1.27	0.61		0.37	0.69	
Control Delay	34.6	143.0	5.3	30.2	26.4	8.6	180.8	31.0		34.2	34.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	34.6	143.0	5.3	30.2	26.4	8.6	180.8	31.0		34.2	34.3	
LOS	C	F	A	C	C	A	F	C		C	C	
Approach Delay		112.8			25.3			108.8			34.3	
Approach LOS		F			C			F			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 66.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 89.5 Intersection LOS: F
Intersection Capacity Utilization 86.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



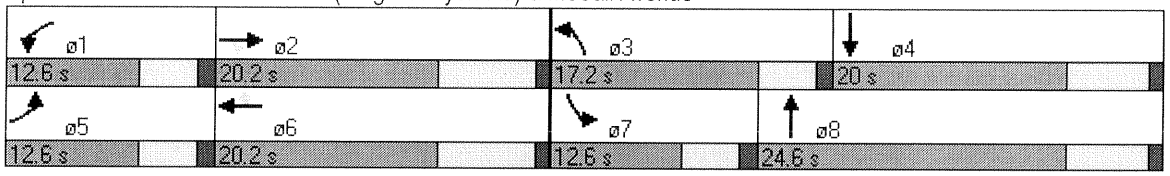
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	767	406	36	1192	36	441	162	18	33	248	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.985			0.951	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1817	0	1752	1754	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1817	0	1752	1754	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467			49		8			31	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	74	882	467	49	805	49	519	191	21	38	288	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	882	467	49	805	49	519	212	0	38	429	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.5	13.5	12.7	26.5		8.1	14.1	
Actuated g/C Ratio	0.12	0.24	0.24	0.12	0.20	0.20	0.19	0.39		0.12	0.21	
v/c Ratio	0.35	1.12	0.64	0.23	1.21	0.14	1.58	0.29		0.18	1.10	
Control Delay	34.0	99.8	7.6	31.4	134.7	9.0	299.6	18.3		30.5	103.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	34.0	99.8	7.6	31.4	134.7	9.0	299.6	18.3		30.5	103.0	
LOS	C	F	A	C	F	A	F	B		C	F	
Approach Delay		66.1			122.3			218.0			97.1	
Approach LOS		E			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.5
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.58
Intersection Signal Delay: 116.1 Intersection LOS: F
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



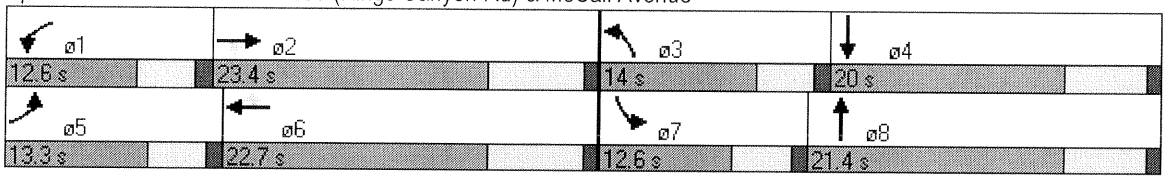
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	1217	290	34	844	36	285	226	28	72	161	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1762	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			322			40		8			27	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	93	1352	322	37	464	40	331	263	33	79	177	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	1352	322	37	464	40	331	296	0	79	252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.5	21.5	21.5	8.1	16.2	16.2	9.5	17.4		8.1	12.9	
Actuated g/C Ratio	0.13	0.32	0.32	0.12	0.24	0.24	0.14	0.26		0.12	0.19	
v/c Ratio	0.41	1.25	0.44	0.17	0.57	0.10	1.32	0.61		0.37	0.69	
Control Delay	34.6	143.0	5.3	30.2	26.4	8.6	197.9	31.0		34.2	34.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	34.6	143.0	5.3	30.2	26.4	8.6	197.9	31.0		34.2	34.3	
LOS	C	F	A	C	C	A	F	C		C	C	
Approach Delay		112.2			25.3			119.1			34.3	
Approach LOS		F			C			F			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 66.2
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.32
Intersection Signal Delay: 91.2 Intersection LOS: F
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



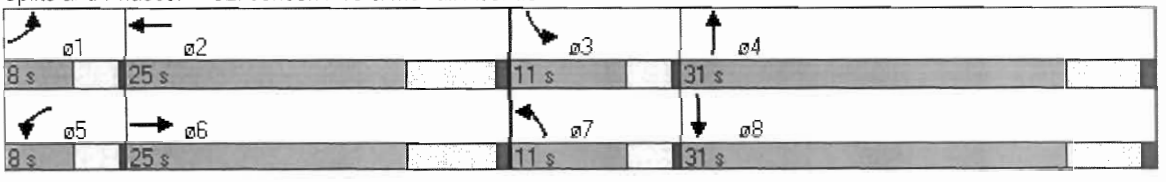
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	380	97	27	592	167	184	248	11	170	272	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.967			0.994			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3400	0	1752	3389	0	1752	1834	0	1752	1775	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3400	0	1752	3389	0	1752	1834	0	1752	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			46			3			24	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	52	475	121	32	705	199	242	326	14	187	299	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	596	0	32	904	0	242	340	0	187	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

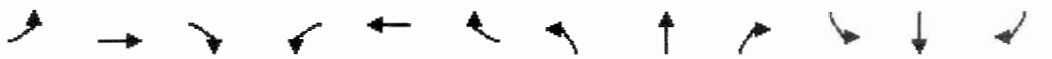
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.1		4.6	18.6		7.7	18.5		7.7	18.5	
Actuated g/C Ratio	0.07	0.31		0.07	0.28		0.12	0.28		0.12	0.28	
v/c Ratio	0.43	0.56		0.26	0.91		1.19	0.66		0.92	0.77	
Control Delay	44.7	21.9		38.3	39.7		155.5	27.4		80.8	31.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.7	21.9		38.3	39.7		155.5	27.4		80.8	31.6	
LOS	D	C		D	D		F	C		F	C	
Approach Delay		23.7			39.7			80.7			47.3	
Approach LOS		C			D			F			D	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 65.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 46.2 Intersection LOS: D
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	115	8	8	150	79	7	101	7	56	105	18
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	8	174	12	11	197	104	10	140	10	62	115	20

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	194	312	160	197
Volume Left (vph)	8	11	10	62
Volume Right (vph)	12	104	10	20
Hadj (s)	0.19	0.03	0.03	0.05
Departure Headway (s)	5.6	5.3	5.7	5.7
Degree Utilization, x	0.30	0.46	0.25	0.31
Capacity (veh/h)	585	638	562	579
Control Delay (s)	11.1	12.7	10.6	11.2
Approach Delay (s)	11.1	12.7	10.6	11.2
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.6		
HCM Level of Service	B		
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	128	124	10	26	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	21	191	172	14	38	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	186				412	179
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	186				412	179
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				93	98
cM capacity (veh/h)	1382				585	861

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	212	186	53
Volume Left	21	0	38
Volume Right	0	14	15
cSH	1382	1700	642
Volume to Capacity	0.02	0.11	0.08
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.9	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	125	18	6	116	19	19	51	6	27	60	26
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	22	158	23	8	161	26	33	89	11	30	67	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	203	196	133	127
Volume Left (vph)	22	8	33	30
Volume Right (vph)	23	26	11	29
Hadj (s)	0.00	-0.02	0.05	-0.04
Departure Headway (s)	4.9	4.8	5.1	5.1
Degree Utilization, x	0.27	0.26	0.19	0.18
Capacity (veh/h)	693	696	642	647
Control Delay (s)	9.7	9.6	9.3	9.1
Approach Delay (s)	9.7	9.6	9.3	9.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.5		
HCM Level of Service	A		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	101	66	34	99	32	98	237	30	38	253	36
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	41	128	84	45	132	43	126	304	38	40	269	38

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	252	220	126	342	40	307
Volume Left (vph)	41	45	126	0	40	0
Volume Right (vph)	84	43	0	38	0	38
Hadj (s)	0.05	0.15	0.55	-0.03	0.55	-0.04
Departure Headway (s)	7.0	7.2	7.6	7.0	7.8	7.1
Degree Utilization, x	0.49	0.44	0.26	0.66	0.09	0.61
Capacity (veh/h)	462	443	456	491	437	472
Control Delay (s)	16.6	15.8	12.1	21.4	10.3	19.5
Approach Delay (s)	16.6	15.8	18.9		18.4	
Approach LOS	C	C	C		C	

Intersection Summary				
Delay	17.8			
HCM Level of Service	C			
Intersection Capacity Utilization	44.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	84	4	7	100	45	10	154	10	35	242	11
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	7	125	6	9	133	60	14	211	14	48	332	15

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	139	203	238	395
Volume Left (vph)	7	9	14	48
Volume Right (vph)	6	60	14	15
Hadj (s)	0.21	0.05	0.03	0.05
Departure Headway (s)	6.3	6.0	5.7	5.5
Degree Utilization, x	0.24	0.34	0.38	0.60
Capacity (veh/h)	489	535	580	629
Control Delay (s)	11.4	12.1	12.1	16.2
Approach Delay (s)	11.4	12.1	12.1	16.2
Approach LOS	B	B	B	C

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	595	216	259	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	692	237	285	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	237				1230	380
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	237				1230	380
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1268				184	667

Direction, Lane #	EB 1	WB 1
Volume Total	771	522
Volume Left	79	0
Volume Right	0	285
cSH	1268	1700
Volume to Capacity	0.06	0.31
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	223	216	0	438	118
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	269	296	0	521	140
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	296				565	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	296				565	296
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	80
cM capacity (veh/h)	1205				468	718

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	269	296	662
Volume Left	0	0	521
Volume Right	0	0	140
cSH	1700	1700	517
Volume to Capacity	0.16	0.17	1.28
Queue Length 95th (ft)	0	0	681
Control Delay (s)	0.0	0.0	164.6
Lane LOS			F
Approach Delay (s)	0.0	0.0	164.6
Approach LOS			F

Intersection Summary			
Average Delay	88.8		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	54	5	30	114	121	13	178	23	85	269	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	13	71	7	36	137	146	17	237	31	104	328	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	91	319	285	450
Volume Left (vph)	13	36	17	104
Volume Right (vph)	7	146	31	18
Hadj (s)	0.04	-0.20	0.00	0.07
Departure Headway (s)	7.0	6.1	6.1	5.9
Degree Utilization, x	0.18	0.54	0.49	0.74
Capacity (veh/h)	421	543	541	591
Control Delay (s)	11.5	16.1	14.8	23.5
Approach Delay (s)	11.5	16.1	14.8	23.5
Approach LOS	B	C	B	C

Intersection Summary			
Delay	18.3		
HCM Level of Service	C		
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

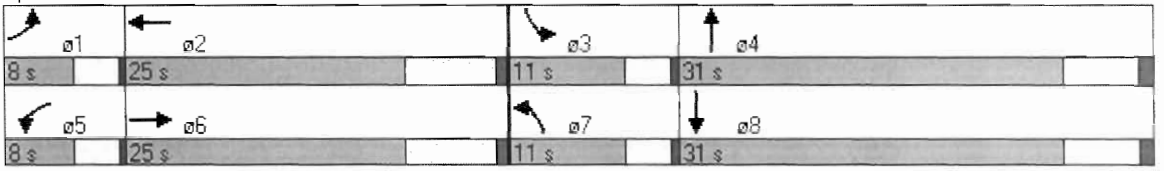
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	623	141	24	389	148	147	264	43	178	241	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.959			0.979			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3407	0	1752	3361	0	1752	1806	0	1752	1793	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3407	0	1752	3361	0	1752	1806	0	1752	1793	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			70			12			17	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	128	733	166	27	442	168	155	278	45	207	280	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	899	0	27	610	0	155	323	0	207	345	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.4		4.5	18.3		7.5	17.4		7.5	17.4	
Actuated g/C Ratio	0.07	0.35		0.07	0.27		0.11	0.26		0.11	0.26	
v/c Ratio	1.09	0.75		0.23	0.63		0.79	0.68		1.06	0.73	
Control Delay	147.3	27.5		37.1	23.5		62.0	29.4		116.6	31.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	147.3	27.5		37.1	23.5		62.0	29.4		116.6	31.2	
LOS	F	C		D	C		E	C		F	C	
Approach Delay		42.4			24.1			40.0			63.2	
Approach LOS		D			C			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 67.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 41.9 Intersection LOS: D
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



HCM Unsignalized Intersection Capacity Analysis
2: Central Avenue & Bethel Avenue

2/14/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	152	10	8	109	84	7	148	17	70	104	2
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	25	188	12	9	121	93	8	174	20	91	135	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	225	223	202	229
Volume Left (vph)	25	9	8	91
Volume Right (vph)	12	93	20	3
Hadj (s)	0.21	-0.02	0.00	0.12
Departure Headway (s)	5.8	5.5	5.6	5.7
Degree Utilization, x	0.36	0.34	0.32	0.36
Capacity (veh/h)	575	595	578	582
Control Delay (s)	12.0	11.4	11.2	11.9
Approach Delay (s)	12.0	11.4	11.2	11.9
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.6		
HCM Level of Service	B		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	124	201	8	13	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	9	153	254	10	20	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	265				430	259
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265				430	259
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	96
cM capacity (veh/h)	1294				576	777

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	162	265	52
Volume Left	9	0	20
Volume Right	0	10	32
cSH	1294	1700	686
Volume to Capacity	0.01	0.16	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.5	0.0	10.7
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	10.7
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	116	25	5	104	19	27	68	6	17	60	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	22	126	27	5	113	21	36	91	8	20	69	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	175	139	135	100
Volume Left (vph)	22	5	36	20
Volume Right (vph)	27	21	8	11
Hadj (s)	-0.02	-0.03	0.07	0.02
Departure Headway (s)	4.7	4.7	4.9	4.9
Degree Utilization, x	0.23	0.18	0.18	0.14
Capacity (veh/h)	724	718	691	682
Control Delay (s)	9.0	8.7	8.9	8.6
Approach Delay (s)	9.0	8.7	8.9	8.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.8		
HCM Level of Service	A		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	70	85	84	20	90	37	82	307	25	41	295	54
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	92	112	111	22	99	41	99	370	30	49	355	65

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	314	162	99	400	49	420
Volume Left (vph)	92	22	99	0	49	0
Volume Right (vph)	111	41	0	30	0	65
Hadj (s)	0.07	0.10	0.55	0.00	0.55	-0.06
Departure Headway (s)	7.6	8.3	8.2	7.6	8.2	7.5
Degree Utilization, x	0.66	0.37	0.22	0.84	0.11	0.88
Capacity (veh/h)	442	392	426	463	426	468
Control Delay (s)	24.4	16.2	12.3	38.3	11.0	43.4
Approach Delay (s)	24.4	16.2	33.1		40.0	
Approach LOS	C	C	D		E	

Intersection Summary			
Delay	31.6		
HCM Level of Service	D		
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	101	11	9	79	60	7	223	20	55	193	11
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	15	111	12	11	96	73	8	240	22	65	230	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	138	180	269	308
Volume Left (vph)	15	11	8	65
Volume Right (vph)	12	73	22	13
Hadj (s)	0.19	-0.01	0.01	0.07
Departure Headway (s)	6.0	5.7	5.4	5.4
Degree Utilization, x	0.23	0.29	0.40	0.46
Capacity (veh/h)	529	561	619	631
Control Delay (s)	10.8	11.1	11.9	12.9
Approach Delay (s)	10.8	11.1	11.9	12.9
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.9		
HCM Level of Service	B		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	480	181	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	119	565	223	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	223				1396	593
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	49				1381	469
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1311				127	523

Direction, Lane #	EB 1	WB 1
Volume Total	684	963
Volume Left	119	0
Volume Right	0	740
cSH	1311	1700
Volume to Capacity	0.09	0.57
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	329	181	0	238	71
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	383	241	0	294	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	241				624	241
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	241				624	241
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				32	89
cM capacity (veh/h)	1263				432	771

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	383	241	381
Volume Left	0	0	294
Volume Right	0	0	88
cSH	1700	1700	534
Volume to Capacity	0.23	0.14	0.71
Queue Length 95th (ft)	0	0	144
Control Delay (s)	0.0	0.0	26.8
Lane LOS			D
Approach Delay (s)	0.0	0.0	26.8
Approach LOS			D

Intersection Summary			
Average Delay	10.2		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	18	117	13	29	47	87	5	293	32	113	242	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	21	134	15	38	62	114	5	299	33	131	281	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	170	214	337	416
Volume Left (vph)	21	38	5	131
Volume Right (vph)	15	114	33	3
Hadj (s)	0.02	-0.23	0.00	0.11
Departure Headway (s)	6.7	6.4	6.0	6.0
Degree Utilization, x	0.32	0.38	0.56	0.69
Capacity (veh/h)	454	487	557	569
Control Delay (s)	12.9	13.2	16.5	21.3
Approach Delay (s)	12.9	13.2	16.5	21.3
Approach LOS	B	B	C	C

Intersection Summary			
Delay	17.1		
HCM Level of Service	C		
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

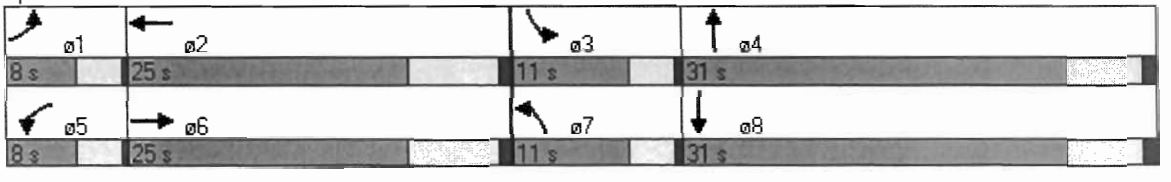
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	380	101	27	592	167	188	399	11	170	424	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.967			0.996			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3396	0	1752	3389	0	1752	1837	0	1752	1795	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3396	0	1752	3389	0	1752	1837	0	1752	1795	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			46			2			16	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	52	475	126	32	705	199	247	525	14	187	466	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	601	0	32	904	0	247	539	0	187	567	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	19.8		4.5	18.3		7.5	24.0		7.5	24.0	
Actuated g/C Ratio	0.06	0.28		0.06	0.26		0.11	0.34		0.11	0.34	
v/c Ratio	0.46	0.61		0.29	0.99		1.33	0.86		1.01	0.91	
Control Delay	48.5	24.6		40.4	56.8		209.7	38.8		105.0	45.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	48.5	24.6		40.4	56.8		209.7	38.8		105.0	45.0	
LOS	D	C		D	E		F	D		F	D	
Approach Delay		26.5			56.2			92.5			59.9	
Approach LOS		C			E			F			E	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 70.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.33
Intersection Signal Delay: 60.0 Intersection LOS: E
Intersection Capacity Utilization 80.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	274	8	8	308	79	7	101	7	56	105	18
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.72	0.72	0.72	0.91	0.91	0.91
Hourly flow rate (vph)	8	415	12	11	405	104	10	140	10	62	115	20

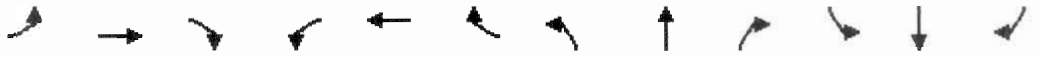
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	435	520	160	197
Volume Left (vph)	8	11	10	62
Volume Right (vph)	12	104	10	20
Hadj (s)	0.21	0.11	0.03	0.05
Departure Headway (s)	6.7	6.4	7.7	7.6
Degree Utilization, x	0.81	0.93	0.34	0.42
Capacity (veh/h)	435	554	422	440
Control Delay (s)	31.9	47.3	14.7	15.9
Approach Delay (s)	31.9	47.3	14.7	15.9
Approach LOS	D	E	B	C

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	135	131	10	26	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	24	201	182	14	38	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	196				438	189
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196				438	189
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				93	98
cM capacity (veh/h)	1371				564	850

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	225	196	56
Volume Left	24	0	38
Volume Right	0	14	18
cSH	1371	1700	631
Volume to Capacity	0.02	0.12	0.09
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.9	0.0	11.3
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	11.3
Approach LOS			B

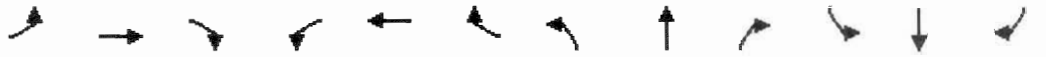
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	298	18	6	287	19	19	51	6	27	60	26
Peak Hour Factor	0.79	0.79	0.79	0.72	0.72	0.72	0.57	0.57	0.57	0.89	0.89	0.89
Hourly flow rate (vph)	22	377	23	8	399	26	33	89	11	30	67	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	422	433	133	127
Volume Left (vph)	22	8	33	30
Volume Right (vph)	23	26	11	29
Hadj (s)	0.03	0.02	0.05	-0.04
Departure Headway (s)	5.5	5.5	6.6	6.5
Degree Utilization, x	0.65	0.66	0.24	0.23
Capacity (veh/h)	624	631	460	458
Control Delay (s)	18.0	18.5	11.7	11.5
Approach Delay (s)	18.0	18.5	11.7	11.5
Approach LOS	C	C	B	B

Intersection Summary			
Delay	16.7		
HCM Level of Service	C		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	260	66	43	257	36	98	237	39	43	253	36
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.78	0.78	0.78	0.94	0.94	0.94
Hourly flow rate (vph)	41	329	84	57	343	48	126	304	50	46	269	38

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	453	448	126	354	46	307
Volume Left (vph)	41	57	126	0	46	0
Volume Right (vph)	84	48	0	50	0	38
Hadj (s)	0.13	0.18	0.55	-0.05	0.55	-0.04
Departure Headway (s)	8.9	9.0	9.8	9.2	10.0	9.4
Degree Utilization, x	1.12	1.11	0.34	0.90	0.13	0.81
Capacity (veh/h)	402	406	363	381	353	376
Control Delay (s)	111.5	109.7	16.6	54.4	13.3	40.5
Approach Delay (s)	111.5	109.7	44.5		37.0	
Approach LOS	F	F	E		E	

Intersection Summary			
Delay	77.3		
HCM Level of Service	F		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	87	4	7	103	200	10	154	10	191	242	11
Peak Hour Factor	0.67	0.67	0.67	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	7	130	6	9	137	267	14	211	14	262	332	15

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	143	413	238	608
Volume Left (vph)	7	9	14	262
Volume Right (vph)	6	267	14	15
Hadj (s)	0.21	-0.16	0.03	0.12
Departure Headway (s)	8.0	6.8	7.3	6.7
Degree Utilization, x	0.32	0.78	0.48	1.14
Capacity (veh/h)	405	519	459	526
Control Delay (s)	14.7	29.8	17.0	107.2
Approach Delay (s)	14.7	29.8	17.0	107.2
Approach LOS	B	D	C	F

Intersection Summary			
Delay	59.6		
HCM Level of Service	F		
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	68	598	216	262	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.91	0.91	0.92	0.92
Hourly flow rate (vph)	79	695	237	288	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked						
vC, conflicting volume	237				1235	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	237				1235	381
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	94				100	100
cM capacity (veh/h)	1268				183	666

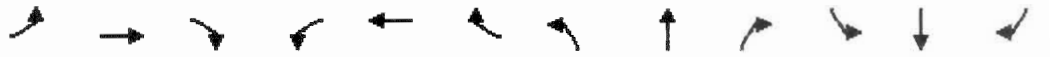
Direction, Lane #	EB 1	WB 1
Volume Total	774	525
Volume Left	79	0
Volume Right	0	288
cSH	1268	1700
Volume to Capacity	0.06	0.31
Queue Length 95th (ft)	5	0
Control Delay (s)	1.6	0.0
Lane LOS	A	
Approach Delay (s)	1.6	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	223	216	0	441	118
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Hourly flow rate (vph)	0	269	296	0	525	140
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	296				565	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	296				565	296
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	80
cM capacity (veh/h)	1205				468	718

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	269	296	665
Volume Left	0	0	525
Volume Right	0	0	140
cSH	1700	1700	516
Volume to Capacity	0.16	0.17	1.29
Queue Length 95th (ft)	0	0	693
Control Delay (s)	0.0	0.0	168.4
Lane LOS			F
Approach Delay (s)	0.0	0.0	168.4
Approach LOS			F

Intersection Summary			
Average Delay	91.1		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	54	5	30	114	121	13	333	23	85	425	15
Peak Hour Factor	0.76	0.76	0.76	0.83	0.83	0.83	0.75	0.75	0.75	0.82	0.82	0.82
Hourly flow rate (vph)	13	71	7	36	137	146	17	444	31	104	518	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	91	319	492	640
Volume Left (vph)	13	36	17	104
Volume Right (vph)	7	146	31	18
Hadj (s)	0.04	-0.20	0.02	0.07
Departure Headway (s)	8.5	7.2	6.7	6.7
Degree Utilization, x	0.21	0.64	0.92	1.20
Capacity (veh/h)	383	481	525	537
Control Delay (s)	13.8	22.1	46.9	130.2
Approach Delay (s)	13.8	22.1	46.9	130.2
Approach LOS	B	C	E	F

Intersection Summary			
Delay	74.4		
HCM Level of Service	F		
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	173	142	134	9	9	171
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	154	146	10	10	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	155				681	151
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	155				681	151
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				97	79
cM capacity (veh/h)	1425				361	896

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	342	155	196
Volume Left	188	0	10
Volume Right	0	10	186
cSH	1425	1700	834
Volume to Capacity	0.13	0.09	0.23
Queue Length 95th (ft)	11	0	23
Control Delay (s)	4.9	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	4.9	0.0	10.6
Approach LOS			B

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

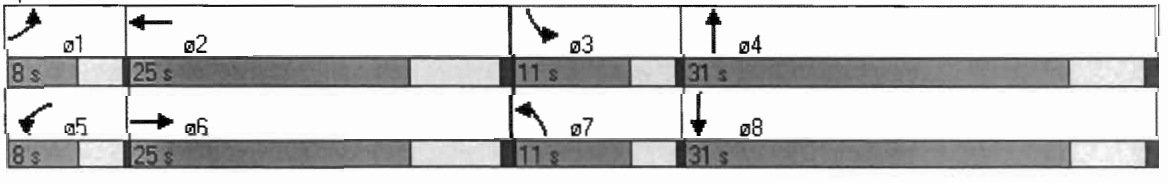
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	623	141	24	389	148	147	274	43	178	251	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.959			0.980			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3407	0	1752	3361	0	1752	1808	0	1752	1795	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3407	0	1752	3361	0	1752	1808	0	1752	1795	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			70			11			16	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	128	733	166	27	442	168	155	288	45	207	292	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	899	0	27	610	0	155	333	0	207	357	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.3		4.5	18.3		7.5	17.8		7.5	17.8	
Actuated g/C Ratio	0.07	0.34		0.07	0.27		0.11	0.26		0.11	0.26	
v/c Ratio	1.10	0.75		0.23	0.64		0.80	0.69		1.07	0.74	
Control Delay	149.9	27.9		37.3	23.7		62.7	29.8		118.5	31.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	149.9	27.9		37.3	23.7		62.7	29.8		118.5	31.8	
LOS	F	C		D	C		E	C		F	C	
Approach Delay		43.1			24.3			40.2			63.6	
Approach LOS		D			C			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 68
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 42.4 Intersection LOS: D
Intersection Capacity Utilization 69.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	162	10	8	119	85	7	148	17	70	104	2
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.85	0.85	0.85	0.77	0.77	0.77
Hourly flow rate (vph)	25	200	12	9	132	94	8	174	20	91	135	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	237	236	202	229
Volume Left (vph)	25	9	8	91
Volume Right (vph)	12	94	20	3
Hadj (s)	0.21	-0.01	0.00	0.12
Departure Headway (s)	5.8	5.6	5.7	5.8
Degree Utilization, x	0.38	0.37	0.32	0.37
Capacity (veh/h)	571	590	567	570
Control Delay (s)	12.4	11.8	11.4	12.1
Approach Delay (s)	12.4	11.8	11.4	12.1
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.9		
HCM Level of Service	B		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	125	96	8	13	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.79	0.79	0.65	0.65
Hourly flow rate (vph)	9	154	122	10	20	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	132				298	127
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132				298	127
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	96
cM capacity (veh/h)	1447				687	921

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	163	132	52
Volume Left	9	0	20
Volume Right	0	10	32
cSH	1447	1700	815
Volume to Capacity	0.01	0.08	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.4	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	0.4	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	127	25	5	118	20	27	68	6	17	60	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.87	0.87	0.87
Hourly flow rate (vph)	22	138	27	5	128	22	36	91	8	20	69	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	187	155	135	100
Volume Left (vph)	22	5	36	20
Volume Right (vph)	27	22	8	11
Hadj (s)	-0.01	-0.03	0.07	0.02
Departure Headway (s)	4.7	4.7	4.9	4.9
Degree Utilization, x	0.24	0.20	0.18	0.14
Capacity (veh/h)	719	715	677	668
Control Delay (s)	9.2	8.9	9.1	8.7
Approach Delay (s)	9.2	8.9	9.1	8.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.0		
HCM Level of Service	A		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	70	95	84	22	101	38	82	307	26	41	295	54
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	92	125	111	24	111	42	99	370	31	49	355	65

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	328	177	99	401	49	420
Volume Left (vph)	92	24	99	0	49	0
Volume Right (vph)	111	42	0	31	0	65
Hadj (s)	0.07	0.11	0.55	0.00	0.55	-0.06
Departure Headway (s)	7.8	8.5	8.4	7.8	8.4	7.8
Degree Utilization, x	0.71	0.42	0.23	0.87	0.12	0.91
Capacity (veh/h)	434	380	414	449	413	444
Control Delay (s)	27.7	17.5	12.7	43.3	11.3	49.0
Approach Delay (s)	27.7	17.5	37.3		45.0	
Approach LOS	D	C	E		E	

Intersection Summary				
Delay	35.2			
HCM Level of Service	E			
Intersection Capacity Utilization	58.8%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	101	11	9	79	70	7	223	20	65	193	11
Peak Hour Factor	0.91	0.91	0.91	0.82	0.82	0.82	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	15	111	12	11	96	85	8	240	22	77	230	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	138	193	269	320
Volume Left (vph)	15	11	8	77
Volume Right (vph)	12	85	22	13
Hadj (s)	0.19	-0.03	0.01	0.07
Departure Headway (s)	6.1	5.8	5.5	5.4
Degree Utilization, x	0.23	0.31	0.41	0.48
Capacity (veh/h)	509	558	610	625
Control Delay (s)	11.0	11.3	12.1	13.4
Approach Delay (s)	11.0	11.3	12.1	13.4
Approach LOS	B	B	B	B

Intersection Summary			
Delay	12.2		
HCM Level of Service	B		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
36: Central Avenue & SR 99 NB On-Ramp

1/17/2014

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	480	181	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	119	565	223	740	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	223				1396	593
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	49				1381	469
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1311				127	523

Direction, Lane #	EB 1	WB 1
Volume Total	684	963
Volume Left	119	0
Volume Right	0	740
cSH	1311	1700
Volume to Capacity	0.09	0.57
Queue Length 95th (ft)	7	0
Control Delay (s)	2.3	0.0
Lane LOS	A	
Approach Delay (s)	2.3	0.0
Approach LOS		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	329	181	0	238	71
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Hourly flow rate (vph)	0	383	241	0	294	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	241				624	241
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	241				624	241
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				32	89
cM capacity (veh/h)	1263				432	771

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	383	241	381
Volume Left	0	0	294
Volume Right	0	0	88
cSH	1700	1700	534
Volume to Capacity	0.23	0.14	0.71
Queue Length 95th (ft)	0	0	144
Control Delay (s)	0.0	0.0	26.8
Lane LOS			D
Approach Delay (s)	0.0	0.0	26.8
Approach LOS			D

Intersection Summary			
Average Delay	10.2		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
48: North Ave & McCall Avenue

1/17/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	18	117	13	29	47	87	5	303	32	113	252	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	21	134	15	38	62	114	5	309	33	131	293	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	170	214	347	428
Volume Left (vph)	21	38	5	131
Volume Right (vph)	15	114	33	3
Hadj (s)	0.02	-0.23	0.00	0.11
Departure Headway (s)	6.8	6.5	6.1	6.0
Degree Utilization, x	0.32	0.39	0.59	0.72
Capacity (veh/h)	444	480	554	567
Control Delay (s)	13.1	13.5	17.3	22.7
Approach Delay (s)	13.1	13.5	17.3	22.7
Approach LOS	B	B	C	C

Intersection Summary			
Delay	18.0		
HCM Level of Service	C		
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	18	117	13	29	47	87	5	303	32	113	252	3
Peak Hour Factor	0.87	0.87	0.87	0.76	0.76	0.76	0.98	0.98	0.98	0.86	0.86	0.86
Hourly flow rate (vph)	21	134	15	38	62	114	5	309	33	131	293	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	170	214	347	428
Volume Left (vph)	21	38	5	131
Volume Right (vph)	15	114	33	3
Hadj (s)	0.02	-0.23	0.00	0.11
Departure Headway (s)	6.8	6.5	6.1	6.0
Degree Utilization, x	0.32	0.39	0.59	0.72
Capacity (veh/h)	444	480	554	567
Control Delay (s)	13.1	13.5	17.3	22.7
Approach Delay (s)	13.1	13.5	17.3	22.7
Approach LOS	B	B	C	C

Intersection Summary			
Delay	18.0		
HCM Level of Service	C		
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	131	121	0	1	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	142	132	0	1	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	132				298	132
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132				298	132
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1454				688	918

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	154	132	17
Volume Left	12	0	1
Volume Right	0	0	16
cSH	1454	1700	899
Volume to Capacity	0.01	0.08	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	0.6	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	0.6	0.0	9.1
Approach LOS			A

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

CUMULATIVE 2035 CONDITIONS WORKSHEETS

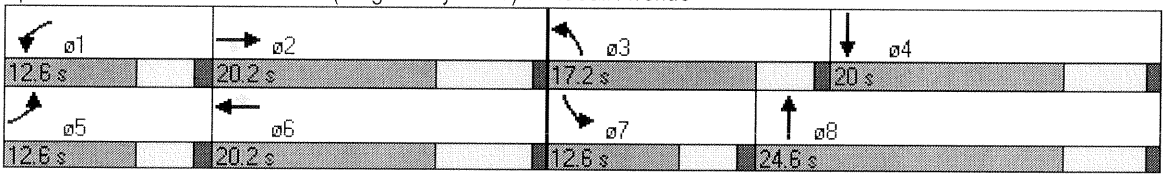
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1156	350	59	1692	77	399	305	32	67	400	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.986			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1819	0	1752	1758	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1819	0	1752	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			380			84		7			30	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	125	1257	380	64	920	84	434	332	35	73	435	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	1257	380	64	920	84	434	367	0	73	635	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.5	13.5	12.7	21.7		8.1	14.1	
Actuated g/C Ratio	0.12	0.24	0.24	0.12	0.20	0.20	0.19	0.32		0.12	0.21	
v/c Ratio	0.60	1.60	0.58	0.31	1.38	0.22	1.32	0.62		0.35	1.62	
Control Delay	43.4	297.6	7.1	32.9	205.9	8.1	191.9	28.2		33.9	316.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	43.4	297.6	7.1	32.9	205.9	8.1	191.9	28.2		33.9	316.2	
LOS	D	F	A	C	F	A	F	C		C	F	
Approach Delay		216.9			180.0			116.9			287.1	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.62
Intersection Signal Delay: 200.8 Intersection LOS: F
Intersection Capacity Utilization 111.3% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



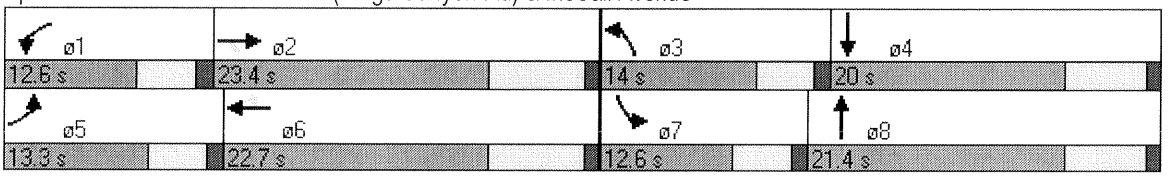
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	1669	328	63	1264	76	349	398	51	156	298	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1773	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			357			83		8			22	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	122	1814	357	68	687	83	379	433	55	170	324	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	1814	357	68	687	83	379	488	0	170	437	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.6	19.1	19.1	8.1	16.2	16.2	9.5	15.5		8.1	14.1	
Actuated g/C Ratio	0.13	0.28	0.28	0.12	0.24	0.24	0.14	0.23		0.12	0.21	
v/c Ratio	0.55	1.91	0.51	0.33	0.86	0.19	1.54	1.15		0.81	1.13	
Control Delay	39.1	436.7	5.9	33.3	38.7	7.2	290.6	122.0		62.1	113.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.1	436.7	5.9	33.3	38.7	7.2	290.6	122.0		62.1	113.9	
LOS	D	F	A	C	D	A	F	F		E	F	
Approach Delay		348.5			35.1			195.7			99.4	
Approach LOS		F			D			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.91
Intersection Signal Delay: 229.9 Intersection LOS: F
Intersection Capacity Utilization 112.5% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



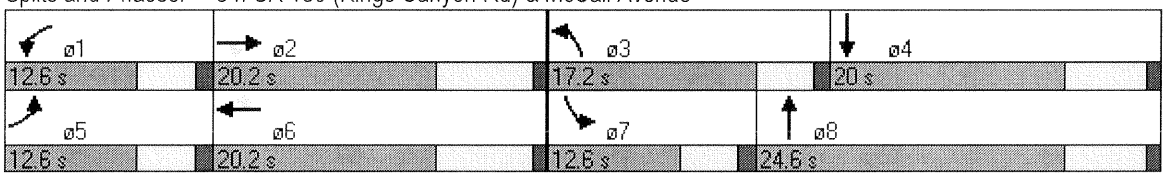
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1156	495	59	1692	77	543	312	32	67	407	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.986			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1819	0	1752	1758	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1819	0	1752	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			459			84		7			29	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	125	1257	538	64	920	84	590	339	35	73	442	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	1257	538	64	920	84	590	374	0	73	642	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	20.2	20.2	12.6	20.2	20.2	17.2	24.6	0.0	12.6	20.0	0.0
Total Split (%)	18.0%	28.9%	28.9%	18.0%	28.9%	28.9%	24.6%	35.1%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.0	13.4	13.4	8.0	13.4	13.4	12.6	18.6		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	15.9	15.9	8.1	13.5	13.5	12.7	21.7		8.1	14.1	
Actuated g/C Ratio	0.12	0.24	0.24	0.12	0.20	0.20	0.19	0.32		0.12	0.21	
v/c Ratio	0.60	1.60	0.75	0.31	1.38	0.22	1.79	0.63		0.35	1.65	
Control Delay	43.4	297.6	13.4	32.9	205.9	8.1	392.4	28.7		33.9	325.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	43.4	297.6	13.4	32.9	205.9	8.1	392.4	28.7		33.9	325.4	
LOS	D	F	B	C	F	A	F	C		C	F	
Approach Delay		201.4			180.0			251.3			295.6	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.79
Intersection Signal Delay: 221.2 Intersection LOS: F
Intersection Capacity Utilization 119.7% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



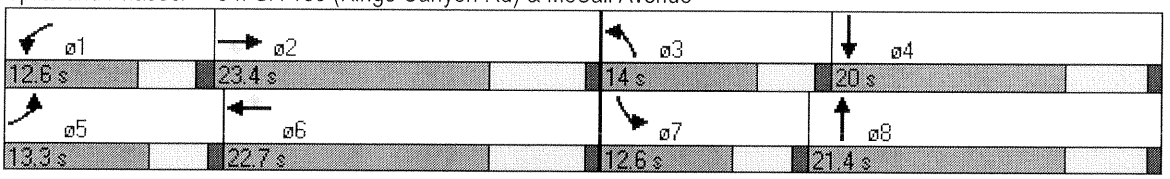
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	1669	338	63	1264	76	359	398	51	156	298	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1773	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	1752	1813	0	1752	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			367			83		8			22	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	122	1814	367	68	687	83	390	433	55	170	324	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	1814	367	68	687	83	390	488	0	170	437	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	13.3	23.4	23.4	12.6	22.7	22.7	14.0	21.4	0.0	12.6	20.0	0.0
Total Split (%)	19.0%	33.4%	33.4%	18.0%	32.4%	32.4%	20.0%	30.6%	0.0%	18.0%	28.6%	0.0%
Maximum Green (s)	8.7	16.6	16.6	8.0	15.9	15.9	9.4	15.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.6	19.1	19.1	8.1	16.2	16.2	9.5	15.5		8.1	14.1	
Actuated g/C Ratio	0.13	0.28	0.28	0.12	0.24	0.24	0.14	0.23		0.12	0.21	
v/c Ratio	0.55	1.91	0.52	0.33	0.86	0.19	1.59	1.15		0.81	1.13	
Control Delay	39.1	436.7	5.9	33.3	38.7	7.2	309.4	122.0		62.1	113.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.1	436.7	5.9	33.3	38.7	7.2	309.4	122.0		62.1	113.9	
LOS	D	F	A	C	D	A	F	F		E	F	
Approach Delay		347.0			35.1			205.2			99.4	
Approach LOS		F			D			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.91
Intersection Signal Delay: 231.1 Intersection LOS: F
Intersection Capacity Utilization 113.0% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



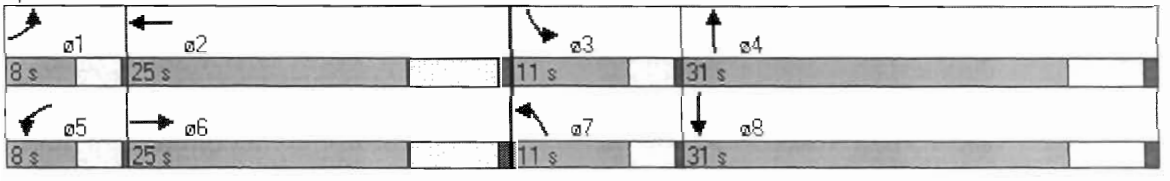
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	491	157	27	837	237	280	379	11	198	397	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.967			0.996			0.946	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3379	0	1752	3389	0	1752	1837	0	1752	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3379	0	1752	3389	0	1752	1837	0	1752	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			46			2			41	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	126	534	171	29	910	258	304	412	12	215	432	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	705	0	29	1168	0	304	424	0	215	677	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.0		4.5	18.2		7.5	25.0		7.5	25.0	
Actuated g/C Ratio	0.06	0.31		0.06	0.24		0.10	0.33		0.10	0.33	
v/c Ratio	1.20	0.66		0.28	1.36		1.74	0.69		1.23	1.11	
Control Delay	187.1	25.7		40.6	197.0		380.5	28.5		176.0	96.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	187.1	25.7		40.6	197.0		380.5	28.5		176.0	96.7	
LOS	F	C		D	F		F	C		F	F	
Approach Delay		50.1			193.2			175.5			115.8	
Approach LOS		D			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.74
Intersection Signal Delay: 138.2 Intersection LOS: F
Intersection Capacity Utilization 104.6% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	171	12	9	204	130	9	135	7	91	157	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	186	13	10	222	141	10	147	8	99	171	38

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	212	373	164	308
Volume Left (vph)	13	10	10	99
Volume Right (vph)	13	141	8	38
Hadj (s)	0.20	0.00	0.04	0.04
Departure Headway (s)	6.4	5.9	6.5	6.1
Degree Utilization, x	0.38	0.61	0.29	0.52
Capacity (veh/h)	498	579	483	544
Control Delay (s)	13.2	17.6	12.1	15.6
Approach Delay (s)	13.2	17.6	12.1	15.6
Approach LOS	B	C	B	C

Intersection Summary			
Delay	15.3		
HCM Level of Service	C		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	161	192	10	26	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	175	209	11	28	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	220				420	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220				420	214
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	99
cM capacity (veh/h)	1344				582	823

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	190	220	39
Volume Left	15	0	28
Volume Right	0	11	11
cSH	1344	1700	633
Volume to Capacity	0.01	0.13	0.06
Queue Length 95th (ft)	1	0	5
Control Delay (s)	0.7	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	191	25	9	173	24	24	51	8	34	60	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	208	27	10	188	26	26	55	9	37	65	32

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	257	224	90	134
Volume Left (vph)	22	10	26	37
Volume Right (vph)	27	26	9	32
Hadj (s)	0.00	-0.01	0.05	-0.04
Departure Headway (s)	4.8	4.8	5.3	5.2
Degree Utilization, x	0.34	0.30	0.13	0.19
Capacity (veh/h)	706	701	604	626
Control Delay (s)	10.3	9.9	9.2	9.4
Approach Delay (s)	10.3	9.9	9.2	9.4
Approach LOS	B	A	A	A

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	52	149	105	46	137	47	161	391	40	54	356	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	162	114	50	149	51	175	425	43	59	387	55

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	333	250	175	468	59	442
Volume Left (vph)	57	50	175	0	59	0
Volume Right (vph)	114	51	0	43	0	55
Hadj (s)	0.05	0.14	0.55	-0.01	0.55	-0.04
Departure Headway (s)	8.6	9.1	9.1	8.5	9.1	8.5
Degree Utilization, x	0.79	0.63	0.44	1.10	0.15	1.05
Capacity (veh/h)	412	379	395	436	390	428
Control Delay (s)	37.3	26.3	17.8	102.7	12.5	84.8
Approach Delay (s)	37.3	26.3	79.6		76.3	
Approach LOS	E	D	F		F	

Intersection Summary			
Delay	62.8		
HCM Level of Service	F		
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	115	4	8	131	86	13	256	14	67	338	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	125	4	9	142	93	14	278	15	73	367	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	140	245	308	462
Volume Left (vph)	11	9	14	73
Volume Right (vph)	4	93	15	22
Hadj (s)	0.22	0.00	0.03	0.05
Departure Headway (s)	7.1	6.6	6.2	5.9
Degree Utilization, x	0.28	0.45	0.53	0.76
Capacity (veh/h)	428	479	537	577
Control Delay (s)	12.9	14.9	16.0	25.5
Approach Delay (s)	12.9	14.9	16.0	25.5
Approach LOS	B	B	C	D

Intersection Summary			
Delay	19.2		
HCM Level of Service	C		
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	73	653	279	259	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	79	710	303	282	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	303				1312	444
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	258				1305	404
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	93				100	100
cM capacity (veh/h)	1200				159	623

Direction, Lane #	EB 1	WB 1
Volume Total	789	585
Volume Left	79	0
Volume Right	0	282
cSH	1200	1700
Volume to Capacity	0.07	0.34
Queue Length 95th (ft)	5	0
Control Delay (s)	1.7	0.0
Lane LOS	A	
Approach Delay (s)	1.7	0.0
Approach LOS		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↗
Volume (veh/h)	0	268	278	0	449	132
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	291	302	0	488	143
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	302				593	302
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	302				593	302
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				0	80
cM capacity (veh/h)	1199				450	712

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	291	302	632
Volume Left	0	0	488
Volume Right	0	0	143
cSH	1700	1700	504
Volume to Capacity	0.17	0.18	1.25
Queue Length 95th (ft)	0	0	632
Control Delay (s)	0.0	0.0	153.9
Lane LOS			F
Approach Delay (s)	0.0	0.0	153.9
Approach LOS			F

Intersection Summary			
Average Delay	79.3		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	59	5	43	121	210	14	313	37	140	394	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	64	5	47	132	228	15	340	40	152	428	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	83	407	396	599
Volume Left (vph)	13	47	15	152
Volume Right (vph)	5	228	40	18
Hadj (s)	0.04	-0.26	0.00	0.08
Departure Headway (s)	8.5	6.9	7.0	6.8
Degree Utilization, x	0.19	0.78	0.77	1.14
Capacity (veh/h)	363	511	504	521
Control Delay (s)	13.5	29.7	29.2	107.1
Approach Delay (s)	13.5	29.7	29.2	107.1
Approach LOS	B	D	D	F

Intersection Summary			
Delay	59.9		
HCM Level of Service	F		
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

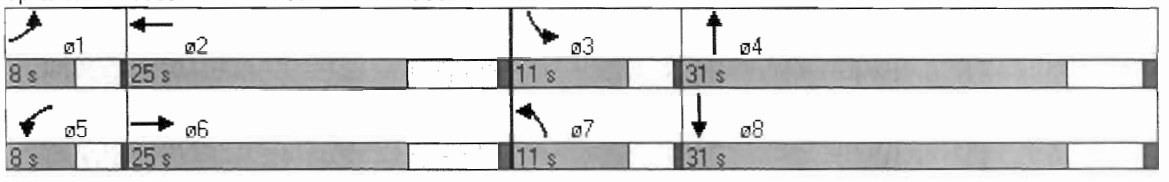
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	947	265	24	555	156	282	374	43	206	345	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.967			0.984			0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3389	0	1752	3389	0	1752	1815	0	1752	1762	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3389	0	1752	3389	0	1752	1815	0	1752	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			45			8			31	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	302	1029	288	26	603	170	307	407	47	224	375	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	302	1317	0	26	773	0	307	454	0	224	535	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.1		4.5	18.2		7.5	23.7		7.5	23.7	
Actuated g/C Ratio	0.06	0.31		0.06	0.25		0.10	0.32		0.10	0.32	
v/c Ratio	2.82	1.21		0.24	0.89		1.72	0.77		1.26	0.91	
Control Delay	865.8	128.2		39.5	39.9		373.9	32.5		185.8	44.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	865.8	128.2		39.5	39.9		373.9	32.5		185.8	44.9	
LOS	F	F		D	D		F	C		F	D	
Approach Delay		265.8			39.9			170.2			86.5	
Approach LOS		F			D			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 73.8
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.82
Intersection Signal Delay: 166.9 Intersection LOS: F
Intersection Capacity Utilization 98.0% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	43	199	12	8	168	129	10	213	17	116	150	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	216	13	9	183	140	11	232	18	126	163	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	276	332	261	296
Volume Left (vph)	47	9	11	126
Volume Right (vph)	13	140	18	7
Hadj (s)	0.23	-0.03	0.02	0.12
Departure Headway (s)	6.9	6.5	6.8	6.8
Degree Utilization, x	0.53	0.60	0.49	0.56
Capacity (veh/h)	471	505	474	480
Control Delay (s)	17.3	18.8	16.1	17.9
Approach Delay (s)	17.3	18.8	16.1	17.9
Approach LOS	C	C	C	C

Intersection Summary			
Delay	17.6		
HCM Level of Service	C		
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	159	194	8	13	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	173	211	9	14	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	220				403	215
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220				403	215
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	97
cM capacity (veh/h)	1344				598	822

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	180	220	37
Volume Left	8	0	14
Volume Right	0	9	23
cSH	1344	1700	719
Volume to Capacity	0.01	0.13	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.4	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	24.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	189	30	7	172	25	33	68	9	23	60	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	205	33	8	187	27	36	74	10	25	65	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	263	222	120	102
Volume Left (vph)	25	8	36	25
Volume Right (vph)	33	27	10	12
Hadj (s)	0.00	-0.02	0.06	0.03
Departure Headway (s)	4.8	4.8	5.3	5.3
Degree Utilization, x	0.35	0.30	0.18	0.15
Capacity (veh/h)	707	701	613	607
Control Delay (s)	10.4	9.9	9.5	9.3
Approach Delay (s)	10.4	9.9	9.5	9.3
Approach LOS	B	A	A	A

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	92	124	129	33	135	56	132	447	41	66	456	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	100	135	140	36	147	61	143	486	45	72	496	86

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	375	243	143	530	72	582
Volume Left (vph)	100	36	143	0	72	0
Volume Right (vph)	140	61	0	45	0	86
Hadj (s)	0.05	0.10	0.55	-0.01	0.55	-0.05
Departure Headway (s)	8.6	9.3	9.3	8.7	9.3	8.7
Degree Utilization, x	0.89	0.63	0.37	1.28	0.19	1.40
Capacity (veh/h)	409	371	384	421	382	425
Control Delay (s)	50.9	26.8	16.4	169.7	13.2	218.6
Approach Delay (s)	50.9	26.8	137.1		196.0	
Approach LOS	F	D	F		F	

Intersection Summary			
Delay	126.5		
HCM Level of Service	F		
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	133	15	12	98	104	9	347	26	91	316	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	145	16	13	107	113	10	377	28	99	343	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	188	233	415	461
Volume Left (vph)	27	13	10	99
Volume Right (vph)	16	113	28	18
Hadj (s)	0.20	-0.06	0.01	0.07
Departure Headway (s)	7.8	7.4	6.7	6.6
Degree Utilization, x	0.41	0.48	0.77	0.85
Capacity (veh/h)	407	438	508	526
Control Delay (s)	16.1	17.0	28.7	36.4
Approach Delay (s)	16.1	17.0	28.7	36.4
Approach LOS	C	C	D	E

Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	104	584	231	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	635	251	651	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.89				0.89	0.89
vC, conflicting volume	251				1438	577
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	96				1430	462
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1273				120	534

Direction, Lane #	EB 1	WB 1
Volume Total	748	902
Volume Left	113	0
Volume Right	0	651
cSH	1273	1700
Volume to Capacity	0.09	0.53
Queue Length 95th (ft)	7	0
Control Delay (s)	2.2	0.0
Lane LOS	A	
Approach Delay (s)	2.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	410	231	0	238	81
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	446	251	0	259	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	251				697	251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	251				697	251
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				34	88
cM capacity (veh/h)	1253				391	761

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	446	251	347
Volume Left	0	0	259
Volume Right	0	0	88
cSH	1700	1700	498
Volume to Capacity	0.26	0.15	0.70
Queue Length 95th (ft)	0	0	134
Control Delay (s)	0.0	0.0	27.1
Lane LOS			D
Approach Delay (s)	0.0	0.0	27.1
Approach LOS			D

Intersection Summary			
Average Delay	9.0		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	139	15	47	56	157	5	458	46	189	388	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	151	16	51	61	171	5	498	50	205	422	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	192	283	553	630
Volume Left (vph)	25	51	5	205
Volume Right (vph)	16	171	50	3
Hadj (s)	0.03	-0.28	0.00	0.11
Departure Headway (s)	8.6	7.9	7.3	7.4
Degree Utilization, x	0.46	0.62	1.12	1.29
Capacity (veh/h)	396	444	500	497
Control Delay (s)	18.7	22.9	102.3	168.9
Approach Delay (s)	18.7	22.9	102.3	168.9
Approach LOS	C	C	F	F

Intersection Summary			
Delay	104.4		
HCM Level of Service	F		
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		

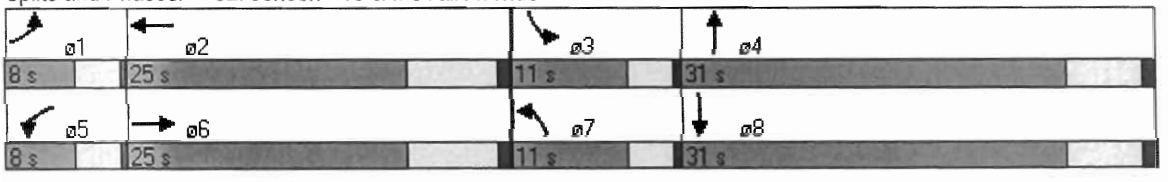
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	491	161	27	837	237	284	530	11	198	549	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.967			0.997			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3375	0	1752	3389	0	1752	1839	0	1752	1763	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3375	0	1752	3389	0	1752	1839	0	1752	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			46			2			30	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	126	534	175	29	910	258	309	576	12	215	597	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	709	0	29	1168	0	309	588	0	215	842	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

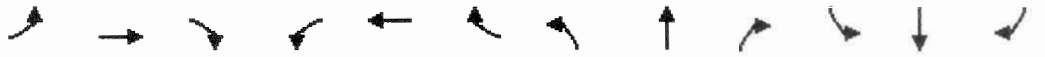
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.0		4.5	18.2		7.5	25.0		7.5	25.0	
Actuated g/C Ratio	0.06	0.31		0.06	0.24		0.10	0.33		0.10	0.33	
v/c Ratio	1.20	0.66		0.28	1.36		1.77	0.96		1.23	1.38	
Control Delay	187.1	25.7		40.6	197.0		392.6	54.2		176.0	207.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	187.1	25.7		40.6	197.0		392.6	54.2		176.0	207.8	
LOS	F	C		D	F		F	D		F	F	
Approach Delay		50.1			193.2			170.7			201.3	
Approach LOS		D			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.77
Intersection Signal Delay: 160.3 Intersection LOS: F
Intersection Capacity Utilization 112.8% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	330	12	9	362	130	9	135	7	91	157	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	359	13	10	393	141	10	147	8	99	171	38

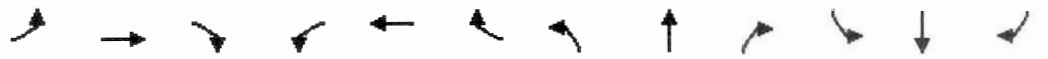
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	385	545	164	308
Volume Left (vph)	13	10	10	99
Volume Right (vph)	13	141	8	38
Hadj (s)	0.21	0.07	0.04	0.04
Departure Headway (s)	7.4	7.0	8.3	7.6
Degree Utilization, x	0.79	1.06	0.38	0.65
Capacity (veh/h)	472	500	392	452
Control Delay (s)	32.3	83.0	16.2	23.8
Approach Delay (s)	32.3	83.0	16.2	23.8
Approach LOS	D	F	C	C

Intersection Summary			
Delay	48.3		
HCM Level of Service	E		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	168	199	10	26	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	183	216	11	28	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	227				439	222
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227				439	222
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	98
cM capacity (veh/h)	1335				566	815

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	200	227	41
Volume Left	17	0	28
Volume Right	0	11	13
cSH	1335	1700	626
Volume to Capacity	0.01	0.13	0.07
Queue Length 95th (ft)	1	0	5
Control Delay (s)	0.8	0.0	11.2
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	11.2
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	364	25	9	344	24	24	51	8	34	60	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	396	27	10	374	26	26	55	9	37	65	32

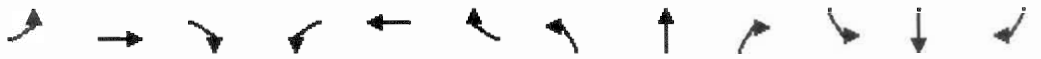
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	445	410	90	134
Volume Left (vph)	22	10	26	37
Volume Right (vph)	27	26	9	32
Hadj (s)	0.02	0.02	0.05	-0.04
Departure Headway (s)	5.3	5.3	6.5	6.3
Degree Utilization, x	0.65	0.61	0.16	0.23
Capacity (veh/h)	654	649	456	489
Control Delay (s)	17.7	16.2	10.8	11.2
Approach Delay (s)	17.7	16.2	10.8	11.2
Approach LOS	C	C	B	B

Intersection Summary			
Delay	15.7		
HCM Level of Service	C		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	52	308	105	55	295	51	161	391	49	59	356	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	335	114	60	321	55	175	425	53	64	387	55

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	505	436	175	478	64	442
Volume Left (vph)	57	60	175	0	64	0
Volume Right (vph)	114	55	0	53	0	55
Hadj (s)	0.11	0.17	0.55	-0.03	0.55	-0.04
Departure Headway (s)	9.6	9.6	10.2	9.6	10.2	9.6
Degree Utilization, x	1.34	1.17	0.49	1.28	0.18	1.18
Capacity (veh/h)	384	378	343	381	349	380
Control Delay (s)	198.0	130.1	21.5	170.1	14.2	133.5
Approach Delay (s)	198.0	130.1	130.3		118.4	
Approach LOS	F	F	F		F	

Intersection Summary			
Delay	143.7		
HCM Level of Service	F		
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	118	4	8	134	241	13	256	14	223	338	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	128	4	9	146	262	14	278	15	242	367	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	143	416	308	632
Volume Left (vph)	11	9	14	242
Volume Right (vph)	4	262	15	22
Hadj (s)	0.22	-0.15	0.03	0.11
Departure Headway (s)	8.5	7.1	7.5	7.1
Degree Utilization, x	0.34	0.82	0.64	1.24
Capacity (veh/h)	378	416	459	497
Control Delay (s)	15.7	34.8	22.7	147.8
Approach Delay (s)	15.7	34.8	22.7	147.8
Approach LOS	C	D	C	F

Intersection Summary			
Delay	78.1		
HCM Level of Service	F		
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱			
Volume (veh/h)	73	656	279	262	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	79	713	303	285	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	303				1317	446
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	254				1310	402
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	93				100	100
cM capacity (veh/h)	1200				157	623

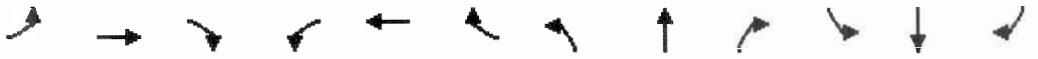
Direction, Lane #	EB 1	WB 1
Volume Total	792	588
Volume Left	79	0
Volume Right	0	285
cSH	1200	1700
Volume to Capacity	0.07	0.35
Queue 95th (ft)	5	0
Control Delay (s)	1.7	0.0
Lane LOS	A	
Approach Delay (s)	1.7	0.0
Approach LOS		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

Move	EBL	EBT	WBT	WBR	SBL	SBR
Lane gurations		↑	↑		↰	↱
Volur h/)	0	268	278	0	452	132
Sign l		Free	Free		Stop	
Grad		0%	0%		0%	
Peak Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourl v rate (vph)	0	291	302	0	491	143
Pede ns						
Lane ( )						
Walk d (ft/s)						
Perce ge						
Right ar (veh)						2
Median		None	None			
Median ra, e veh)						
Upstrea sig al (ft)						
pX, plat unblocked						
vC, con volume	302				593	302
vC1, st onf vol						
vC2, st onf vol						
vCu, ur d vol	302				593	302
tC, sing	4.2				6.5	6.3
tC, 2 sta (						
tF (s)	2.3				3.6	3.4
p0 queu %	100				0	80
cM capa h/h)	1199				450	712

Directio #	EB 1	WB 1	SB 1
Volume	291	302	635
Volume	0	0	491
Volume	0	0	143
cSH	1700	1700	503
Volume acity	0.17	0.18	1.26
Queue L 5th (ft)	0	0	643
Control s)	0.0	0.0	157.7
Lane LC			F
Approac y (s)	0.0	0.0	157.7
Approac			F

Intersec mmary				
Average			81.5	
Intersec acity Utilization			46.3%	ICU Level of Service A
Analysis (min)			15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	59	5	43	121	210	14	468	37	140	550	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	64	5	47	132	228	15	509	40	152	598	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	83	407	564	768
Volume Left (vph)	13	47	15	152
Volume Right (vph)	5	228	40	18
Hadj (s)	0.04	-0.26	0.01	0.08
Departure Headway (s)	9.1	7.3	7.1	7.2
Degree Utilization, x	0.21	0.82	1.12	1.54
Capacity (veh/h)	371	488	509	504
Control Delay (s)	14.6	35.5	102.1	270.5
Approach Delay (s)	14.6	35.5	102.1	270.5
Approach LOS	B	E	F	F

Intersection Summary			
Delay	154.3		
HCM Level of Service	F		
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	173	175	202	9	9	171
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	190	220	10	10	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	229				791	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	229				791	224
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				97	77
cM capacity (veh/h)	1339				308	815

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	378	229	196
Volume Left	188	0	10
Volume Right	0	10	186
cSH	1339	1700	753
Volume to Capacity	0.14	0.13	0.26
Queue Length 95th (ft)	12	0	26
Control Delay (s)	4.7	0.0	11.4
Lane LOS	A		B
Approach Delay (s)	4.7	0.0	11.4
Approach LOS			B

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

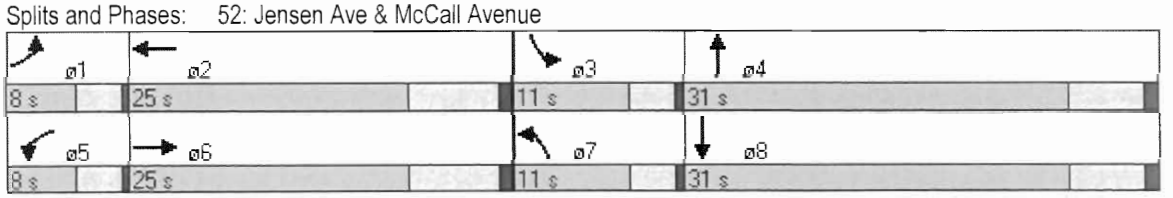
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	947	265	24	555	156	282	384	43	206	355	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.967			0.985			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3389	0	1752	3389	0	1752	1817	0	1752	1763	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3389	0	1752	3389	0	1752	1817	0	1752	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			45			8			30	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	302	1029	288	26	603	170	307	417	47	224	386	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	302	1317	0	26	773	0	307	464	0	224	546	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	25.0	0.0	8.0	25.0	0.0	11.0	31.0	0.0	11.0	31.0	0.0
Total Split (%)	10.7%	33.3%	0.0%	10.7%	33.3%	0.0%	14.7%	41.3%	0.0%	14.7%	41.3%	0.0%
Maximum Green (s)	4.5	18.2		4.5	18.2		7.5	25.0		7.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	23.1		4.5	18.2		7.5	23.9		7.5	23.9	
Actuated g/C Ratio	0.06	0.31		0.06	0.25		0.10	0.32		0.10	0.32	
v/c Ratio	2.82	1.21		0.24	0.89		1.72	0.78		1.26	0.92	
Control Delay	868.2	129.8		39.5	40.2		376.5	33.2		187.4	47.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	868.2	129.8		39.5	40.2		376.5	33.2		187.4	47.1	
LOS	F	F		D	D		F	C		F	D	
Approach Delay		267.5			40.2			169.9			88.0	
Approach LOS		F			D			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 74
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.82
Intersection Signal Delay: 167.7 Intersection LOS: F
Intersection Capacity Utilization 98.6% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	43	209	12	8	178	130	10	213	17	116	150	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	227	13	9	193	141	11	232	18	126	163	7

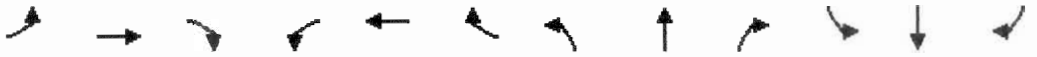
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	287	343	261	296
Volume Left (vph)	47	9	11	126
Volume Right (vph)	13	141	18	7
Hadj (s)	0.23	-0.02	0.02	0.12
Departure Headway (s)	7.0	6.6	6.9	6.9
Degree Utilization, x	0.56	0.63	0.50	0.57
Capacity (veh/h)	467	501	457	471
Control Delay (s)	18.3	20.1	16.6	18.5
Approach Delay (s)	18.3	20.1	16.6	18.5
Approach LOS	C	C	C	C

Intersection Summary			
Delay	18.5		
HCM Level of Service	C		
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	160	194	8	13	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	174	211	9	14	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	220				404	215
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220				404	215
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	97
cM capacity (veh/h)	1344				597	822

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	182	220	37
Volume Left	8	0	14
Volume Right	0	9	23
cSH	1344	1700	719
Volume to Capacity	0.01	0.13	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.4	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	24.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	200	30	7	186	26	33	68	9	23	60	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	217	33	8	202	28	36	74	10	25	65	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	275	238	120	102
Volume Left (vph)	25	8	36	25
Volume Right (vph)	33	28	10	12
Hadj (s)	0.00	-0.01	0.06	0.03
Departure Headway (s)	4.8	4.9	5.4	5.4
Degree Utilization, x	0.37	0.32	0.18	0.15
Capacity (veh/h)	703	697	592	595
Control Delay (s)	10.6	10.2	9.6	9.4
Approach Delay (s)	10.6	10.2	9.6	9.4
Approach LOS	B	B	A	A

Intersection Summary			
Delay	10.1		
HCM Level of Service	B		
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	92	134	129	33	146	57	132	447	42	66	456	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	100	146	140	36	159	62	143	486	46	72	496	86

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	386	257	143	532	72	582
Volume Left (vph)	100	36	143	0	72	0
Volume Right (vph)	140	62	0	46	0	86
Hadj (s)	0.05	0.10	0.55	-0.01	0.55	-0.05
Departure Headway (s)	8.7	9.4	9.4	8.9	9.5	8.9
Degree Utilization, x	0.93	0.67	0.38	1.31	0.19	1.43
Capacity (veh/h)	408	369	377	414	375	417
Control Delay (s)	58.3	29.4	16.8	181.3	13.5	230.3
Approach Delay (s)	58.3	29.4	146.4		206.5	
Approach LOS	F	D	F		F	

Intersection Summary			
Delay	133.8		
HCM Level of Service	F		
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
18: Central Avenue & McCall Avenue

1/17/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	133	15	12	98	114	9	347	26	101	316	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	145	16	13	107	124	10	377	28	110	343	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	188	243	415	472
Volume Left (vph)	27	13	10	110
Volume Right (vph)	16	124	28	18
Hadj (s)	0.20	-0.07	0.01	0.07
Departure Headway (s)	8.0	7.5	6.8	6.7
Degree Utilization, x	0.42	0.51	0.79	0.88
Capacity (veh/h)	404	441	500	521
Control Delay (s)	16.6	18.0	30.4	41.5
Approach Delay (s)	16.6	18.0	30.4	41.5
Approach LOS	C	C	D	E

Intersection Summary			
Delay	30.1		
HCM Level of Service	D		
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	104	584	231	599	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	635	251	651	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1090			
pX, platoon unblocked	0.89				0.89	0.89
vC, conflicting volume	251				1438	577
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	96				1430	462
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				100	100
cM capacity (veh/h)	1273				120	534

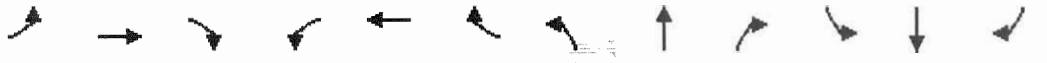
Direction, Lane #	EB 1	WB 1
Volume Total	748	902
Volume Left	113	0
Volume Right	0	651
cSH	1273	1700
Volume to Capacity	0.09	0.53
Queue Length 95th (ft)	7	0
Control Delay (s)	2.2	0.0
Lane LOS	A	
Approach Delay (s)	2.2	0.0
Approach LOS		

ntersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (veh/h)	0	410	231	0	238	81
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	446	251	0	259	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	251				697	251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	251				697	251
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				34	88
cM capacity (veh/h)	1253				391	761

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	446	251	347
Volume Left	0	0	259
Volume Right	0	0	88
cSH	1700	1700	498
Volume to Capacity	0.26	0.15	0.70
Queue Length 95th (ft)	0	0	134
Control Delay (s)	0.0	0.0	27.1
Lane LOS			D
Approach Delay (s)	0.0	0.0	27.1
Approach LOS			D

Intersection Summary			
Average Delay	9.0		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	139	15	47	56	157	5	468	46	189	398	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	151	16	51	61	171	5	509	50	205	433	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	192	283	564	641
Volume Left (vph)	25	51	5	205
Volume Right (vph)	16	171	50	3
Hadj (s)	0.03	-0.28	0.00	0.11
Departure Headway (s)	8.6	7.9	7.3	7.4
Degree Utilization, x	0.46	0.62	1.14	1.31
Capacity (veh/h)	396	444	500	498
Control Delay (s)	18.7	22.9	110.0	177.9
Approach Delay (s)	18.7	22.9	110.0	177.9
Approach LOS	C	C	F	F

Intersection Summary			
Delay	110.8		
HCM Level of Service	F		
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	166	215	0	1	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	180	234	0	1	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	234				438	234
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	234				438	234
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1334				571	805

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	192	234	17
Volume Left	12	0	1
Volume Right	0	0	16
cSH	1334	1700	785
Volume to Capacity	0.01	0.14	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s)	0.6	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	0.6	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

MITIGATION WORKSHEETS

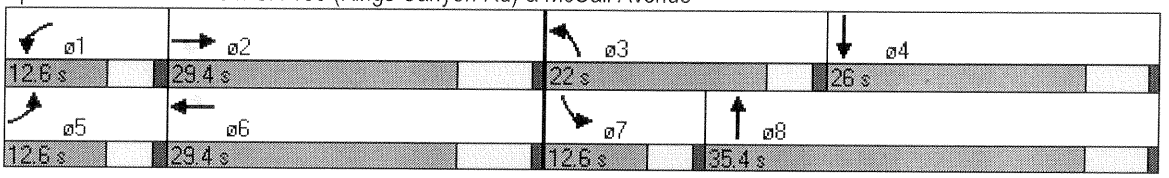
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	419	363	25	799	17	391	87	11	18	167	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			417			23		8			28	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	43	482	417	34	540	23	460	102	13	21	194	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	482	417	34	540	23	460	115	0	21	299	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	29.4	29.4	12.6	29.4	29.4	22.0	35.4	0.0	12.6	26.0	0.0
Total Split (%)	14.0%	32.7%	32.7%	14.0%	32.7%	32.7%	24.4%	39.3%	0.0%	14.0%	28.9%	0.0%
Maximum Green (s)	8.0	22.6	22.6	8.0	22.6	22.6	17.4	29.4		8.0	20.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.2	23.3	23.3	8.2	23.3	23.3	15.0	31.8		8.2	16.6	
Actuated g/C Ratio	0.10	0.29	0.29	0.10	0.29	0.29	0.19	0.40		0.10	0.21	
v/c Ratio	0.24	0.49	0.55	0.19	0.55	0.05	0.72	0.16		0.12	0.77	
Control Delay	40.9	27.9	6.2	40.1	28.8	11.2	38.5	18.1		39.2	42.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.9	27.9	6.2	40.1	28.8	11.2	38.5	18.1		39.2	42.8	
LOS	D	C	A	D	C	B	D	B		D	D	
Approach Delay		18.9			28.8			34.4			42.6	
Approach LOS		B			C			C			D	
Queue Length 50th (ft)	23	124	0	18	142	0	125	33		11	143	
Queue Length 95th (ft)	54	170	60	39	157	14	167	78		32	#224	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	182	979	754	182	979	475	767	756		182	473	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.24	0.49	0.55	0.19	0.55	0.05	0.60	0.15		0.12	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 79.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 62.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



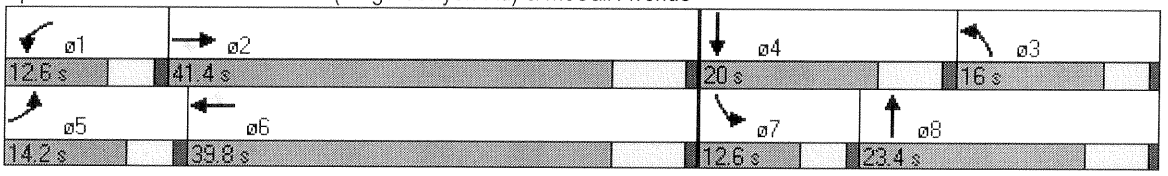
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	975	270	20	614	19	251	139	17	35	90	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			21		6			26	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	78	1083	300	22	337	21	292	162	20	38	99	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1083	300	22	337	21	292	182	0	38	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	14.2	41.4	41.4	12.6	39.8	39.8	16.0	23.4	0.0	12.6	20.0	0.0
Total Split (%)	15.8%	46.0%	46.0%	14.0%	44.2%	44.2%	17.8%	26.0%	0.0%	14.0%	22.2%	0.0%
Maximum Green (s)	9.6	34.6	34.6	8.0	33.0	33.0	11.4	17.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.9	39.5	39.5	8.1	33.7	33.7	10.7	20.1		8.1	11.9	
Actuated g/C Ratio	0.11	0.47	0.47	0.10	0.40	0.40	0.13	0.24		0.10	0.14	
v/c Ratio	0.42	0.69	0.34	0.13	0.25	0.03	0.67	0.42		0.23	0.57	
Control Delay	44.8	22.5	3.5	39.5	19.1	8.1	44.6	32.9		41.3	37.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	44.8	22.5	3.5	39.5	19.1	8.1	44.6	32.9		41.3	37.9	
LOS	D	C	A	D	B	A	D	C		D	D	
Approach Delay		19.8			19.6			40.1			38.6	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	41	202	0	11	66	0	79	90		20	66	
Queue Length 95th (ft)	87	376	49	35	103	15	119	148		51	129	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	201	1564	893	168	1334	638	463	447		168	314	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.69	0.34	0.13	0.25	0.03	0.63	0.41		0.23	0.49	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 84.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 67.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



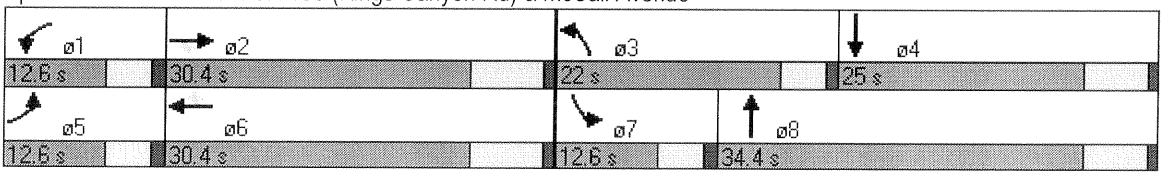
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	572	363	25	943	17	391	87	11	18	167	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			417			23		7			27	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	43	657	417	34	637	23	460	102	13	21	194	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	657	417	34	637	23	460	115	0	21	299	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	30.4	30.4	12.6	30.4	30.4	22.0	34.4	0.0	12.6	25.0	0.0
Total Split (%)	14.0%	33.8%	33.8%	14.0%	33.8%	33.8%	24.4%	38.2%	0.0%	14.0%	27.8%	0.0%
Maximum Green (s)	8.0	23.6	23.6	8.0	23.6	23.6	17.4	28.4		8.0	19.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.2	24.2	24.2	8.2	24.2	24.2	15.1	31.6		8.2	16.3	
Actuated g/C Ratio	0.10	0.30	0.30	0.10	0.30	0.30	0.19	0.39		0.10	0.20	
v/c Ratio	0.24	0.65	0.55	0.19	0.63	0.05	0.72	0.16		0.12	0.79	
Control Delay	41.2	30.3	6.0	40.2	29.9	10.8	38.9	18.8		39.3	45.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	41.2	30.3	6.0	40.2	29.9	10.8	38.9	18.8		39.3	45.4	
LOS	D	C	A	D	C	B	D	B		D	D	
Approach Delay		21.6			29.7			34.9			45.0	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	23	180	0	18	173	0	126	34		11	146	
Queue Length 95th (ft)	54	233	59	39	183	13	167	80		32	#247	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	179	1009	764	179	1009	489	756	734		179	445	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.24	0.65	0.55	0.19	0.63	0.05	0.61	0.16		0.12	0.67	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 80.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 29.3 Intersection LOS: C
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



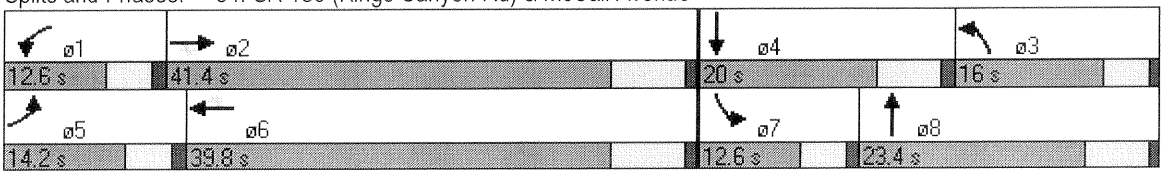
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	984	270	20	635	19	251	139	17	35	90	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1747	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			21		6			26	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	78	1093	300	22	349	21	292	162	20	38	99	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	1093	300	22	349	21	292	182	0	38	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	14.2	41.4	41.4	12.6	39.8	39.8	16.0	23.4	0.0	12.6	20.0	0.0
Total Split (%)	15.8%	46.0%	46.0%	14.0%	44.2%	44.2%	17.8%	26.0%	0.0%	14.0%	22.2%	0.0%
Maximum Green (s)	9.6	34.6	34.6	8.0	33.0	33.0	11.4	17.4		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.9	39.5	39.5	8.1	33.7	33.7	10.7	20.1		8.1	11.9	
Actuated g/C Ratio	0.11	0.47	0.47	0.10	0.40	0.40	0.13	0.24		0.10	0.14	
v/c Ratio	0.42	0.70	0.34	0.13	0.26	0.03	0.67	0.42		0.23	0.57	
Control Delay	44.8	22.7	3.5	39.5	19.1	8.1	44.6	32.9		41.3	37.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	44.8	22.7	3.5	39.5	19.1	8.1	44.6	32.9		41.3	37.9	
LOS	D	C	A	D	B	A	D	C		D	D	
Approach Delay		20.0			19.7			40.1			38.6	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	41	204	0	11	68	0	79	90		20	66	
Queue Length 95th (ft)	87	#384	49	35	106	15	119	148		51	129	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	201	1564	893	168	1334	638	463	447		168	314	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.70	0.34	0.13	0.26	0.03	0.63	0.41		0.23	0.49	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 84.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 67.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



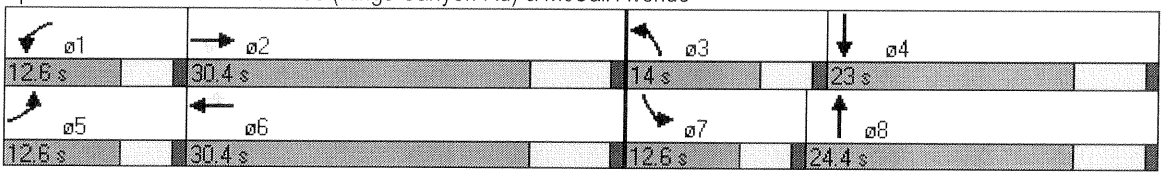
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	671	239	30	1067	26	272	117	14	25	200	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1749	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			275			35		7			30	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	59	771	275	41	721	35	320	138	16	29	233	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	771	275	41	721	35	320	154	0	29	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	30.4	30.4	12.6	30.4	30.4	14.0	24.4	0.0	12.6	23.0	0.0
Total Split (%)	15.8%	38.0%	38.0%	15.8%	38.0%	38.0%	17.5%	30.5%	0.0%	15.8%	28.8%	0.0%
Maximum Green (s)	8.0	23.6	23.6	8.0	23.6	23.6	9.4	18.4		8.0	17.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	23.8	23.8	8.1	23.8	23.8	9.4	25.8		8.1	16.4	
Actuated g/C Ratio	0.11	0.32	0.32	0.11	0.32	0.32	0.13	0.35		0.11	0.22	
v/c Ratio	0.31	0.72	0.40	0.21	0.67	0.07	0.74	0.24		0.15	0.87	
Control Delay	37.7	28.2	5.0	35.8	26.8	8.0	45.0	21.9		34.8	49.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	37.7	28.2	5.0	35.8	26.8	8.0	45.0	21.9		34.8	49.9	
LOS	D	C	A	D	C	A	D	C		C	D	
Approach Delay		22.9			26.5			37.5			48.8	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	28	184	0	19	169	0	81	48		14	161	
Queue Length 95th (ft)	62	240	47	40	178	14	#130	107		36	#293	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	191	1073	690	191	1073	527	435	635		191	427	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.31	0.72	0.40	0.21	0.67	0.07	0.74	0.24		0.15	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 30.0 Intersection LOS: C
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



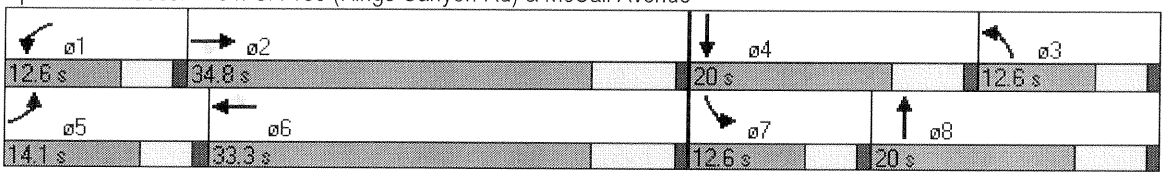
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1101	270	27	739	27	258	183	22	52	126	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1756	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			30		7			26	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	86	1223	300	30	406	30	300	213	26	57	138	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1223	300	30	406	30	300	239	0	57	203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	14.1	34.8	34.8	12.6	33.3	33.3	12.6	20.0	0.0	12.6	20.0	0.0
Total Split (%)	17.6%	43.5%	43.5%	15.8%	41.6%	41.6%	15.8%	25.0%	0.0%	15.8%	25.0%	0.0%
Maximum Green (s)	9.5	28.0	28.0	8.0	26.5	26.5	8.0	14.0		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.9	32.8	32.8	8.1	27.1	27.1	8.2	18.1		8.1	12.4	
Actuated g/C Ratio	0.12	0.43	0.43	0.11	0.36	0.36	0.11	0.24		0.11	0.16	
v/c Ratio	0.42	0.84	0.35	0.16	0.34	0.05	0.82	0.55		0.30	0.66	
Control Delay	39.5	28.8	3.8	35.1	20.1	7.4	54.0	34.1		38.0	37.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.5	28.8	3.8	35.1	20.1	7.4	54.0	34.1		38.0	37.5	
LOS	D	C	A	D	C	A	D	C		D	D	
Approach Delay		24.7			20.2			45.2			37.6	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	41	235	0	14	80	0	76	110		27	83	
Queue Length 95th (ft)	84	#480	50	39	117	17	#137	#200		62	151	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	222	1448	849	187	1196	580	368	438		187	349	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.84	0.35	0.16	0.34	0.05	0.82	0.55		0.30	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 73.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



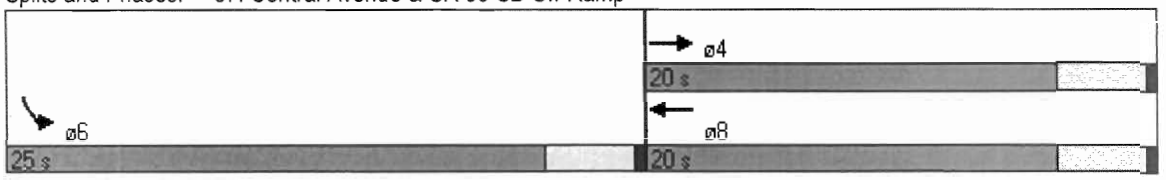
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	212	200	0	435	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						119
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	255	274	0	518	137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	255	274	0	518	137
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	25.0	25.0
Total Split (%)	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%
Maximum Green (s)		16.0	16.0		21.0	21.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.1	11.2		20.1	20.1
Actuated g/C Ratio		0.32	0.32		0.57	0.57
v/c Ratio		0.48	0.51		0.57	0.16
Control Delay		14.1	14.7		11.6	2.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.1	14.7		11.6	2.8
LOS		B	B		B	A
Approach Delay		14.1	14.7		9.8	
Approach LOS		B	B		A	
Queue Length 50th (ft)		39	42		70	2
Queue Length 95th (ft)		86	78		163	20
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		810	810		1010	948
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.31	0.34		0.51	0.14

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 35.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 11.8 Intersection LOS: B
Intersection Capacity Utilization 41.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



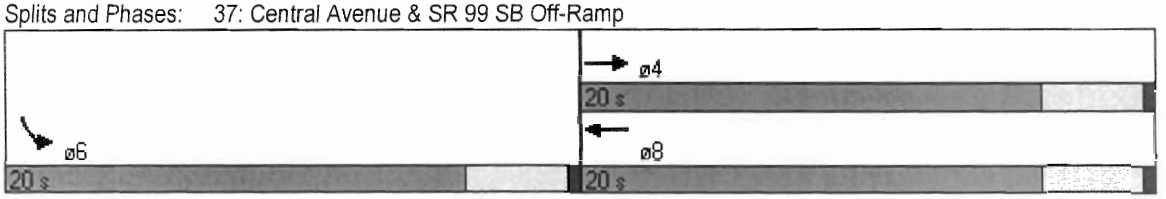
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	308	169	0	238	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						81
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	358	225	0	294	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	358	225	0	294	81
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.5	11.5		12.0	12.0
Actuated g/C Ratio		0.36	0.36		0.38	0.38
v/c Ratio		0.59	0.37		0.49	0.14
Control Delay		12.9	9.6		11.5	3.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		12.9	9.6		11.5	3.2
LOS		B	A		B	A
Approach Delay		12.9	9.6		9.7	
Approach LOS		B	A		A	
Queue Length 50th (ft)		40	23		34	0
Queue Length 95th (ft)		106	54		80	13
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		874	874		831	782
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.41	0.26		0.35	0.10

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 36.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



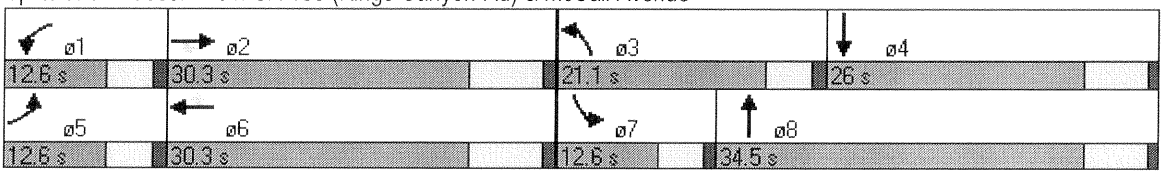
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	671	384	30	1067	26	416	124	14	25	207	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.985			0.949	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1817	0	1752	1751	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1817	0	1752	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			441			35		6			26	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	59	771	441	41	721	35	489	146	16	29	241	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	771	441	41	721	35	489	162	0	29	364	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	30.3	30.3	12.6	30.3	30.3	21.1	34.5	0.0	12.6	26.0	0.0
Total Split (%)	14.0%	33.7%	33.7%	14.0%	33.7%	33.7%	23.4%	38.3%	0.0%	14.0%	28.9%	0.0%
Maximum Green (s)	8.0	23.5	23.5	8.0	23.5	23.5	16.5	28.5		8.0	20.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	26.2	26.2	8.1	23.8	23.8	15.5	34.3		8.1	18.9	
Actuated g/C Ratio	0.09	0.31	0.31	0.09	0.28	0.28	0.18	0.40		0.09	0.22	
v/c Ratio	0.36	0.75	0.56	0.25	0.77	0.08	0.79	0.22		0.17	0.89	
Control Delay	45.2	34.4	6.0	42.3	36.7	9.4	44.9	19.9		40.8	56.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	45.2	34.4	6.0	42.3	36.7	9.4	44.9	19.9		40.8	56.9	
LOS	D	C	A	D	D	A	D	B		D	E	
Approach Delay		25.0			35.8			38.7			55.7	
Approach LOS		C			D			D			E	
Queue Length 50th (ft)	32	221	0	22	203	0	138	51		16	188	
Queue Length 95th (ft)	69	#305	61	44	210	16	179	109		40	#322	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	166	1025	787	166	932	462	665	733		166	435	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.36	0.75	0.56	0.25	0.77	0.08	0.74	0.22		0.17	0.84	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 85.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 34.5 Intersection LOS: C
Intersection Capacity Utilization 72.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



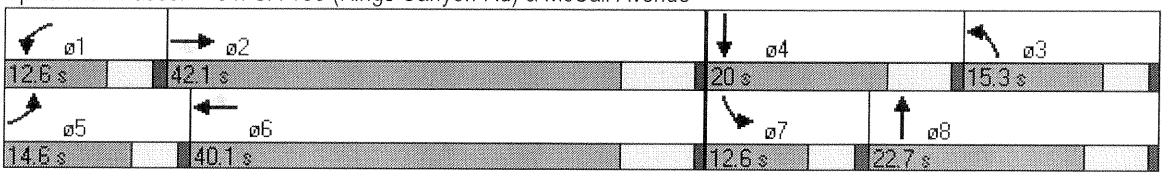
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1101	280	27	739	27	268	183	22	52	126	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1756	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			311			30		6			22	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	86	1223	311	30	406	30	312	213	26	57	138	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1223	311	30	406	30	312	239	0	57	203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	14.6	42.1	42.1	12.6	40.1	40.1	15.3	22.7	0.0	12.6	20.0	0.0
Total Split (%)	16.2%	46.8%	46.8%	14.0%	44.6%	44.6%	17.0%	25.2%	0.0%	14.0%	22.2%	0.0%
Maximum Green (s)	10.0	35.3	35.3	8.0	33.3	33.3	10.7	16.7		8.0	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	9.2	40.0	40.0	8.1	34.0	34.0	10.4	18.2		8.1	12.8	
Actuated g/C Ratio	0.11	0.47	0.47	0.09	0.40	0.40	0.12	0.21		0.09	0.15	
v/c Ratio	0.46	0.78	0.35	0.18	0.31	0.05	0.75	0.61		0.35	0.72	
Control Delay	46.0	25.5	3.5	40.8	19.8	7.1	50.2	40.2		44.7	47.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	46.0	25.5	3.5	40.8	19.8	7.1	50.2	40.2		44.7	47.5	
LOS	D	C	A	D	B	A	D	D		D	D	
Approach Delay		22.4			20.3			45.9			46.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	47	254	0	16	85	0	89	125		31	98	
Queue Length 95th (ft)	93	#485	50	43	123	18	#138	#197		69	#192	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	206	1564	899	165	1329	641	428	398		165	308	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.42	0.78	0.35	0.18	0.31	0.05	0.73	0.60		0.35	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 85.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 28.7 Intersection LOS: C
Intersection Capacity Utilization 73.3% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



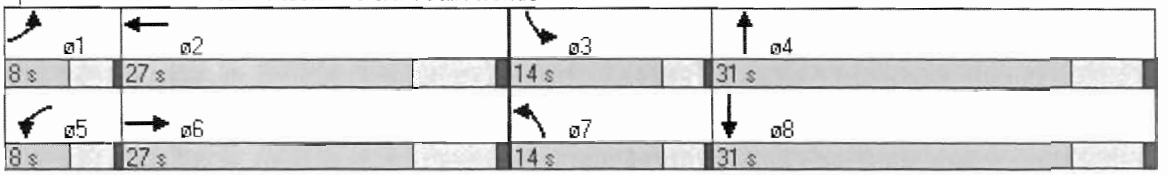
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	350	85	27	529	148	164	365	11	164	391	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.967			0.996			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3403	0	1752	3389	0	1752	3491	0	1752	3435	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3403	0	1752	3389	0	1752	3491	0	1752	3435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			43			4			22	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	32	438	106	32	630	176	216	480	14	180	430	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	544	0	32	806	0	216	494	0	180	496	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	27.0	0.0	8.0	27.0	0.0	14.0	31.0	0.0	14.0	31.0	0.0
Total Split (%)	10.0%	33.8%	0.0%	10.0%	33.8%	0.0%	17.5%	38.8%	0.0%	17.5%	38.8%	0.0%
Maximum Green (s)	4.5	20.2		4.5	20.2		10.5	25.0		10.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	20.5		4.6	20.5		10.6	14.8		10.2	14.3	
Actuated g/C Ratio	0.07	0.32		0.07	0.32		0.16	0.23		0.16	0.22	
v/c Ratio	0.26	0.49		0.26	0.73		0.75	0.62		0.65	0.64	
Control Delay	37.2	20.0		37.1	25.3		47.2	26.4		41.0	26.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.2	20.0		37.1	25.3		47.2	26.4		41.0	26.1	
LOS	D	B		D	C		D	C		D	C	
Approach Delay		20.9			25.7			32.7			30.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	11	75		11	124		75	85		61	82	
Queue Length 95th (ft)	36	134		38	#227		#168	120		#176	144	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	123	1100		123	1101		288	1368		288	1358	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.26	0.49		0.26	0.73		0.75	0.36		0.63	0.37	

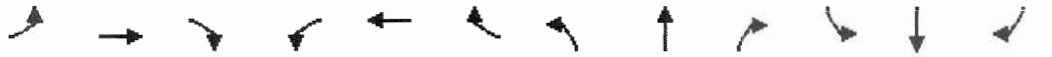
Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 64.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 27.6 Intersection LOS: C
Intersection Capacity Utilization 58.2% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	538	110	24	344	148	115	242	43	173	222	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975			0.955			0.978			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3417	0	1752	3347	0	1752	3428	0	1752	3431	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3417	0	1752	3347	0	1752	3428	0	1752	3431	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			80			26			24	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	84	633	129	27	391	168	121	255	45	201	258	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	762	0	27	559	0	121	300	0	201	300	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

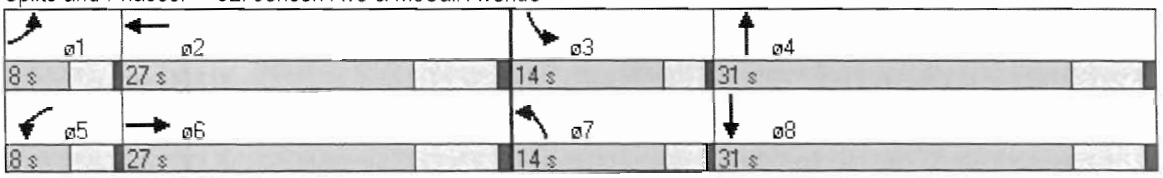


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	27.0	0.0	8.0	27.0	0.0	14.0	31.0	0.0	14.0	31.0	0.0
Total Split (%)	10.0%	33.8%	0.0%	10.0%	33.8%	0.0%	17.5%	38.8%	0.0%	17.5%	38.8%	0.0%
Maximum Green (s)	4.5	20.2		4.5	20.2		10.5	25.0		10.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.5	25.1		4.5	20.2		9.0	10.6		10.4	14.1	
Actuated g/C Ratio	0.07	0.38		0.07	0.31		0.14	0.16		0.16	0.21	
v/c Ratio	0.70	0.57		0.23	0.51		0.50	0.52		0.72	0.40	
Control Delay	63.1	18.9		34.5	18.1		34.0	26.3		44.0	23.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	63.1	18.9		34.5	18.1		34.0	26.3		44.0	23.5	
LOS	E	B		C	B		C	C		D	C	
Approach Delay		23.2			18.9			28.5			31.7	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	34	106		10	80		45	53		77	53	
Queue Length 95th (ft)	#96	190		33	128		94	87		#165	83	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	120	1328		120	1088		281	1325		281	1325	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.70	0.57		0.23	0.51		0.43	0.23		0.72	0.23	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 65.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 24.9 Intersection LOS: C
Intersection Capacity Utilization 56.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



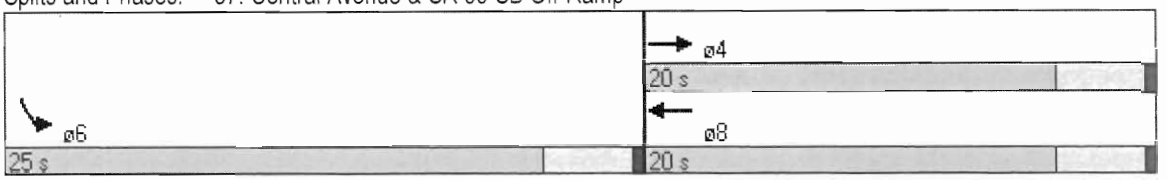
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↱
Volume (vph)	0	212	200	0	438	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						118
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	255	274	0	521	137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	255	274	0	521	137
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	25.0	25.0
Total Split (%)	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%
Maximum Green (s)		16.0	16.0		21.0	21.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.1	11.2		20.1	20.1
Actuated g/C Ratio		0.31	0.32		0.57	0.57
v/c Ratio		0.48	0.52		0.57	0.16
Control Delay		14.2	14.7		11.7	2.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.2	14.7		11.7	2.8
LOS		B	B		B	A
Approach Delay		14.2	14.7		9.9	
Approach LOS		B	B		A	
Queue Length 50th (ft)		39	42		70	2
Queue Length 95th (ft)		86	78		164	20
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		808	808		1007	945
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.32	0.34		0.52	0.14

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 35.3
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 11.9 Intersection LOS: B
Intersection Capacity Utilization 42.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



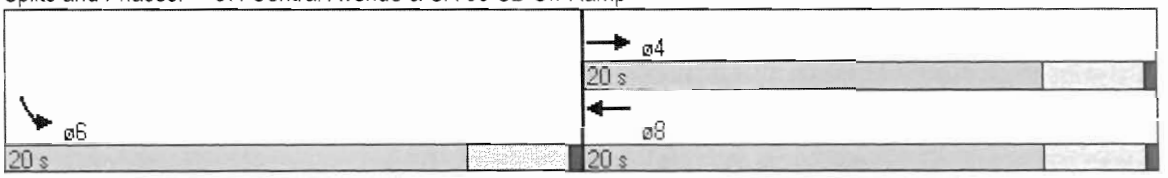
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	308	169	0	238	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						81
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	358	225	0	294	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	358	225	0	294	81
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.5	11.5		12.0	12.0
Actuated g/C Ratio		0.36	0.36		0.38	0.38
v/c Ratio		0.59	0.37		0.49	0.14
Control Delay		12.9	9.6		11.5	3.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		12.9	9.6		11.5	3.2
LOS		B	A		B	A
Approach Delay		12.9	9.6		9.7	
Approach LOS		B	A		A	
Queue Length 50th (ft)		40	23		34	0
Queue Length 95th (ft)		106	54		80	13
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		874	874		831	782
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.41	0.26		0.35	0.10

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 36.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



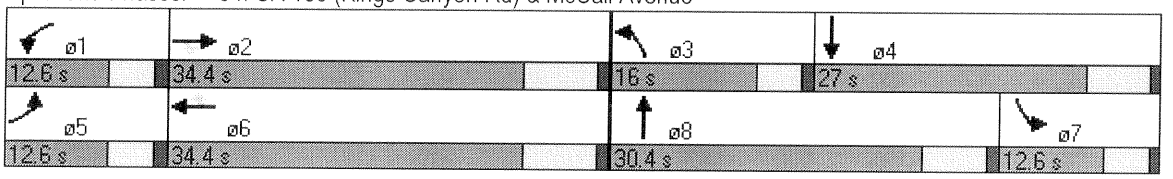
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	719	250	33	1129	30	284	136	16	29	220	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.949	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1751	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			287			41		7			27	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	66	826	287	45	763	41	334	160	19	34	256	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	826	287	45	763	41	334	179	0	34	389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	12.6	34.4	34.4	12.6	34.4	34.4	16.0	30.4	0.0	12.6	27.0	0.0
Total Split (%)	14.0%	38.2%	38.2%	14.0%	38.2%	38.2%	17.8%	33.8%	0.0%	14.0%	30.0%	0.0%
Maximum Green (s)	8.0	27.6	27.6	8.0	27.6	27.6	11.4	24.4		8.0	21.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	8.1	30.3	30.3	8.1	27.9	27.9	11.1	28.3		10.7	20.1	
Actuated g/C Ratio	0.09	0.35	0.35	0.09	0.32	0.32	0.13	0.33		0.12	0.23	
v/c Ratio	0.40	0.70	0.39	0.27	0.71	0.08	0.76	0.30		0.16	0.91	
Control Delay	46.7	29.6	4.8	43.0	31.0	7.8	50.1	26.7		35.8	58.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	46.7	29.6	4.8	43.0	31.0	7.8	50.1	26.7		35.8	58.2	
LOS	D	C	A	D	C	A	D	C		D	E	
Approach Delay		24.5			30.5			41.9			56.4	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)	36	226	0	24	204	0	96	62		18	202	
Queue Length 95th (ft)	75	285	49	47	208	16	#141	139		42	#344	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	164	1174	737	164	1080	534	454	656		218	451	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.40	0.70	0.39	0.27	0.71	0.08	0.74	0.27		0.16	0.86	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 33.8 Intersection LOS: C
Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



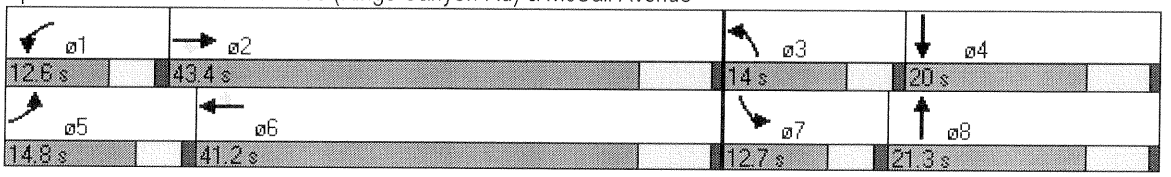
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1159	275	30	792	31	266	204	25	62	143	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1760	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			306			34		6			21	
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	89	1288	306	33	435	34	309	237	29	68	157	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1288	306	33	435	34	309	266	0	68	226	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	
Total Split (s)	14.8	43.4	43.4	12.6	41.2	41.2	14.0	21.3	0.0	12.7	20.0	0.0
Total Split (%)	16.4%	48.2%	48.2%	14.0%	45.8%	45.8%	15.6%	23.7%	0.0%	14.1%	22.2%	0.0%
Maximum Green (s)	10.2	36.6	36.6	8.0	34.4	34.4	9.4	15.3		8.1	14.0	
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Act Effct Green (s)	9.3	38.9	38.9	8.1	35.2	35.2	9.5	17.4		8.1	13.1	
Actuated g/C Ratio	0.11	0.45	0.45	0.09	0.41	0.41	0.11	0.20		0.09	0.15	
v/c Ratio	0.47	0.85	0.35	0.20	0.32	0.05	0.83	0.72		0.41	0.79	
Control Delay	46.2	30.0	3.4	41.3	19.4	6.5	58.9	46.7		46.8	53.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	46.2	30.0	3.4	41.3	19.4	6.5	58.9	46.7		46.8	53.6	
LOS	D	C	A	D	B	A	E	D		D	D	
Approach Delay		26.0			20.0			53.3			52.1	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	48	363	0	18	90	0	90	145		37	113	
Queue Length 95th (ft)	95	#512	48	47	128	19	#151	#259		80	#227	
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	209	1508	875	164	1364	660	373	372		166	305	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.43	0.85	0.35	0.20	0.32	0.05	0.83	0.72		0.41	0.74	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 76.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



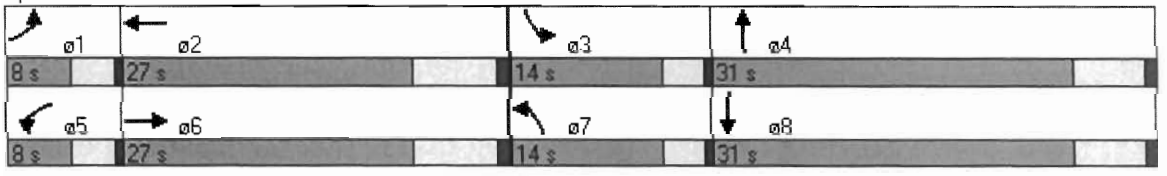
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	365	89	27	561	157	172	230	11	167	256	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.967			0.993			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3403	0	1752	3389	0	1752	1832	0	1752	1780	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3403	0	1752	3389	0	1752	1832	0	1752	1780	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			43			3			20	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	42	456	111	32	668	187	226	303	14	184	281	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	567	0	32	855	0	226	317	0	184	365	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	27.0	0.0	8.0	27.0	0.0	14.0	31.0	0.0	14.0	31.0	0.0
Total Split (%)	10.0%	33.8%	0.0%	10.0%	33.8%	0.0%	17.5%	38.8%	0.0%	17.5%	38.8%	0.0%
Maximum Green (s)	4.5	20.2		4.5	20.2		10.5	25.0		10.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	22.1		4.6	20.6		10.7	18.7		10.2	18.3	
Actuated g/C Ratio	0.07	0.31		0.07	0.29		0.15	0.27		0.14	0.26	
v/c Ratio	0.37	0.52		0.28	0.84		0.85	0.65		0.72	0.77	
Control Delay	44.6	22.3		41.6	33.7		62.5	29.9		49.5	34.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.6	22.3		41.6	33.7		62.5	29.9		49.5	34.4	
LOS	D	C		D	C		E	C		D	C	
Approach Delay		23.8			34.0			43.5			39.4	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 70.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 34.8 Intersection LOS: C
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



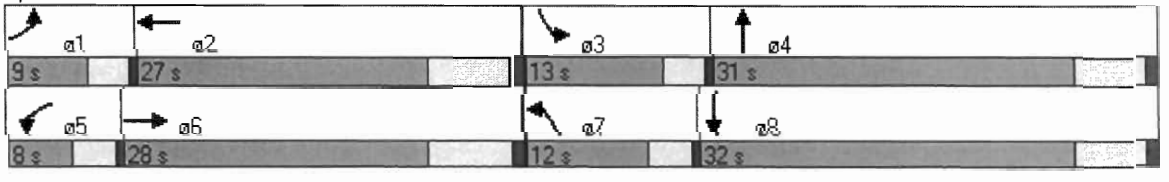
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	581	126	24	367	148	131	248	43	175	227	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.957			0.978			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1752	3354	0	1752	1804	0	1752	1799	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3354	0	1752	1804	0	1752	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			72			11			13	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	106	684	148	27	417	168	138	261	45	203	264	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	832	0	27	585	0	138	306	0	203	317	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	9.0	28.0	0.0	8.0	27.0	0.0	12.0	31.0	0.0	13.0	32.0	0.0
Total Split (%)	11.3%	35.0%	0.0%	10.0%	33.8%	0.0%	15.0%	38.8%	0.0%	16.3%	40.0%	0.0%
Maximum Green (s)	5.5	21.2		4.5	20.2		8.5	25.0		9.5	26.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.5	26.3		4.5	20.3		8.3	16.8		9.5	18.1	
Actuated g/C Ratio	0.08	0.36		0.06	0.28		0.12	0.23		0.13	0.25	
v/c Ratio	0.79	0.66		0.25	0.59		0.68	0.71		0.88	0.69	
Control Delay	74.8	24.1		40.0	23.0		51.2	33.9		69.4	31.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	74.8	24.1		40.0	23.0		51.2	33.9		69.4	31.6	
LOS	E	C		D	C		D	C		E	C	
Approach Delay		29.8			23.8			39.3			46.3	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 72.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 33.4 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



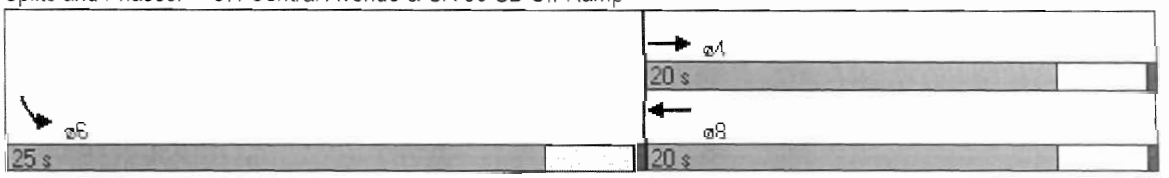
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	218	208	0	436	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						121
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	263	285	0	519	139
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	263	285	0	519	139
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	25.0	25.0
Total Split (%)	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%
Maximum Green (s)		16.0	16.0		21.0	21.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.3	11.4		20.0	20.0
Actuated g/C Ratio		0.32	0.32		0.57	0.57
v/c Ratio		0.49	0.52		0.57	0.16
Control Delay		14.1	14.8		11.8	2.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.1	14.8		11.8	2.8
LOS		B	B		B	A
Approach Delay		14.1	14.8		9.9	
Approach LOS		B	B		A	

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 35.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 12.0 Intersection LOS: B
Intersection Capacity Utilization 42.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



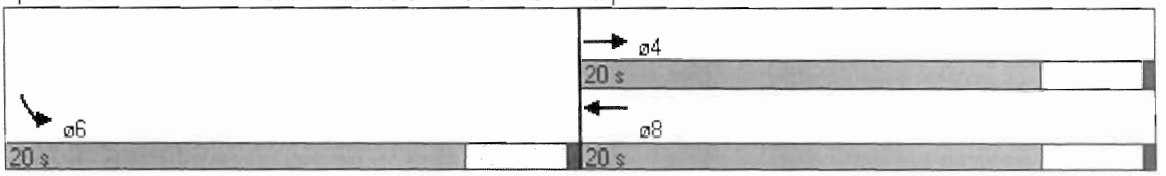
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	320	175	0	238	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						81
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	372	233	0	294	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	372	233	0	294	81
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.6	11.6		11.8	11.8
Actuated g/C Ratio		0.37	0.37		0.37	0.37
v/c Ratio		0.60	0.38		0.49	0.14
Control Delay		13.2	9.7		11.7	3.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.2	9.7		11.7	3.2
LOS		B	A		B	A
Approach Delay		13.2	9.7		9.9	
Approach LOS		B	A		A	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 36.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	719	395	33	1129	30	428	143	16	29	227	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.985				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1817	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1817	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			454			41		7				133
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	66	826	454	45	763	41	504	168	19	34	264	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	826	454	45	763	41	504	187	0	34	264	133
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	20.0
Total Split (s)	12.6	31.4	31.4	12.6	31.4	31.4	16.0	23.4	0.0	12.6	20.0	20.0
Total Split (%)	15.8%	39.3%	39.3%	15.8%	39.3%	39.3%	20.0%	29.3%	0.0%	15.8%	25.0%	25.0%
Maximum Green (s)	8.0	24.6	24.6	8.0	24.6	24.6	11.4	17.4		8.0	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Act Effct Green (s)	8.1	27.2	27.2	8.1	24.8	24.8	11.5	24.2		8.5	13.3	13.3
Actuated g/C Ratio	0.11	0.35	0.35	0.11	0.32	0.32	0.15	0.32		0.11	0.17	0.17
v/c Ratio	0.36	0.70	0.53	0.24	0.71	0.08	0.99	0.32		0.18	0.82	0.35
Control Delay	39.7	26.7	5.0	37.0	28.1	7.3	73.9	24.8		34.9	54.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	39.7	26.7	5.0	37.0	28.1	7.3	73.9	24.8		34.9	54.2	8.7
LOS	D	C	A	D	C	A	E	C		C	D	A
Approach Delay		20.0			27.6			60.6			38.6	
Approach LOS		B			C			E			D	
Queue Length 50th (ft)	32	198	0	21	178	0	~142	61		16	128	0
Queue Length 95th (ft)	68	255	55	43	186	15	#215	130		40	#232	40
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	184	1184	849	184	1079	534	509	587		193	339	396
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.36	0.70	0.53	0.24	0.71	0.08	0.99	0.32		0.18	0.78	0.34

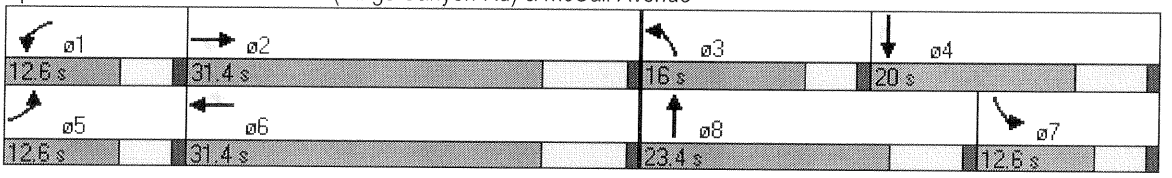
Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 32.8 Intersection LOS: C
Intersection Capacity Utilization 69.0% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



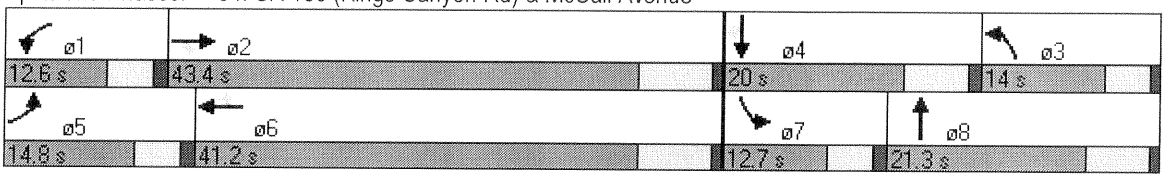
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1159	285	30	792	31	276	204	25	62	143	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			317			34		6				69
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	89	1288	317	33	435	34	321	237	29	68	157	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1288	317	33	435	34	321	266	0	68	157	69
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	20.0
Total Split (s)	14.8	43.4	43.4	12.6	41.2	41.2	14.0	21.3	0.0	12.7	20.0	20.0
Total Split (%)	16.4%	48.2%	48.2%	14.0%	45.8%	45.8%	15.6%	23.7%	0.0%	14.1%	22.2%	22.2%
Maximum Green (s)	10.2	36.6	36.6	8.0	34.4	34.4	9.4	15.3		8.1	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Act Effct Green (s)	9.3	38.9	38.9	8.1	35.2	35.2	10.3	17.4		8.1	12.3	12.3
Actuated g/C Ratio	0.11	0.45	0.45	0.09	0.41	0.41	0.12	0.20		0.09	0.14	0.14
v/c Ratio	0.47	0.85	0.36	0.20	0.32	0.05	0.79	0.72		0.41	0.60	0.24
Control Delay	46.2	30.0	3.4	41.3	19.4	6.5	54.4	46.7		46.8	45.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	46.2	30.0	3.4	41.3	19.4	6.5	54.4	46.7		46.8	45.6	11.3
LOS	D	C	A	D	B	A	D	D		D	D	B
Approach Delay		25.8			20.0			50.9			37.8	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	48	363	0	18	90	0	93	145		37	85	0
Queue Length 95th (ft)	95	#512	49	47	128	19	#159	#259		80	146	36
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	209	1508	882	164	1364	660	405	372		166	301	314
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.43	0.85	0.36	0.20	0.32	0.05	0.79	0.72		0.41	0.52	0.22

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 76.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



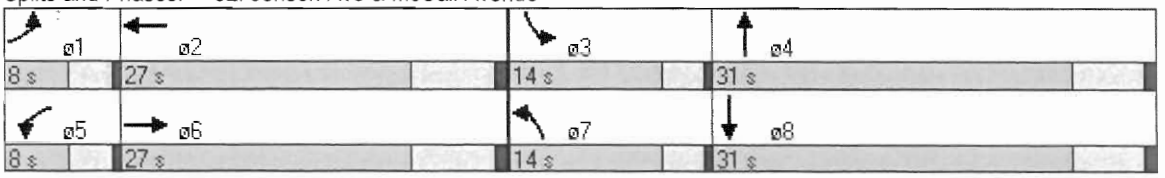
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	365	93	27	561	157	176	381	11	167	408	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.970			0.967			0.996			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3400	0	1752	3389	0	1752	3491	0	1752	3421	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3400	0	1752	3389	0	1752	3491	0	1752	3421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			43			4			28	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	42	456	116	32	668	187	232	501	14	184	448	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	572	0	32	855	0	232	515	0	184	532	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	8.0	27.0	0.0	8.0	27.0	0.0	14.0	31.0	0.0	14.0	31.0	0.0
Total Split (%)	10.0%	33.8%	0.0%	10.0%	33.8%	0.0%	17.5%	38.8%	0.0%	17.5%	38.8%	0.0%
Maximum Green (s)	4.5	20.2		4.5	20.2		10.5	25.0		10.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	4.6	22.0		4.6	20.5		10.6	15.8		10.2	15.4	
Actuated g/C Ratio	0.07	0.33		0.07	0.30		0.16	0.23		0.15	0.23	
v/c Ratio	0.35	0.50		0.27	0.81		0.84	0.63		0.69	0.66	
Control Delay	41.7	20.3		39.1	29.9		58.6	27.1		45.3	26.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.7	20.3		39.1	29.9		58.6	27.1		45.3	26.9	
LOS	D	C		D	C		E	C		D	C	
Approach Delay		21.8			30.2			36.8			31.7	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	18	84		14	174		100	107		77	106	
Queue Length 95th (ft)	45	144		39	#274		#188	125		#184	154	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	119	1135		119	1059		276	1314		276	1303	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.35	0.50		0.27	0.81		0.84	0.39		0.67	0.41	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 67.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 30.5 Intersection LOS: C
Intersection Capacity Utilization 64.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



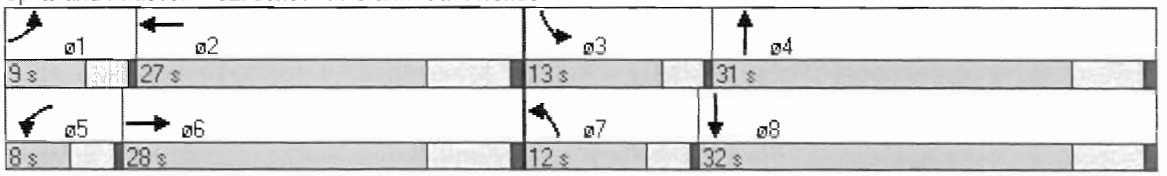
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	581	126	24	367	148	131	258	43	175	237	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.973			0.957			0.979			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1752	3354	0	1752	3431	0	1752	3421	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3354	0	1752	3431	0	1752	3421	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			72			24			29	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	106	684	148	27	417	168	138	272	45	203	276	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	832	0	27	585	0	138	317	0	203	329	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8		8.0	31.0		8.0	31.0	
Total Split (s)	9.0	28.0	0.0	8.0	27.0	0.0	12.0	31.0	0.0	13.0	32.0	0.0
Total Split (%)	11.3%	35.0%	0.0%	10.0%	33.8%	0.0%	15.0%	38.8%	0.0%	16.3%	40.0%	0.0%
Maximum Green (s)	5.5	21.2		4.5	20.2		8.5	25.0		9.5	26.0	
Yellow Time (s)	3.0	5.8		3.0	5.8		3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	4.0	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			14.0			14.0	
Flash Dont Walk (s)		11.0			11.0			7.0			7.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.5	26.1		4.5	20.2		8.3	10.9		9.5	12.1	
Actuated g/C Ratio	0.08	0.40		0.07	0.31		0.13	0.17		0.14	0.18	
v/c Ratio	0.73	0.61		0.23	0.54		0.63	0.54		0.80	0.50	
Control Delay	60.8	19.1		34.8	19.1		42.5	26.8		54.2	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.8	19.1		34.8	19.1		42.5	26.8		54.2	24.8	
LOS	E	B		C	B		D	C		D	C	
Approach Delay		23.9			19.8			31.5			36.0	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)	43	118		11	88		54	57		80	57	
Queue Length 95th (ft)	#112	208		33	139		#128	93		#181	88	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	146	1370		120	1078		226	1316		253	1367	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.73	0.61		0.23	0.54		0.61	0.24		0.80	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 66
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 58.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



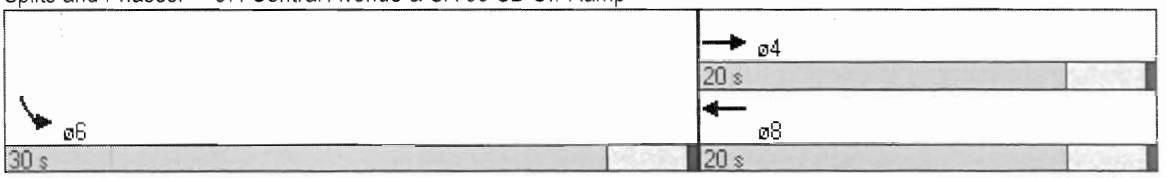
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	218	208	0	439	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						120
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	263	285	0	523	139
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	263	285	0	523	139
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	30.0	30.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	60.0%
Maximum Green (s)		16.0	16.0		26.0	26.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.6	11.7		21.4	21.4
Actuated g/C Ratio		0.32	0.32		0.58	0.58
v/c Ratio		0.49	0.53		0.56	0.16
Control Delay		15.5	16.1		10.6	2.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		15.5	16.1		10.6	2.6
LOS		B	B		B	A
Approach Delay		15.5	16.1		8.9	
Approach LOS		B	B		A	
Queue Length 50th (ft)		41	45		73	2
Queue Length 95th (ft)		104	96		159	19
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		812	812		1172	1081
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.32	0.35		0.45	0.13

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 36.6
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 42.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	320	175	0	238	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						81
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	372	233	0	294	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	372	233	0	294	81
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.6	11.6		11.8	11.8
Actuated g/C Ratio		0.37	0.37		0.37	0.37
v/c Ratio		0.60	0.38		0.49	0.14
Control Delay		13.2	9.7		11.7	3.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.2	9.7		11.7	3.2
LOS		B	A		B	A
Approach Delay		13.2	9.7		9.9	
Approach LOS		B	A		A	
Queue Length 50th (ft)		43	24		34	0
Queue Length 95th (ft)		111	56		80	13
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		876	876		832	783
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.42	0.27		0.35	0.10

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 36.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp

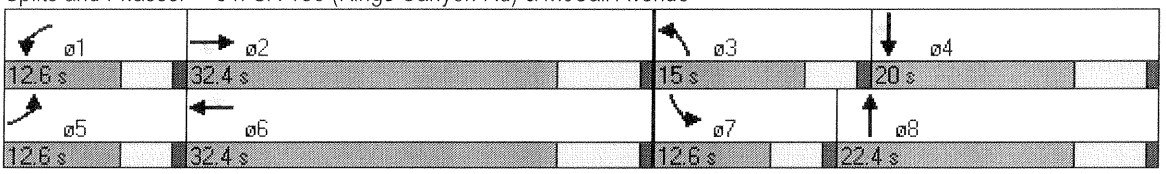
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	767	261	36	1192	36	297	155	18	33	241	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.984				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1815	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			300			49		7				141
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	74	882	300	49	805	49	349	182	21	38	280	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	882	300	49	805	49	349	203	0	38	280	141
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	20.0
Total Split (s)	12.6	32.4	32.4	12.6	32.4	32.4	15.0	22.4	0.0	12.6	20.0	20.0
Total Split (%)	15.8%	40.5%	40.5%	15.8%	40.5%	40.5%	18.8%	28.0%	0.0%	15.8%	25.0%	25.0%
Maximum Green (s)	8.0	25.6	25.6	8.0	25.6	25.6	10.4	16.4		8.0	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Act Effct Green (s)	8.1	28.2	28.2	8.1	25.8	25.8	10.2	21.2		8.1	13.6	13.6
Actuated g/C Ratio	0.11	0.37	0.37	0.11	0.34	0.34	0.13	0.28		0.11	0.18	0.18
v/c Ratio	0.40	0.72	0.39	0.27	0.72	0.09	0.77	0.40		0.21	0.86	0.36
Control Delay	41.0	26.6	4.4	37.4	27.6	6.7	46.2	28.2		36.2	58.3	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.0	26.6	4.4	37.4	27.6	6.7	46.2	28.2		36.2	58.3	8.5
LOS	D	C	A	D	C	A	D	C		D	E	A
Approach Delay		22.1			27.0			39.6			41.2	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	35	212	0	23	187	0	88	88		18	138	0
Queue Length 95th (ft)	74	272	46	45	194	15	#136	144		44	#252	41
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	184	1229	766	184	1123	559	464	505		184	339	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.40	0.72	0.39	0.27	0.72	0.09	0.75	0.40		0.21	0.83	0.35

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 29.3 Intersection LOS: C
Intersection Capacity Utilization 67.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



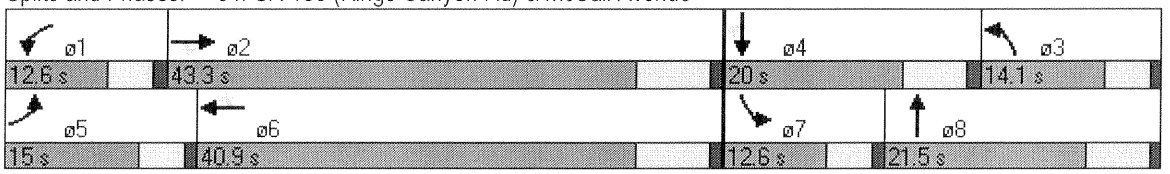
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	1217	280	34	844	36	275	226	28	72	161	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			311			40		6				75
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	93	1352	311	37	464	40	320	263	33	79	177	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	1352	311	37	464	40	320	296	0	79	177	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	20.0
Total Split (s)	15.0	43.3	43.3	12.6	40.9	40.9	14.1	21.5	0.0	12.6	20.0	20.0
Total Split (%)	16.7%	48.1%	48.1%	14.0%	45.4%	45.4%	15.7%	23.9%	0.0%	14.0%	22.2%	22.2%
Maximum Green (s)	10.4	36.5	36.5	8.0	34.1	34.1	9.5	15.5		8.0	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Act Effct Green (s)	9.5	38.8	38.8	8.1	34.9	34.9	10.1	17.6		8.1	12.6	12.6
Actuated g/C Ratio	0.11	0.45	0.45	0.09	0.40	0.40	0.12	0.20		0.09	0.15	0.15
v/c Ratio	0.48	0.90	0.35	0.23	0.34	0.06	0.81	0.79		0.48	0.66	0.26
Control Delay	46.5	33.5	3.4	41.8	19.8	6.2	55.8	52.0		49.6	47.9	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	46.5	33.5	3.4	41.8	19.8	6.2	55.8	52.0		49.6	47.9	11.0
LOS	D	C	A	D	B	A	E	D		D	D	B
Approach Delay		28.9			20.3			54.0			39.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	50	394	0	20	97	0	93	165		44	96	0
Queue Length 95th (ft)	99	#556	48	50	138	20	#157	#299		89	163	38
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	212	1504	877	164	1354	659	397	375		164	301	319
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.44	0.90	0.35	0.23	0.34	0.06	0.81	0.79		0.48	0.59	0.24

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 33.3 Intersection LOS: C
Intersection Capacity Utilization 78.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



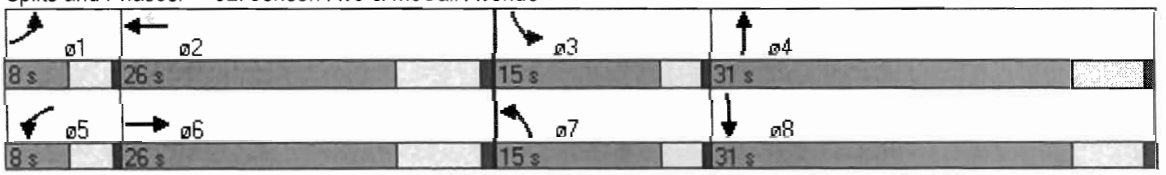
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	380	97	27	592	167	184	248	11	170	272	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850		0.994			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3400	0	1752	3505	1568	1752	1834	0	1752	1775	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3400	0	1752	3505	1568	1752	1834	0	1752	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				199		3			22	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	52	475	121	32	705	199	242	326	14	187	299	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	596	0	32	705	199	242	340	0	187	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0	8.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8	24.8	8.0	31.0		8.0	31.0	
Total Split (s)	8.0	26.0	0.0	8.0	26.0	26.0	15.0	31.0	0.0	15.0	31.0	0.0
Total Split (%)	10.0%	32.5%	0.0%	10.0%	32.5%	32.5%	18.8%	38.8%	0.0%	18.8%	38.8%	0.0%
Maximum Green (s)	4.5	19.2		4.5	19.2	19.2	11.5	25.0		11.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8	5.8	3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	6.8	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max	Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		14.0			14.0	
Flash Dont Walk (s)		11.0			11.0	11.0		7.0			7.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	4.6	21.0		4.6	19.5	19.5	11.7	20.5		10.8	19.5	
Actuated g/C Ratio	0.06	0.29		0.06	0.27	0.27	0.16	0.29		0.15	0.27	
v/c Ratio	0.46	0.58		0.29	0.74	0.35	0.85	0.65		0.71	0.80	
Control Delay	50.7	24.5		42.4	31.5	6.1	60.2	29.3		47.7	36.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	50.7	24.5		42.4	31.5	6.1	60.2	29.3		47.7	36.1	
LOS	D	C		D	C	A	E	C		D	D	
Approach Delay		26.6			26.4			42.2			39.8	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 71.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 32.7 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



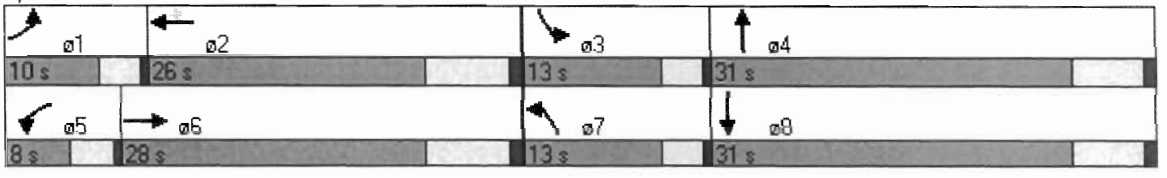
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	623	141	24	389	148	147	264	43	178	241	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850		0.979			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3407	0	1752	3505	1568	1752	1806	0	1752	1793	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3407	0	1752	3505	1568	1752	1806	0	1752	1793	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				168		11			15	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	128	733	166	27	442	168	155	278	45	207	280	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	899	0	27	442	168	155	323	0	207	345	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0	8.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8	24.8	8.0	31.0		8.0	31.0	
Total Split (s)	10.0	28.0	0.0	8.0	26.0	26.0	13.0	31.0	0.0	13.0	31.0	0.0
Total Split (%)	12.5%	35.0%	0.0%	10.0%	32.5%	32.5%	16.3%	38.8%	0.0%	16.3%	38.8%	0.0%
Maximum Green (s)	6.5	21.2		4.5	19.2	19.2	9.5	25.0		9.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8	5.8	3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	6.8	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max	Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		14.0			14.0	
Flash Dont Walk (s)		11.0			11.0	11.0		7.0			7.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	6.5	26.3		4.5	19.3	19.3	9.2	18.2		9.5	18.5	
Actuated g/C Ratio	0.09	0.36		0.06	0.26	0.26	0.13	0.25		0.13	0.25	
v/c Ratio	0.82	0.72		0.25	0.48	0.31	0.71	0.71		0.91	0.75	
Control Delay	74.6	26.8		40.9	25.9	6.2	51.6	33.3		76.6	34.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	74.6	26.8		40.9	25.9	6.2	51.6	33.3		76.6	34.6	
LOS	E	C		D	C	A	D	C		E	C	
Approach Delay		32.7			21.3			39.2			50.4	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 73.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 34.8 Intersection LOS: C
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



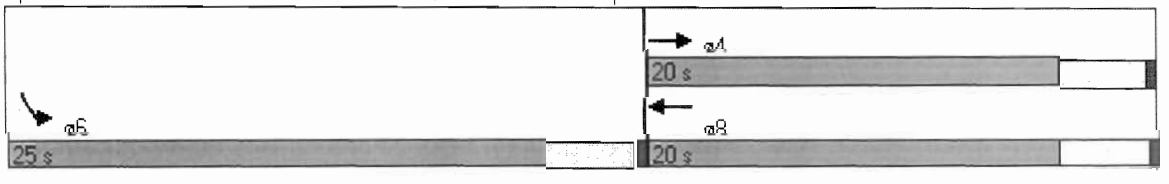
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	223	216	0	438	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						121
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	269	296	0	521	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	269	296	0	521	140
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	25.0	25.0
Total Split (%)	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%
Maximum Green (s)		16.0	16.0		21.0	21.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.5	11.6		20.0	20.0
Actuated g/C Ratio		0.33	0.33		0.57	0.57
v/c Ratio		0.49	0.54		0.57	0.16
Control Delay		14.1	14.9		12.0	2.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.1	14.9		12.0	2.8
LOS		B	B		B	A
Approach Delay		14.1	14.9		10.0	
Approach LOS		B	B		B	

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 35.3
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 42.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



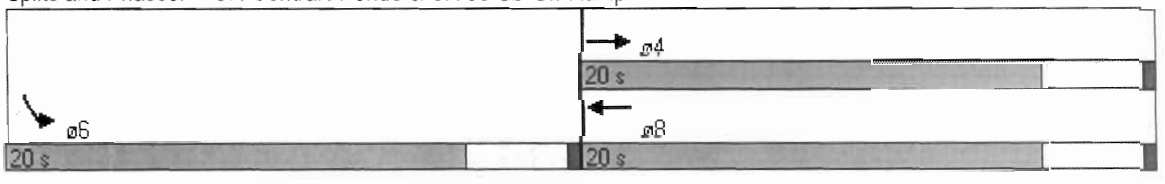
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	329	181	0	238	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						88
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	383	241	0	294	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	383	241	0	294	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.8	11.8		11.6	11.6
Actuated g/C Ratio		0.37	0.37		0.37	0.37
v/c Ratio		0.61	0.39		0.50	0.15
Control Delay		13.3	9.7		11.9	3.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.3	9.7		11.9	3.2
LOS		B	A		B	A
Approach Delay		13.3	9.7		9.9	
Approach LOS		B	A		A	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 37.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



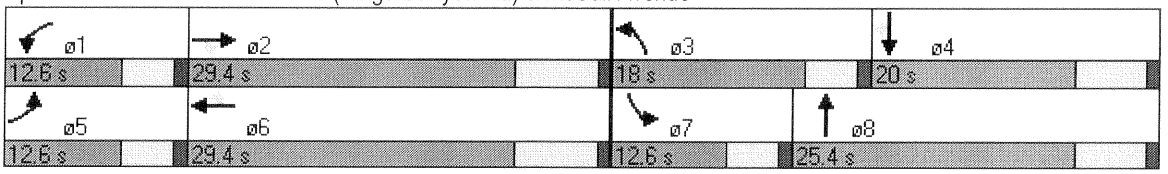
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	767	406	36	1192	36	441	162	18	33	248	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.985				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1817	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1817	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467			49		7				141
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.87	0.87	0.87	0.74	0.74	0.74	0.85	0.85	0.85	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	74	882	467	49	805	49	519	191	21	38	288	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	882	467	49	805	49	519	212	0	38	288	141
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	20.0
Total Split (s)	12.6	29.4	29.4	12.6	29.4	29.4	18.0	25.4	0.0	12.6	20.0	20.0
Total Split (%)	15.8%	36.8%	36.8%	15.8%	36.8%	36.8%	22.5%	31.8%	0.0%	15.8%	25.0%	25.0%
Maximum Green (s)	8.0	22.6	22.6	8.0	22.6	22.6	13.4	19.4		8.0	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Act Effct Green (s)	8.1	25.2	25.2	8.1	22.8	22.8	13.4	24.5		8.1	13.7	13.7
Actuated g/C Ratio	0.11	0.33	0.33	0.11	0.30	0.30	0.17	0.32		0.11	0.18	0.18
v/c Ratio	0.40	0.81	0.57	0.27	0.82	0.10	0.88	0.36		0.21	0.88	0.36
Control Delay	41.1	32.9	5.5	37.5	34.5	7.4	50.5	25.2		36.2	60.4	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.1	32.9	5.5	37.5	34.5	7.4	50.5	25.2		36.2	60.4	8.5
LOS	D	C	A	D	C	A	D	C		D	E	A
Approach Delay		24.3			33.2			43.1			42.8	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	35	225	0	23	199	0	132	88		18	142	0
Queue Length 95th (ft)	74	#323	58	45	206	16	#201	142		44	#262	41
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	183	1092	826	183	986	497	595	581		183	337	402
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.40	0.81	0.57	0.27	0.82	0.10	0.87	0.36		0.21	0.85	0.35

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 77.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 32.9 Intersection LOS: C
Intersection Capacity Utilization 71.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



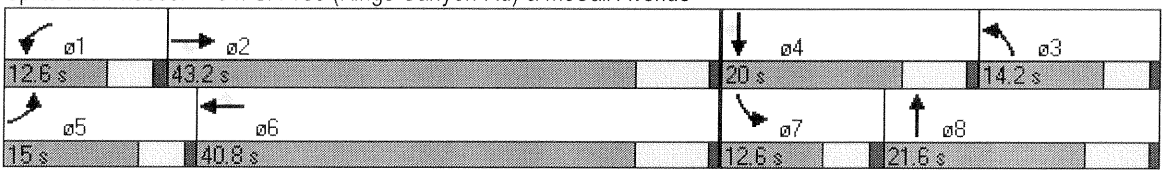
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	1217	290	34	844	36	285	226	28	72	161	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		0	400		0
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	1813	0	1752	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			322			40		6				75
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	93	1352	322	37	464	40	331	263	33	79	177	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	1352	322	37	464	40	331	296	0	79	177	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0		12.6	20.0	20.0
Total Split (s)	15.0	43.2	43.2	12.6	40.8	40.8	14.2	21.6	0.0	12.6	20.0	20.0
Total Split (%)	16.7%	48.0%	48.0%	14.0%	45.3%	45.3%	15.8%	24.0%	0.0%	14.0%	22.2%	22.2%
Maximum Green (s)	10.4	36.4	36.4	8.0	34.0	34.0	9.6	15.6		8.0	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0		3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	4.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	None
Act Effct Green (s)	9.5	38.7	38.7	8.1	34.8	34.8	10.2	17.7		8.1	12.6	12.6
Actuated g/C Ratio	0.11	0.45	0.45	0.09	0.40	0.40	0.12	0.21		0.09	0.15	0.15
v/c Ratio	0.48	0.90	0.37	0.23	0.34	0.06	0.83	0.79		0.48	0.66	0.26
Control Delay	46.5	33.8	3.4	41.8	19.9	6.3	57.3	51.5		49.6	47.9	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	46.5	33.8	3.4	41.8	19.9	6.3	57.3	51.5		49.6	47.9	11.0
LOS	D	C	A	D	B	A	E	D		D	D	B
Approach Delay		28.9			20.4			54.5			39.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	50	395	0	20	97	0	97	164		44	96	0
Queue Length 95th (ft)	99	#557	49	50	138	20	#163	#297		89	163	38
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200			400		
Base Capacity (vph)	212	1500	881	164	1350	657	401	377		164	301	319
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.44	0.90	0.37	0.23	0.34	0.06	0.83	0.79		0.48	0.59	0.24

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 33.6 Intersection LOS: C
Intersection Capacity Utilization 78.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



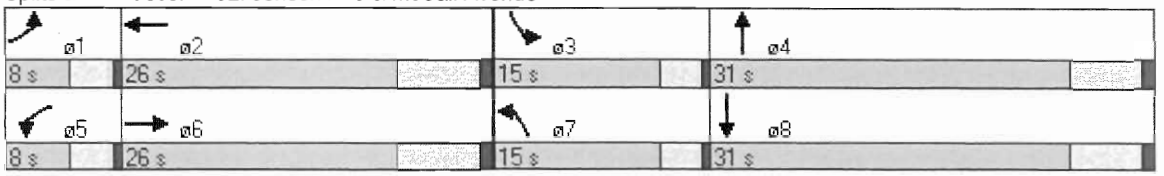
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	380	101	27	592	167	188	399	11	170	424	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.969				0.850		0.996			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3396	0	1752	3505	1568	1752	3491	0	1752	3410	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3396	0	1752	3505	1568	1752	3491	0	1752	3410	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				199		3			34	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.76	0.76	0.76	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	52	475	126	32	705	199	247	525	14	187	466	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	601	0	32	705	199	247	539	0	187	567	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0	8.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8	24.8	8.0	31.0		8.0	31.0	
Total Split (s)	8.0	26.0	0.0	8.0	26.0	26.0	15.0	31.0	0.0	15.0	31.0	0.0
Total Split (%)	10.0%	32.5%	0.0%	10.0%	32.5%	32.5%	18.8%	38.8%	0.0%	18.8%	38.8%	0.0%
Maximum Green (s)	4.5	19.2		4.5	19.2	19.2	11.5	25.0		11.5	25.0	
Yellow Time (s)	3.0	5.8		3.0	5.8	5.8	3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	6.8	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max	Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		14.0			14.0	
Flash Dont Walk (s)		11.0			11.0	11.0		7.0			7.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	4.6	21.0		4.6	19.5	19.5	11.7	17.3		10.7	16.3	
Actuated g/C Ratio	0.07	0.31		0.07	0.29	0.29	0.17	0.25		0.16	0.24	
v/c Ratio	0.44	0.56		0.27	0.71	0.34	0.83	0.61		0.68	0.68	
Control Delay	47.2	22.4		39.8	28.4	5.8	55.2	26.2		43.7	26.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	47.2	22.4		39.8	28.4	5.8	55.2	26.2		43.7	26.7	
LOS	D	C		D	C	A	E	C		D	C	
Approach Delay		24.4			24.0			35.3			30.9	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	23	94		14	149	0	108	113		79	113	
Queue Length 95th (ft)	#57	160		39	213	40	#197	130		#182	163	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	117	1069		117	997	588	299	1296		299	1285	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.44	0.56		0.27	0.71	0.34	0.83	0.42		0.63	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 68.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.6 Intersection LOS: C
Intersection Capacity Utilization 62.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



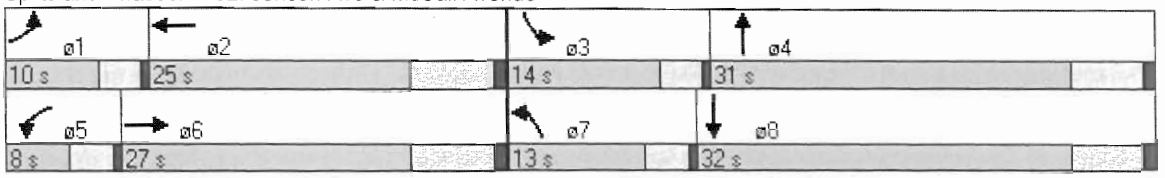
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	623	141	24	389	148	147	270	43	178	247	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	75		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.972				0.850		0.979			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3407	0	1752	3505	1568	1752	3431	0	1752	3407	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3407	0	1752	3505	1568	1752	3431	0	1752	3407	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				168		23			36	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	128	733	166	27	442	168	155	284	45	207	287	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	899	0	27	442	168	155	329	0	207	352	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0	8.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	8.0	24.8		8.0	24.8	24.8	8.0	31.0		8.0	31.0	
Total Split (s)	10.0	27.0	0.0	8.0	25.0	25.0	13.0	31.0	0.0	14.0	32.0	0.0
Total Split (%)	12.5%	33.8%	0.0%	10.0%	31.3%	31.3%	16.3%	38.8%	0.0%	17.5%	40.0%	0.0%
Maximum Green (s)	6.5	20.2		4.5	18.2	18.2	9.5	25.0		10.5	26.0	
Yellow Time (s)	3.0	5.8		3.0	5.8	5.8	3.0	5.0		3.0	5.0	
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	4.0	3.5	6.8	6.8	3.5	6.0	4.0	3.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max	Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0		14.0			14.0	
Flash Dont Walk (s)		11.0			11.0	11.0		7.0			7.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	6.5	25.1		4.5	18.2	18.2	9.2	11.1		10.5	12.5	
Actuated g/C Ratio	0.10	0.38		0.07	0.27	0.27	0.14	0.17		0.16	0.19	
v/c Ratio	0.74	0.68		0.23	0.46	0.30	0.64	0.55		0.74	0.52	
Control Delay	58.1	22.1		35.0	22.2	5.5	41.4	27.0		46.1	24.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	58.1	22.1		35.0	22.2	5.5	41.4	27.0		46.1	24.6	
LOS	E	C		D	C	A	D	C		D	C	
Approach Delay		26.6			18.3			31.6			32.6	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	51	136		11	77	0	60	60		81	61	
Queue Length 95th (ft)	#128	#262		34	122	39	#139	96		#175	93	
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150			150			75			100		
Base Capacity (vph)	172	1314		119	965	553	252	1311		278	1361	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.74	0.68		0.23	0.46	0.30	0.62	0.25		0.74	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 66.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



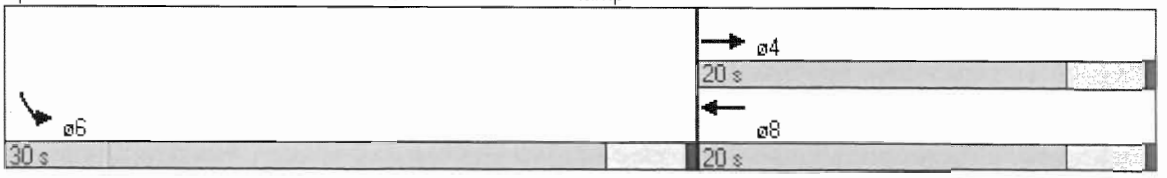
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	223	216	0	441	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						120
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.83	0.83	0.73	0.73	0.84	0.84
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	269	296	0	525	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	269	296	0	525	140
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	30.0	30.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	60.0%
Maximum Green (s)		16.0	16.0		26.0	26.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.7	11.7		18.1	18.1
Actuated g/C Ratio		0.31	0.31		0.47	0.47
v/c Ratio		0.52	0.58		0.70	0.19
Control Delay		16.3	17.4		14.0	2.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		16.3	17.4		14.0	2.8
LOS		B	B		B	A
Approach Delay		16.3	17.4		11.6	
Approach LOS		B	B		B	
Queue Length 50th (ft)		43	48		74	2
Queue Length 95th (ft)		107	99		160	19
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		744	744		1149	1062
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.36	0.40		0.46	0.13

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 38.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 42.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



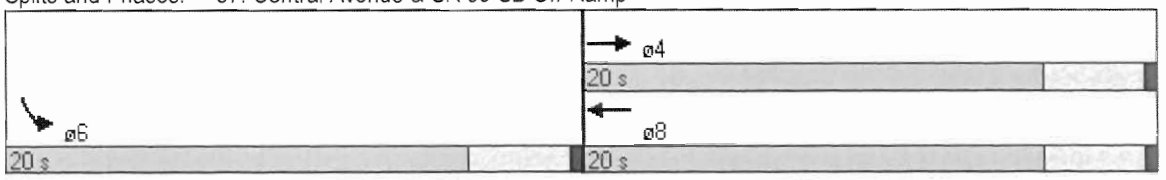
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	329	181	0	238	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						88
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	383	241	0	294	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	383	241	0	294	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.8	11.8		11.6	11.6
Actuated g/C Ratio		0.37	0.37		0.37	0.37
v/c Ratio		0.61	0.39		0.50	0.15
Control Delay		13.3	9.7		11.9	3.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.3	9.7		11.9	3.2
LOS		B	A		B	A
Approach Delay		13.3	9.7		9.9	
Approach LOS		B	A		A	
Queue Length 50th (ft)		44	25		35	0
Queue Length 95th (ft)		115	58		80	14
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		878	878		834	788
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.44	0.27		0.35	0.11

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 37.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



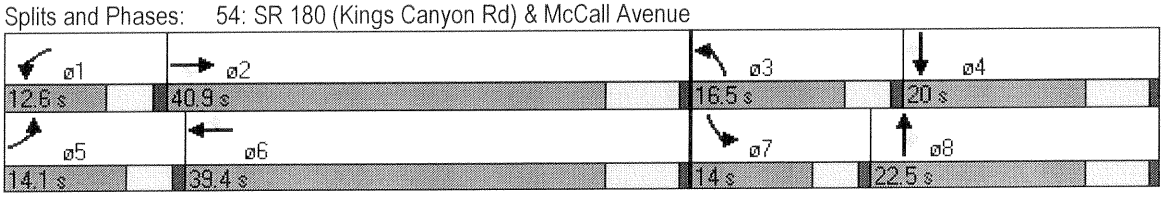
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1156	350	59	1692	77	399	305	32	67	400	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		200	400		400
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			380			84			35			200
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	125	1257	380	64	920	84	434	332	35	73	435	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	1257	380	64	920	84	434	332	35	73	435	200
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0
Total Split (s)	14.1	40.9	40.9	12.6	39.4	39.4	16.5	22.5	22.5	14.0	20.0	20.0
Total Split (%)	15.7%	45.4%	45.4%	14.0%	43.8%	43.8%	18.3%	25.0%	25.0%	15.6%	22.2%	22.2%
Maximum Green (s)	9.5	34.1	34.1	8.0	32.6	32.6	11.9	16.5	16.5	9.4	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0	5.0	3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	6.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	9.2	36.4	36.4	8.0	32.6	32.6	11.9	19.3	19.3	8.8	13.6	13.6
Actuated g/C Ratio	0.10	0.41	0.41	0.09	0.37	0.37	0.13	0.22	0.22	0.10	0.15	0.15
v/c Ratio	0.69	0.92	0.44	0.41	0.75	0.13	0.96	0.44	0.10	0.42	0.81	0.49
Control Delay	59.9	39.2	3.9	47.1	29.8	5.2	73.1	33.8	11.7	46.1	50.2	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	39.2	3.9	47.1	29.8	5.2	73.1	33.8	11.7	46.1	50.2	9.7
LOS	E	D	A	D	C	A	E	C	B	D	D	A
Approach Delay		33.1			28.9			54.2			38.3	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	70	367	0	35	238	0	128	90	0	40	127	0
Queue Length 95th (ft)	#149	#522	55	75	313	29	#222	133	25	83	#197	59
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200		200	400		400
Base Capacity (vph)	186	1362	864	157	1220	626	453	759	367	184	549	415
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.92	0.44	0.41	0.75	0.13	0.96	0.44	0.10	0.40	0.79	0.48

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 89.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 36.8 Intersection LOS: D
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	1669	328	63	1264	76	349	398	51	156	298	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		200	400		400
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			357			83			55			113
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	122	1814	357	68	687	83	379	433	55	170	324	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	1814	357	68	687	83	379	433	55	170	324	113
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0
Total Split (s)	20.5	69.1	69.1	12.6	61.2	61.2	18.3	21.1	21.1	17.2	20.0	20.0
Total Split (%)	17.1%	57.6%	57.6%	10.5%	51.0%	51.0%	15.3%	17.6%	17.6%	14.3%	16.7%	16.7%
Maximum Green (s)	15.9	62.3	62.3	8.0	54.4	54.4	13.7	15.1	15.1	12.6	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0	5.0	3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	6.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	12.9	63.4	63.4	8.0	55.8	55.8	14.1	15.1	15.1	12.6	13.6	13.6
Actuated g/C Ratio	0.11	0.54	0.54	0.07	0.47	0.47	0.12	0.13	0.13	0.11	0.11	0.11
v/c Ratio	0.64	1.01	0.36	0.57	0.44	0.11	0.94	0.97	0.22	0.91	0.81	0.40
Control Delay	65.8	53.3	2.6	73.7	22.3	4.3	83.4	87.4	14.7	99.4	67.4	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	53.3	2.6	73.7	22.3	4.3	83.4	87.4	14.7	99.4	67.4	13.5
LOS	E	D	A	E	C	A	F	F	B	F	E	B
Approach Delay		46.1			24.7			81.1			66.3	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	91	~802	0	52	181	0	153	178	0	133	130	0
Queue Length 95th (ft)	154	#941	45	#112	241	29	#253	#286	39	#268	#197	55
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200		200	400		400
Base Capacity (vph)	235	1789	1005	119	1575	783	405	447	248	187	415	285
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	1.01	0.36	0.57	0.44	0.11	0.94	0.97	0.22	0.91	0.78	0.40

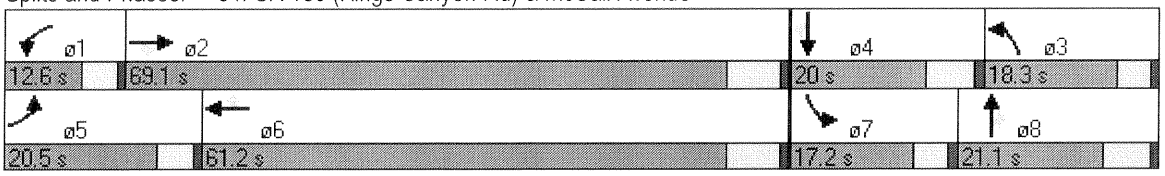
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 118.5
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 51.5 Intersection LOS: D
Intersection Capacity Utilization 90.8% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



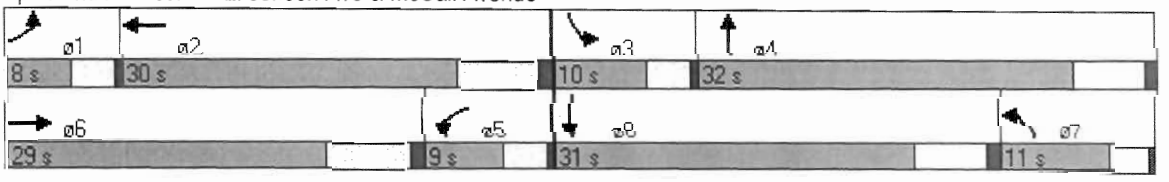
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	491	157	27	837	237	280	379	11	198	397	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	75		75	100		100
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3505	1568	1752	3505	1568	3400	1845	1568	3400	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	1752	3505	1568	3400	1845	1568	3400	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171			239			8			186
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	126	534	171	29	910	258	304	412	12	215	432	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	534	171	29	910	258	304	412	12	215	432	245
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	8.0	24.8	24.8	8.0	24.8	24.8	8.0	31.0	31.0	8.0	31.0	31.0
Total Split (s)	8.0	29.0	29.0	9.0	30.0	30.0	11.0	32.0	32.0	10.0	31.0	31.0
Total Split (%)	10.0%	36.3%	36.3%	11.3%	37.5%	37.5%	13.8%	40.0%	40.0%	12.5%	38.8%	38.8%
Maximum Green (s)	4.5	22.2	22.2	5.5	23.2	23.2	7.5	26.0	26.0	6.5	25.0	25.0
Yellow Time (s)	3.0	5.8	5.8	3.0	5.8	5.8	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	6.8	3.5	6.8	6.8	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		14.0	14.0		14.0	14.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		7.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	4.5	27.8	27.8	5.5	23.3	23.3	7.5	22.5	22.5	6.5	21.5	21.5
Actuated g/C Ratio	0.06	0.36	0.36	0.07	0.30	0.30	0.10	0.29	0.29	0.08	0.28	0.28
v/c Ratio	0.63	0.42	0.25	0.23	0.86	0.40	0.91	0.76	0.03	0.74	0.83	0.43
Control Delay	51.8	21.5	5.1	39.7	35.6	6.2	68.8	34.5	12.9	52.6	41.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	21.5	5.1	39.7	35.6	6.2	68.8	34.5	12.9	52.6	41.1	8.8
LOS	D	C	A	D	D	A	E	C	B	D	D	A
Approach Delay		22.7			29.4			48.5			35.0	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 33.0 Intersection LOS: C
Intersection Capacity Utilization 72.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



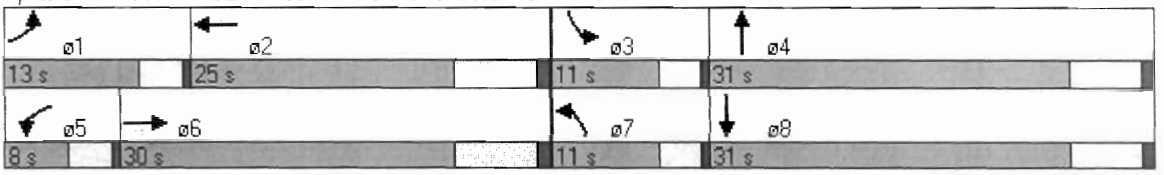
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	947	265	24	555	156	282	374	43	206	345	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	75		75	100		100
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3505	1568	1752	3505	1568	3400	1845	1568	3400	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	1752	3505	1568	3400	1845	1568	3400	1845	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			236			170			30			140
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	302	1029	288	26	603	170	307	407	47	224	375	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	302	1029	288	26	603	170	307	407	47	224	375	160
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	8.0	24.8	24.8	8.0	24.8	24.8	8.0	31.0	31.0	8.0	31.0	31.0
Total Split (s)	13.0	30.0	30.0	8.0	25.0	25.0	11.0	31.0	31.0	11.0	31.0	31.0
Total Split (%)	16.3%	37.5%	37.5%	10.0%	31.3%	31.3%	13.8%	38.8%	38.8%	13.8%	38.8%	38.8%
Maximum Green (s)	9.5	23.2	23.2	4.5	18.2	18.2	7.5	25.0	25.0	7.5	25.0	25.0
Yellow Time (s)	3.0	5.8	5.8	3.0	5.8	5.8	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	6.8	3.5	6.8	6.8	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		14.0	14.0		14.0	14.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		7.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	9.4	28.1	28.1	4.5	18.3	18.3	7.5	20.6	20.6	7.5	20.6	20.6
Actuated g/C Ratio	0.12	0.37	0.37	0.06	0.24	0.24	0.10	0.27	0.27	0.10	0.27	0.27
v/c Ratio	0.72	0.79	0.39	0.25	0.71	0.33	0.91	0.81	0.10	0.66	0.75	0.30
Control Delay	43.7	29.7	7.1	41.8	32.6	6.6	67.4	39.1	11.2	44.6	35.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	29.7	7.1	41.8	32.6	6.6	67.4	39.1	11.2	44.6	35.0	7.0
LOS	D	C	A	D	C	A	E	D	B	D	C	A
Approach Delay		28.3			27.4			48.8			31.9	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 32.8 Intersection LOS: C
Intersection Capacity Utilization 73.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 52: Jensen Ave & McCall Avenue



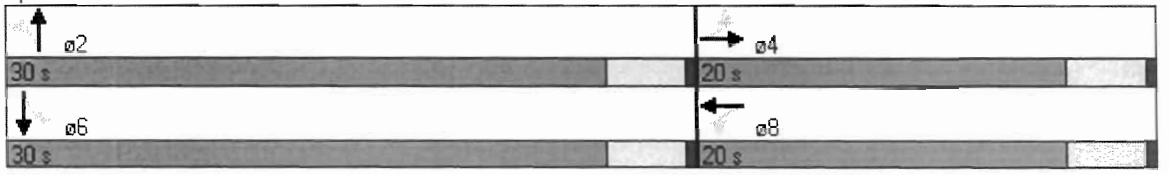
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	59	5	43	121	210	14	313	37	140	394	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.924			0.986			0.996	
Flt Protected		0.992			0.994			0.998			0.987	
Satd. Flow (prot)	0	1815	0	0	1694	0	0	1815	0	0	1813	0
Flt Permitted		0.941			0.958			0.976			0.826	
Satd. Flow (perm)	0	1722	0	0	1633	0	0	1775	0	0	1518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			135			17			5	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		211			228			5297			5448	
Travel Time (s)		2.6			2.8			65.7			67.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	13	64	5	47	132	228	15	340	40	152	428	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	407	0	0	395	0	0	598	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Nurnber of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.0			12.0			21.0			21.0	
Actuated g/C Ratio		0.29			0.29			0.51			0.51	
v/c Ratio		0.16			0.72			0.43			0.77	
Control Delay		12.2			17.4			8.4			17.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.2			17.4			8.4			17.8	
LOS		B			B			A			B	
Approach Delay		12.2			17.4			8.4			17.8	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 41.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 14.9 Intersection LOS: B
Intersection Capacity Utilization 85.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 48: North Ave & McCall Avenue



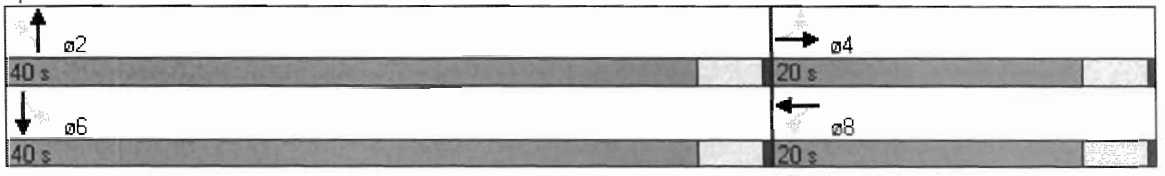
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	23	139	15	47	56	157	5	458	46	189	388	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.918			0.988			0.999	
Flt Protected		0.994			0.991						0.984	
Satd. Flow (prot)	0	1813	0	0	1678	0	0	1823	0	0	1813	0
Flt Permitted		0.942			0.927			0.996			0.723	
Satd. Flow (perm)	0	1719	0	0	1570	0	0	1815	0	0	1332	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			125			15			1	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		211			228			5297			5448	
Travel Time (s)		2.6			2.8			65.7			67.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	25	151	16	51	61	171	5	498	50	205	422	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	192	0	0	283	0	0	553	0	0	630	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.9			10.9			28.1			28.1	
Actuated g/C Ratio		0.23			0.23			0.59			0.59	
v/c Ratio		0.48			0.62			0.51			0.80	
Control Delay		21.1			16.9			7.8			17.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.1			16.9			7.8			17.9	
LOS		C			B			A			B	
Approach Delay		21.1			16.9			7.8			17.9	
Approach LOS		C			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 47.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 14.7 Intersection LOS: B
Intersection Capacity Utilization 91.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 48: North Ave & McCall Avenue



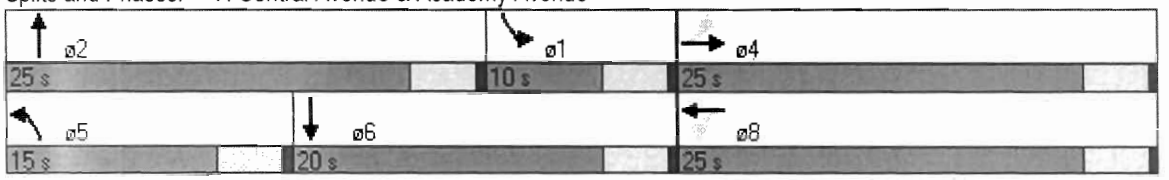
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	149	105	46	137	47	161	391	40	54	356	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.954			0.972			0.986			0.981	
Flt Protected		0.992			0.990		0.950			0.950		
Satd. Flow (prot)	0	1591	0	0	1618	0	1752	3456	0	1752	3438	0
Flt Permitted		0.922			0.898		0.950			0.950		
Satd. Flow (perm)	0	1479	0	0	1468	0	1752	3456	0	1752	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			24			20			25	
Link Speed (mph)		45			55			40			40	
Link Distance (ft)		5260			2864			3348			8180	
Travel Time (s)		79.7			35.5			57.1			139.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	57	162	114	50	149	51	175	425	43	59	387	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	333	0	0	250	0	175	468	0	59	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	15.0	25.0	0.0	10.0	20.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	25.0%	41.7%	0.0%	16.7%	33.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		11.0	21.0		6.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		14.5			14.5		9.7	17.4		7.7	11.6	
Actuated g/C Ratio		0.32			0.32		0.21	0.38		0.17	0.26	
v/c Ratio		0.66			0.51		0.47	0.35		0.20	0.49	
Control Delay		19.8			17.1		24.0	12.7		22.2	17.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		19.8			17.1		24.0	12.7		22.2	17.5	
LOS		B			B		C	B		C	B	
Approach Delay		19.8			17.1			15.8			18.1	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		67			51		43	32		15	53	
Queue Length 95th (ft)		158			120		113	107		48	104	
Internal Link Dist (ft)		5180			2784			3268			8100	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		804			787		485	1907		307	1399	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.41			0.32		0.36	0.25		0.19	0.32	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.2
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Central Avenue & Academy Avenue



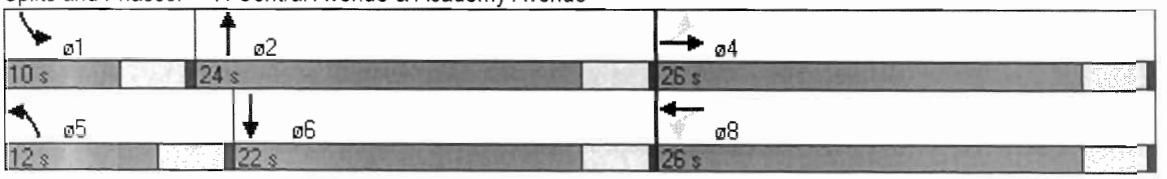
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	124	129	33	135	56	132	447	41	66	456	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.950			0.966			0.987			0.978	
Flt Protected		0.987			0.993		0.950			0.950		
Satd. Flow (prot)	0	1577	0	0	1613	0	1752	3459	0	1752	3428	0
Flt Permitted		0.867			0.928		0.950			0.950		
Satd. Flow (perm)	0	1385	0	0	1507	0	1752	3459	0	1752	3428	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			32			17			34	
Link Speed (mph)		45			55			40			40	
Link Distance (ft)		5260			2864			3348			8180	
Travel Time (s)		79.7			35.5			57.1			139.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	100	135	140	36	147	61	143	486	45	72	496	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	375	0	0	244	0	143	531	0	72	582	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	12.0	24.0	0.0	10.0	22.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	20.0%	40.0%	0.0%	16.7%	36.7%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		8.0	20.0		6.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		16.4			16.4		8.2	17.3		6.6	13.7	
Actuated g/C Ratio		0.34			0.34		0.17	0.36		0.14	0.29	
v/c Ratio		0.73			0.45		0.48	0.42		0.30	0.58	
Control Delay		22.8			14.9		29.8	14.1		27.5	17.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		22.8			14.9		29.8	14.1		27.5	17.8	
LOS		C			B		C	B		C	B	
Approach Delay		22.8			14.9			17.4			18.8	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		83			49		41	65		21	75	
Queue Length 95th (ft)		#196			109		#116	114		60	130	
Internal Link Dist (ft)		5180			2784			3268			8100	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		746			798		331	1689		248	1476	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.50			0.31		0.43	0.31		0.29	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 47.8
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 18.6 Intersection LOS: B
Intersection Capacity Utilization 65.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Central Avenue & Academy Avenue



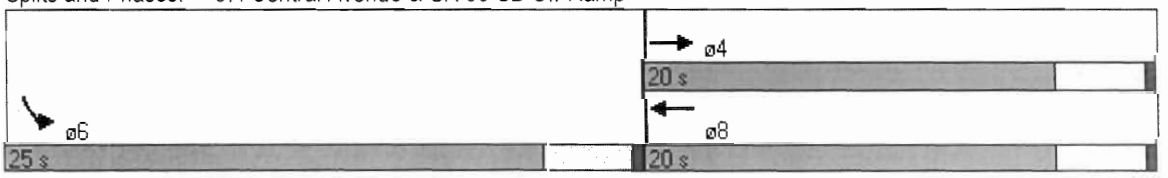
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	268	278	0	449	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						132
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	291	302	0	488	143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	291	302	0	488	143
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	25.0	25.0
Total Split (%)	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%
Maximum Green (s)		16.0	16.0		21.0	21.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		11.6	11.7		19.3	19.3
Actuated g/C Ratio		0.34	0.34		0.56	0.56
v/c Ratio		0.51	0.53		0.55	0.17
Control Delay		14.2	14.5		10.9	2.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.2	14.5		10.9	2.6
LOS		B	B		B	A
Approach Delay		14.2	14.5		9.1	
Approach LOS		B	B		A	

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 34.5
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 46.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



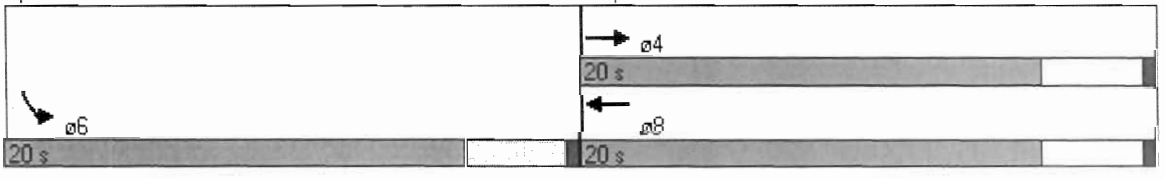
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	410	231	0	238	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						88
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	446	251	0	259	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	446	251	0	259	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		12.6	12.6		10.6	10.6
Actuated g/C Ratio		0.40	0.40		0.34	0.34
v/c Ratio		0.66	0.37		0.48	0.16
Control Delay		14.5	9.2		12.2	3.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.5	9.2		12.2	3.4
LOS		B	A		B	A
Approach Delay		14.5	9.2		10.0	
Approach LOS		B	A		A	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.5
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 11.7 Intersection LOS: B
Intersection Capacity Utilization 41.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



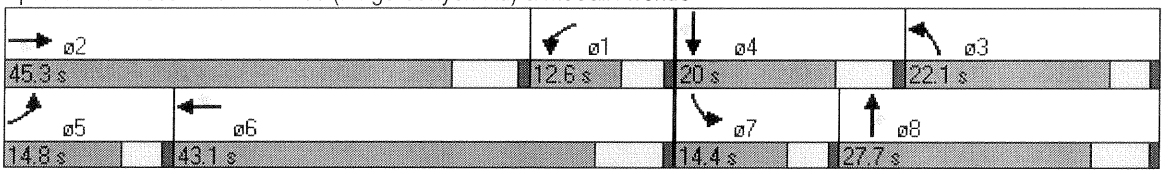
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1156	495	59	1692	77	543	312	32	67	407	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		200	400		400
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			538			84			35			200
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	125	1257	538	64	920	84	590	339	35	73	442	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	1257	538	64	920	84	590	339	35	73	442	200
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0
Total Split (s)	14.8	45.3	45.3	12.6	43.1	43.1	22.1	27.7	27.7	14.4	20.0	20.0
Total Split (%)	14.8%	45.3%	45.3%	12.6%	43.1%	43.1%	22.1%	27.7%	27.7%	14.4%	20.0%	20.0%
Maximum Green (s)	10.2	38.5	38.5	8.0	36.3	36.3	17.5	21.7	21.7	9.8	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0	5.0	3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	6.0	4.6	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	9.8	40.6	40.6	8.0	36.3	36.3	17.5	25.1	25.1	9.0	14.0	14.0
Actuated g/C Ratio	0.10	0.41	0.41	0.08	0.36	0.36	0.18	0.25	0.25	0.09	0.14	0.14
v/c Ratio	0.73	0.92	0.56	0.45	0.75	0.13	0.99	0.38	0.08	0.46	0.90	0.51
Control Delay	68.2	41.3	4.4	54.9	32.6	5.4	75.9	33.8	11.4	52.8	64.6	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	41.3	4.4	54.9	32.6	5.4	75.9	33.8	11.4	52.8	64.6	10.8
LOS	E	D	A	D	C	A	E	C	B	D	E	B
Approach Delay		32.8			31.8			58.8			48.4	
Approach LOS		C			C			E			D	
Queue Length 50th (ft)	78	408	0	40	267	0	195	98	0	45	147	0
Queue Length 95th (ft)	#164	#563	65	83	344	31	#309	143	25	90	#238	63
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200		200	400		400
Base Capacity (vph)	180	1364	959	141	1219	625	598	882	421	173	493	393
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.92	0.56	0.45	0.75	0.13	0.99	0.38	0.08	0.42	0.90	0.51

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 99.6
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 40.3 Intersection LOS: D
Intersection Capacity Utilization 83.7% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	1669	338	63	1264	76	359	398	51	156	298	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		500	200		200	400		400
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3343	1568	1752	3343	1568	3400	3505	1568	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			367			83			55			113
Link Speed (mph)		65			65			55			55	
Link Distance (ft)		640			1217			10602			1319	
Travel Time (s)		6.7			12.8			131.4			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	3%	3%	8%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	122	1814	367	68	687	83	390	433	55	170	324	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	1814	367	68	687	83	390	433	55	170	324	113
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0
Minimum Split (s)	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0	12.6	20.0	20.0
Total Split (s)	20.5	69.2	69.2	12.6	61.3	61.3	18.2	21.0	21.0	17.2	20.0	20.0
Total Split (%)	17.1%	57.7%	57.7%	10.5%	51.1%	51.1%	15.2%	17.5%	17.5%	14.3%	16.7%	16.7%
Maximum Green (s)	15.9	62.4	62.4	8.0	54.5	54.5	13.6	15.0	15.0	12.6	14.0	14.0
Yellow Time (s)	3.6	5.8	5.8	3.6	5.8	5.8	3.6	5.0	5.0	3.6	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.8	6.8	4.6	6.8	6.8	4.6	6.0	6.0	4.6	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	12.9	63.5	63.5	8.0	55.9	55.9	14.0	15.0	15.0	12.6	13.6	13.6
Actuated g/C Ratio	0.11	0.54	0.54	0.07	0.47	0.47	0.12	0.13	0.13	0.11	0.11	0.11
v/c Ratio	0.64	1.01	0.36	0.57	0.44	0.11	0.97	0.98	0.22	0.91	0.81	0.40
Control Delay	65.8	52.9	2.6	73.7	22.2	4.3	90.5	89.1	14.7	99.4	67.4	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	52.9	2.6	73.7	22.2	4.3	90.5	89.1	14.7	99.4	67.4	13.5
LOS	E	D	A	E	C	A	F	F	B	F	E	B
Approach Delay		45.6			24.6			85.0			66.3	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	91	~801	0	52	181	0	~160	178	0	133	130	0
Queue Length 95th (ft)	154	#940	46	#112	240	29	#264	#287	39	#268	#197	55
Internal Link Dist (ft)		560			1137			10522			1239	
Turn Bay Length (ft)	500		500	500		500	200		200	400		400
Base Capacity (vph)	235	1791	1011	119	1577	784	402	444	247	187	415	285
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	1.01	0.36	0.57	0.44	0.11	0.97	0.98	0.22	0.91	0.78	0.40

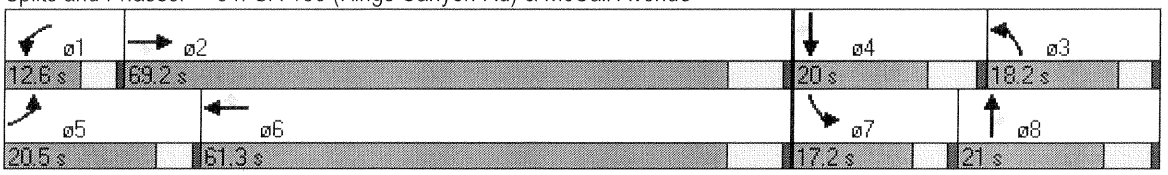
Intersection Summary

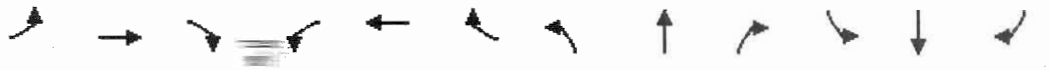
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 118.5
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 52.0 Intersection LOS: D
Intersection Capacity Utilization 90.8% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 54: SR 180 (Kings Canyon Rd) & McCall Avenue





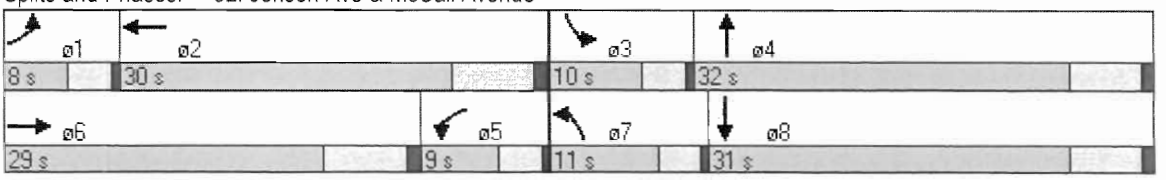
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	491	161	27	837	237	284	530	11	198	549	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	75		75	100		100
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3505	1568	1752	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	1752	3505	1568	3400	3505	1568	3400	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175			239			11			191
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	126	534	175	29	910	258	309	576	12	215	597	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	534	175	29	910	258	309	576	12	215	597	245
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	8.0	24.8	24.8	8.0	24.8	24.8	8.0	31.0	31.0	8.0	31.0	31.0
Total Split (s)	8.0	29.0	29.0	9.0	30.0	30.0	11.0	32.0	32.0	10.0	31.0	31.0
Total Split (%)	10.0%	36.3%	36.3%	11.3%	37.5%	37.5%	13.8%	40.0%	40.0%	12.5%	38.8%	38.8%
Maximum Green (s)	4.5	22.2	22.2	5.5	23.2	23.2	7.5	26.0	26.0	6.5	25.0	25.0
Yellow Time (s)	3.0	5.8	5.8	3.0	5.8	5.8	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	6.8	3.5	6.8	6.8	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		14.0	14.0		14.0	14.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		7.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	4.5	26.3	26.3	5.6	23.4	23.4	7.6	19.5	19.5	6.6	18.5	18.5
Actuated g/C Ratio	0.06	0.36	0.36	0.08	0.32	0.32	0.11	0.27	0.27	0.09	0.26	0.26
v/c Ratio	0.59	0.42	0.26	0.21	0.80	0.38	0.87	0.61	0.03	0.69	0.66	0.45
Control Delay	47.6	20.3	5.0	38.0	30.4	6.0	59.2	26.0	10.9	47.2	28.0	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	20.3	5.0	38.0	30.4	6.0	59.2	26.0	10.9	47.2	28.0	9.1
LOS	D	C	A	D	C	A	E	C	B	D	C	A
Approach Delay		21.2			25.4			37.2			27.5	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	29	83	0	13	197	6	72	121	0	50	128	19
Queue Length 95th (ft)	#70	168	44	39	#339	60	#159	169	12	#109	180	72
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150		150	150		150	75		75	100		100
Base Capacity (vph)	214	1276	682	135	1139	671	357	1276	578	310	1227	673
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.42	0.26	0.21	0.80	0.38	0.87	0.45	0.02	0.69	0.49	0.36

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 72.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 27.7 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



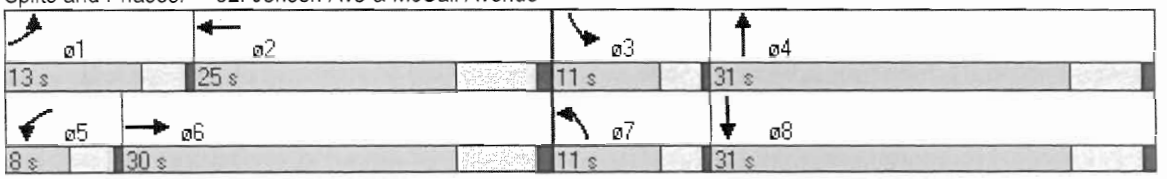
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	278	947	265	24	555	156	282	384	43	206	355	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	75		75	100		100
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3505	1568	1752	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	1752	3505	1568	3400	3505	1568	3400	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			236			170			47			160
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		493			625			5448			10602	
Travel Time (s)		6.1			7.7			67.5			131.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	302	1029	288	26	603	170	307	417	47	224	386	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	302	1029	288	26	603	170	307	417	47	224	386	160
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	8.0	24.8	24.8	8.0	24.8	24.8	8.0	31.0	31.0	8.0	31.0	31.0
Total Split (s)	13.0	30.0	30.0	8.0	25.0	25.0	11.0	31.0	31.0	11.0	31.0	31.0
Total Split (%)	16.3%	37.5%	37.5%	10.0%	31.3%	31.3%	13.8%	38.8%	38.8%	13.8%	38.8%	38.8%
Maximum Green (s)	9.5	23.2	23.2	4.5	18.2	18.2	7.5	25.0	25.0	7.5	25.0	25.0
Yellow Time (s)	3.0	5.8	5.8	3.0	5.8	5.8	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.8	6.8	3.5	6.8	6.8	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		14.0	14.0		14.0	14.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		7.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	9.3	28.0	28.0	4.5	18.2	18.2	7.5	13.4	13.4	7.5	13.4	13.4
Actuated g/C Ratio	0.14	0.41	0.41	0.07	0.27	0.27	0.11	0.20	0.20	0.11	0.20	0.20
v/c Ratio	0.65	0.72	0.37	0.22	0.64	0.31	0.82	0.61	0.14	0.60	0.56	0.37
Control Delay	36.1	22.8	6.0	36.6	26.5	5.8	50.7	28.9	8.4	37.3	28.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	22.8	6.0	36.6	26.5	5.8	50.7	28.9	8.4	37.3	28.1	7.0
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		22.3			22.4			36.3			26.4	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	62	165	12	11	117	0	65	84	0	46	77	0
Queue Length 95th (ft)	#110	#356	71	35	184	43	#140	126	23	#87	117	42
Internal Link Dist (ft)		413			545			5368			10522	
Turn Bay Length (ft)	150		150	150		150	75		75	100		100
Base Capacity (vph)	474	1437	782	116	936	543	374	1286	605	374	1286	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.72	0.37	0.22	0.64	0.31	0.82	0.32	0.08	0.60	0.30	0.24

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 68.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 25.8 Intersection LOS: C
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 52: Jensen Ave & McCall Avenue



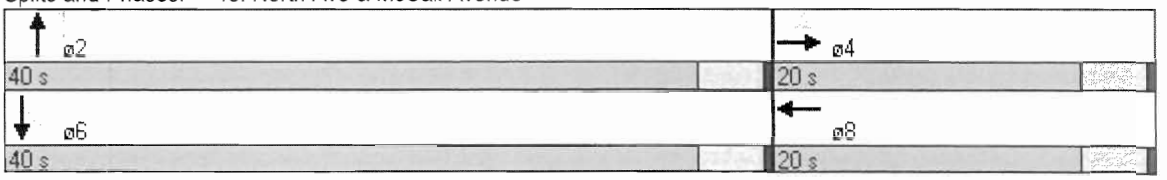
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	12	59	5	43	121	210	14	468	37	140	550	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.924			0.990			0.997	
Flt Protected		0.992			0.994			0.999			0.990	
Satd. Flow (prot)	0	1815	0	0	1694	0	0	1824	0	0	1821	0
Flt Permitted		0.928			0.957			0.979			0.816	
Satd. Flow (perm)	0	1698	0	0	1631	0	0	1788	0	0	1501	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			104			11			4	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		211			228			5297			5448	
Travel Time (s)		2.6			2.8			65.7			67.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	13	64	5	47	132	228	15	509	40	152	598	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	407	0	0	564	0	0	768	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		13.9			13.9			31.2			31.2	
Actuated g/C Ratio		0.26			0.26			0.58			0.58	
v/c Ratio		0.18			0.81			0.54			0.87	
Control Delay		17.2			29.9			9.0			23.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.2			29.9			9.0			23.6	
LOS		B			C			A			C	
Approach Delay		17.2			29.9			9.0			23.6	
Approach LOS		B			C			A			C	
Queue Length 50th (ft)		21			101			101			195	
Queue Length 95th (ft)		51			#237			170			#437	
Internal Link Dist (ft)		131			148			5217			5368	
Turn Bay Length (ft)												
Base Capacity (vph)		530			577			1251			1048	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.15			0.71			0.45			0.73	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 53.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 20.2 Intersection LOS: C
Intersection Capacity Utilization 102.0% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 48: North Ave & McCall Avenue



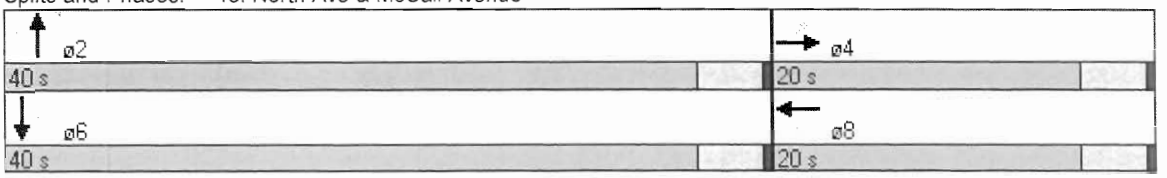
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	23	139	15	47	56	157	5	468	46	189	398	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.918			0.988			0.999	
Flt Protected		0.994			0.991						0.984	
Satd. Flow (prot)	0	1813	0	0	1678	0	0	1823	0	0	1813	0
Flt Permitted		0.940			0.926			0.996			0.722	
Satd. Flow (perm)	0	1715	0	0	1568	0	0	1815	0	0	1331	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			125			15			1	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		211			228			5297			5448	
Travel Time (s)		2.6			2.8			65.7			67.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	25	151	16	51	61	171	5	509	50	205	433	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	192	0	0	283	0	0	564	0	0	641	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.9			10.9			28.7			28.7	
Actuated g/C Ratio		0.23			0.23			0.60			0.60	
v/c Ratio		0.48			0.62			0.52			0.81	
Control Delay		21.4			17.1			7.9			18.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.4			17.1			7.9			18.5	
LOS		C			B			A			B	
Approach Delay		21.4			17.1			7.9			18.5	
Approach LOS		C			B			A			B	
Queue Length 50th (ft)		46			39			71			111	
Queue Length 95th (ft)		106			112			167			#366	
Internal Link Dist (ft)		131			148			5217			5368	
Turn Bay Length (ft)												
Base Capacity (vph)		604			629			1417			1037	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.32			0.45			0.40			0.62	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 48
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 92.0% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 48: North Ave & McCall Avenue



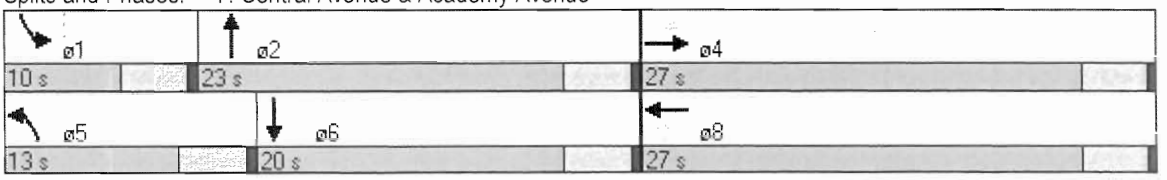
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	308	105	54	295	51	161	391	49	59	356	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.970			0.983			0.983			0.981	
Flt Protected		0.994			0.993		0.950			0.950		
Satd. Flow (prot)	0	1621	0	0	1641	0	1752	3445	0	1752	3438	0
Flt Permitted		0.927			0.900		0.950			0.950		
Satd. Flow (perm)	0	1512	0	0	1488	0	1752	3445	0	1752	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			14			23			25	
Link Speed (mph)		45			55			40			40	
Link Distance (ft)		5260			2864			3348			8180	
Travel Time (s)		79.7			35.5			57.1			139.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	57	335	114	59	321	55	175	425	53	64	387	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	506	0	0	435	0	175	478	0	64	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	27.0	27.0	0.0	27.0	27.0	0.0	13.0	23.0	0.0	10.0	20.0	0.0
Total Split (%)	45.0%	45.0%	0.0%	45.0%	45.0%	0.0%	21.7%	38.3%	0.0%	16.7%	33.3%	0.0%
Maximum Green (s)	23.0	23.0		23.0	23.0		9.0	19.0		6.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		20.9			20.9		8.9	16.2		6.2	12.0	
Actuated g/C Ratio		0.41			0.41		0.17	0.32		0.12	0.24	
v/c Ratio		0.79			0.70		0.57	0.43		0.30	0.53	
Control Delay		26.3			22.0		32.4	15.7		28.2	19.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		26.3			22.0		32.4	15.7		28.2	19.9	
LOS		C			C		C	B		C	B	
Approach Delay		26.3			22.0			20.2			21.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		133			111		55	67		20	65	
Queue Length 95th (ft)		#320			#264		#139	104		54	104	
Internal Link Dist (ft)		5180			2784			3268			8100	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		744			725		330	1445		220	1170	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.68			0.60		0.53	0.33		0.29	0.38	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 51
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 22.2 Intersection LOS: C
Intersection Capacity Utilization 62.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Central Avenue & Academy Avenue



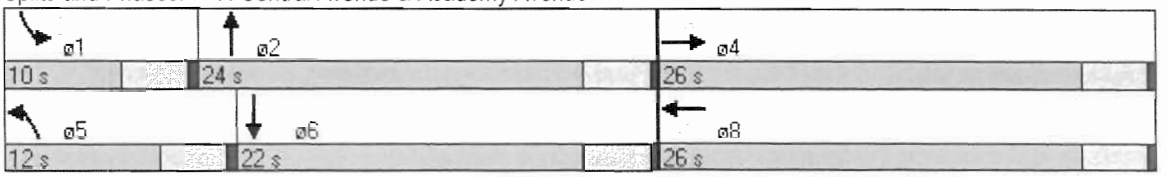
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	134	129	33	146	57	132	447	42	66	456	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.951			0.967			0.987			0.978	
Flt Protected		0.987			0.993		0.950			0.950		
Satd. Flow (prot)	0	1578	0	0	1615	0	1752	3459	0	1752	3428	0
Flt Permitted		0.866			0.929		0.950			0.950		
Satd. Flow (perm)	0	1385	0	0	1510	0	1752	3459	0	1752	3428	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			30			18			34	
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		5260			2864			3348			8180	
Travel Time (s)		79.7			43.4			57.1			139.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	100	146	140	36	159	62	143	486	46	72	496	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	386	0	0	257	0	143	532	0	72	582	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

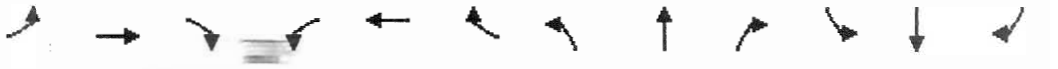
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	12.0	24.0	0.0	10.0	22.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	20.0%	40.0%	0.0%	16.7%	36.7%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		8.0	20.0		6.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		16.9			16.9		8.2	17.4		6.5	13.8	
Actuated g/C Ratio		0.35			0.35		0.17	0.36		0.13	0.29	
v/c Ratio		0.74			0.47		0.48	0.42		0.30	0.58	
Control Delay		23.8			15.4		30.2	14.2		27.8	18.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.8			15.4		30.2	14.2		27.8	18.0	
LOS		C			B		C	B		C	B	
Approach Delay		23.8			15.4			17.6			19.0	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		88			53		42	67		22	77	
Queue Length 95th (ft)		#221			116		#116	114		60	130	
Internal Link Dist (ft)		5180			2784			3268			8100	
Turn Bay Length (ft)							200			200		
Base Capacity (vph)		735			787		326	1668		244	1454	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.53			0.33		0.44	0.32		0.30	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 48.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Central Avenue & Academy Avenue





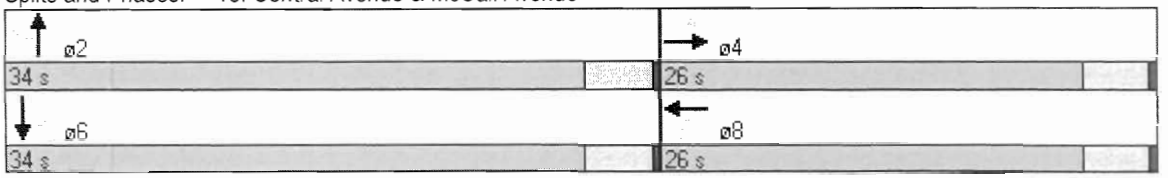
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	118	4	8	134	241	13	256	14	223	338	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.915			0.993			0.995	
Flt Protected		0.996			0.999			0.998			0.981	
Satd. Flow (prot)	0	1668	0	0	1537	0	0	1828	0	0	1801	0
Flt Permitted		0.971			0.994			0.972			0.767	
Satd. Flow (perm)	0	1626	0	0	1529	0	0	1780	0	0	1408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			160			6			4	
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		15700			10560			748			5297	
Travel Time (s)		194.6			130.9			9.3			65.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	11	128	4	9	146	262	14	278	15	242	367	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	0	0	417	0	0	307	0	0	631	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		14.2			14.2			27.4			27.4	
Actuated g/C Ratio		0.28			0.28			0.55			0.55	
v/c Ratio		0.31			0.76			0.31			0.82	
Control Delay		15.8			19.7			8.2			22.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.8			19.7			8.2			22.5	
LOS		B			B			A			C	
Approach Delay		15.8			19.7			8.2			22.5	
Approach LOS		B			B			A			C	
Queue Length 50th (ft)		34			69			42			132	
Queue Length 95th (ft)		70			155			107			#395	
Internal Link Dist (ft)		15620			10480			668			5217	
Turn Bay Length (ft)												
Base Capacity (vph)		747			787			1115			882	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.19			0.53			0.28			0.72	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 49.9
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 18.1 Intersection LOS: B
Intersection Capacity Utilization 80.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Central Avenue & McCall Avenue



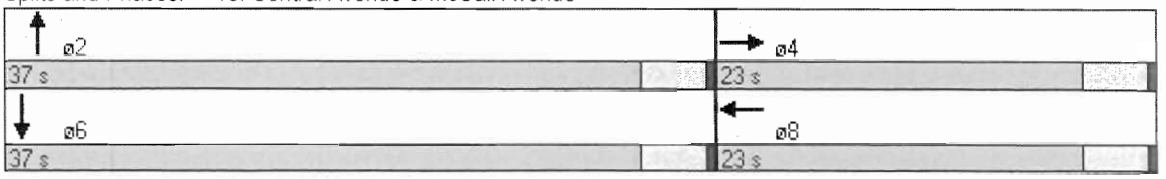
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	25	133	15	12	98	114	9	347	26	101	316	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.931			0.991			0.995	
Flt Protected		0.993			0.997			0.999			0.988	
Satd. Flow (prot)	0	1651	0	0	1561	0	0	1826	0	0	1813	0
Flt Permitted		0.930			0.979			0.988			0.831	
Satd. Flow (perm)	0	1547	0	0	1533	0	0	1806	0	0	1525	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			91			10			5	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		15700			10560			748			5297	
Travel Time (s)		237.9			160.0			9.3			65.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	27	145	16	13	107	124	10	377	28	110	343	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	188	0	0	244	0	0	415	0	0	471	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	37.0	37.0	0.0	37.0	37.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	61.7%	61.7%	0.0%	61.7%	61.7%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		33.0	33.0		33.0	33.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.1			10.1			18.3			18.3	
Actuated g/C Ratio		0.27			0.27			0.50			0.50	
v/c Ratio		0.44			0.50			0.46			0.62	
Control Delay		15.0			11.9			8.2			11.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.0			11.9			8.2			11.4	
LOS		B			B			A			B	
Approach Delay		15.0			11.9			8.2			11.4	
Approach LOS		B			B			A			B	
Queue Length 50th (ft)		24			20			41			53	
Queue Length 95th (ft)		90			89			120			161	
Internal Link Dist (ft)		15620			10480			668			5217	
Turn Bay Length (ft)												
Base Capacity (vph)		847			877			1615			1363	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.22			0.28			0.26			0.35	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 36.8
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 70.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 18: Central Avenue & McCall Avenue



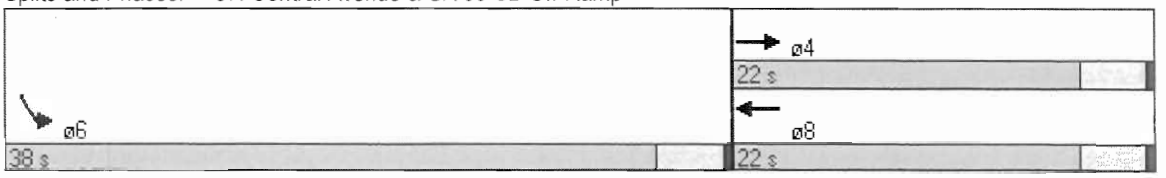
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	268	278	0	452	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						121
Link Speed (mph)		40	40		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		5.4	13.3		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	291	302	0	491	143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	291	302	0	491	143
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	22.0	22.0	0.0	38.0	38.0
Total Split (%)	0.0%	36.7%	36.7%	0.0%	63.3%	63.3%
Maximum Green (s)		18.0	18.0		34.0	34.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		12.1	12.1		17.6	17.6
Actuated g/C Ratio		0.32	0.32		0.46	0.46
v/c Ratio		0.55	0.57		0.67	0.20
Control Delay		16.8	17.2		13.5	2.9
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		16.8	17.2		13.5	2.9
LOS		B	B		B	A
Approach Delay		16.8	17.2		11.1	
Approach LOS		B	B		B	
Queue Length 50th (ft)		46	48		68	2
Queue Length 95th (ft)		140	146		176	23
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		852	852		1377	1249
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.34	0.35		0.36	0.11

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.4
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 46.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



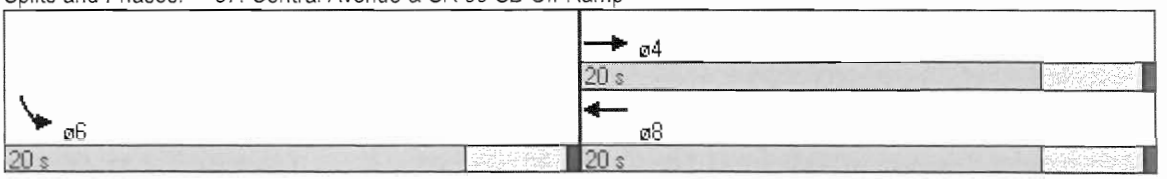
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Volume (vph)	0	410	231	0	238	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	50
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1681	1681	0	1597	1429
Flt Permitted					0.950	
Satd. Flow (perm)	0	1681	1681	0	1597	1429
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						88
Link Speed (mph)		45	45		65	
Link Distance (ft)		319	780		427	
Travel Time (s)		4.8	11.8		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Adj. Flow (vph)	0	446	251	0	259	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	446	251	0	259	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		20.0	20.0		20.0	20.0
Total Split (s)	0.0	20.0	20.0	0.0	20.0	20.0
Total Split (%)	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)		16.0	16.0		16.0	16.0
Yellow Time (s)		3.5	3.5		3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		None	None		Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
Act Effct Green (s)		12.6	12.6		10.6	10.6
Actuated g/C Ratio		0.40	0.40		0.34	0.34
v/c Ratio		0.66	0.37		0.48	0.16
Control Delay		14.5	9.2		12.2	3.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.5	9.2		12.2	3.4
LOS		B	A		B	A
Approach Delay		14.5	9.2		10.0	
Approach LOS		B	A		A	
Queue Length 50th (ft)		53	26		33	0
Queue Length 95th (ft)		#159	76		80	17
Internal Link Dist (ft)		239	700		347	
Turn Bay Length (ft)						50
Base Capacity (vph)		888	888		844	796
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.50	0.28		0.31	0.11

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 31.6
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 11.7 Intersection LOS: B
Intersection Capacity Utilization 41.4% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 37: Central Avenue & SR 99 SB Off-Ramp



APPENDIX E

HCS 2010 Worksheets

EXISTING WORKSHEETS

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Conditions

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	839	vph	1554	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	250		447	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	516	pcphpl	924	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	516	pcphpl	924	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		B	
Density, D	8.6	pc/mi/ln	15.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	499.4	893.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	3.97	4.26
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Conditions

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1353	vph	904	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	398		254	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	823	pcphpl	525	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	823	pcphpl	525	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.7	pc/mi/ln	8.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	795.9	507.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.20	3.98
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Conditions

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	843	vph	1567	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	251		440	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	519	pcphpl	911	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	519	pcphpl	911	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		B	
Density, D	8.6	pc/mi/ln	15.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	501.8	880.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	3.97	4.26
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Conditions

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1390	vph	879	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	395		244	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	817	pcphpl	505	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	817	pcphpl	505	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.6	pc/mi/ln	8.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	789.8	488.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.20	3.96
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Conditions

Flow Inputs and Adjustments

Volume, V	865	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	257	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	533	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	533	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	8.2	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Conditions

Flow Inputs and Adjustments

Volume, V	1450	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	412	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	853	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	853	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	13.1	pc/mi/ln
Level of service, LOS	B	

EXISTING PLUS PROJECT, EXISTING PLUS APPROVED/PENDING, EXISTING PLUS PROJECT PLUS APPROVED/PENDING WORKSHEETS

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	984	vph	1698	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	293		488	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	606	pcphpl	1010	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	606	pcphpl	1010	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		B	
Density, D	10.1	pc/mi/ln	16.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	585.7	975.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.05	4.31
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1363	vph	914	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	401		257	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	829	pcphpl	531	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	829	pcphpl	531	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.8	pc/mi/ln	8.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	801.8	513.5
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.21	3.98
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	988	vph	1711	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	294		481	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	608	pcphpl	994	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	608	pcphpl	994	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		B	
Density, D	10.1	pc/mi/ln	16.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	588.1	961.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.05	4.30
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1400	vph	889	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	398		247	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	823	pcphpl	511	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	823	pcphpl	511	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.7	pc/mi/ln	8.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	795.5	493.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.20	3.96
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Project

Flow Inputs and Adjustments

Volume, V	1010	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	301	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	622	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	622	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	9.6	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Project

Flow Inputs and Adjustments

Volume, V	1774	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	498	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1032	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1032	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.9	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Project

Flow Inputs and Adjustments

Volume, V	909	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	253	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	523	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	523	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	8.0	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	992	vph	1698	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	295		488	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	611	pcphpl	1010	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	611	pcphpl	1010	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		B	
Density, D	10.2	pc/mi/ln	16.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	590.5	975.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.05	4.31
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1362	vph	925	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	401		260	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	829	pcphpl	537	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	829	pcphpl	537	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.8	pc/mi/ln	8.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	801.2	519.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.21	3.99
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	996	vph	1711	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	296		481	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	613	pcphpl	994	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	613	pcphpl	994	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	A		B	
Density, D	10.2	pc/mi/ln	16.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	592.9	961.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.06	4.30
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1399	vph	900	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	397		250	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	822	pcphpl	517	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	822	pcphpl	517	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.7	pc/mi/ln	8.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	794.9	500.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.20	3.97
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	1018	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	303	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	627	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	627	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	9.6	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Basic Freeway Segments Release 6.3

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	1459	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	414	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	858	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	858	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	13.2	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	1774	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	498	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1032	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1032	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.9	pc/mi/ln
Level of service, LOS	B	

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Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	920	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	256	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	529	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	529	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	8.1	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1137	vph	1842	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	338		529	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	700	pcphpl	1095	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	700	pcphpl	1095	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	11.7	pc/mi/ln	18.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	676.8	1058.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.12	4.35
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1372	vph	935	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	404		263	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	835	pcphpl	543	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	835	pcphpl	543	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.9	pc/mi/ln	9.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	807.1	525.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.21	3.99
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1141	vph	1855	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	340		521	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	702	pcphpl	1078	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	702	pcphpl	1078	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	11.7	pc/mi/ln	18.0-	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	679.2	1042.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.12	4.34
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2014
Project ID:	Existing Plus Project Plus Approved/Pending

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1409	vph	910	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	400		253	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	828	pcphpl	523	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	828	pcphpl	523	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	13.8	pc/mi/ln	8.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	800.6	505.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.21	3.97
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014

Description: Existing Plus Project Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	1163	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	346	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	716	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	716	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	11.0+	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014

Description: Existing Plus Project Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	1469	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	417	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	864	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	864	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	13.3	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014
Description:	Existing Plus Project Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	1918	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	539	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1115	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1115	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	17.2	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2014

Description: Existing Plus Project Plus Approved/Pending

Flow Inputs and Adjustments

Volume, V	930	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	258	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	535	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	535	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	8.2	pc/mi/ln
Level of service, LOS	A	

YEAR 2015 CONDTIONS WORKSHEETS

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1124	vph	1864	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	335		536	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	692	pcphpl	1108	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	692	pcphpl	1108	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	11.5	pc/mi/ln	18.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	669.0	1071.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.12	4.35
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1494	vph	1057	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	439		297	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	909	pcphpl	614	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	909	pcphpl	614	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.1	pc/mi/ln	10.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	878.8	593.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.25	4.06
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1159	vph	1901	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	345		534	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	714	pcphpl	1105	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	714	pcphpl	1105	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	11.9	pc/mi/ln	18.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	689.9	1068.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.13	4.35
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1542	vph	1066	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	438		296	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	906	pcphpl	612	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	906	pcphpl	612	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.1	pc/mi/ln	10.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	876.1	592.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.25	4.05
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 No Project	

Flow Inputs and Adjustments

Volume, V	1155	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	344	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	712	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	712	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	11.0-	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 No Project	

Flow Inputs and Adjustments

Volume, V	1566	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	445	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	921	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	921	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	14.2	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description:	Year 2015 No Project

Flow Inputs and Adjustments

Volume, V	1957	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	550	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1138	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1138	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	17.5	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 No Project	

Flow Inputs and Adjustments

Volume, V	1064	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	296	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	612	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	612	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	9.4	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1269	vph	2008	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	378		577	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	781	pcphpl	1194	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	781	pcphpl	1194	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	13.0	pc/mi/ln	19.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	755.4	1154.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.18	4.39
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1504	vph	1067	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	442		300	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	915	pcphpl	620	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	915	pcphpl	620	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.3	pc/mi/ln	10.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	884.7	599.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.26	4.06
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1304	vph	2045	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	388		574	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	803	pcphpl	1189	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	803	pcphpl	1189	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	13.4	pc/mi/ln	19.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	776.2	1148.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.19	4.39
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2015
Project ID:	Year 2015 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1552	vph	1067	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	441		296	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	912	pcphpl	613	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	912	pcphpl	613	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.2	pc/mi/ln	10.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	881.8	592.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.26	4.06
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 Plus Project	

Flow Inputs and Adjustments

Volume, V	1300	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	387	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	801	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	801	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	12.3	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 Plus Project	

Flow Inputs and Adjustments

Volume, V	1576	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	448	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	927	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	927	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	14.3	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 Plus Project	

Flow Inputs and Adjustments

Volume, V	2101	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	590	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1222	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1222	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	18.8	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2015
Description: Year 2015 Plus Project	

Flow Inputs and Adjustments

Volume, V	1074	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	298	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	618	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	618	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	9.5	pc/mi/ln
Level of service, LOS	A	

YEAR 2017 CONDITIONS WORKSHEETS

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1190	vph	1947	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	354		559	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	733	pcphpl	1158	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	733	pcphpl	1158	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	12.2	pc/mi/ln	19.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	708.3	1119.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.14	4.38
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1559	vph	1123	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	459		315	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	949	pcphpl	652	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	949	pcphpl	652	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.8	pc/mi/ln	10.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	917.1	630.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.28	4.09
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1240	vph	1995	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	369		560	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	763	pcphpl	1160	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	763	pcphpl	1160	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	12.7	pc/mi/ln	19.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	738.1	1120.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.17	4.38
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1614	vph	1148	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	459		319	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	949	pcphpl	660	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	949	pcphpl	660	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.8	pc/mi/ln	11.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	917.0	637.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.28	4.09
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 No Project	

Flow Inputs and Adjustments

Volume, V	1223	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	364	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	753	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	753	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	11.6	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 No Project	

Flow Inputs and Adjustments

Volume, V	1619	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	460	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	952	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	952	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	14.6	pc/mi/ln
Level of service, LOS	B	

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Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 No Project	

Flow Inputs and Adjustments

Volume, V	2049	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	576	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1191	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1191	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	18.3	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description:	Year 2017 No Project

Flow Inputs and Adjustments

Volume, V	1135	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	315	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	653	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	653	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	10.0	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1335	vph	2091	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	397		601	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	822	pcphpl	1243	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	822	pcphpl	1243	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	13.7	pc/mi/ln	20.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	794.6	1201.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.20	4.41
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1569	vph	1133	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	461		318	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	955	pcphpl	658	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	955	pcphpl	658	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		A	
Density, D	15.9	pc/mi/ln	11.0-	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	922.9	636.5
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.28	4.09
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1385	vph	2139	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	412		601	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	853	pcphpl	1243	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	853	pcphpl	1243	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	14.2	pc/mi/ln	20.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	824.4	1201.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.22	4.41
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2017
Project ID:	Year 2017 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1624	vph	1158	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	461		322	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	955	pcphpl	665	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	955	pcphpl	665	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	15.9	pc/mi/ln	11.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	922.7	643.3
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.28	4.10
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 Plus Project	

Flow Inputs and Adjustments

Volume, V	1368	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	407	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	843	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	843	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	13.0	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 Plus Project	

Flow Inputs and Adjustments

Volume, V	1629	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	463	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	958	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	958	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	14.7	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 Plus Project	

Flow Inputs and Adjustments

Volume, V	2193	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	616	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1275	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1275	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	19.6	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2017
Description: Year 2017 Plus Project	

Flow Inputs and Adjustments

Volume, V	1145	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	318	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	658	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	658	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	10.1	pc/mi/ln
Level of service, LOS	A	

YEAR 2019 CONDITIONS WORKSHEETS

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1255	vph	2030	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	374		583	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	773	pcphpl	1207	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	773	pcphpl	1207	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	12.9	pc/mi/ln	20.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	747.0	1166.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.17	4.40
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1625	vph	1189	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	478		334	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	989	pcphpl	691	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	989	pcphpl	691	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.5	pc/mi/ln	11.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	955.9	668.0
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.30	4.12
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1321	vph	2090	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	393		587	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	813	pcphpl	1215	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	813	pcphpl	1215	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	13.6	pc/mi/ln	20.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	786.3	1174.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.20	4.40
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1685	vph	1231	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	479		342	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	990	pcphpl	707	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	990	pcphpl	707	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.5	pc/mi/ln	11.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	957.4	683.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.30	4.13
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019 No Project	

Flow Inputs and Adjustments

Volume, V	1291	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	384	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	795	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	795	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	12.2	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019	No Project

Flow Inputs and Adjustments

Volume, V	1672	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	475	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	983	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	983	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.1	pc/mi/ln
Level of service, LOS	B	

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Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019 No Project	

Flow Inputs and Adjustments

Volume, V	2140	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	601	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1244	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1244	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019	No Project

Flow Inputs and Adjustments

Volume, V	1207	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	335	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	694	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	694	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	10.7	pc/mi/ln
Level of service, LOS	A	

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1400	vph	2174	vph
Peak-hour factor, PHF	0.84		0.87	
Peak 15-minute volume, v15	417		625	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	862	pcphpl	1293	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	862	pcphpl	1293	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	14.4	pc/mi/ln	21.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	833.3	1249.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.23	4.43
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1635	vph	1199	vph
Peak-hour factor, PHF	0.85		0.89	
Peak 15-minute volume, v15	481		337	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	995	pcphpl	697	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	995	pcphpl	697	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.6	pc/mi/ln	11.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	961.8	673.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.30	4.12
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1466	vph	2234	vph
Peak-hour factor, PHF	0.84		0.89	
Peak 15-minute volume, v15	436		628	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	903	pcphpl	1298	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	903	pcphpl	1298	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	15.1	pc/mi/ln	21.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	872.6	1255.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.25	4.44
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

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E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2019
Project ID:	Year 2019 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1695	vph	1241	vph
Peak-hour factor, PHF	0.88		0.90	
Peak 15-minute volume, v15	482		345	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	996	pcphpl	713	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	996	pcphpl	713	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		B	
Density, D	16.6	pc/mi/ln	11.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	963.1	689.4
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.30	4.13
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019 Plus Project	

Flow Inputs and Adjustments

Volume, V	1436	veh/h
Peak-hour factor, PHF	0.84	
Peak 15-min volume, v15	427	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	885	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	885	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	13.6	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019 Plus Project	

Flow Inputs and Adjustments

Volume, V	1682	veh/h
Peak-hour factor, PHF	0.88	
Peak 15-min volume, v15	478	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	989	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	989	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.2	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019 Plus Project	

Flow Inputs and Adjustments

Volume, V	2284	veh/h
Peak-hour factor, PHF	0.89	
Peak 15-min volume, v15	642	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1328	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1328	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	20.4	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Basic Freeway Segments Release 6.3

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E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2019
Description: Year 2019 Plus Project	

Flow Inputs and Adjustments

Volume, V	1217	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	338	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	700	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	700	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	10.8	pc/mi/ln
Level of service, LOS	A	

CUMULATIVE 2035 CONDITIONS WORKSHEETS

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1752	vph	2695	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	476		732	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	985	pcphpl	1515	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	985	pcphpl	1515	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	59.6	mph
Level of service, LOS	B		C	
Density, D	16.4	pc/mi/ln	25.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	952.2	1464.7
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.30	4.51
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2151	vph	1717	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	585		467	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1209	pcphpl	965	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1209	pcphpl	965	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	20.1	pc/mi/ln	16.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1169.0	933.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.40	4.28
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

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Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1971	vph	2848	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	536		774	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1108	pcphpl	1601	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1108	pcphpl	1601	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	59.2	mph
Level of service, LOS	C		D	
Density, D	18.5	pc/mi/ln	27.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1071.2	1547.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.35	4.54
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 No Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2257	vph	1893	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	613		514	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1269	pcphpl	1064	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1269	pcphpl	1064	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	21.1	pc/mi/ln	17.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1226.6	1028.8
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.42	4.33
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035
Description:	Cumulative Year 2035 No Project

Flow Inputs and Adjustments

Volume, V	1838	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	499	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1034	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1034	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.9	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035
Description:	Cumulative Year 2035 No Project

Flow Inputs and Adjustments

Volume, V	2099	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	570	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1181	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1181	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	18.2	pc/mi/ln
Level of service, LOS	C	

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Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035
Description:	Cumulative Year 2035 No Project

Flow Inputs and Adjustments

Volume, V	2873	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	781	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1616	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1616	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	64.3	mi/h
Number of lanes, N	2	
Density, D	25.1	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035
Description:	Cumulative Year 2035 No Project

Flow Inputs and Adjustments

Volume, V	1781	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	484	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1002	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1002	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1897	vph	2839	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	515		771	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1067	pcphpl	1596	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1067	pcphpl	1596	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	59.2	mph
Level of service, LOS	B		D	
Density, D	17.8	pc/mi/ln	27.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1031.0	1542.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.34	4.54
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	Highland Ave to McCall Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2161	vph	1727	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	587		469	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1215	pcphpl	971	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1215	pcphpl	971	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	20.3	pc/mi/ln	16.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1174.5	938.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.40	4.29
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Multilane Highways Release 6.3

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	AM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2116	vph	2992	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	575		813	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1190	pcphpl	1682	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1190	pcphpl	1682	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	58.7	mph
Level of service, LOS	C		D	
Density, D	19.8	pc/mi/ln	28.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1150.0	1626.1
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.39	4.57
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	VRPA Technologies, Inc.
Agency/Co:	Fresno County
Date:	6/18/2014
Analysis Period:	PM Peak
Highway:	SR 180
From/To:	De Wolf Ave to Highland Ave
Jurisdiction:	
Analysis Year:	2035
Project ID:	Cumulative Year 2035 Plus Project

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2267	vph	1903	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	616		517	
Trucks and buses	7	%	7	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.966	
Flow rate, vp	1275	pcphpl	1070	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1275	pcphpl	1070	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		B	
Density, D	21.3	pc/mi/ln	17.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1232.1	1034.2
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.43	4.34
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035
Description:	Cumulative Year 2035 Plus Project Conditions

Flow Inputs and Adjustments

Volume, V	1983	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	539	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1115	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1115	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	17.2	pc/mi/ln
Level of service, LOS	B	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Eastbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035

Description: Cumulative Year 2035 Plus Project Conditions

Flow Inputs and Adjustments

Volume, V	2109	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	573	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1186	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1186	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	18.2	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	AM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035

Description: Cumulative Year 2035 Plus Project Conditions

Flow Inputs and Adjustments

Volume, V	3017	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	820	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1697	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1697	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	63.7	mi/h
Number of lanes, N	2	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

HCS 2010: Basic Freeway Segments Release 6.3

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	VRPA Technologies, Inc.
Agency or Company:	Fresno County
Date Performed:	6/18/2014
Analysis Time Period:	PM Peak
Freeway/Direction:	SR 180 / Westbound
From/To:	Temperance Ave to De Wolf Ave
Jurisdiction:	
Analysis Year:	2035

Description: Cumulative Year 2035 Plus Project Conditions

Flow Inputs and Adjustments

Volume, V	1791	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	487	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1007	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	65.0	mi/h

LOS and Performance Measures

Flow rate, vp	1007	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	15.5	pc/mi/ln
Level of service, LOS	B	

APPENDIX F

Project Production Levels

Estimated Project Traffic[1] - Trip Generation

Aggregate Sales of 1.25 Million Tons/Yr[2] (Anticipated 2019)

10/08/13

Truck Trips	Average Daily Trips[3,4]	Maximum Daily Trips	AM Peak Hour Trips[5]	PM Peak Hour Trips[5,6]
Aggregate Loads[7]	246	266	50	2
Asphalt[7]	80	212	40	2
Ready-Mix Concrete[8]	136	224	42	4
Product Truck Totals	462	702	132	8
Liquid Asphalt[9,10]	4	10	2	0
Cement[9,11]	10	22	4	0
Propane[12]	0.5	2	0	0
Import Concrete/Asphalt for Recycle[7]	40	40	6	0
Diesel Fuel[13]	0.25	0.1	0	0
Delivery Truck Totals	54	74	12	0
Total Truck Trips	**516**	**776**	**144**	**8**
Aggregate, Asphalt Employees Trips[14]	36	36	0	4
Ready-Mix Concrete Employee Trips[15]	40	40	0	2
Outside Services & Misc Visitors	14	14	2	1
Total Employees & Outside Services	**90**	**90**	**2**	**7**
Total Trips	**606**	**866**	**146**	**15**

Assumptions

1. Actual mix of products and trucks will vary with market-driven sales
2. Aggregate sales includes aggregate for on-site asphalt and ready-mix plants
3. Trip = one-way trip (i.e. 1 load = 2 trips)
4. 250 working days/yr for aggregate & asphalt, 275 working days/yr for ready-mix concrete
5. Peak hrly sales of each product determined by hrly loading capacity of each plant and mobile loading equipment (loaders) available. 1.25 loader to load aggregate and asphalt trucks. .75 loader to feed HMA and RMC plants.
6. PM peak trips are negligible. Almost all trips in the aggregate related industry occur befor 3:00 pm.
7. Aggregate, asphalt, recycle 25 tons/load
8. 1.65 tons agg/cy, avg 8.0 cy/load, peak 9.5 cy/load
9. Liquid asphalt & cement 27 tons/load
10. 0.05 tons of liquid asphalt/ton of asphalt
11. 0.235 tons cement/cy
12. Avg 2.75 gals/ton of asphalt with electric hot oil heater (delivered by 12,165 gal tanker)
13. Engineer's estimate: Mobile Equip 100,000 gal, RMC Mixer off-site delivery 1 gal/cy; delivered by 8,000 gal tanker
14. 18 Aggregate & asphalt employees
15. 20 Ready-mix concrete employees

Estimated Project Traffic[1] - Trip Generation
Aggregate Sales of 350,000 Tons/Yr[2] (Anticipated 2015)

10/08/13

Truck Trips	Average Daily Trips[3,4]	AM Peak Hour Trips[5]	PM Peak Hour Trips[5,6]
Aggregate Loads[7]	64	50	2
Asphalt[7]	24	40	2
Ready-Mix Concrete[8]	46	42	4
Product Truck Totals	134	132	8
Liquid Asphalt[9,10]	2	2	0
Cement[9,11]	4	4	0
Propane[12]	0.1	0	0
Import Concrete/Asphalt for Recycle[7]	24	6	0
Diesel Fuel[13]	0.08	0	0
Delivery Truck Totals	28	12	0
Total Truck Trips	**162**	**144**	**8**
Aggregate, Asphalt Employees Trips[14]	36	0	4
Ready-Mix Concrete Employee Trips[15]	20	0	2
Outside Services & Misc Visitors	6	2	1
Total Employees & Outside Services	**62**	**2**	**7**
Total Trips	**224**	**146**	**15**

Assumptions

1. Actual mix of products and trucks will vary with market-driven sales
2. Aggregate sales includes aggregate for on-site asphalt and ready-mix plants
3. Trip = one-way trip (i.e. 1 load = 2 trips)
4. 250 working days/yr for aggregate & asphalt, 275 working days/yr for ready-mix concrete
5. Peak hrly sales of each product determined by hrly loading capacity of each plant and mobile loading equipment (loaders) available. 1.25 loader to load aggregate and asphalt trucks. .75 loader to feed HMA and RMC plants.
6. PM peak trips are negligible. Almost all trips in the aggregate related industry occur befor 3:00 pm.
7. Aggregate, asphalt, recycle 25 tons/load
8. 1.65 tons agg/cy, avg 8.0 cy/load, peak 9.5 cy/load
9. Liquid asphalt & cement 27 tons/load
10. 0.05 tons of liquid asphalt/ton of asphalt
11. 0.235 tons cement/cy
12. Avg 2.75 gals/ton of asphalt with electric hot oil heater (delivered by 12,165 gal tanker)
13. Engineer's estimate: Mobile Equip 30,000 gal, RMC Mixer off-site delivery 1 gal/cy; delivered by 8,000 gal tanker
14. 18 Aggregate & asphalt employees
15. 10 Ready-mix concrete employees

Estimated Project Traffic[1] - Trip Generation
Aggregate Sales of 700,000 Tons/Yr[2] (Anticipated 2017)

10/08/13

Truck Trips	Average Daily Trips[3,4]	AM Peak Hour Trips[5]	PM Peak Hour Trips[5,6]
Aggregate Loads[7]	126	50	2
Asphalt[7]	48	40	2
Ready-Mix Concrete[8]	92	42	4
Product Truck Totals	266	132	8
Liquid Asphalt[9,10]	2	2	0
Cement[9,11]	6	4	0
Propane[12]	0.3	0	0
Import Concrete/Asphalt for Recycle[7]	32	6	0
Diesel Fuel[13]	0.16	0	0
Delivery Truck Totals	42	12	0
Total Truck Trips	**308**	**144**	**8**
Aggregate, Asphalt Employees Trips[14]	36	0	4
Ready-Mix Concrete Employee Trips[15]	40	0	2
Outside Services & Misc Visitors	10	2	1
Total Employees & Outside Services	**86**	**2**	7
Total Trips	**394**	**146**	**15**

Assumptions

1. Actual mix of products and trucks will vary with market-driven sales
2. Aggregate sales includes aggregate for on-site asphalt and ready-mix plants
3. Trip = one-way trip (i.e. 1 load = 2 trips)
4. 250 working days/yr for aggregate & asphalt, 275 working days/yr for ready-mix concrete
5. Peak hrly sales of each product determined by hrly loading capacity of each plant and mobile loading equipment (loaders) available. 1.25 loader to load aggregate and asphalt trucks. .75 loader to feed HMA and RMC plants.
6. PM peak trips are negligible. Almost all trips in the aggregate related industry occur befor 3:00 pm.
7. Aggregate, asphalt, recycle 25 tons/load
8. 1.65 tons agg/cy, avg 8.0 cy/load, peak 9.5 cy/load
9. Liquid asphalt & cement 27 tons/load
10. 0.05 tons of liquid asphalt/ton of asphalt
11. 0.235 tons cement/cy
12. Avg 2.75 gals/ton of asphalt with electric hot oil heater (delivered by 12,165 gal tanker)
13. Engineer's estimate: Mobile Equip 60,000 gal, RMC Mixer off-site delivery 1 gal/cy; delivered by 8,000 gal tanker
14. 18 Aggregate & asphalt employees
15. 20 Ready-mix concrete employees

Riverbend Sand and Gravel

10/08/13

Estimated Peak Hour Project Traffic[1]

Truck Trips	Loading Capacity Tons/hr	Loading Capacity Yd^3/hr	Use tons/hr	Use gals/hr	AM Peak Hour Loads[3]	AM Peak Hour Trips[3,4]	PM Peak Hour Trips[4,5]	Maximum Daily Trips
Aggregate Loads[6]	625				25	50	2	266
Asphalt[6]	500				20	40	2	212
Ready-Mix Concrete[7]		200			21	42	4	224
Product Truck Totals					66	132	8	702
Liquid Asphalt[8,9]			25		1	2	0	10
Cement[8,10]			47		2	4	0	22
Propane[11]				1,375	0	0	0	0.9
Import Concrete/Asphalt for Recycle[6]					3	6	0	40
Diesel Fuel[12]				262	0	0	0	0.25
Delivery Truck Totals					6	12	0	73
Total Truck Trips					**72**	**144**	**8**	**775**
Aggregate, Asphalt Employee Trips					0	0	4	36
Ready-Mix Concrete Employee Trips					0	0	2	40
Outside Services & Misc Visitors					0	2	1	14
Total Employee & Outside Visitors					**0**	**2**	**7**	**90**
Total Peak Trips						**146**	**15**	**865**

*Differences in calculations due to rounding

Assumptions

1. Actual mix of products and trucks will vary with market-driven sales
2. Aggregate sales includes aggregate for on-site asphalt and ready-mix plants
3. Peak hrly sales of each product determined by hrly loading capacity of each plant and mobile loading equipment (loaders) available. 1.25 loader to load aggregate and asphalt trucks. .75 loader to feed HMA and RMC plants.
4. Trip = one-way trip (i.e. 1 load = 2 trips)
5. PM peak trips are neglible. Almost all trips in the aggregate related industry occur befor 3:00 pm.
6. Aggregate, asphalt & recycle 25 tons/load
7. 9.5 yd^3/load
8. Liquid asphalt & cement 27 tons/load
9. 0.05 tons of liquid asphalt/ton of asphalt
10. 0.235 tons cement/cy
11. Avg 2.75 gals/ton of asphalt with electric hot oil heater (delivered by 12,165 gal tanker)
12. Engineer's estimate (Mobile Equip 62 gal; RMC Mixer off-site delivery at 1 gal/cy) delivered by 8,000 gal tanker

Estimated Maximum Daily Truck Trips

Hrs	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	Max Daily Trps
% of Hrly Capacity	100	100	100	60	60	60	28	28	
Aggregate	50	50	50	30	30	30	13	13	265
Asphalt	40	40	40	24	24	24	10	10	212
RMC	42	42	42	25	25	25	11	11	223
Liquid Asphalt	2	2	2	1	1	1	0	0	10
Cement	4	4	4	2	2	2	1	1	21
Propane	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.9
Import Concrete/Asphalt for Recycle	6	6	6	6	6	6	2	2	40
Diesel Fuel	0	0	0	0	0	0	0	0	0.25
									772

APPENDIX G

Cumulative Project Trip Generation and Distribution

Table 4.12-9
Trip Generation Estimates for the Proposed Project at Build-Out

Uses	Number of Axles	Peak-Season Daily Trips	AM (Daily Peak-Hour)		PM (Daily Peak-Hour)	
			Entering	Exiting	Entering	Exiting
Facility Employees[1]	2	60	26	4	6	24
Ready Mix Trucks[2]	3/4	550	18	18	2	2
Asphalt Trucks[3]	5	256	10	10	1	1
Aggregate Trucks[4]	5	384	21	21	2	2
Cement Trucks[5]	5	64	10	10	1	1
Liquid Asphalt/ Propane Trucks[6]	5	32	2	2	0	0
Recycled Material Trucks	5	64	0	0	0	0
Fuel Trucks[7]	5	2	0	0	0	0
Outside Services[8]	2	8	0	0	0	0
Build-Out Total	**N/A**	**1,420**	**87**	**65**	**12**	**30**

Notes:

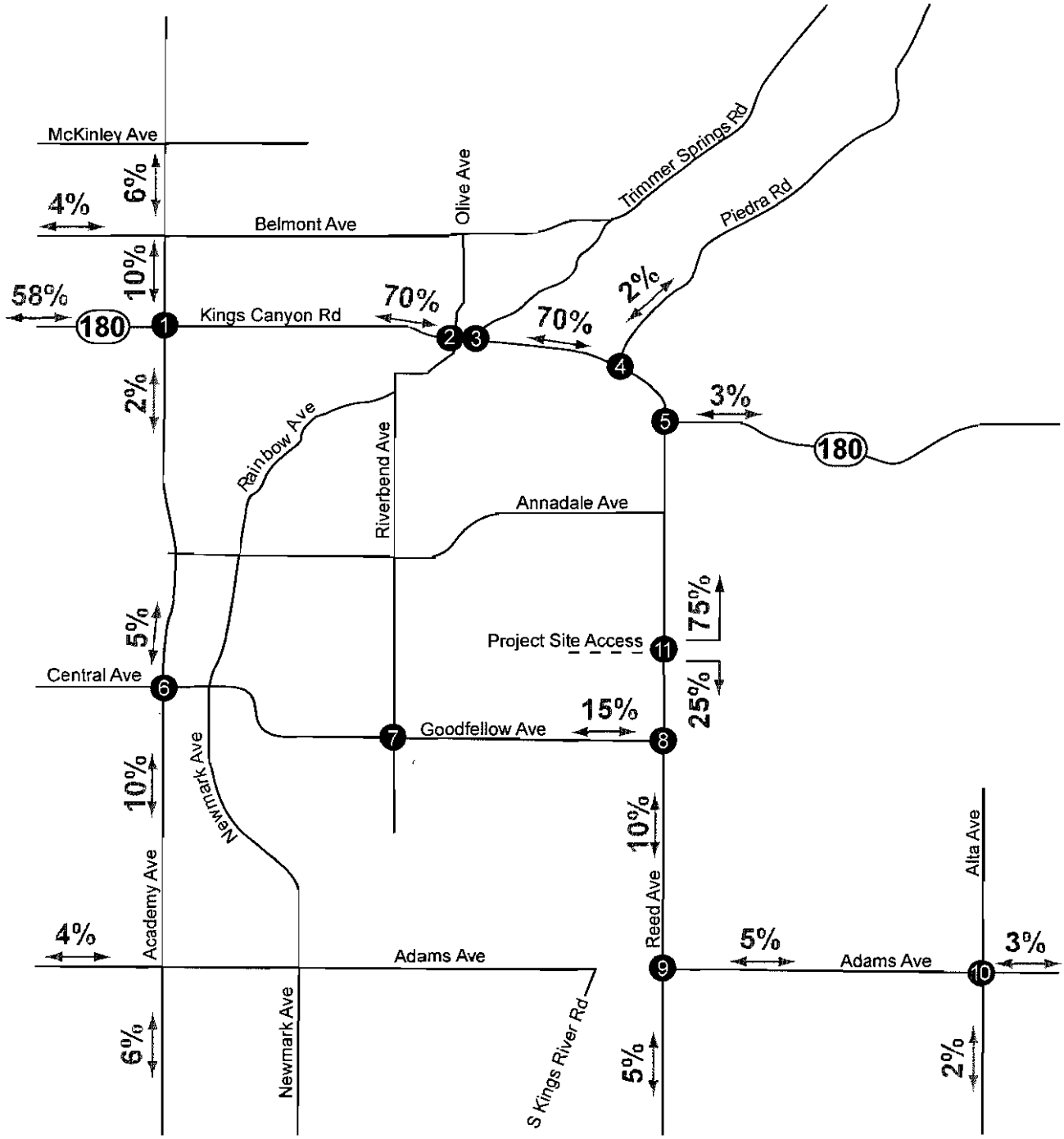
1. Estimate based on 30 employees operating entire facility (aggregate plant, ready-mix and asphalt, URS used ITE Trip Generation 8th Edition Peak Hour Trip Splits using Land Use 130 – Industrial Park).
2. Ready-mix truck capacity of 9 yds^3 or 150 lbs/ft^3 or 2.02 $tons/yd^3$ or 18.2 tons/truck; assume sales of 5,000 tons (or 2,475 yd^3) /day equal 550 trips/day.
3. Asphalt: Assume 25 tons/truck and maximum daily sales of 3,200 tons/day (or 256 trips/day).
4. Aggregate: Based on estimate for maximum sales/day of 4,800 tons/day (or 384 trips/day).
5. Cement trucks: Assume cement is 25 percent of ready-mix concrete by weight or need for 131,250 tons/yr of cement. At 25 tons/truck (or 17 trips/day) or worst case of 64 trips/day.
6. Assumes site is serviced by gas pipeline, propane deliveries only for plant maintenance purposes (welding).
7. Fuel consumption estimated at 336,000 gal/yr, with a 10,000 gal tanker equals 34 trips year, or 1 every approximate10 days, none during peak hours.
8. Engineer's estimate.

Near Term (2012) Traffic Impact Analysis

Near Term 2012 traffic conditions were predicted for conditions with and without the Proposed Project. Near Term 2012 Condition traffic volumes were developed by applying a 3% growth rate per year to the existing traffic volumes. This growth rate is generally consistent with the growth rates obtained from the 2035 Fresno COG model. A 3% annual growth rate was also used to forecast future traffic volumes for other similar use traffic impact studies (e.g. the Jesse Morrow Mountain Quarry Project and the Vulcan Mining Project) near the vicinity of the Proposed Project.

In consultation with Caltrans staff, the following roadway improvements are assumed to be in place under the Year 2012 condition.

- SR 180 will be widened to include two through lanes in each direction at the intersection of SR 180/Academy Avenue;
- Academy Avenue will be widened to a four-lane roadway (two-lanes in each direction) between SR 180 and Central Avenue by the Year 2012.



LEGEND

1 Study Intersections

10% Trip Distribution

NOT TO SCALE

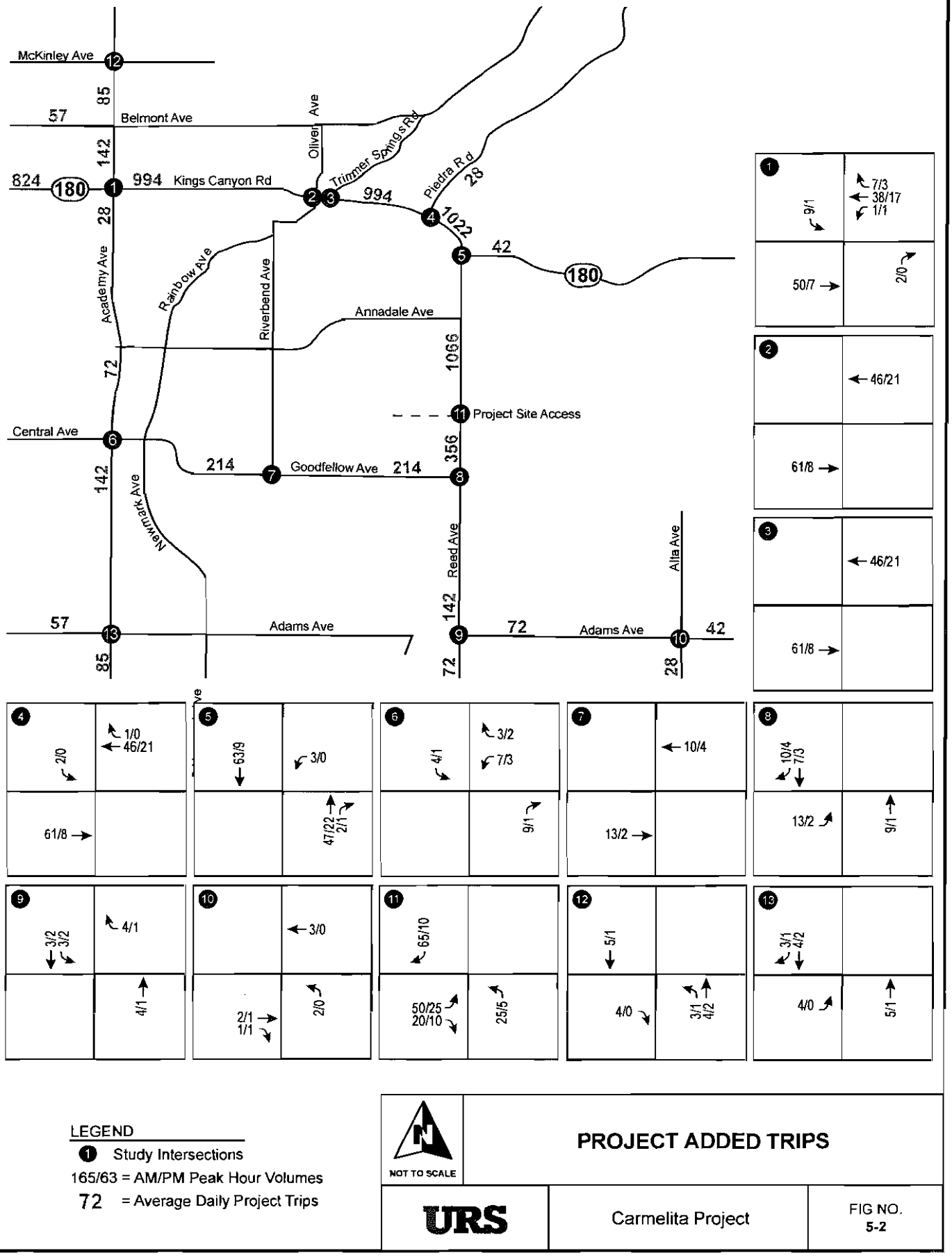
PROJECT TRIP DISTRIBUTION

URS

Carmelita Project

FIG NO. 4-2

K:\2010\Carmelita Mining EIR\Fig 4-2 Project Trip Distribution.ai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Oliver Ave
Trimmer Springs Rd
Piedra Rd
Kings Canyon Rd
Academy Ave
Rainbow Ave
Riverbend Ave
Annadale Ave
Project Site Access
Central Ave
Goodfellow Ave
Newmark Ave
Reed Ave
Alta Ave
Adams Ave
Adams Ave
180
180
824
994
994
1022
1066
356
214
214
142
142
72
72
72
57
57
85
85
28
28
42
42
LEGEND
Study Intersections
165/63 = AM/PM Peak Hour Volumes
72 = Average Daily Project Trips
NOT TO SCALE
PROJECT ADDED TRIPS
URS
Carmelita Project
FIG NO. 5-2
K:\2010\Carmelita Mining EIR\Fig 5-2 Project Added Trips.ai

3.0 TRAFFIC IMPACTS

3.1 TRIP GENERATION

To assess the impacts that the project may have on the surrounding streets, the first step was to determine Project trip generation. Project trip generation is shown in Table 3-1. Daily and Peak hour Project truck trip generation for the three phases of aggregate production levels was provided by Vulcan Materials Company and is based on Pre-Project traffic at the site. AM and PM peak hour percentages and splits are based on current count data at the project driveway. Information on Pre-Project production levels and phased Project production is included in Appendix F of this report.

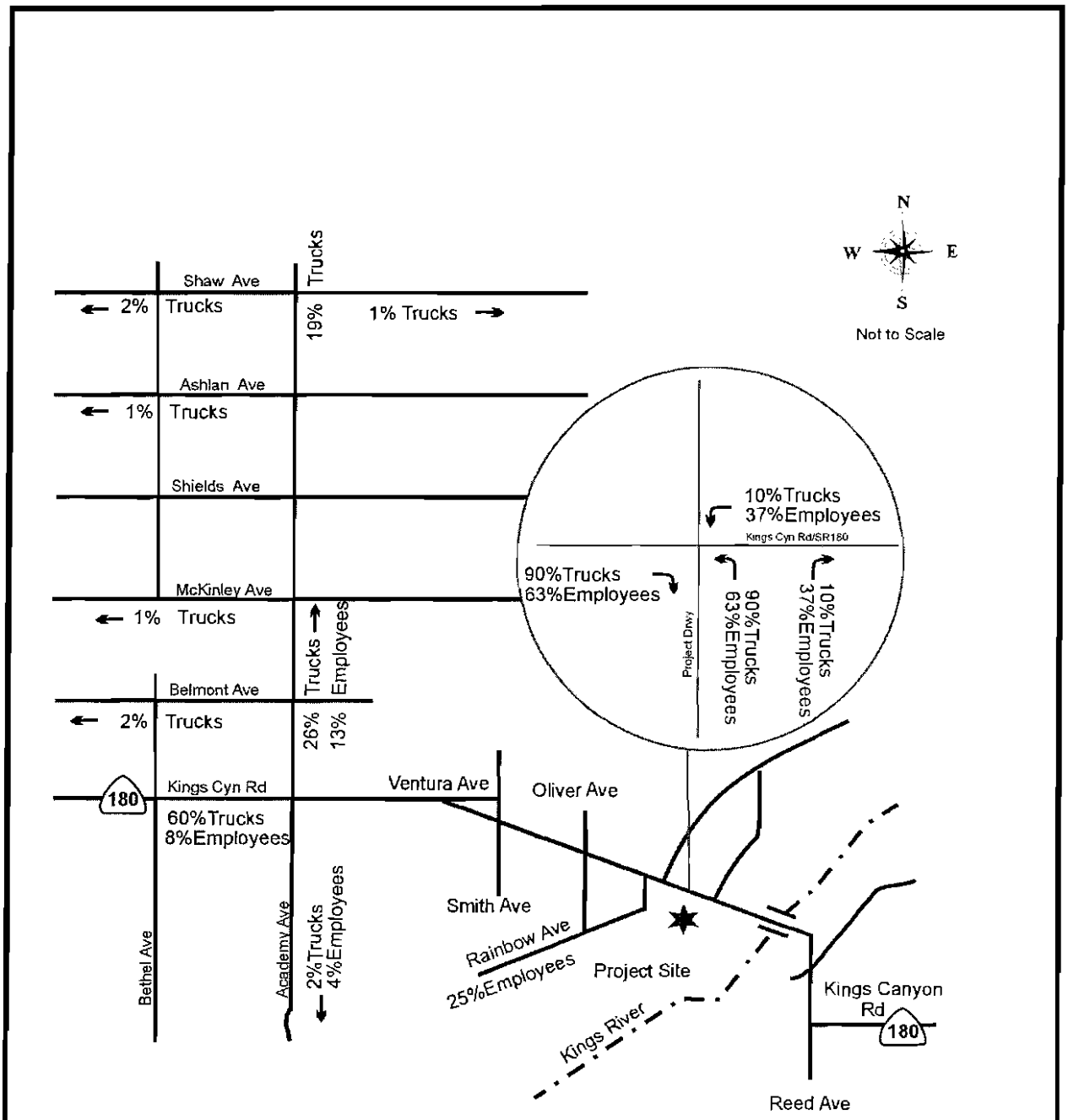
Table 3-1
PROJECT TRAFFIC GENERATION

USE	EXPANSION SIZE	DAILY TRIP ENDS[1]	AM PEAK HOUR[2]			PM PEAK HOUR[2]		
	TOTAL SALES	VOLUME	IN:OUT SPLIT	VOLUME		IN:OUT SPLIT	VOLUME	
				IN	OUT		IN	OUT
Phase 1	0.5 Million Tons/Year	149 Truck Trips	50:50	1	2	NA	0	0
	1.5 Million Tons/Year Total	0 Employee Trips	10:90	0	0	13:87	0	0
Phase 2	1.0 Million Tons/Year	337 Truck Trips	50:50	17	18	NA	0	0
	2.0 Million Tons/Year Total	24 Employee Trips	10:90	0	3	13:87	1	5
Phase 3[3]	1.5 Million Tons/Year	533 Truck Trips	50:50	57	58	NA	0	0
	2.5 Million Tons/Year	64 Employee Trips	10:90	1	6	13:87	2	15
TOTAL PROJECT TRIPS				**122**			**17**	

1 Daily Project Trip Ends = Total Daily Trips - Pre-Project Trips.
2 Based on Vulcan Materials Company Peak Hour Operations
3 Project Build-Out

3.2 TRIP DISTRIBUTION

Trip distribution for Project trips is shown in Figure 3-1. Truck trip distribution is based on socio-economic growth projections provided by the Fresno County Regional Data Center. Employment trips are based on a select zone analysis performed by the Council of Fresno County Governments' traffic forecasting model.



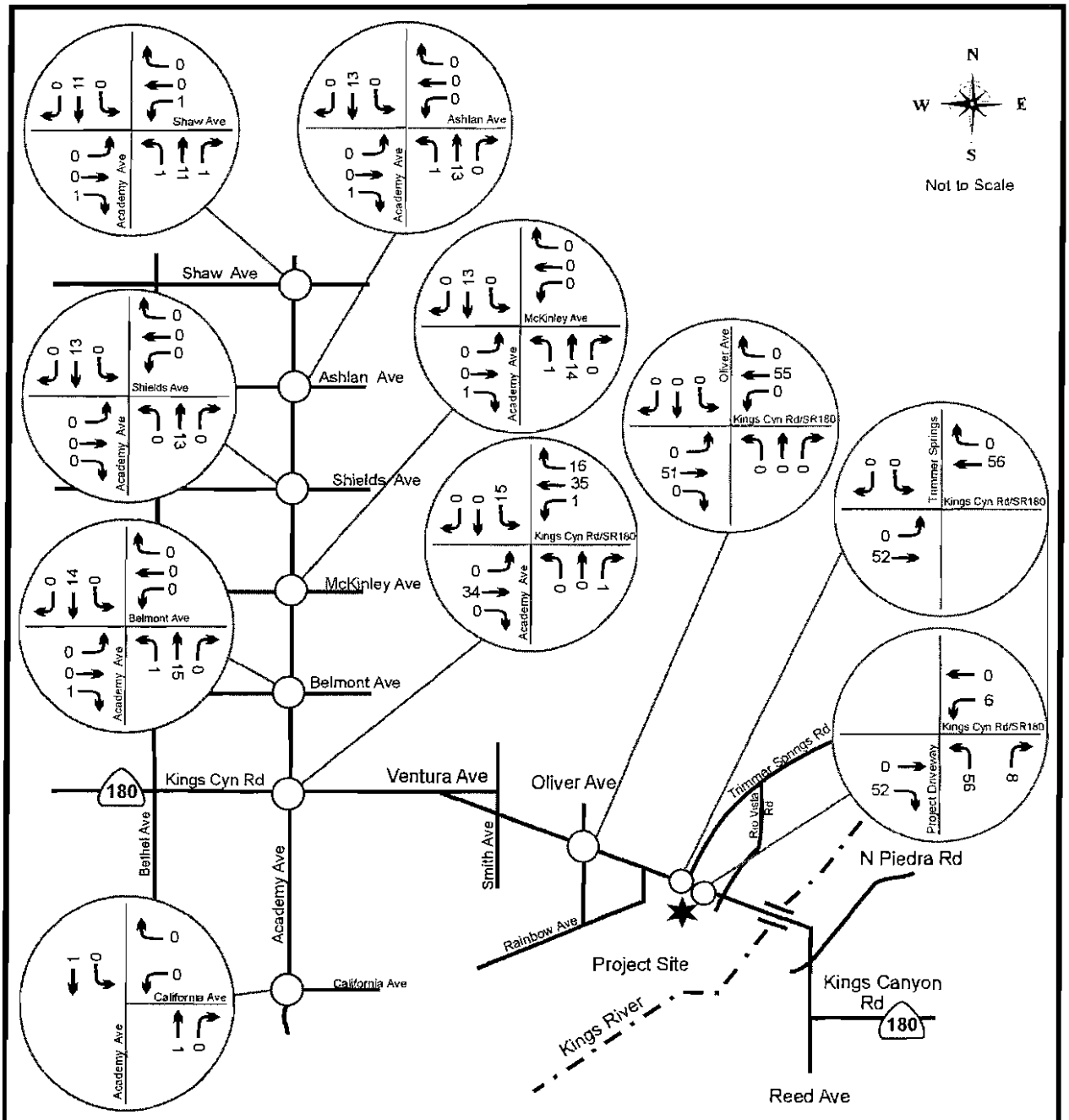
Trip Distribution Percentage

Figure 3-1

Legend

★ Project Site

VRPA Technologies, Inc.



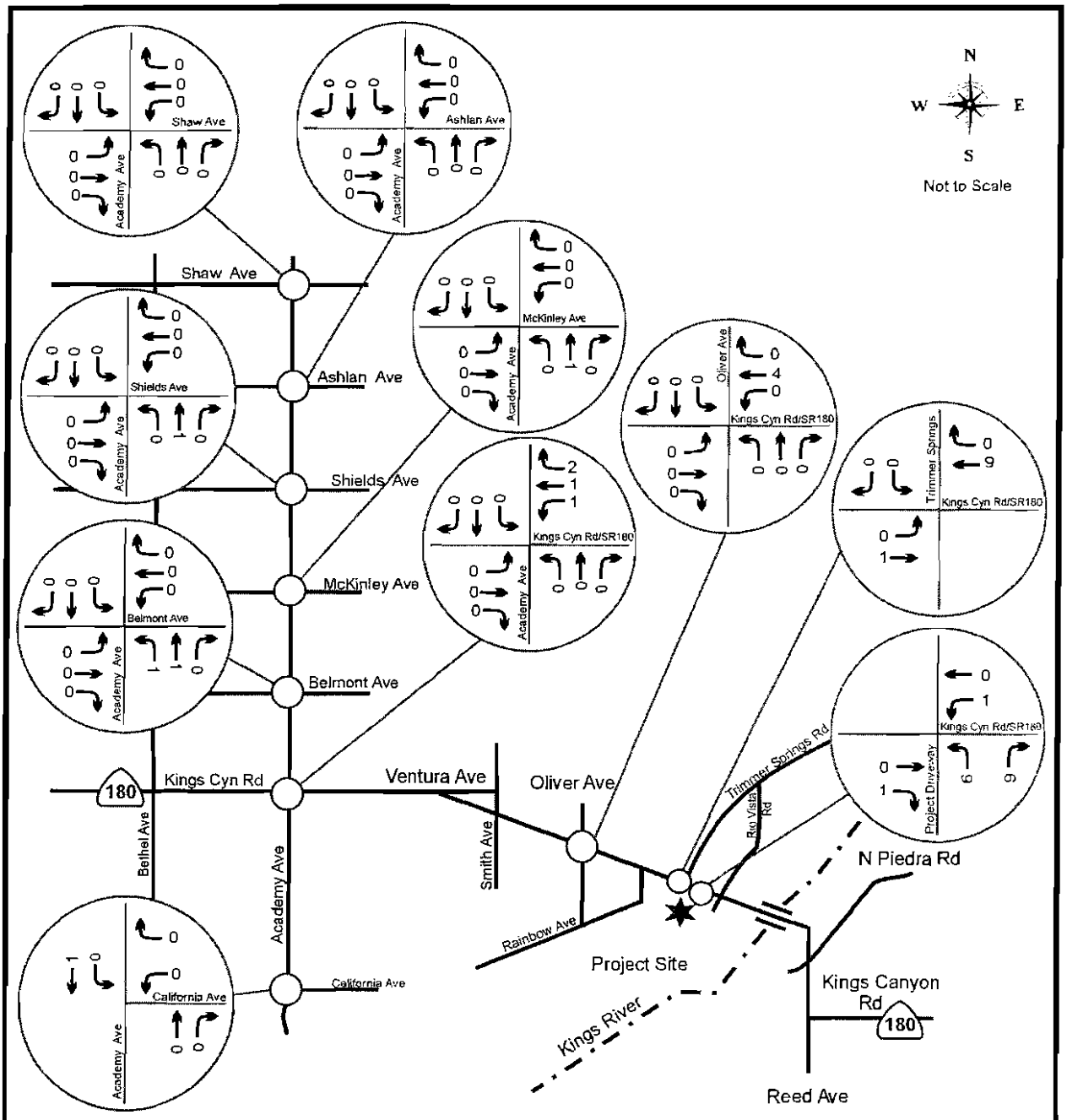
AM Build-Out Project Trips[1]

Figure 3-2

Legend

○ Key Intersections ←xxx AM Peak Hour Traffic

1: Project Build-Out = Phase 3 Daily Trips minus Pre-Project Daily Trips



PM Build-Out Project Trips[1]

Figure 3-3

Legend

○ Key Intersections ←xxx PM Peak Hour Traffic

VRPA Technologies, Inc.

1: Project Build-Out = Phase 3 Daily Trips minus Pre-Project Daily Trips

3.0 TRAFFIC IMPACTS

3.1 TRIP GENERATION

To assess the impacts that the Project may have on the surrounding streets, the first step was to determine Project trip generation. Calaveras provided daily Project trip generation for aggregate production based on peak season data included in the company's operational statement. Based on information provided in the operational statement, the plant will generate 408 daily truck trip ends and 54 daily employee trips during the peak season. AM and PM peak hour percentages and splits are based on the assumptions used in the previously approved 1998 TIS.

Table 3-1
Project Trip Generation

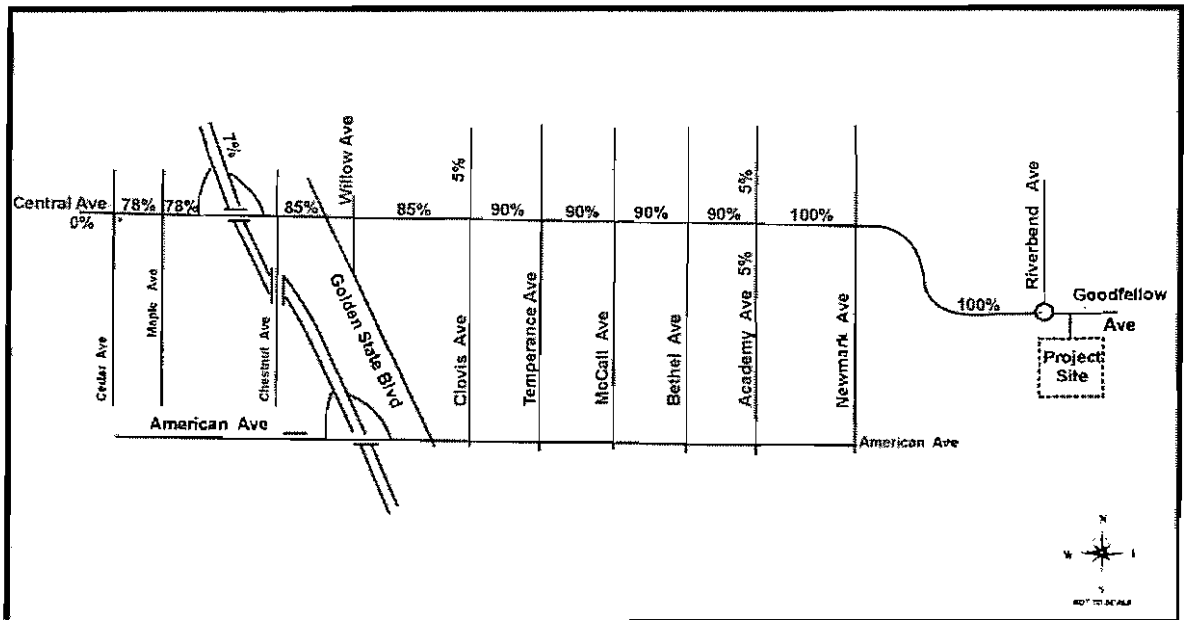
	DAILY TRIP ENDS*	AM PEAK HOUR				PM PEAK HOUR			
USE	VOLUME	% OF ADT	IN:OUT SPLIT	VOLUME		% OF ADT	IN:OUT SPLIT	VOLUME	
				IN	OUT			IN	OUT
AGGREGATE PRODUCTION	408 Truck Trips	9.6%	50:50	20	20	4.8%	50:50	10	10
	54 Employee Trips	0%	50:50	0	0	0.6%	50:50	0	0
	462 Total Trips			**40 AM Peak**				**20 PM Peak**	

3.2 TRIP DISTRIBUTION

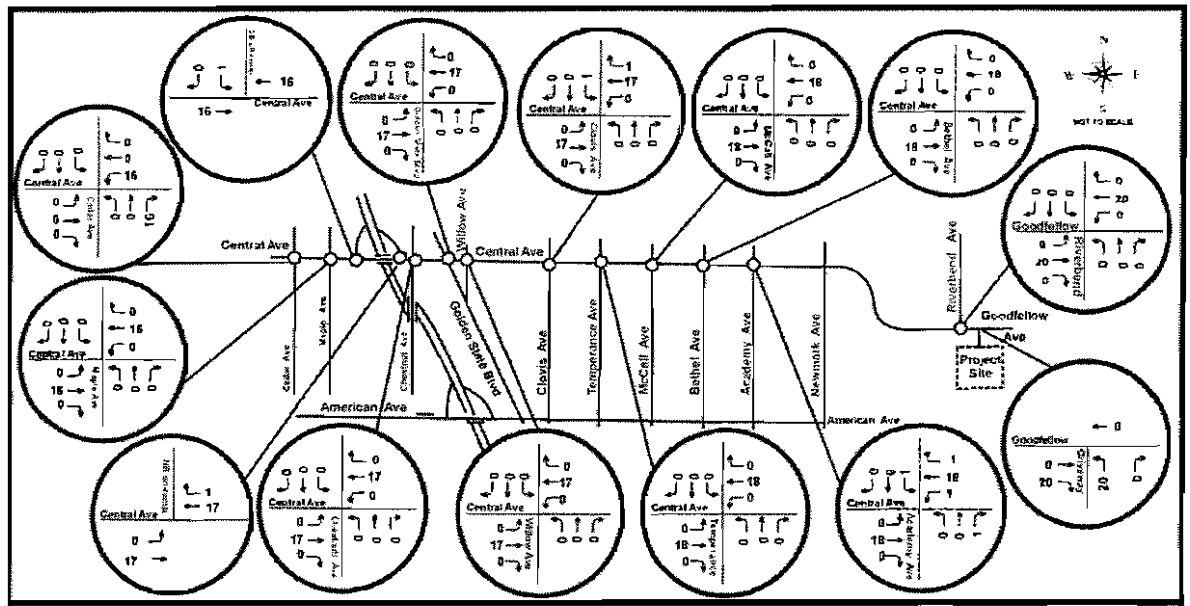
Trip distribution for Project trips is shown in Figure 3-1. According to the operational statement and discussions with CMI staff, the major delivery destination for the aggregate will be to an asphalt plant owned by Calaveras. Approximately 78% of the Project trips will use Central Avenue to Cedar and Central Avenues in south Fresno. Other shipments will be made to the rural and metropolitan areas throughout the region via Academy Avenue, Clovis Avenue and SR 99. It is highly unlikely trucks trips will travel east for two miles to Reed Avenue and then proceed north to SR 180. As a result, no trips were directed easterly from the Project site.

3.3 PROJECT TRAFFIC

Project traffic as calculated in Table 3-1 was distributed to the roadway system using the trip distribution percentages shown in Figure 3-1. This information is shown in Figures 3-2 and 3-3 for peak hours. Truck trip percentages were identified in the HCM calculation to adjust for the additional capacity that trucks typically require versus passenger vehicles.



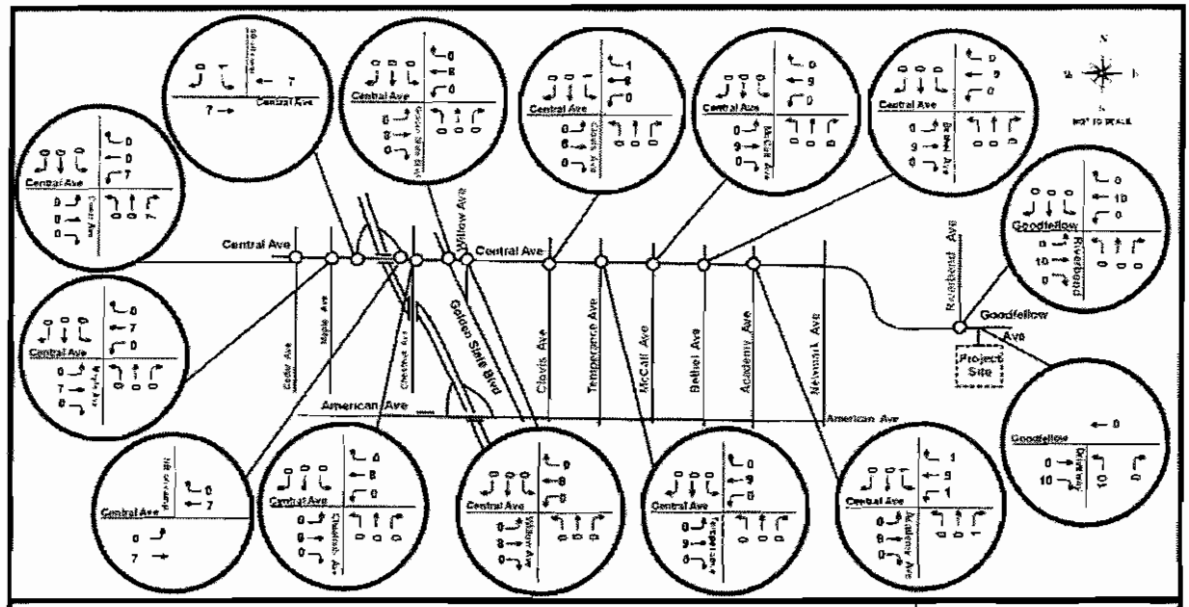
Trip Distribution Percentage	Figure 3-1
Legend Project Location	VRPA Technologies, Inc.



AM Peak Hour Project Trips | **Figure 3-2**

Legend

←XX AM Peak Project Traffic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Cleveland Ave
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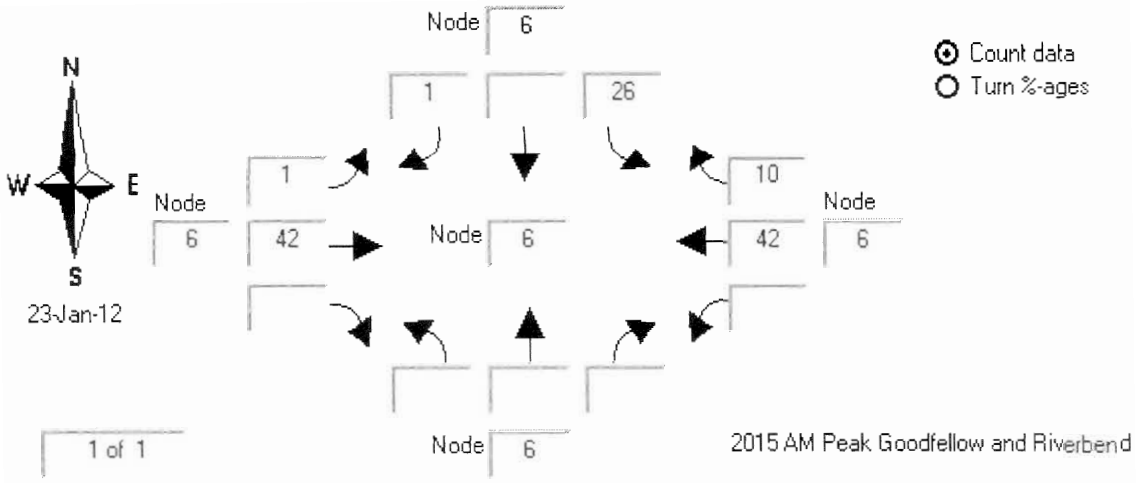
McCall Ave
Bethel Ave
Academy Ave
Newmark Ave
Recreation Ave
Goodfellow Ave
Project Site
Goodfellow
Recreation
Drive Ave
Central Ave
Central Ave
Central

APPENDIX H

TurnsW32 Worksheets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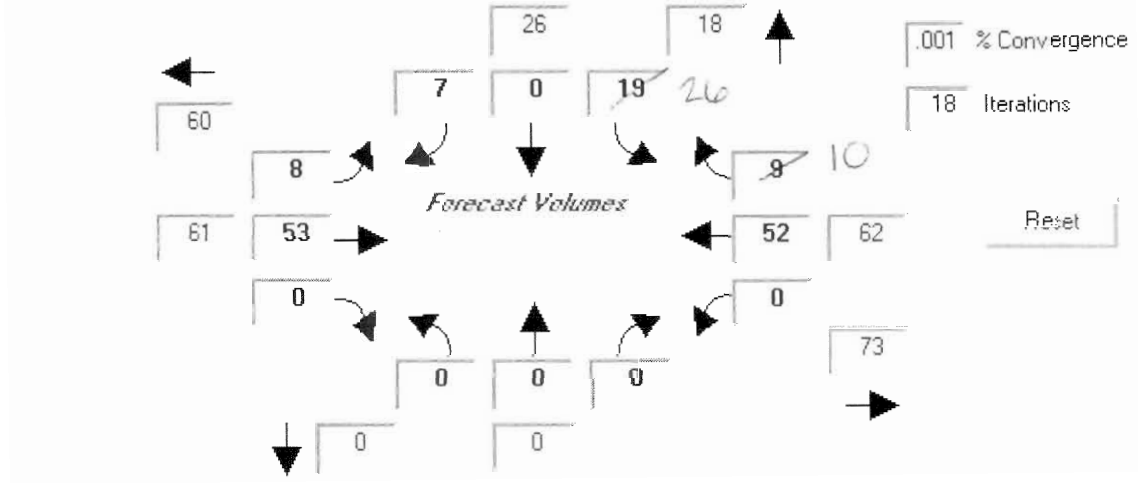
1 of 1
2015 AM Peak Goodfellow and Riverbend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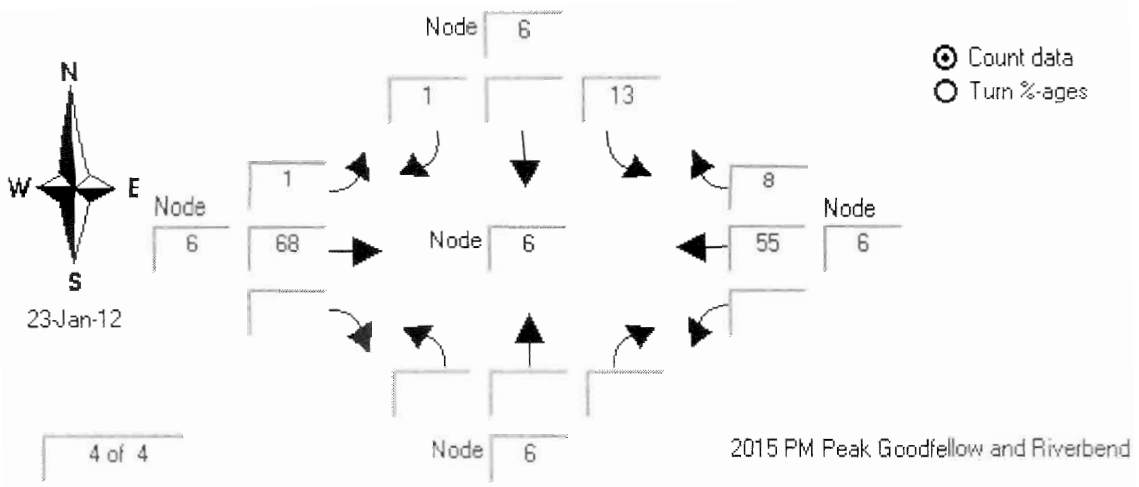
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4 of 4
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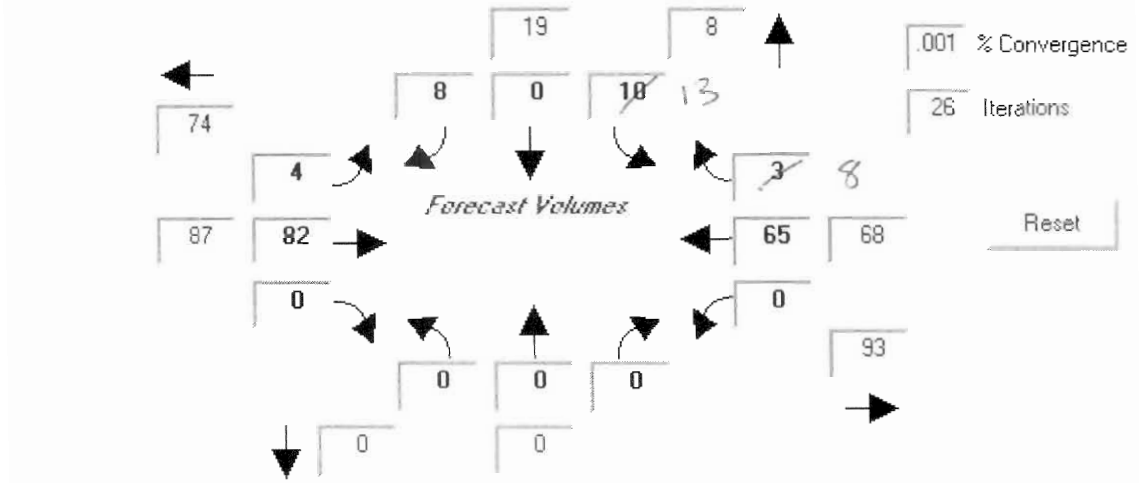
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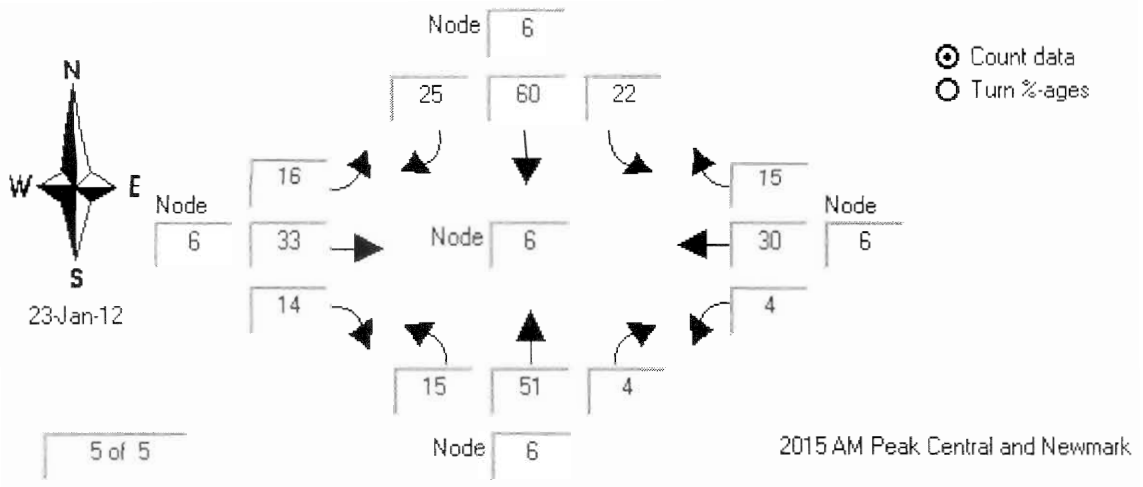
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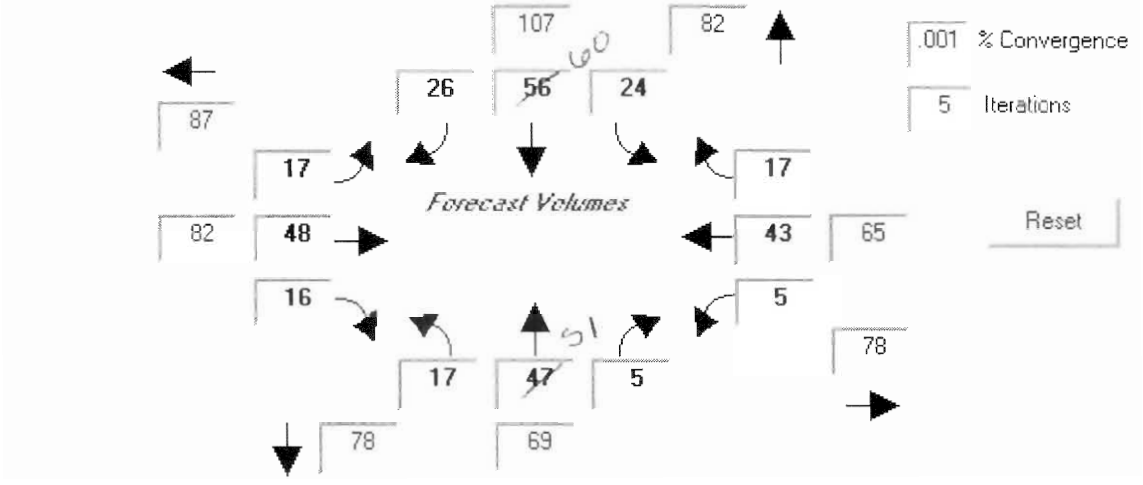
2015 AM Peak Central and Newmark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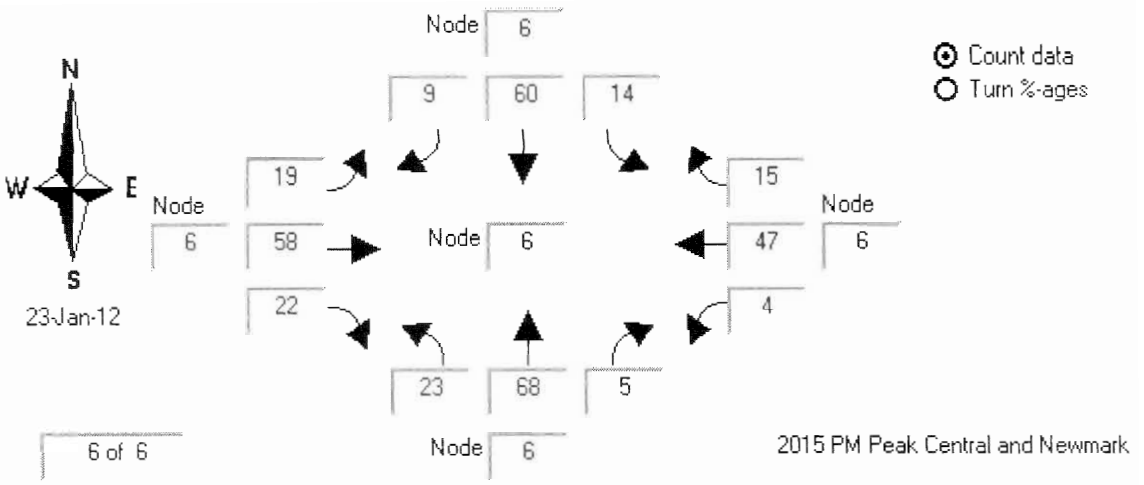
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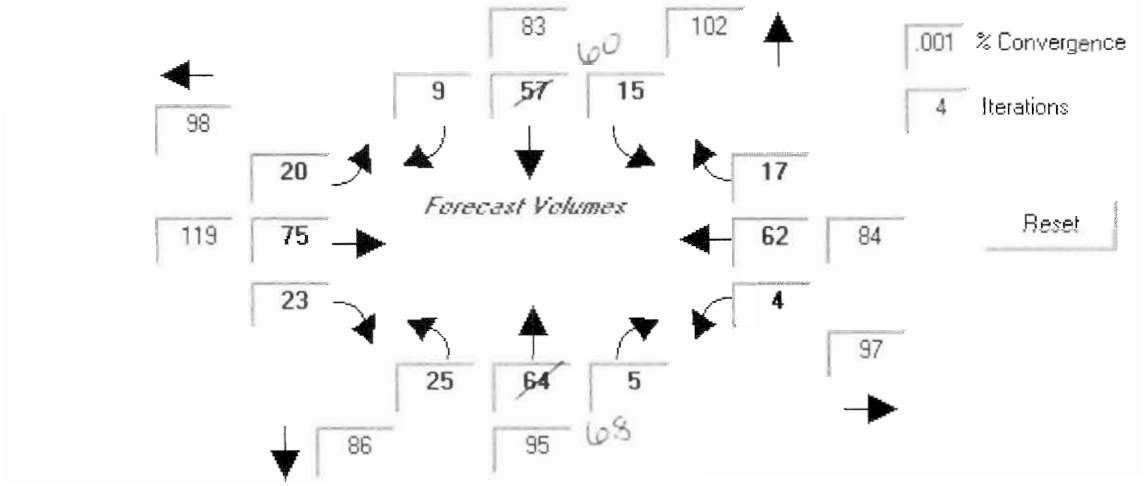
Count data
Turn %-ages
6 of 6
2015 PM Peak Central and Newmark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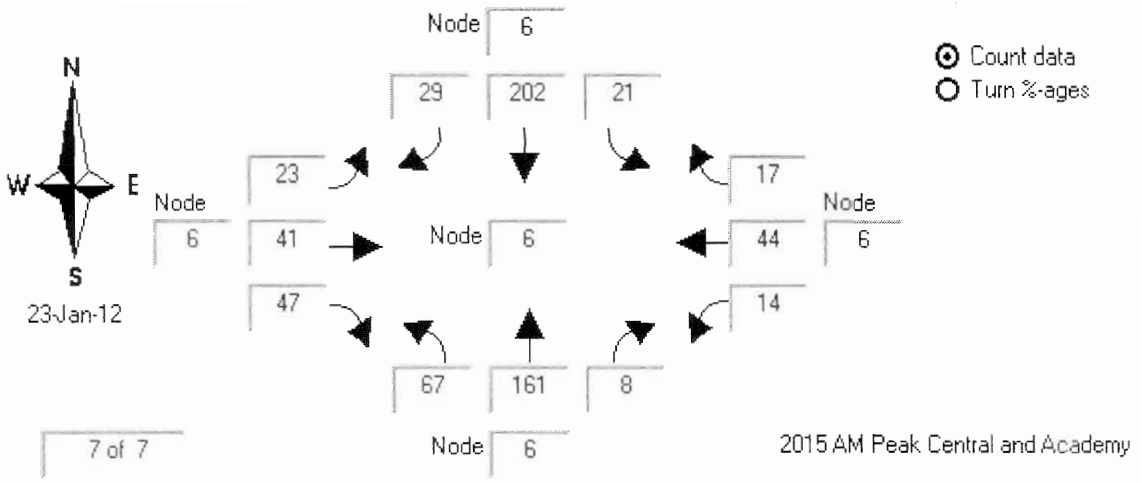
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161
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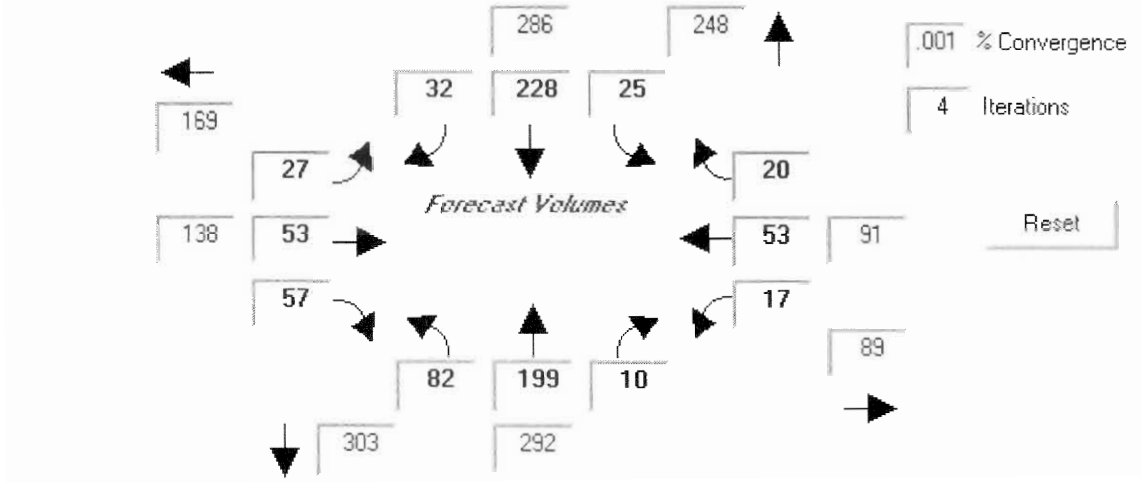
7 of 7
Node 6
2015 AM Peak Central and Academy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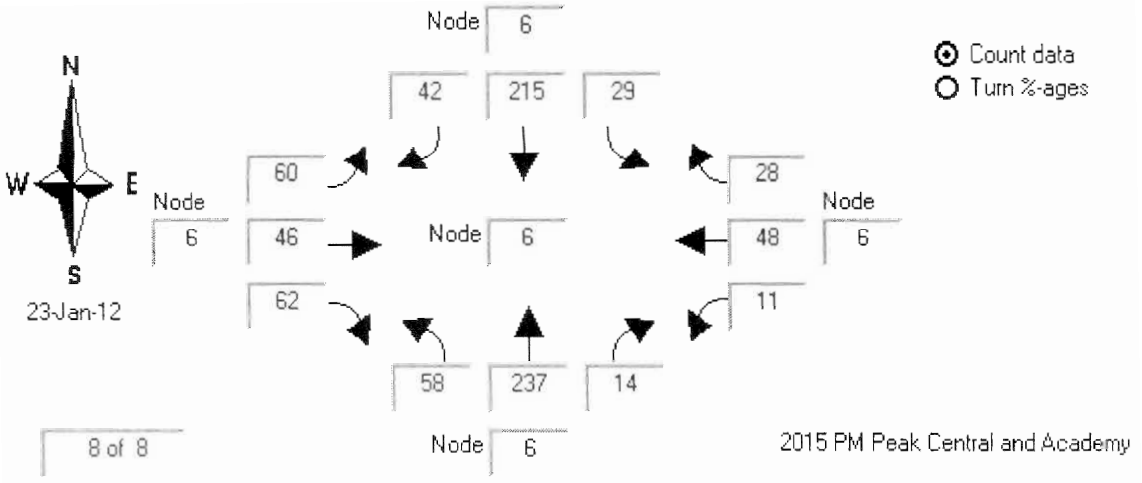
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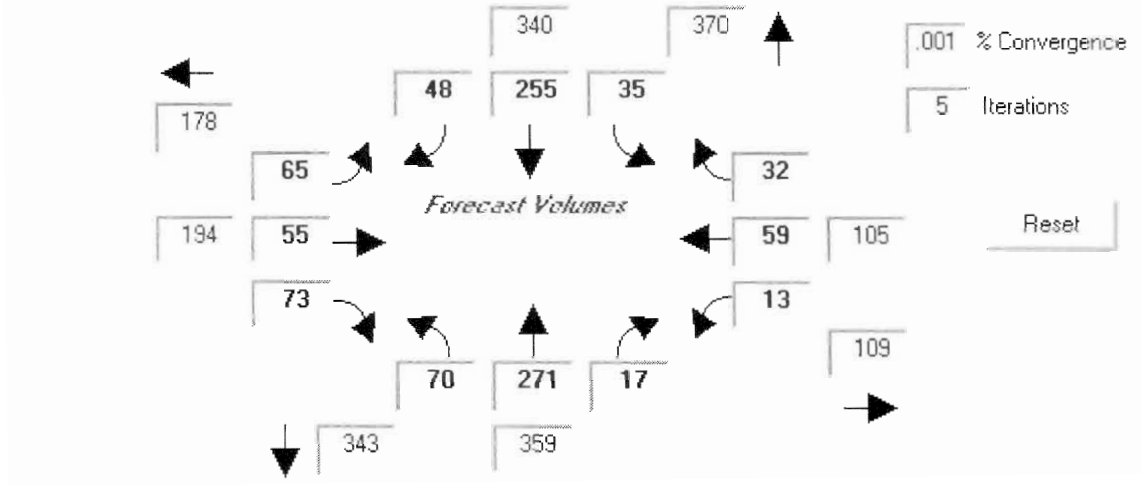
Turn %-ages
8 of 8
2015 PM Peak Central and Academy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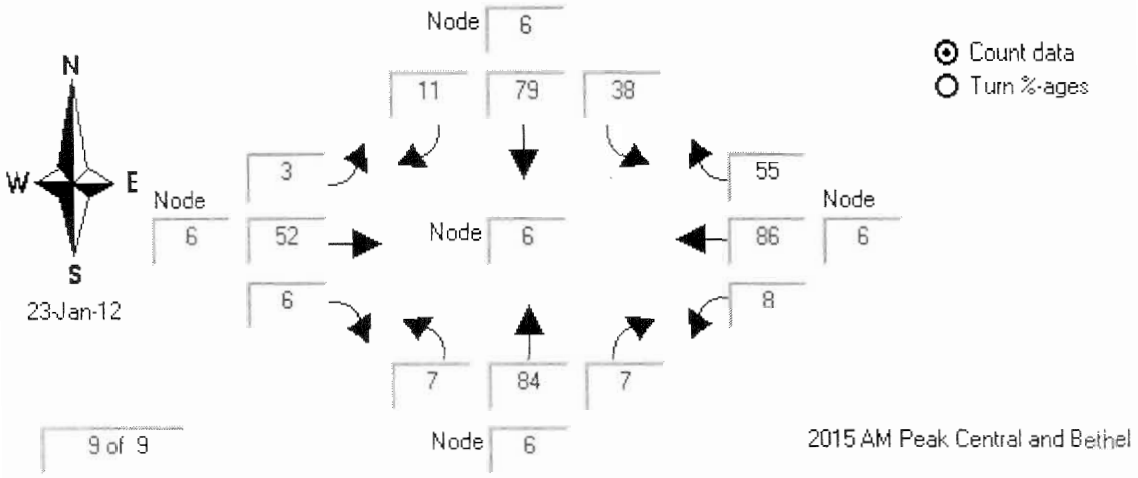
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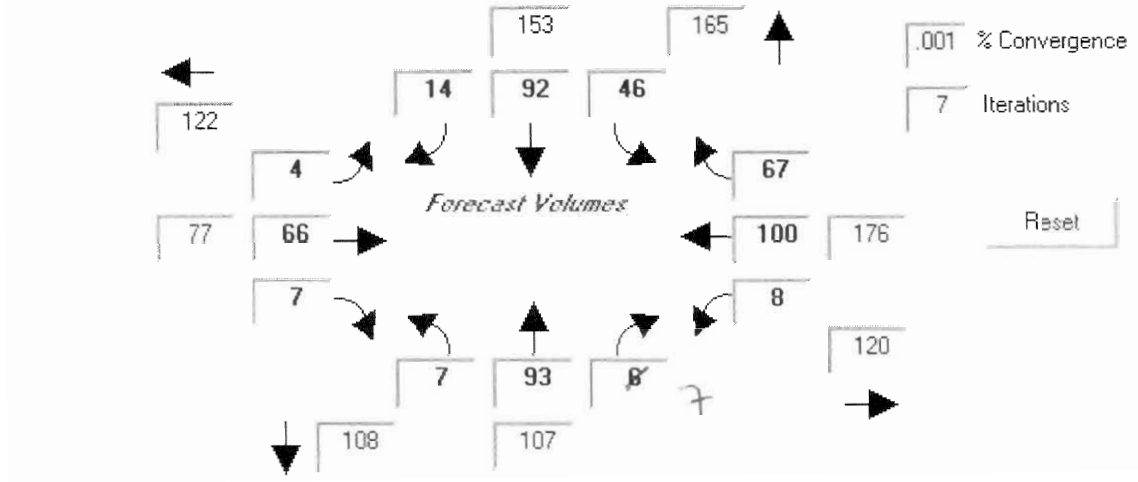
2015 AM Peak Central and Bethel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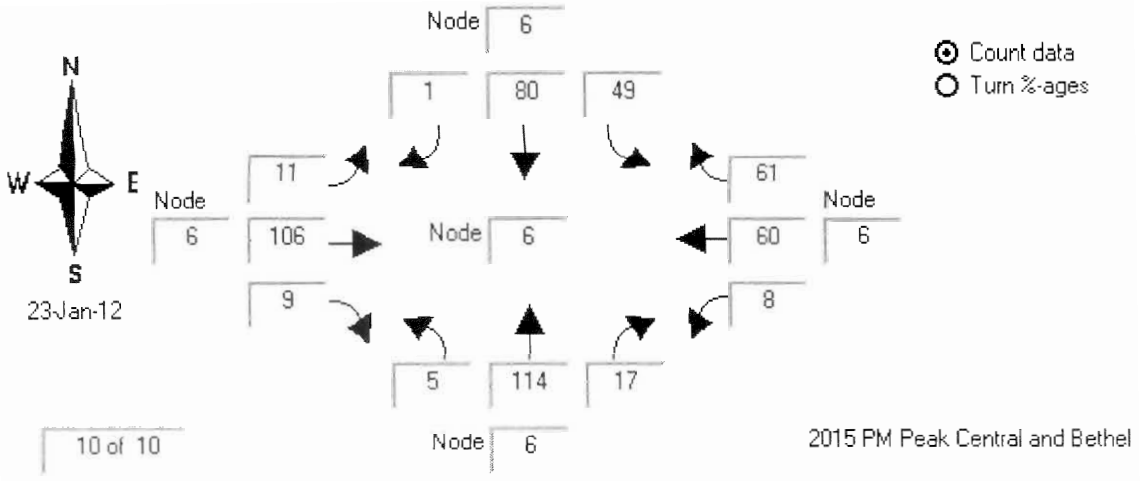
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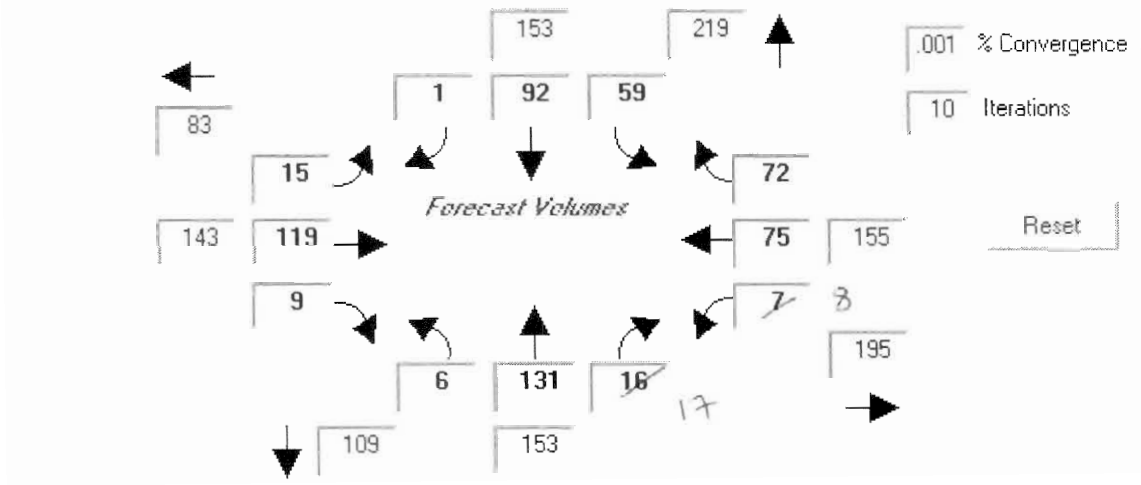
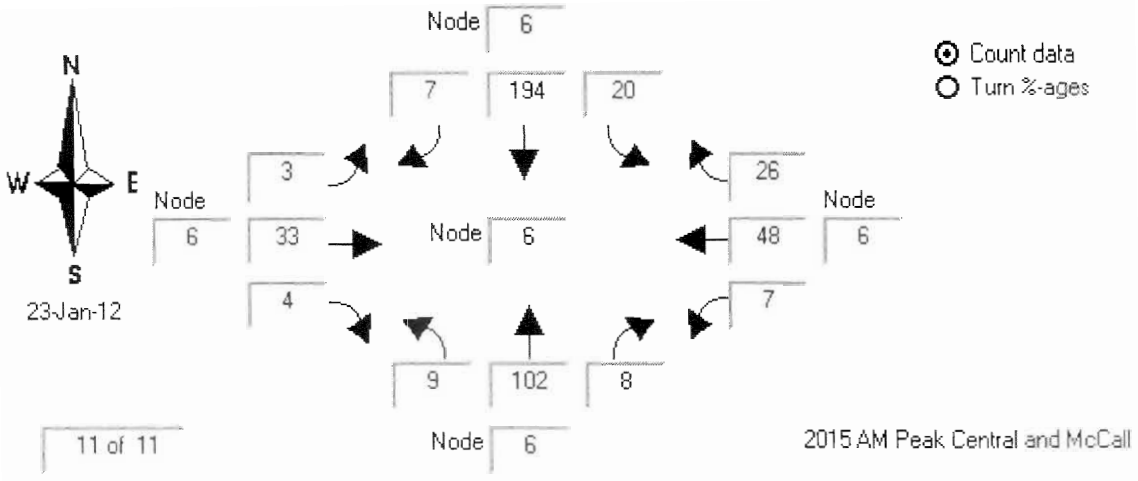
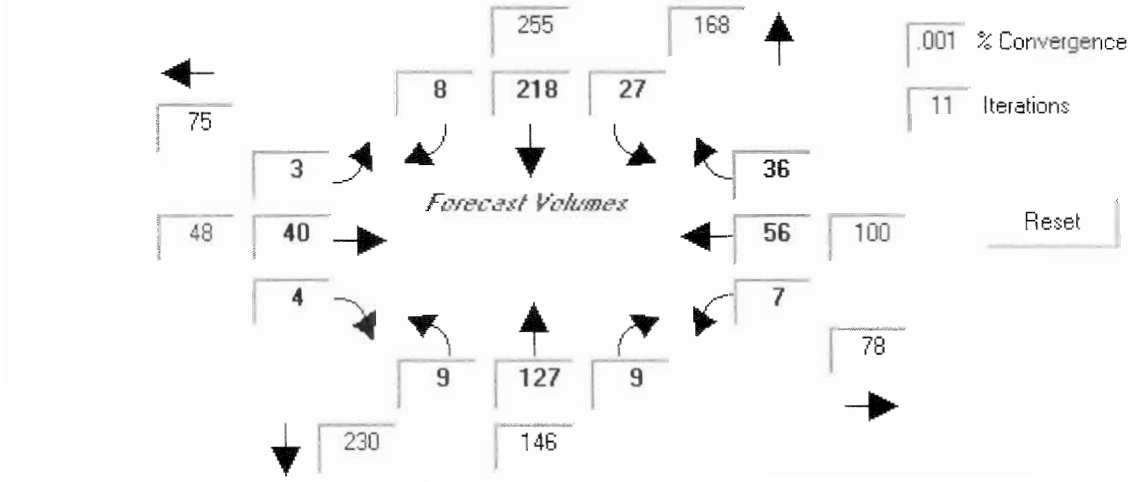
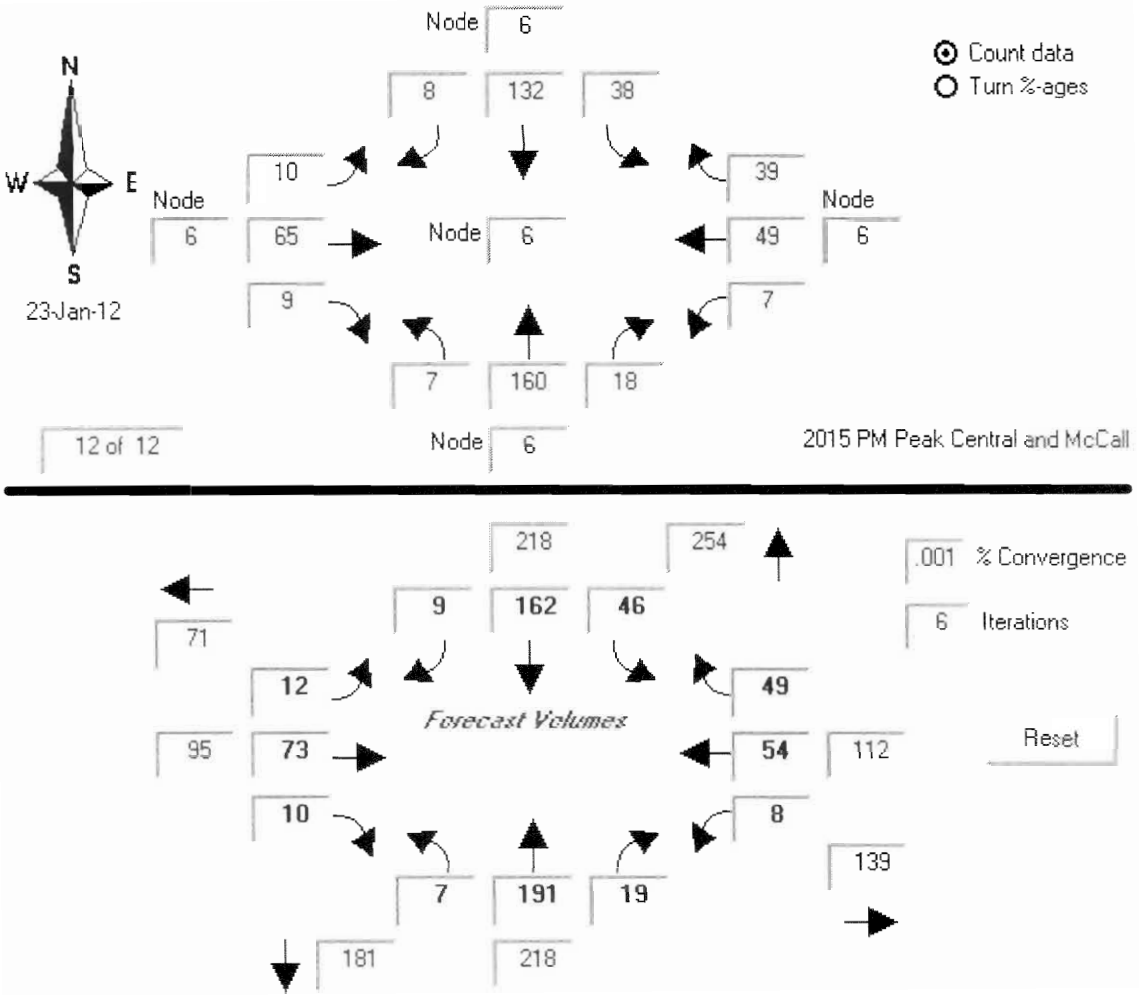
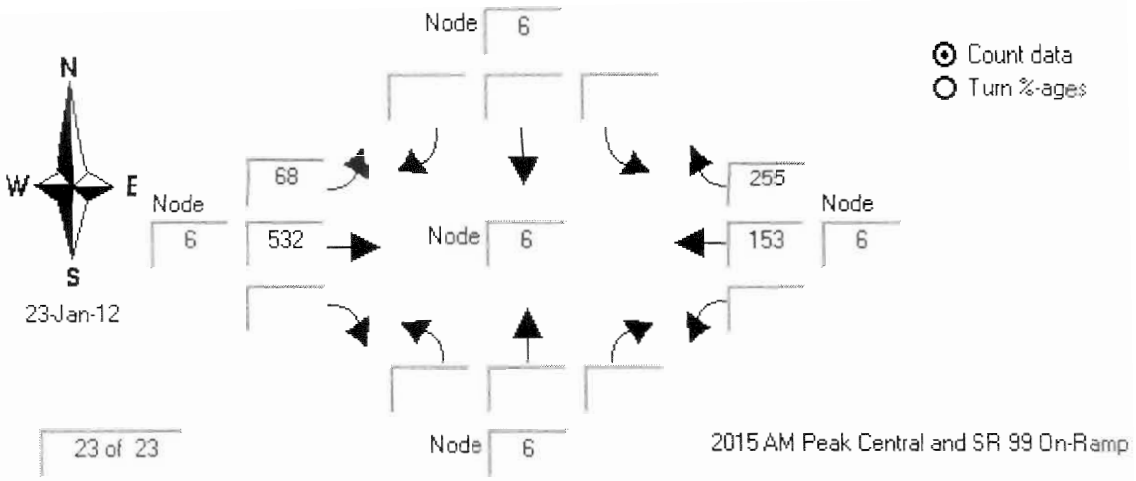
Count data
Turn %-ages
1
80
49
11
61
Node 6
106
Node 6
60
Node 6
9
8
5
114
17
Node 6
10 of 10
2015 PM Peak Central and Bethel

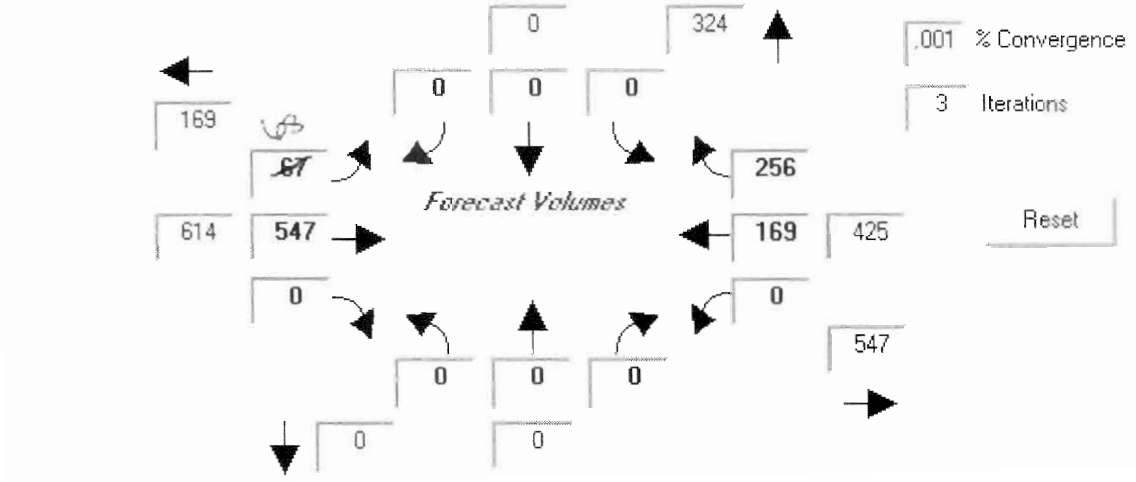

153
219
.001 % Convergence
83
1
92
59
10 Iterations
15
72
Forecast Volumes
143
119
75
155
Reset
9
7
8
195
6
131
16
17
109
153

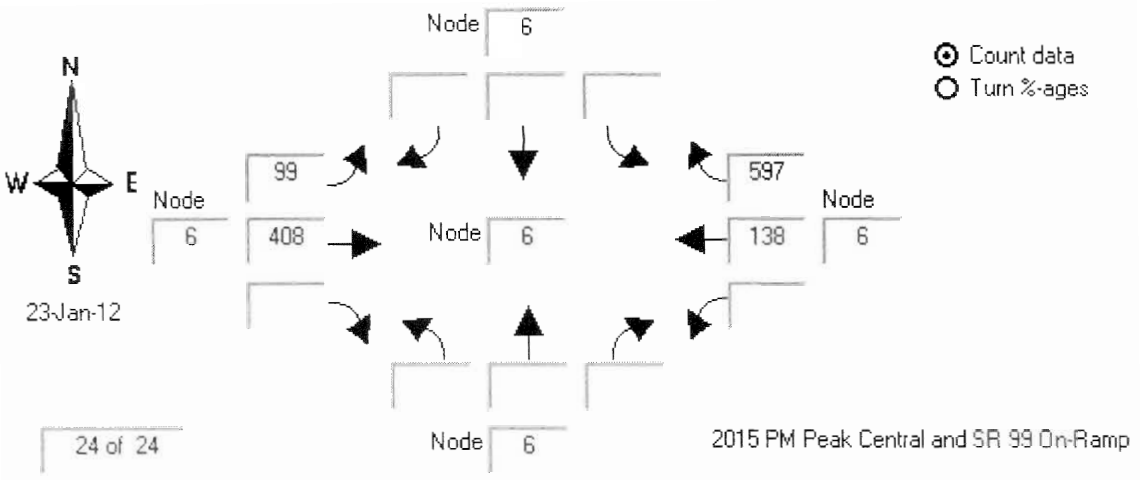

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
7
194
20
3
26
Node 6
Node 6
Node 6
33
48
4
7
9
102
8
11 of 11
Node 6
2015 AM Peak Central and McCall

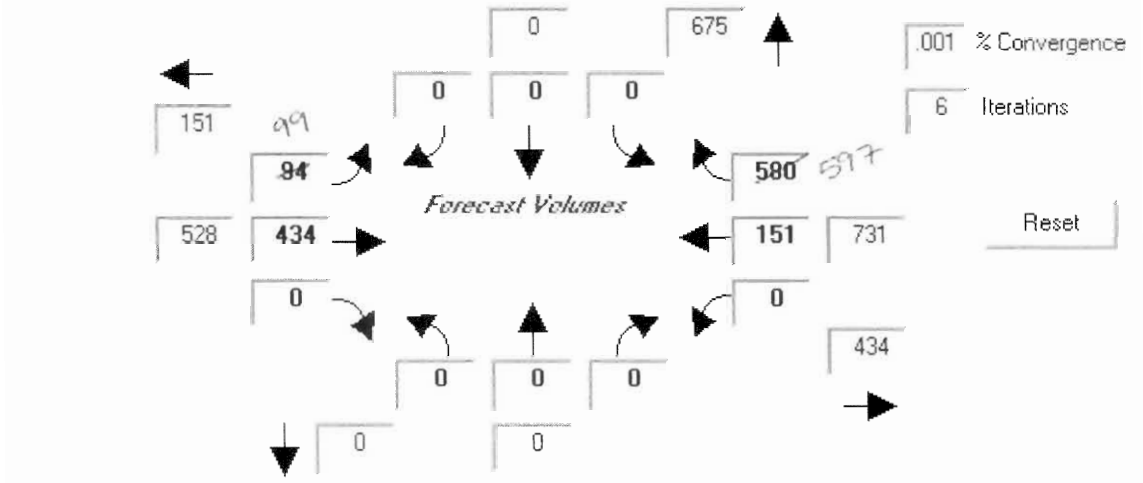

255
168
.001 % Convergence
75
8
218
27
11 Iterations
3
36
Forecast Volumes
48
40
56
100
Reset
4
7
78
9
127
9
230
146

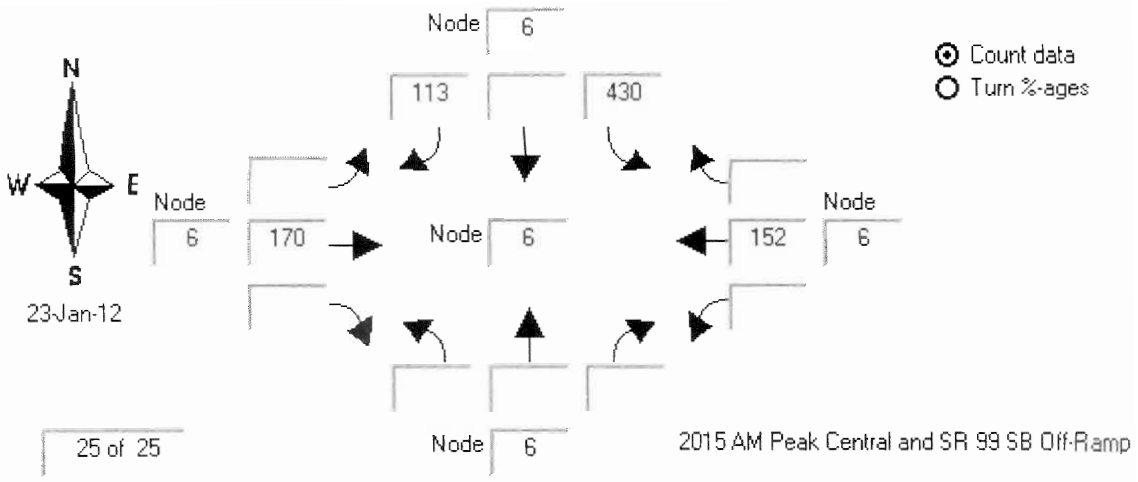

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
8
132
38
10
39
Node 6
65
Node 6
49
Node 6
9
7
7
160
18
12 of 12
Node 6
2015 PM Peak Central and McCall
218
254
.001 % Convergence
6 Iterations
71
9
162
46
12
49
Forecast Volumes
95
73
54
112
Reset
10
8
139
7
191
19
181
218

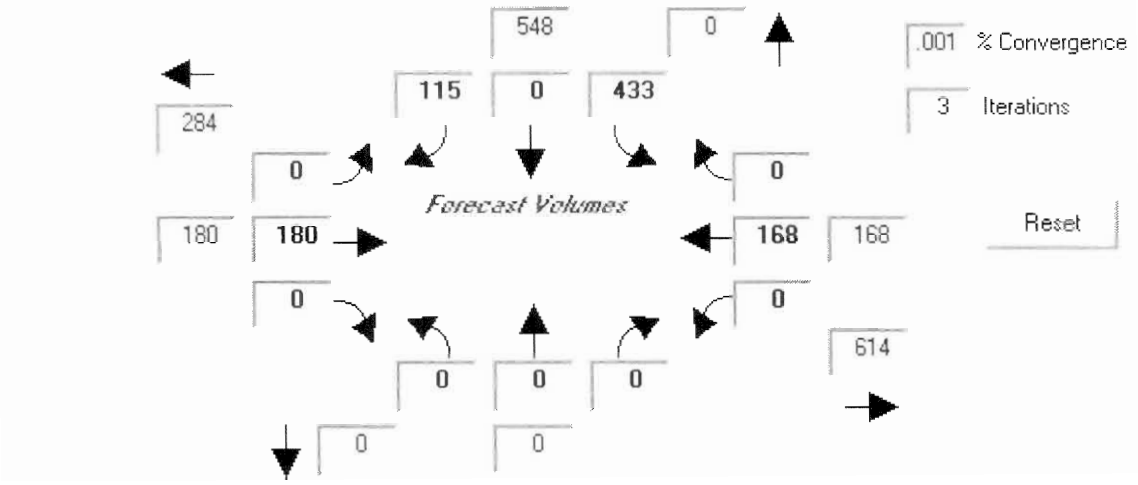

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
68
255
Node 6
532
Node 6
153
Node 6
Node 6
23 of 23
2015 AM Peak Central and SR 99 On-Ramp

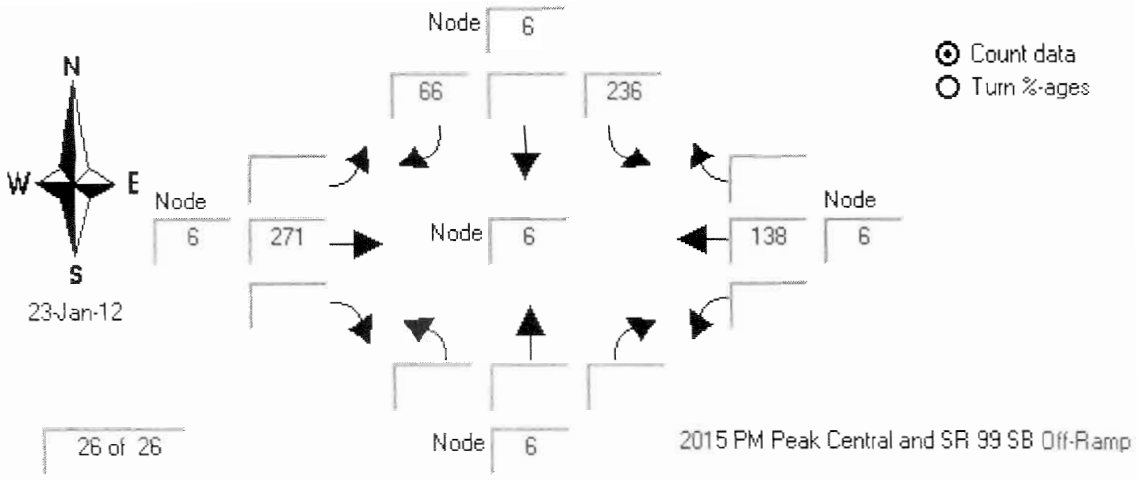

0
324
,001 % Convergence
3 Iterations
169
0
0
0
87
256
Forecast Volumes
614
547
169
425
Reset
0
0
547
0
0
0
0
0
0

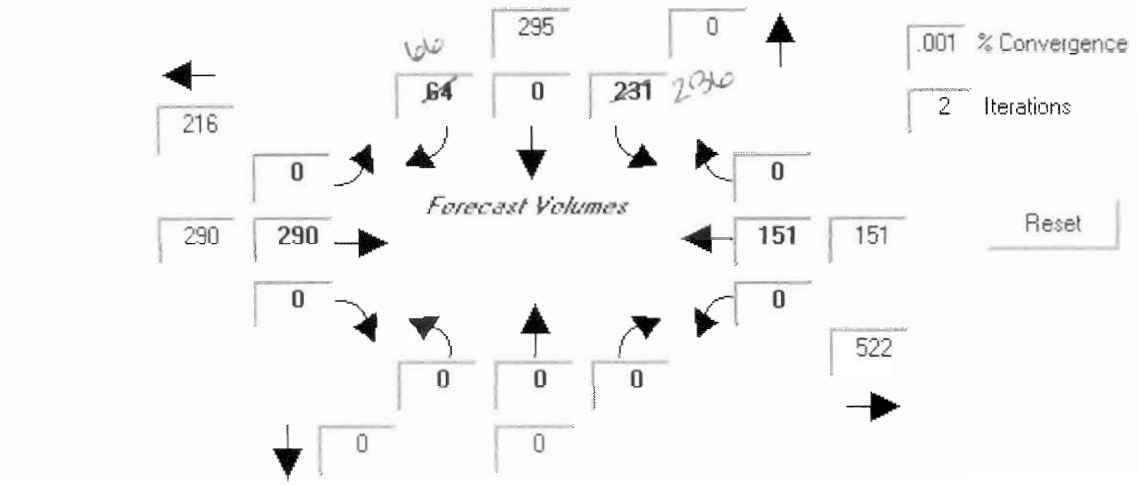

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
99
597
Node 6
408
Node 6
Node 6
138
Node 6
Node 6
24 of 24
2015 PM Peak Central and SR 99 On-Ramp

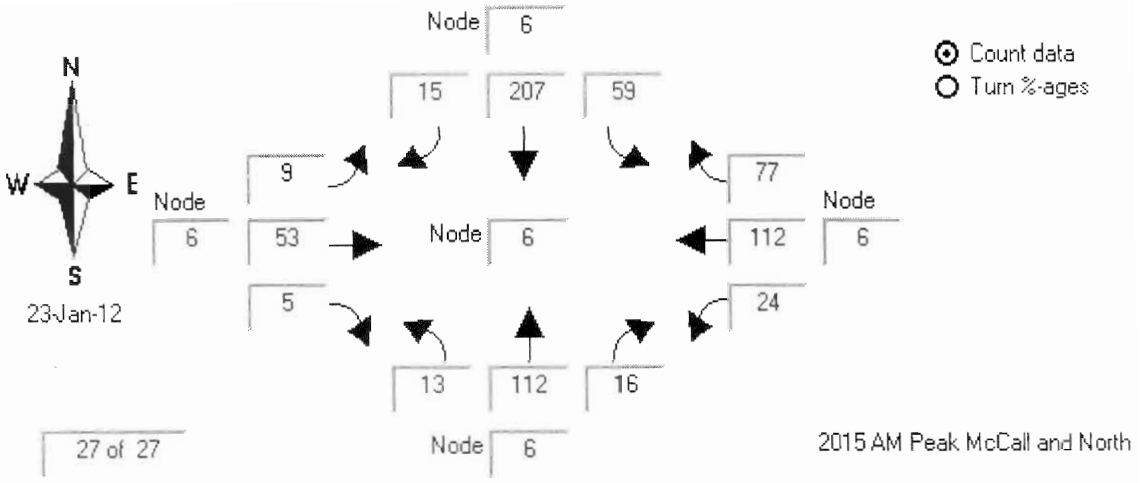

0
675
.001 % Convergence
6 Iterations
151
0
0
0
94
580
Forecast Volumes
528
434
151
731
Reset
0
0
0
0
434
0
0

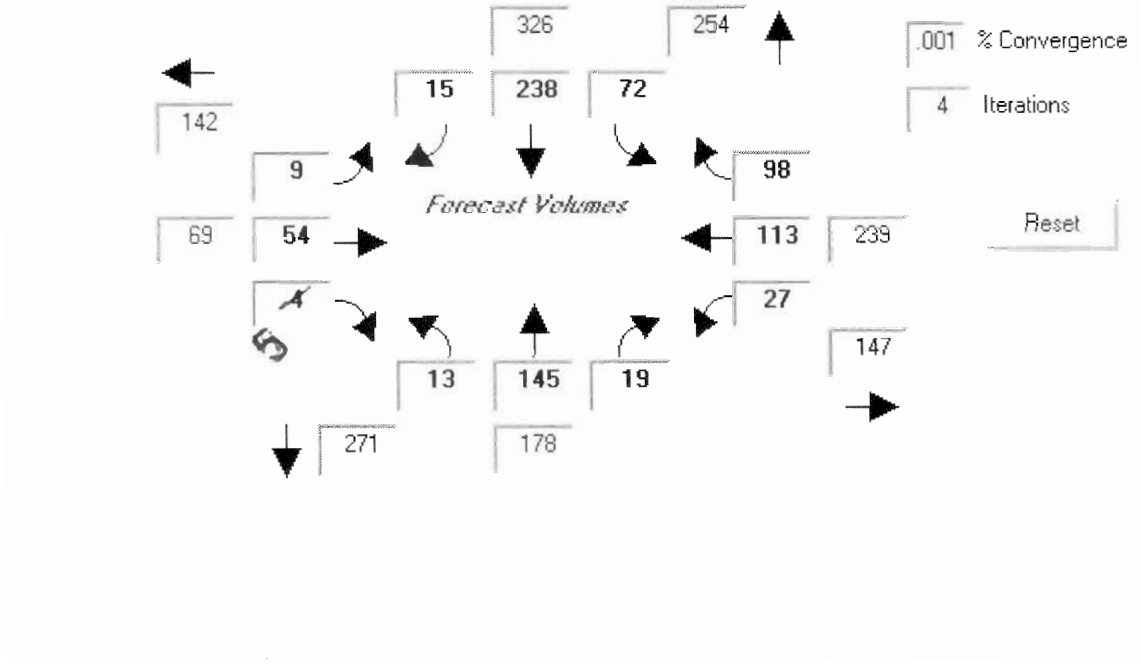

Node 6
113
430
Count data
Turn %-ages
N
W
E
S
Node 6
170
Node 6
Node 6
152
Node 6
23-Jan-12
25 of 25
Node 6
2015 AM Peak Central and SR 99 SB Off-Ramp

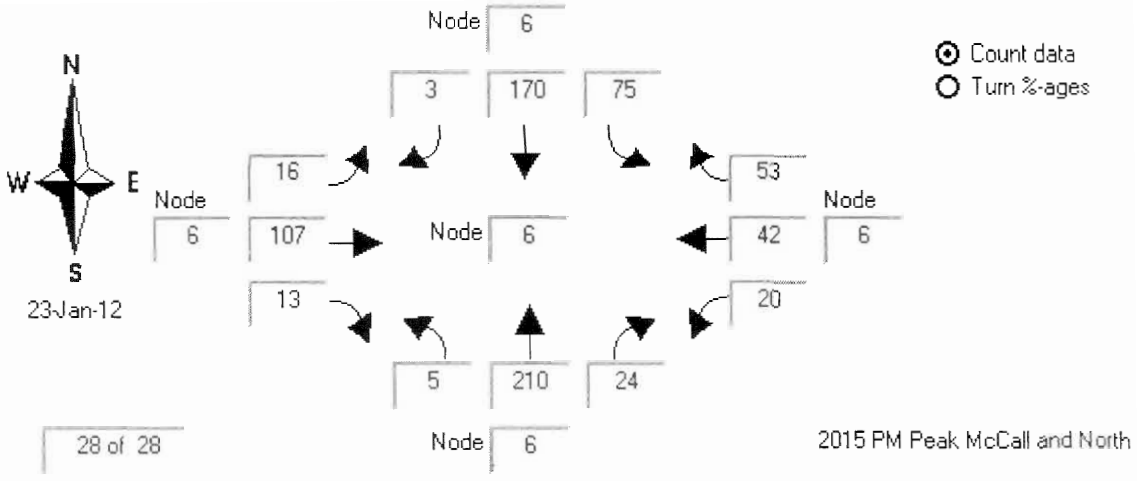

548
0
.001 % Convergence
115
0
433
3 Iterations
284
0
0
Forecast Volumes
180
180
168
168
Reset
0
0
614
0
0
0
0
0

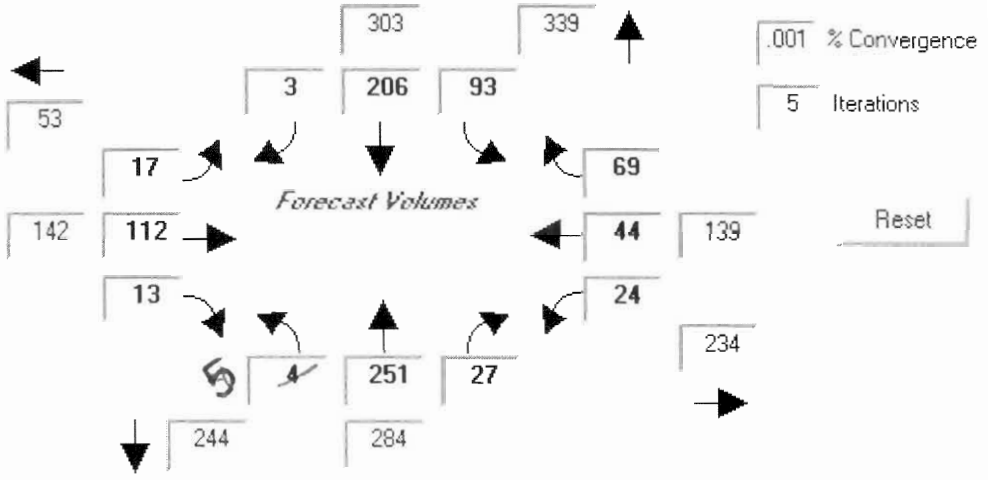

Node 6
66
236
Count data
Turn %-ages
N
W
E
S
Node 6
271
Node 6
Node 6
138
23-Jan-12
26 of 26
Node 6
2015 PM Peak Central and SR 99 SB Off-Ramp

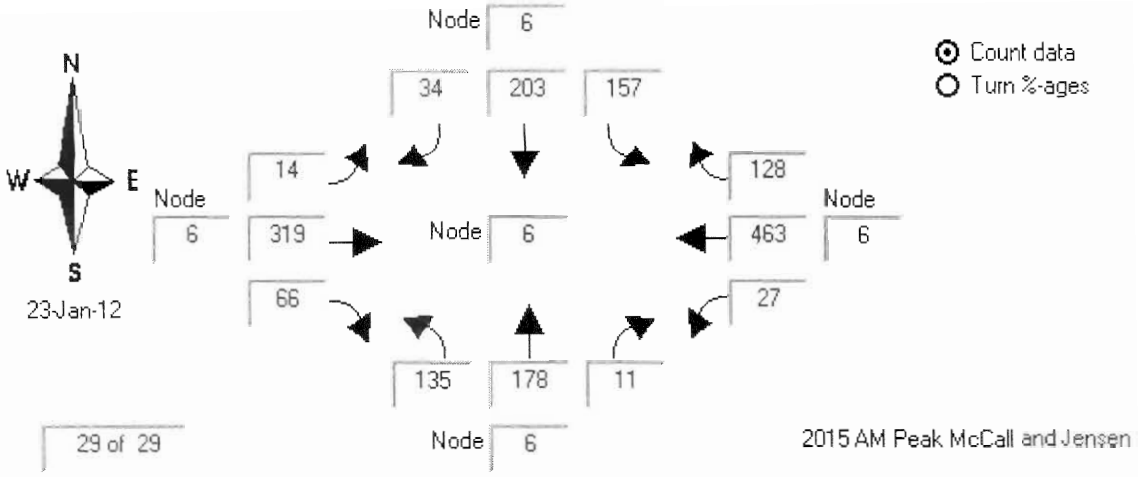

295
0
64
0
231
216
0
0
Forecast Volumes
290
290
151
151
0
0
522
0
0
0
0
0
.001 % Convergence
2 Iterations
Reset

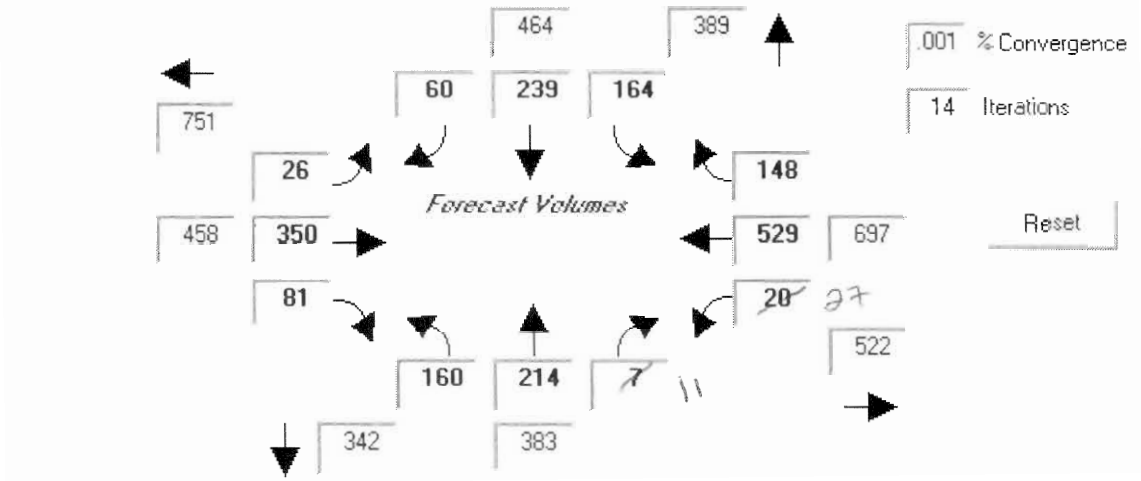

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
15
207
59
9
77
Node 6
53
Node 6
112
Node 6
5
24
13
112
16
27 of 27
Node 6
2015 AM Peak McCall and North

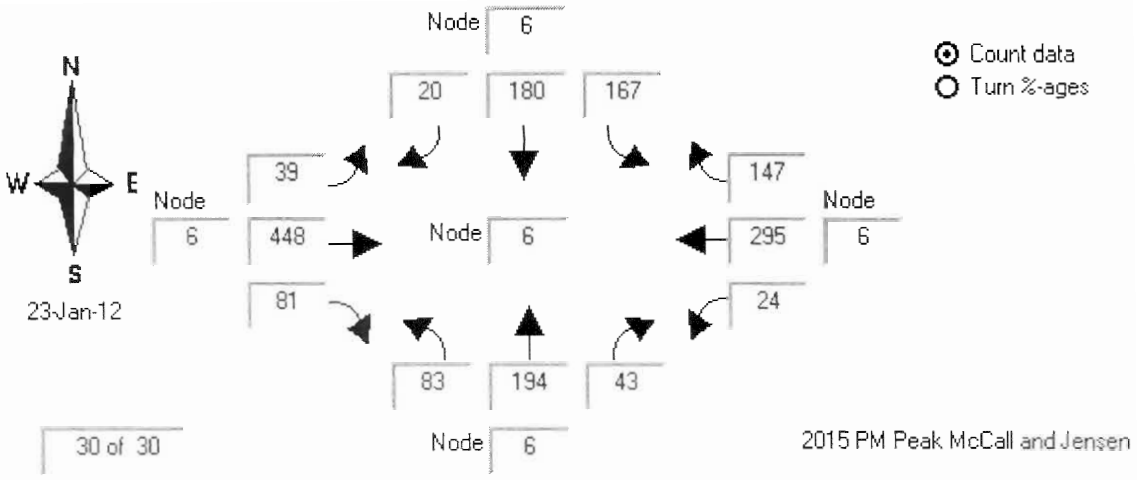

326
254
.001 % Convergence
142
15
238
72
4 Iterations
9
98
Forecast Volumes
69
54
113
239
Reset
5
27
147
13
145
19
271
178

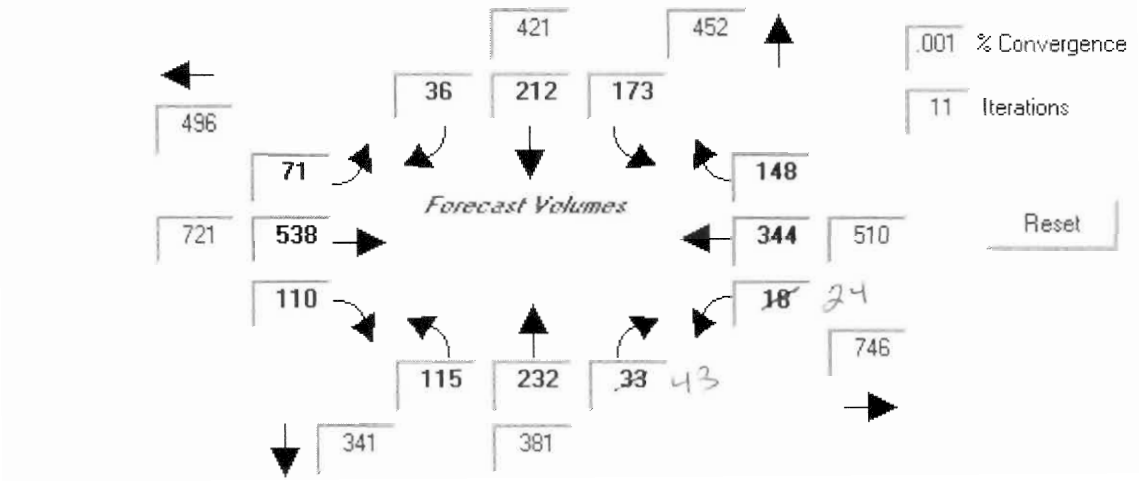

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
3
170
75
16
53
Node 6
107
Node 6
42
Node 6
13
20
5
210
24
28 of 28
Node 6
2015 PM Peak McCall and North

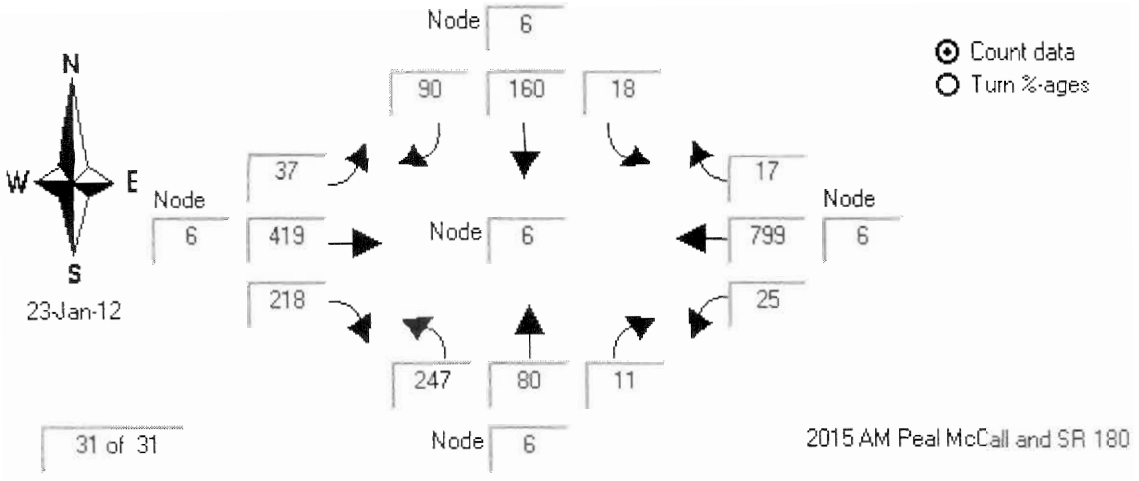

303
339
.001 % Convergence
53
3
206
93
5 Iterations
17
69
Forecast Volumes
142
112
44
139
Reset
13
24
234
4
251
27
244
284

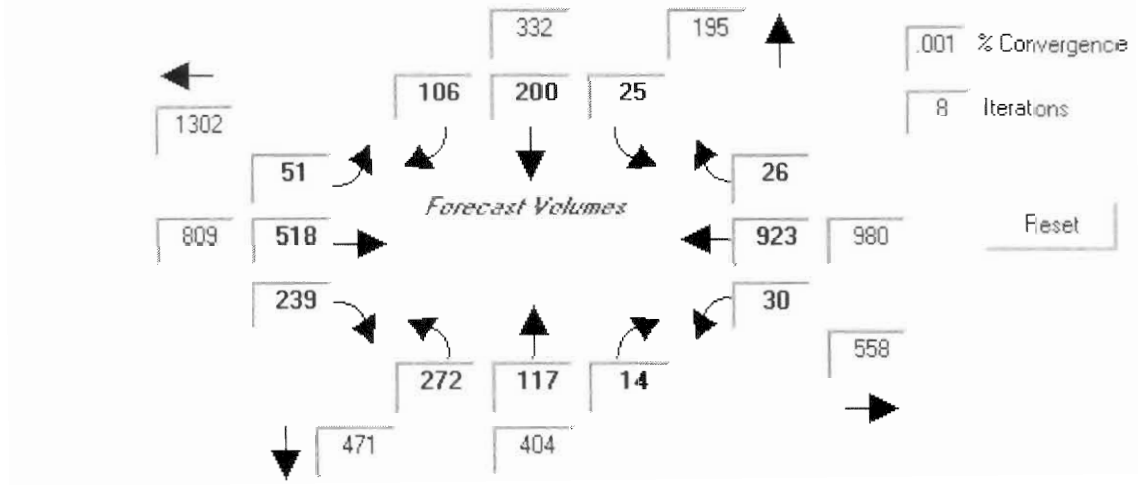

N
W
E
S
23-Jan-12
Node 6
34
203
157
14
128
Node 6
319
Node 6
463
Node 6
66
27
135
178
11
Node 6
Count data
Turn %-ages
29 of 29
2015 AM Peak McCall and Jensen

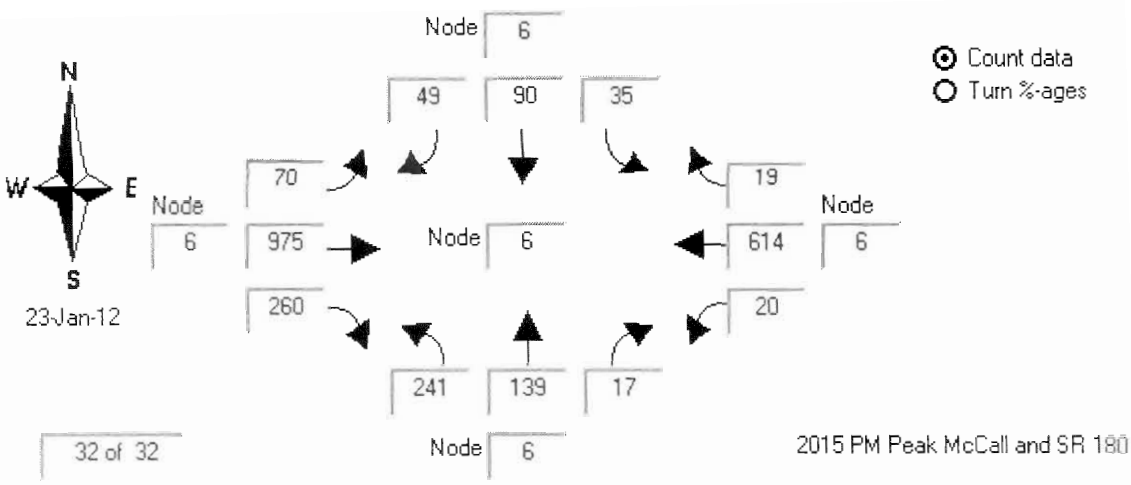

464
389
751
60
239
164
26
148
Forecast Volumes
458
350
529
697
81
20
522
160
214
7
342
383
.001 % Convergence
14 Iterations
Reset

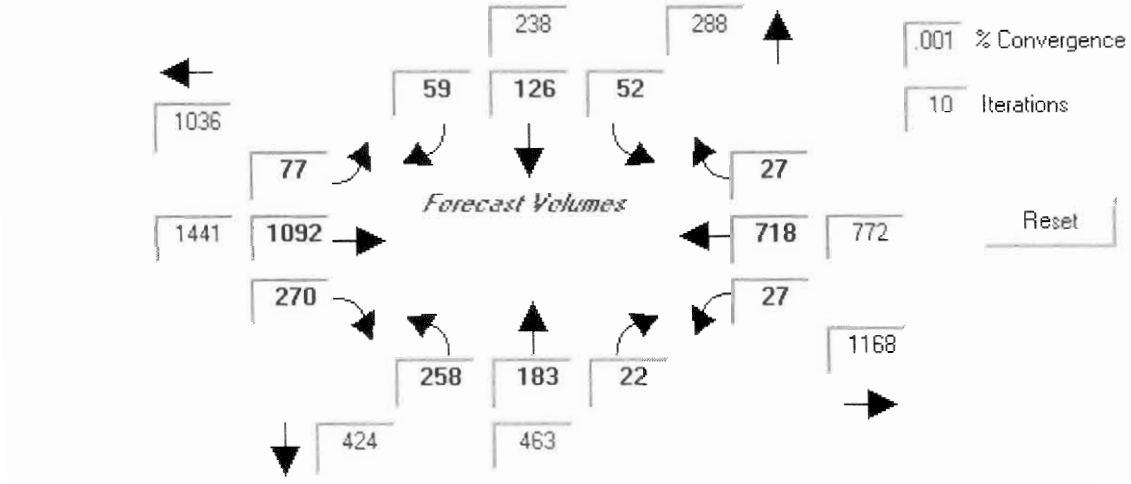

Node 6
20
180
167
39
147
Node 6
448
Node 6
295
Node 6
81
24
83
194
43
N
W
E
S
23-Jan-12
Count data
Turn %-ages
30 of 30
Node 6
2015 PM Peak McCall and Jensen

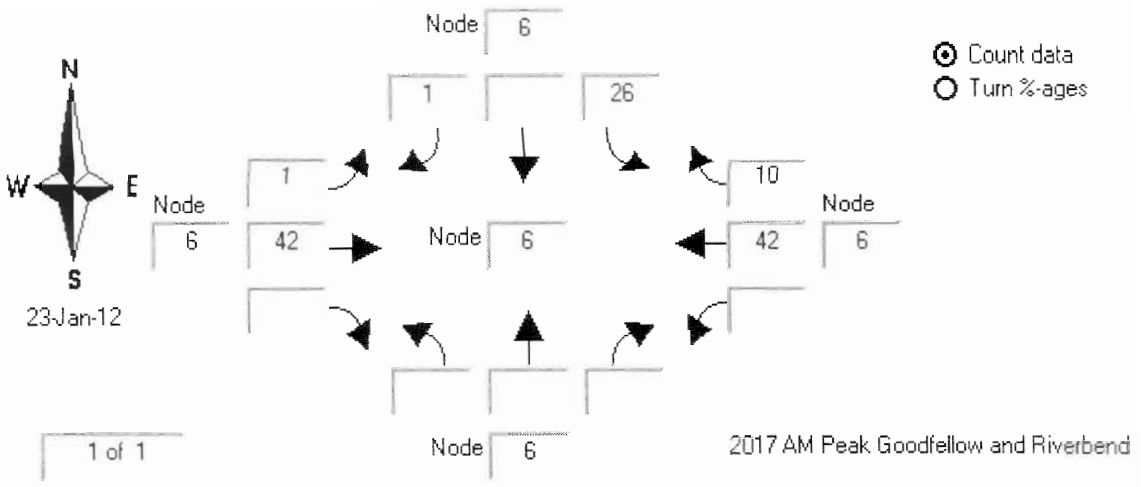

421
452
.001 % Convergence
496
36
212
173
11 Iterations
71
148
Forecast Volumes
721
538
344
510
Reset
110
18
24
746
115
232
33
43
341
381

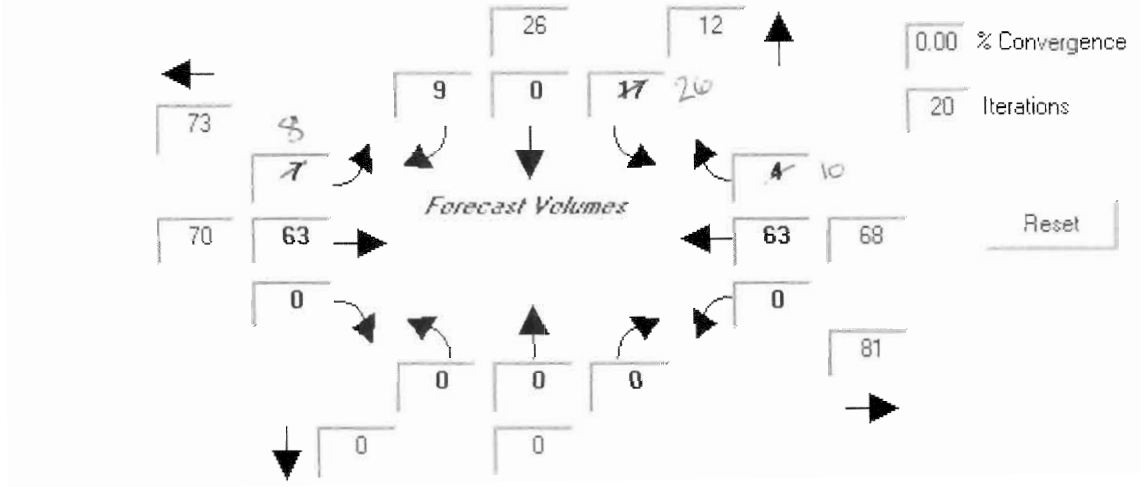

Node 6
N
W
E
S
23-Jan-12
90
160
18
37
17
Node 6
419
Node 6
799
Node 6
218
25
247
80
11
Count data
Turn %-ages
31 of 31
Node 6
2015 AM Peal McCall and SR 180

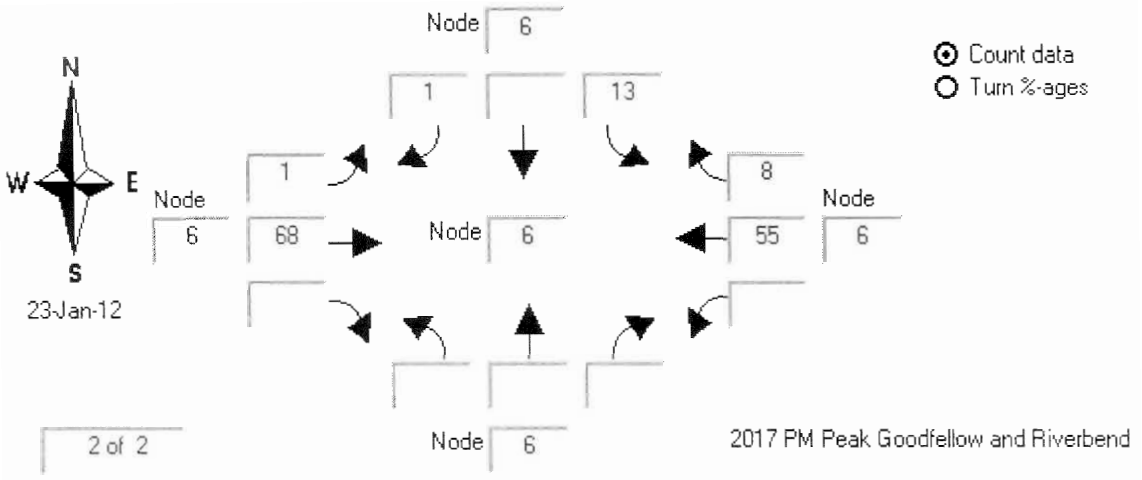

332
195
.001 % Convergence
106
200
25
1302
8 Iterations
51
26
Forecast Volumes
809
518
923
980
Reset
239
30
558
272
117
14
471
404

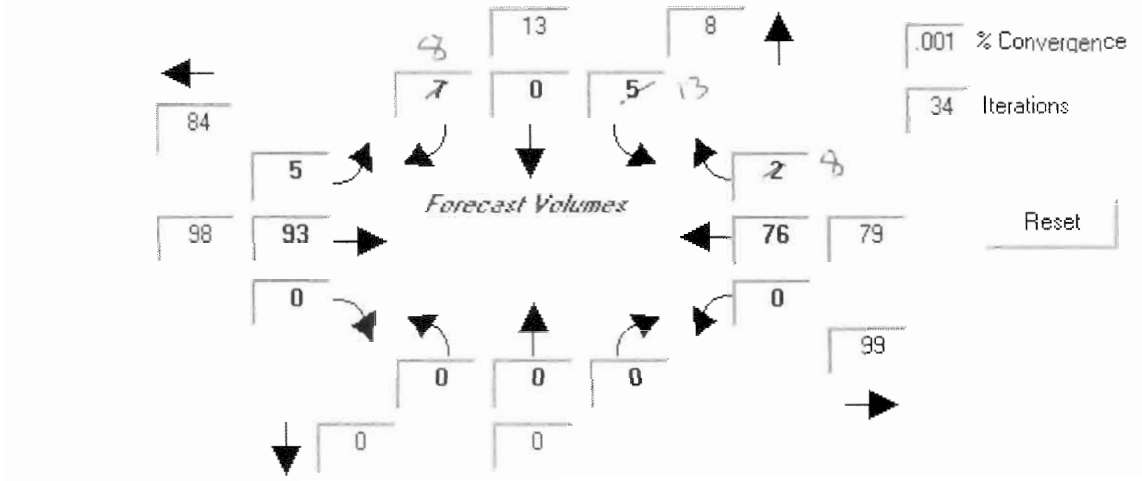

Node 6
N
W
E
S
23-Jan-12
49
90
35
70
19
Node 6
975
Node 6
614
Node 6
260
20
241
139
17
Count data
Turn %-ages
32 of 32
Node 6
2015 PM Peak McCall and SR 180

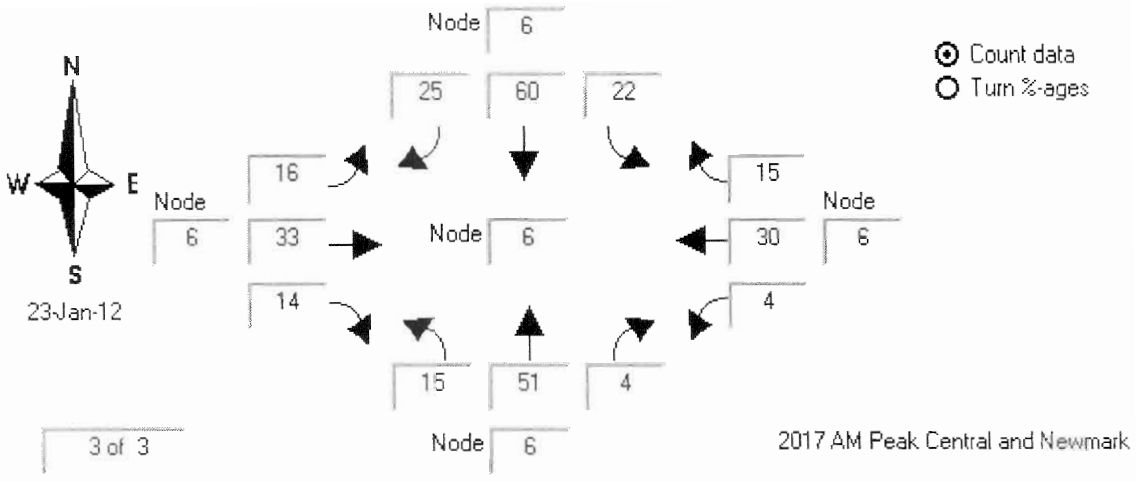

238
288
.001 % Convergence
59
126
52
1036
10 Iterations
77
27
Forecast Volumes
1441
1092
718
772
Reset
270
27
1168
258
183
22
424
463

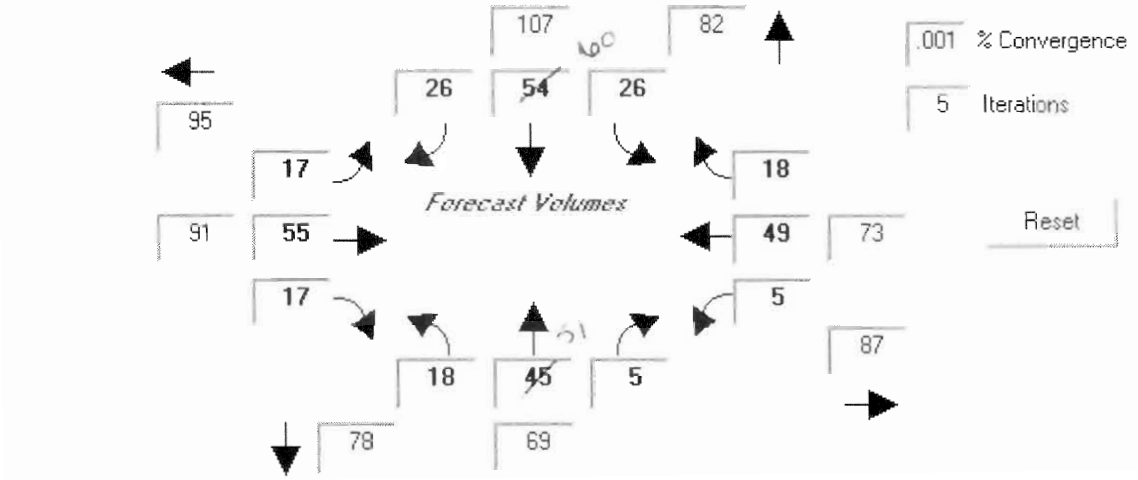

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
1
26
1
10
Node 6
42
Node 6
42
Node 6
Node 6
1 of 1
2017 AM Peak Goodfellow and Riverbend

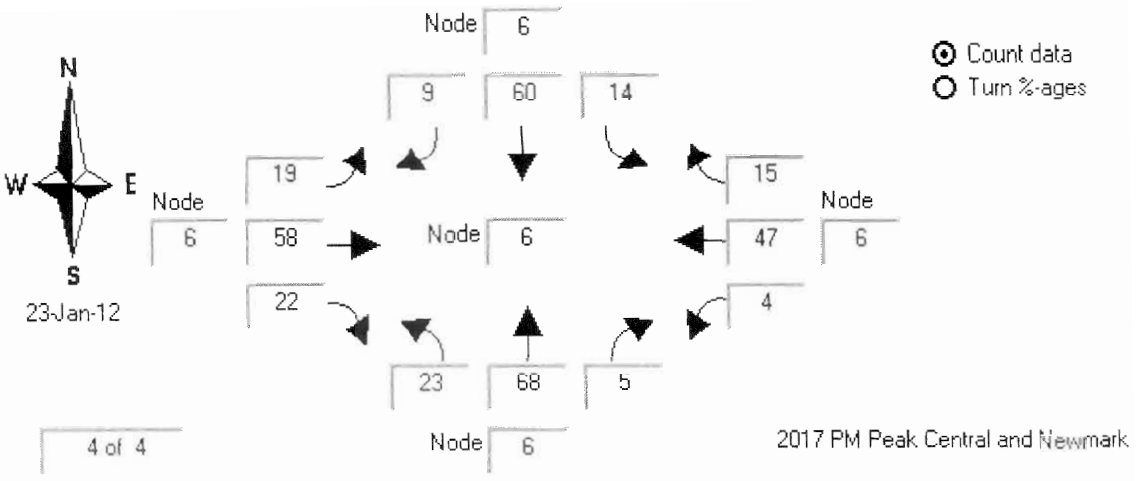

26
12
0.00 % Convergence
9
0
20
20 Iterations
73
5
10
Forecast Volumes
70
63
63
68
Reset
0
0
81
0
0
0
0
0

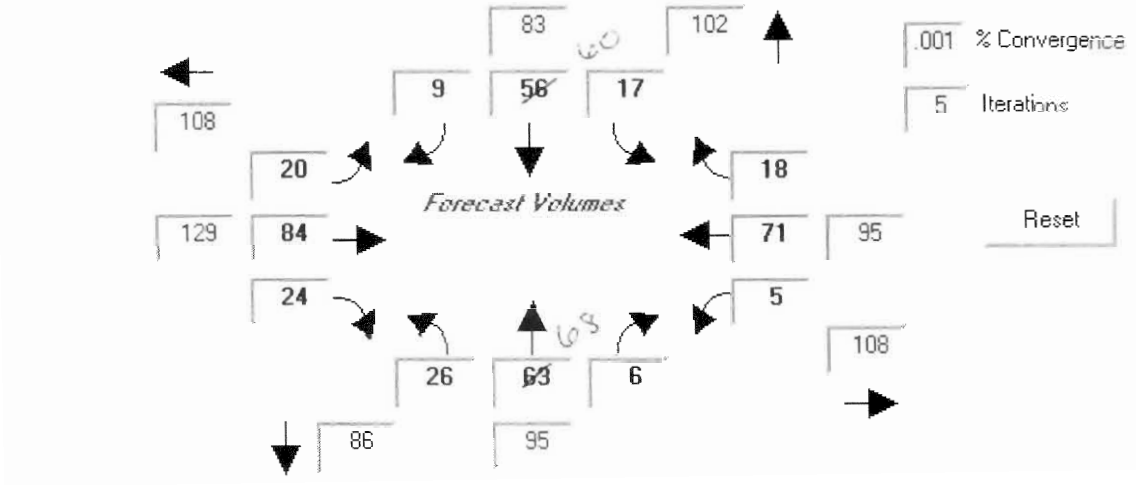

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
1
13
1
8
Node 6
68
Node 6
55
Node 6
Node 6
2 of 2
2017 PM Peak Goodfellow and Riverbend

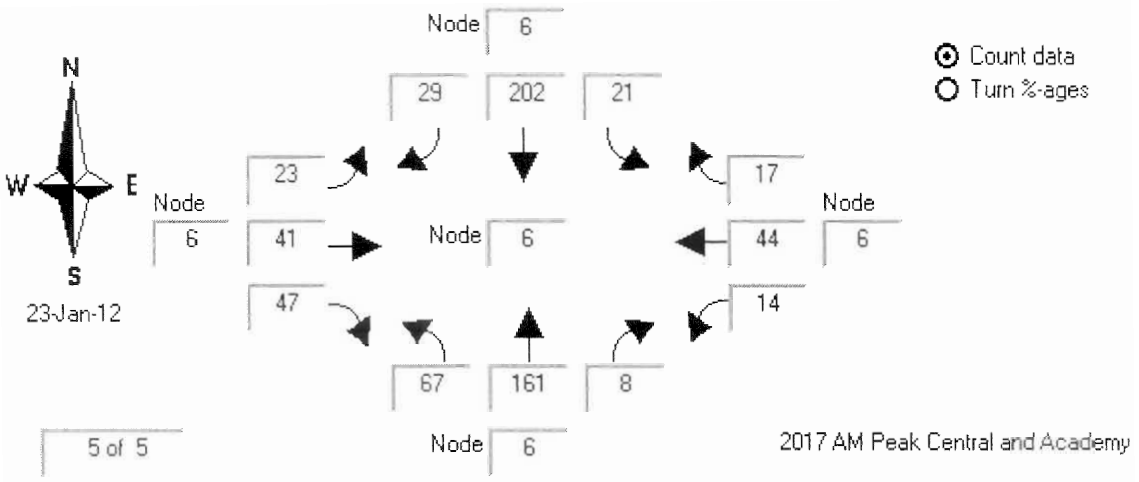

13
8
.001 % Convergence
34 Iterations
84
5
0
5
2
Forecast Volumes
98
93
76
79
Reset
0
0
0
0
99
0
0

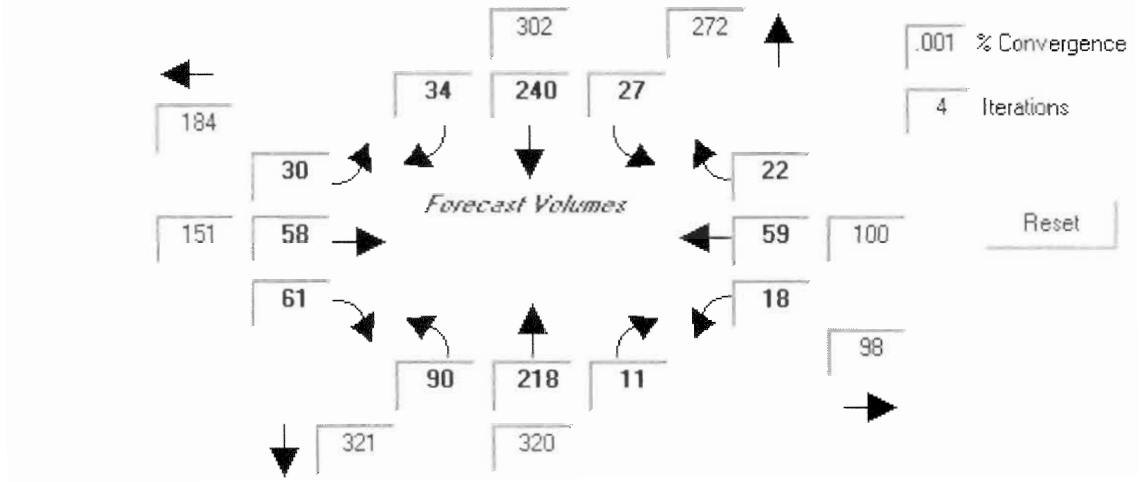

N
W
E
S
23-Jan-12
Node 6
25
60
22
16
15
Node 6
33
Node 6
30
Node 6
14
4
15
51
4
Node 6
Count data
Turn %-ages
3 of 3
2017 AM Peak Central and Newmark

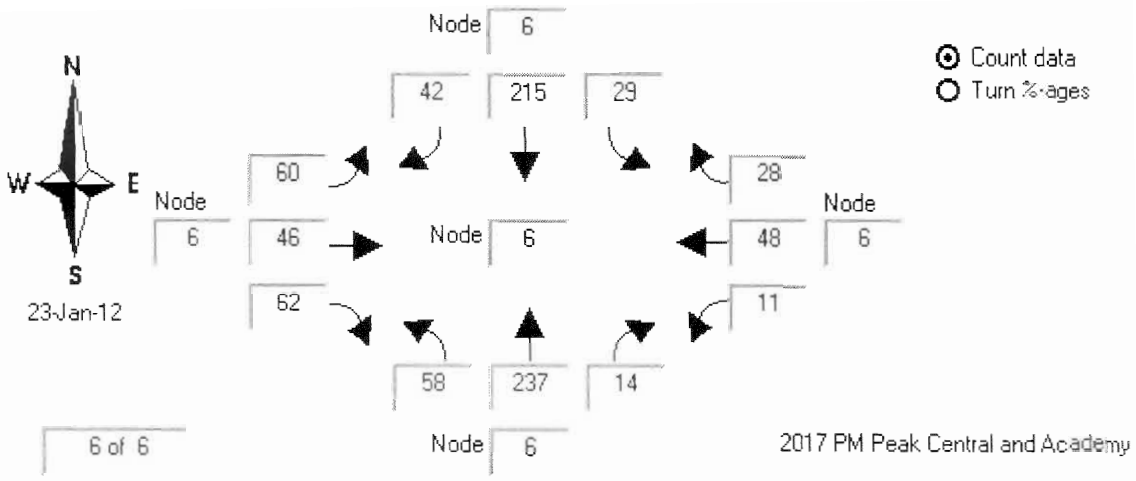

107
82
95
26
54
26
17
18
Forecast Volumes
91
55
49
73
17
5
87
18
45
5
78
69
.001 % Convergence
5 Iterations
Reset

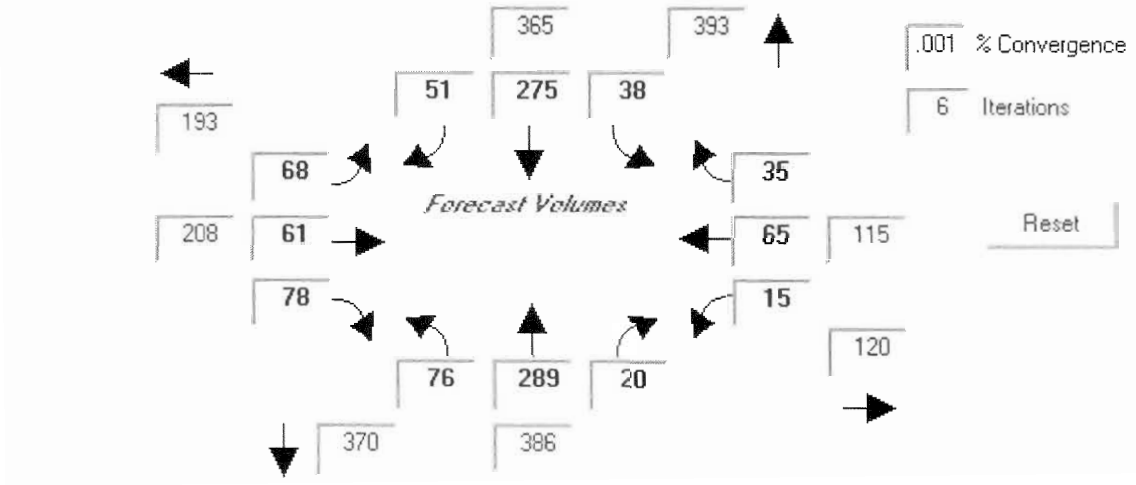

Node 6
N
W E
S
23-Jan-12
Count data
Turn %-ages
9 60 14
19
15
Node 6 58
Node 6
47 Node 6
22
4
23 68 5
4 of 4
Node 6
2017 PM Peak Central and Newmark

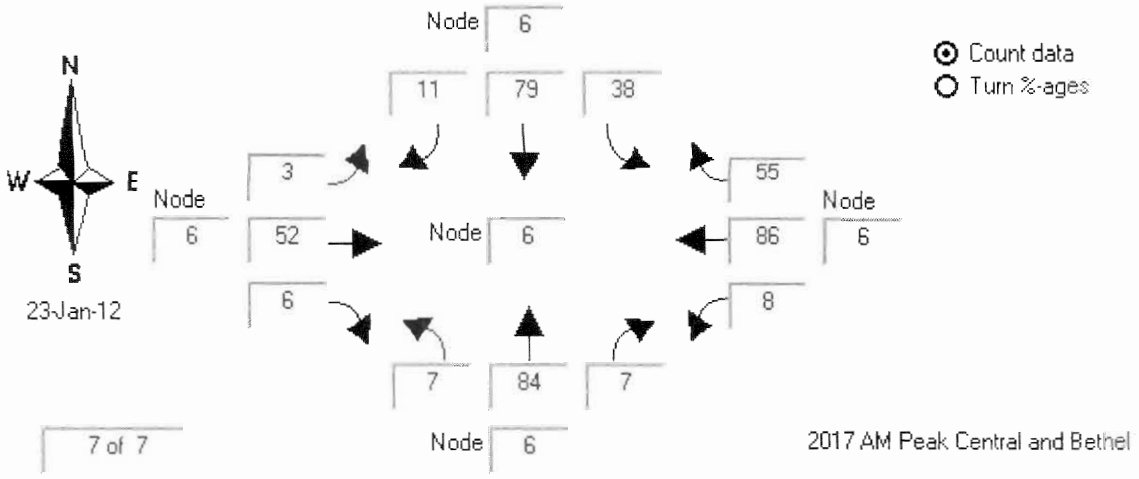

83
102
.001 % Convergence
9 56 17
108
5 Iterations
20
18
Forecast Volumes
129 84
71 95
Reset
24
5
108
26 63 6
86 95

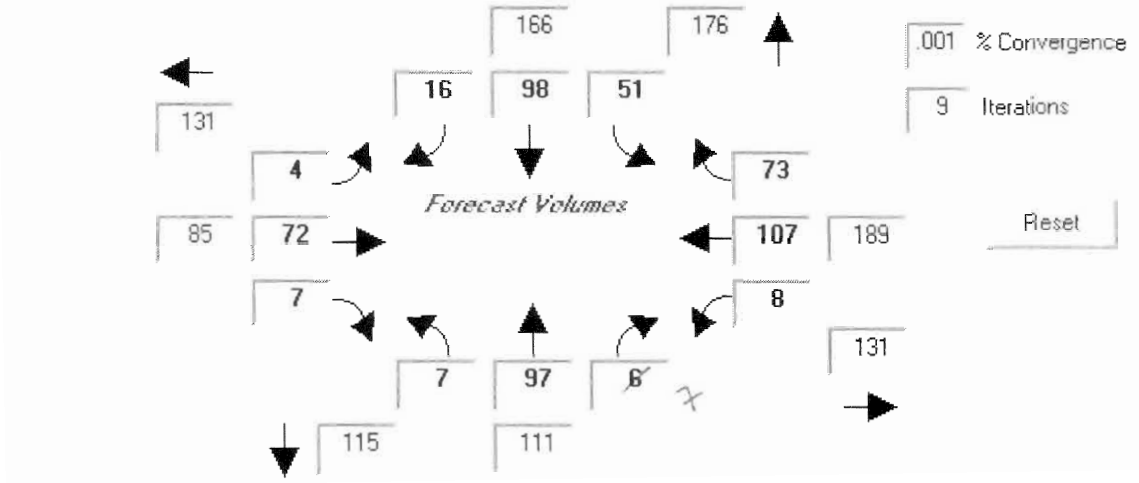

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
29
202
21
23
17
Node 6
41
Node 6
44
Node 6
47
14
67
161
8
5 of 5
Node 6
2017 AM Peak Central and Academy

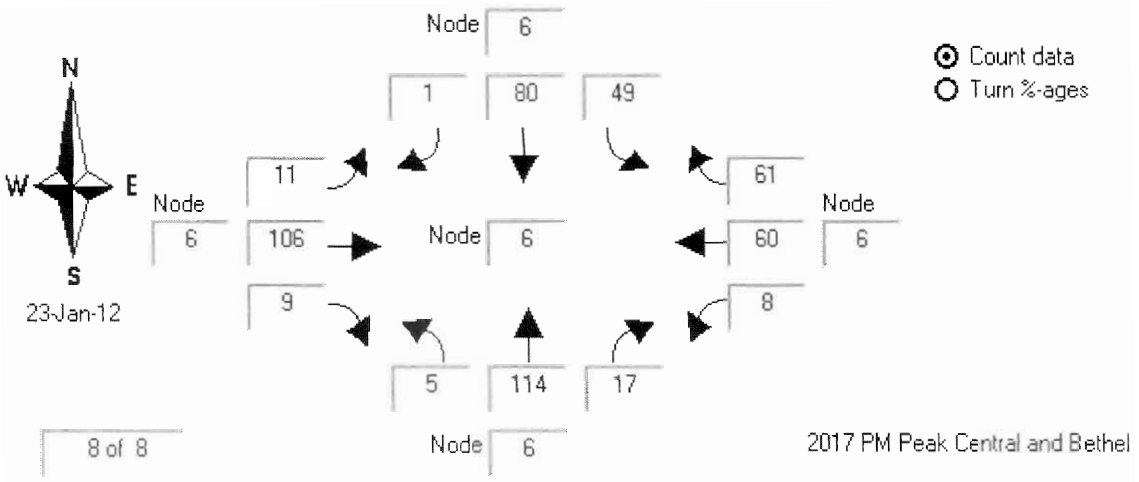

302
272
.001 % Convergence
4 Iterations
34
240
27
184
30
22
Forecast Volumes
151
58
59
100
Reset
61
18
98
90
218
11
321
320

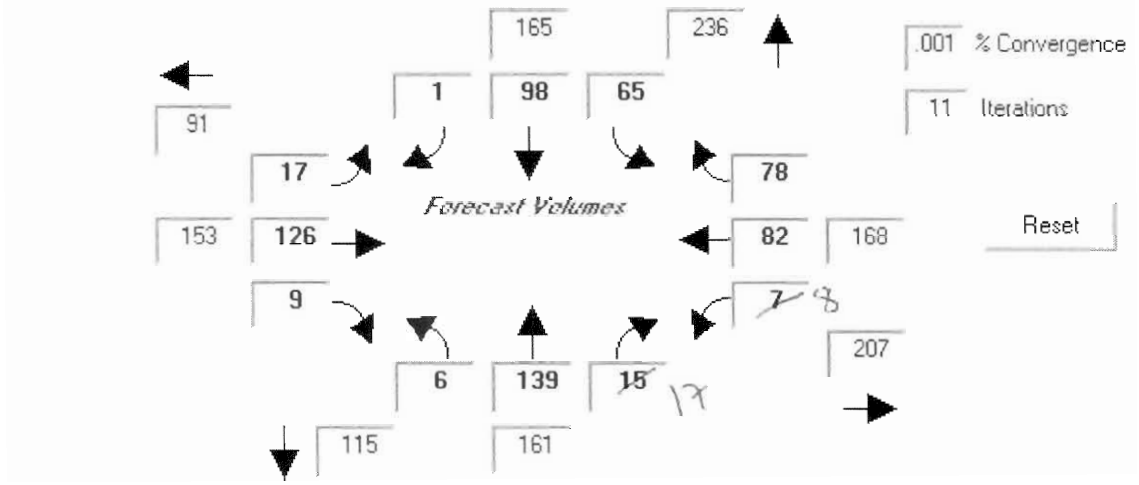

Node 6
N
W E
S
23-Jan-12
Count data
Turn %-ages
42 215 29
60
28
Node 6
46
Node 6
48
Node 6
62
11
58 237 14
6 of 6
Node 6
2017 PM Peak Central and Academy

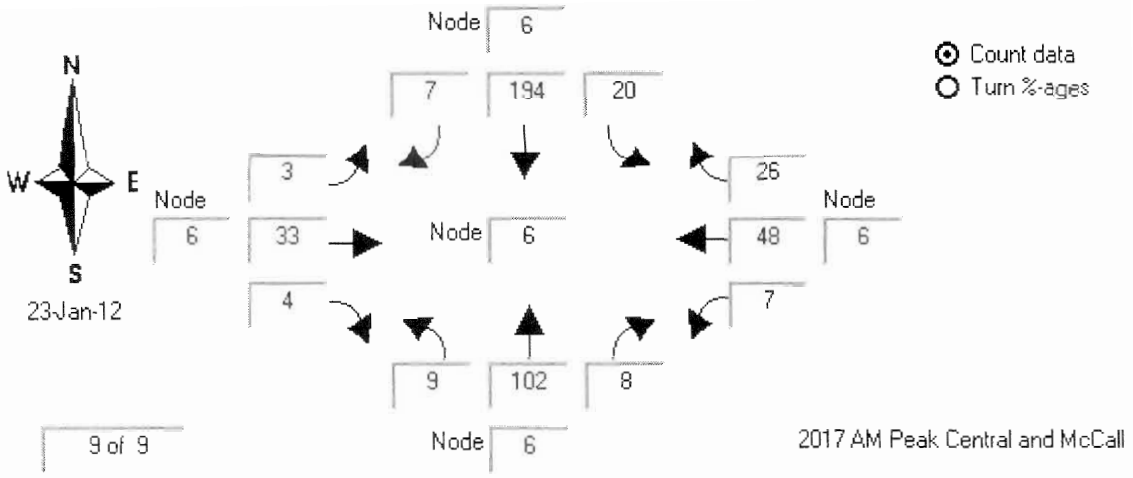

365
393
.001 % Convergence
193
51 275 38
6 Iterations
68
35
Forecast Volumes
208
61
65
115
Reset
78
15
120
76 289 20
370
386

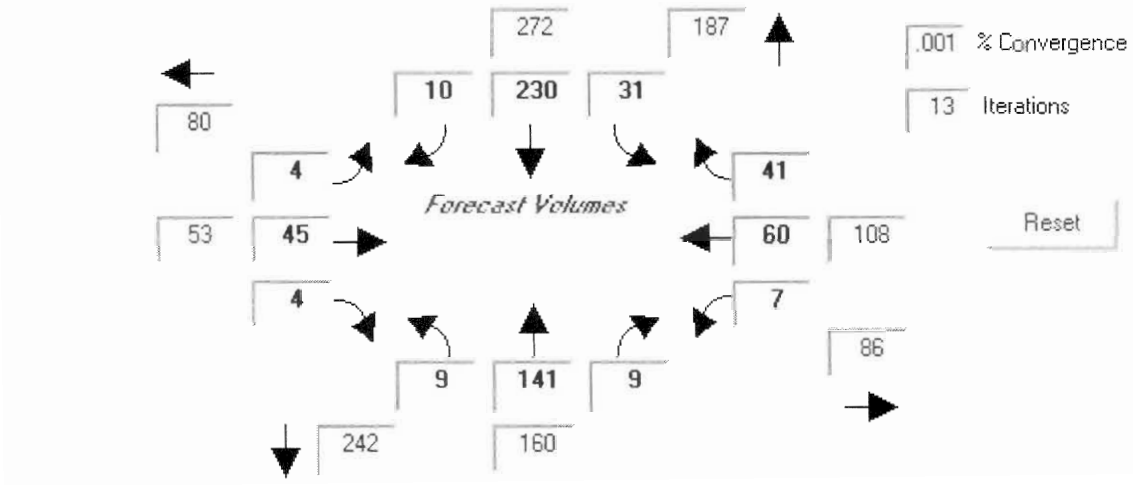

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
11
79
38
3
55
Node 6
52
Node 6
86
Node 6
6
8
7
84
7
7 of 7
Node 6
2017 AM Peak Central and Bethel

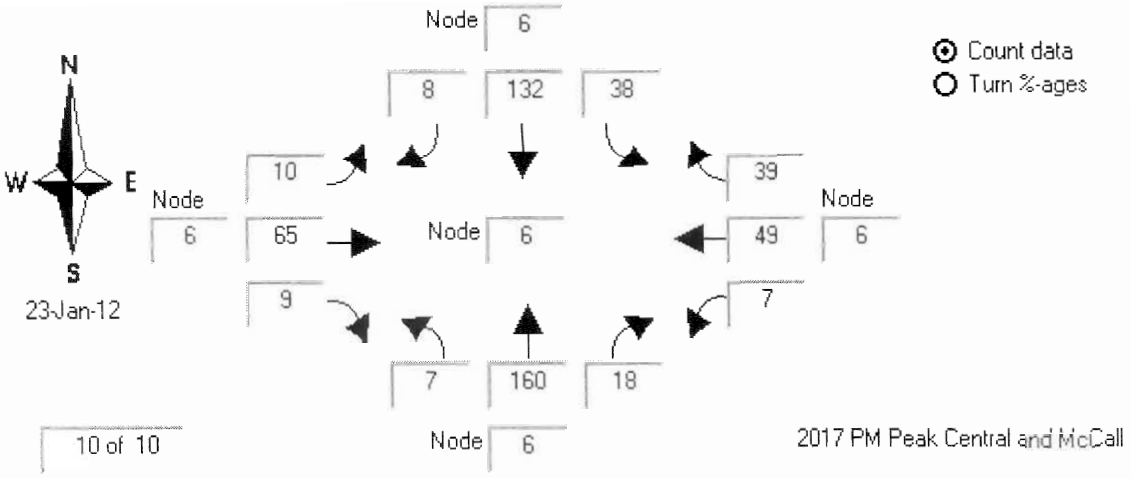

166
176
.001 % Convergence
16
98
51
131
9 Iterations
4
73
Forecast Volumes
85
72
107
189
Reset
7
8
131
7
97
8
115
111

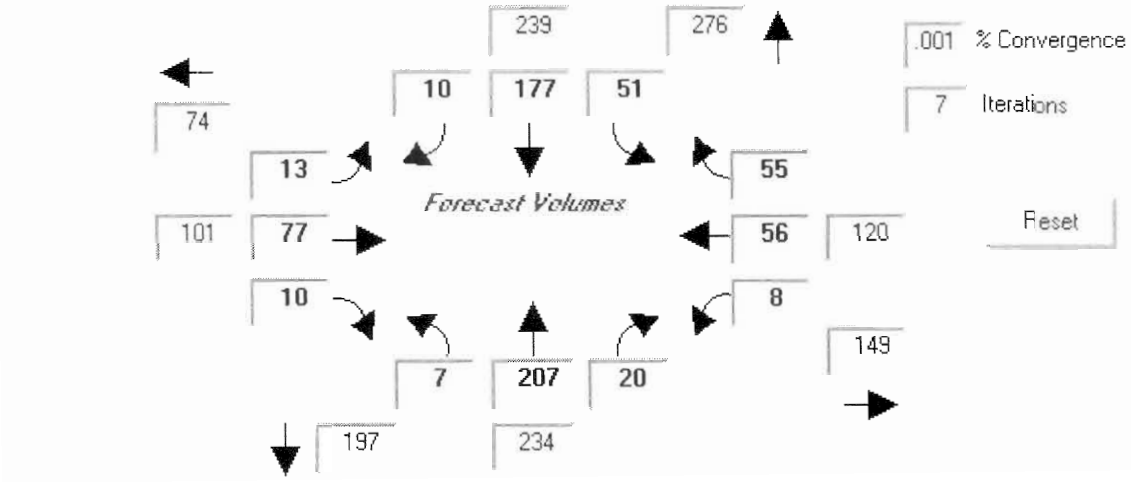

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
1
80
49
11
61
Node 6
106
Node 6
60
Node 6
9
8
5
114
17
8 of 8
Node 6
2017 PM Peak Central and Bethel

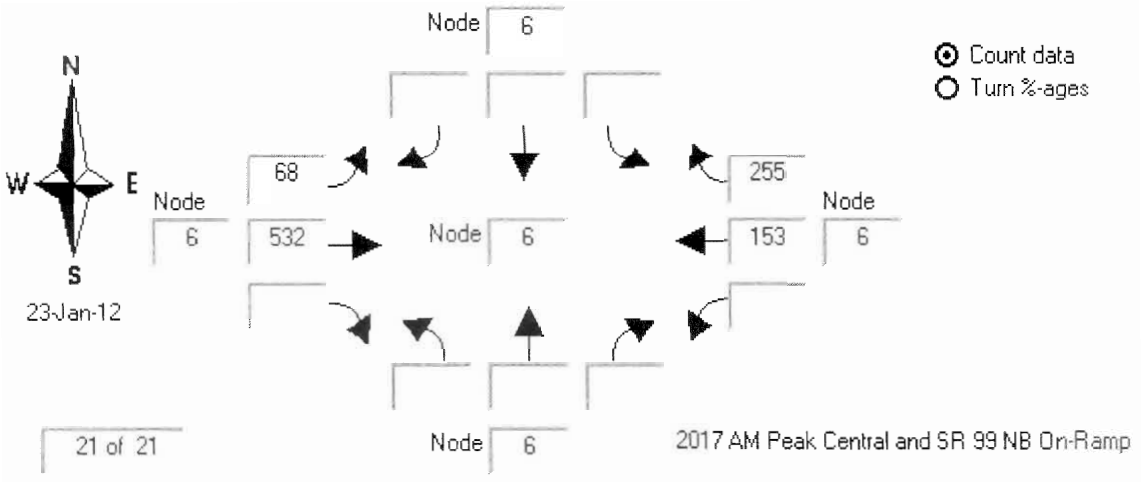

165
236
.001 % Convergence
91
1
98
65
11 Iterations
17
78
Forecast Volumes
153
126
82
168
Reset
9
7
207
6
139
15
115
161

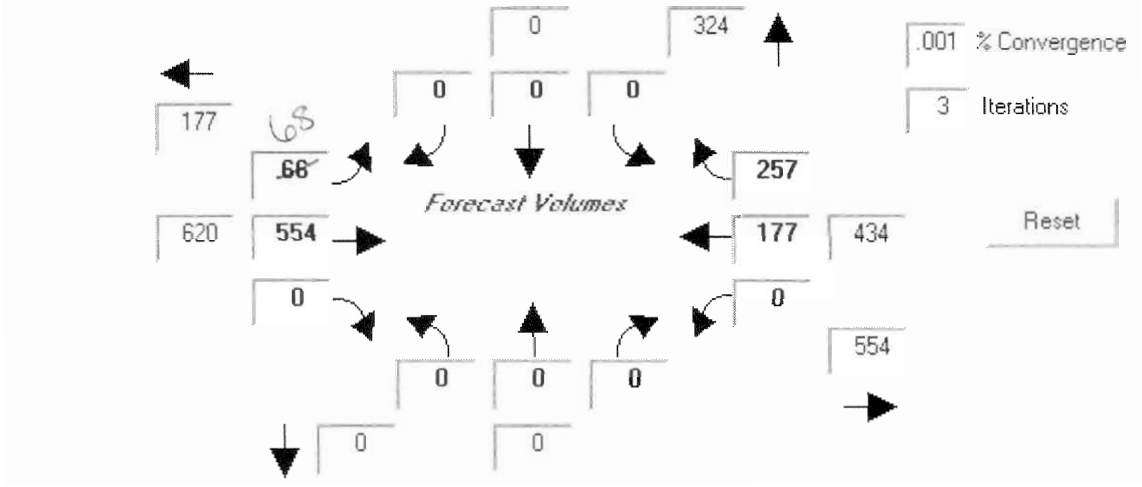

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
7
194
20
3
26
Node 6
Node 6
Node 6
33
48
4
7
9
102
8
9 of 9
Node 6
2017 AM Peak Central and McCall

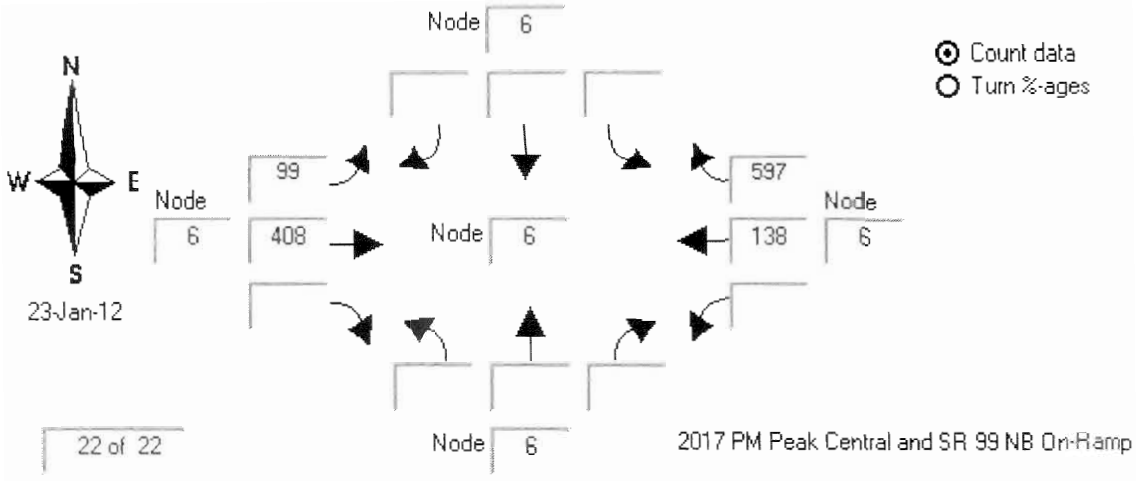

272
187
.001 % Convergence
10
230
31
80
13 Iterations
4
41
Forecast Volumes
53
45
60
108
Reset
4
7
86
9
141
9
242
160

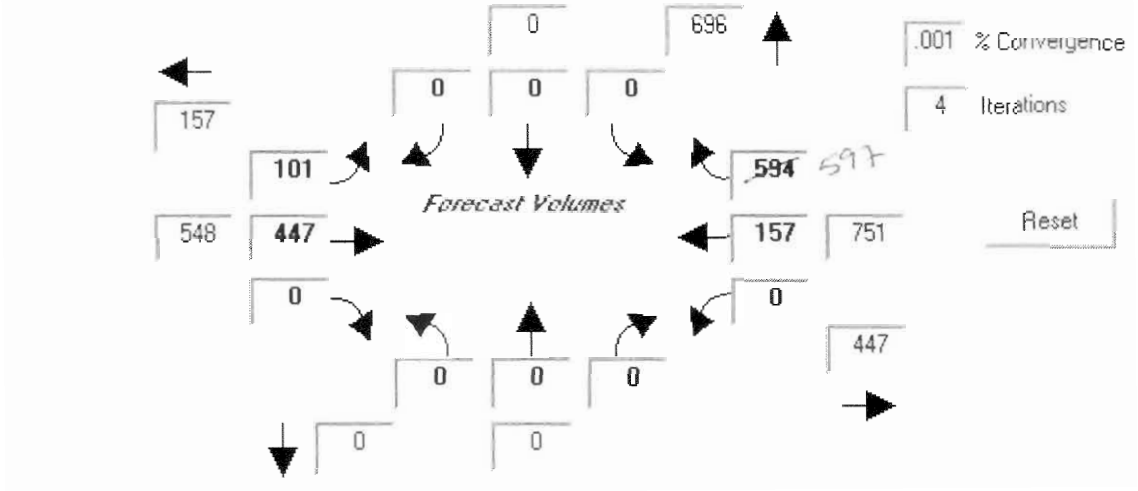

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
8
132
38
10
39
Node 6
65
Node 6
49
Node 6
9
7
7
160
18
10 of 10
Node 6
2017 PM Peak Central and McCall

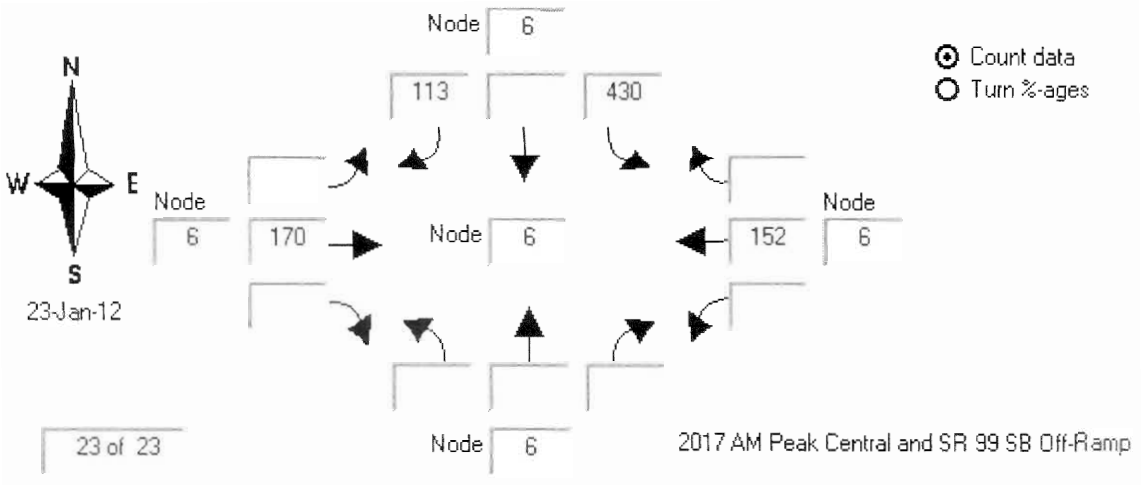

239
276
.001 % Convergence
74
10
177
51
7 Iterations
13
55
Forecast Volumes
101
77
56
120
Reset
10
8
149
7
207
20
197
234

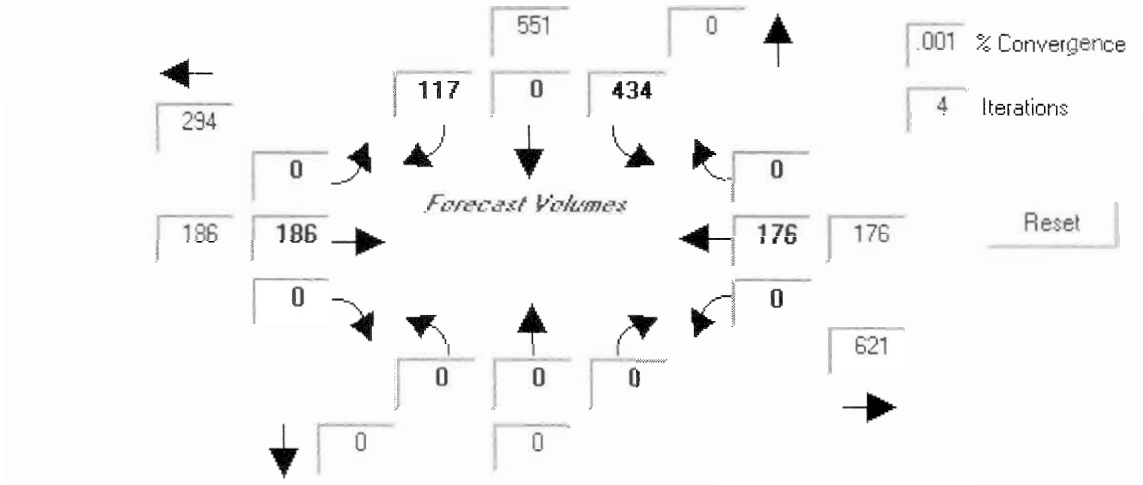

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
68
255
Node 6
532
Node 6
153
Node 6
Node 6
21 of 21
2017 AM Peak Central and SR 99 NB On-Ramp

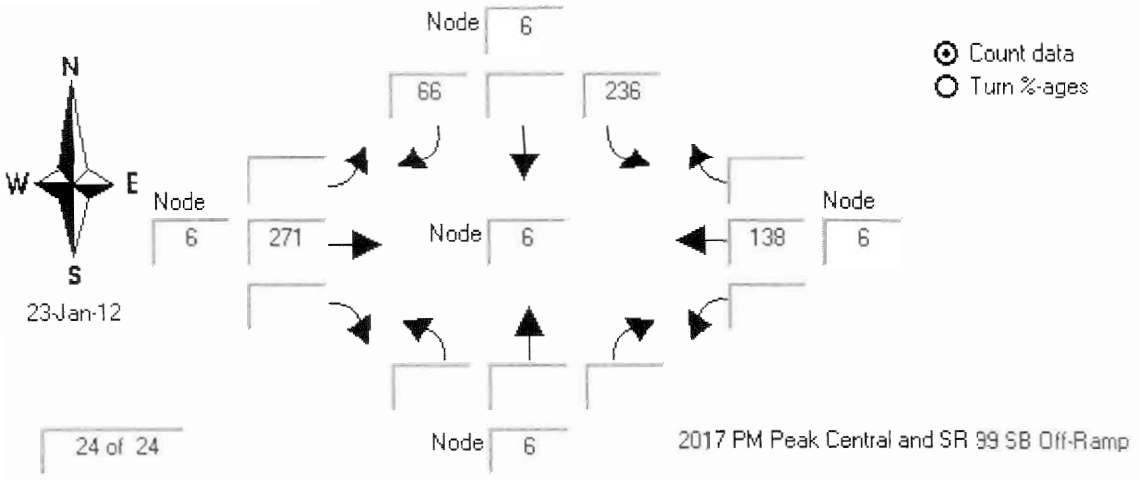

0
324
.001 % Convergence
0
0
0
177
68
257
3 Iterations
Forecast Volumes
620
554
177
434
Reset
0
0
554
0
0
0
0
0

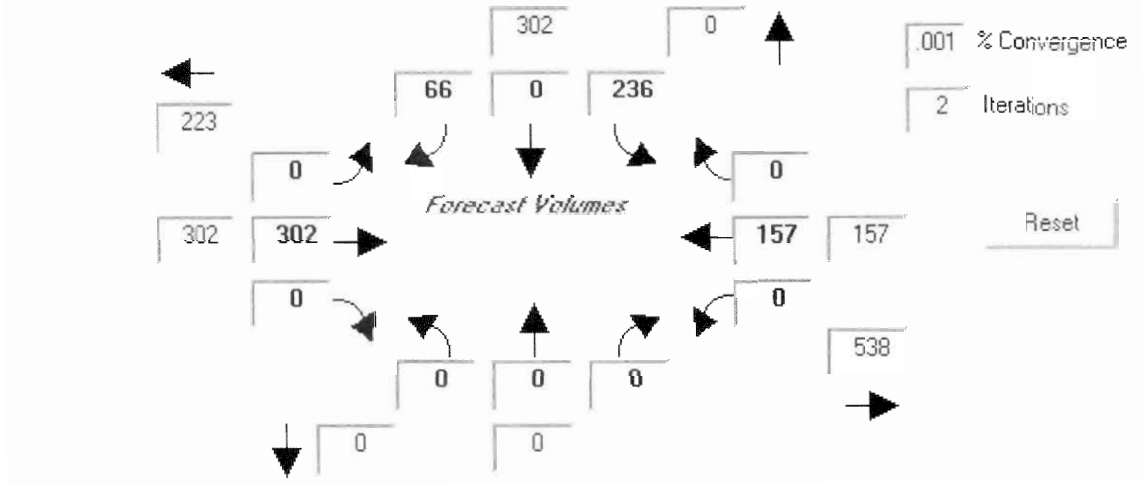

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
99
597
Node 6
408
Node 6
138
Node 6
Node 6
22 of 22
2017 PM Peak Central and SR 99 NB On-Ramp

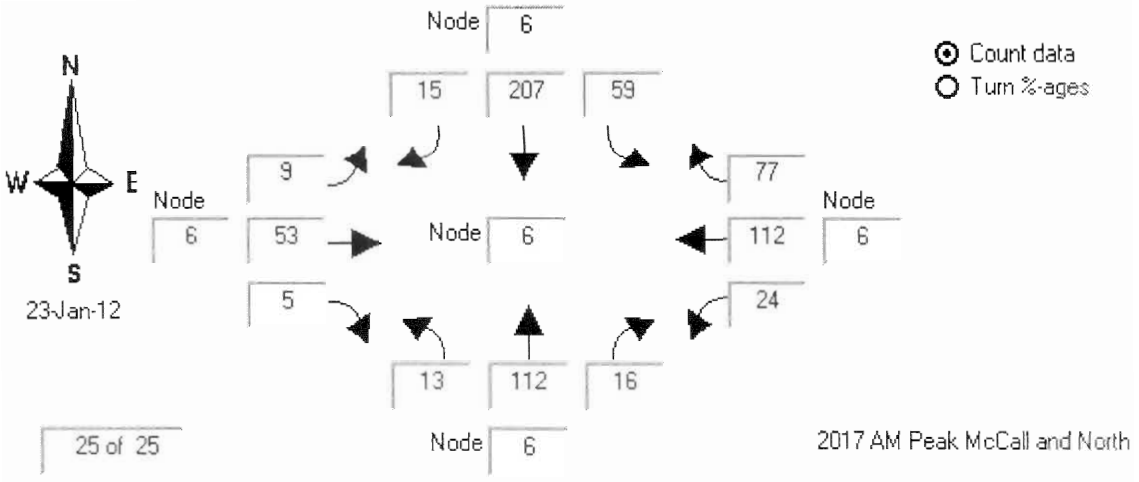

0
696
.001 % Convergence
4 Iterations
157
0 0 0
101
594
597
Forecast Volumes
548
447
157
751
Reset
0
0
447
0 0 0
0 0

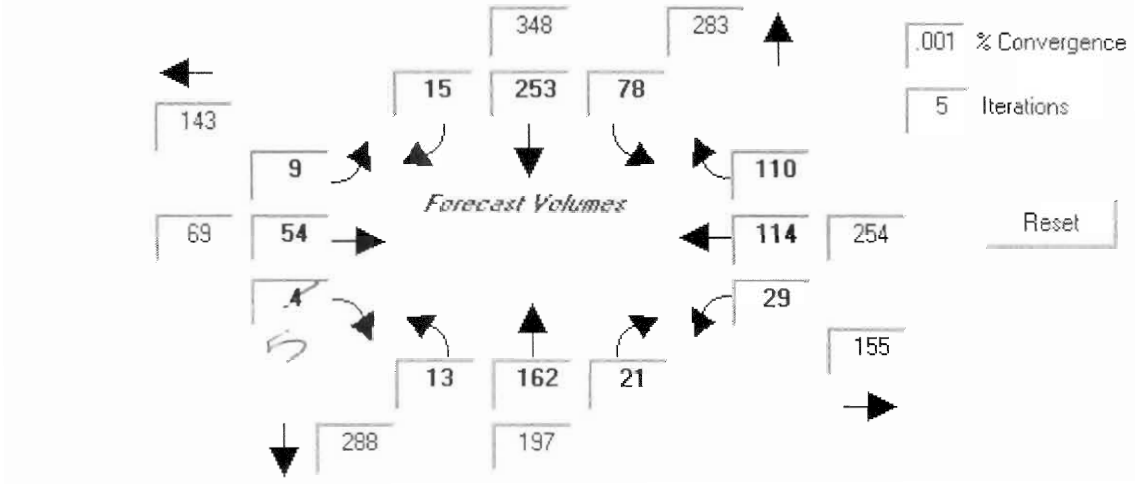

Node 6
N
W
E
S
23-Jan-12
113
430
Node 6
170
Node 6
152
Node 6
Node 6
Count data
Turn %-ages
23 of 23
2017 AM Peak Central and SR 99 SB Off-Ramp

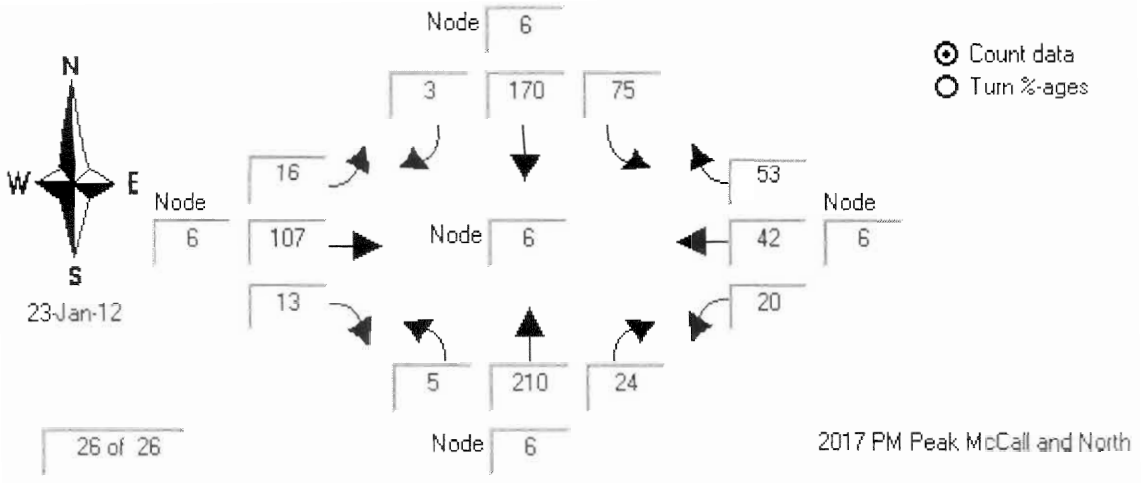

551
0
117
0
434
294
0
0
Forecast Volumes
186
186
176
176
0
0
621
0
0
0
0
0
.001 % Convergence
4 Iterations
Reset

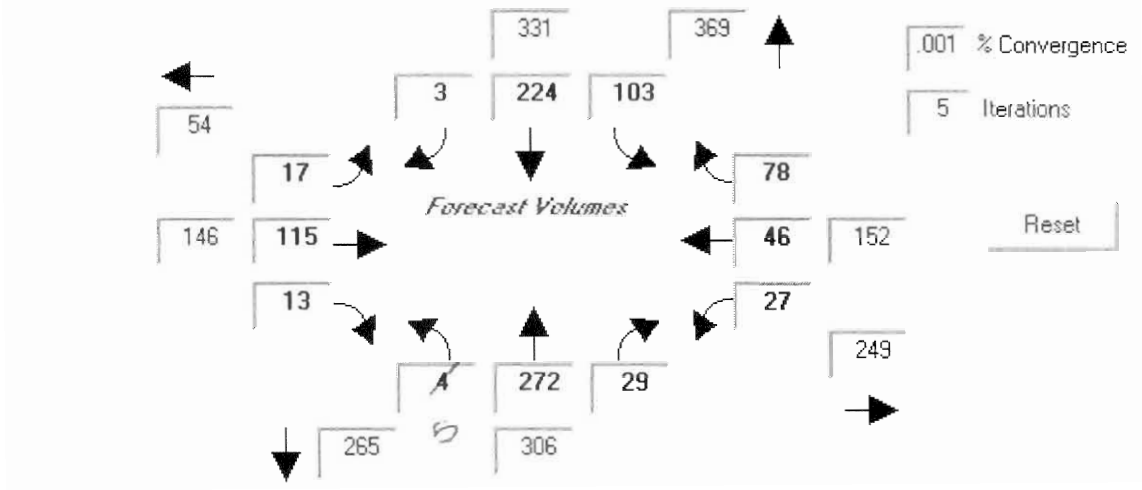

Node 6
66
236
N
W
E
S
23-Jan-12
Node 6
271
Node 6
138
Node 6
Node 6
Count data
Turn %-ages
24 of 24
2017 PM Peak Central and SR 99 SB Off-Ramp

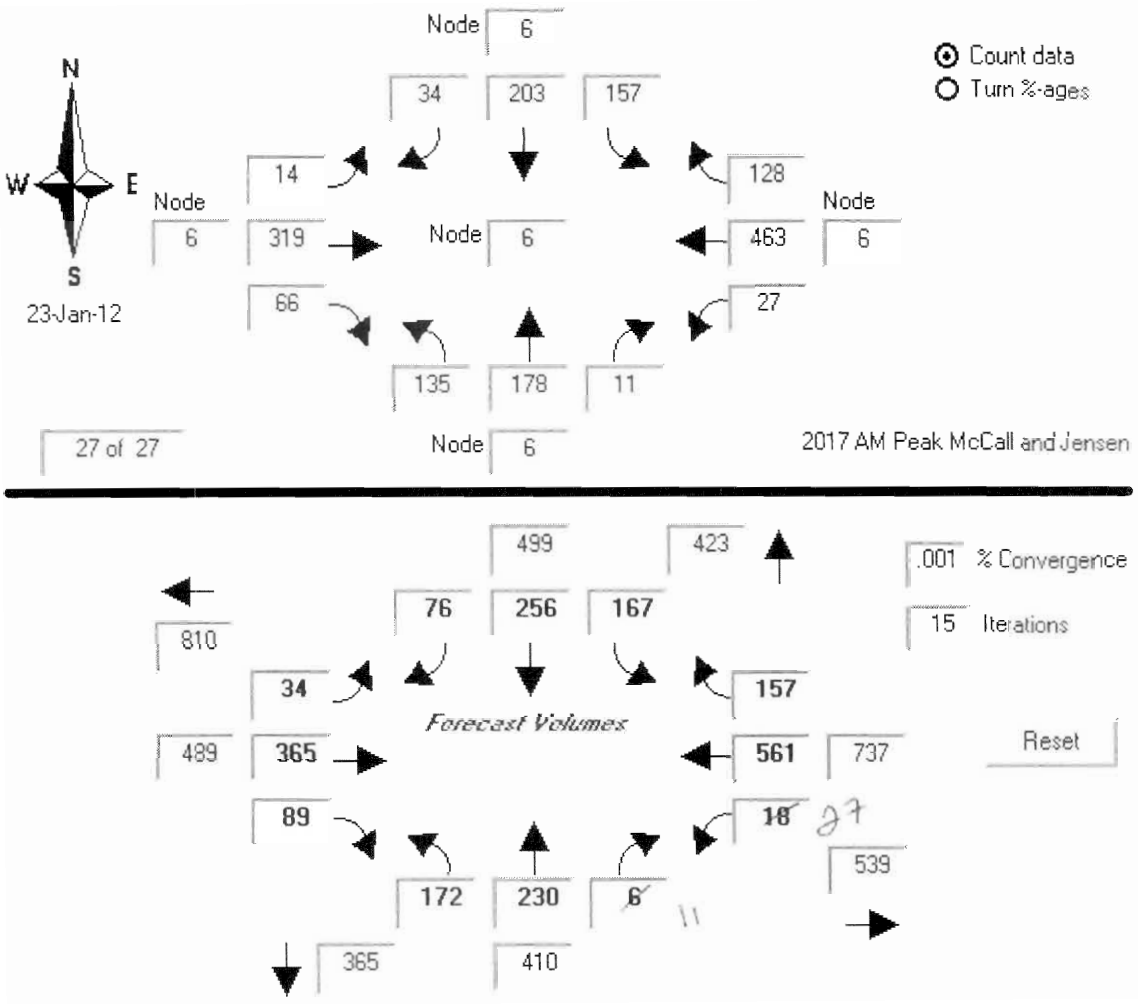

302
0
66
0
236
223
0
0
Forecast Volumes
302
302
157
157
0
0
538
0
0
0
0
0
.001 % Convergence
2 Iterations
Reset


Node 6
15 207 59
9 77
Node 6 53 Node 6 112 Node 6
5 24
13 112 16
Node 6
N
W E
S
23-Jan-12
Count data
Turn %-ages
25 of 25
2017 AM Peak McCall and North

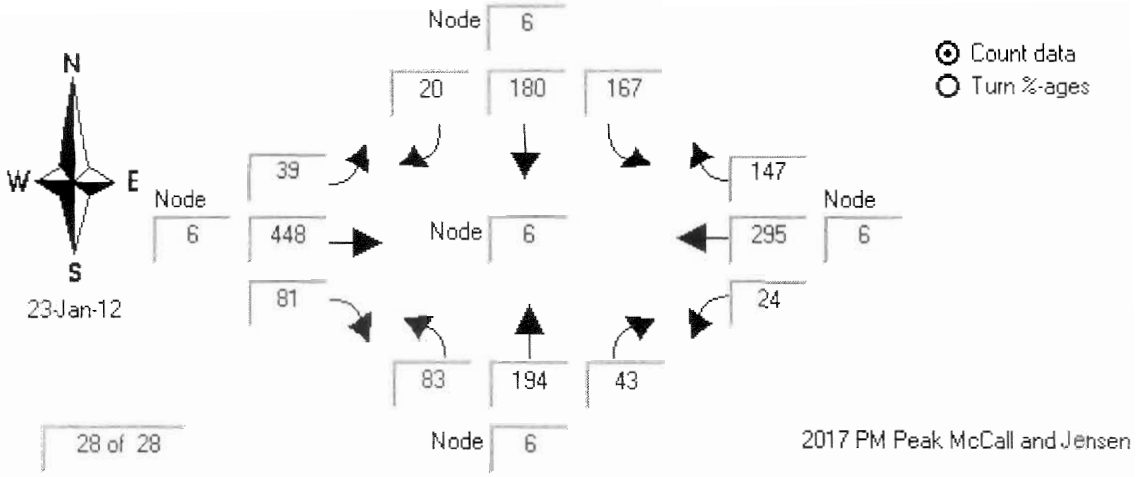

348 283
15 253 78
143
9 110
Forecast Volumes
69 54 114 254
29
155
13 162 21
288 197
.001 % Convergence
5 Iterations
Reset

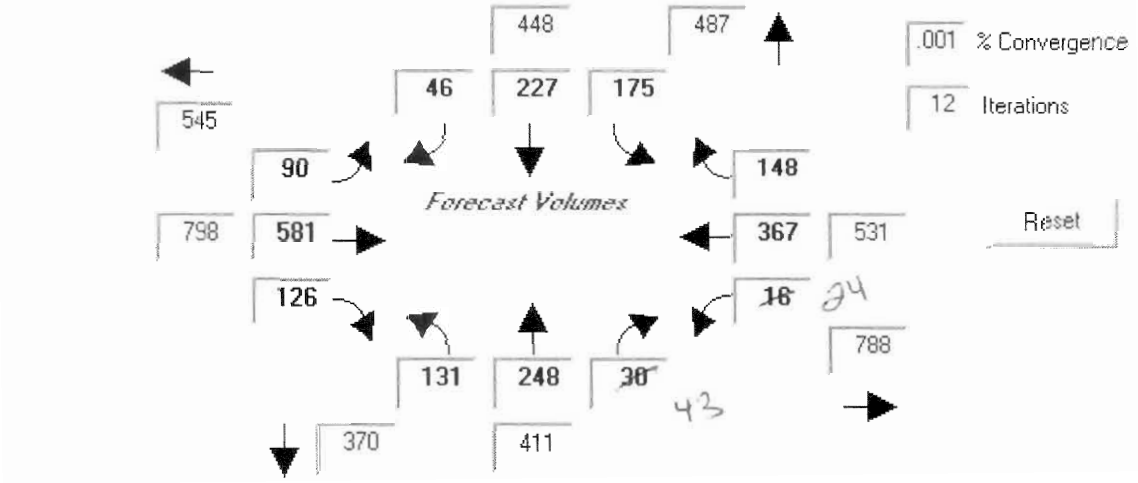

Node 6
3
170
75
16
53
Node 6
107
Node 6
42
Node 6
13
20
5
210
24
Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
26 of 26
2017 PM Peak McCall and North

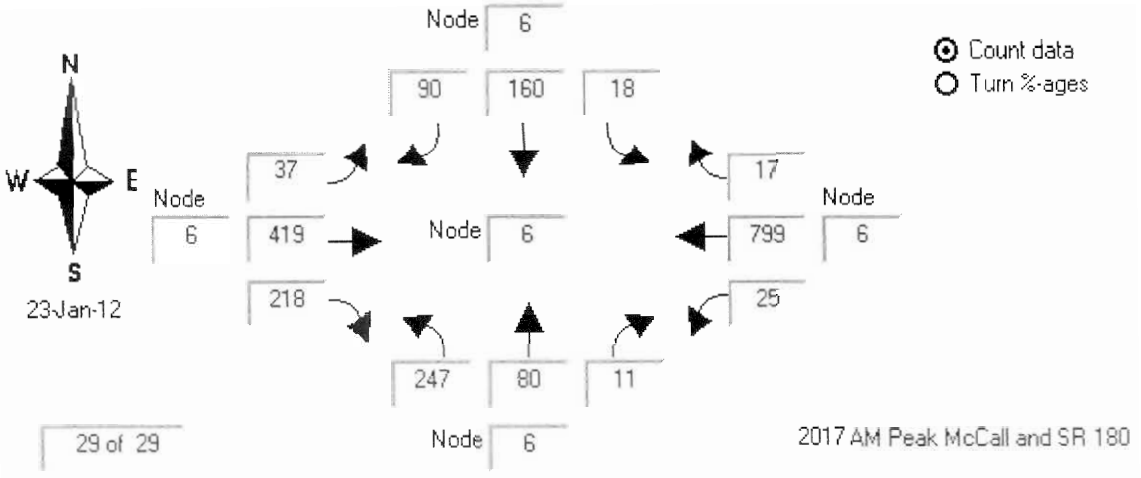

331
369
3
224
103
54
17
78
Forecast Volumes
146
115
46
152
13
27
249
A
272
29
265
306
.001 % Convergence
5 Iterations
Reset

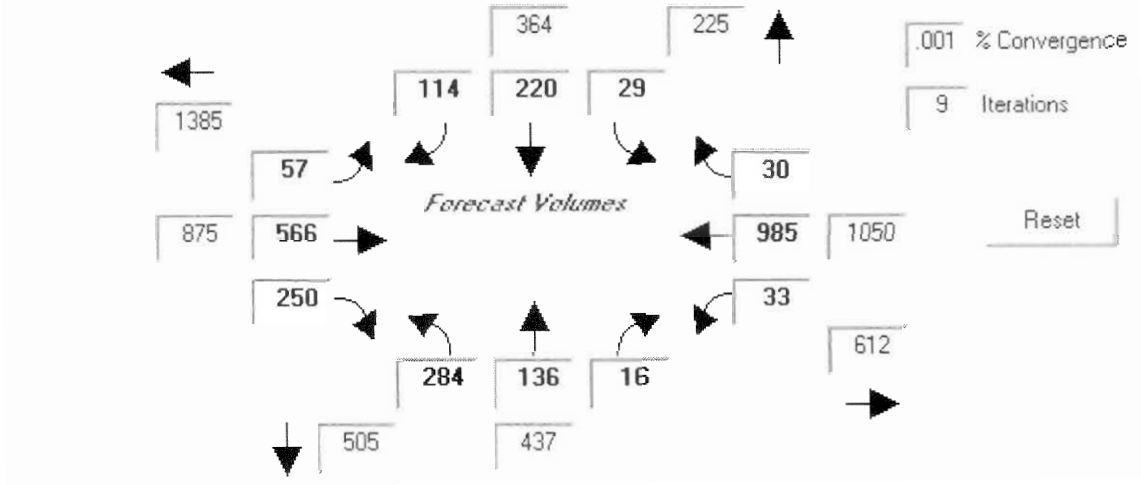

Node 6
34
203
157
14
128
Node 6
319
Node 6
463
Node 6
66
27
135
178
11
N
W
E
S
23-Jan-12
Count data
Turn %-ages
27 of 27
Node 6
2017 AM Peak McCall and Jensen

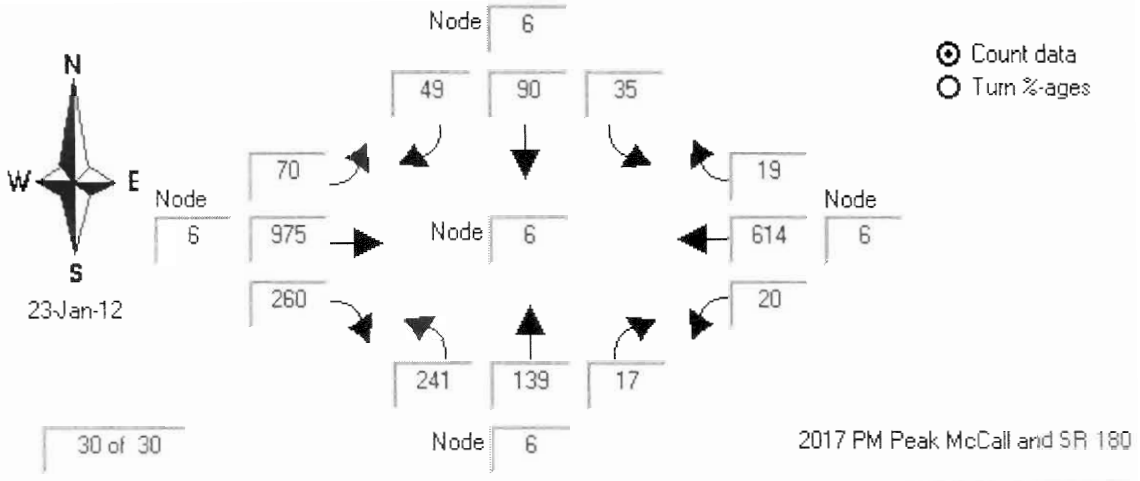
499
423
76
256
167
810
34
157
Forecast Volumes
489
365
561
737
89
18
27
539
172
230
6
365
410
.001 % Convergence
15 Iterations
Reset

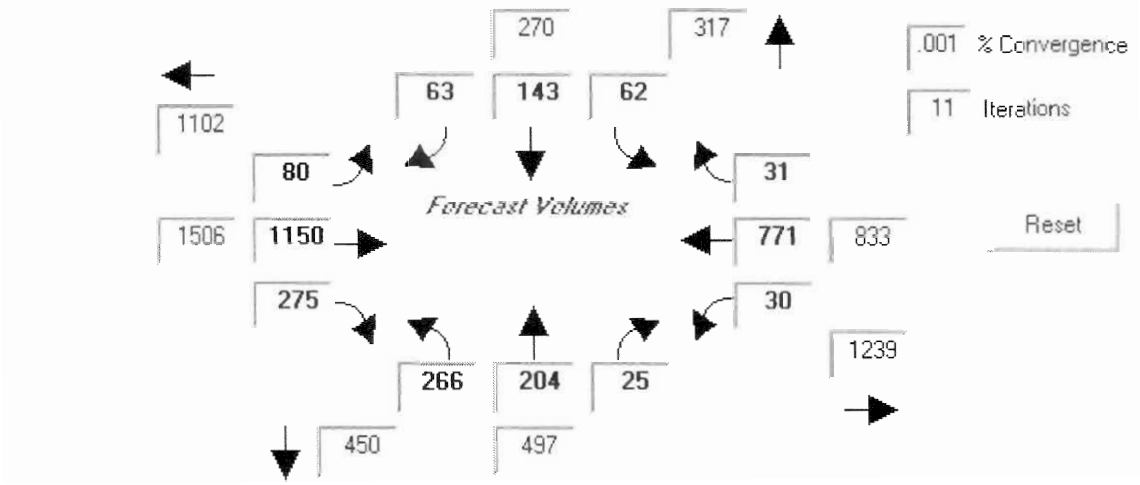

Node 6
N
W
E
S
23-Jan-12
20
180
167
39
147
Node 6
448
Node 6
295
Node 6
81
24
83
194
43
Count data
Turn %-ages
28 of 28
Node 6
2017 PM Peak McCall and Jensen

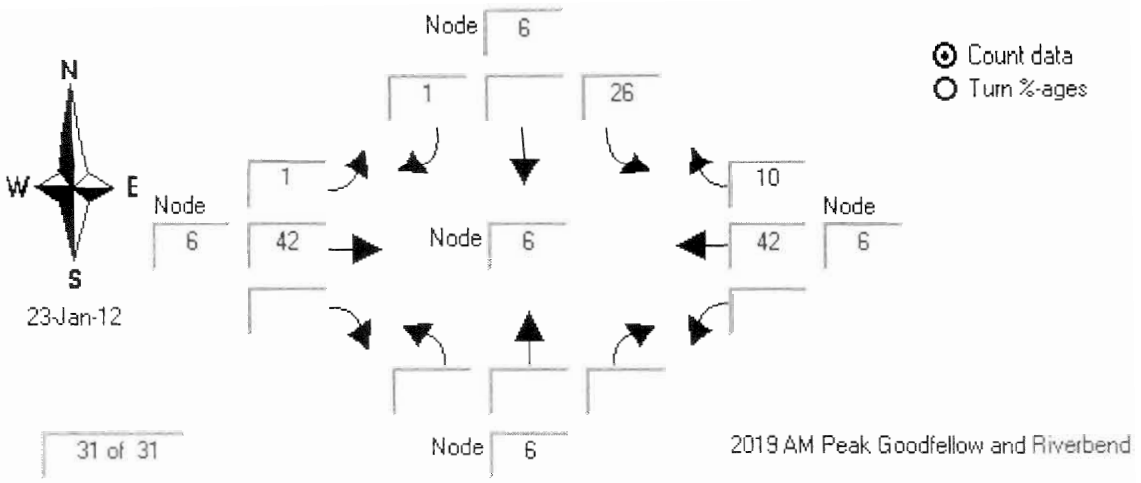

448
487
.001 % Convergence
46
227
175
545
12 Iterations
90
148
Forecast Volumes
798
581
367
531
Reset
126
16
94
788
131
248
30
43
370
411

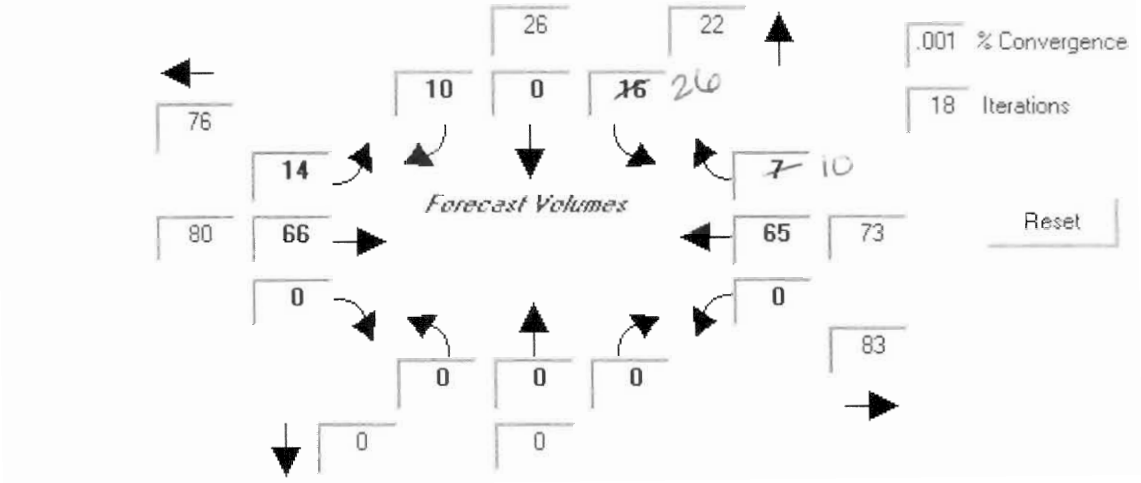

Node 6
Count data
Turn %-ages
N
W
E
S
23-Jan-12
90
160
18
37
17
Node 6
419
Node 6
799
Node 6
218
25
247
80
11
29 of 29
Node 6
2017 AM Peak McCall and SR 180

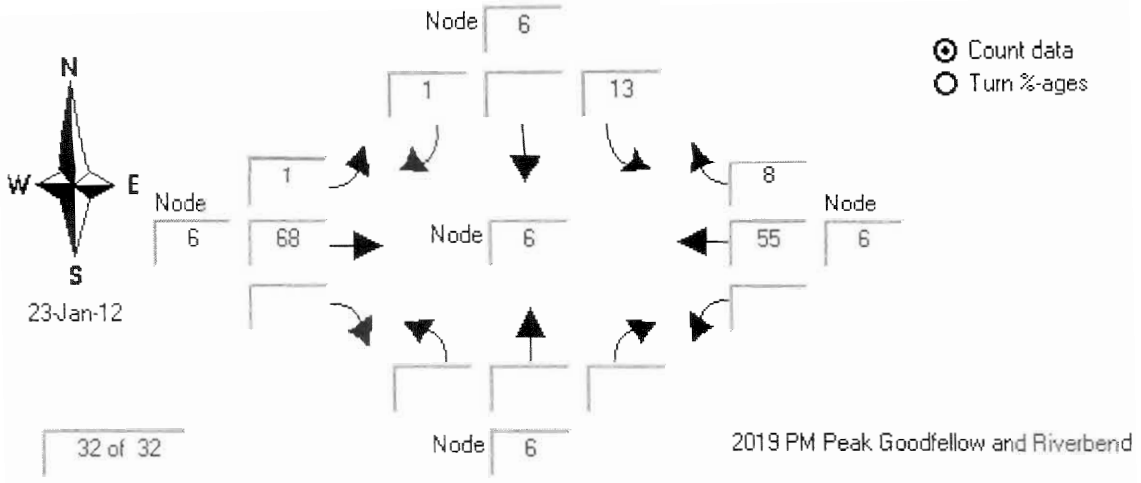

364
225
.001 % Convergence
1385
114
220
29
9 Iterations
57
30
Forecast Volumes
875
566
985
1050
Reset
250
33
612
284
136
16
505
437

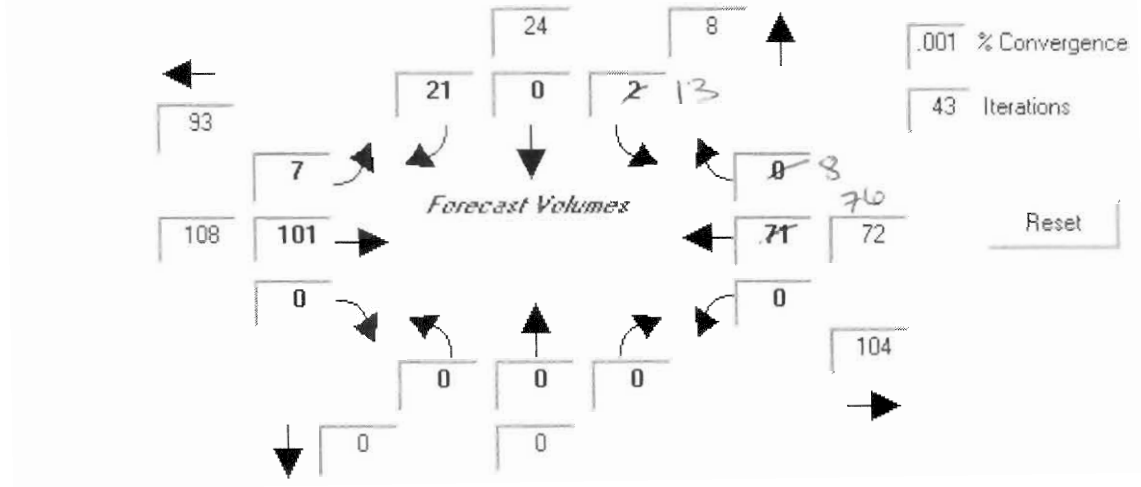

N
W
E
S
23-Jan-12
Node 6
49
90
35
70
19
Node 6
975
Node 6
614
Node 6
260
20
241
139
17
Node 6
Count data
Turn %-ages
30 of 30
2017 PM Peak McCall and SR 180

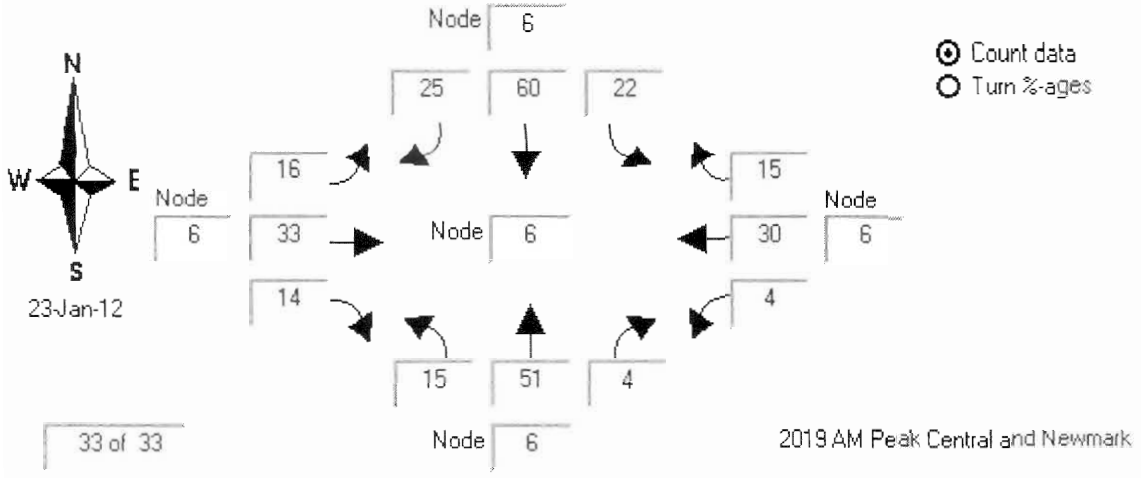

270
317
.001 % Convergence
63
143
62
1102
11 Iterations
80
31
Forecast Volumes
1506
1150
771
833
Reset
275
30
1239
266
204
25
450
497

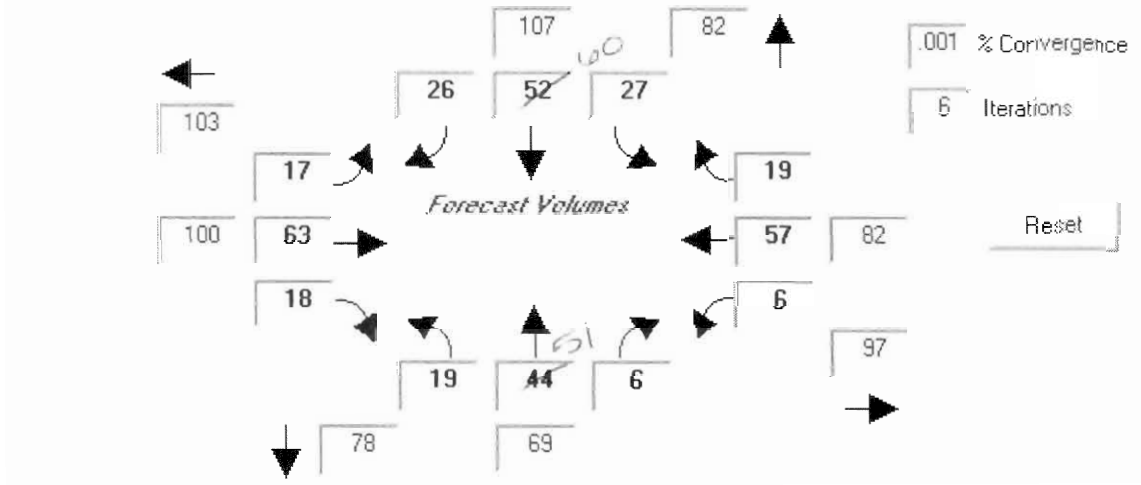

Node 6
N
W E
S
23-Jan-12
Count data
Turn %-ages
1
26
1
10
Node 6
42
Node 6
42
Node 6
Node 6
31 of 31
2019 AM Peak Goodfellow and Riverbend

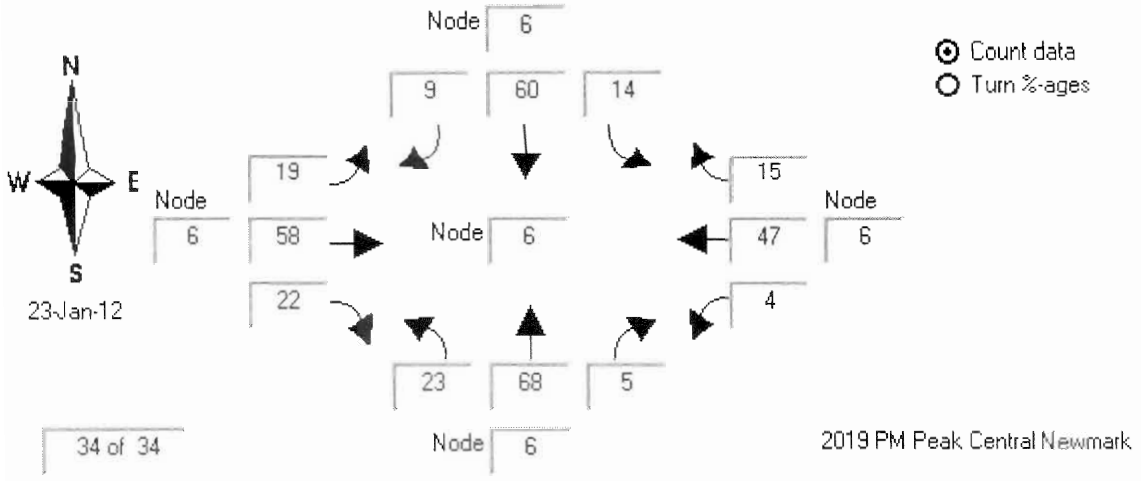

26
22
.001 % Convergence
10
0
16
26
76
18 Iterations
14
7
10
Forecast Volumes
80
66
65
73
Reset
0
0
83
0
0
0
0
0

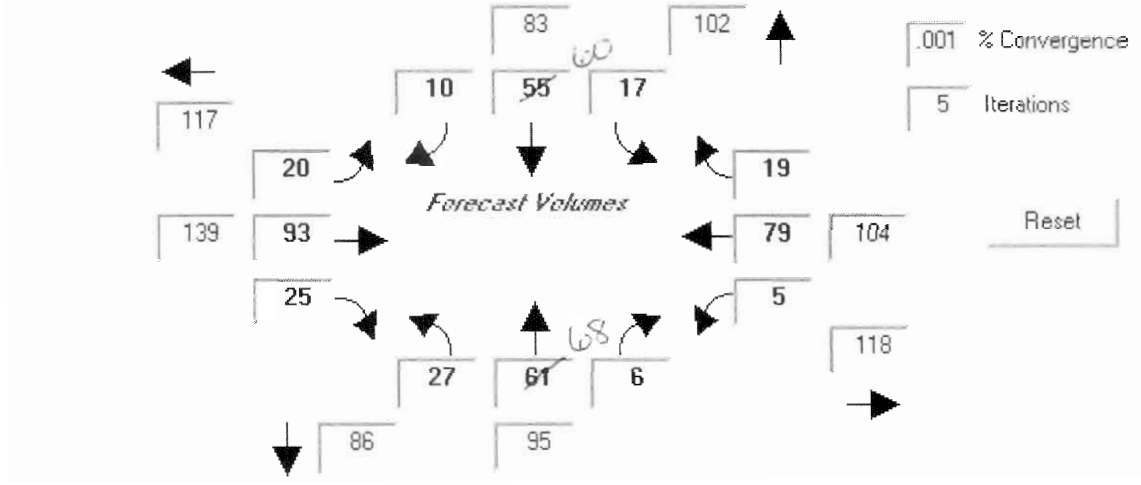

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
1
13
1
8
Node 6
68
Node 6
55
Node 6
Node 6
32 of 32
2019 PM Peak Goodfellow and Riverbend

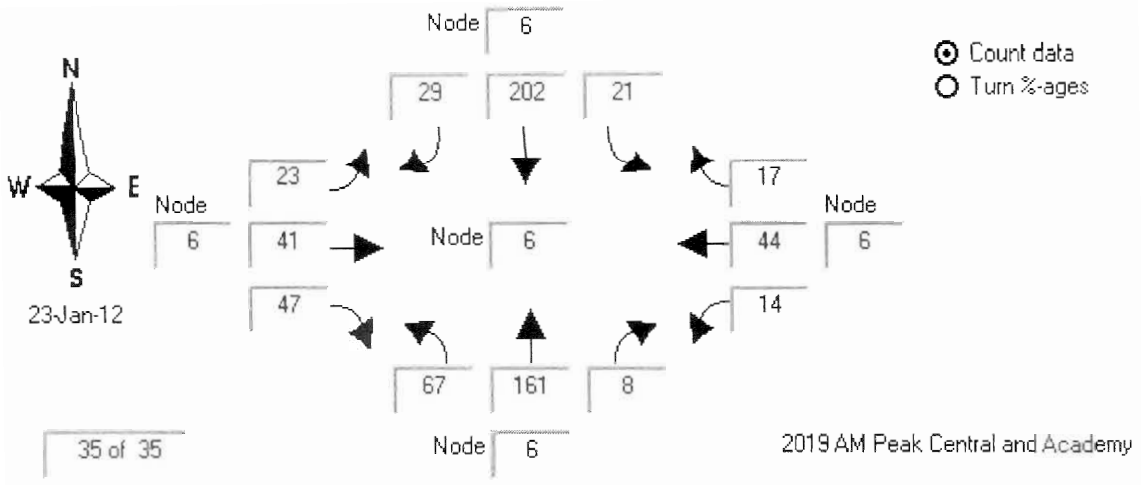

24
8
.001 % Convergence
21
0
2
13
93
43 Iterations
7
8
Forecast Volumes
76
108
101
71
72
Reset
0
0
104
0
0
0
0
0
0

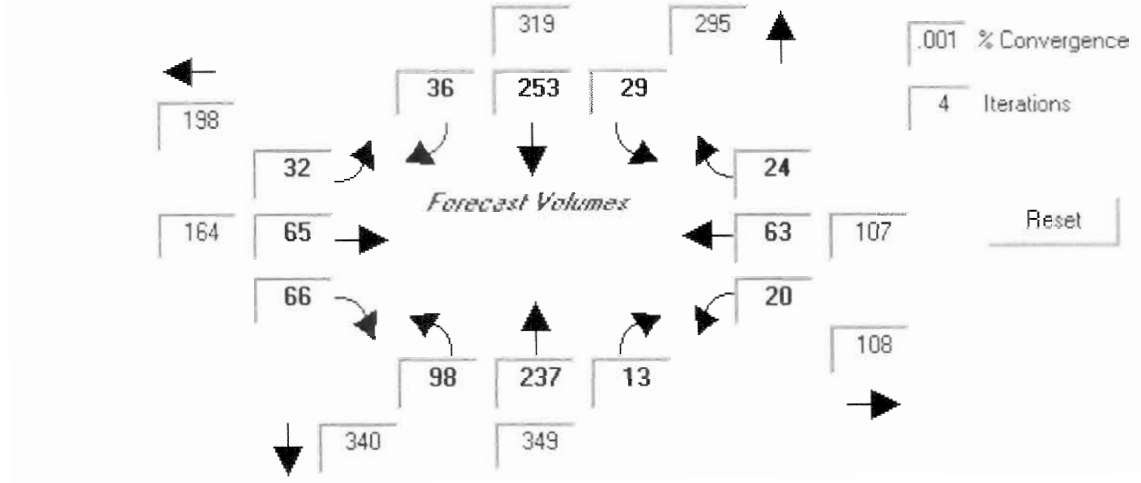

Node 6
N
W E
S
23-Jan-12
Count data
Turn %-ages
25 60 22
16 15
Node 6
33
Node 6
Node 6
30
14 4
15 51 4
33 of 33
Node 6
2019 AM Peak Central and Newmark

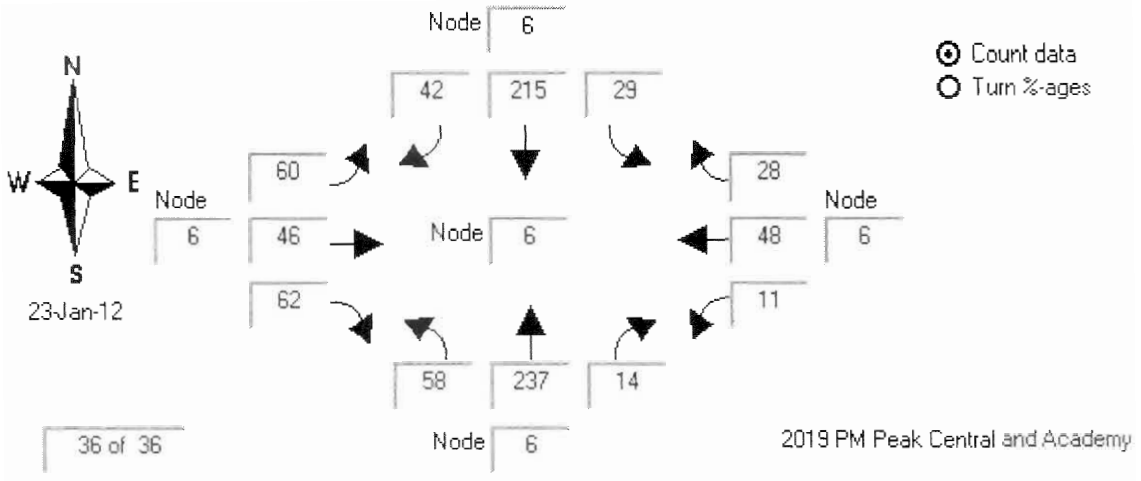

107
82
103
26 52 27
17 19
Forecast Volumes
100 63
57 82
18 6
19 44 6
97
78 69
.001 % Convergence
6 Iterations
Reset

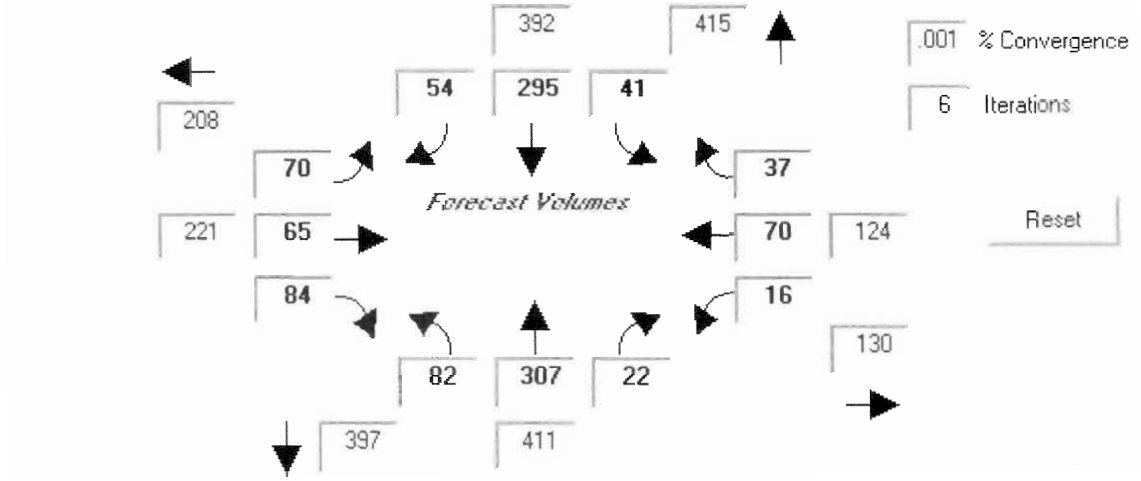

N
W
E
S
23-Jan-12
Node 6
9
60
14
19
15
Node 6
58
Node 6
47
Node 6
22
4
23
68
5
Node 6
Count data
Turn %-ages
34 of 34
2019 PM Peak Central Newmark

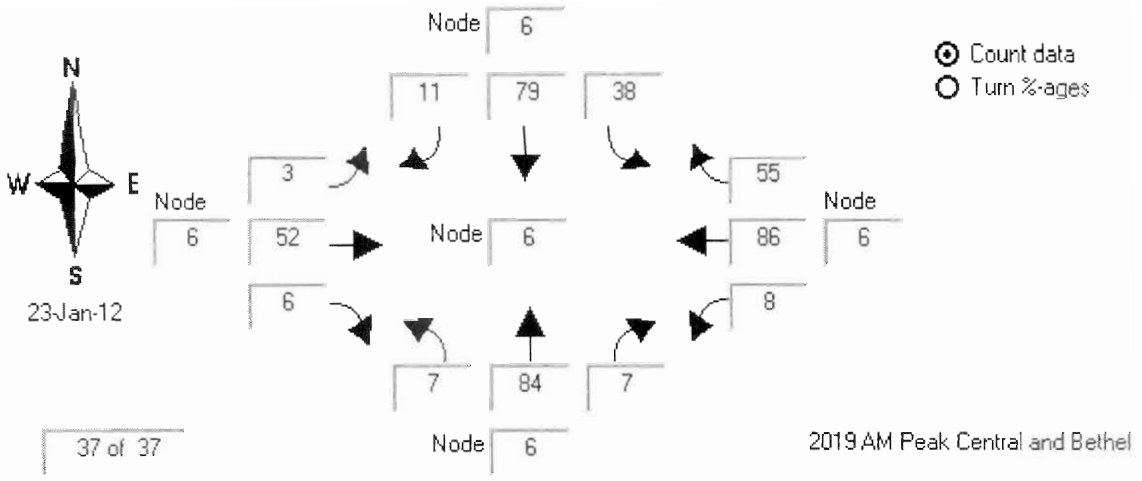

83
102
10
55
17
117
20
19
Forecast Volumes
139
93
79
104
25
5
27
61
6
118
86
95
.001 % Convergence
5 Iterations
Reset

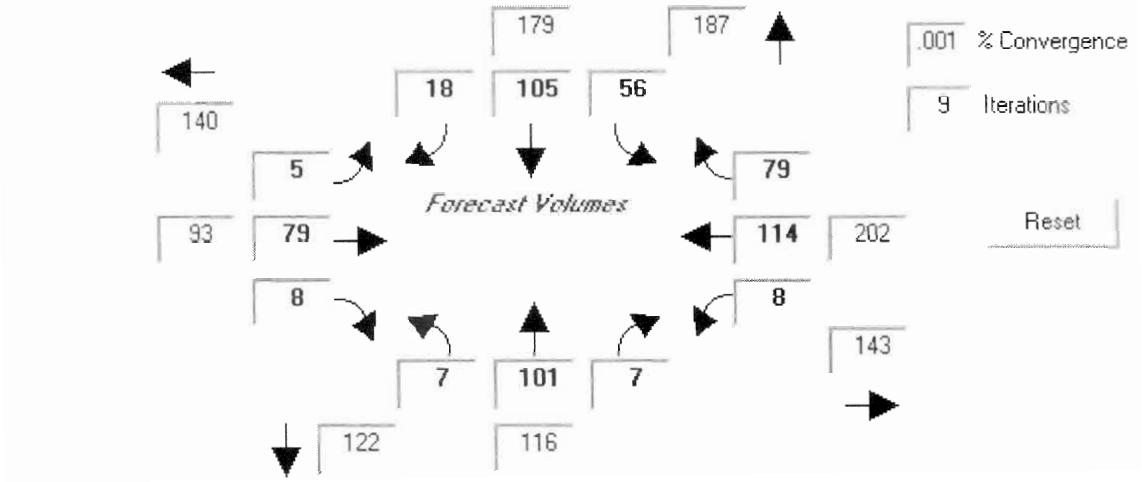

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
29
202
21
23
17
Node 6
Node 6
Node 6
41
44
47
14
67
161
8
35 of 35
Node 6
2019 AM Peak Central and Academy

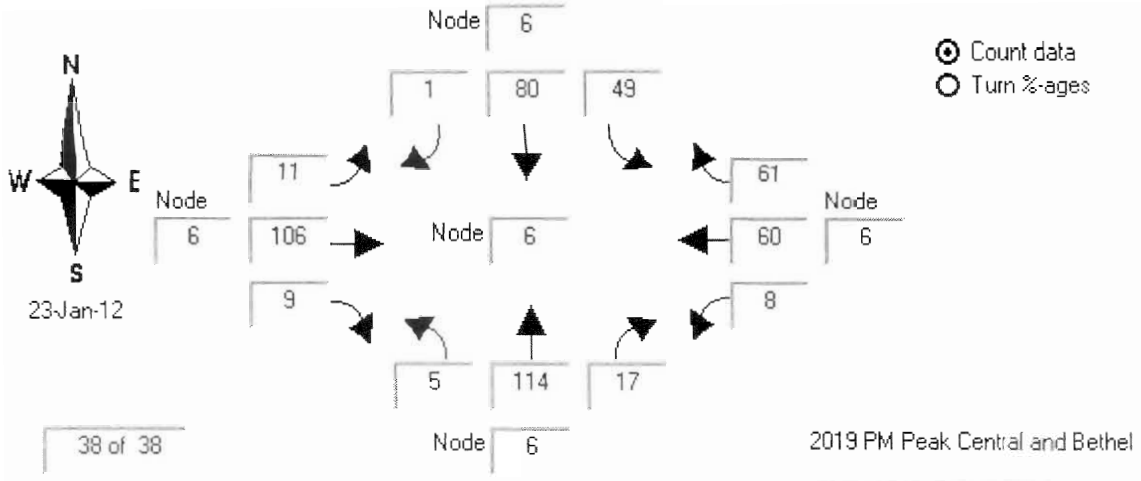

319
295
.001 % Convergence
36
253
29
4 Iterations
198
32
24
Forecast Volumes
164
65
63
107
Reset
66
20
108
98
237
13
340
349

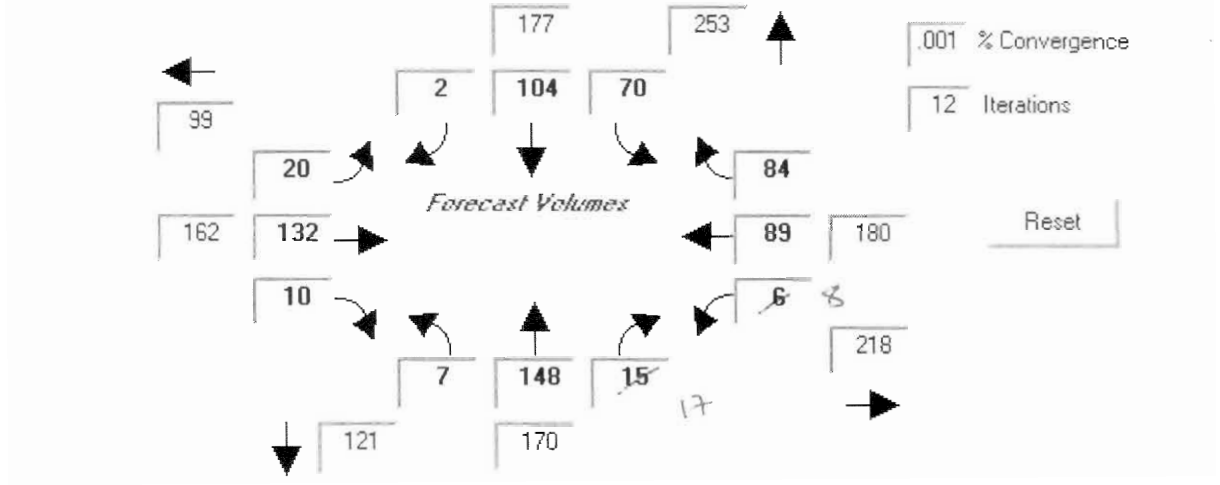

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
42
215
29
60
28
Node 6
46
Node 6
48
Node 6
62
11
58
237
14
36 of 36
Node 6
2019 PM Peak Central and Academy

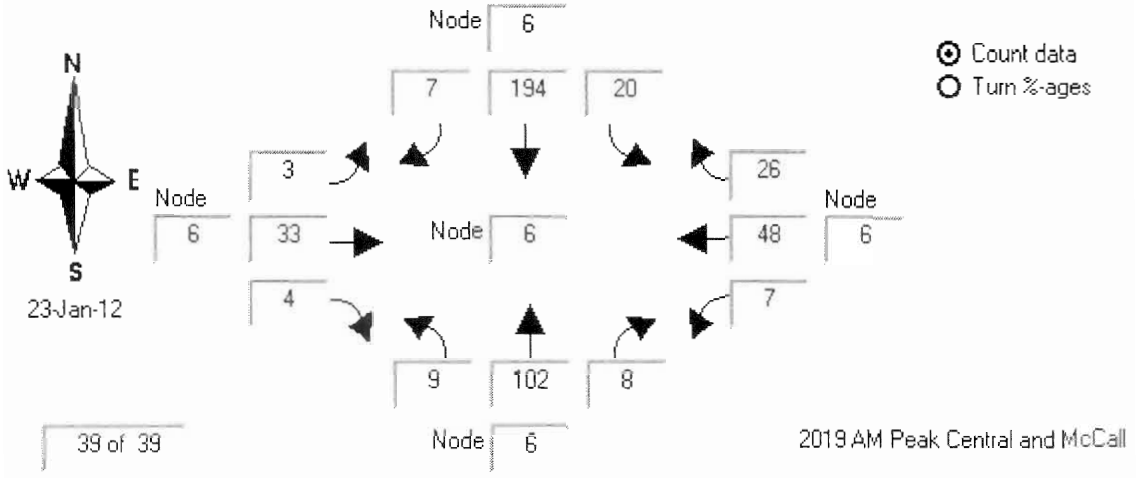

392
415
.001 % Convergence
54
295
41
208
6 Iterations
70
37
Forecast Volumes
221
65
70
124
Reset
84
16
130
82
307
22
397
411

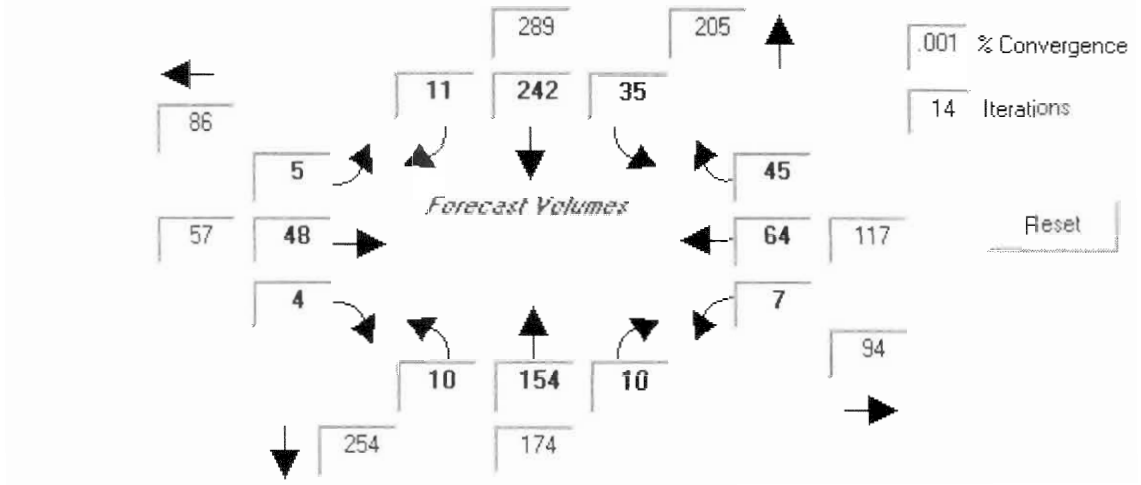

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
11
79
38
3
55
Node 6
52
Node 6
86
Node 6
6
8
7
84
7
37 of 37
Node 6
2019 AM Peak Central and Bethel

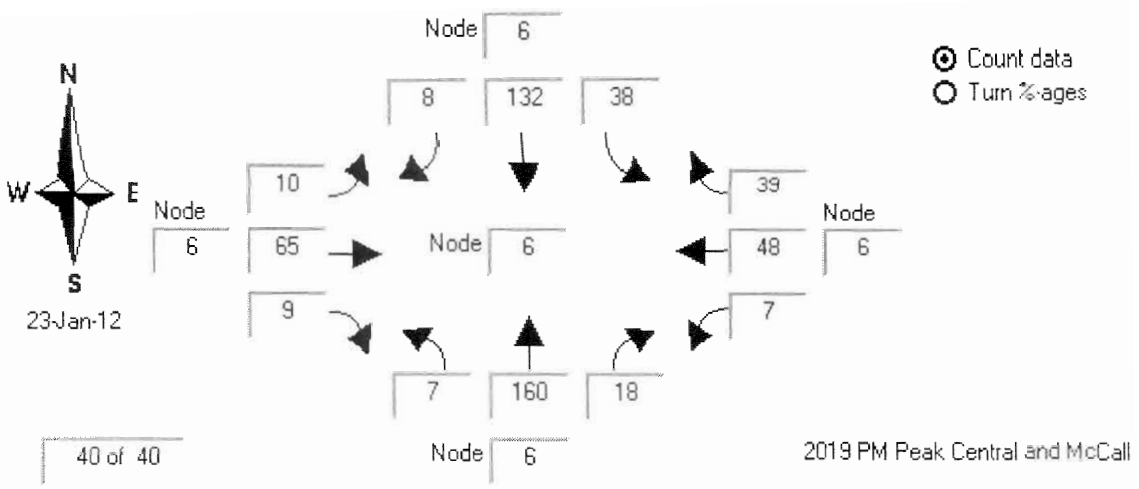

179
187
.001 % Convergence
140
18
105
56
9 Iterations
5
79
Forecast Volumes
93
79
114
202
Reset
8
8
143
7
101
7
122
116

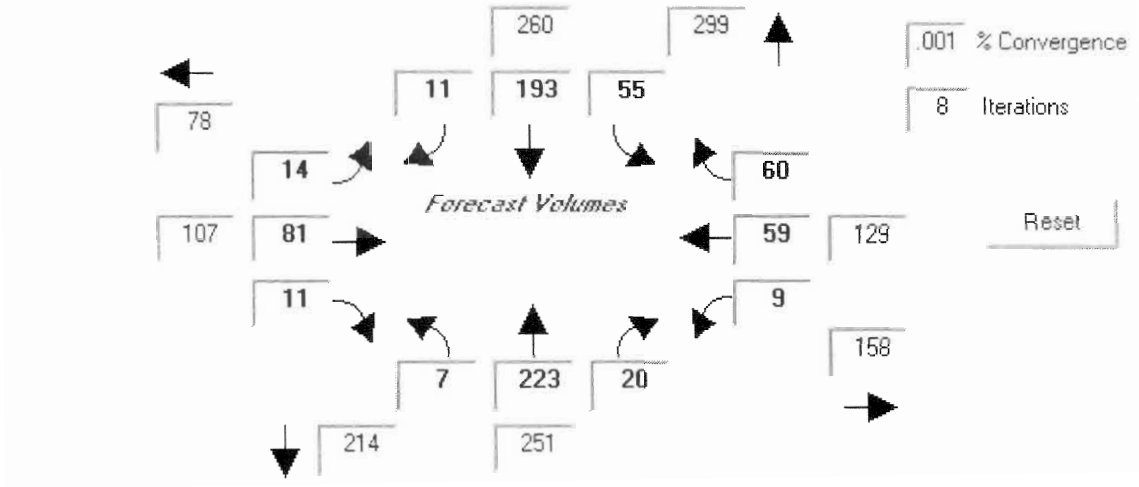

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
1
80
49
11
61
Node 6
106
Node 6
60
Node 6
9
8
5
114
17
38 of 38
Node 6
2019 PM Peak Central and Bethel

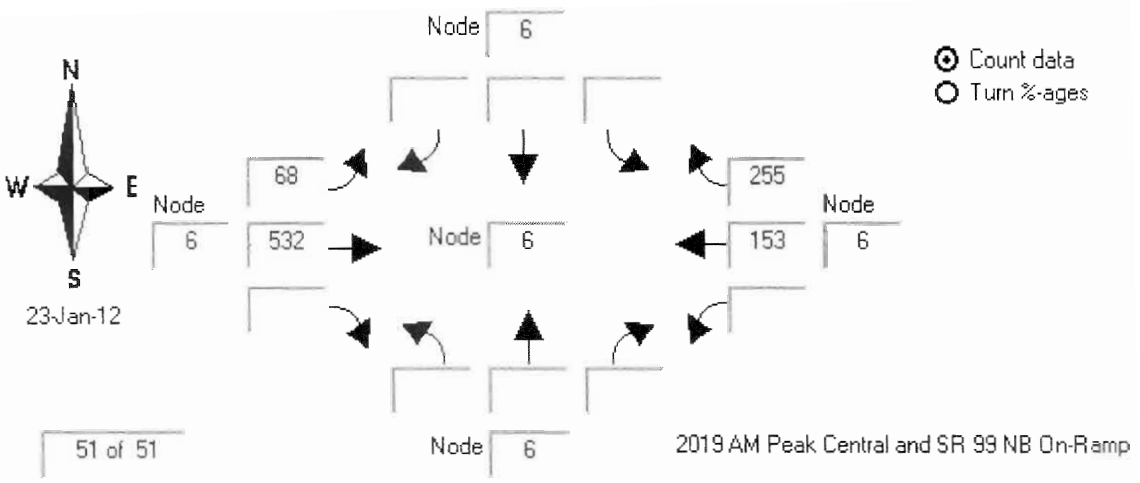

177
253
.001 % Convergence
99
2
104
70
12 Iterations
20
84
Forecast Volumes
162
132
89
180
Reset
10
6
218
7
148
15
121
170

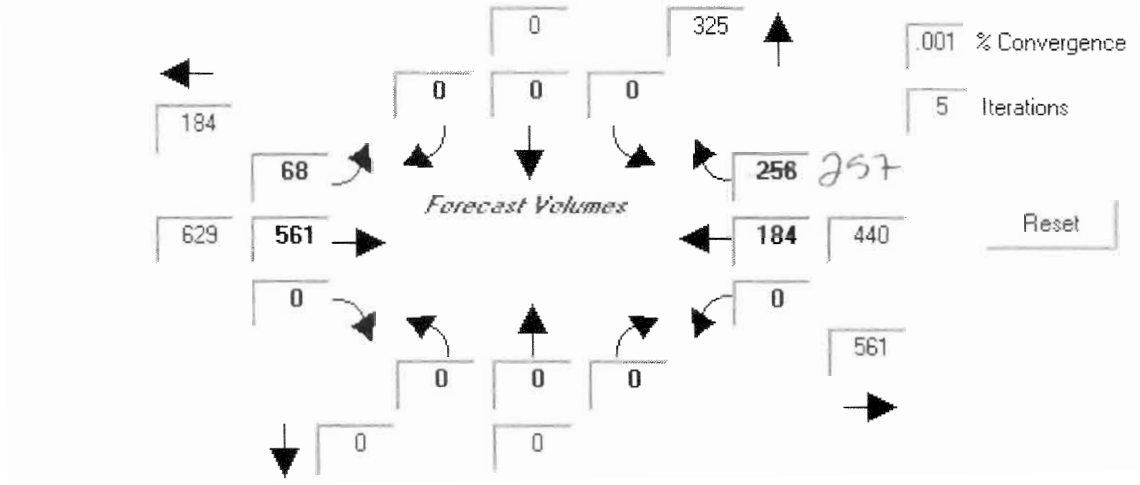

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
7
194
20
3
26
Node 6
33
Node 6
48
Node 6
4
7
9
102
8
39 of 39
Node 6
2019 AM Peak Central and McCall

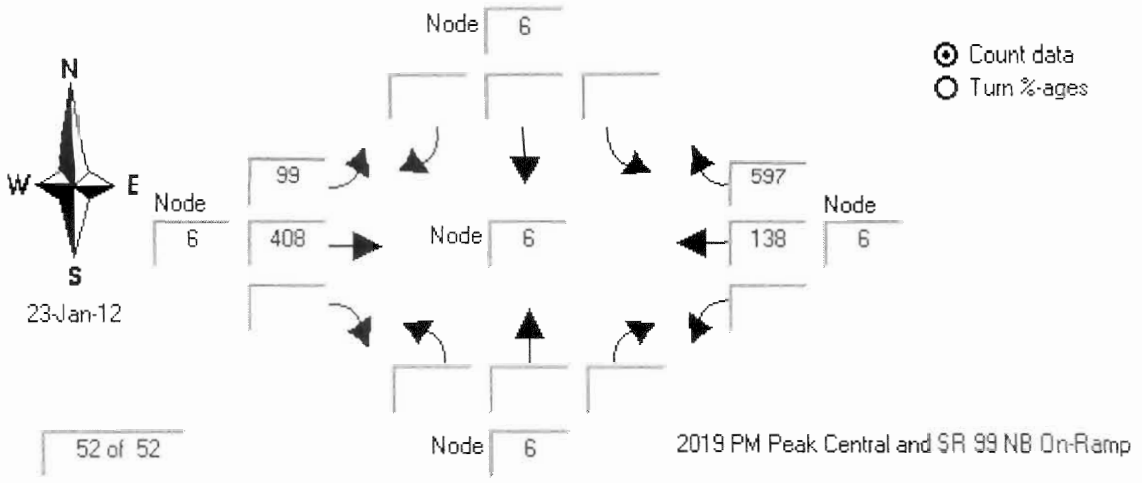

289
205
.001 % Convergence
14 Iterations
86
11
242
35
5
45
Forecast Volumes
57
48
64
117
Reset
4
7
94
10
154
10
254
174

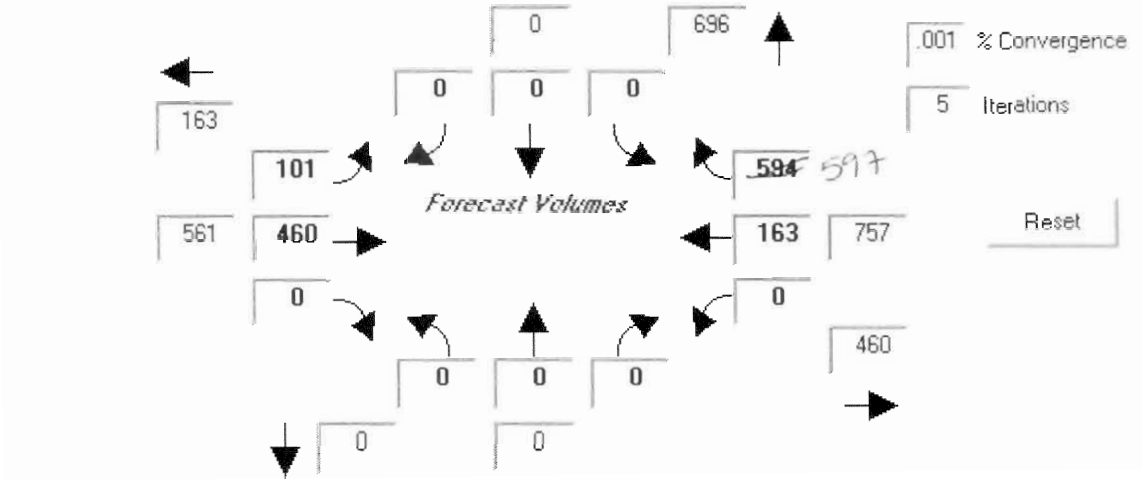

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %ages
8
132
38
10
39
Node 6
65
Node 6
48
Node 6
9
7
7
160
18
40 of 40
Node 6
2019 PM Peak Central and McCall

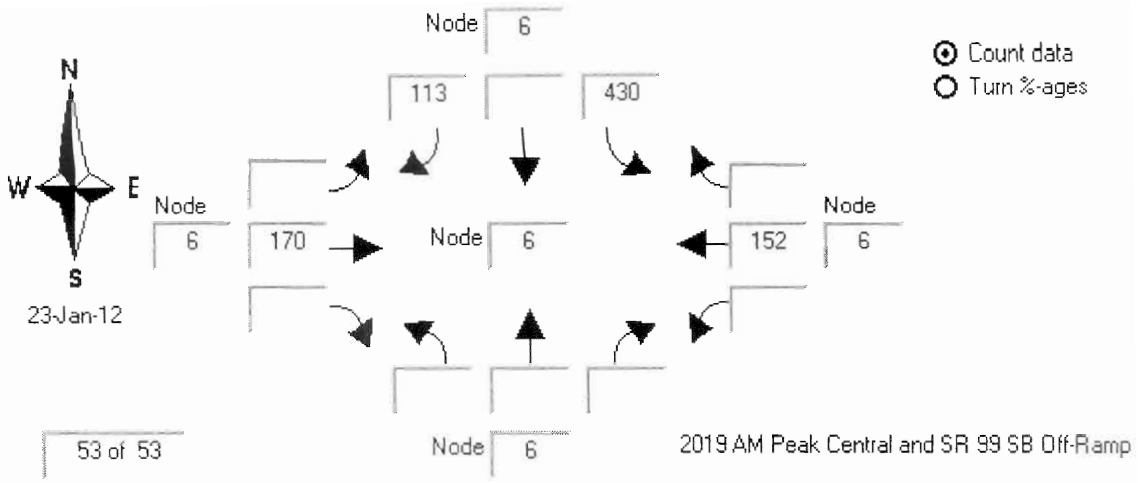

260
299
.001 % Convergence
11
193
55
78
8 Iterations
14
60
Forecast Volumes
107
81
59
129
Reset
11
9
158
7
223
20
214
251

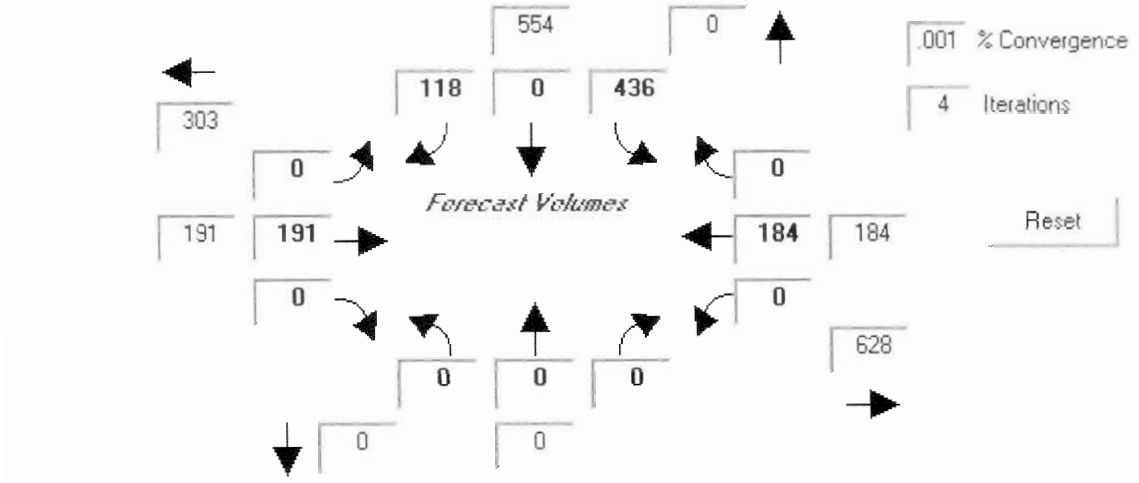

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
68
255
Node 6
532
Node 6
153
Node 6
Node 6
51 of 51
2019 AM Peak Central and SR 99 NB On-Ramp

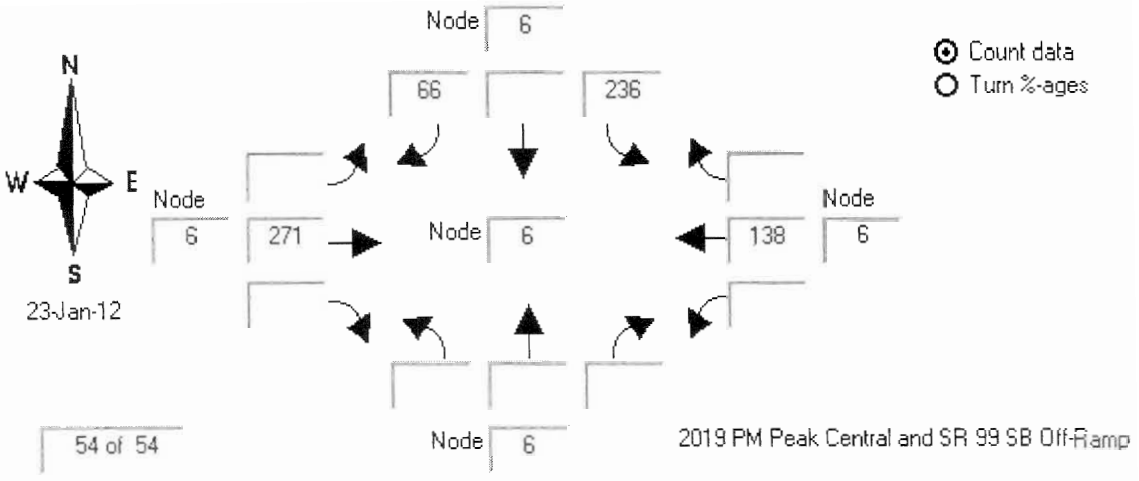

0
325
.001 % Convergence
5 Iterations
184
0 0 0
68
256
257
Forecast Volumes
629
561
184
440
Reset
0
0
561
0 0 0
0
0

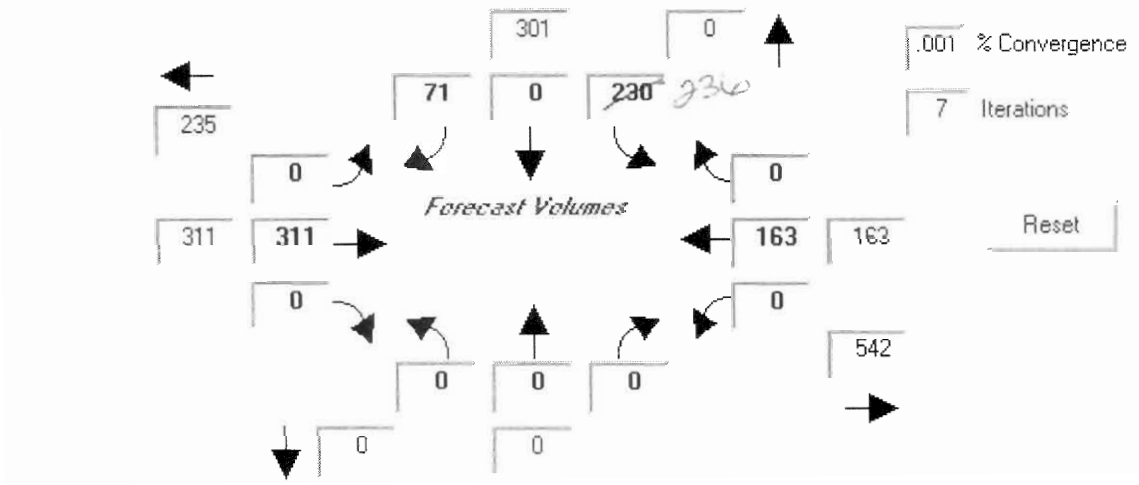

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
99
597
Node 6
408
Node 6
138
Node 6
Node 6
52 of 52
2019 PM Peak Central and SR 99 NB On-Ramp

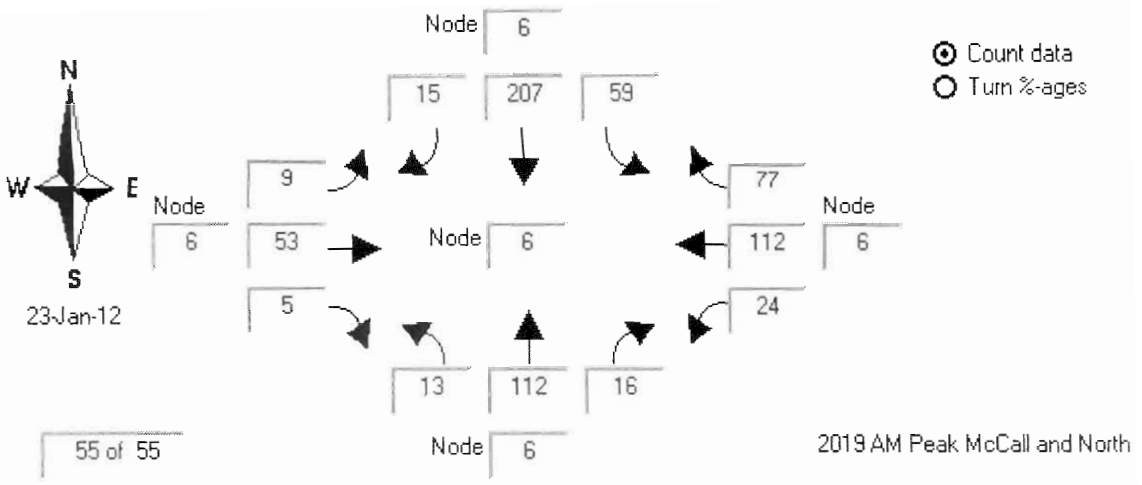

0
696
.001 % Convergence
5 Iterations
163
0 0 0
101
594 597
Forecast Volumes
561
460
163
757
Reset
0
0
460
0 0 0
0
0

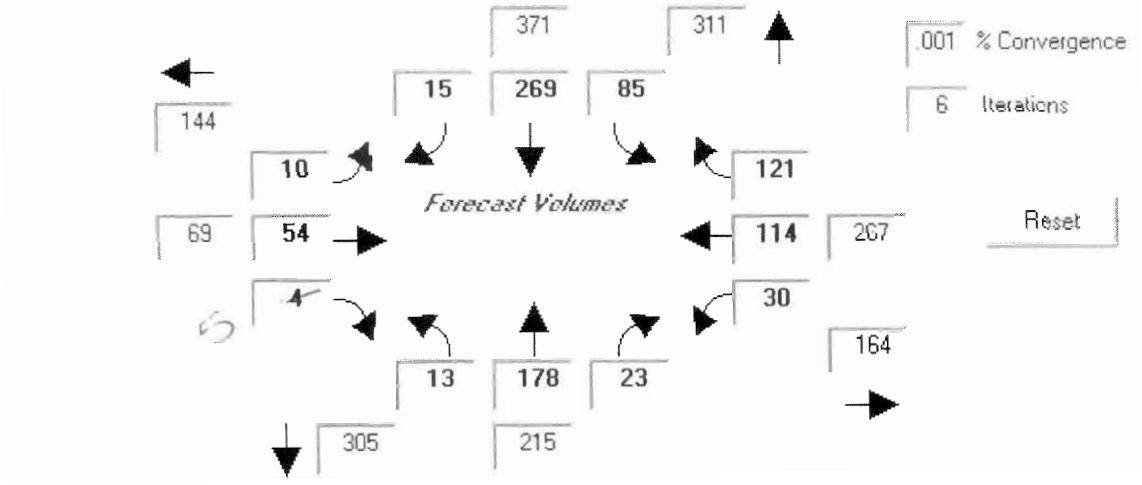

Node 6
113
430
Count data
Turn %-ages
N
W
E
S
Node 6
170
Node 6
152
Node 6
23-Jan-12
53 of 53
Node 6
2019 AM Peak Central and SR 99 SB Off-Ramp

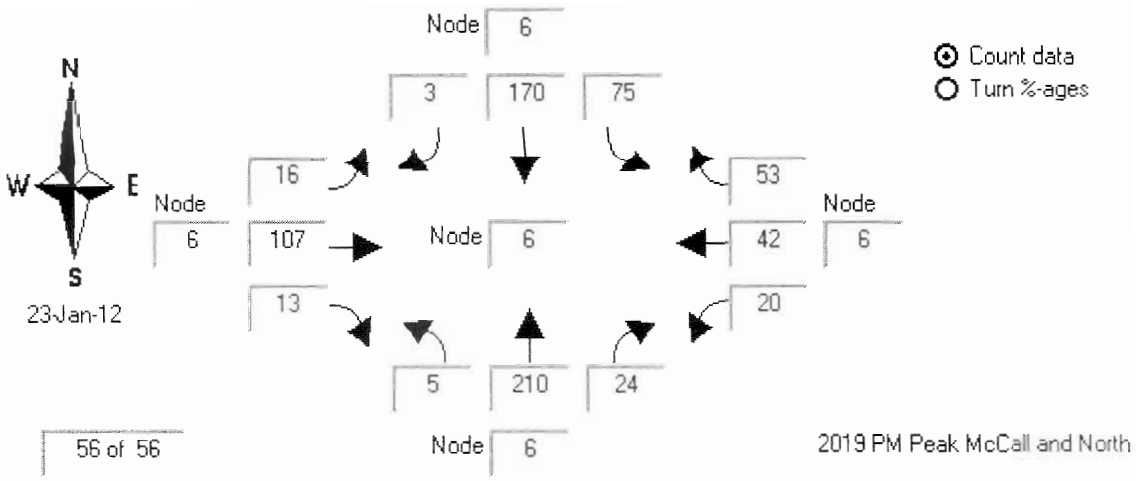

554
0
.001 % Convergence
118
0
436
303
4 Iterations
0
0
Forecast Volumes
191
191
184
184
Reset
0
0
628
0
0
0
0
0

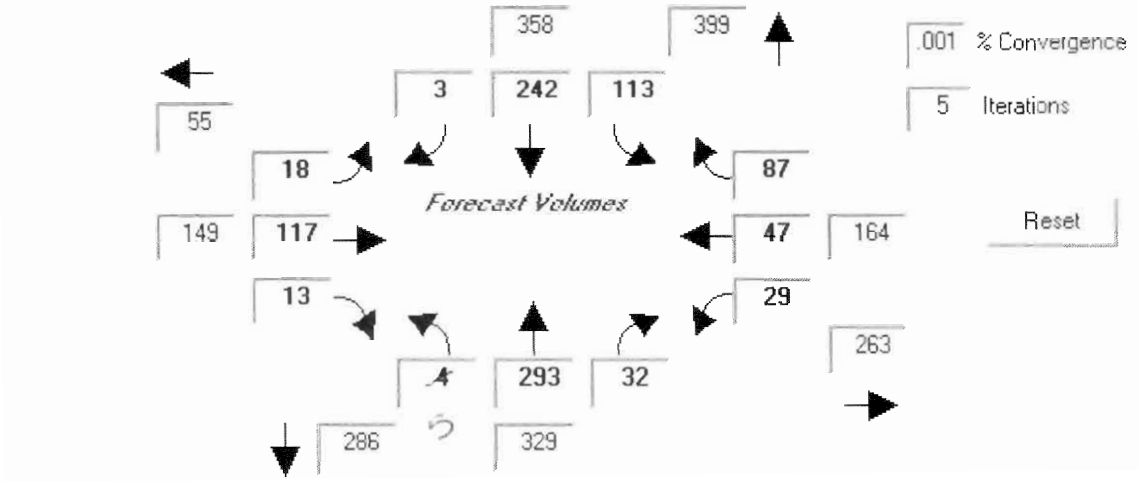

N
W
E
S
23-Jan-12
Node 6
66
236
Node 6
271
Node 6
Node 6
138
Node 6
Count data
Turn %-ages
54 of 54
Node 6
2019 PM Peak Central and SR 99 SB Off-Ramp

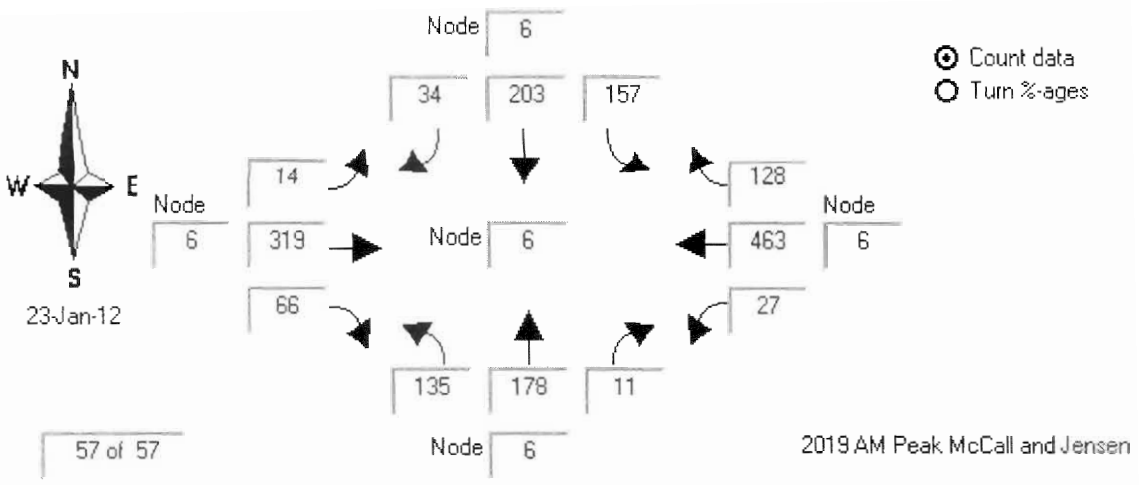

301
0
71
0
230
230
235
0
0
Forecast Volumes
311
311
163
163
0
0
0
0
0
542
0
0
.001 % Convergence
7 Iterations
Reset

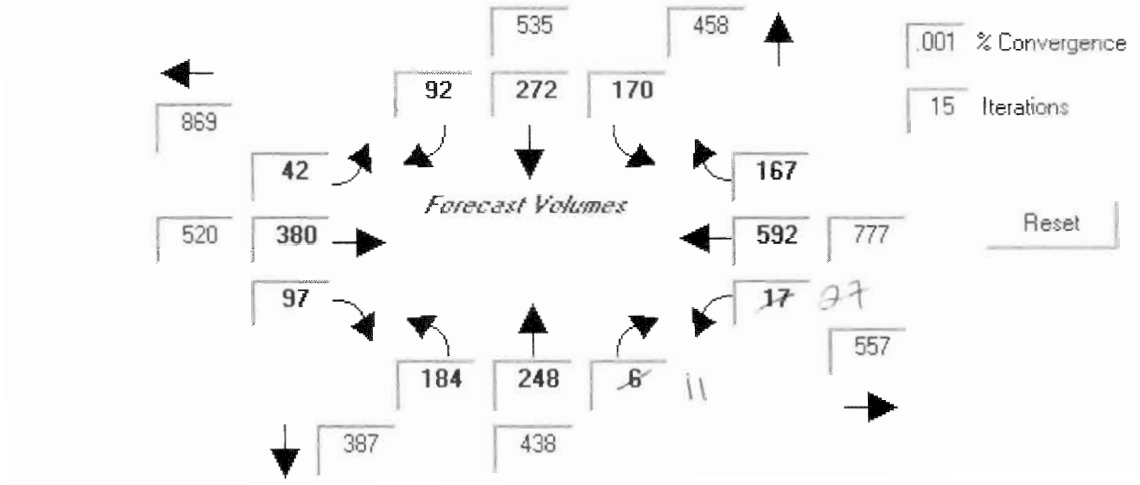

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
15
207
59
9
77
Node 6
53
Node 6
112
Node 6
5
24
13
112
16
55 of 55
Node 6
2019 AM Peak McCall and North

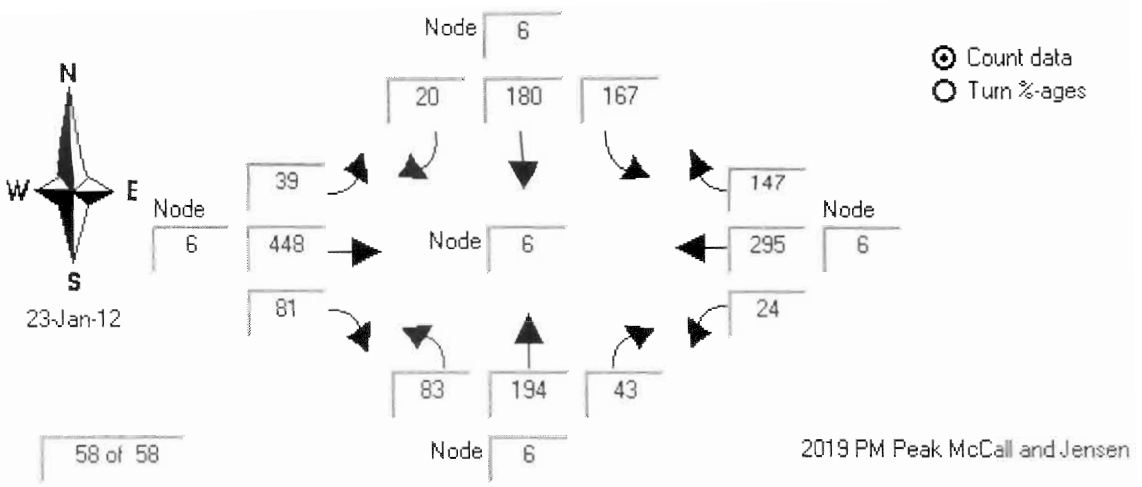

371
311
.001 % Convergence
144
15
269
85
6 Iterations
10
121
Forecast Volumes
69
54
114
267
Reset
4
30
164
13
178
23
305
215

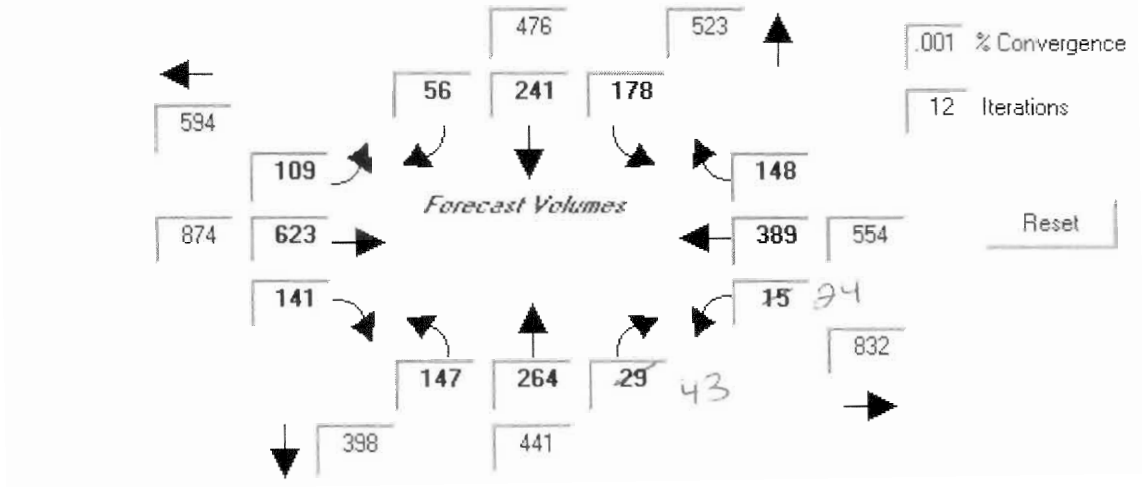

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
3
170
75
16
53
Node 6
107
Node 6
42
Node 6
13
20
5
210
24
56 of 56
Node 6
2019 PM Peak McCall and North

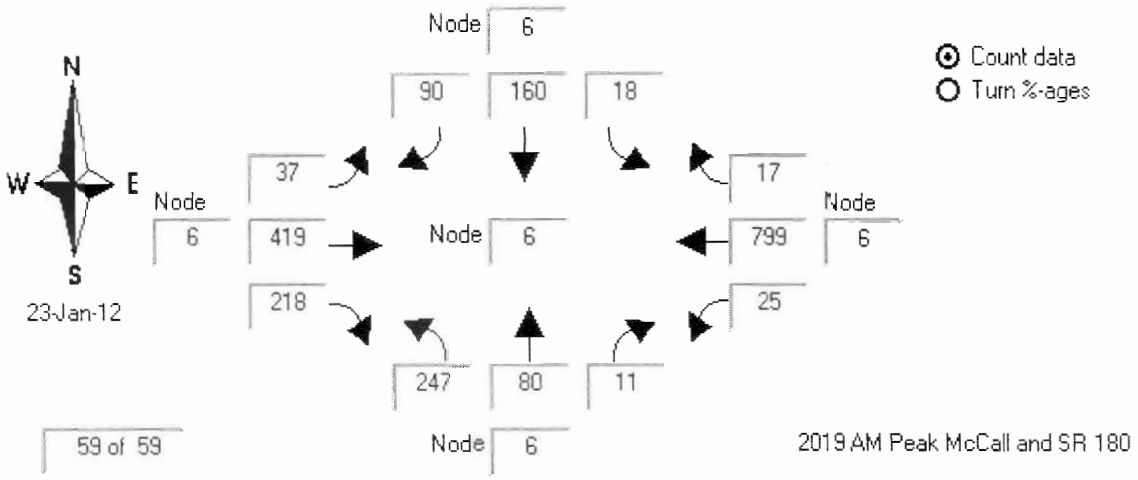

358
399
.001 % Convergence
55
3
242
113
5 Iterations
18
87
Forecast Volumes
149
117
47
164
Reset
13
29
263
293
32
286
329

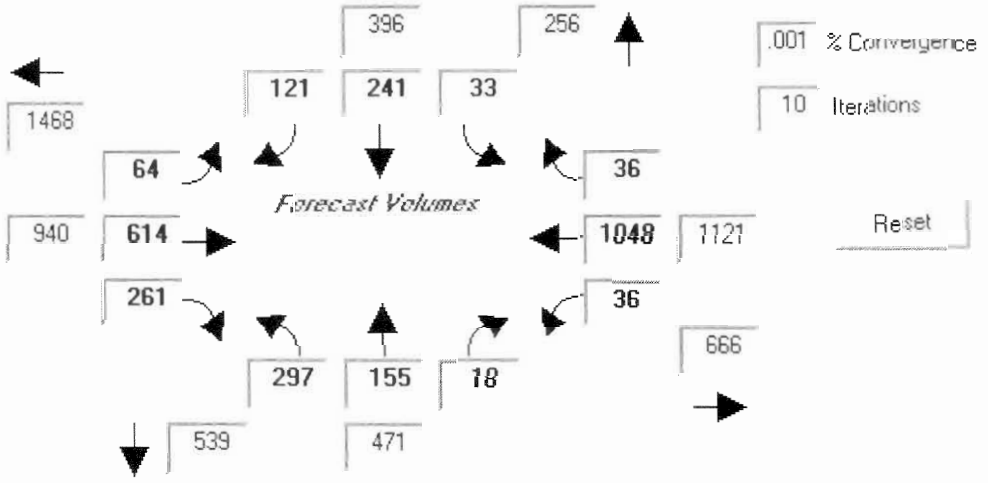

Node 6
N
W
E
S
23-Jan-12
34
203
157
14
128
Node 6
319
Node 6
463
Node 6
66
27
135
178
11
Count data
Turn %-ages
57 of 57
Node 6
2019 AM Peak McCall and Jensen

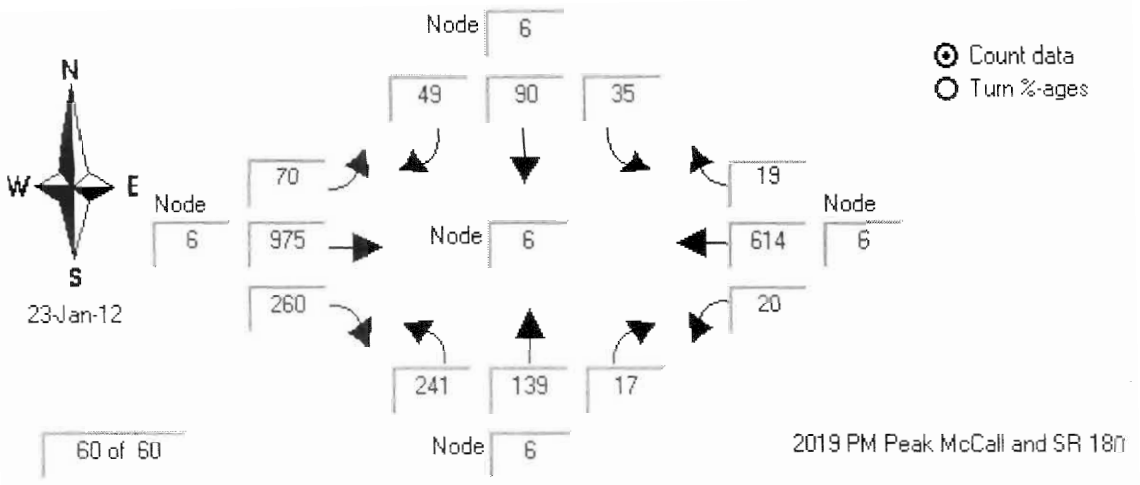

535
458
.001 % Convergence
92
272
170
869
15 Iterations
42
167
Forecast Volumes
520
380
592
777
Reset
97
17
557
184
248
6
387
438

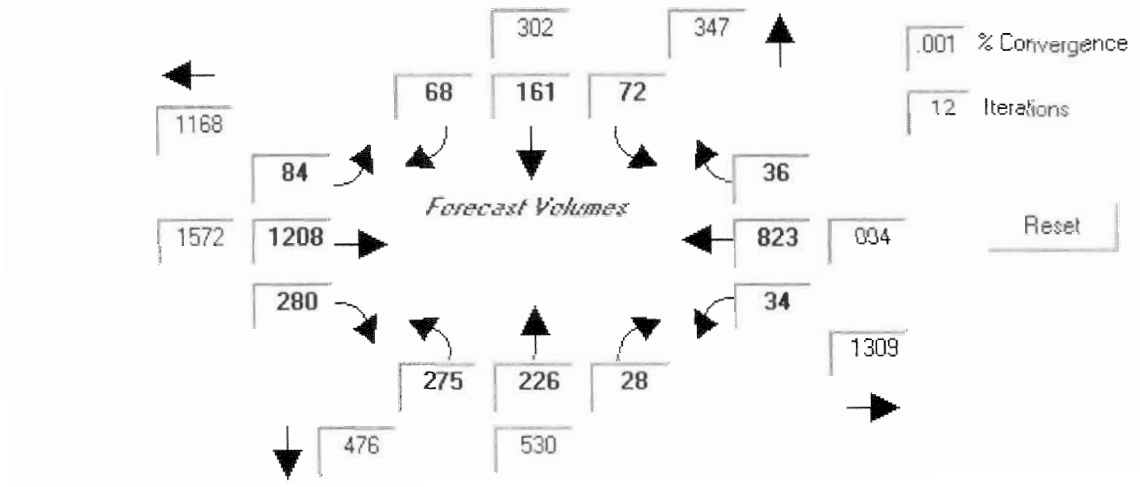

Node 6
20
180
167
39
147
Node 6
448
Node 6
295
Node 6
81
24
83
194
43
N
W
E
S
23-Jan-12
Count data
Turn %-ages
58 of 58
Node 6
2019 PM Peak McCall and Jensen

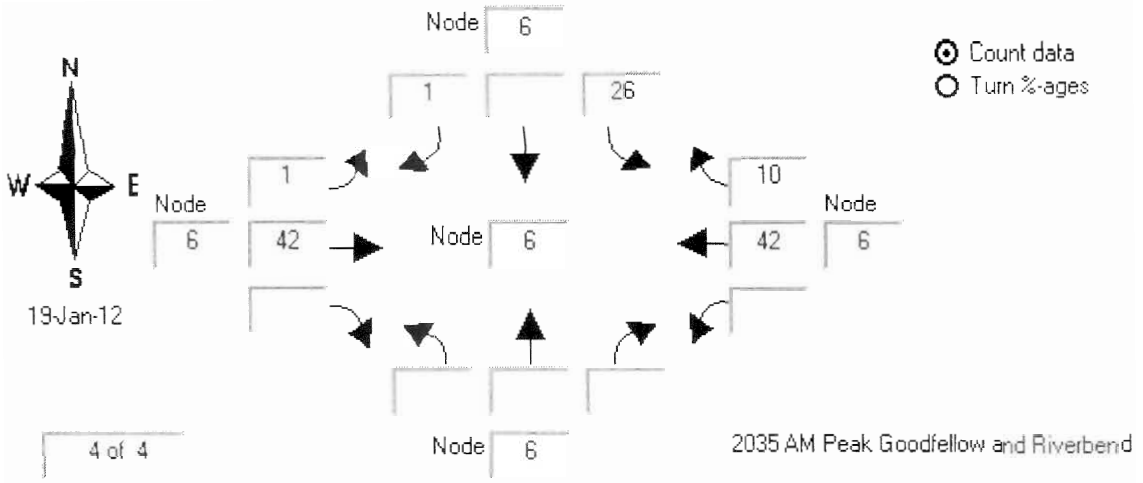

476
523
.001 % Convergence
56
241
178
12 Iterations
594
109
148
Forecast Volumes
874
623
389
554
Reset
141
15
94
832
147
264
29
43
398
441

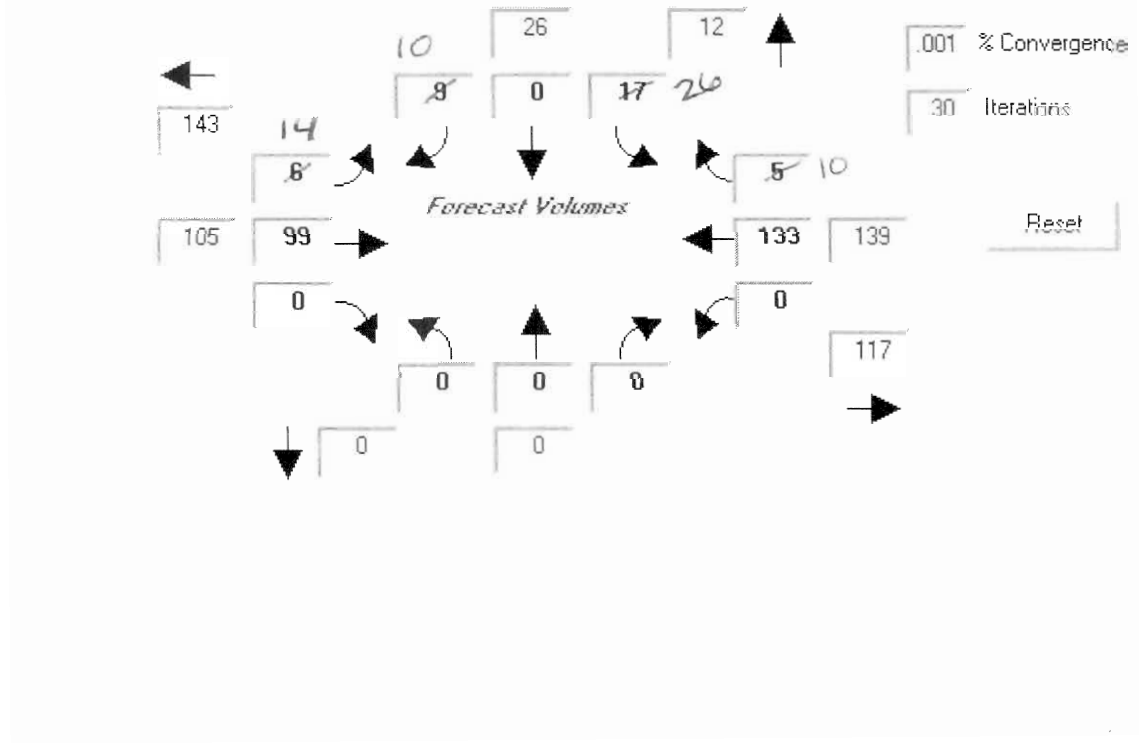

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
90
160
18
37
17
Node 6
419
Node 6
799
Node 6
218
25
247
80
11
59 of 59
Node 6
2019 AM Peak McCall and SR 180

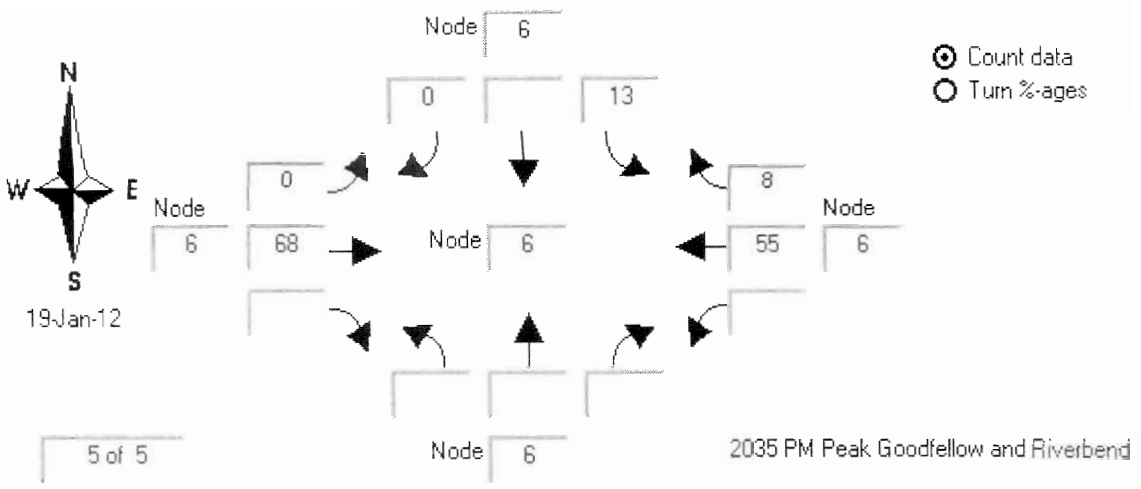

396
256
.001 % Convergence
1468
121
241
33
10 Iterations
64
36
Forecast Volumes
940
614
1048
1121
Reset
261
36
666
297
155
18
539
471

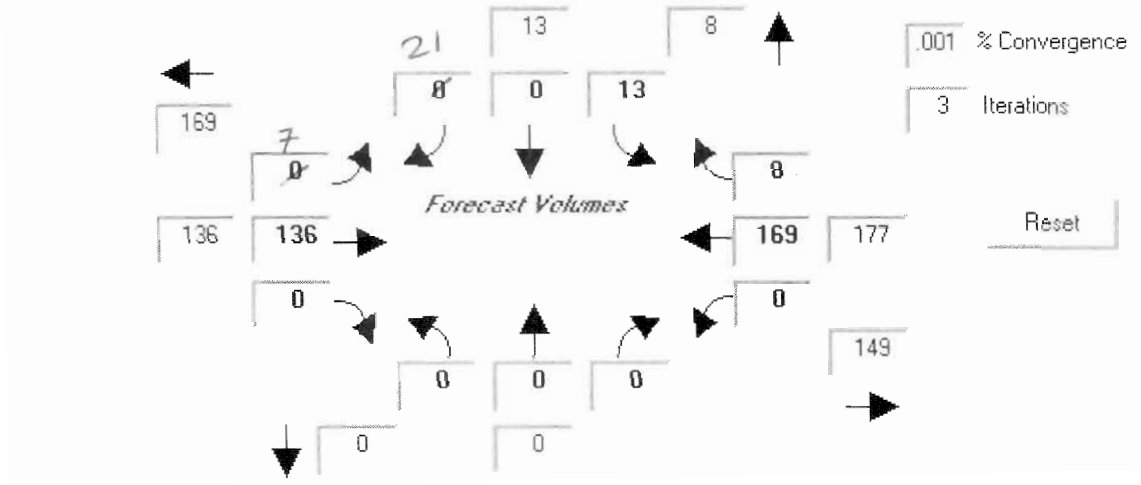

Node 6
N
W
E
S
23-Jan-12
Count data
Turn %-ages
49
90
35
70
19
Node 6
975
Node 6
614
Node 6
260
20
241
139
17
60 of 60
Node 6
2019 PM Peak McCall and SR 18

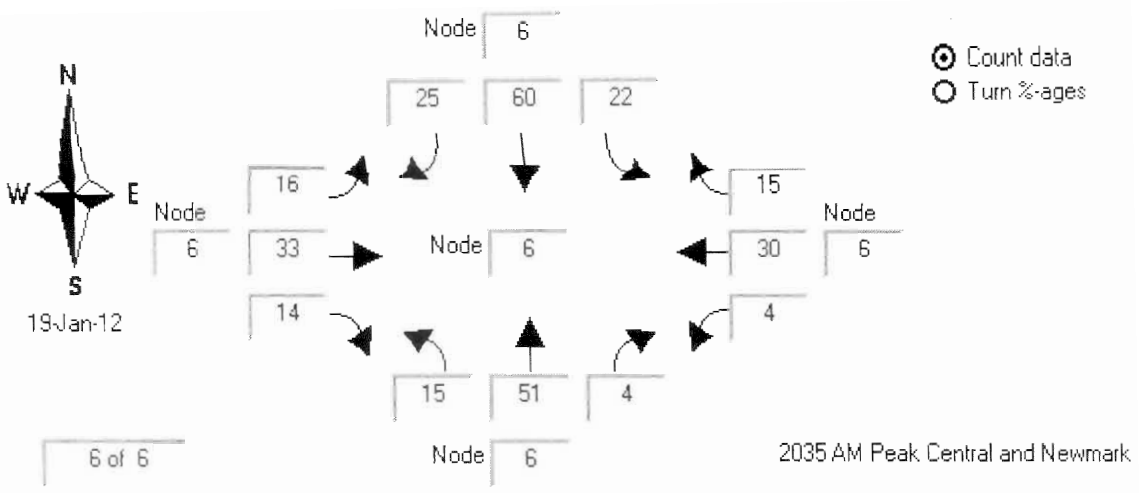

302
347
.001 % Convergence
68
161
72
1168
12 Iterations
84
36
Forecast Volumes
1572
1208
823
004
Reset
280
34
1309
275
226
28
476
530

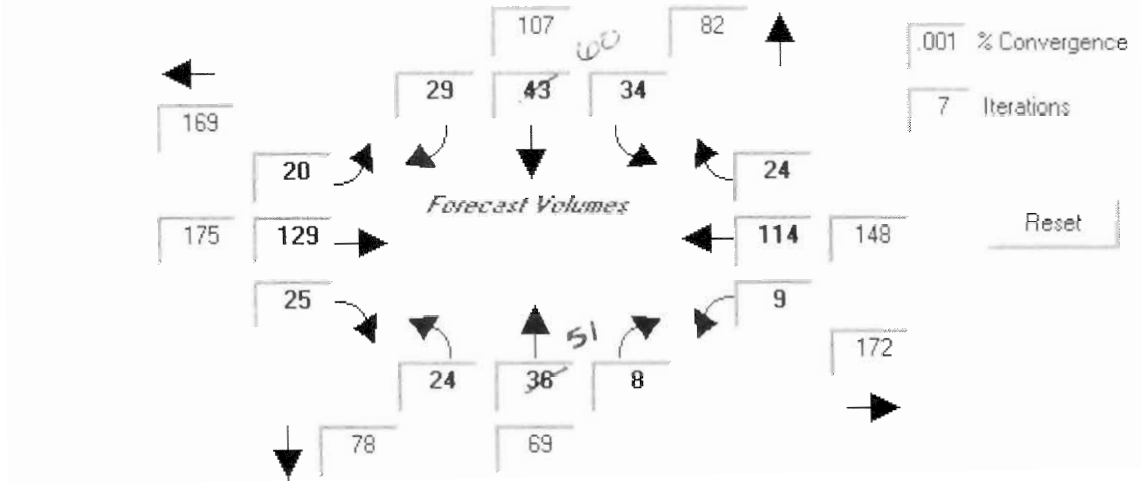

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
1
26
1
10
Node 6
42
Node 6
42
Node 6
4 of 4
Node 6
2035 AM Peak Goodfellow and Riverbend

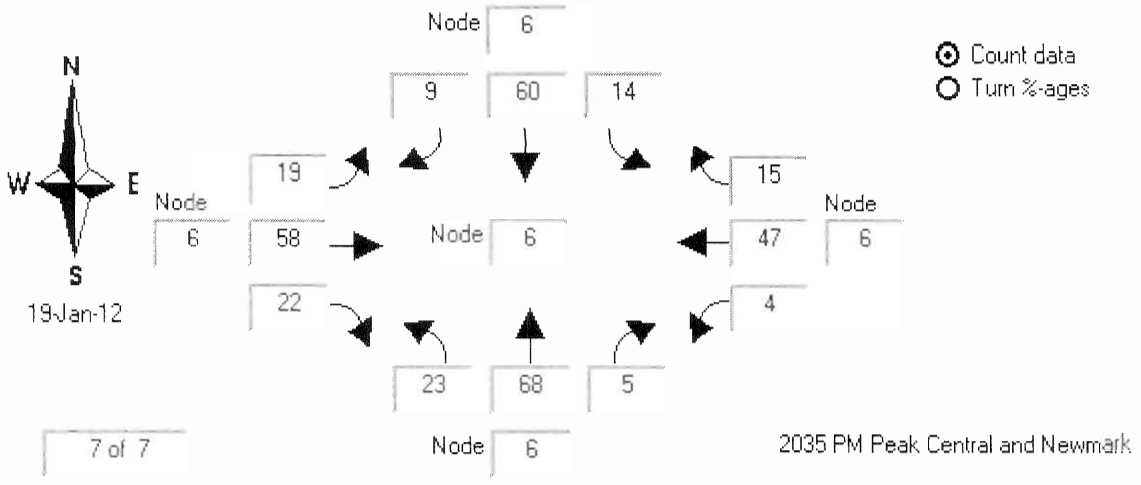

26
12
10
9
0
17
26
.001 % Convergence
30 Iterations
143
14
6
5
10
Forecast Volumes
105
99
133
139
Reset
0
0
117
0
0
0
0
0
0

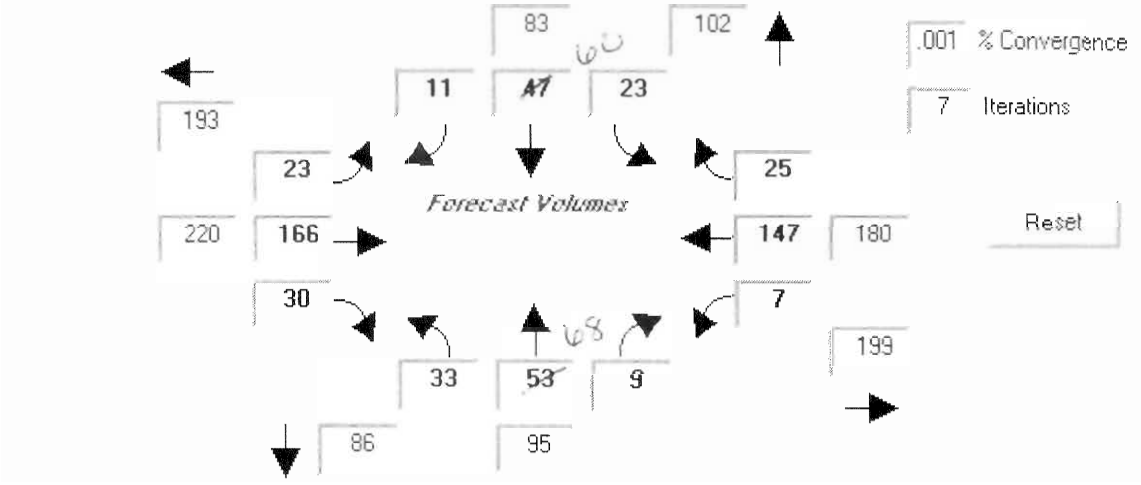

Node 6
Count data
Turn %-ages
N
W
E
S
19-Jan-12
0
13
8
Node 6
0
68
Node 6
55
Node 6
Node 6
5 of 5
2035 PM Peak Goodfellow and Riverbend

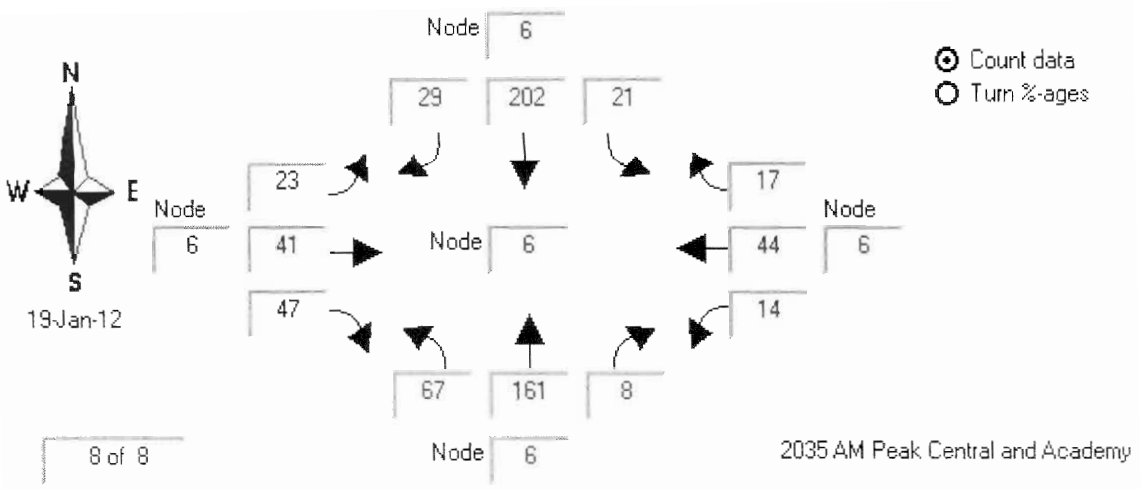

13
8
21
8
0
13
.001 % Convergence
3 Iterations
169
7
0
8
Forecast Volumes
136
136
169
177
Reset
0
0
149
0
0
0
0
0
0

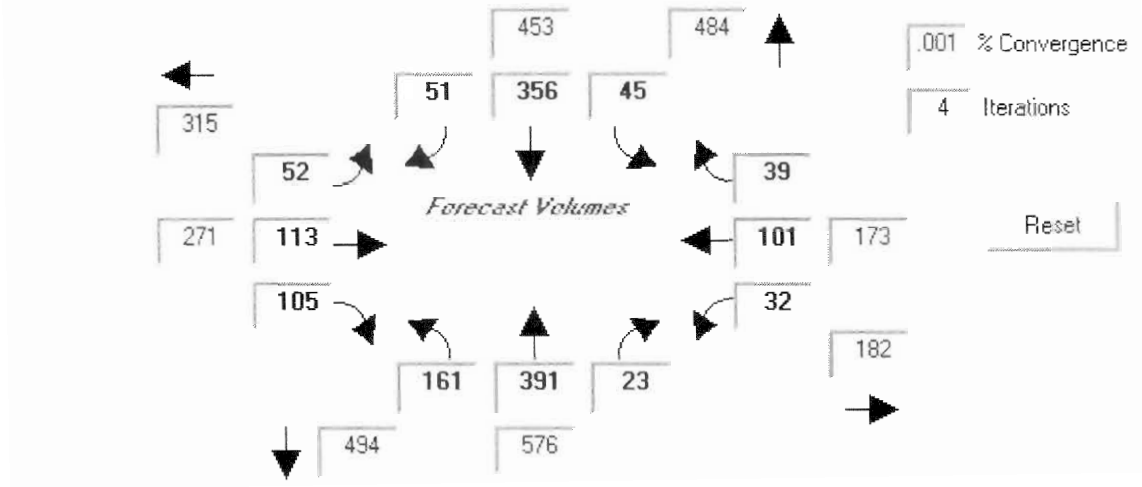

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
25
60
22
16
15
Node 6
Node 6
Node 6
33
30
14
4
15
51
4
6 of 6
Node 6
2035 AM Peak Central and Newmark

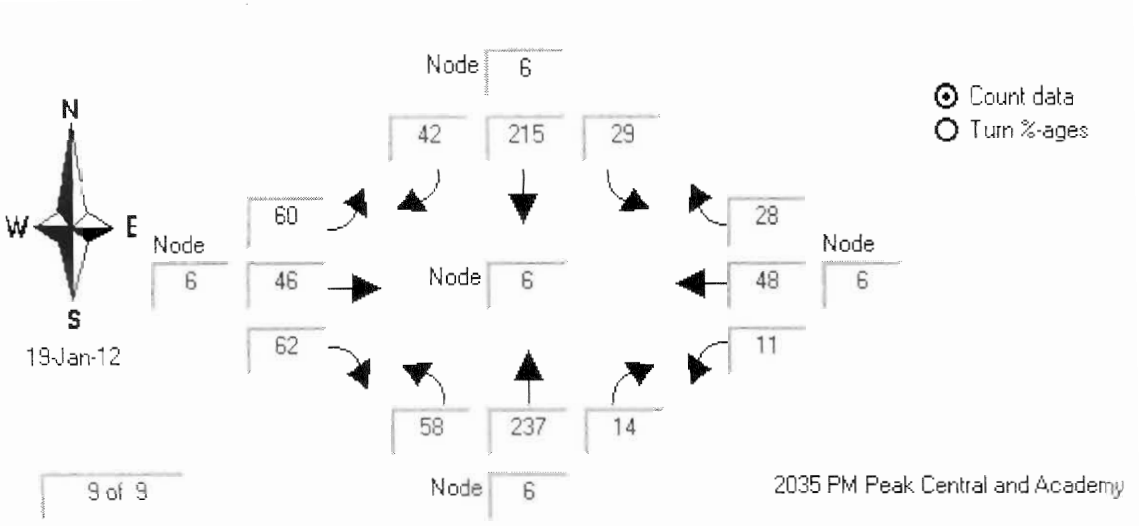

107
82
.001 % Convergence
29
43
34
7 Iterations
169
20
24
Forecast Volumes
175
129
114
148
Reset
25
9
172
24
36
8
78
69

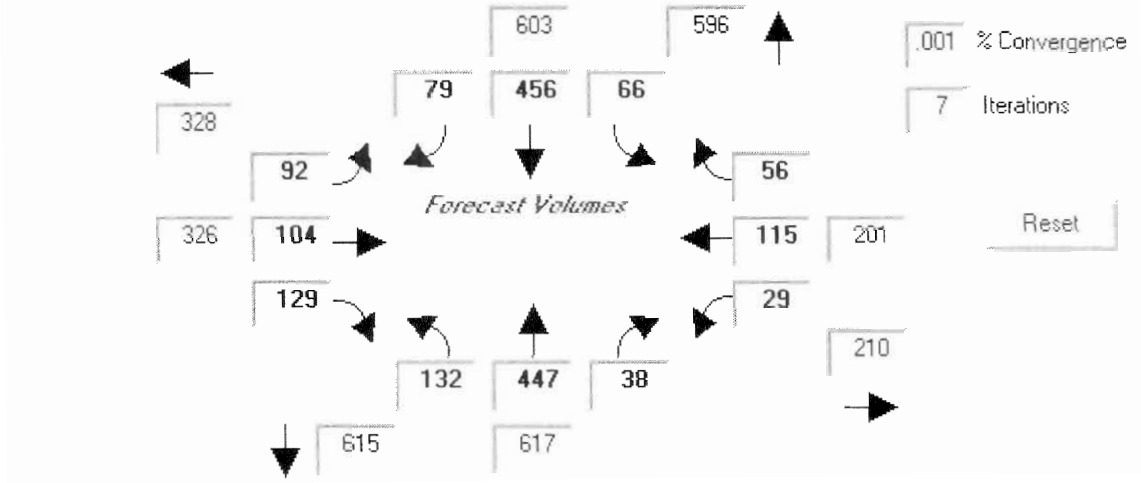

Node 6
9 60 14
19
15
Node 6
58
Node 6
47
Node 6
22
4
23 68 5
N
W
E
S
19-Jan-12
Count data
Turn %-ages
7 of 7
Node 6
2035 PM Peak Central and Newmark

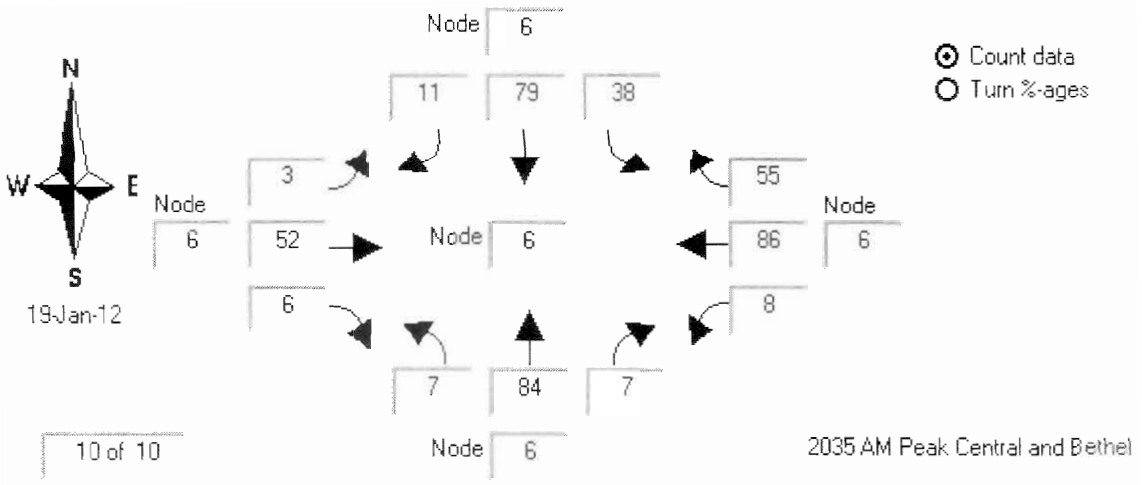

83
102
193
11
47
23
23
25
Forecast Volumes
220
166
147
180
30
7
199
33
53
9
86
95
.001 % Convergence
7 Iterations
Reset

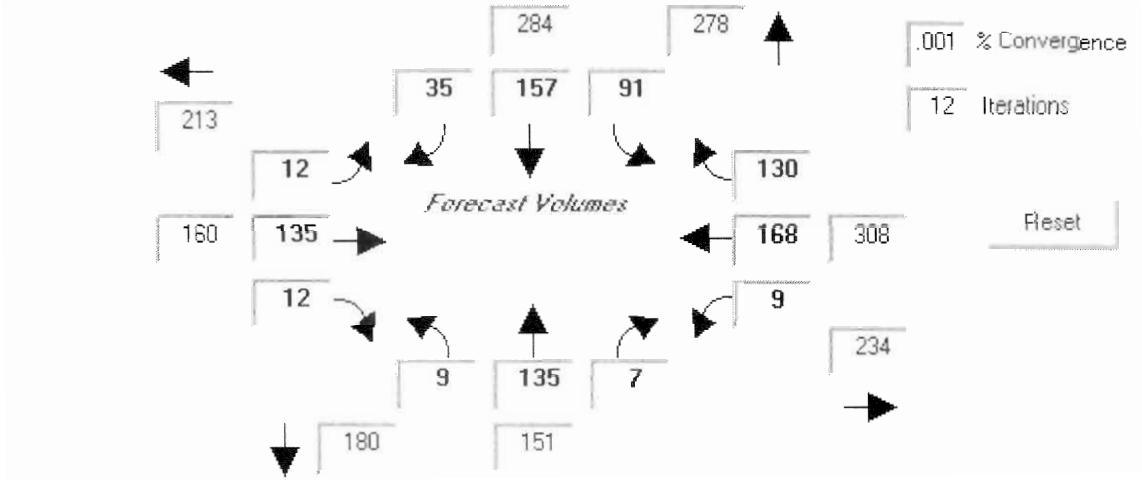

N
W
E
S
19-Jan-12
Node 6
29
202
21
23
17
Node 6
41
Node 6
44
Node 6
47
14
67
161
8
Count data
Turn %-ages
8 of 8
Node 6
2035 AM Peak Central and Academy

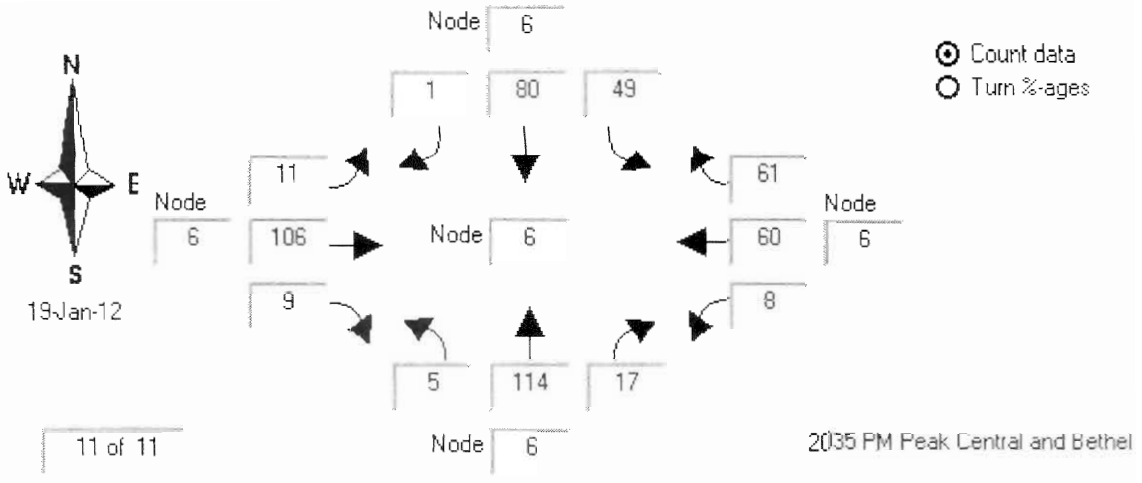

453
484
315
51
356
45
52
39
Forecast Volumes
271
113
101
173
105
32
182
161
391
23
494
576
.001 % Convergence
4 Iterations
Reset

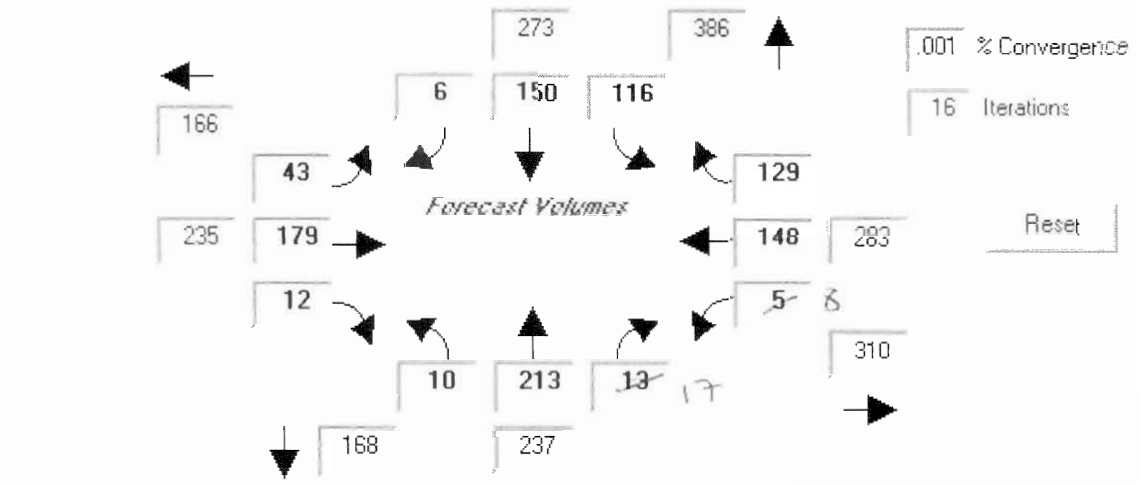

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
42
215
29
60
28
Node 6
Node 6
Node 6
46
48
62
11
58
237
14
9 of 9
Node 6
2035 PM Peak Central and Academy

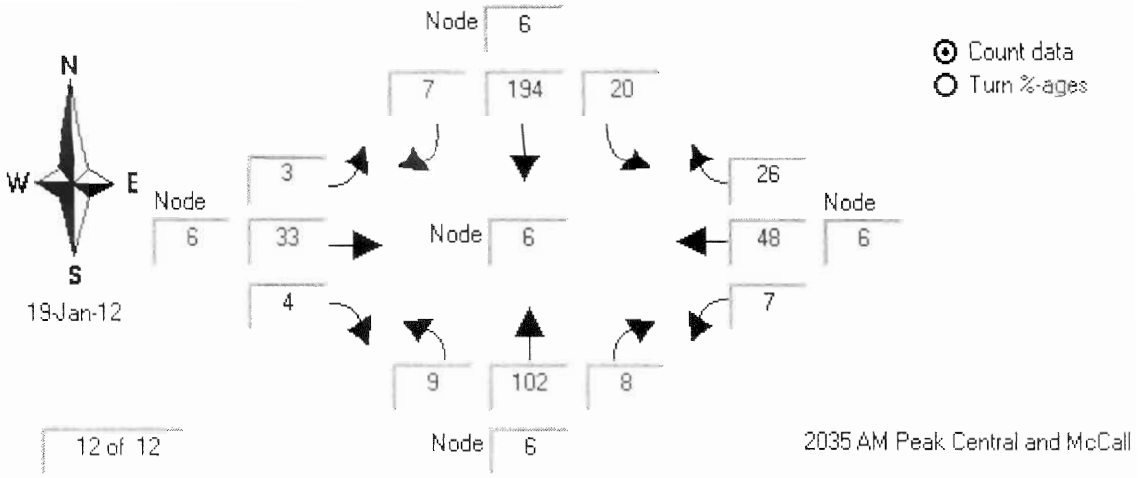

603
596
.001 % Convergence
328
79
456
66
7 Iterations
92
56
Forecast Volumes
326
104
115
201
Reset
129
29
210
132
447
38
615
617

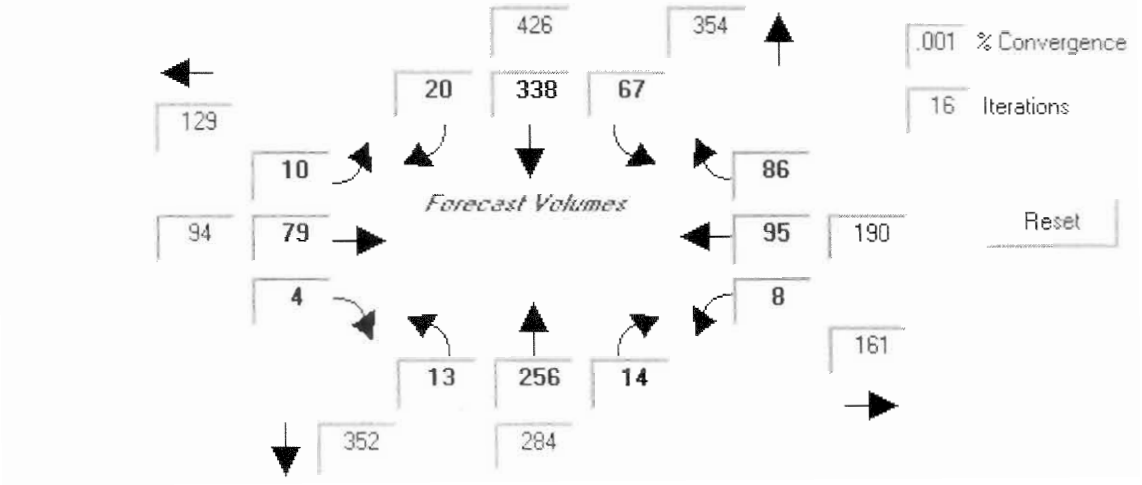

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
11
79
38
3
55
Node 6
52
Node 6
86
Node 6
6
8
7
84
7
10 of 10
Node 6
2035 AM Peak Central and Bethel

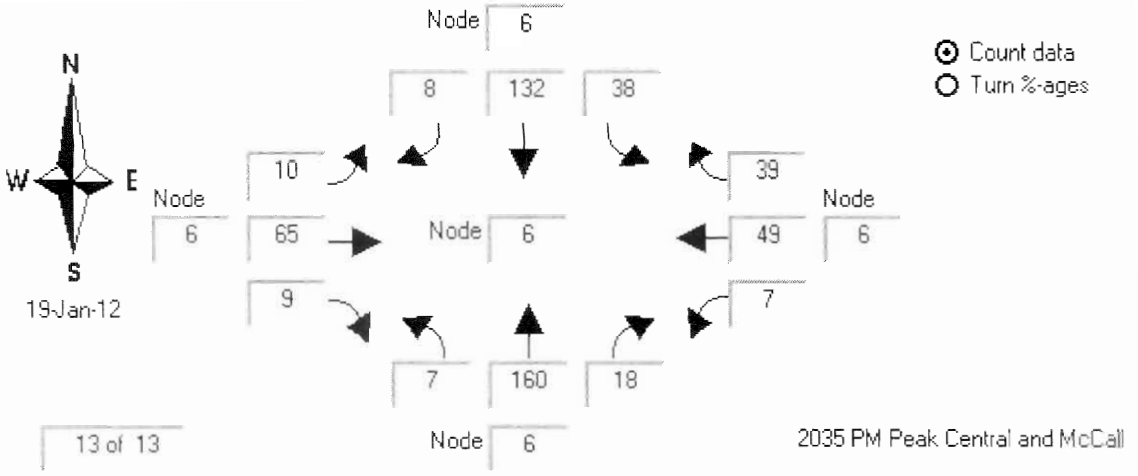

284
278
.001 % Convergence
213
35
157
91
12 Iterations
12
130
Forecast Volumes
160
135
168
308
Reset
12
9
234
9
135
7
180
151

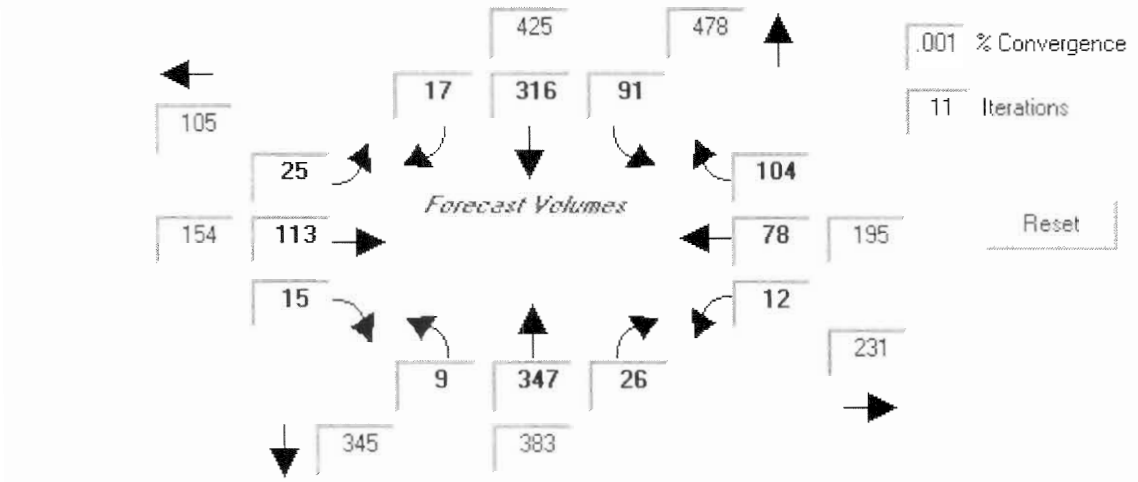

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
1
80
49
11
61
Node 6
106
Node 6
60
Node 6
9
8
5
114
17
11 of 11
Node 6
2035 PM Peak Central and Bethel

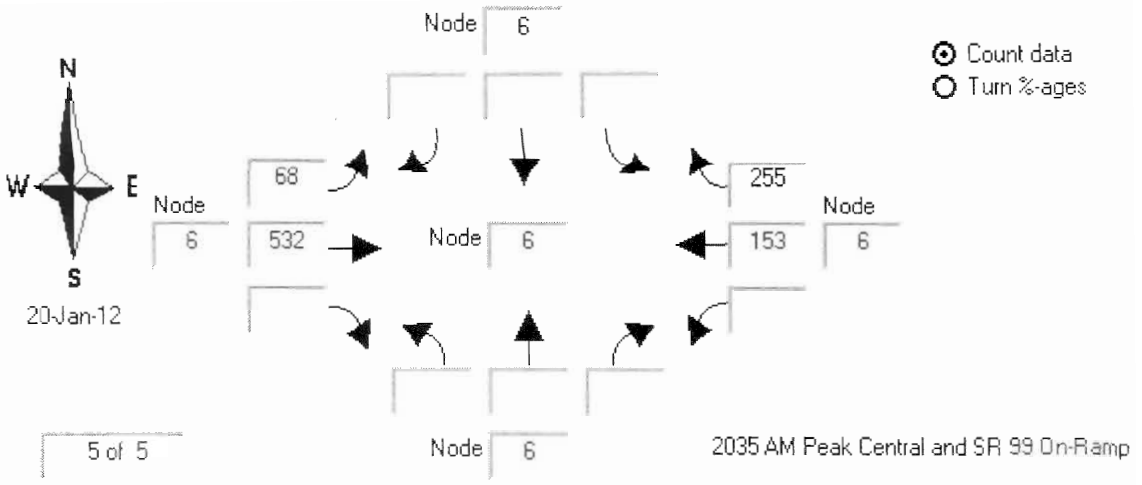

273
386
.001 % Convergence
166
6
150
116
16 Iterations
43
129
Forecast Volumes
235
179
148
283
Reset
12
5
310
10
213
13
168
237

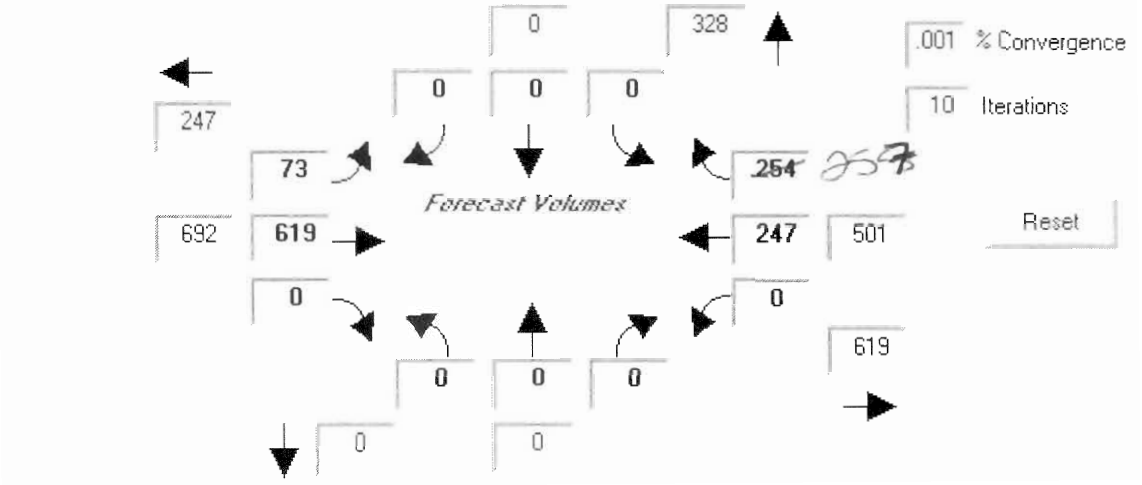

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
7
194
20
3
26
Node 6
33
Node 6
48
Node 6
4
7
9
102
8
12 of 12
Node 6
2035 AM Peak Central and McCall

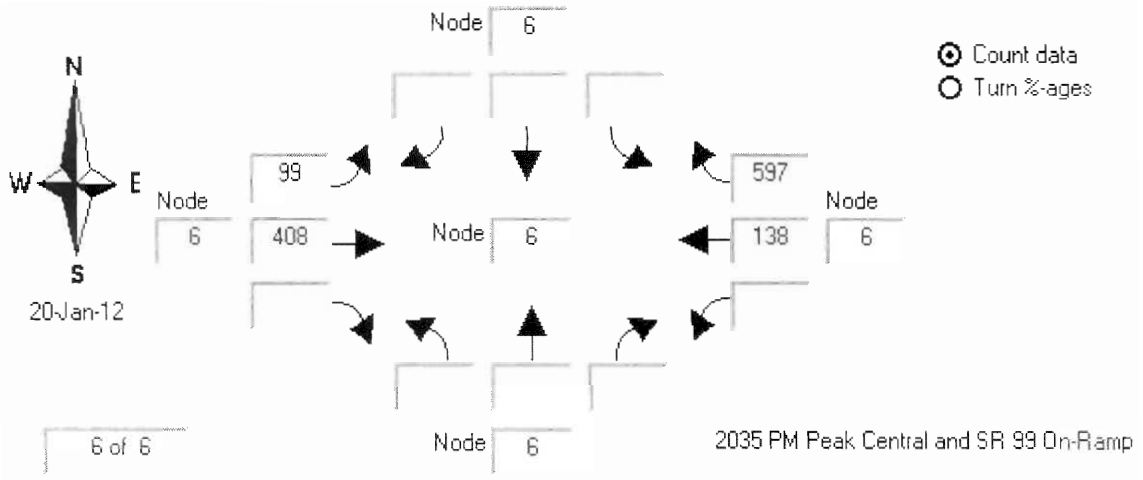

426
354
.001 % Convergence
129
20
338
67
16 Iterations
10
86
Forecast Volumes
94
79
95
190
Reset
4
8
161
13
256
14
352
284

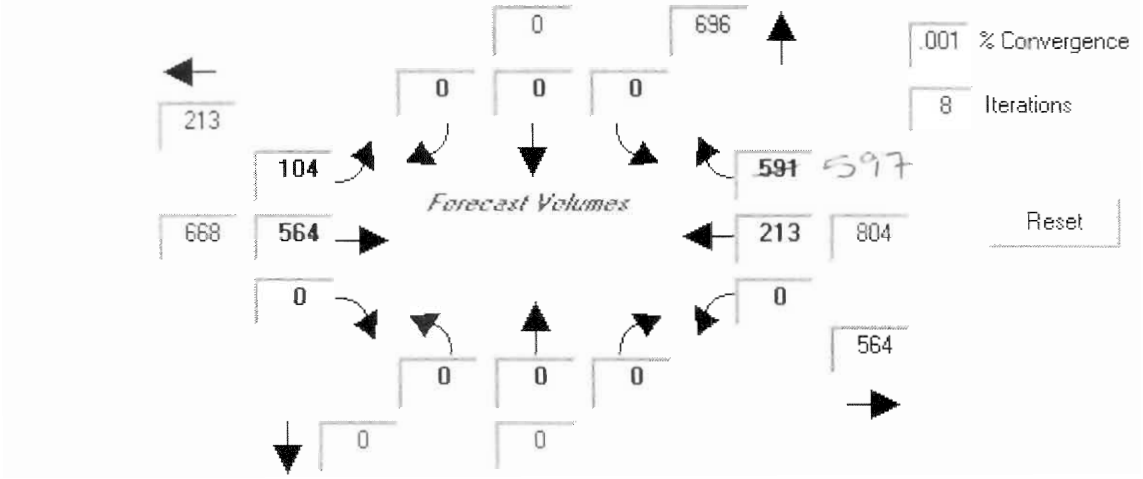

Node 6
N
W
E
S
19-Jan-12
Count data
Turn %-ages
8
132
38
10
39
Node 6
65
Node 6
49
Node 6
9
7
7
160
18
13 of 13
Node 6
2035 PM Peak Central and McCall

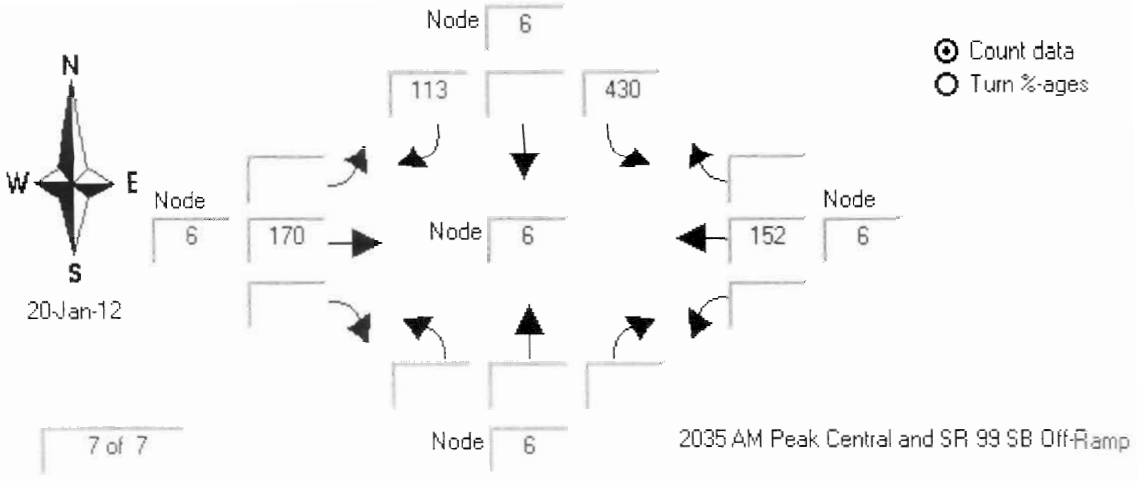

425
478
.001 % Convergence
105
17
316
91
11 Iterations
25
104
Forecast Volumes
154
113
78
195
Reset
15
12
231
9
347
26
345
383

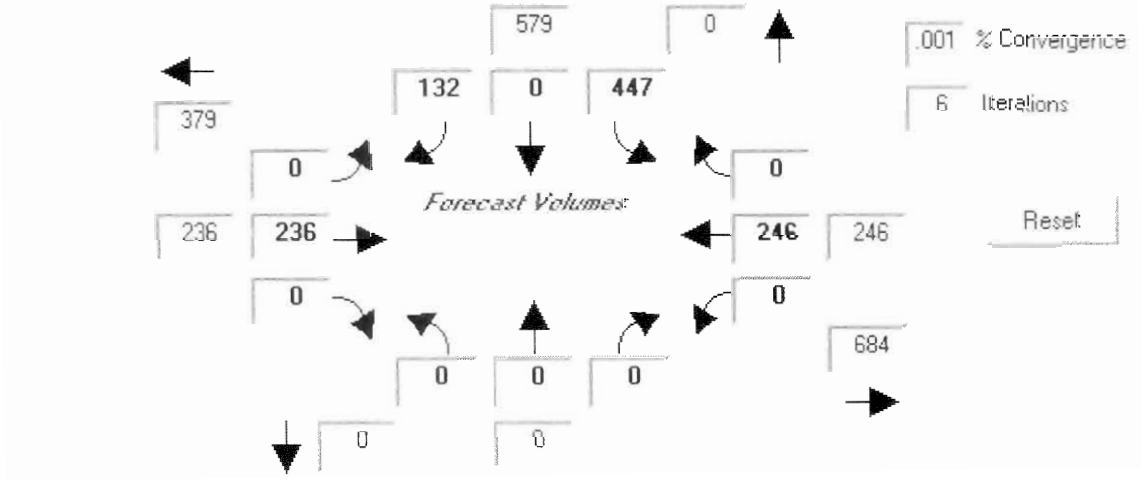

Node 6
N
W
E
S
20-Jan-12
Count data
Turn %-ages
68
255
Node 6
532
Node 6
153
Node 6
Node 6
5 of 5
2035 AM Peak Central and SR 99 On-Ramp

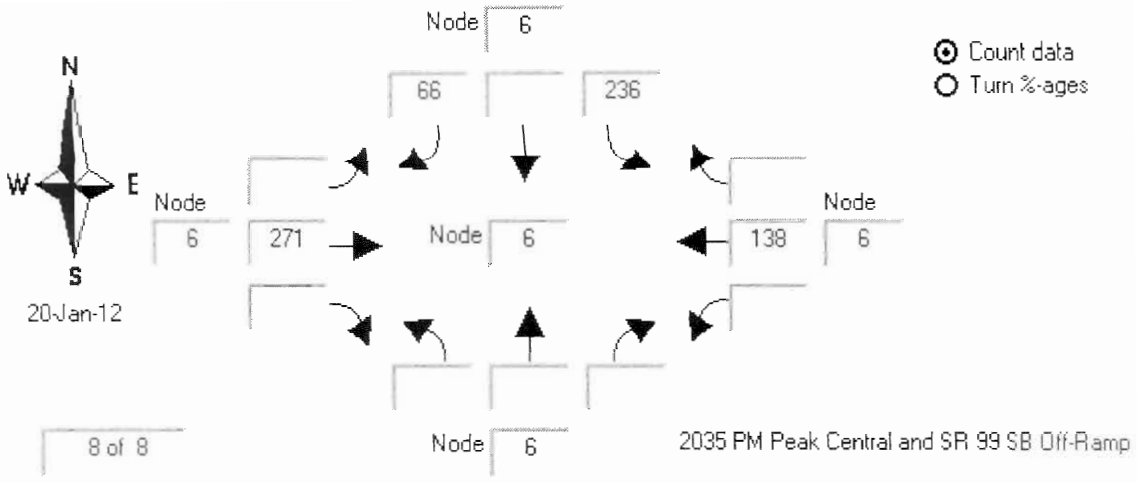

0
328
.001 % Convergence
247
0 0 0
10 Iterations
73
254
Forecast Volumes
692
619
247
501
Reset
0
0
619
0 0 0
0
0

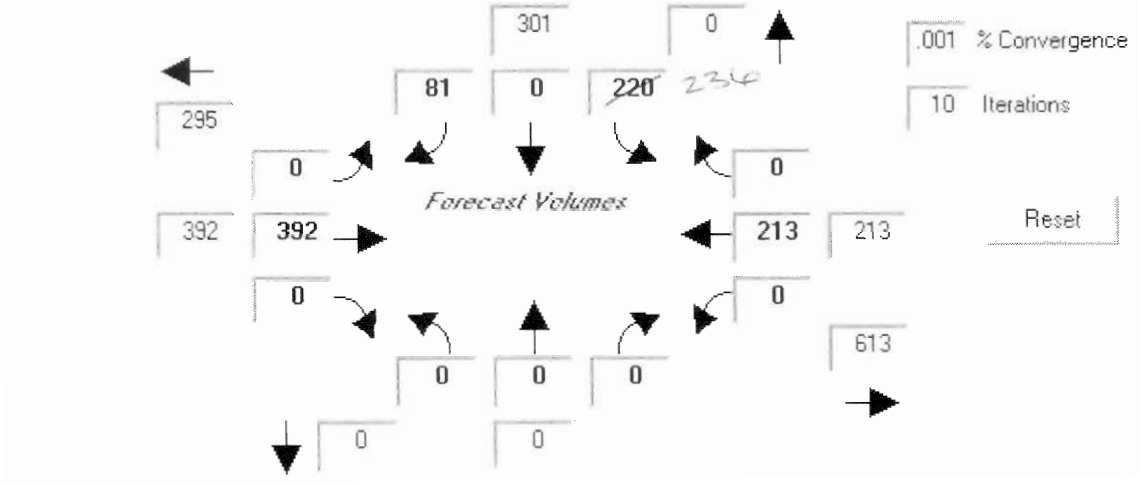

N
W
E
S
20-Jan-12
Node 6
Node 6
Node 6
Node 6
Node 6
99
597
408
138
Count data
Turn %-ages
6 of 6
2035 PM Peak Central and SR 99 On-Ramp

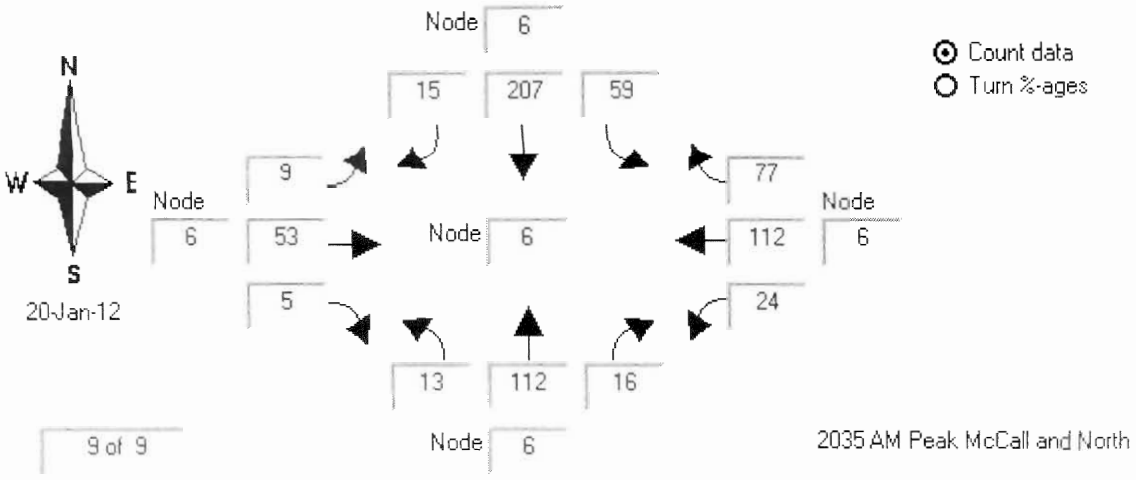

0
696
213
0
0
0
104
591
597
Forecast Volumes
668
564
213
804
0
0
564
0
0
0
0
0
.001 % Convergence
8 Iterations
Reset

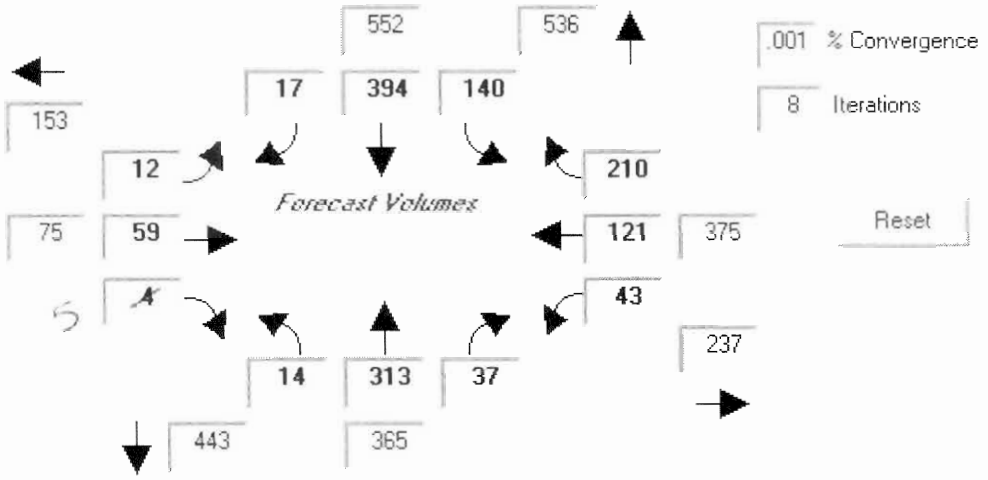

Node 6
113
430
Count data
Turn %-ages
N
W
E
S
Node 6
170
Node 6
Node 6
152
Node 6
20-Jan-12
7 of 7
Node 6
2035 AM Peak Central and SR 99 SB Off-Ramp

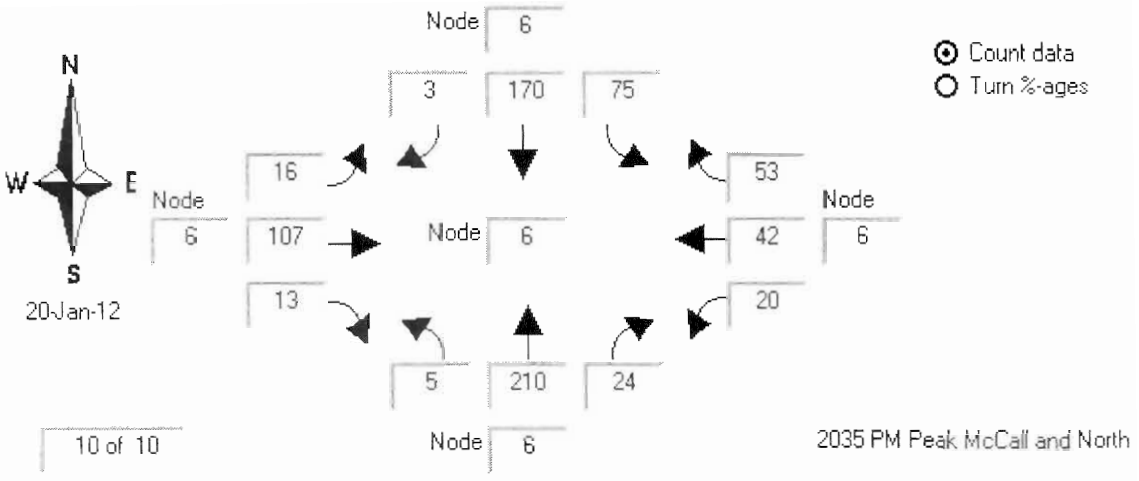

579
0
.001 % Convergence
132
0
447
6 Iterations
379
0
0
Forecast Volumes:
236
236
246
246
Reset
0
0
684
0
0
0
0
0
0

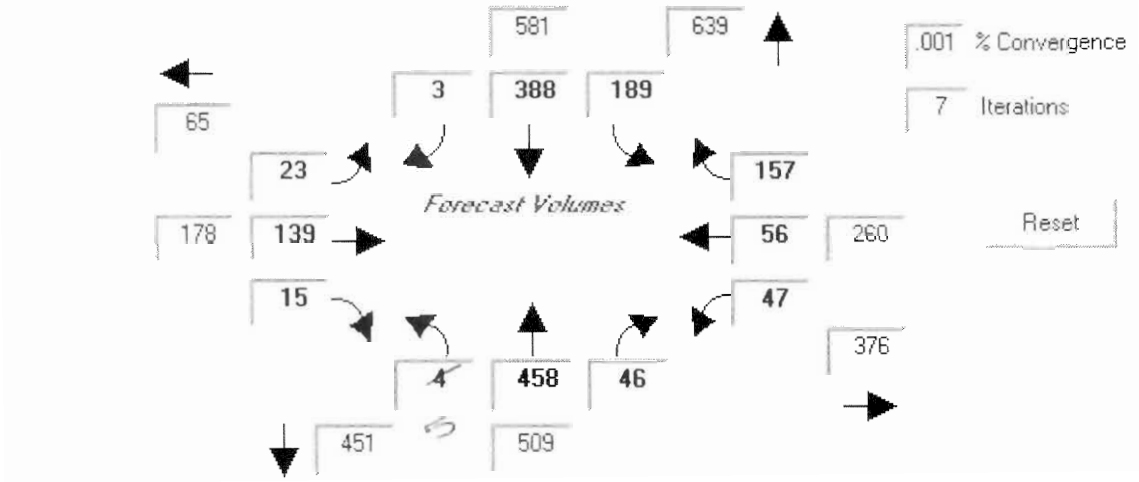

Node 6
N
W
E
S
20-Jan-12
Count data
Turn %-ages
66
236
Node 6
271
Node 6
138
Node 6
Node 6
8 of 8
2035 PM Peak Central and SR 99 SB Off-Ramp

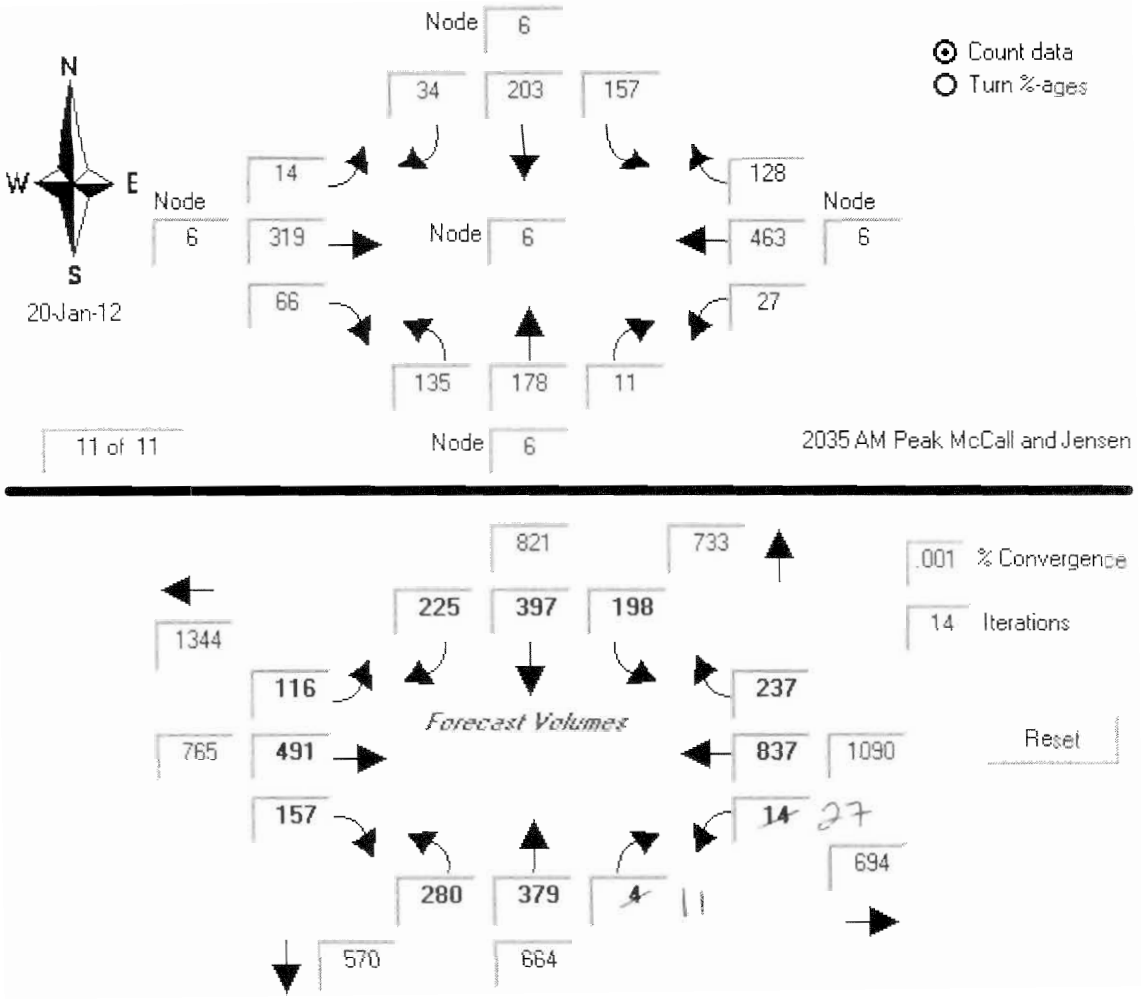

301
0
81
0
220
236
295
0
0
Forecast Volumes
392
392
213
213
0
0
613
0
0
0
0
0
.001 % Convergence
10 Iterations
Reset

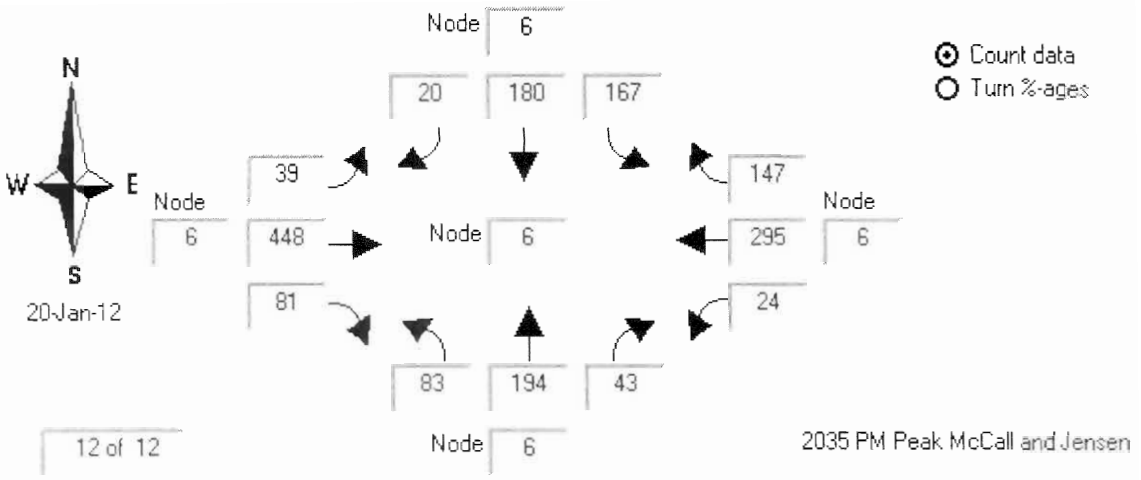

Node 6
15
207
59
9
77
Node 6
53
Node 6
112
Node 6
5
24
13
112
16
N
W
E
S
20-Jan-12
Count data
Turn %-ages
9 of 9
Node 6
2035 AM Peak McCall and North

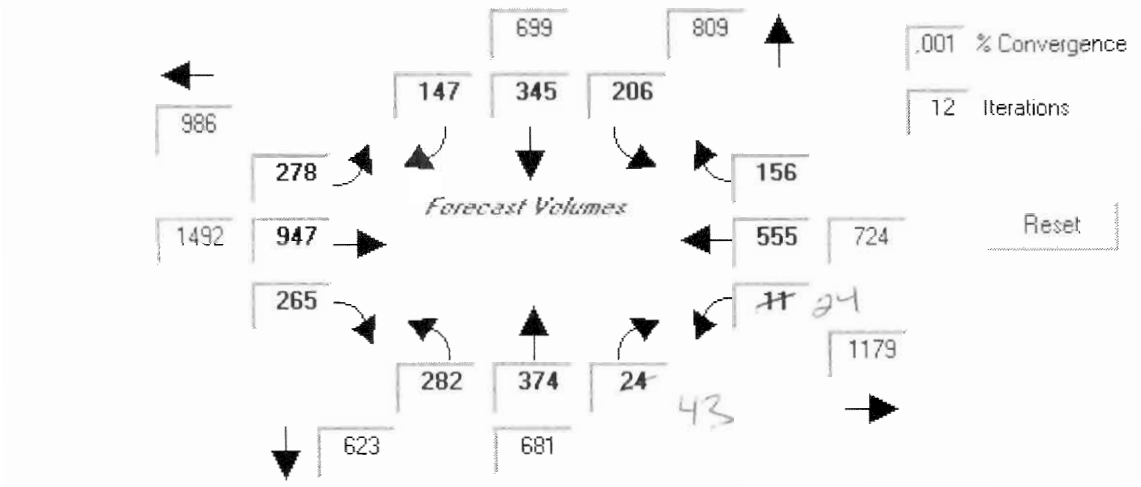

552
536
153
17
394
140
12
210
Forecast Volumes
75
59
121
375
43
14
313
37
237
443
365
.001 % Convergence
8 Iterations
Reset

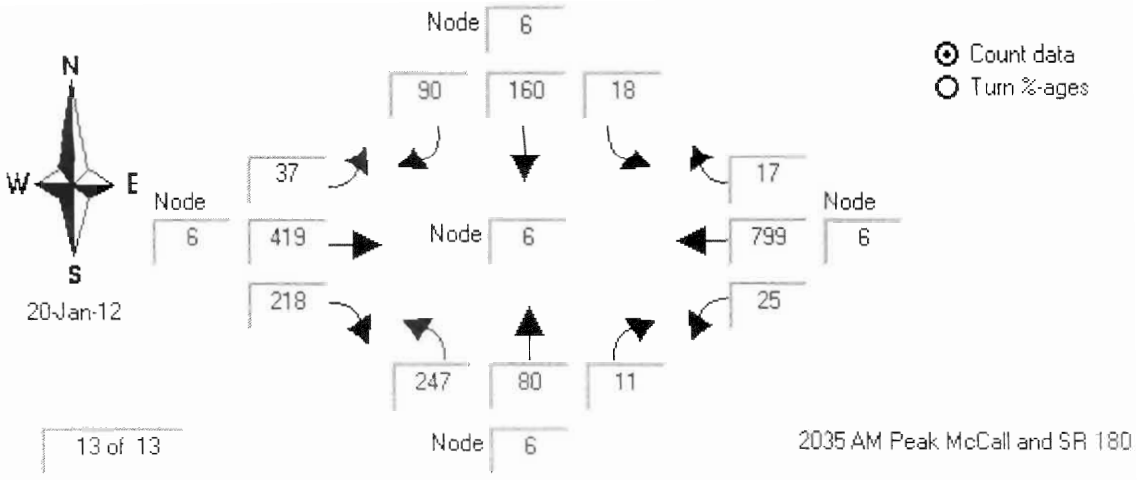

Node 6
N
W
E
S
20-Jan-12
Count data
Turn %-ages
3
170
75
16
53
Node 6
107
Node 6
42
Node 6
13
20
5
210
24
10 of 10
Node 6
2035 PM Peak McCall and North

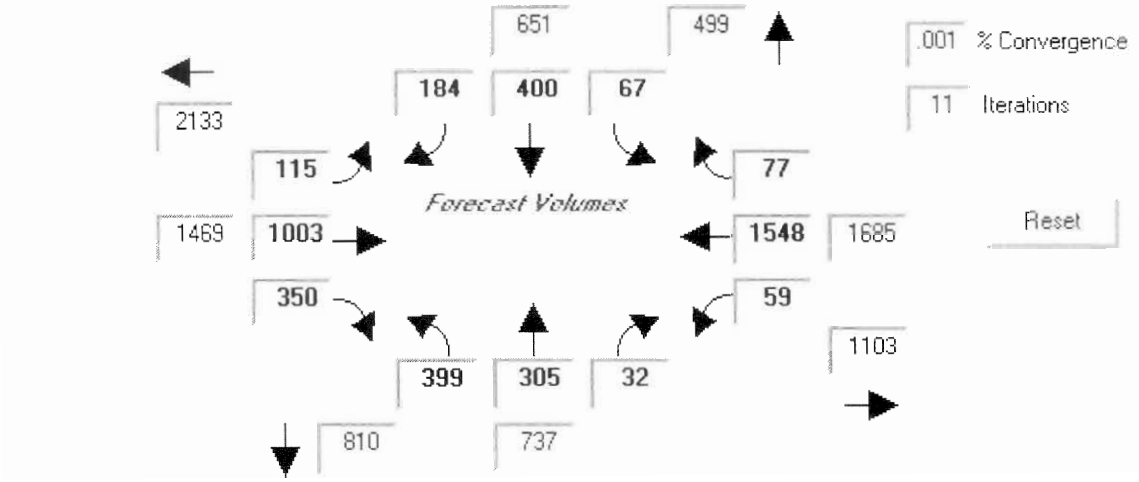

581
639
.001 % Convergence
65
3
388
189
7 Iterations
23
157
Forecast Volumes
178
139
56
260
Reset
15
47
376
4
458
46
451
509

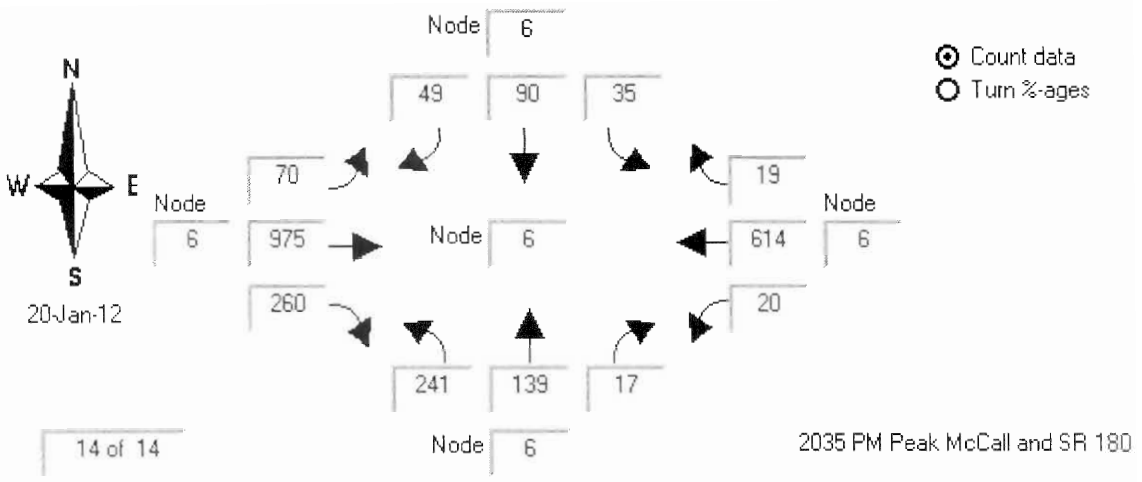

Node 6
Count data
Turn %-ages
N
W
E
S
20-Jan-12
34
203
157
14
128
Node 6
319
Node 6
463
Node 6
66
27
135
178
11
11 of 11
Node 6
2035 AM Peak McCall and Jensen
821
733
.001 % Convergence
225
397
198
1344
14 Iterations
116
237
Forecast Volumes
765
491
837
1090
Reset
157
14 27
694
280
379
4 11
570
664

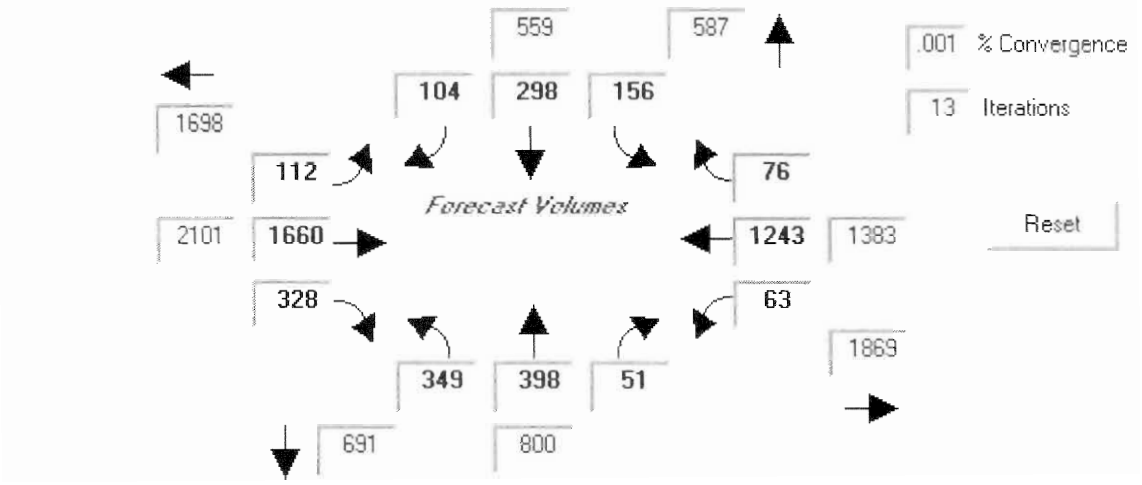

Node 6
N
W
E
S
20-Jan-12
20
180
167
39
147
Node 6
448
Node 6
295
Node 6
81
24
83
194
43
Count data
Turn %-ages
12 of 12
Node 6
2035 PM Peak McCall and Jensen


699
809
.001 % Convergence
147
345
206
986
12 Iterations
278
156
Forecast Volumes
1492
947
555
724
Reset
265
24
1179
282
374
24
623
681


Node 6
N
W
E
S
20-Jan-12
Count data
Turn %-ages
90
160
18
37
17
Node 6
419
Node 6
799
Node 6
218
25
247
80
11
13 of 13
Node 6
2035 AM Peak McCall and SR 180


651
499
.001 % Convergence
2133
184
400
67
11 Iterations
115
77
Forecast Volumes
1469
1003
1548
1685
Reset
350
59
1103
399
305
32
810
737


N
W
E
S
20-Jan-12
Node 6
49
90
35
70
19
Node 6
975
Node 6
614
Node 6
260
20
241
139
17
Node 6
Count data
Turn %-ages
14 of 14
2035 PM Peak McCall and SR 180


559
587
.001 % Convergence
1698
104
298
156
13 Iterations
112
76
Forecast Volumes
2101
1660
1243
1383
Reset
328
63
1869
349
398
51
691
800

APPENDIX I

Fresno COG Model Plots

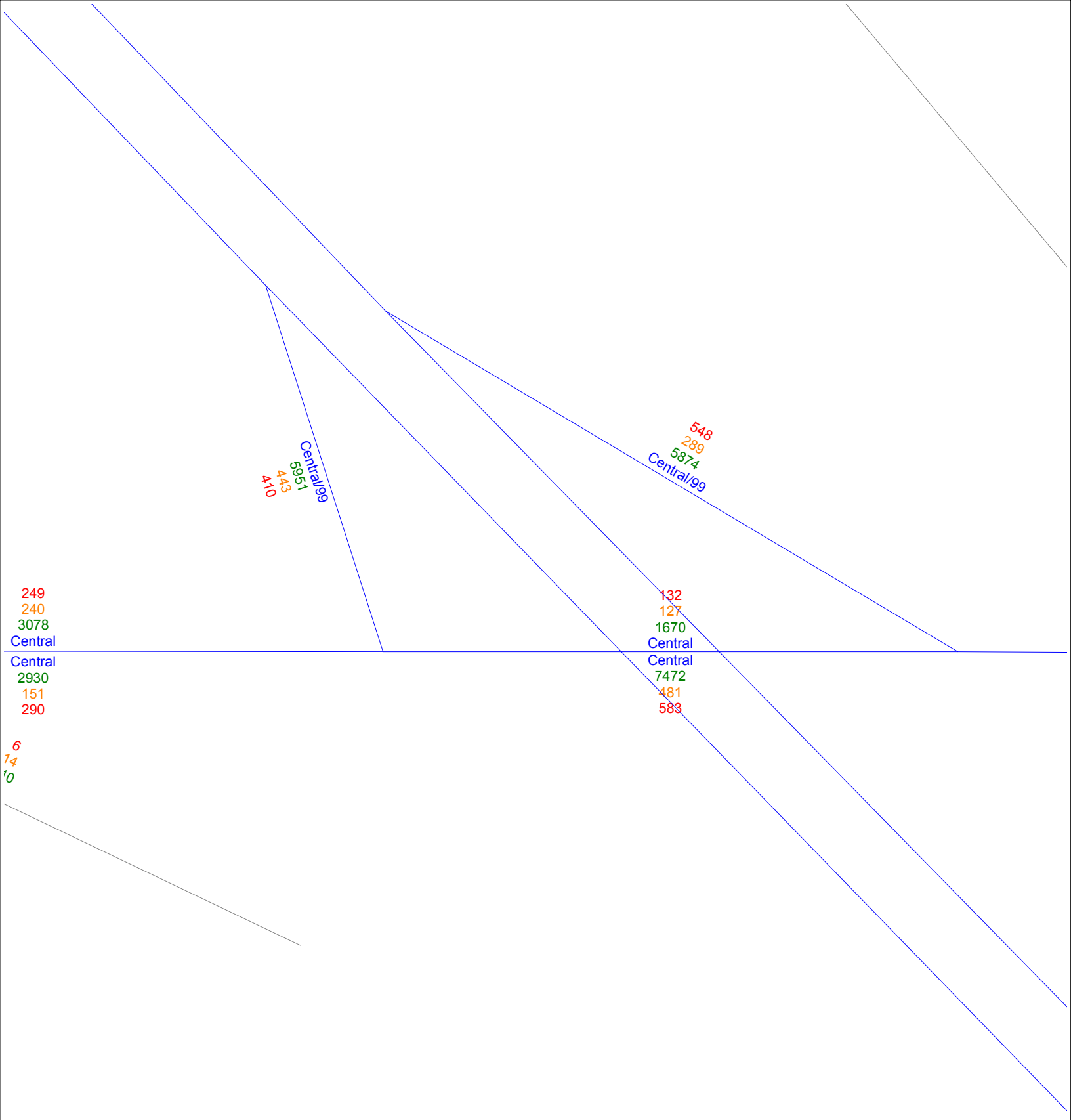
Fresno COG Model Plots

Green = Daily Volumes

Orange = AM Peak Hour Volumes

Red = PM Peak Hour volumes

YEAR 2011 FRESNO COG MODEL PLOTS



viper
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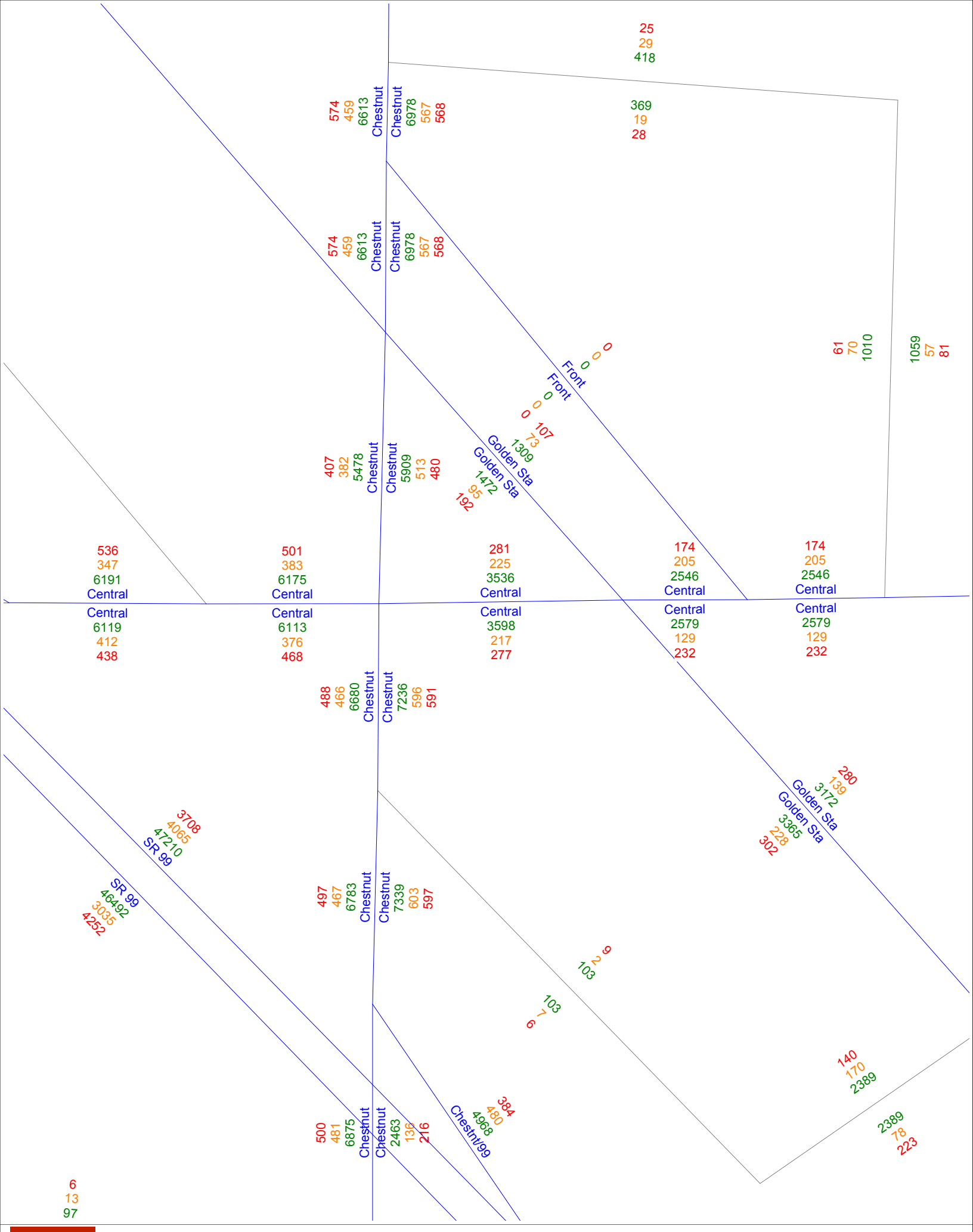

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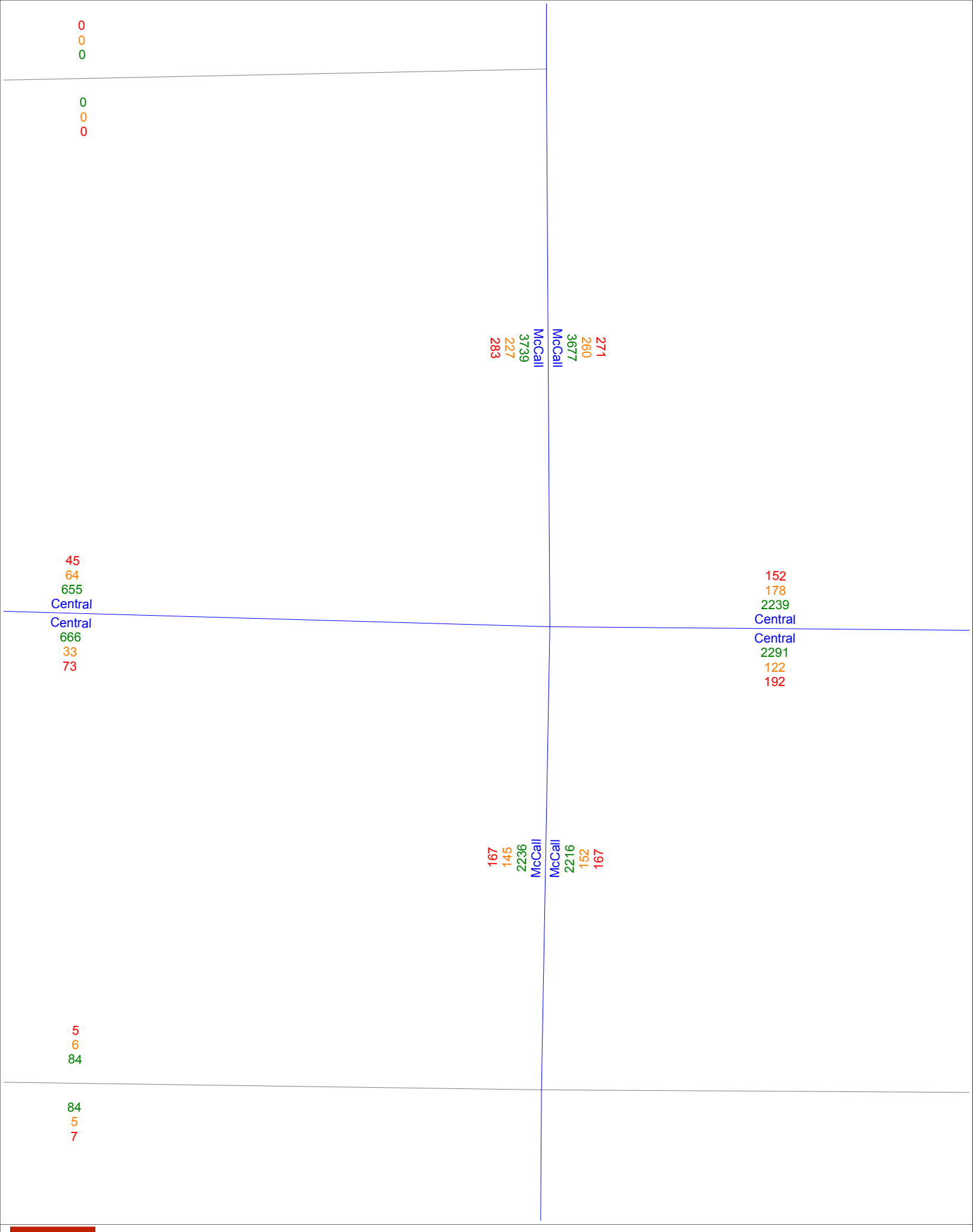

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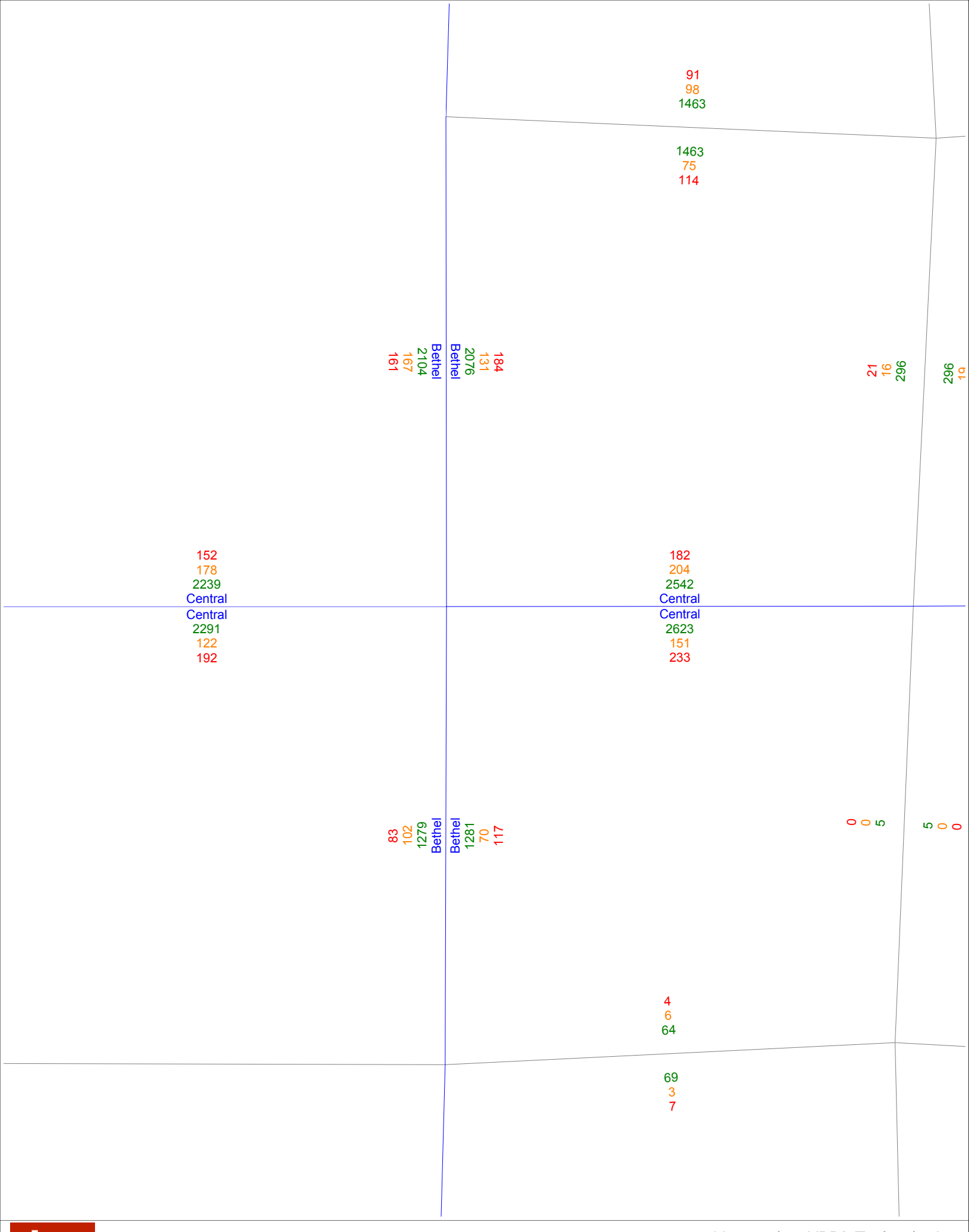

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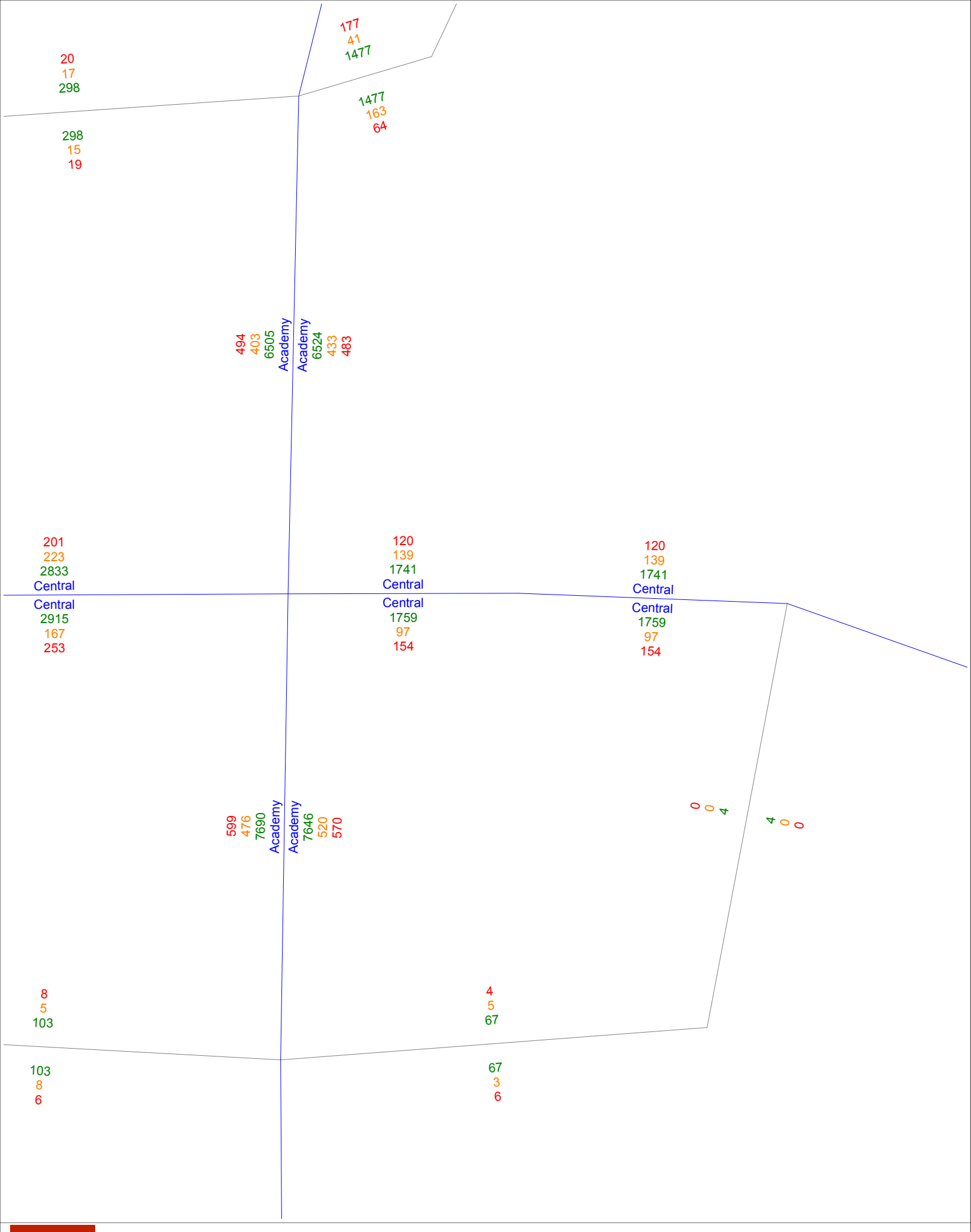

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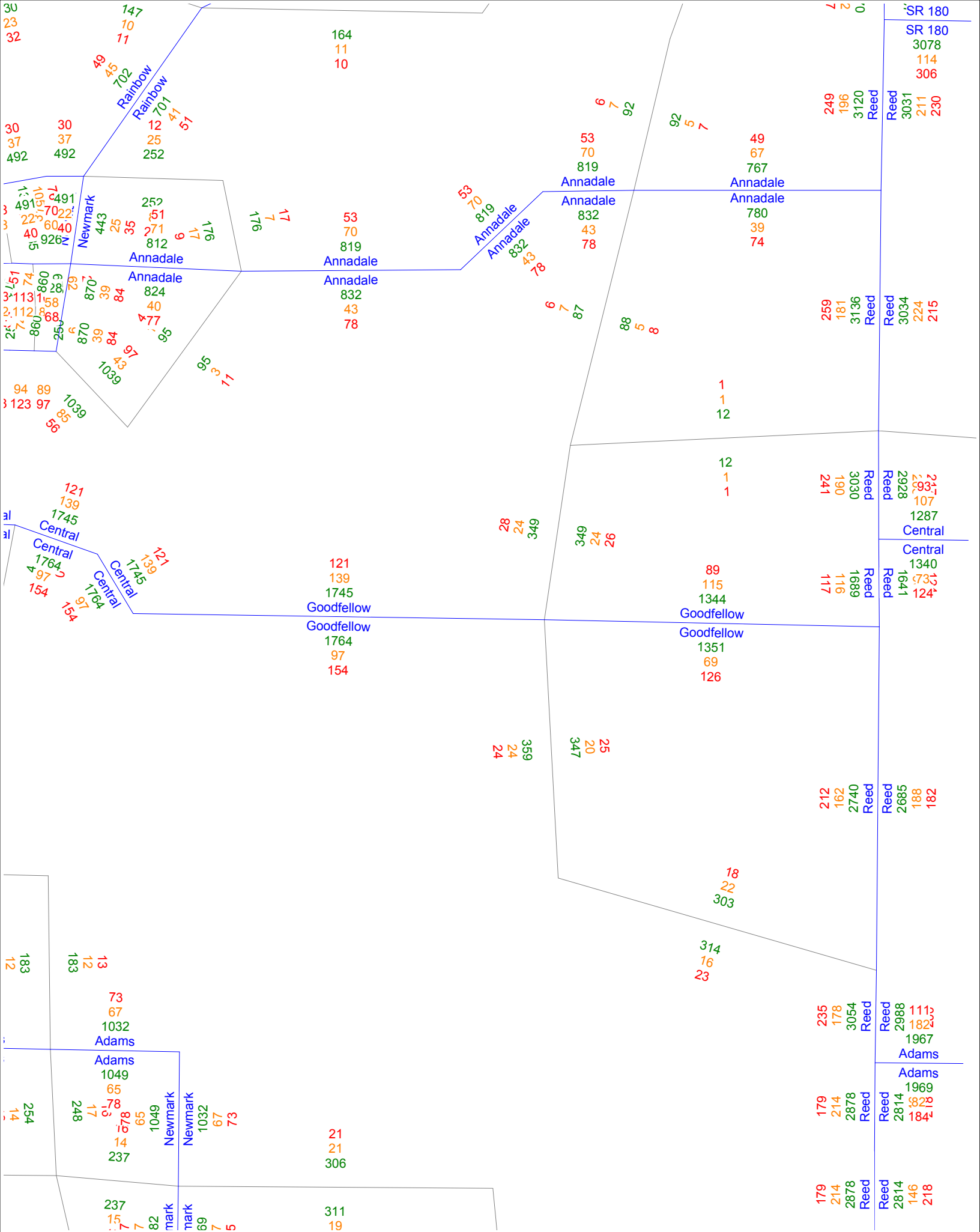
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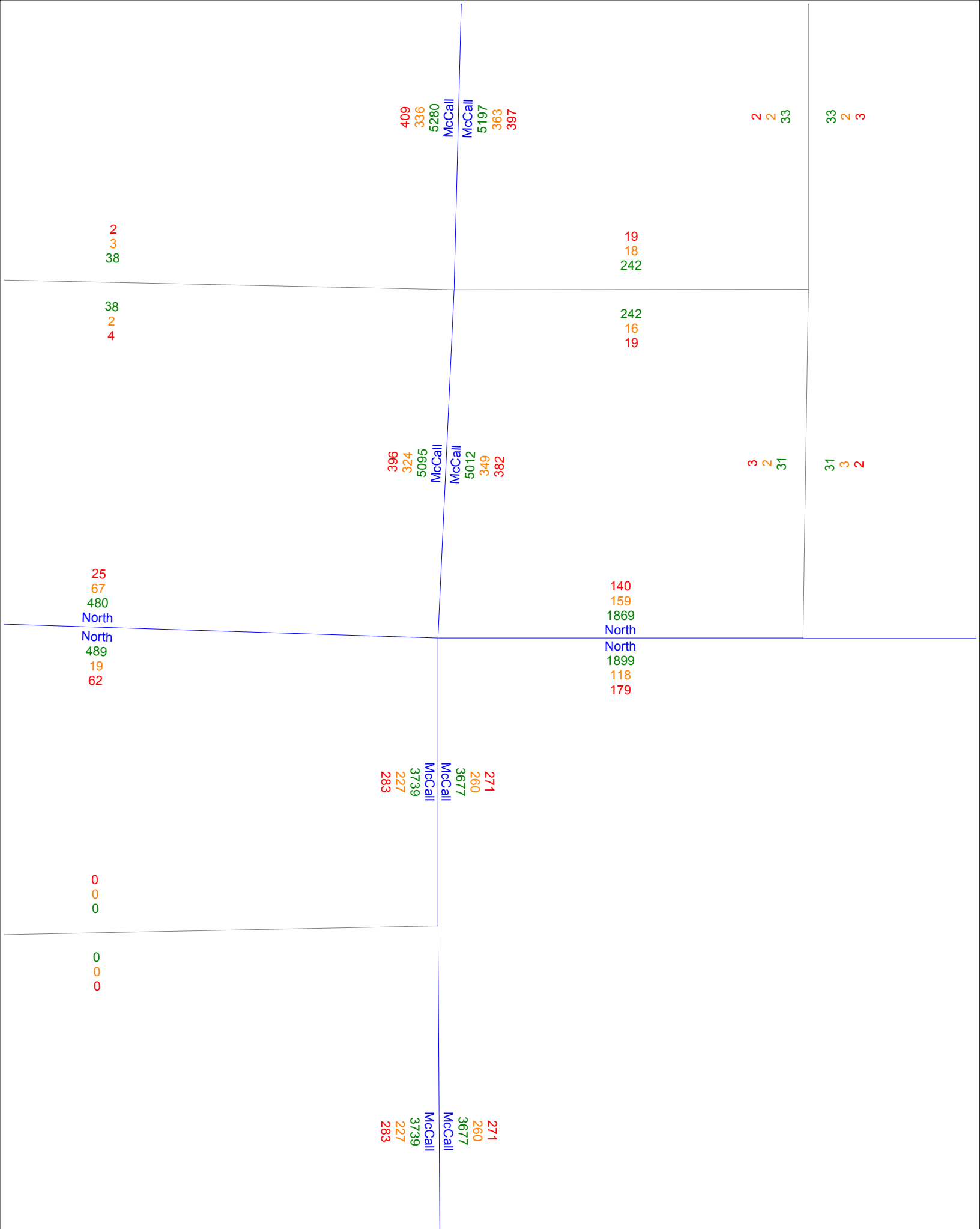

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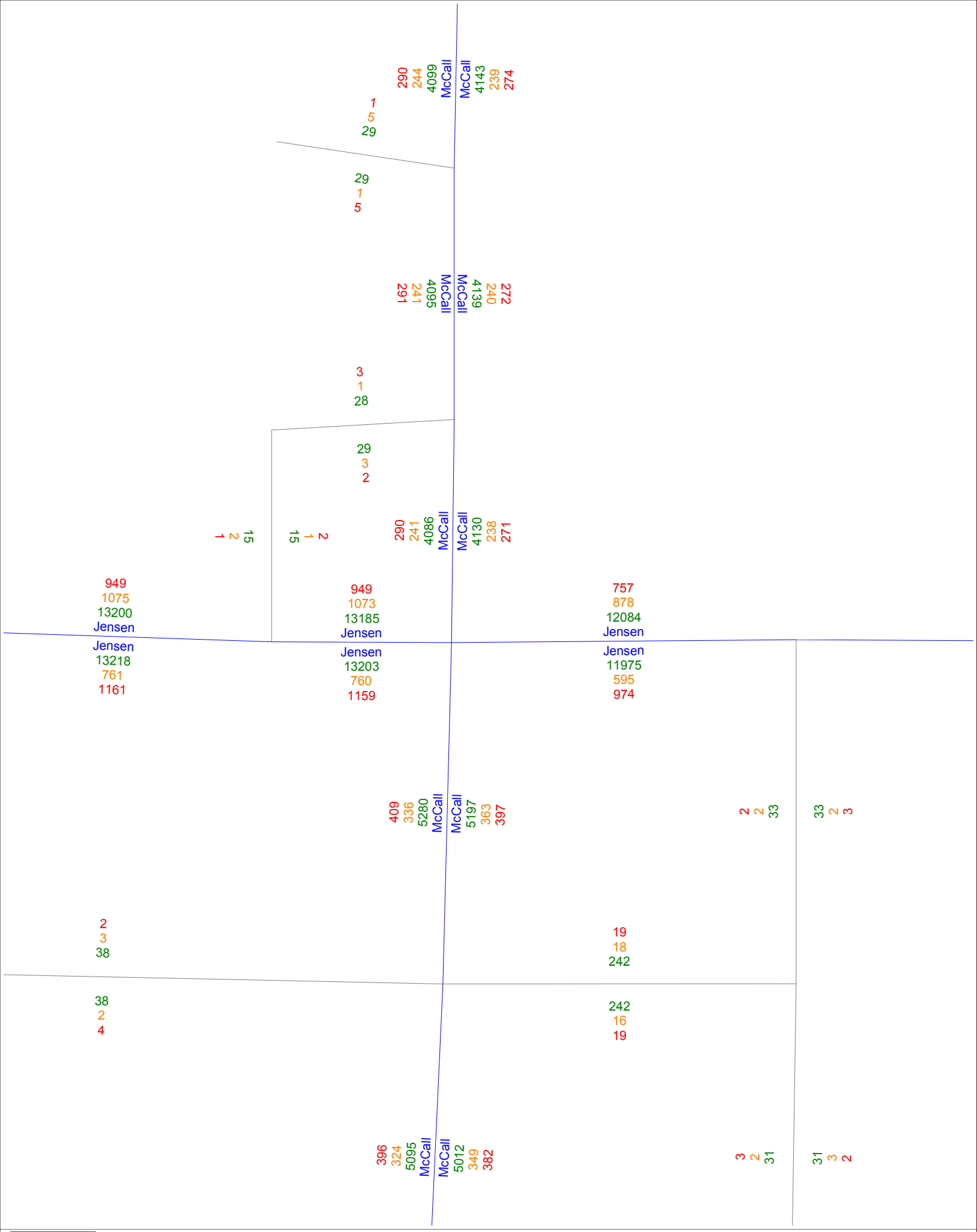

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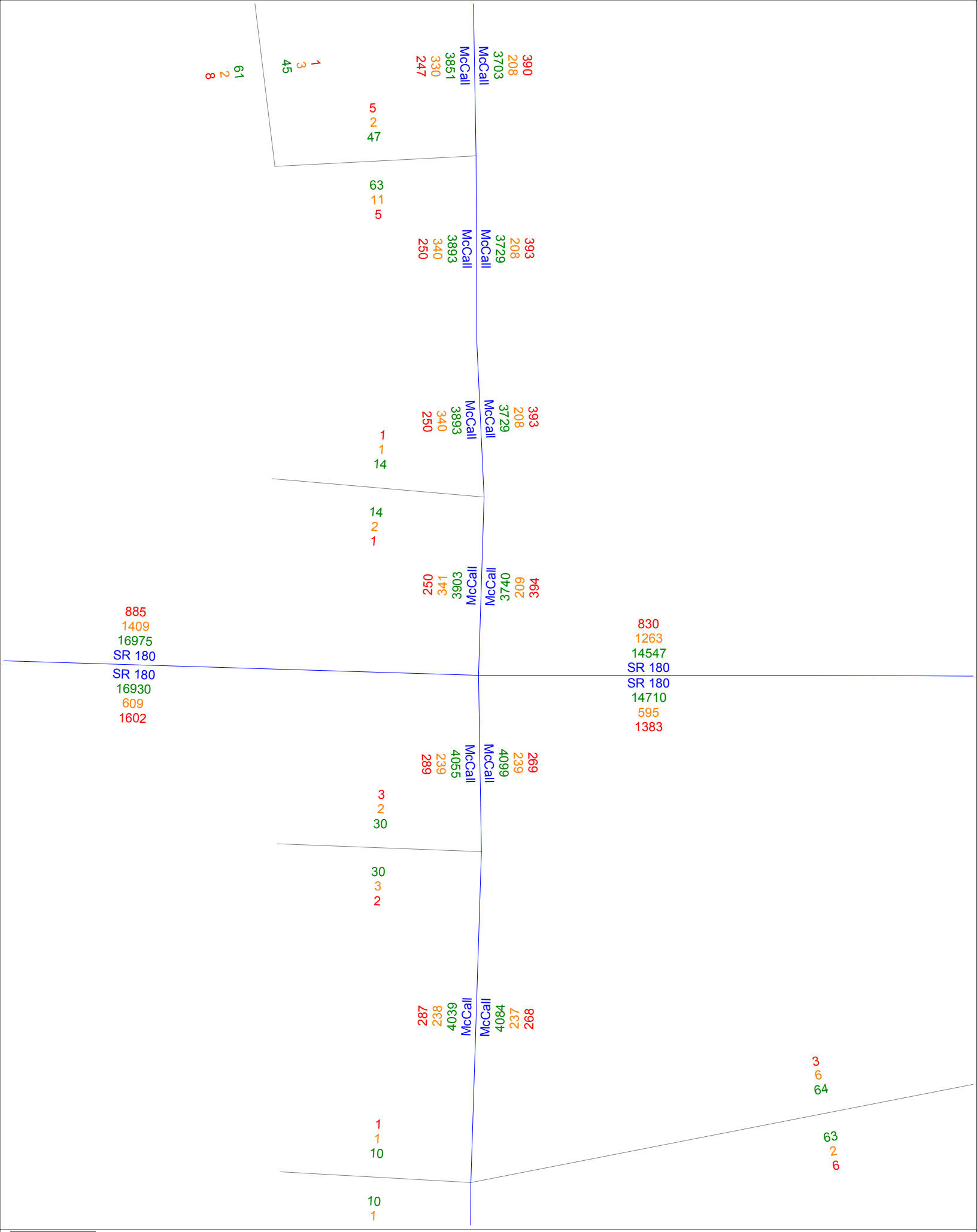

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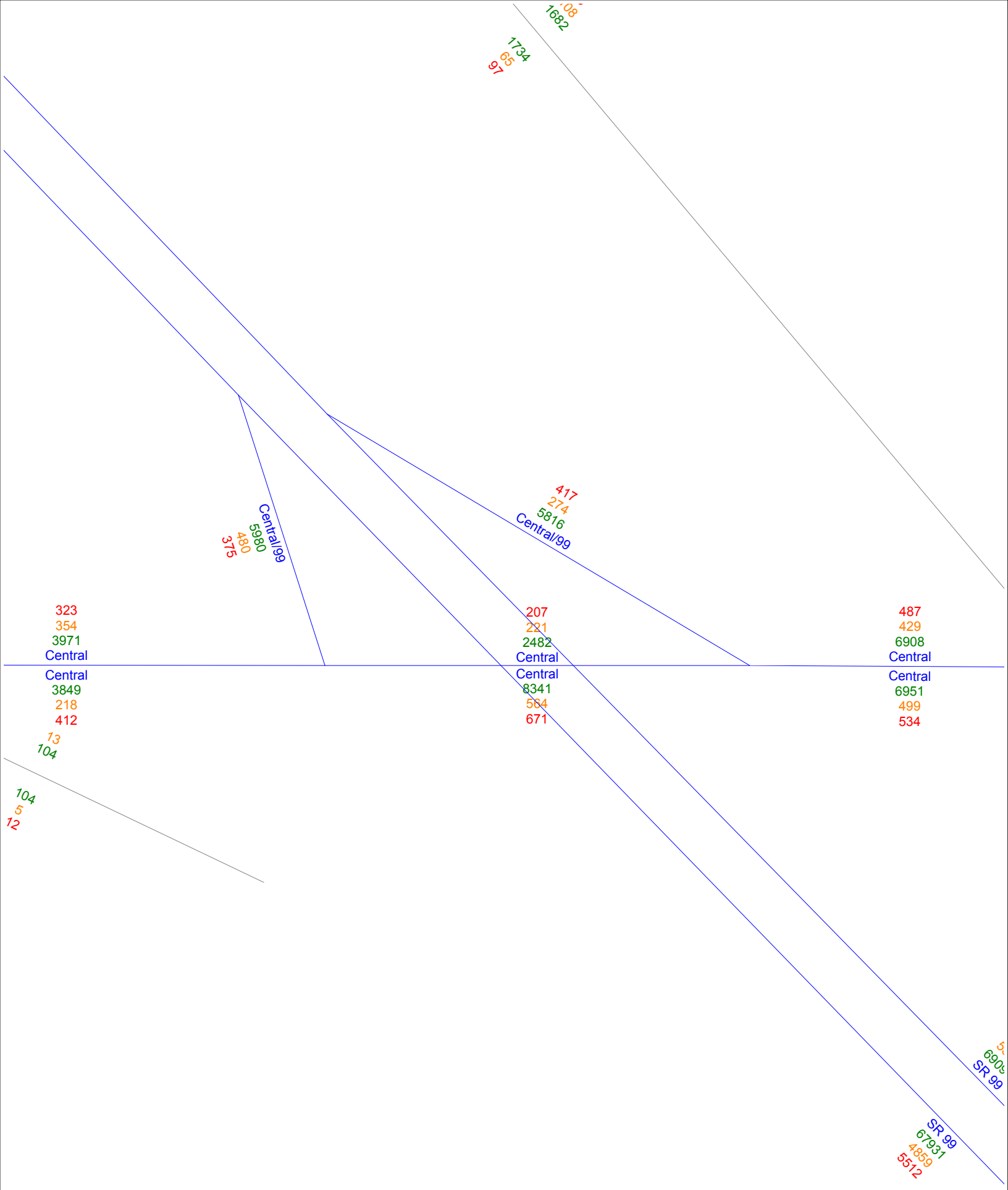
YEAR 2035 FRESNO COG MODEL PLOTS



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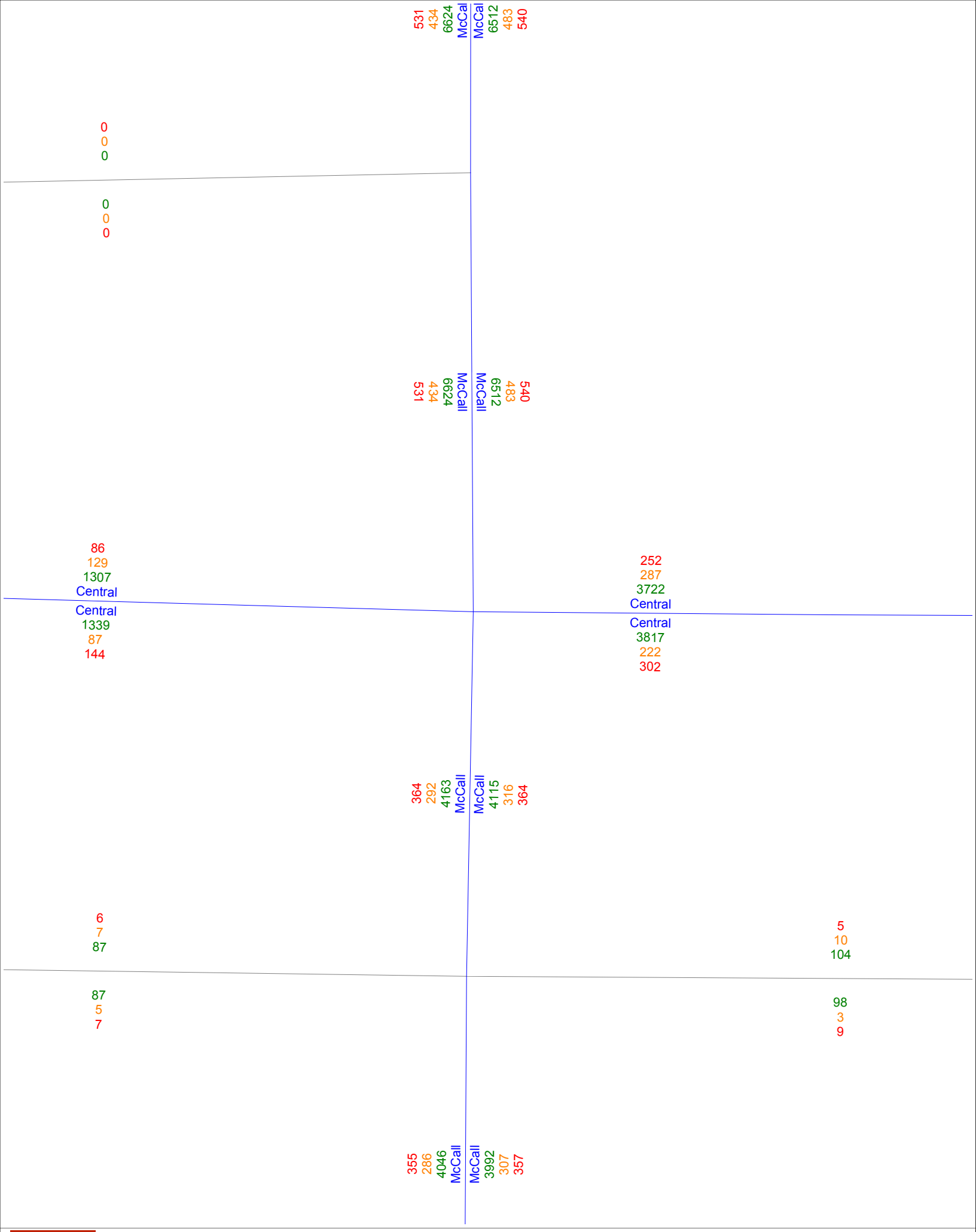

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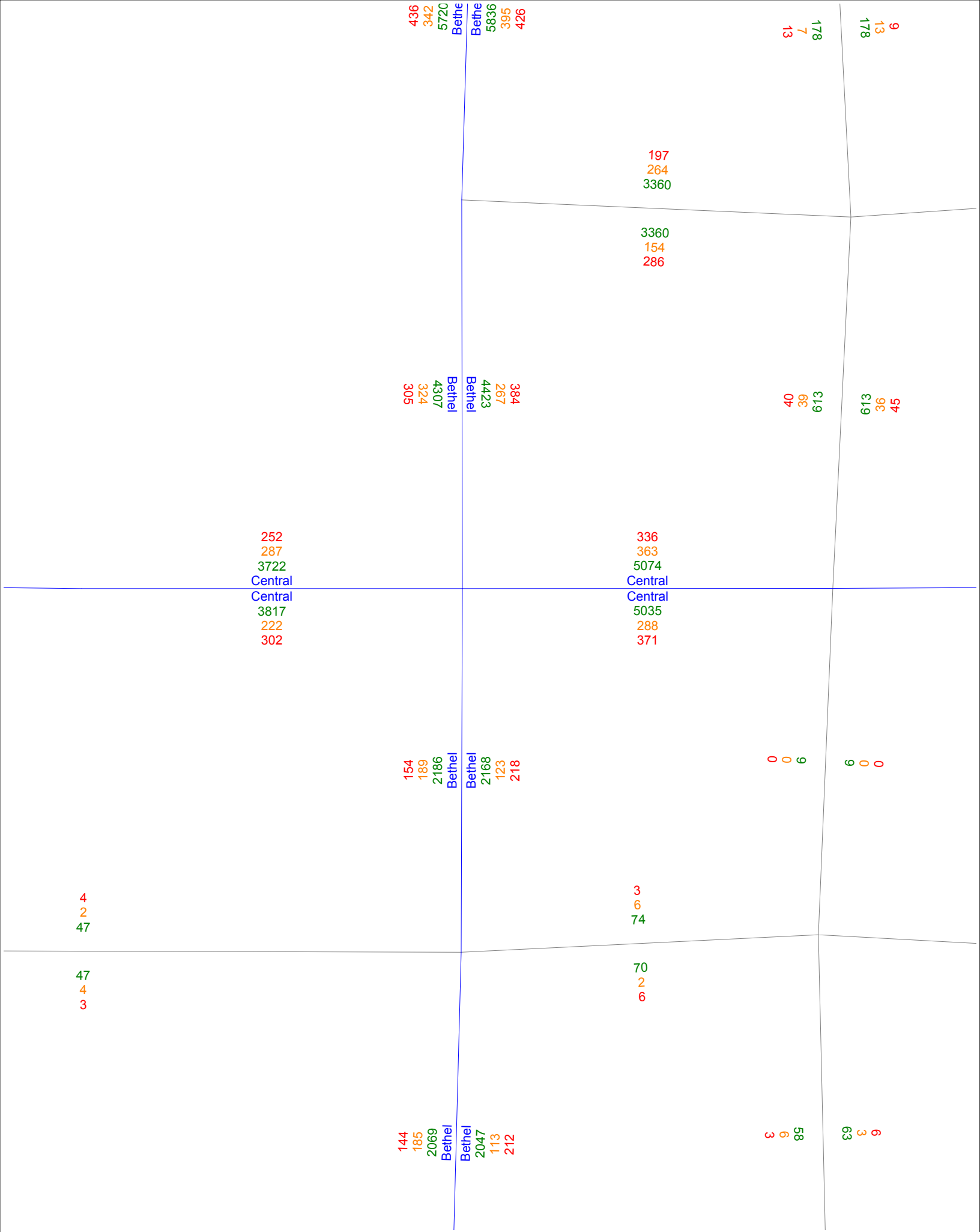

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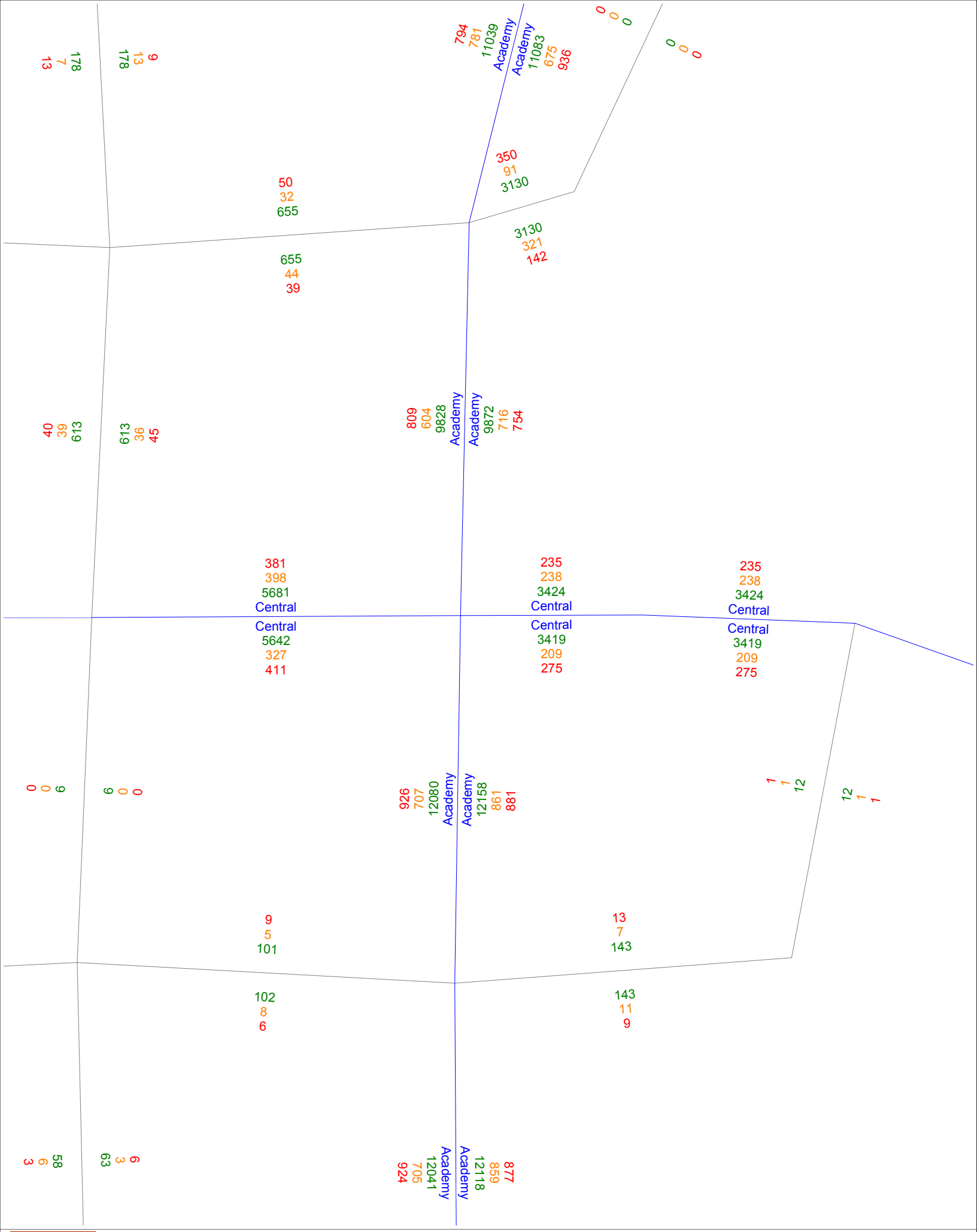

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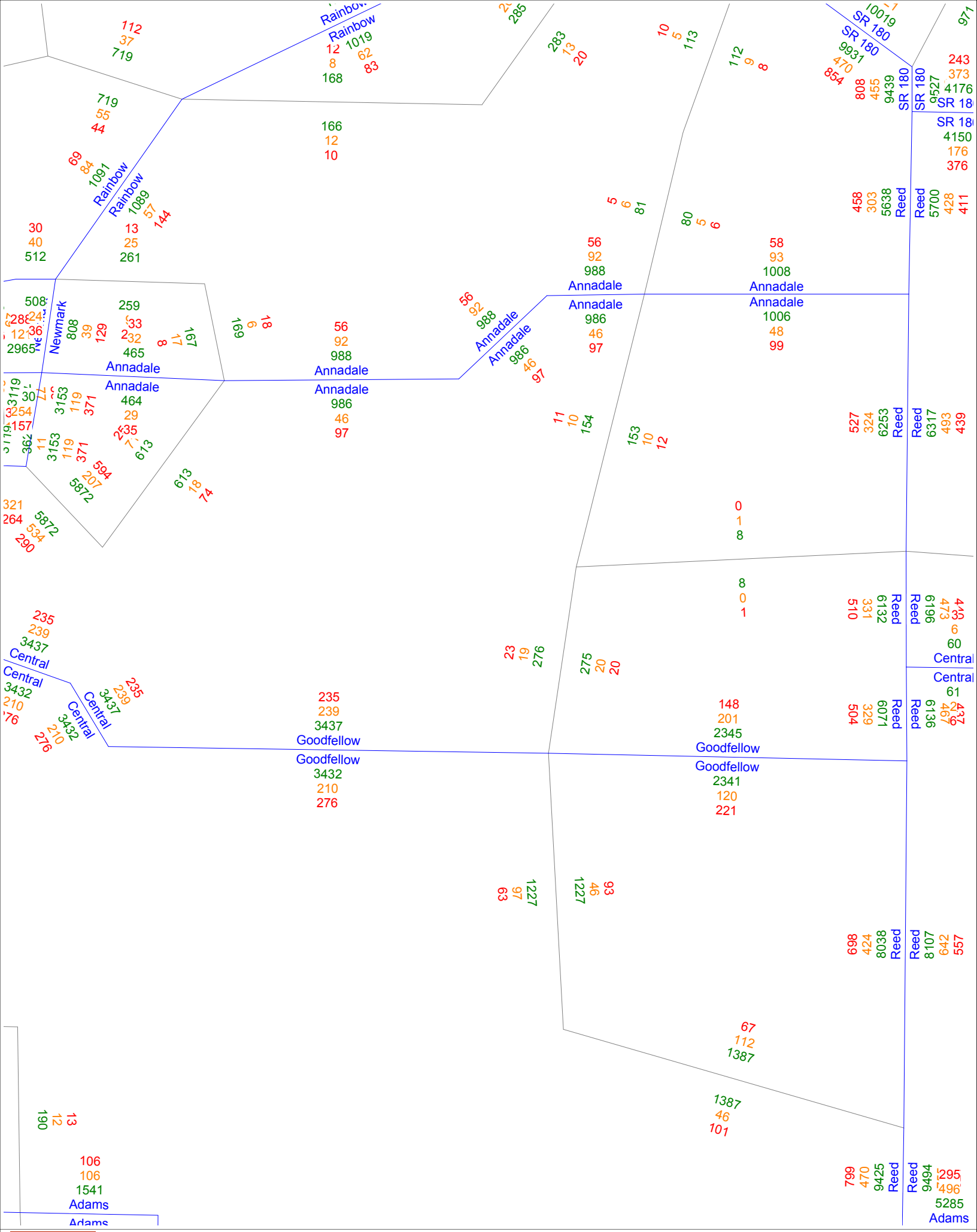
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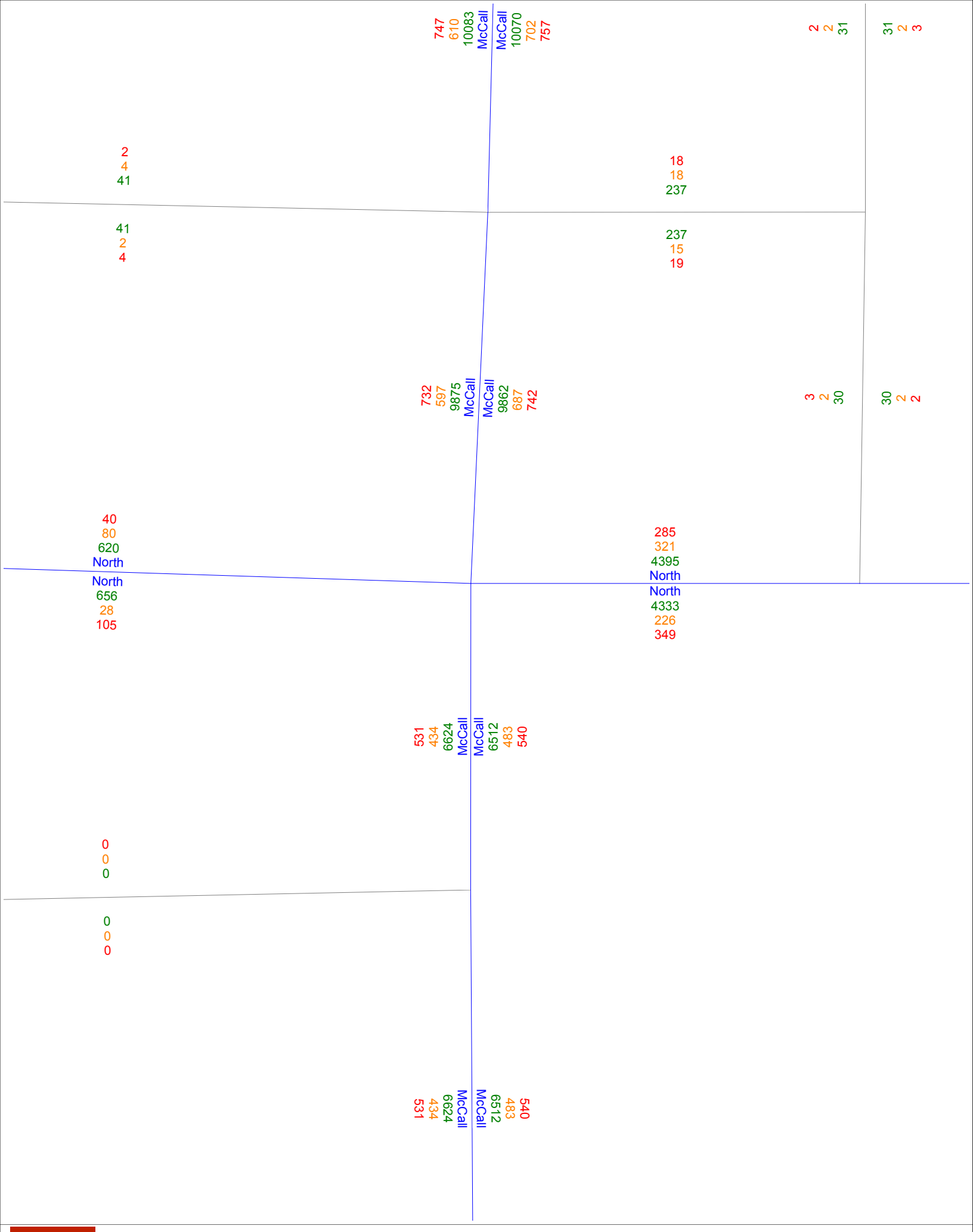
Rainbow
Rainbow
Rainbow
Newmark
Annadale
Annadale
Annadale



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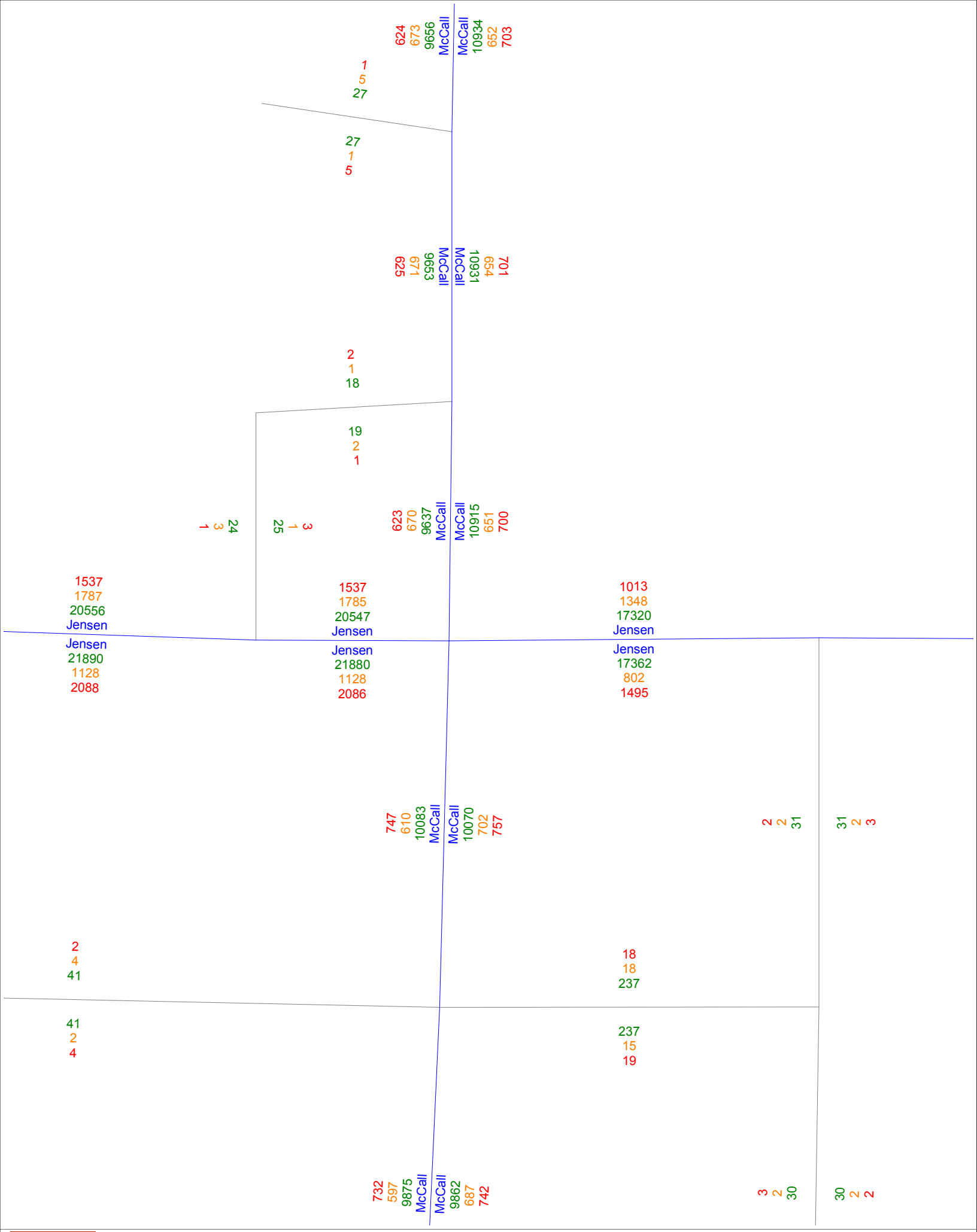

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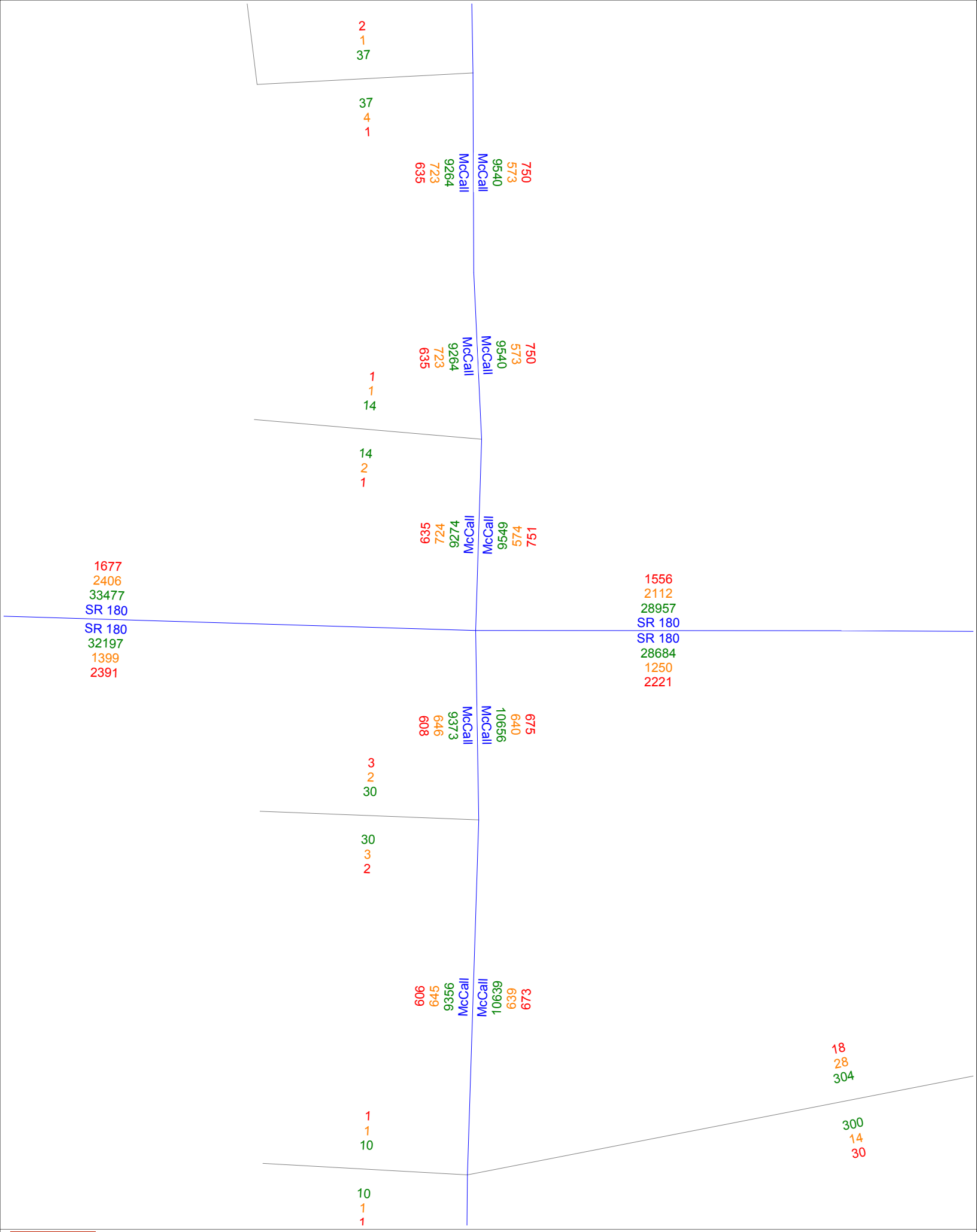

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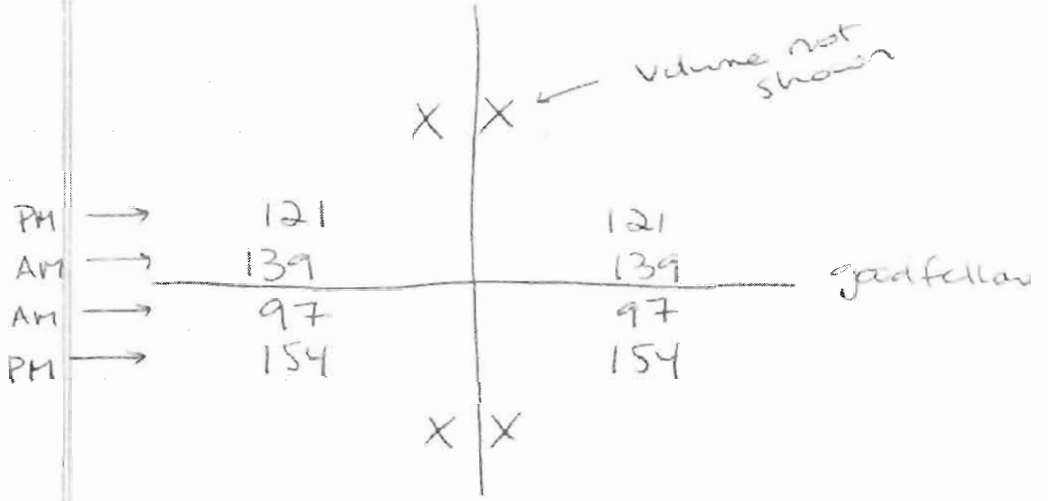
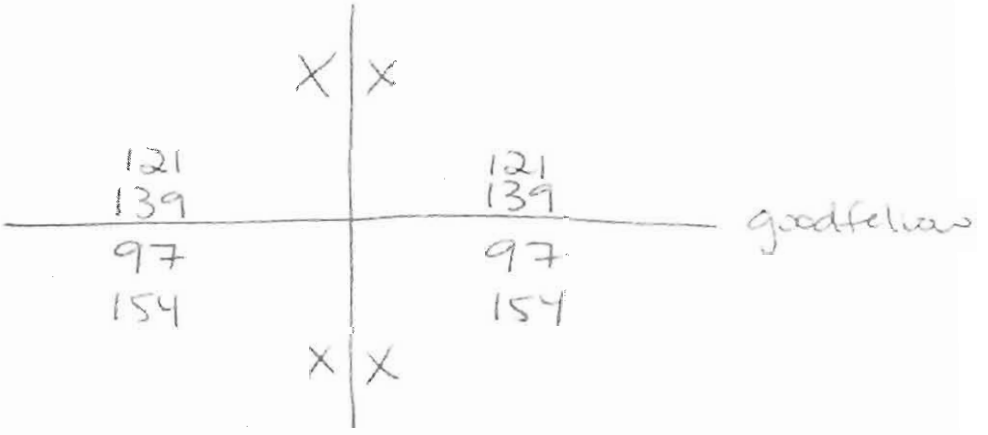
2011 MODEL PLOTS

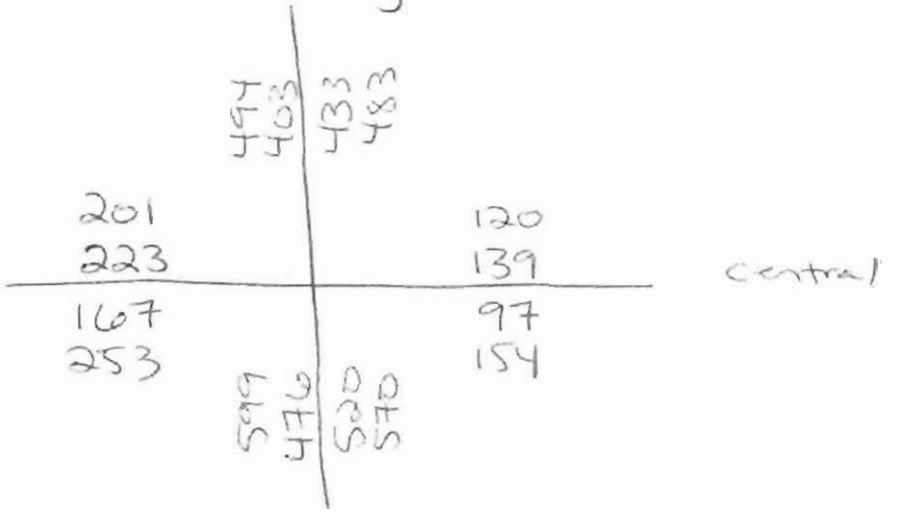
1) Goodfellow / Riverbend



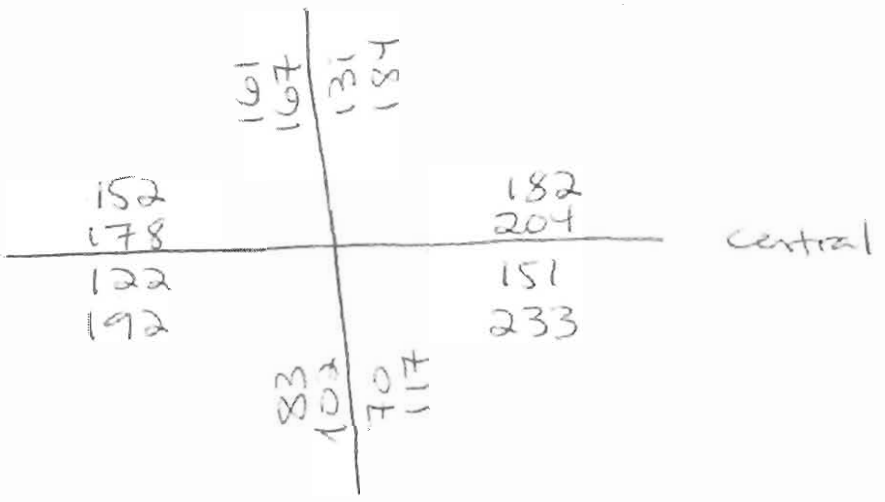
2) Central / Goodfellow / Newmark



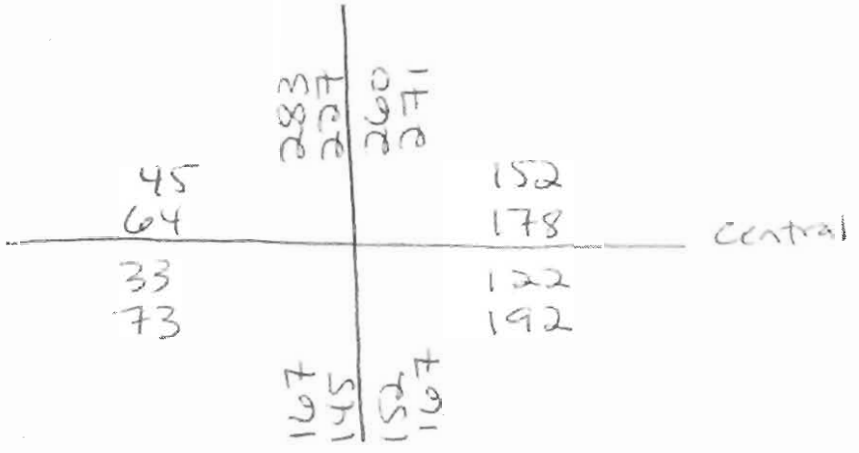
3) Central / Academy



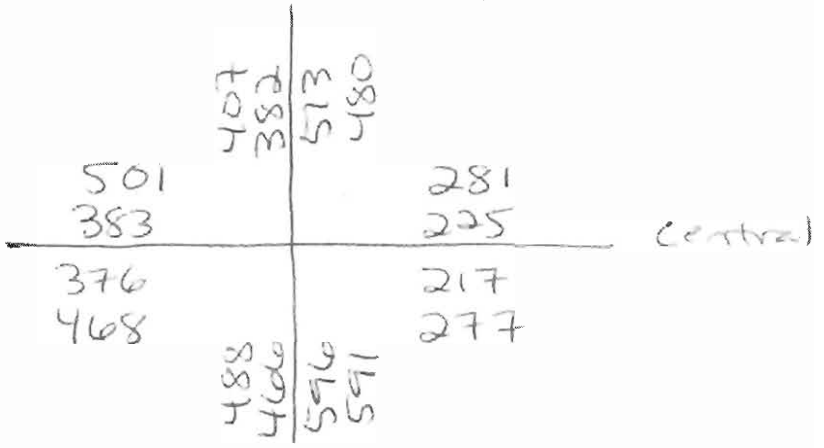
4) Central / Bethel



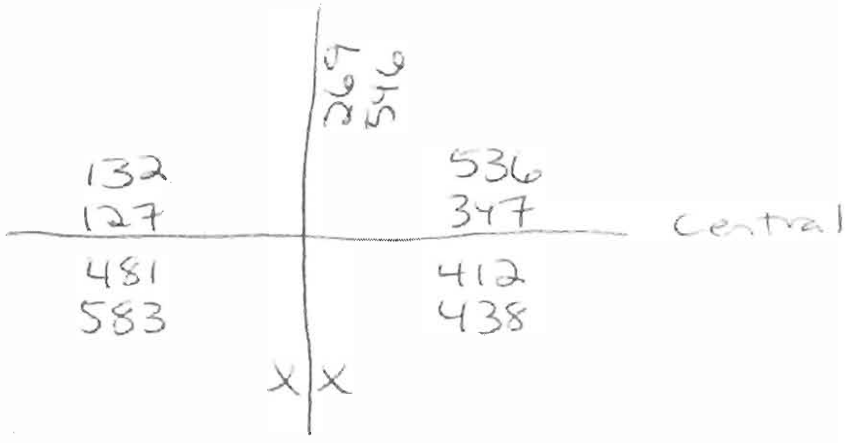
5) Central / McCall



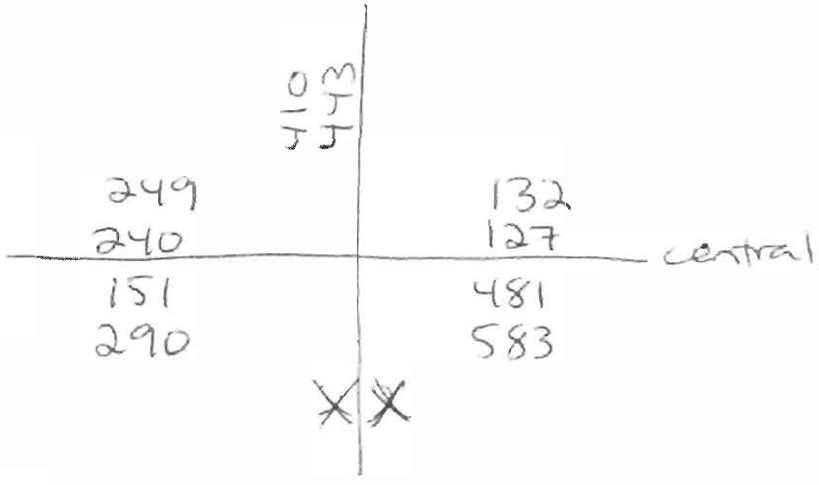
10) Central / Chestnut



11) Central / 99 NB on

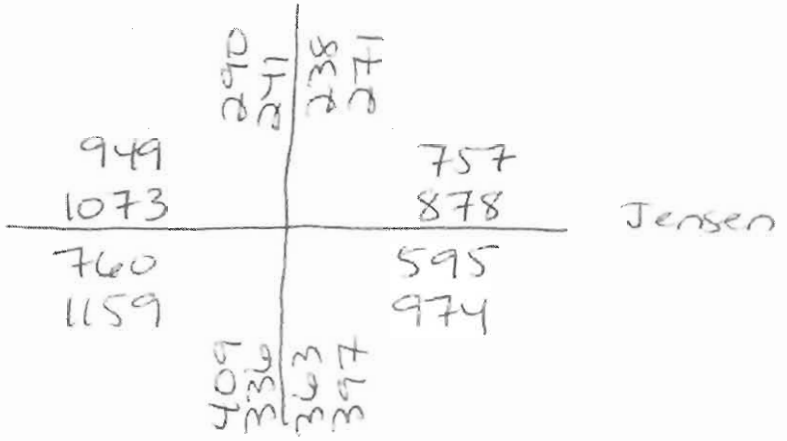


12) Central / 99 SB off

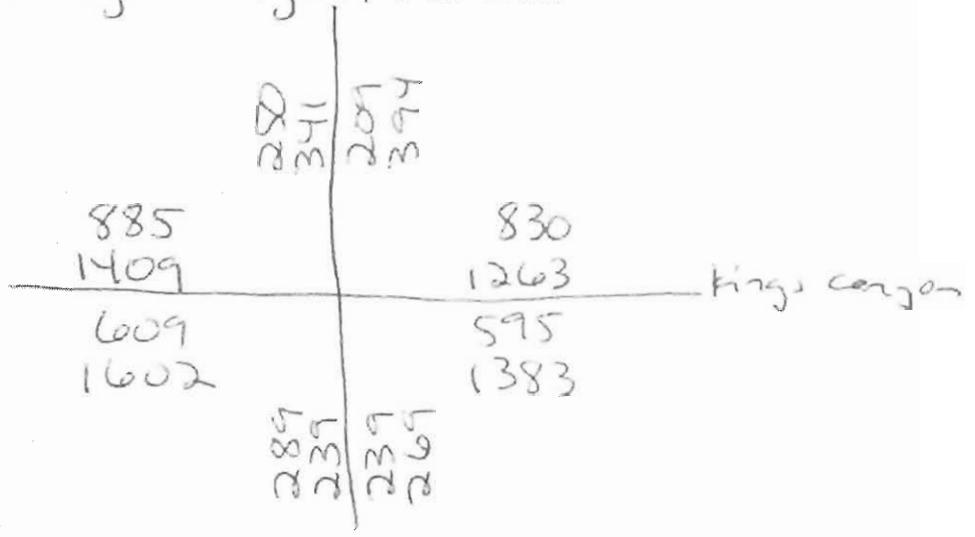


13) North / McCall

14) Jensen / McCall



15) Kings Canyon / McCall



greenroom

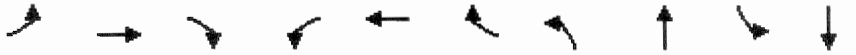
APPENDIX J

Queuing Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	487	32	703	183	447	173	427
v/c Ratio	0.15	0.49	0.26	0.66	0.89	0.80	0.84	0.77
Control Delay	35.3	21.7	37.8	23.6	75.9	33.5	67.9	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	21.7	37.8	23.6	75.9	33.5	67.9	30.8
Queue Length 50th (ft)	7	72	12	113	69	147	65	137
Queue Length 95th (ft)	24	124	38	196	#166	223	#201	268
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	123	991	123	1066	205	716	205	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.49	0.26	0.66	0.89	0.62	0.84	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	482	417	34	540	23	460	115	21	299
v/c Ratio	0.19	0.55	0.59	0.15	0.72	0.07	1.31	0.14	0.09	0.78
Control Delay	30.1	25.3	7.1	29.6	32.0	11.2	187.0	14.2	28.9	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	25.3	7.1	29.6	32.0	11.2	187.0	14.2	28.9	39.3
Queue Length 50th (ft)	17	77	0	14	117	0	~277	26	8	109
Queue Length 95th (ft)	43	146	60	31	134	13	#411	70	26	#212
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	223	873	704	223	747	352	351	802	223	416
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.55	0.59	0.15	0.72	0.07	1.31	0.14	0.09	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	622	27	502	87	260	194	244
v/c Ratio	0.35	0.54	0.20	0.46	0.43	0.63	0.88	0.43
Control Delay	37.4	19.5	33.8	16.2	34.4	27.8	69.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	19.5	33.8	16.2	34.4	27.8	69.6	21.8
Queue Length 50th (ft)	17	83	10	64	32	87	76	83
Queue Length 95th (ft)	47	163	33	115	77	153	#197	138
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	132	1150	132	1094	221	763	221	768
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.54	0.20	0.46	0.39	0.34	0.88	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	78	1083	300	22	337	21	292	182	38	153
v/c Ratio	0.32	0.79	0.38	0.09	0.35	0.05	0.98	0.35	0.16	0.43
Control Delay	31.3	25.6	4.4	28.2	22.3	10.2	83.9	22.1	29.2	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	25.6	4.4	28.2	22.3	10.2	83.9	22.1	29.2	24.2
Queue Length 50th (ft)	29	176	0	8	59	0	~142	48	14	44
Queue Length 95th (ft)	70	#438	56	28	102	16	#282	115	41	94
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	259	1375	797	238	959	444	297	576	238	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.79	0.38	0.09	0.35	0.05	0.98	0.32	0.16	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	481	32	703	178	248	173	260
v/c Ratio	0.13	0.44	0.24	0.60	0.78	0.59	0.76	0.62
Control Delay	31.6	18.1	33.4	19.0	55.0	26.7	52.7	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	18.1	33.4	19.0	55.0	26.7	52.7	26.9
Queue Length 50th (ft)	6	57	10	91	57	70	55	72
Queue Length 95th (ft)	23	113	36	180	#148	121	#185	154
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	136	1096	136	1180	227	794	227	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.44	0.24	0.60	0.78	0.31	0.76	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	657	251	34	637	23	291	107	21	291
v/c Ratio	0.19	0.75	0.43	0.15	0.85	0.07	0.83	0.13	0.09	0.77
Control Delay	30.1	31.9	6.6	29.6	39.5	11.2	50.1	14.0	28.9	37.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	31.9	6.6	29.6	39.5	11.2	50.1	14.0	28.9	37.7
Queue Length 50th (ft)	17	112	0	14	144	0	125	23	8	105
Queue Length 95th (ft)	43	#240	50	31	#165	13	#239	65	26	#202
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	223	875	580	223	749	353	352	799	223	418
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.75	0.43	0.15	0.85	0.07	0.83	0.13	0.09	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	622	27	502	87	249	194	232
v/c Ratio	0.35	0.54	0.20	0.46	0.42	0.62	0.87	0.42
Control Delay	37.0	19.2	33.4	16.0	34.0	27.4	68.3	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	19.2	33.4	16.0	34.0	27.4	68.3	21.6
Queue Length 50th (ft)	17	82	10	63	32	82	76	78
Queue Length 95th (ft)	47	160	33	114	77	146	#195	131
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	133	1157	133	1100	222	768	222	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.54	0.20	0.46	0.39	0.32	0.87	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	78	1093	289	22	349	21	280	182	38	153
v/c Ratio	0.32	0.79	0.37	0.09	0.36	0.05	0.94	0.35	0.16	0.43
Control Delay	31.3	25.8	4.5	28.2	22.4	10.2	74.7	22.1	29.2	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	25.8	4.5	28.2	22.4	10.2	74.7	22.1	29.2	24.2
Queue Length 50th (ft)	29	178	0	8	61	0	~132	48	14	44
Queue Length 95th (ft)	70	#443	55	28	105	16	#268	115	41	94
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	259	1375	791	238	959	444	297	576	238	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.79	0.37	0.09	0.36	0.05	0.94	0.32	0.16	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	487	32	703	183	447	173	427
v/c Ratio	0.15	0.49	0.26	0.66	0.89	0.80	0.84	0.77
Control Delay	35.3	21.7	37.8	23.6	75.9	33.5	67.9	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	21.7	37.8	23.6	75.9	33.5	67.9	30.8
Queue Length 50th (ft)	7	72	12	113	69	147	65	137
Queue Length 95th (ft)	24	124	38	196	#166	223	#201	268
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	123	991	123	1066	205	716	205	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.49	0.26	0.66	0.89	0.62	0.84	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	657	417	34	637	23	460	115	21	299
v/c Ratio	0.19	0.75	0.59	0.15	0.85	0.07	1.31	0.14	0.09	0.78
Control Delay	30.1	32.0	7.1	29.6	39.8	11.2	187.0	14.2	28.9	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	32.0	7.1	29.6	39.8	11.2	187.0	14.2	28.9	39.3
Queue Length 50th (ft)	17	112	0	14	144	0	~277	26	8	109
Queue Length 95th (ft)	43	#240	60	31	#165	13	#411	70	26	#212
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	223	873	704	223	747	352	351	802	223	416
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.75	0.59	0.15	0.85	0.07	1.31	0.14	0.09	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	622	27	502	87	260	194	244
v/c Ratio	0.35	0.54	0.20	0.46	0.43	0.63	0.88	0.43
Control Delay	37.4	19.5	33.8	16.2	34.4	27.8	69.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	19.5	33.8	16.2	34.4	27.8	69.6	21.8
Queue Length 50th (ft)	17	83	10	64	32	87	76	83
Queue Length 95th (ft)	47	163	33	115	77	153	#197	138
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	132	1150	132	1094	221	763	221	768
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.54	0.20	0.46	0.39	0.34	0.88	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	78	1093	300	22	349	21	292	182	38	153
v/c Ratio	0.32	0.79	0.38	0.09	0.36	0.05	0.98	0.35	0.16	0.43
Control Delay	31.3	25.8	4.4	28.2	22.4	10.2	83.9	22.1	29.2	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	25.8	4.4	28.2	22.4	10.2	83.9	22.1	29.2	24.2
Queue Length 50th (ft)	29	178	0	8	61	0	~142	48	14	44
Queue Length 95th (ft)	70	#443	56	28	105	16	#282	115	41	94
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	259	1375	797	238	959	444	297	576	238	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.79	0.38	0.09	0.36	0.05	0.98	0.32	0.16	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	539	32	806	211	296	180	329
v/c Ratio	0.24	0.51	0.24	0.76	0.97	0.62	0.83	0.69
Control Delay	35.6	20.4	35.6	26.8	87.7	26.3	62.2	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	20.4	35.6	26.8	87.7	26.3	62.2	27.9
Queue Length 50th (ft)	11	71	11	118	72	87	60	95
Queue Length 95th (ft)	36	136	38	#259	#195	143	#208	193
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	131	1055	131	1056	218	763	218	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.51	0.24	0.76	0.97	0.39	0.83	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	771	275	41	721	35	320	154	29	356
v/c Ratio	0.27	1.06	0.50	0.19	0.99	0.10	0.93	0.20	0.13	0.87
Control Delay	31.5	78.7	7.3	30.1	60.6	9.9	65.6	16.8	29.4	49.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	78.7	7.3	30.1	60.6	9.9	65.6	16.8	29.4	49.2
Queue Length 50th (ft)	24	~210	0	16	~186	0	~142	36	12	139
Queue Length 95th (ft)	55	#299	52	36	#208	16	#269	90	33	#274
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	218	730	545	218	730	354	343	754	218	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	1.06	0.50	0.19	0.99	0.10	0.93	0.20	0.13	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	762	27	559	121	289	201	289
v/c Ratio	0.67	0.64	0.21	0.54	0.60	0.67	0.96	0.57
Control Delay	60.2	22.6	35.0	19.6	43.5	29.4	87.8	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	22.6	35.0	19.6	43.5	29.4	87.8	25.5
Queue Length 50th (ft)	33	112	10	82	47	100	81	100
Queue Length 95th (ft)	#101	#231	34	142	#125	171	#211	161
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	126	1183	126	1032	210	726	210	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.64	0.21	0.54	0.58	0.40	0.96	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	86	1223	300	30	406	30	300	239	57	203
v/c Ratio	0.38	1.06	0.42	0.14	0.47	0.07	1.18	0.45	0.26	0.58
Control Delay	33.3	69.9	5.2	29.4	24.3	9.3	145.6	25.0	31.5	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	69.9	5.2	29.4	24.3	9.3	145.6	25.0	31.5	29.0
Queue Length 50th (ft)	34	228	0	12	77	0	~161	90	22	67
Queue Length 95th (ft)	75	#510	56	35	122	19	#289	149	55	129
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	235	1156	718	216	870	412	254	544	216	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	1.06	0.42	0.14	0.47	0.07	1.18	0.44	0.26	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	544	32	806	216	494	180	496
v/c Ratio	0.27	0.56	0.27	0.83	1.09	0.84	0.90	0.85
Control Delay	38.4	23.2	38.4	32.7	122.6	36.1	78.7	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	23.2	38.4	32.7	122.6	36.1	78.7	36.5
Queue Length 50th (ft)	12	88	12	147	~98	168	72	167
Queue Length 95th (ft)	36	138	38	#262	#201	250	#210	#363
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	120	967	120	969	199	699	199	693
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.56	0.27	0.83	1.09	0.71	0.90	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	771	441	41	721	35	489	162	29	364
v/c Ratio	0.27	1.06	0.65	0.19	0.99	0.10	1.43	0.21	0.13	0.89
Control Delay	31.5	78.9	8.2	30.1	60.8	9.9	234.0	16.9	29.4	52.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	78.9	8.2	30.1	60.8	9.9	234.0	16.9	29.4	52.0
Queue Length 50th (ft)	24	~210	0	16	~186	0	~304	38	12	144
Queue Length 95th (ft)	55	#299	62	36	#208	16	#441	95	33	#283
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	218	730	676	218	730	354	343	755	218	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	1.06	0.65	0.19	0.99	0.10	1.43	0.21	0.13	0.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	762	27	559	121	300	201	300
v/c Ratio	0.67	0.65	0.22	0.55	0.60	0.68	0.97	0.58
Control Delay	60.9	22.9	35.4	19.9	44.0	29.6	89.5	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	22.9	35.4	19.9	44.0	29.6	89.5	25.6
Queue Length 50th (ft)	34	113	10	83	47	105	~82	105
Queue Length 95th (ft)	#103	#235	35	144	#126	178	#213	168
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	125	1175	125	1025	208	722	208	722
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.65	0.22	0.55	0.58	0.42	0.97	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

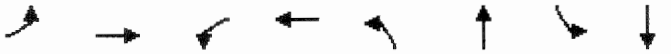
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	86	1223	311	30	406	30	312	239	57	203
v/c Ratio	0.38	1.06	0.43	0.14	0.47	0.07	1.23	0.45	0.26	0.58
Control Delay	33.3	69.9	5.3	29.4	24.3	9.3	162.6	25.0	31.5	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	69.9	5.3	29.4	24.3	9.3	162.6	25.0	31.5	29.0
Queue Length 50th (ft)	34	228	0	12	77	0	~172	90	22	67
Queue Length 95th (ft)	75	#510	57	35	122	19	#302	149	55	129
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	235	1156	726	216	870	412	254	544	216	403
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	1.06	0.43	0.14	0.47	0.07	1.23	0.44	0.26	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	567	32	855	226	317	184	365
v/c Ratio	0.34	0.52	0.26	0.85	1.09	0.64	0.88	0.74
Control Delay	39.9	20.9	37.6	33.2	122.7	27.3	74.1	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	20.9	37.6	33.2	122.7	27.3	74.1	30.1
Queue Length 50th (ft)	17	82	13	172	~116	116	78	131
Queue Length 95th (ft)	44	145	38	#288	#212	153	#215	217
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	125	1086	125	1007	208	726	208	717
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.52	0.26	0.85	1.09	0.44	0.88	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	826	287	45	763	41	334	179	34	389
v/c Ratio	0.30	1.13	0.52	0.21	1.05	0.11	0.97	0.24	0.16	0.96
Control Delay	32.1	104.5	7.4	30.4	75.6	9.6	74.5	17.1	29.7	63.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	104.5	7.4	30.4	75.6	9.6	74.5	17.1	29.7	63.2
Queue Length 50th (ft)	27	~236	0	18	~206	0	~162	43	14	~172
Queue Length 95th (ft)	60	#327	53	38	#227	17	#285	104	37	#310
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	218	730	554	218	730	359	343	754	218	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	1.13	0.52	0.21	1.05	0.11	0.97	0.24	0.16	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	106	832	27	585	138	306	203	317
v/c Ratio	0.89	0.68	0.23	0.60	0.70	0.68	1.03	0.70
Control Delay	95.5	24.5	36.3	21.9	51.0	29.7	105.7	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.5	24.5	36.3	21.9	51.0	29.7	105.7	30.6
Queue Length 50th (ft)	44	131	11	92	55	108	~86	112
Queue Length 95th (ft)	#132	#278	35	157	#152	181	#220	177
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	119	1218	119	977	198	689	198	688
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.68	0.23	0.60	0.70	0.44	1.03	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

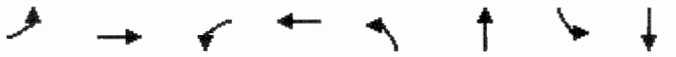
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	1288	306	33	435	34	309	266	68	226
v/c Ratio	0.39	1.12	0.43	0.15	0.50	0.08	1.22	0.49	0.32	0.64
Control Delay	33.9	92.8	5.3	29.8	25.0	9.0	161.1	25.9	32.8	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	92.8	5.3	29.8	25.0	9.0	161.1	25.9	32.8	31.3
Queue Length 50th (ft)	36	257	0	13	86	0	~174	102	27	78
Queue Length 95th (ft)	77	#543	57	37	130	21	#299	166	63	145
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	234	1147	719	215	866	413	253	544	215	400
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	1.12	0.43	0.15	0.50	0.08	1.22	0.49	0.32	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	572	32	855	232	515	184	532
v/c Ratio	0.37	0.57	0.28	0.92	1.21	0.86	0.96	0.89
Control Delay	43.0	23.5	40.0	42.6	169.0	38.4	94.6	41.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	23.5	40.0	42.6	169.0	38.4	94.6	41.9
Queue Length 50th (ft)	19	98	15	200	~142	218	~95	224
Queue Length 95th (ft)	44	146	38	#288	#219	263	#215	#404
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	114	999	114	928	191	668	191	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.57	0.28	0.92	1.21	0.77	0.96	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

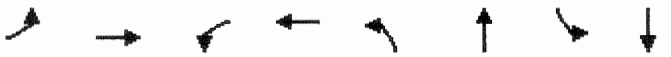
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	826	454	45	763	41	504	187	34	397
v/c Ratio	0.30	1.13	0.66	0.21	1.05	0.11	1.47	0.25	0.16	0.98
Control Delay	32.1	104.5	8.3	30.4	75.6	9.6	252.4	17.2	29.7	68.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	104.5	8.3	30.4	75.6	9.6	252.4	17.2	29.7	68.2
Queue Length 50th (ft)	27	~236	0	18	~206	0	~318	45	14	~180
Queue Length 95th (ft)	60	#327	62	38	#227	17	#455	108	37	#319
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	218	730	686	218	730	359	343	755	218	406
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	1.13	0.66	0.21	1.05	0.11	1.47	0.25	0.16	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	106	832	27	585	138	317	203	329
v/c Ratio	0.90	0.69	0.23	0.60	0.70	0.69	1.03	0.71
Control Delay	97.3	25.0	36.7	22.3	51.9	29.8	108.0	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.3	25.0	36.7	22.3	51.9	29.8	108.0	30.8
Queue Length 50th (ft)	44	132	11	93	55	112	~88	117
Queue Length 95th (ft)	#134	#283	35	160	#154	188	#222	183
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	118	1208	118	970	197	684	197	683
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.69	0.23	0.60	0.70	0.46	1.03	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

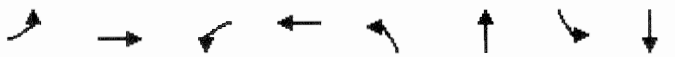
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	1288	317	33	435	34	321	266	68	226
v/c Ratio	0.39	1.12	0.44	0.15	0.50	0.08	1.27	0.49	0.32	0.64
Control Delay	33.9	92.8	5.3	29.8	25.0	9.0	178.9	25.9	32.8	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	92.8	5.3	29.8	25.0	9.0	178.9	25.9	32.8	31.3
Queue Length 50th (ft)	36	257	0	13	86	0	~185	102	27	78
Queue Length 95th (ft)	77	#543	57	37	130	21	#312	166	63	145
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	234	1147	727	215	866	413	253	544	215	400
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	1.12	0.44	0.15	0.50	0.08	1.27	0.49	0.32	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	596	32	904	242	340	187	400
v/c Ratio	0.43	0.56	0.26	0.91	1.19	0.66	0.92	0.77
Control Delay	44.7	21.9	38.3	39.7	155.5	27.4	80.8	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	21.9	38.3	39.7	155.5	27.4	80.8	31.6
Queue Length 50th (ft)	22	91	13	193	~135	126	82	147
Queue Length 95th (ft)	#52	153	38	#314	#227	164	#219	241
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	122	1067	122	991	204	714	204	704
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.56	0.26	0.91	1.19	0.48	0.92	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

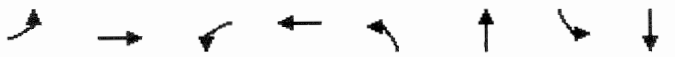
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	74	882	300	49	805	49	349	203	38	421
v/c Ratio	0.35	1.07	0.50	0.23	1.15	0.14	1.06	0.28	0.18	1.08
Control Delay	34.0	81.4	6.8	31.4	112.3	9.0	98.6	18.2	30.5	96.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	81.4	6.8	31.4	112.3	9.0	98.6	18.2	30.5	96.2
Queue Length 50th (ft)	30	~263	0	20	~226	0	~176	50	15	~203
Queue Length 95th (ft)	65	#355	53	40	#245	18	#299	117	39	#343
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	209	827	599	209	700	353	329	718	209	391
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.07	0.50	0.23	1.15	0.14	1.06	0.28	0.18	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	128	899	27	610	155	323	207	345
v/c Ratio	1.09	0.75	0.23	0.63	0.79	0.68	1.06	0.73
Control Delay	147.3	27.5	37.1	23.5	62.0	29.4	116.6	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	147.3	27.5	37.1	23.5	62.0	29.4	116.6	31.2
Queue Length 50th (ft)	~61	150	11	102	64	115	~96	123
Queue Length 95th (ft)	#163	#322	36	171	#177	191	#228	192
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	117	1199	117	961	195	679	195	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.75	0.23	0.63	0.79	0.48	1.06	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

54: SR 180 (Kings Canyon Rd) & McCall Avenue

12/4/2012

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	1352	311	37	464	40	320	296	79	252
v/c Ratio	0.41	1.19	0.43	0.17	0.54	0.10	1.27	0.61	0.37	0.69
Control Delay	34.6	118.9	5.3	30.2	25.7	8.6	180.8	31.0	34.2	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	118.9	5.3	30.2	25.7	8.6	180.8	31.0	34.2	34.3
Queue Length 50th (ft)	38	280	0	15	94	0	~186	116	32	90
Queue Length 95th (ft)	80	#575	57	40	139	22	#311	#205	71	#181
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	233	1137	719	214	860	415	251	490	214	398
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.19	0.43	0.17	0.54	0.10	1.27	0.60	0.37	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	601	32	904	247	539	187	567
v/c Ratio	0.46	0.61	0.29	0.99	1.33	0.86	1.01	0.91
Control Delay	48.5	24.6	40.4	56.8	209.7	38.8	105.0	45.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	24.6	40.4	56.8	209.7	38.8	105.0	45.0
Queue Length 50th (ft)	24	105	15	~237	~157	232	~98	245
Queue Length 95th (ft)	#52	154	38	#314	#233	279	#219	#442
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	112	980	112	910	186	654	186	648
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.61	0.29	0.99	1.33	0.82	1.01	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	74	882	467	49	805	49	519	212	38	429
v/c Ratio	0.35	1.07	0.64	0.23	1.15	0.14	1.58	0.29	0.18	1.10
Control Delay	34.0	81.4	7.6	31.4	112.3	9.0	299.6	18.3	30.5	103.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	81.4	7.6	31.4	112.3	9.0	299.6	18.3	30.5	103.0
Queue Length 50th (ft)	30	~263	0	20	~226	0	~331	52	15	~211
Queue Length 95th (ft)	65	#355	63	40	#245	18	#470	122	39	#352
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	209	827	727	209	700	353	329	719	209	391
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.07	0.64	0.23	1.15	0.14	1.58	0.29	0.18	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	128	899	27	610	155	333	207	357
v/c Ratio	1.10	0.75	0.23	0.64	0.80	0.69	1.07	0.74
Control Delay	149.9	27.9	37.3	23.7	62.7	29.8	118.5	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.9	27.9	37.3	23.7	62.7	29.8	118.5	31.8
Queue Length 50th (ft)	~62	152	11	103	64	120	~98	129
Queue Length 95th (ft)	#163	#322	36	171	#177	199	#228	199
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	116	1192	116	955	194	675	194	673
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.75	0.23	0.64	0.80	0.49	1.07	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	1352	322	37	464	40	331	296	79	252
v/c Ratio	0.41	1.19	0.44	0.17	0.54	0.10	1.32	0.61	0.37	0.69
Control Delay	34.6	118.9	5.3	30.2	25.7	8.6	197.9	31.0	34.2	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	118.9	5.3	30.2	25.7	8.6	197.9	31.0	34.2	34.3
Queue Length 50th (ft)	38	280	0	15	94	0	~196	116	32	90
Queue Length 95th (ft)	80	#575	58	40	139	22	#323	#205	71	#181
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	233	1137	726	214	860	415	251	490	214	398
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.19	0.44	0.17	0.54	0.10	1.32	0.60	0.37	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	126	705	29	1168	304	424	215	677
v/c Ratio	1.20	0.66	0.28	1.36	1.74	0.69	1.23	1.11
Control Delay	187.1	25.7	40.6	197.0	380.5	28.5	176.0	96.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.1	25.7	40.6	197.0	380.5	28.5	176.0	96.7
Queue Length 50th (ft)	~72	126	13	~378	~214	168	~126	~355
Queue Length 95th (ft)	#174	#236	38	#503	#361	267	#253	#558
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	105	1074	105	857	175	614	175	609
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.66	0.28	1.36	1.74	0.69	1.23	1.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	125	1257	380	64	920	84	434	367	73	635
v/c Ratio	0.60	1.52	0.58	0.31	1.31	0.22	1.32	0.62	0.35	1.62
Control Delay	43.4	265.3	7.1	32.9	178.6	8.1	191.9	28.2	33.9	316.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	265.3	7.1	32.9	178.6	8.1	191.9	28.2	33.9	316.2
Queue Length 50th (ft)	52	~444	0	26	~282	0	~254	142	30	~406
Queue Length 95th (ft)	#120	#566	67	60	#393	33	#417	#265	67	#598
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	209	827	660	209	700	380	329	589	209	391
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.52	0.58	0.31	1.31	0.22	1.32	0.62	0.35	1.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

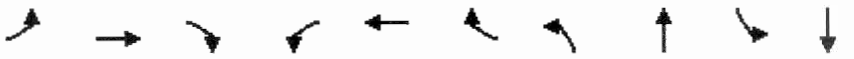
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	302	1317	26	773	307	454	224	535
v/c Ratio	2.82	1.21	0.24	0.89	1.72	0.77	1.26	0.91
Control Delay	865.8	128.2	39.5	39.9	373.9	32.5	185.8	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	865.8	128.2	39.5	39.9	373.9	32.5	185.8	44.9
Queue Length 50th (ft)	~246	~362	12	173	~217	181	~135	219
Queue Length 95th (ft)	#392	#587	36	#279	#364	#302	#265	#402
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	107	1091	107	870	178	621	178	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.82	1.21	0.24	0.89	1.72	0.73	1.26	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	1814	357	68	687	83	379	488	170	437
v/c Ratio	0.55	1.83	0.51	0.33	0.82	0.19	1.54	1.15	0.81	1.13
Control Delay	39.1	397.7	5.9	33.3	35.1	7.2	290.6	122.0	62.1	113.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	397.7	5.9	33.3	35.1	7.2	290.6	122.0	62.1	113.9
Queue Length 50th (ft)	50	~675	0	28	150	0	~240	~261	73	~223
Queue Length 95th (ft)	#108	#805	61	63	#240	31	#395	#437	#176	#393
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	228	993	700	209	840	439	246	423	209	388
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.83	0.51	0.33	0.82	0.19	1.54	1.15	0.81	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	126	709	29	1168	309	588	215	842
v/c Ratio	1.20	0.66	0.28	1.36	1.77	0.96	1.23	1.38
Control Delay	187.1	25.7	40.6	197.0	392.6	54.2	176.0	207.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.1	25.7	40.6	197.0	392.6	54.2	176.0	207.8
Queue Length 50th (ft)	~72	127	13	~378	~219	263	~126	~527
Queue Length 95th (ft)	#174	#238	38	#503	#366	#468	#253	#744
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	105	1073	105	857	175	614	175	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.66	0.28	1.36	1.77	0.96	1.23	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	125	1257	538	64	920	84	590	374	73	642
v/c Ratio	0.60	1.52	0.75	0.31	1.31	0.22	1.79	0.63	0.35	1.65
Control Delay	43.4	265.3	13.4	32.9	178.6	8.1	392.4	28.7	33.9	325.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	265.3	13.4	32.9	178.6	8.1	392.4	28.7	33.9	325.4
Queue Length 50th (ft)	52	~444	29	26	~282	0	~397	145	30	~413
Queue Length 95th (ft)	#120	#566	#184	60	#393	33	#579	#272	67	#607
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	209	827	720	209	700	380	329	589	209	390
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.52	0.75	0.31	1.31	0.22	1.79	0.63	0.35	1.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	302	1317	26	773	307	464	224	546
v/c Ratio	2.82	1.21	0.24	0.89	1.72	0.78	1.26	0.92
Control Delay	868.2	129.8	39.5	40.2	376.5	33.2	187.4	47.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	868.2	129.8	39.5	40.2	376.5	33.2	187.4	47.1
Queue Length 50th (ft)	~246	~362	12	173	~217	187	~135	226
Queue Length 95th (ft)	#392	#587	36	#279	#364	#326	#265	#415
Internal Link Dist (ft)		413		545		5368		10522
Turn Bay Length (ft)	150		150		75		100	
Base Capacity (vph)	107	1088	107	868	178	620	178	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.82	1.21	0.24	0.89	1.72	0.75	1.26	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	1814	367	68	687	83	390	488	170	437
v/c Ratio	0.55	1.83	0.52	0.33	0.82	0.19	1.59	1.15	0.81	1.13
Control Delay	39.1	397.7	5.9	33.3	35.1	7.2	309.4	122.0	62.1	113.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	397.7	5.9	33.3	35.1	7.2	309.4	122.0	62.1	113.9
Queue Length 50th (ft)	50	~675	0	28	150	0	~250	~261	73	~223
Queue Length 95th (ft)	#108	#805	62	63	#240	31	#407	#437	#176	#393
Internal Link Dist (ft)		560			1137			10522		1239
Turn Bay Length (ft)	500		500	500		500	200		400	
Base Capacity (vph)	228	993	707	209	840	439	246	423	209	388
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.83	0.52	0.33	0.82	0.19	1.59	1.15	0.81	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX K

Traffic Index (TI) Calculations

2035 NO Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	65	2.1%	105	3680		385,112
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
					TOTAL	473,855
						8.2

2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	65	2.1%	105	3680		385,112
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
PROJECT TRAFFIC >5-AXLE			217	13780		2,990,260
					TOTAL	3,464,115
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	65	2.1%	105	3680		385,112
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
PROJECT TRAFFIC >5-AXLE			217	13780		2,990,260
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	3,464,115
						10.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	65	2.1%	105	3680		385,112
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	473,855
						8.2

2035 NO Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	57	2.1%	92	3680		337,714
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
					TOTAL	382,085
						8.0

2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	57	2.1%	92	3680		337,714
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			216	13780		2,976,480
					TOTAL	3,358,565
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	57	2.1%	92	3680		337,714
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			216	13780		2,976,480
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	3,358,565
						10.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **McCall Avenue between SR 180 and Jensen Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	57	2.1%	92	3680		337,714
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	382,085
						8.0

2035 NO Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	52	2.1%	84	3680		308,090
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
					TOTAL	374,647
						8.0

2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	52	2.1%	84	3680		308,090
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
					TOTAL	3,433,807
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	52	2.1%	84	3680		308,090
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	3,433,807
						10.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	52	2.1%	84	3680		308,090
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	374,647
						8.0

2035 NO Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	47	2.1%	76	3680		278,466
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
					TOTAL	322,837
						7.9

2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	47	2.1%	76	3680		278,466
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
					TOTAL	3,381,997
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	47	2.1%	76	3680		278,466
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	3,381,997
						10.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **McCall Avenue between Jensen and North Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	47	2.1%	76	3680		278,466
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	322,837
						7.9

2035 NO Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	36	2.1%	58	3680		213,293
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
					TOTAL	302,036
						7.8

2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	36	2.1%	58	3680		213,293
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
					TOTAL	3,361,196
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	36	2.1%	58	3680		213,293
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	3,361,196
						10.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Northbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	36	2.1%	58	3680		213,293
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	4	2.1%	6	13780		88,743
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	302,036
						7.8

2035 NO Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	31	2.1%	50	3680		183,669
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
					TOTAL	250,226
						7.6

2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
3-AXLE	31	2.1%	50	3680		183,669
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
					TOTAL	3,309,386
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	31	2.1%	50	3680		183,669
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			222	13780		3,059,160
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	3,309,386
						10.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **McCall Avenue between North and Central Southbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	0	2.1%	0	1380		0
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	31	2.1%	50	3680		183,669
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
CARMELITA TRAFFIC >5-AXLE			0	13780		0
VULCAN TRAFFIC >5-AXLE			0	13780		0
					TOTAL	250,226
						7.6

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	6	2.1%	10	1380		13,331
3-AXLE	15	2.1%	24	3680		88,872
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
					TOTAL	124,389
						7.0

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	6	2.1%	10	1380		13,331
3-AXLE	15	2.1%	24	3680		88,872
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
					TOTAL	3,500,489
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	6	2.1%	10	1380		13,331
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	15	2.1%	24	3680		88,872
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			31	5880		182,280
>5-AXLE	1	2.1%	2	13780		22,186
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			153	13780		2,108,340
					TOTAL	6,416,729
						11.2

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	6	2.1%	10	1380		13,331
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	15	2.1%	24	3680		88,872
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			31	5880		182,280
>5-AXLE	1	2.1%	2	13780		22,186
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			153	13780		2,108,340
					TOTAL	3,040,629
						10.3

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
3-AXLE	19	2.1%	31	3680		112,571
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
					TOTAL	152,531
						7.2

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
3-AXLE	19	2.1%	31	3680		112,571
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
					TOTAL	3,528,631
						10.5

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	19	2.1%	31	3680		112,571
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			32	5880		188,160
>5-AXLE	1	2.1%	2	13780		22,186
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			154	13780		2,122,120
					TOTAL	6,464,531
						11.2

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between Newark and Riverbend Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	19	2.1%	31	3680		112,571
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			32	5880		188,160
>5-AXLE	1	2.1%	2	13780		22,186
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			154	13780		2,122,120
					TOTAL	3,088,431
						10.3

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
3-AXLE	20	2.1%	32	3680		118,496
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
					TOTAL	180,642
						7.3

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
3-AXLE	20	2.1%	32	3680		118,496
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
					TOTAL	3,556,742
						10.5

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	20	2.1%	32	3680		118,496
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			31	5880		182,280
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			153	13780		2,108,340
					TOTAL	6,472,982
						11.2

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	8	2.1%	13	1380		17,774
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	20	2.1%	32	3680		118,496
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			31	5880		182,280
>5-AXLE	2	2.1%	3	13780		44,372
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			153	13780		2,108,340
					TOTAL	3,096,882
						10.3

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	10	2.1%	16	1380		22,218
3-AXLE	24	2.1%	39	3680		142,195
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
					TOTAL	230,971
						7.6

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	10	2.1%	16	1380		22,218
3-AXLE	24	2.1%	39	3680		142,195
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
					TOTAL	3,607,071
						10.5

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	10	2.1%	16	1380		22,218
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	24	2.1%	39	3680		142,195
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			32	5880		188,160
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			245	13780		3,376,100
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			154	13780		2,122,120
					TOTAL	6,542,971
						11.3

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between Academy and Newark Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	10	2.1%	16	1380		22,218
CARMELITA TRAFFIC 2-AXLE			4	1380		5,520
3-AXLE	24	2.1%	39	3680		142,195
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			32	5880		188,160
>5-AXLE	3	2.1%	5	13780		66,557
CARMELITA TRAFFIC >5-AXLE			45	13780		620,100
CMI TRAFFIC >5-AXLE			154	13780		2,122,120
					TOTAL	3,166,871
						10.3

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	14	2.1%	23	1380		31,105
3-AXLE	34	2.1%	55	3680		201,443
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
					TOTAL	276,920
						7.7

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	14	2.1%	23	1380		31,105
3-AXLE	34	2.1%	55	3680		201,443
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
					TOTAL	3,404,980
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	14	2.1%	23	1380		31,105
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	34	2.1%	55	3680		201,443
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			277	13780		3,817,060
					TOTAL	7,222,040
						11.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	14	2.1%	23	1380		31,105
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	34	2.1%	55	3680		201,443
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	2	2.1%	3	13780		44,372
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			138	13780		1,901,640
					TOTAL	2,178,560
						9.9

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	17	2.1%	27	1380		37,771
3-AXLE	44	2.1%	71	3680		260,691
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	5	2.1%	8	13780		110,929
					TOTAL	409,391
						8.1

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	17	2.1%	27	1380		37,771
3-AXLE	44	2.1%	71	3680		260,691
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	5	2.1%	8	13780		110,929
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
					TOTAL	3,537,451
						10.5

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	17	2.1%	27	1380		37,771
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	44	2.1%	71	3680		260,691
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	5	2.1%	8	13780		110,929
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			277	13780		3,817,060
					TOTAL	7,354,511
						11.4

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between Bethel and Academy Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	17	2.1%	27	1380		37,771
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	44	2.1%	71	3680		260,691
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	5	2.1%	8	13780		110,929
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			139	13780		1,915,420
					TOTAL	2,324,811
						10.0

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	9	2.1%	14	1380		19,996
3-AXLE	23	2.1%	37	3680		136,270
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
					TOTAL	178,452
						7.3

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	9	2.1%	14	1380		19,996
3-AXLE	23	2.1%	37	3680		136,270
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
					TOTAL	3,306,512
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	9	2.1%	14	1380		19,996
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	23	2.1%	37	3680		136,270
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			138	13780		1,901,640
					TOTAL	5,208,152
						11.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	9	2.1%	14	1380		19,996
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	23	2.1%	37	3680		136,270
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	1	2.1%	2	13780		22,186
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			138	13780		1,901,640
					TOTAL	2,080,092
						9.8

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	12	2.1%	19	1380		26,662
3-AXLE	29	2.1%	47	3680		171,819
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
					TOTAL	265,038
						7.7

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	12	2.1%	19	1380		26,662
3-AXLE	29	2.1%	47	3680		171,819
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
					TOTAL	3,393,098
						10.4

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	12	2.1%	19	1380		26,662
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	29	2.1%	47	3680		171,819
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
PROJECT TRAFFIC >5-AXLE			227	13780		3,128,060
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			139	13780		1,915,420
					TOTAL	5,308,518
						11.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between McCall and Bethel Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	12	2.1%	19	1380		26,662
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	29	2.1%	47	3680		171,819
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	3	2.1%	5	13780		66,557
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			139	13780		1,915,420
					TOTAL	2,180,458
						9.9

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	157	2.1%	253	1380		348,823
3-AXLE	253	2.1%	407	3680		1,498,974
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	26	2.1%	42	13780		576,831
					TOTAL	2,424,628
						10.0

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	157	2.1%	253	1380		348,823
3-AXLE	253	2.1%	407	3680		1,498,974
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	26	2.1%	42	13780		576,831
PROJECT TRAFFIC >5-AXLE			5	13780		68,900
					TOTAL	2,493,528
						10.0

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	157	2.1%	253	1380		348,823
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	253	2.1%	407	3680		1,498,974
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	26	2.1%	42	13780		576,831
PROJECT TRAFFIC >5-AXLE			5	13780		68,900
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			139	13780		1,915,420
					TOTAL	4,408,948
						10.7

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	157	2.1%	253	1380		348,823
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	253	2.1%	407	3680		1,498,974
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	26	2.1%	42	13780		576,831
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			139	13780		1,915,420
					TOTAL	4,340,048
						10.7

2035 NO Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	145	2.1%	233	1380		322,161
3-AXLE	234	2.1%	377	3680		1,386,403
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	24	2.1%	39	13780		532,459
					TOTAL	2,241,023
						9.9

2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	145	2.1%	233	1380		322,161
3-AXLE	234	2.1%	377	3680		1,386,403
4-AXLE	0	2.1%	0	5880		0
>5-AXLE	24	2.1%	39	13780		532,459
PROJECT TRAFFIC >5-AXLE			0	13780		0
					TOTAL	2,241,023
						9.9

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	145	2.1%	233	1380		322,161
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	234	2.1%	377	3680		1,386,403
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	24	2.1%	39	13780		532,459
PROJECT TRAFFIC >5-AXLE			0	13780		0
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			138	13780		1,901,640
					TOTAL	4,142,663
						10.7

Cumulative 2035 No Project
TI Calculation

SEGMENT = **Central Avenue between SR 99 SB Ramps and SR 99 NB-On Ramp Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	145	2.1%	233	1380		322,161
CARMELITA TRAFFIC 2-AXLE			0	1380		0
3-AXLE	234	2.1%	377	3680		1,386,403
4-AXLE	0	2.1%	0	5880		0
CARMELITA TRAFFIC 4-AXLE			0	5880		0
>5-AXLE	24	2.1%	39	13780		532,459
CARMELITA TRAFFIC >5-AXLE			0	13780		0
CMI TRAFFIC >5-AXLE			138	13780		1,901,640
					TOTAL	4,142,663
						10.7

2035 NO Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
>5-AXLE	110	2.1%	177	13780		2,440,438
					TOTAL	3,513,986
						10.5

2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
>5-AXLE	110	2.1%	177	13780		2,440,438
PROJECT TRAFFIC >5-AXLE			206	13780		2,838,680
					TOTAL	6,352,666
						11.2

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	110	2.1%	177	13780		2,440,438
PROJECT TRAFFIC >5-AXLE			206	13780		2,838,680
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			120	13780		1,653,600
					TOTAL	11,144,066
						12.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	110	2.1%	177	13780		2,440,438
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			120	13780		1,653,600
					TOTAL	8,305,386
						11.6

2035 NO Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
>5-AXLE	114	2.1%	184	13780		2,529,181
					TOTAL	3,655,730
						10.5

2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
>5-AXLE	114	2.1%	184	13780		2,529,181
PROJECT TRAFFIC >5-AXLE			207	13780		2,852,460
					TOTAL	6,508,190
						11.2

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	114	2.1%	184	13780		2,529,181
PROJECT TRAFFIC >5-AXLE			207	13780		2,852,460
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			121	13780		1,667,380
					TOTAL	11,313,370
						12.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **SR-180 between McCall and Highland Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	114	2.1%	184	13780		2,529,181
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			121	13780		1,667,380
					TOTAL	8,460,910
						11.6

2035 NO Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
>5-AXLE	110	2.1%	177	13780		2,440,438
					TOTAL	3,513,986
						10.5

2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
>5-AXLE	110	2.1%	177	13780		2,440,438
PROJECT TRAFFIC >5-AXLE			206	13780		2,838,680
					TOTAL	6,352,666
						11.2

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	110	2.1%	177	13780		2,440,438
PROJECT TRAFFIC >5-AXLE			206	13780		2,838,680
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			120	13780		1,653,600
					TOTAL	11,144,066
						12.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	110	2.1%	177	13780		2,440,438
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			120	13780		1,653,600
					TOTAL	8,305,386
						11.6

2035 NO Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
>5-AXLE	114	2.1%	184	13780		2,529,181
					TOTAL	3,655,730
						10.5

2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
>5-AXLE	114	2.1%	184	13780		2,529,181
PROJECT TRAFFIC >5-AXLE			207	13780		2,852,460
					TOTAL	6,508,190
						11.2

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	114	2.1%	184	13780		2,529,181
PROJECT TRAFFIC >5-AXLE			207	13780		2,852,460
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			121	13780		1,667,380
					TOTAL	11,313,370
						12.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **SR-180 between Highland and De Wolf Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	114	2.1%	184	13780		2,529,181
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			121	13780		1,667,380
					TOTAL	8,460,910
						11.6

2035 NO Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
>5-AXLE	110	2.1%	177	13780		2,440,438
					TOTAL	3,513,986
						10.5

2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
>5-AXLE	110	2.1%	177	13780		2,440,438
PROJECT TRAFFIC >5-AXLE			206	13780		2,838,680
					TOTAL	6,352,666
						11.2

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	110	2.1%	177	13780		2,440,438
PROJECT TRAFFIC >5-AXLE			206	13780		2,838,680
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			120	13780		1,653,600
					TOTAL	11,144,066
						12.0

Cumulative 2035 No Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Eastbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	254	2.1%	409	1380		564,337
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	46	2.1%	74	3680		272,541
4-AXLE	25	2.1%	40	5880		236,670
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	110	2.1%	177	13780		2,440,438
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			120	13780		1,653,600
					TOTAL	8,305,386
						11.6

2035 NO Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
>5-AXLE	114	2.1%	184	13780		2,529,181
					TOTAL	3,655,730
						10.5

2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
>5-AXLE	114	2.1%	184	13780		2,529,181
PROJECT TRAFFIC >5-AXLE			207	13780		2,852,460
					TOTAL	6,508,190
						11.2

Cumulative 2035 PLUS Project
TI Calculation

SEGMENT = **SR-180 between De Wolf and Temperance Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	114	2.1%	184	13780		2,529,181
PROJECT TRAFFIC >5-AXLE			207	13780		2,852,460
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			121	13780		1,667,380
					TOTAL	11,313,370
						12.0

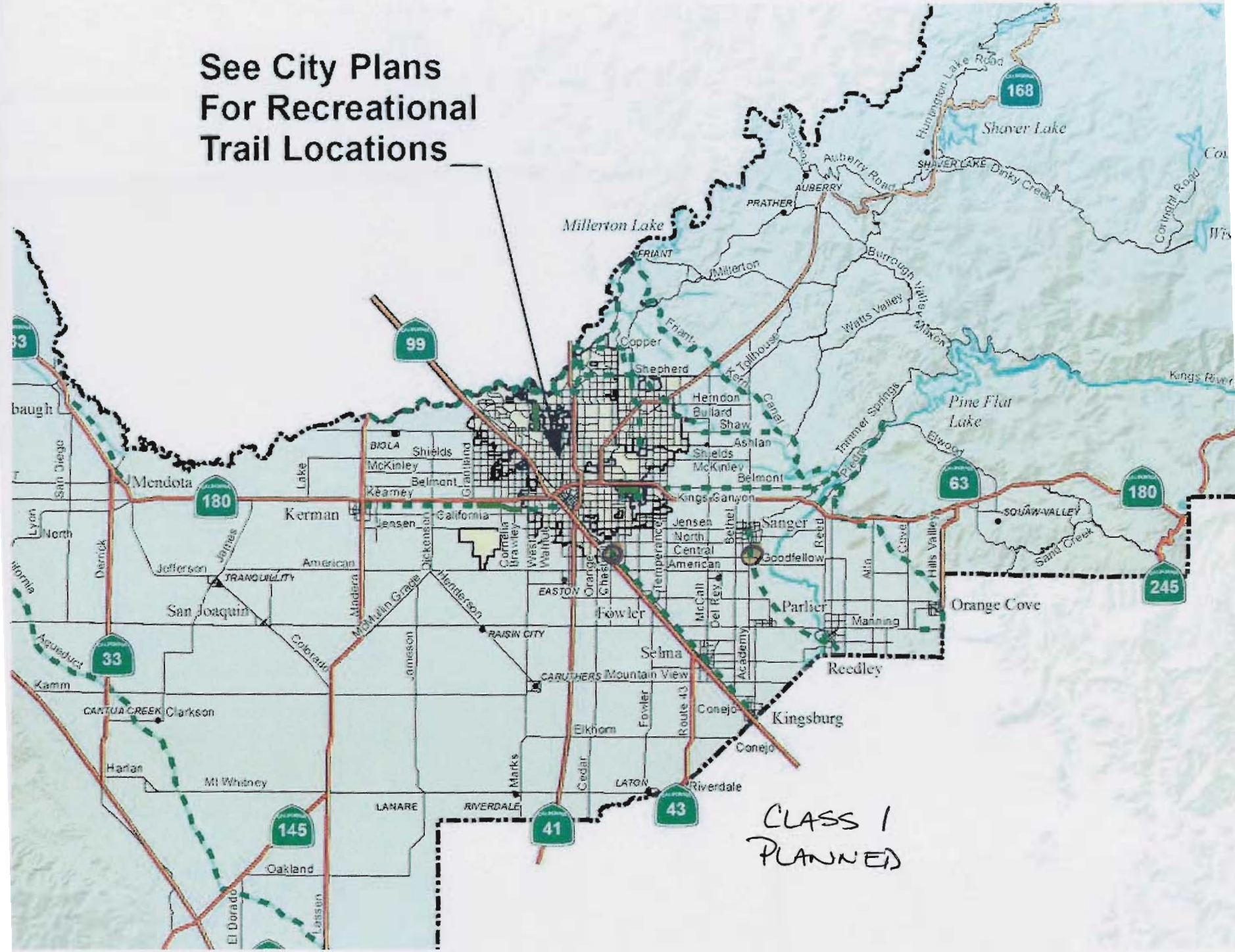
Cumulative 2035 No Project
TI Calculation

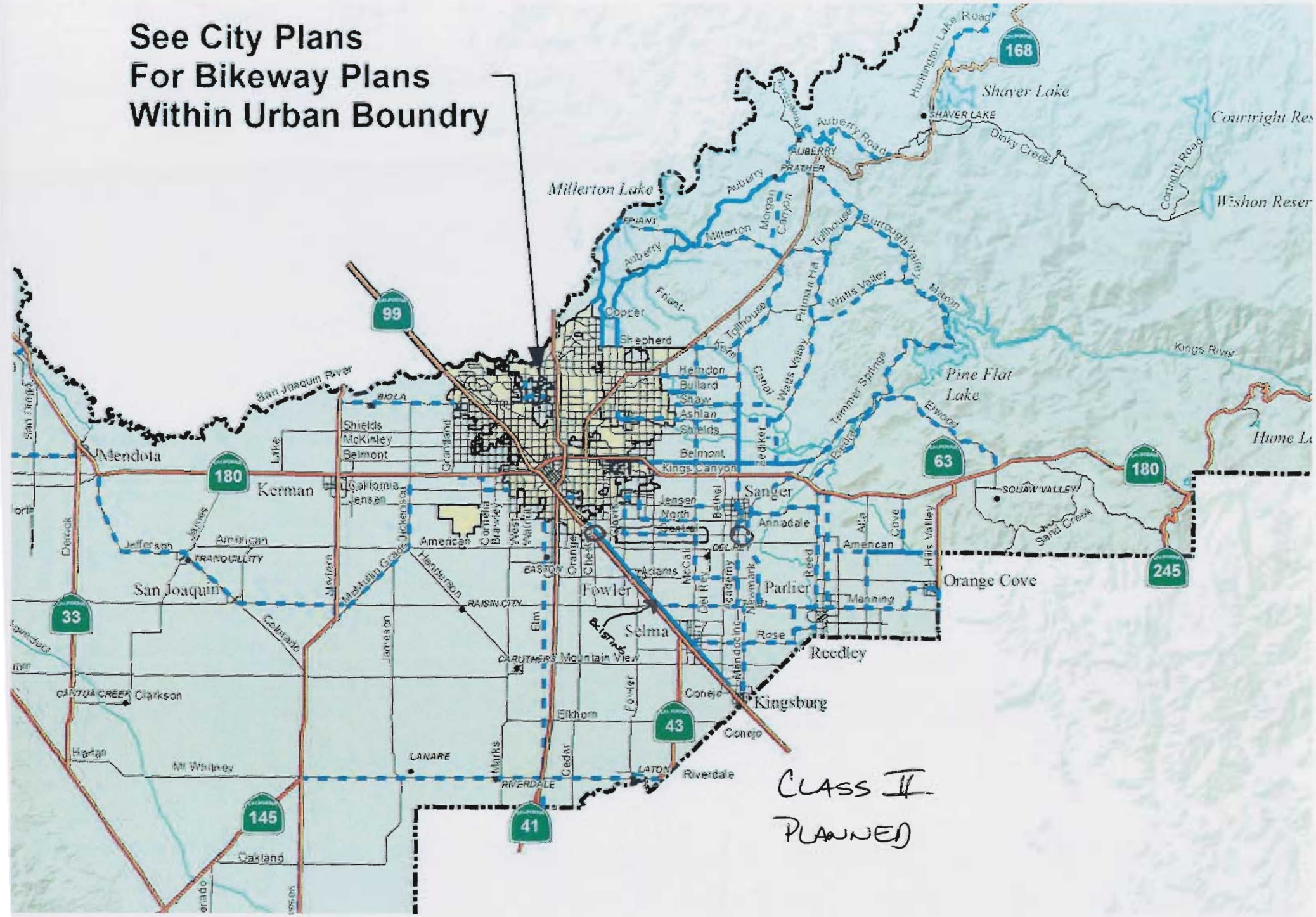
SEGMENT = **SR-180 between De Wolf and Temperance Westbound**

TRUCK CLASSIFICATION	ADTT 2012 COUNTS	GROWTH RATE	EXPANDED ADTT	ESAL 20 YEAR CONSTANT		TOTAL 20 YEAR ESAL
2-AXLE	264	2.1%	425	1380		586,555
CARMELITA TRAFFIC 2-AXLE			15	1380		20,700
3-AXLE	48	2.1%	77	3680		284,390
4-AXLE	27	2.1%	43	5880		255,604
CARMELITA TRAFFIC 4-AXLE			120	5880		705,600
>5-AXLE	114	2.1%	184	13780		2,529,181
CARMELITA TRAFFIC >5-AXLE			175	13780		2,411,500
VULCAN TRAFFIC >5-AXLE			121	13780		1,667,380
					TOTAL	8,460,910
						11.6

APPENDIX L

Fresno County's Bicycle/Trail Master Plan Class I Bicycle/Recreational Trails and Class II Bicycle Lanes


See City Plans
For Recreational
Trail Locations
CLASS 1
PLANNED
Millerton Lake
Shaver Lake
Pine Flat
Lake
Mendota
Kerman
San Joaquin
Fowler
Selma
Sanger
Parlier
Reedley
Orange Cove
Kingsburg
Riverdale
Clarkson
Mt Whitney
Oakland
Harlan
Kamm
Conejo
Elkhorn
Mountain View
Goodfellow
Manning
SQUAW VALLEY
99
180
33
145
41
43
63
168
245

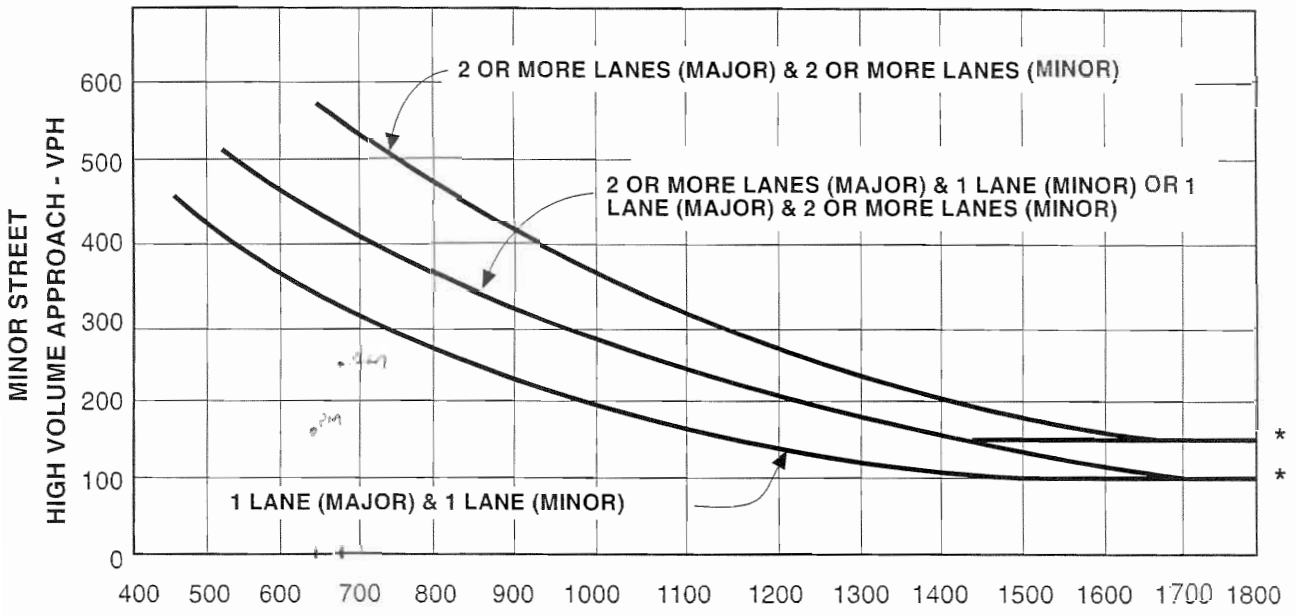

See City Plans
For Bikeway Plans
Within Urban Boundry
CLASS II
PLANNED
Shaver Lake
Millerton Lake
Pine Flat
Lake
Courtright Res
Wishon Reser
Hume La
Kings River
San Joaquin River
Mendota
Kerman
San Joaquin
Fowler
Selma
Sanger
Parlier
Reedley
Orange Cove
Kingsburg
Riverdale
Clarkson
Oakland
Laton
Lanare
Conejo
Elkhorn
Mountain View
Caruthers
Raisin City
Easton
Biola
Squaw Valley
Huntington Lake Road
Auberry Road
Dinky Creek
Courtright Road
Trimmer Springs
Watts Valley
Trimmer
Tollhouse
Burrough Valley
Pitman Hill
Morgan Canyon
Millerton
Copper
Shepherd
Herndon
Bullard
Shaw
Ashlan
Shields
Belmont
Kings Canyon
Jensen
Jensen North
Annadale
American
Manning
Rose
Adams
Jefferson
Tranquillity
Belmont
McKinley
Shields
Lake
Orange
Chestnut
Cornelia
Bethel
Del Rey
Academy
Newmark
Reed
Hills Valley
Alta
Cove
Sand Creek
Elm
Colorado
Henderson
McMullin Grade
Jameson
Marks
Cedar
Conejo
Mendocino
Lovers
Elkhorn
Harlan
Mt Whitney
Cantua Creek
Dorris
Modoc
Dinuba
Visalia
Exeter
Orosi
Woodlake
Lindsay
Strathmore
Porterville
Tulare
Hanford
Corcoran
Avenal
Coalinga
Huron
Lemoore
Kettleman City
Wasco
Shafter
Delano
McFarland
Wasco
Arvin
Lamont
Weedpatch
Famoso
Buttonwillow
Taft
Maricopa
Fellows
Bakersfield
Oildale
Kern River
Kern River Valley
Lake Isabella
Wofford Heights
Kernville
Onyx
Bodfish
Caliente
Tehachapi
Mojave
Rosamond
Edwards AFB
Lancaster
Palmdale
Antelope Valley
Pearblossom
Littlerock
Acton
Agua Dulce
Santa Clarita
Valencia
Newhall
Saugus
Castaic
Gorman
Frazier Park
Lebec
Grapevine
Tejon Pass
Gorman
Los Angeles
Ventura
Santa Barbara
Santa Maria
Lompoc
Solvang
Buellton
Santa Ynez
Los Olivos
Ballard
Los Alamos
Orcutt
Guadalupe
Nipomo
Arroyo Grande
Grover Beach
Pismo Beach
Oceano
San Luis Obispo
Morro Bay
Cayucos
Cambria
San Simeon
Hearst Castle
Paso Robles
Templeton
Atascadero
Santa Margarita
Creston
Shandon
Cholame
Parkfield
Coalinga
Huron
Lemoore
Kettleman City
Avenal
Corcoran
Hanford
Visalia
Tulare
Porterville
Exeter
Orosi
Woodlake
Lindsay
Strathmore
Dinuba
Reedley
Sanger
Selma
Fowler
Kingsburg
Parlier
Orange Cove
Clovis
Fresno
Madera
Chowchilla
Oakhurst
Yosemite
Mariposa
Merced
Los Banos
Gustine
Newman
Patterson
Crows Landing
Modesto
Turlock
Ceres
Riverbank
Oakdale
Waterford
La Grange
Hickman
Keyes
Denair
Hughson
Empire
Salida
Ripon
Escalon
Manteca
Tracy
Lathrop
Stockton
Lodi
Galt
Elk Grove
Sacramento
Folsom
Placerville
Auburn
Grass Valley
Nevada City
Truckee
Lake Tahoe
Reno
Carson City
Minden
Gardnerville
Markleeville
Bridgeport
Mammoth Lakes
June Lake
Lee Vining
Mono Lake
Bishop
Big Pine
Independence
Lone Pine
Olancha
Cartago
Keeler
Death Valley
Panamint Springs
Trona
Ridgecrest
China Lake
Inyokern
Kramer Junction
Barstow
Victorville
Hesperia
Apple Valley
Adelanto
Oro Grande
Helendale
Lucerne Valley
Yucca Valley
Joshua Tree
Twentynine Palms
Morongo Valley
Banning
Beaumont
Cabazon
Calimesa
Yucaipa
Redlands
Loma Linda
San Bernardino
Rialto
Colton
Fontana
Ontario
Upland
Rancho Cucamonga
Claremont
Pomona
Chino
Chino Hills
Diamond Bar
Walnut
Industry
La Puente
Whittier
La Habra
Brea
Fullerton
Anaheim
Orange
Santa Ana
Tustin
Irvine
Laguna Beach
Laguna Niguel
Dana Point
San Clemente
Capistrano Beach
Mission Viejo
Lake Forest
Rancho Santa Margarita
Foothill Ranch
Trabuco Canyon
Silverado
Modjeska Canyon
Santiago Canyon
Irvine Lake
Orange
Anaheim
Fullerton
Brea
La Habra
Whittier
La Puente
Industry
Walnut
Diamond Bar
Chino Hills
Chino
Pomona
Claremont
Rancho Cucamonga
Upland
Ontario
Fontana
Rialto
Colton
San Bernardino
Loma Linda
Redlands
Yucaipa
Calimesa
Cabazon
Beaumont
Banning
Morongo Valley
Yucca Valley
Joshua Tree
Twentynine Palms
Lucerne Valley
Helendale
Oro Grande
Adelanto
Apple Valley
Hesperia
Victorville
Barstow
Kramer Junction
Inyokern
China Lake
Ridgecrest
Trona
Panamint Springs
Death Valley
Keeler
Cartago
Olancha
Lone Pine
Independence
Big Pine
Bishop
Mammoth Lakes
June Lake
Lee Vining
Mono Lake
Bridgeport
Markleeville
Gardnerville
Minden
Carson City
Reno
Truckee
Lake Tahoe
Nevada City
Grass Valley
Auburn
Placerville
Folsom
Sacramento
Elk Grove
Galt
Lodi
Stockton
Lathrop
Tracy
Manteca
Escalon
Ripon
Salida
Empire
Hughson
Denair
Keyes
Hickman
La Grange
Waterford
Oakdale
Riverbank
Ceres
Turlock
Modesto
Patterson
Newman
Gustine
Los Banos
Merced
Mariposa
Yosemite
Oakhurst
Chowchilla
Madera
Fresno
Clovis
99
180
33
145
41
43
63
168
245

APPENDIX M

Signal Warrant Worksheets

Figure 9-8
PEAK HOUR VOLUME WARRANT
(Urban Areas)

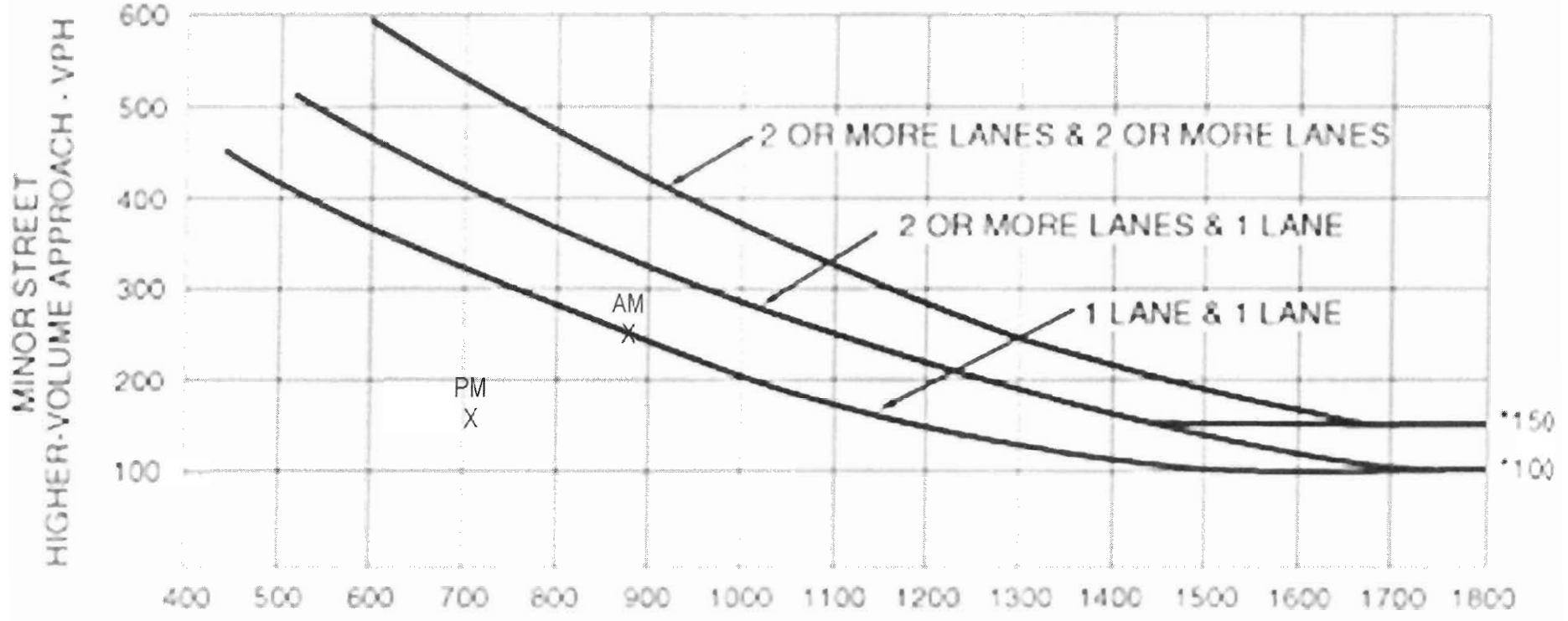
YEAR 2017 PLUS PHASE 2
McCALL AVE / NORTH AVE



* NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

North Avenue at McCall Avenue

Year 2019 Plus Project

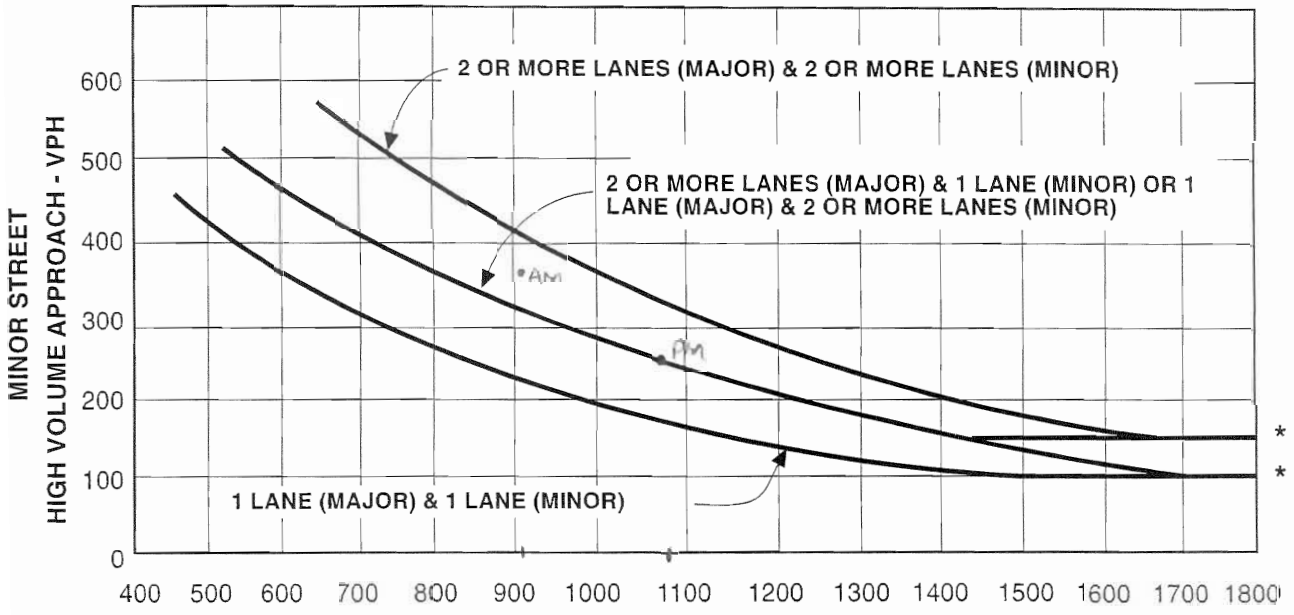


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 9-8
PEAK HOUR VOLUME WARRANT
(Urban Areas)

CUMULATIVE 2035 NO PROJECT

NORTH AVE / MCCALL AVE

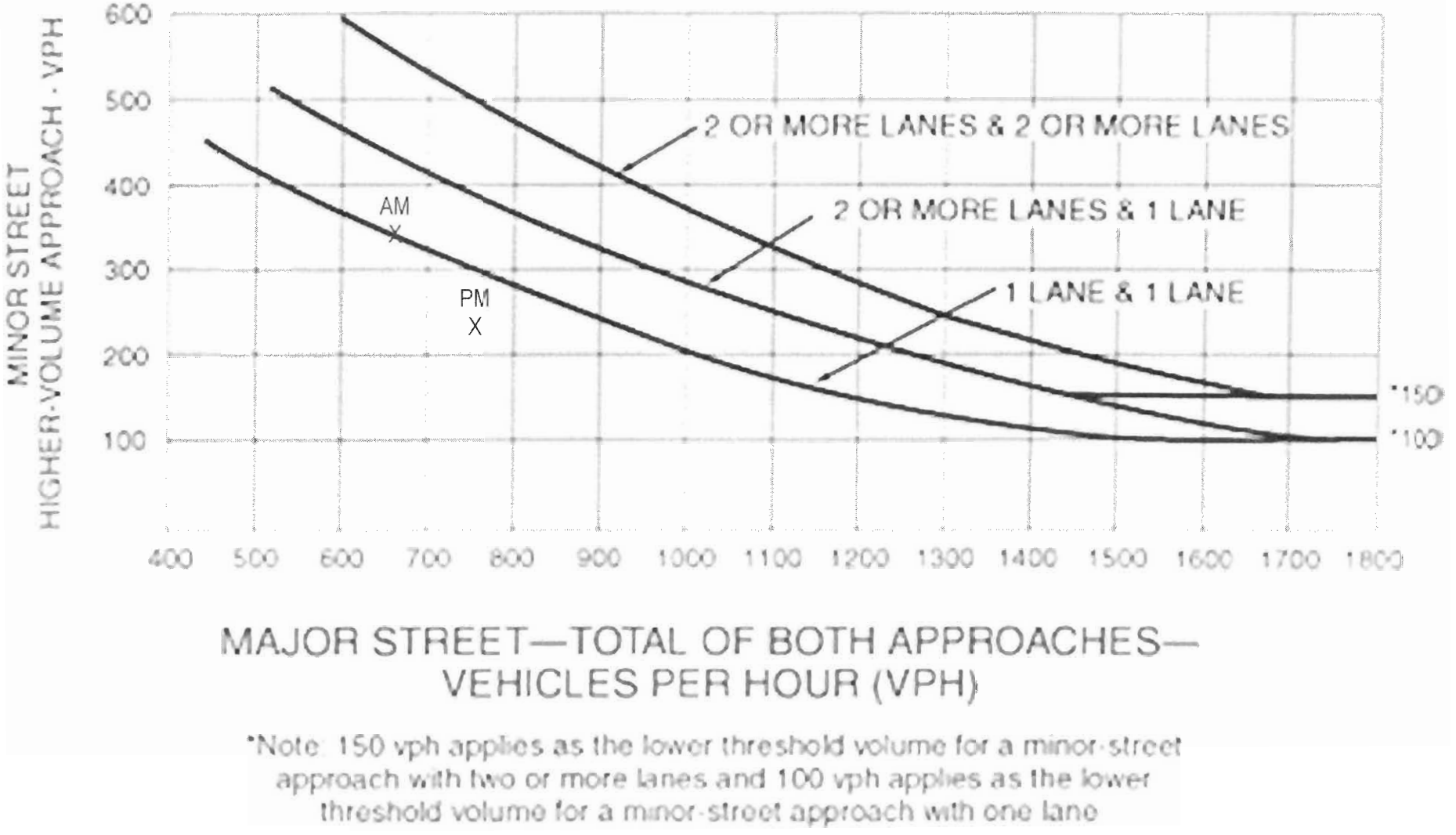


* NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Central Avenue at Academy Avenue

Figure 4C-3. Warrant 3, Peak Hour

Year 2017 Plus Project

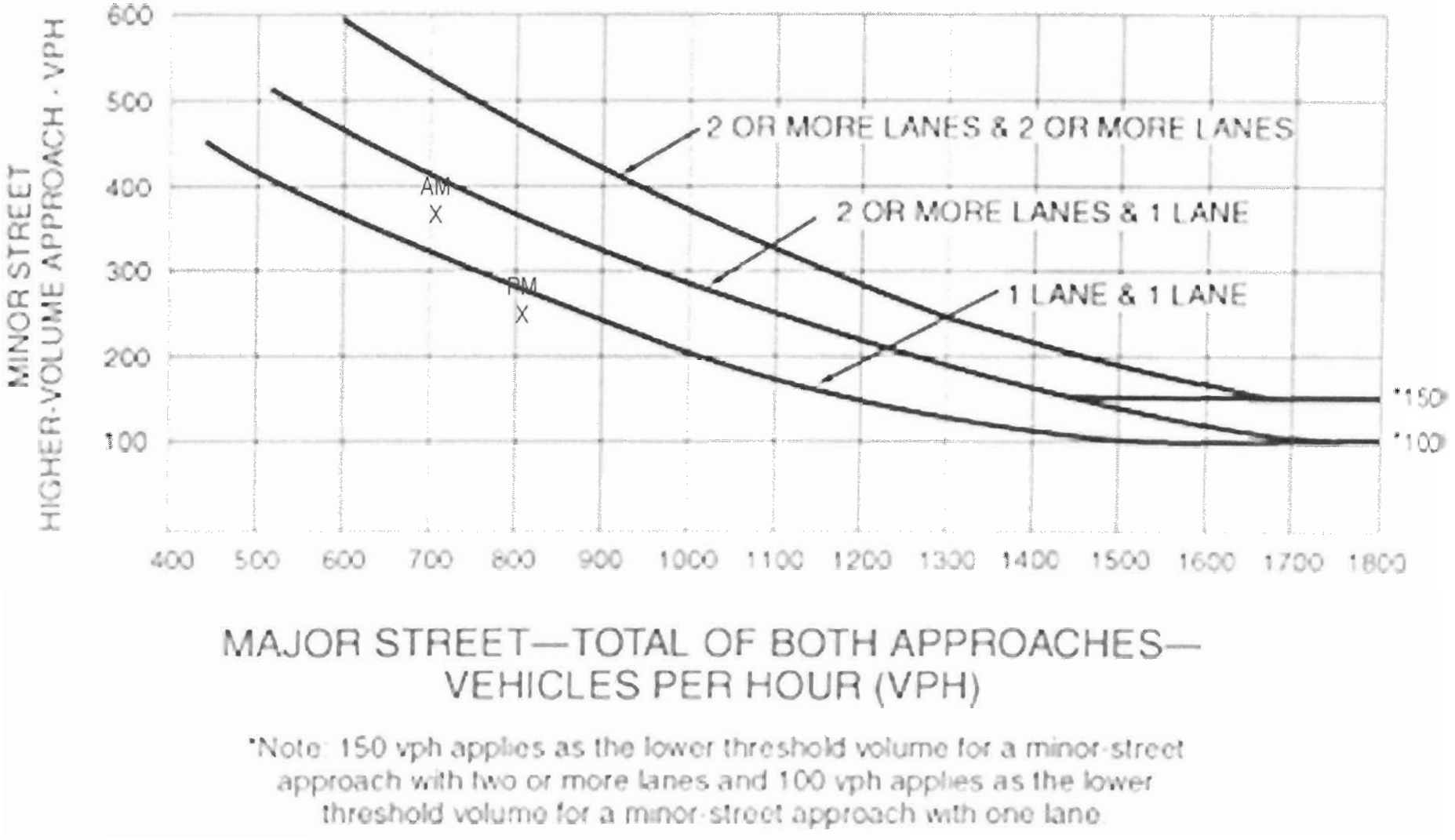


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane

Central Avenue at Academy Avenue

Figure 4C-3. Warrant 3, Peak Hour

Year 2019 Plus Project



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 9-8
PEAK HOUR VOLUME WARRANT
(Urban Areas)

CUMULATIVE 2035 NO PROJECT

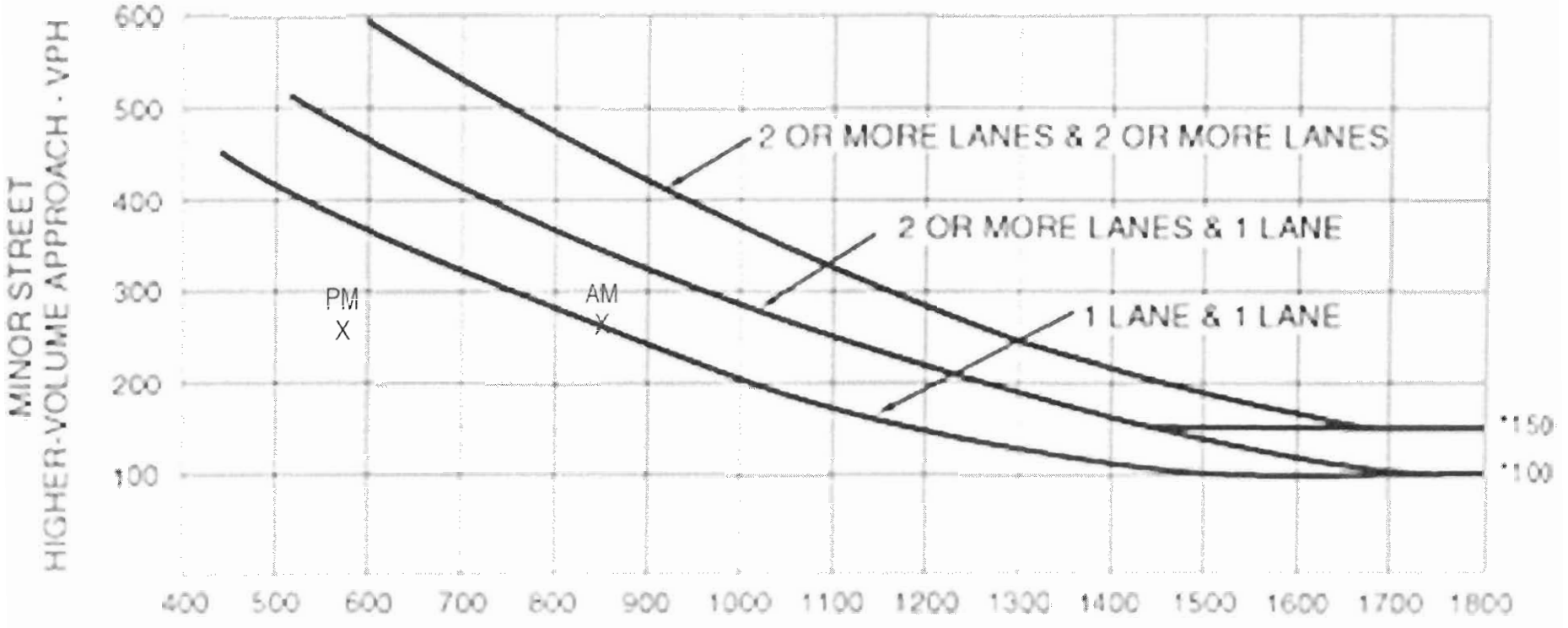
ACADEMY AVE / CENTRAL AVE

* NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Central Avenue at Bethel Avenue

Figure 4C-3. Warrant 3, Peak Hour

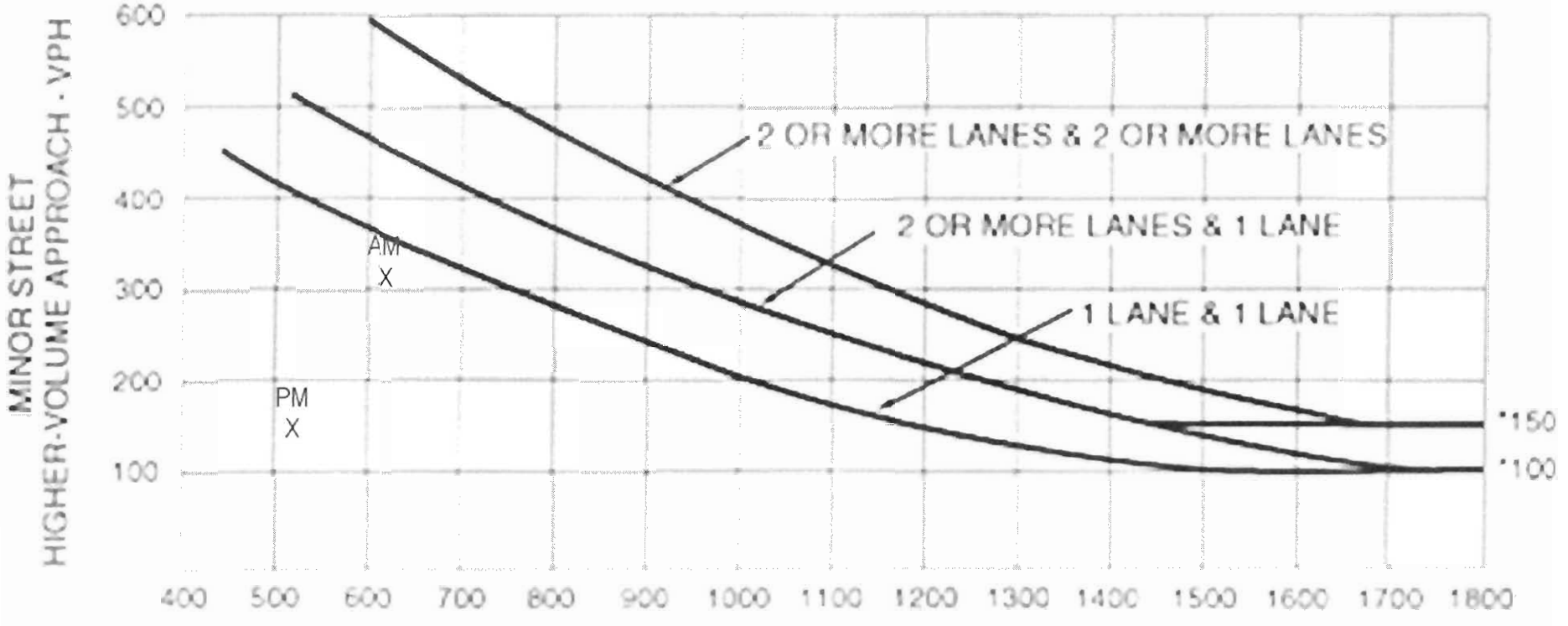
Cumulative 2035 Plus Project



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Central Avenue at McCall Avenue

Year 2019 Plus Project

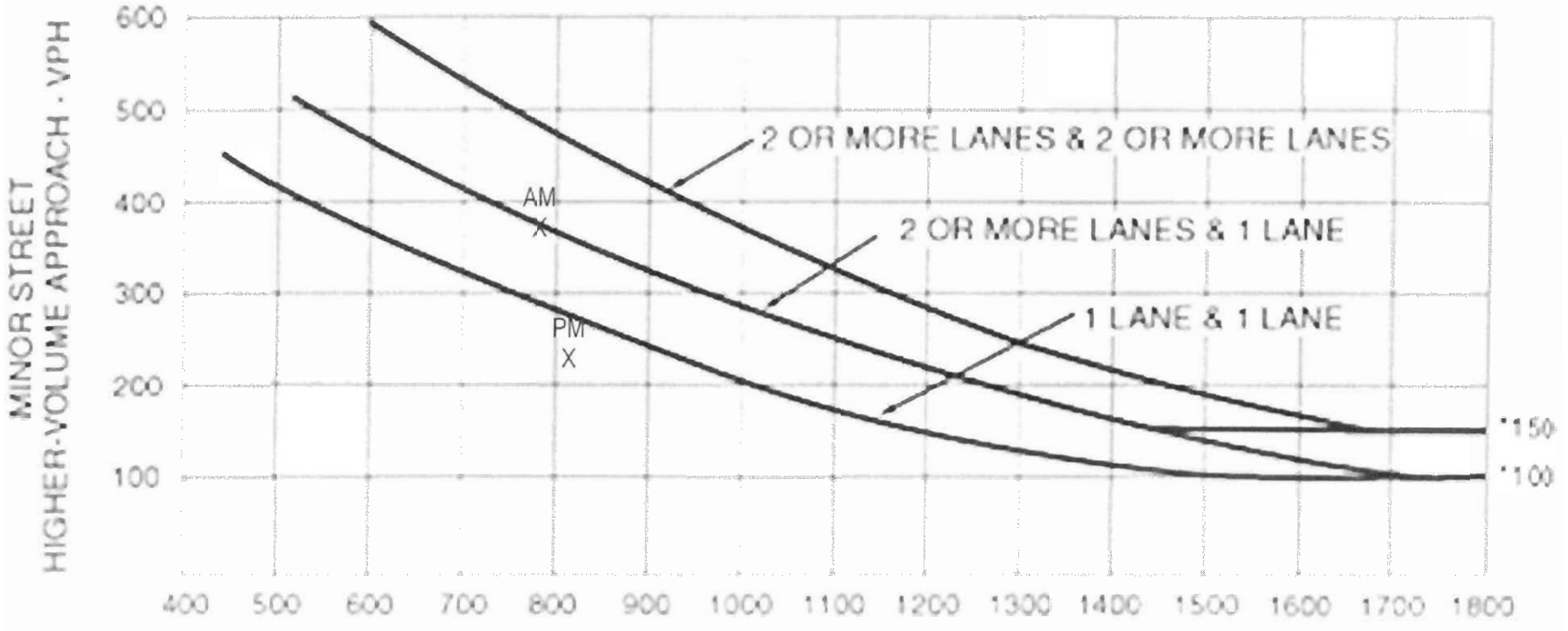


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Central Avenue at McCall Avenue

Figure 4C-3. Warrant 3, Peak Hour

Cumulative 2035 Plus Project



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 4)

COUNT DATE 12/13/2011

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: CENTRAL
Minor St: SR 99 SB OFFRAMP

Critical Approach Speed 40 mph
Critical Approach Speed 65 mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)

☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☑
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	325	374	409	391	313	352	361	392	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	373	326	343	307	363	403	380	364	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	325	374	409	391	313	352	361	392	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	373	326	343	307	363	403	380	364	

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES ☐ NO ☑

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	12-1	1-2	12-1	1-2	Hour
Both Approaches - Major Street	✓		376	409	391	313	
Higher Approach - Minor Street	✓		326	343	307	363	

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☑
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☐
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

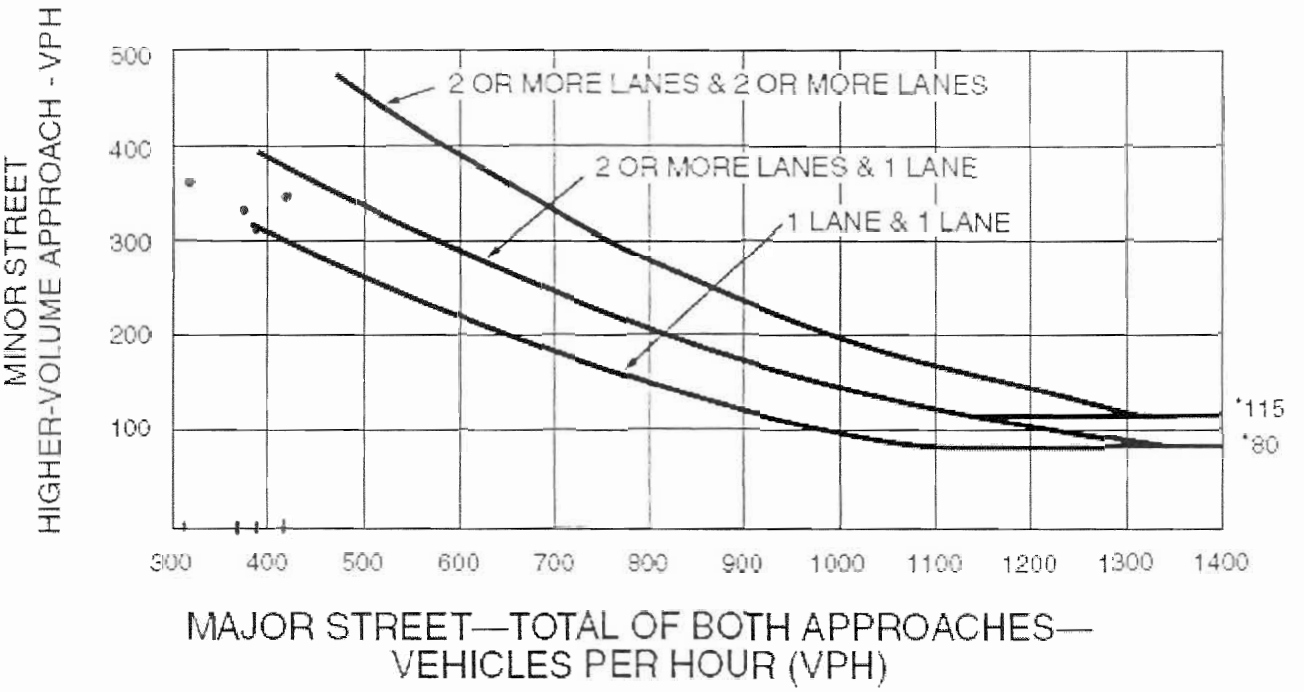
PART B SATISFIED YES ☐ NO ☐

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

EXISTING PLUS PROJECT PLUS CUMULATIVE

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

DIST ____ CO ____ RTE ____ PM ____

COUNT DATE 2011 - EXISTING PLUS PROJECT PLUS CUMULATIVE
CALC ____ DATE ____
CHK ____ DATE ____

Major St: CENTRAL
Minor St: SR 99 SB-OFF RAMP

Critical Approach Speed 40 mph
Critical Approach Speed 65 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐ RURAL (R)
☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☑
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume
100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

APPROACH LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) U	R	U	R
	1		2 or More	
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)

Hour	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
Both Approaches Major Street	325	376	409	391	313	352	361	392
Highest Approach Minor Street	373	326	343	307	363	403	380	304

Condition B - Interruption of Continuous Traffic
100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

APPROACH LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) U	R	U	R
	1		2 or More	
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)

Hour	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
Both Approaches Major Street	325	376	409	391	313	352	361	392
Highest Approach Minor Street	373	326	343	307	363	403	380	304

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☑ NO ☐**

Record hourly vehicular volumes for any four hours of an average day

APPROACH LANES	One	2 or More	10-11	11-12	12-1	1-2 (Hour)
Both Approaches - Major Street	✓		370	408	391	313
Higher Approach - Minor Street	✓		326	343	307	303

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☑
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

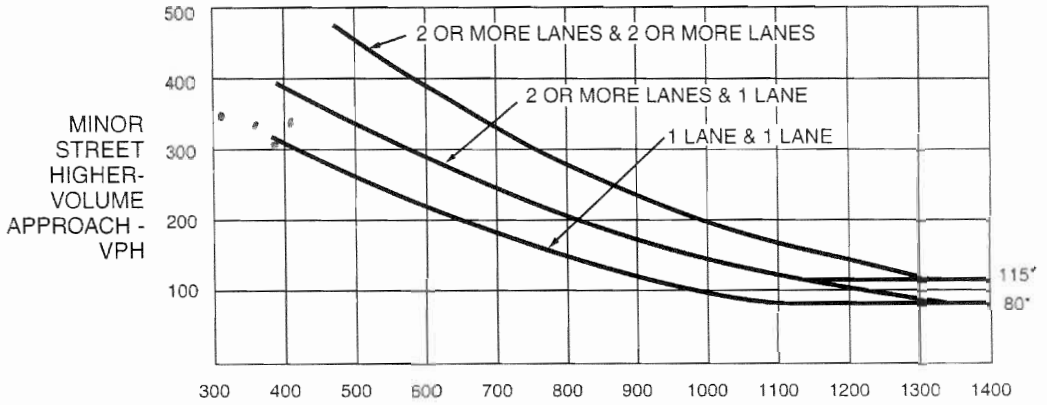
PART B **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

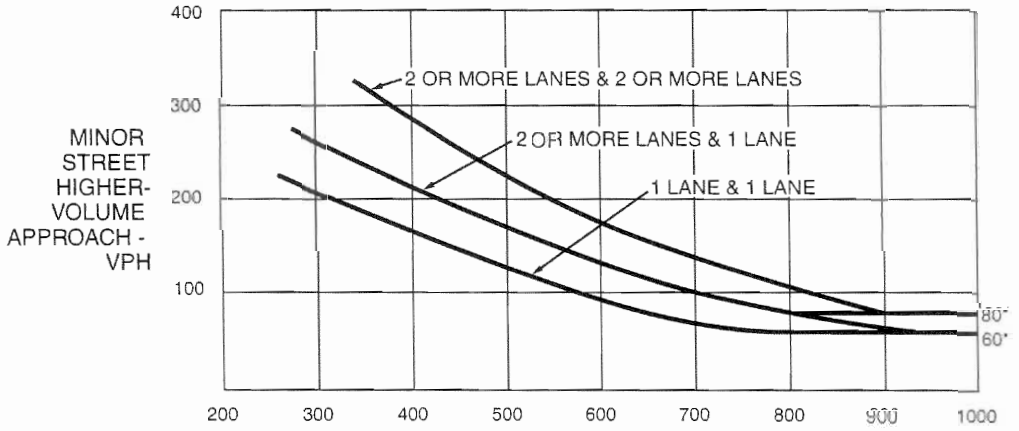
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

YEAR 2019

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 4)

COUNT DATE YEAR 2019

DIST ____ CO ____ RTE ____ PM ____

CALC FEEDER CAD DATE 2019

CHK MODEL DATE ____

Major St: CENTRAL

Minor St: SR 99 SB OFF-RAMP

Critical Approach Speed 40 mph

Critical Approach Speed 65 mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☐ or

In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)

☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☑

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☑

80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				8-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	307	425	462	442	371	398	408	443	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	421	368	388	347	410	455	429	344	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☑

80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				8-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	307	425	462	442	371	398	408	443	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	421	368	388	347	410	455	429	344	

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES ☑ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	10-11	11-12	12-1	1-2 (Hour)
Both Approaches - Major Street	✓		425	462	442	354
Higher Approach - Minor Street	✓		368	350	317	410

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☑ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☐
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

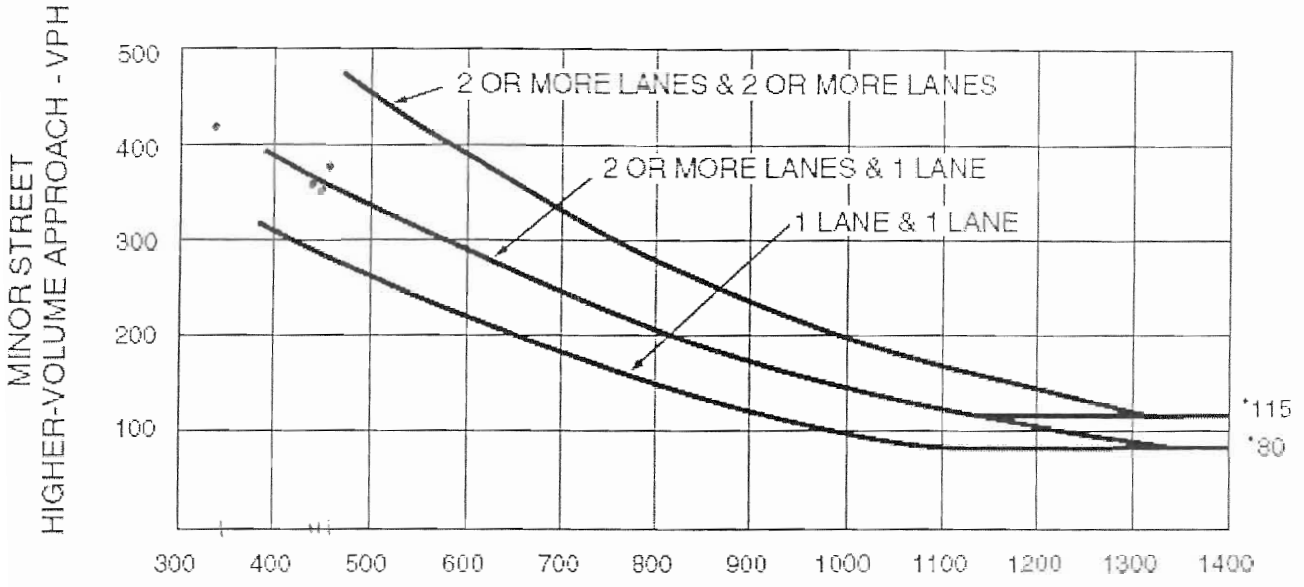
PART B SATISFIED YES ☐ NO ☐

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

CUMULATIVE 2035 NO PROJECT

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 4)

COUNT DATE YEAR 2035
CALC FRESNO COG DATE 2035
CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: CENTRAL
Minor St: SR 99 SB-OFF RAMP

Critical Approach Speed 40 mph
Critical Approach Speed 65 mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)
☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☑
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☑ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	465	538	585	559	448	503	516	561
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	533	466	490	439	519	576	543	435

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	465	538	585	559	448	503	516	561
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	533	466	490	439	519	576	543	435

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES ☑ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	10-11	11-12	12-1	1-2 (Hour)
Both Approaches - Major Street	✓		538	587	554	448
Higher Approach - Minor Street	✓		466	490	439	519

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☑	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☐
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐	No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐	No ☐

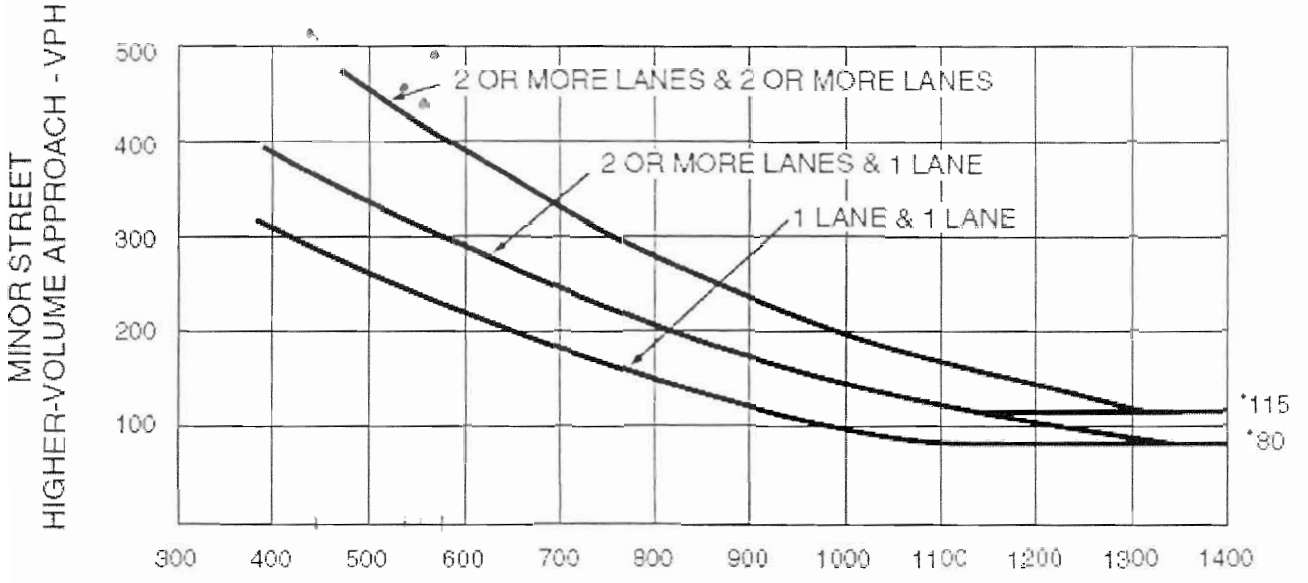
PART B SATISFIED YES ☐ NO ☐

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls *above the applicable curve in Figure 4C-3. (URBAN AREAS)*	Yes ☐	No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 4)

COUNT DATE 12/13/2011

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: CENTRAL — Critical Approach Speed 40 mph

Minor St: SR 99 NB ON-RAMP — Critical Approach Speed 65 mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)

☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☑
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	506	546	497	523	475	534	696	727	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	61	85	80	80	51	74	65	89	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	506	546	497	523	475	534	696	727	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	61	85	80	80	51	74	65	89	

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☑**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	12	2-3	3-4	4-5 Hour
Both Approaches - Major Street	✓		475	534	696	727
Higher Approach - Minor Street	✓		51	74	65	89

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☑
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

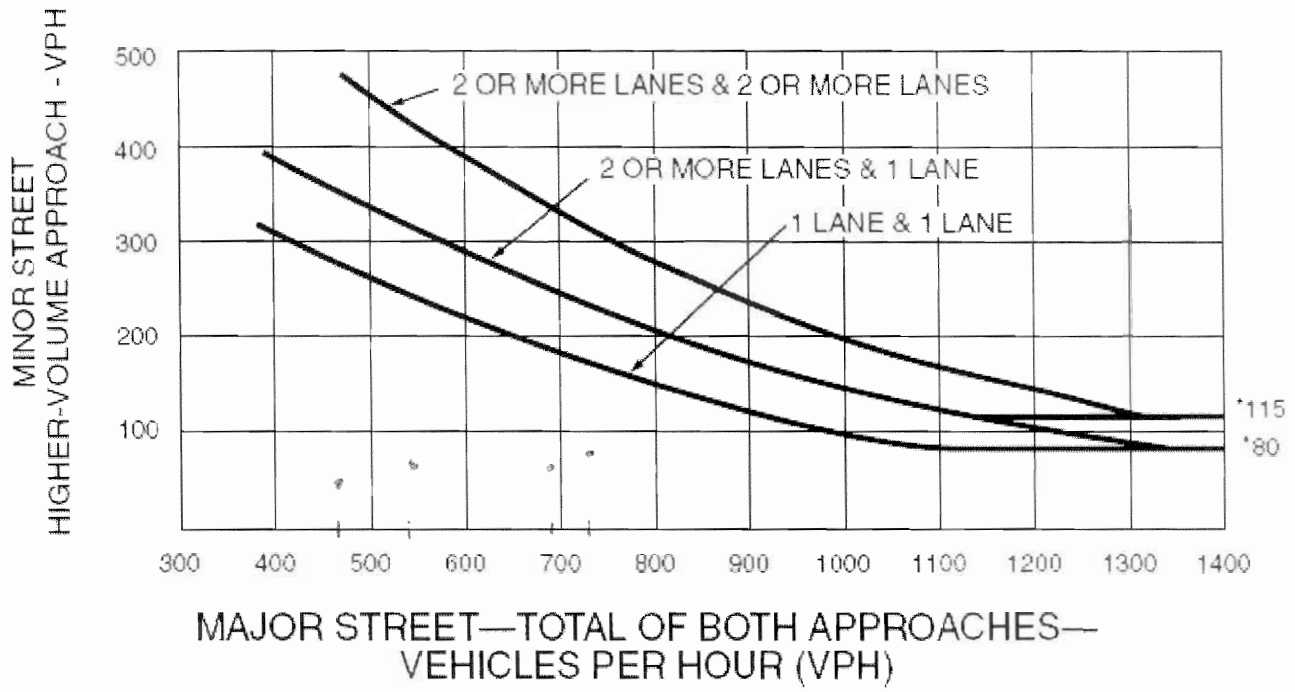
PART B **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

CUMULATIVE 2035 NO PROJECT

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 4)

COUNT DATE YEAR 2035
CALC FRESNO COG DATE 2035
CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: CENTRAL
Minor St: SR 99 NB ON-RAMP

Critical Approach Speed 40 mph
Critical Approach Speed 40 mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)
☑ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☑
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	724	781	711	748	679	764	995	1,040
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	87	122	114	114	73	100	93	127

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☑ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	724	781	711	748	679	764	995	1,040
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	87	122	114	114	73	100	93	127

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES ☐ NO ☑

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	1-2	2-3	3-4	4-5 Hour
Both Approaches - Major Street	√		671	764	995	1,040
Higher Approach - Minor Street	√		73	106	93	127

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☑
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☐
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

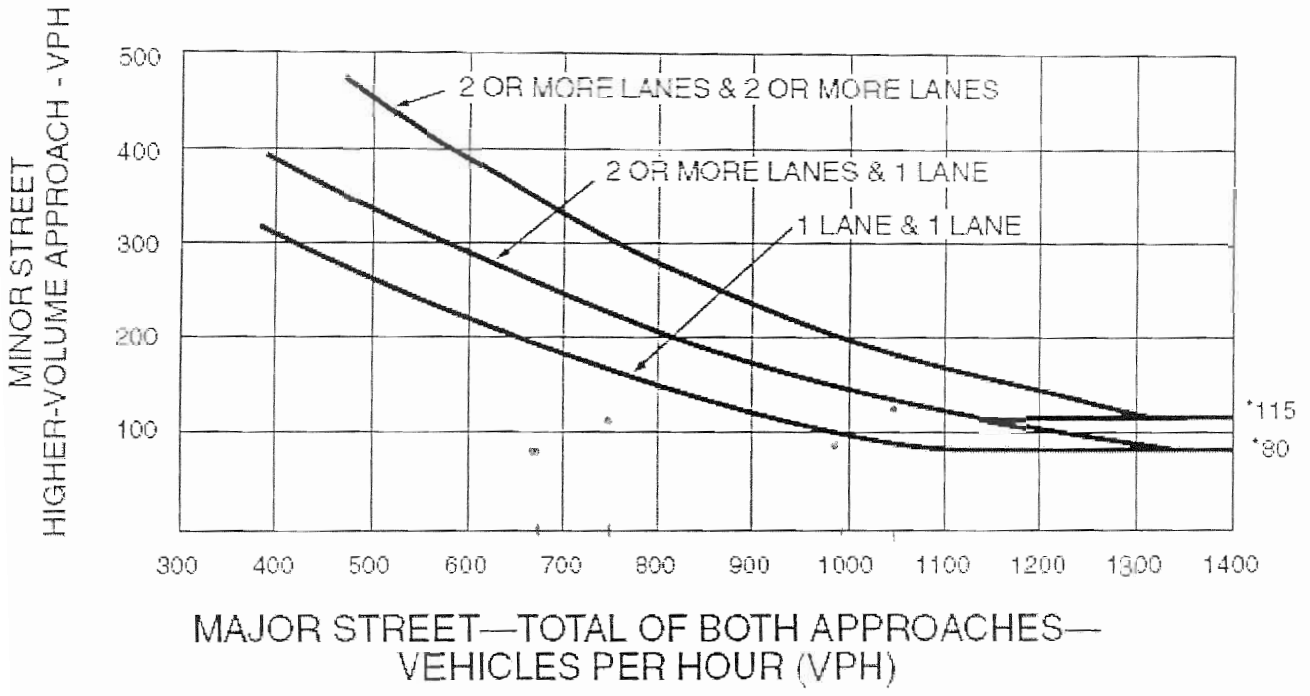
PART B SATISFIED YES ☐ NO ☐

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES ☐ NO ☑

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	12	2	3	4:45	Hour
Both Approaches - Major Street	√		679	764	995	1,040	
Higher Approach - Minor Street	√		73	106	93	127	

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☑
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☐
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐	No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐	No ☐

PART B SATISFIED YES ☐ NO ☐

APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street				
Higher Approach - Minor Street				

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.