

TRAFFIC IMPACT STUDY

THE RIVER DISTRICT

Cascade, Idaho

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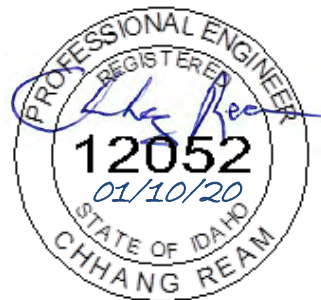
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EXECUTIVE SUMMARY

A-Team Land Development retained CR Engineering, Inc. to prepare a traffic impact study (TIS) for The River District, a proposed mixed-use development located northeast of the Riverview Parkway and SH 55 intersection in Cascade, Idaho, as shown in **Figure 1.1**. The scope of this TIS was determined through coordination with the Idaho Transportation Department (ITD).

The TIS evaluates the potential traffic impacts resulting from, background traffic growth, off-site development in the area, and the proposed development, and identifies improvements to mitigate the impacts if needed. Traffic impacts were evaluated based on the proposed land uses and access as shown in the preliminary site plan under weekday AM and PM peak hours traffic conditions. **Table 1** summarizes the improvements needed to mitigate the traffic impacts for the following analysis years traffic conditions:

- 2019 Existing traffic
- 2040 Build-out year background traffic
- 2040 Build-out year total traffic

Table 1 – Proposed Intersection Improvements Summary

Intersection		2019 Existing	2040 Build-Out Year	
			Background	Total
①	Riverview Parkway and SH 55	None	Southeast-bound right-turn lane	Roundabout, signal, or RCUT
②	Payette Street and SH 55 (proposed access)	N/A	N/A	Northwest-bound right-turn lane

1.0 Proposed Development

- 1.1 The River District is a proposed mixed-use development estimated to include 144 single-family dwelling units, 299 multifamily dwelling units, and 54,000 square feet of general retail land use. The expected build-out year is 2040 but may change depending on the market conditions.
- 1.2 Based on the procedures outlined in the *Trip Generation Handbook, 3rd Edition* and the *Trip Generation Manual, 10th Edition*, both published by the Institute of Transportation Engineers (ITE), the proposed development is estimated to generate approximately 7,628 trips per weekday with 421 trips during the AM peak hour and 645 trips during the PM peak hour.
 - Based on the proposed land use and ITE methodologies, the development is expected to capture approximately 1% of the AM peak hour trips and 20% of the PM peak hour trips within the site. The daily capture rate was assumed to be 10%, the average of the AM and PM peak hour capture rates.
 - Based on ITE pass-by rates, the proposed retail land use within the development is expected to generate 94 pass-by trips in the PM peak hour. No ITE pass-by trip rate is available for the proposed retail land use in the AM peak hour or daily and was not included in the analysis.
 - All trips generated by the development were assumed to be made by personal or commercial vehicles.
- 1.3 The estimated site traffic distribution patterns are:
 - 90% with origins/destinations northwest of the site
 - 10% with origins/destinations southeast of the site

- 1.4 The River District is proposing two access points on SH 55 for site access:
- Payette Street (Northwest access)
 - Proposed as a full access located approximately 450 feet southeast of the existing North Fork Payette River bridge and 400 feet northwest of Riverview Parkway, an existing approach on SH 55
 - Does not meet ITD’s 1,320-foot minimum spacing requirements for public road spacing on a regional route in a transitional area
 - Meets ITD’s 360-foot minimum spacing requirements for a full access driveway on a regional route in a transitional area
 - Expected to meet ITD’s minimum operational thresholds with 2040 total traffic as an unsignalized intersection
 - Ponderosa Street (Southeast access)
 - Proposed as a full access to align with Riverview Parkway to the southwest
 - Located approximately 460 feet northwest of the northernmost access to the Cascade Airport
 - Does not meet ITD’s 1,320-foot minimum spacing requirements for public road spacing on a regional route in a transitional area
 - Meets ITD’s 360-foot minimum spacing requirements for a full access on a regional route in a transitional area

2.0 2019 Existing Traffic Conditions

- 2.1 Traffic counts were collected at the Riverview Parkway and SH 55 intersection on November 21, 2019. To account for peak season travel along SH 55, the traffic volumes along SH 55 were adjusted for seasonal variations to reflect the summer peak month traffic volumes. Seasonal adjustment factors were estimated from historical traffic data from Automatic Traffic Recorder (ATR) No. 043. The seasonal adjustment factors used in this study are:
- 1.96 in the AM peak hour
 - 2.67 in the PM peak hour
- 2.2 With 2019 seasonally-adjusted existing traffic, the Riverview Parkway and SH 55 intersection meets ITD’s minimum operational thresholds. Additionally, no turn lanes are required based on ITD’s turn-lane guidelines. As a result, no improvements are needed to mitigate 2019 existing traffic.

3.0 2040 Background Traffic Conditions

- 3.1. The study area intersection and roadway are expected to remain the same as existing conditions. ITD conducted a corridor study for SH 55 from Marsing to Banks Lowman Road between 2014-2016. However, the North Corridor Plan (Banks Lowman Road to New Meadows) has not been completed and is not available at the time of this study.
- 3.2. 2040 background traffic on SH 55 was estimated by extrapolating the seasonally adjusted 2019 existing counts with a 2% annual growth rate.
- This growth rate was estimated based on historical traffic count data from ATR No. 043
- 3.3. In addition to the traffic growth, one proposed off-site development located along Riverview Parkway was also included in the background traffic:
- Riverview Park Subdivision – 55 single-family lots
- 3.4. With 2040 background traffic, the Riverview Parkway and SH 55 intersection is expected to continue to meet ITD’s minimum operational thresholds analyzed with the existing intersection control and lane configurations. Based on ITD’s turn-lane guidelines, the following turn lane is needed:
- Southwest-bound right-turn lane

4.0 2040 Build-Out Year Total Traffic Conditions

- 4.1 With 2040 total traffic, the proposed Payette Street and SH 55 intersection is expected to meet ITD's minimum operational thresholds as an unsignalized intersection. Based on ITD's turn-lane guidelines, the following turn lane is needed
- Northwest-bound right-turn lane
 - The right-turn lane is warranted when the development generates approximately 590 PM peak hour trips
- 4.2 With 2040 total traffic, the Riverview Parkway/Ponderosa Street and SH 55 intersection is expected to exceed ITD's minimum operational thresholds. Three mitigation options are proposed to mitigate 2040 build-out conditions:
- Single-lane Roundabout
 - A single-lane roundabout is expected to operate at LOS B or better under 2040 build-out year peak hour total traffic conditions with two accesses on SH 55 and LOS C or better with one access onto SH 55
 - Signal with left-turn lanes on all approaches
 - A signal is expected to operate at LOS A under 2040 build-out year peak hour total traffic conditions with two accesses on SH 55 and LOS B or better with one access on SH 55
 - Restricted Crossing U-turns (RCUT) intersection – RCUT intersection alternative would allow right-in, right-out, and left-in movements only, and prohibits left-turn and through movements from the proposed access and Riverview Parkway. These movements will be accommodated by requiring the drivers to make a right-turn onto SH 55 and then make a U-turn after the intersection. A loon will need to be constructed on SH 55 400 to 1,000 feet southeast of the intersection to accommodate U-turns. Additional widenings on SH 55 will be needed to include a southeast-bound U-turn lane. The Payette Street intersection will also need to be widened to include a loon to accommodate U-turns.
 - All lane groups are expected to operate at LOS C or better with a v/c ratio of 0.38 or less with two accesses on SH 55 and LOS C or better with a v/c ratio of 0.55 or less with one access on SH 55
- 4.3 As discussed above, the Riverview Parkway/Ponderosa Street and SH 55 intersection is expected to exceed ITD's minimum operational thresholds under build-out conditions. Preliminary phasing analysis was conducted to determine when the intersection exceeds LOS D thresholds. The intersection is expected to operate at LOS E by year 2025 when the development generates 144 PM peak hour trips.

1.0 INTRODUCTION

CR Engineering, Inc. has been retained to prepare a traffic impact study (TIS) for The River District, a proposed mixed-use development located in the northeast quadrant of the Riverview Parkway and SH 55 intersection in Cascade, Idaho. **Figure 1.1** shows the site location and its vicinity. The TIS evaluates the potential traffic impacts resulting from background traffic growth, off-site development in the area, the proposed development, and identifies improvements to mitigate the impacts if needed.

Figure 1.1 – Site Location and Vicinity



1.1 Proposed Development

Figure 1.2 shows the preliminary site development plan with the proposed access locations. The expected build-out year for the development is 2040 but may change depending on the market conditions. At full build-out, The River District is estimated to include the following land uses:

- 144 single-family dwelling units
 - 135 single-family homes
 - 9 cottages
- 299 multifamily dwelling units
 - 43 townhomes
 - 52 fourplexes
- 54,000 square feet of general retail

Based on the preliminary site plan, the development is proposing one full access to align with Riverview Parkway and one full access to align with the existing private approach located approximately 400 feet northwest of Riverview Parkway.

1.2 Study Approach

The TIS was prepared in accordance with ITD *IDAPA 39.03.42 – Rules Governing Highway Right-of-Way Encroachments on State Rights-of-Way*. The scope of this TIS was determined through coordination with ITD.

1.3 Study Area

The following study area intersections were identified by ITD for collecting peak hour turning movement counts and traffic impact analysis:

1. Riverview Parkway and SH 55 intersection
2. All proposed site access points

1.4 Study Period

The analysis periods will be weekday AM and PM peak hours of operation of the transportation system. The analysis years are:

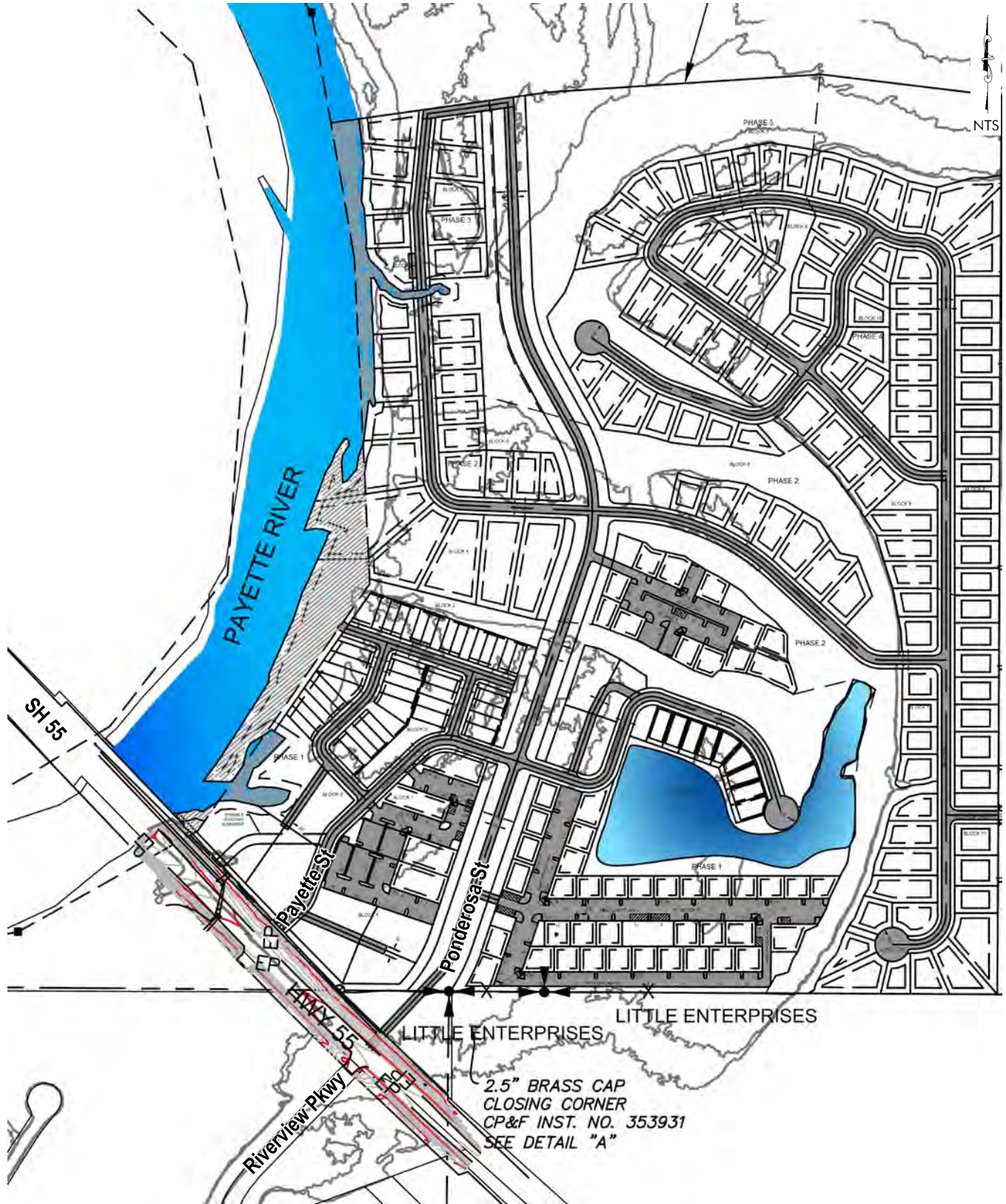
- 2019 existing traffic
- 2040 build-out year background traffic
- 2040 build-out year total traffic

1.5 Analysis Methods and Performance Measure Thresholds

Intersection capacity analysis was performed using the Synchro 10 (Version 10.3.122.0), which utilizes HCM6 methodologies. All parameters used in the analysis were based on existing data when available or Synchro default values, when not available. For future signals, the signal timing was optimized in Synchro for the intersection lane configuration and traffic conditions.

For intersections under ITD's jurisdiction, the minimum operational threshold is a v/c ratio of 0.90 for the overall intersection and lane group.

Figure 1.2 – Preliminary Site Plan



2.0 EXISTING CONDITIONS

2.1 Roadway Network and Lane Configuration

The study area roadways are described below. The roadway functional classification is based on the 2012 ITD Access Control Map for roadways under ITD's jurisdiction.

SH 55 is classified as a Regional Route with a posted speed limit of 35 mph west of Riverview Parkway and 45 mph east of Riverview Parkway. SH 55 has one lane in each direction with a center turn lane and a rural section without curb, gutter, or sidewalk.

Riverview Parkway is an unpaved local road providing access for the airport and recreational sites along the river.

2.2 Existing Traffic Volumes

Weekday AM and PM peak hour turning movement traffic counts were obtained on November 21, 2019. The peak hour intersection turning movement counts were collected on a weekday for a 2-hour period at 15-minute intervals between 7:00 and 9:00 during the AM peak travel period hour and between 4:00 and 6:00 during the PM peak travel period. Existing turning movement counts are included in the appendix.

Traffic volumes on SH 55 experience high seasonal variations due to numerous recreational sites. Based on historical traffic count data from ITD automatic traffic recorder (ATR) No. 043, traffic volumes on SH 55 are generally lower in the winter months compared to the summer months. The peak month typically occurred in July and the low month typically occurred in January. Based on the historical count data, the seasonal adjustment factors are 1.96 for the AM peak hour and 2.67 for the PM peak hour. **Figure 2.2** summarizes the seasonally adjusted existing peak hour traffic volumes for the AM and PM peak hours.

2.3 Intersection Crash Data

The most current five-year crash data (2014-2018) was obtained from the Local Highway Technical Assistance Council (LHTAC) website (<http://gis.lhtac.org/safety/>). There was one reported crash in the five-year span in which the driver drove left of centerline into an embankment due to inattentive driving.

Figure 2.1 – Existing Intersection Control Lane and Configuration

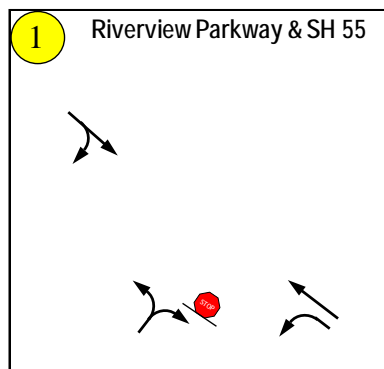
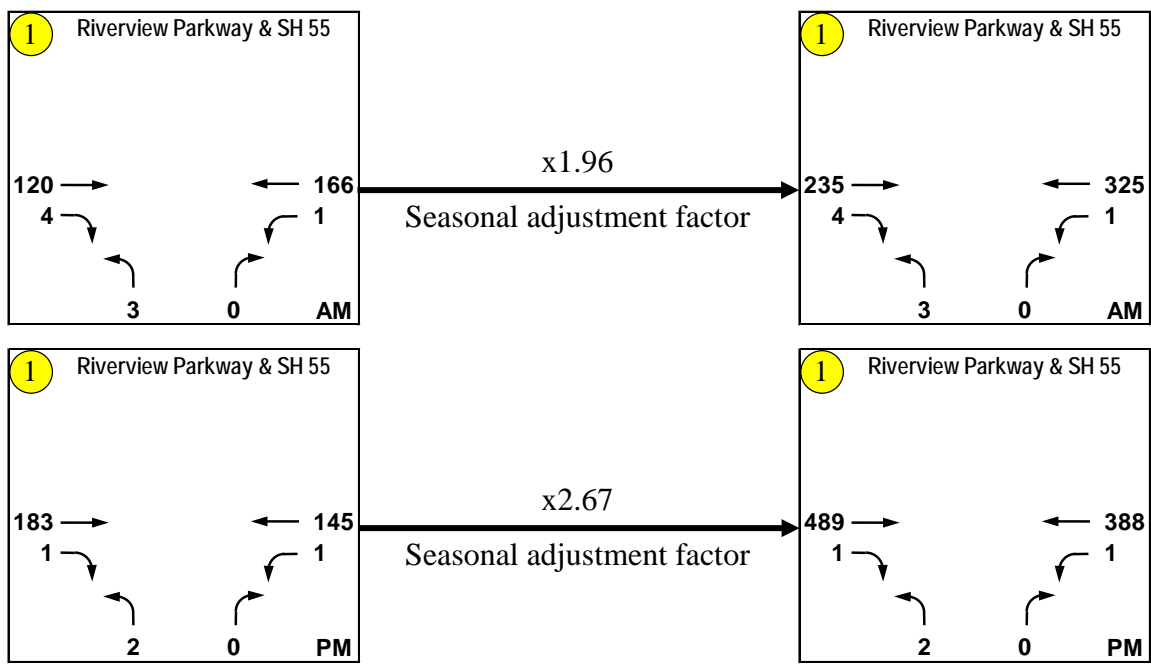


Figure 2.2 – 2019 Existing Peak Hour Traffic



2.4 Intersection Operations

To determine the existing traffic impacts, the study area intersection was analyzed with the existing intersection control and lane configuration with 2019 seasonally-adjusted existing peak hour traffic. Copies of the analysis reports are included in the appendix. **Table 2.5** summarizes the intersection capacity analysis results. The study area intersection of Riverview Parkway and SH 55 currently meets ITD minimum operational thresholds with the seasonally adjusted volumes.

Table 2.1 – Intersection Operations – 2019 Seasonally Adjusted Existing Traffic

Intersection	Control	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway and SH 55		SEB	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	9	< 0.01
		NWT	-	-	-	-	-	-
		NEB	B	11	0.01	B	13	0.01

2.5 Intersection Mitigation

The SH 55 and Riverview Parkway intersection is expected to meet minimum operational thresholds with the existing lane configuration, intersection control, and seasonally adjusted traffic volumes. No improvements are needed to mitigate 2019 existing traffic impacts.

3.0 2040 BACKGROUND TRAFFIC CONDITIONS

3.1 Roadway Network

The study area roadways and intersection are expected to remain the same as existing conditions. SH 55 conducted a corridor plan from Marsing to Nampa and State Street to Banks Lowman Road between 2014-2016. However, the North Corridor Plan (Banks Lowman Road to New Meadows) has not been completed and is not available at this time.

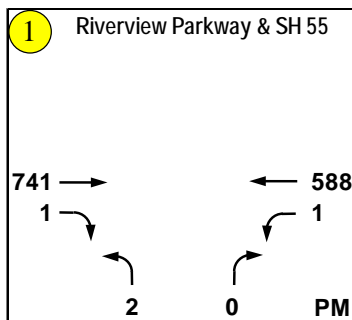
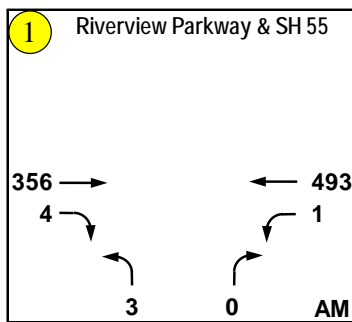
3.2 Background Traffic

2040 background traffic was estimated by extrapolating the 2019 seasonally-adjusted existing traffic counts by the following annual growth rates:

- 2.0% per year on SH 55

This growth rate is based on ATR #043 data collected from 1990 to October 2019. In addition, the Riverview Park Subdivision, a 55 residential lot development southwest of The River District which accesses SH 55 via Riverview Driveway, was assumed to be fully constructed by 2025 and was included as off-site traffic. **Figure 3.1** summarizes the 2040 build-out year peak hour background traffic.

Figure 3.1 – 2040 Build-Out Year Peak Hour Background Traffic



3.3 Intersection Operations

To determine the 2040 background traffic impacts, the intersection of Riverview Parkway and SH 55 was analyzed with the existing intersection control and lane configuration with 2040 background traffic volumes as discussed in Section 3.2. Copies of the analysis reports are included in the appendix. **Table 3.1** summarizes the intersection capacity analysis results. The intersection is expected to meet ITD’s minimum operational thresholds under 2040 background traffic conditions.

Table 3.1 – Intersection Operations – 2040 Build-Out Year Background Traffic

Intersection	Control / Lane	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway and SH 55		SEB	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	10	0.01
		NWT	-	-	-	-	-	-
		NEB	B	13	0.08	C	17	0.08

3.4 Intersection Mitigation

The SH 55 and Riverview Parkway intersection is expected to continue to meet minimum operational thresholds with the existing lane configuration, intersection control, and seasonally adjusted 2040 background traffic volumes. However, a southeast-bound right-turn lane is warranted based on ITD’s turn-lane guidelines. Turn-lane warrant worksheets are included in the appendix. The right-turn lane is needed to mitigate the proposed Riverview Park Subdivision’s impacts. **Table 3.2** summarizes the intersection’s operations with the additional right-turn lane.

Table 3.2 – Intersection Operations – 2040 Build-Out Year Background Traffic Mitigation

Intersection	Control / Lane	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway and SH 55		SEB	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	10	0.01
		NWT	-	-	-	-	-	-
		NEB	B	13	0.08	C	17	0.08

4.0 2040 BUILD-OUT YEAR TOTAL TRAFFIC CONDITIONS

4.1 Roadway Network

SH 55 along the site frontage is expected to remain the same as existing conditions with the exception of the southeast-bound right-turn lane needed to mitigate 2040 background traffic impacts. Based on the preliminary site plan, The River District is proposing two full-access approaches on SH 55, one aligning with Riverview Parkway and the other one aligning with an existing private approach. 2040 total traffic analysis is based on the proposed site access as shown in the preliminary site plan. In addition, the traffic impact analysis was also evaluated with only one access on SH 55.

4.2 Site Traffic

4.2.1 Trip Generation

Site trip generation is estimated using the procedures recommended in the latest edition of the Trip Generation Manual (10th edition), published by the Institute of Transportation Engineers. **Table 4.1** summarizes the site trip generation. The proposed development is estimated to generate approximately 7,628 trips per weekday with 421 trips during the AM peak hour and 645 trips during the PM peak hour.

Table 4.1 – Build-Out Site Traffic Trip Generation Summary

Land Use	ITE Code	Size	Unit	Total Trips	Capture Rate	Internal Capture Trips	Pass-by Rates	Pass-by Trips	Primary Trips				
									Total	Entering	Exiting	Exiting	
Weekday Daily (vpd)													
Single-Family Detached Housing	210	144	DU	1,454	10%	145	--	--	1,309	50%	655	50%	654
Multifamily Housing (Low-Rise)	220	299	DU	2,220	10%	222	--	--	1,998	50%	999	50%	999
Retail	820	54	TSF	3,954	10%	395	--	--	3,559	50%	1,779	50%	1780
Weekday Daily Total Trips				7,628		762			6,866		3,433		3,433
Weekday AM Peak Hour (vph)													
Single-Family Detached Housing	210	144	DU	107	1%	1	--	--	106	25%	27	75%	79
Multifamily Housing (Low-Rise)	220	299	DU	135	1%	1	--	--	134	23%	31	77%	103
Retail	820	54	TSF	179	1%	2	--	--	177	62%	110	38%	67
Weekday AM Peak Hour Total Trips				421		4			417		168		249
Weekday PM Peak Hour (vph)													
Single-Family Detached Housing	210	144	DU	144	20%	29	--	--	115	63%	72	37%	43
Multifamily Housing (Low-Rise)	220	299	DU	157	20%	31	--	--	126	63%	79	37%	47
Retail	820	54	TSF	344	20%	69	34%	94	181	48%	87	52%	94
Weekday PM Peak Hour Total Trips				645		129		94	422		238		184

4.2.2 Trip Capture

Internal capture trips were estimated based on ITE methodologies. Copies of the internal capture worksheets are included in the appendix. Based on the proposed land uses, the development is expected to retain 1% of trips during the AM peak hour and 20% during the PM peak hour. Daily capture rates were not available; a 10% daily capture rate was assumed, the average of the AM and the PM peak hour trip capture rates.

4.2.3 Pass-by Trips

Based on ITE pass-by rates of 34% for ITE Land Use Code 820, the proposed commercial development’s respective land use is expected to attract approximately 94 pass-by trips during the PM peak hour. ITE does not have pass-by rates for the daily or AM peak hour. No pass-by trips were assumed in the AM peak hour analysis.

4.2.4 Modal Split

For the traffic analysis purposes, all trips generated by the development were assumed to be made by personal and commercial vehicles.

4.2.5 Trip Distribution and Assignment

Site traffic was distributed and assigned to the external roadway system based on current travel patterns, site layout, and the general location of the site within the area. **Figure 4.1** summarizes the expected site traffic distribution patterns. **Figure 4.2** summarizes the estimated build-out AM and PM peak hour site traffic.

4.3 Total Traffic

The site traffic is then added to the 2040 background traffic as determined above to obtain the 2040 total traffic. In addition, trips were added to the inflow and outflow movements affecting the southwest leg of the Payette Street and SH 55 intersection to account for a potential, small development southwest of the site. **Table 4.2** summarizes the build-out site traffic percentage estimate at the intersection of Riverview Parkway and SH 55. **Figure 4.3** summarizes the estimated 2040 build-out year AM and PM peak hour total traffic.

Table 4.2 – Build-Out Site Traffic Percentage of 2040 Total Traffic

Intersection		% Site Traffic of 2040 Total Traffic		
		AM Peak	PM Peak	Average
①	Riverview Parkway and SH 55	22%	17%	19%
②	Payette Street and SH 55	30%	23%	26%

Figure 4.2 – 2040 Build-Out Year Peak Hour Site Traffic

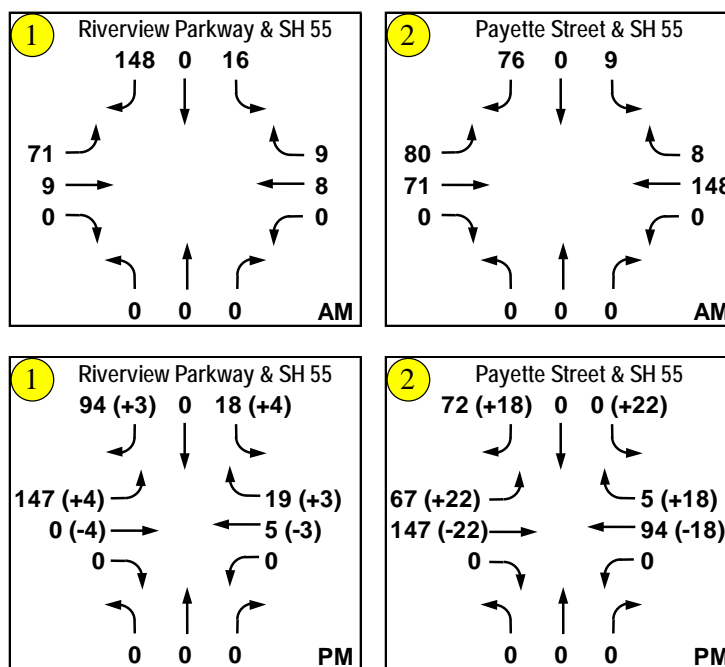
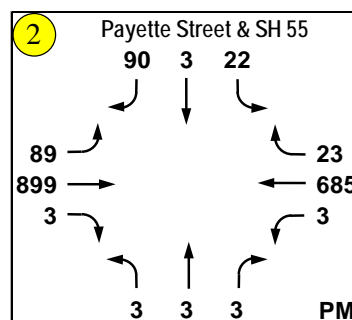
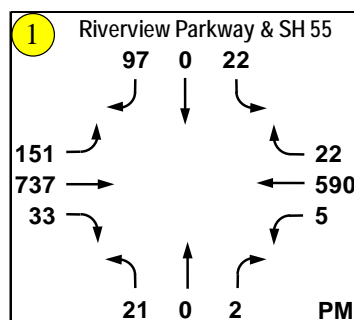
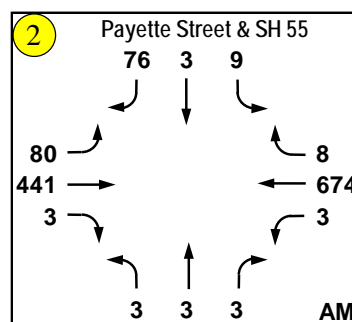
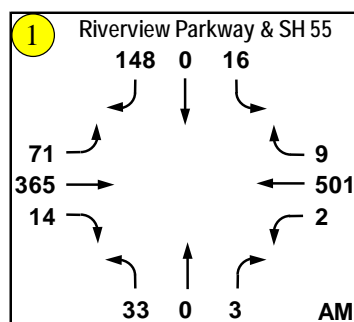


Figure 4.3 – 2040 Build-Out Year Peak Hour Total Traffic



4.4 Intersection Operations

To determine the 2040 total traffic impacts, the study area intersections were analyzed with the existing intersection control and lane configuration or with the preceding improvements needed to mitigate 2040 background traffic. Traffic impacts were evaluated with two proposed site accesses on SH 55 as shown in the preliminary site plan. Additionally, the traffic impacts were also evaluated with the site having only one access on SH 55. Northeast-bound right-turn lanes are needed at the Riverview Parkway/Ponderosa Street and Payette Street intersections on SH 55 with 2040 total traffic and were included in the analysis. Copies of the analysis reports are included in the appendix. **Table 4.3** and **Table 4.4** summarizes the intersection capacity analysis results. The Riverview Parkway/Ponderosa Street and SH 55 intersection is expected to exceed ITD’s minimum operational thresholds under 2040 build-out total traffic conditions for both site access scenarios.

Table 4.3 – Intersection Operations – 2040 Build-Out Year Total Traffic (Two SH 55 Accesses)

Intersection	Control / Lane	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway /Ponderosa Street and SH 55		SEL	A	9	0.08	A	10	0.18
		SET	-	-	-	-	-	-
		SER	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	10	0.01
		NWT	-	-	-	-	-	-
		NWTR	-	-	-	-	-	-
		NEB	F	55	0.36	F	211	0.67
SWB	C	19	0.42	F	65	0.73		
② Payette Street and SH 55		SEL	A	10	0.10	A	10	0.12
		SETR	-	-	-	-	-	-
		NWB	A	8	< 0.01	B	10	0.01
		NEB	C	19	0.04	D	27	0.06
		SWB	C	18	0.25	C	25	0.42

Table 4.4 – Intersection Operations – 2040 Build-Out Year Total Traffic (One SH 55 Access)

Intersection	Control / Lane	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway /Ponderosa Street and SH 55		SEL	A	9	0.17	B	11	0.29
		SET	-	-	-	-	-	-
		SER	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	10	0.01
		NWT	-	-	-	-	-	-
		NWR	-	-	-	-	-	-
		NEB	F	157	0.70	F	620	1.35
SWB	D	32	0.70	F	474	1.87		

4.5 Intersection Mitigation

Riverview Parkway/Ponderosa Street and SH 55 Intersection

The Riverview Parkway/Ponderosa Street and SH 55 intersection is expected to exceed ITD's minimum operational thresholds as an unsignalized intersection with 2040 total traffic. Three mitigation improvement options were evaluated and the results are summarized in **Table 4.5** and **Table 4.6**. The mitigation options and results are:

- Single-lane roundabout
 - The roundabout is expected to operate at LOS B or better under 2040 build-out year peak hour total traffic conditions with one or two site accesses on SH 55
- Traffic signal with left-turn lanes on all approaches
 - The signal is expected to operate at LOS A under 2040 build-out year peak hour total traffic conditions for both site access scenarios
- Restricted Crossing U-Turn (RCUT) intersection – RCUT intersection alternative would allow right-in, right-out, and left-in movements only, and prohibits left-turn and through movements from the proposed access and Riverview Parkway. These movements will be accommodated by requiring the drivers to make a right-turn onto SH 55 and then make a U-turn after the intersection. A loon will need to be constructed on SH 55 400 to 1,000 feet southeast of the intersection to accommodate U-turns. Additional widenings on SH 55 will be needed to include a southeast-bound U-turn lane. The Payette Street intersection will also need to be widened to include a loon to accommodate U-turns.
 - All movements are expected to operate at LOS C or better with a v/c ratio of 0.38 or less under 2040 build-out year total traffic conditions for both site access scenarios

These improvement options are expected to mitigate 2040 total traffic to meet ITD's minimum operational thresholds for the summer peak hours. The preferred alternative will need to be studied further and worked out among ITD, the City of Cascade, and the developer.

Table 4.5 – Intersection Operations – 2040 Build-Out Year Total Traffic Mitigation (Two SH 55 Accesses)

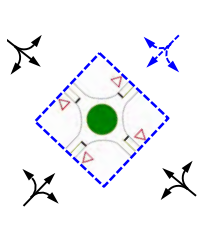
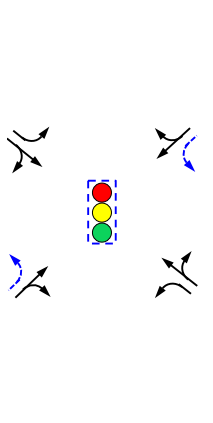
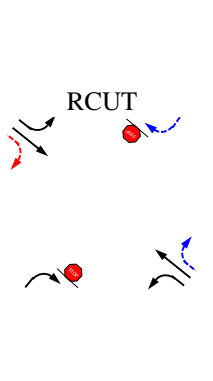
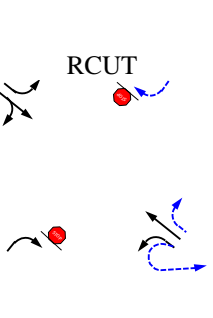
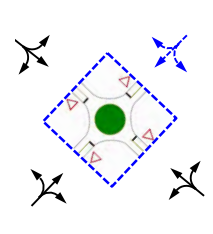
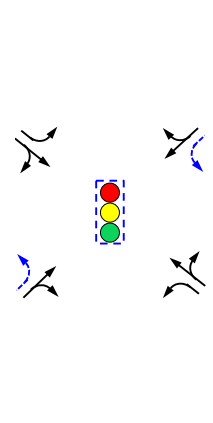
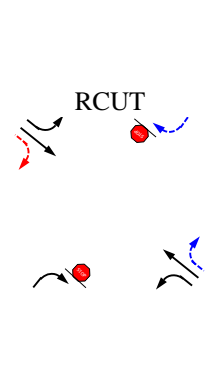
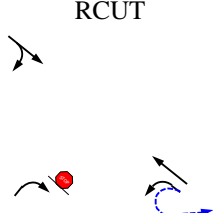
Intersection	Control / Lane	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway and SH 55		Intersection	A	8	-	B	14	-
		SE	A	7	0.39	C	17	0.80
		NW	A	8	0.49	B	12	0.64
		NE	A	5	0.05	A	8	0.05
		SW	A	8	0.25	A	8	0.20
		Intersection	A	7	0.38	A	10	0.69
		SEL	A	6	0.12	A	8	0.38
		SETR	A	6	0.57	A	6	0.71
		NWL	A	7	< 0.01	A	9	0.02
		NWTR	A	5	0.32	B	13	0.82
		NEL	B	11	0.09	C	21	0.11
		NETR	A	8	0.01	B	18	0.01
		SWL	A	8	0.03	B	18	0.08
		SWTR	B	11	0.61	C	23	0.62
		SEL	A	9	0.08	A	10	0.19
		SET	-	-	-	-	-	-
		SER	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	10	0.01
		NWT	-	-	-	-	-	-
		NWR	-	-	-	-	-	-
		NER	B	11	0.06	C	16	0.07
SWR	C	17	0.38	C	17	0.35		
② Payette Street and SH 55		SEL	A	10	0.10	A	10	0.12
		SETR	-	-	-	-	-	-
		NWL	A	9	0.03	B	11	0.08
		NWT	-	-	-	-	-	-
		NWR	-	-	-	-	-	-
		NER	B	11	0.02	C	18	0.03
		SWR	C	16	0.21	C	17	0.26

Table 4.6 – Intersection Operations – 2040 Build-Out Year Total Traffic Mitigation (One SH 55 Access)

Intersection	Control / Lane	Intersection or Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay [s/veh]	v/c Ratio	LOS	Delay [s/veh]	v/c Ratio
① Riverview Parkway and SH 55		Intersection	A	8	-	C	19	-
		SE	A	7	0.44	C	23	0.88
		NW	A	9	0.52	C	16	0.70
		NE	A	6	0.06	A	9	0.06
		SW	A	10	0.38	B	11	0.38
		Intersection	A	10	0.48	B	14	0.72
		SEL	B	12	0.38	B	12	0.66
		SETR	A	6	0.43	A	6	0.71
		NWL	A	8	< 0.01	A	8	0.02
		NWTR	A	7	0.59	A	7	0.86
		NEL	B	18	0.14	B	18	0.12
		NETR	B	12	0.01	B	12	0.01
		SWL	B	13	0.06	B	13	0.13
		SWTR	B	17	0.71	B	17	0.74
		SEL	A	9	0.17	B	11	0.30
		SET	-	-	-	-	-	-
		SER	-	-	-	-	-	-
		NWL	A	8	< 0.01	A	10	0.01
		NWT	-	-	-	-	-	-
		NWR	-	-	-	-	-	-
		NER	B	11	0.06	C	16	0.07
SWR	C	20	0.54	C	22	0.55		
② Payette Street and SH 55		SETR	-	-	-	-	-	
		NWL	A	9	0.03	B	11	0.08
		NWT	-	-	-	-	-	-
		NER	B	12	0.02	C	20	0.04

4.6 Site Access and Circulation

The River District is proposing two accesses on SH 55. Payette Street, the northwest access, is proposed as a full access located approximately 400 feet northwest of Riverview Driveway, where existing approaches are constructed on both sides of SH 55. Ponderosa Street, the southeast access, is set to align with Riverview Driveway, the existing roadway into the future Riverview Park Subdivision south of the site. Minimum spacing requirements for the site accesses on SH 55 are based on ITD IDAPA 39.03.42 minimum access spacing requirements on SH 55, a Regional Route located in a transitional area with speeds greater than 35 mph. According to IDAPA access spacing requirements, the minimum separation distances are as follows:

- 2,640 feet (½ mile) between signals
- 1,320 feet (¼ mile) between public roads
- 690 feet driveway distance separation from the nearest upstream public road intersection
- 360 feet driveway distance separation from the nearest downstream public road intersection
- 360 feet driveway distance separation from nearest unsignalized access other than a public road

The accesses proposed into The River District are assumed to be public streets. Therefore, the separation distance between Payette Street and Ponderosa Street does not meet ITD IDAPA spacing requirements for public roads but does meet ITD IDAPA driveway distance separation requirements.

As discussed in the previous sections, the Payette Street intersection is expected to meet ITD's minimum operational thresholds. A northwest-bound right-turn is needed to mitigate the 2040 total traffic impacts.

The Riverview Parkway/Ponderosa Street and SH 55 intersection is expected to exceed ITD's minimum operational thresholds as an unsignalized intersection. Based on a phasing analysis, when two accesses are permitted onto SH 55, the intersection is expected to fail when the development generates approximately 144 PM peak hour trips, equivalent to 144 dwelling units. This finding assumes the background traffic increases at a 2% annual growth rate and the proposed Riverview Park Subdivision is constructed.

APPENDIX A: TRAFFIC COUNTS

L2 Data Collection

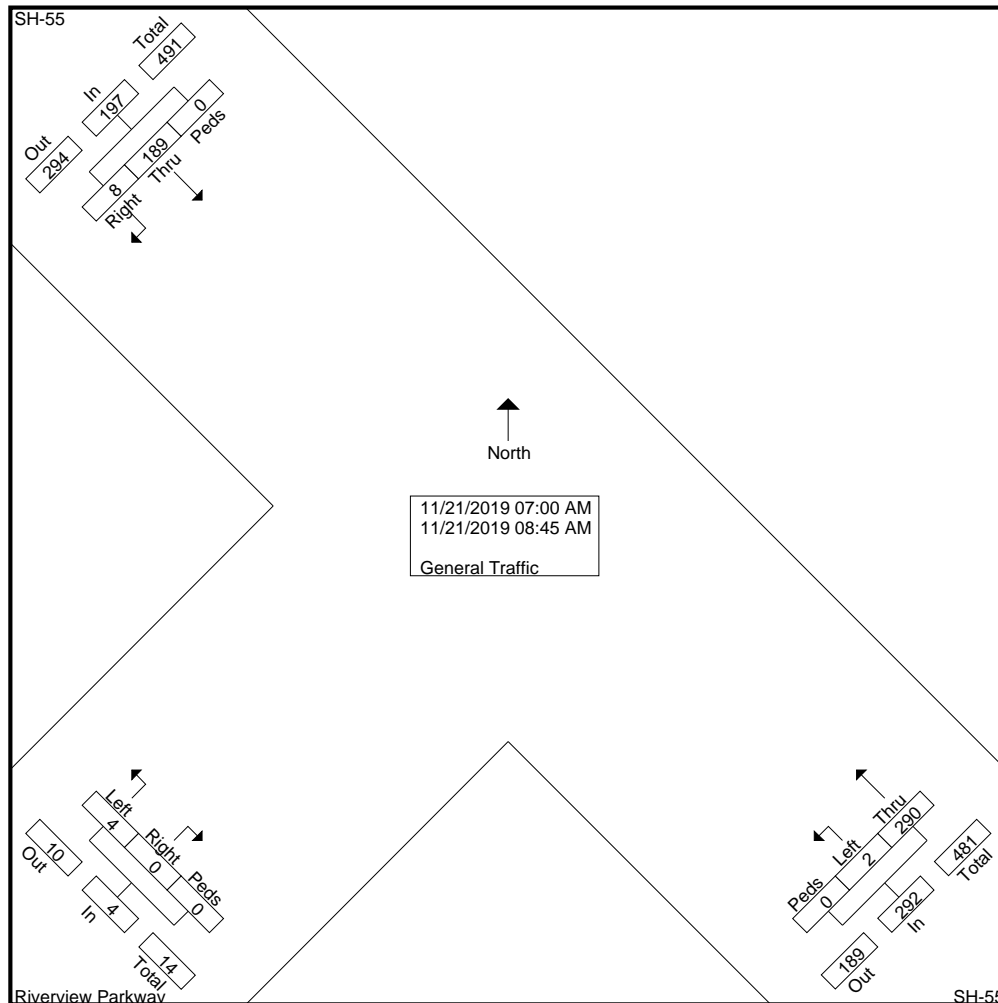
L2DataCollection.com
 (208) 860-7554 Utah (801) 413-2993

Study: CR0052
 Intersection: SH-55 / Riverview Pkwy
 City, State: Cascade, Idaho
 Control: Stop Sign

File Name : SH-55 & Riverview Parkway AM
 Site Code : 00000000
 Start Date : 11/21/2019
 Page No : 1

Groups Printed- General Traffic

Start Time	SH-55 From Southeast				Riverview Parkway From Southwest				SH-55 From Northwest				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
07:00 AM	14	0	0	14	0	0	0	0	0	17	0	17	31
07:15 AM	32	0	0	32	0	0	0	0	0	13	0	14	46
07:30 AM	31	0	0	31	0	0	0	0	0	14	0	15	46
07:45 AM	47	1	0	48	0	1	0	1	1	25	0	27	76
Total	124	1	0	125	0	1	0	1	1	69	0	73	199
08:00 AM	34	0	0	34	0	0	0	0	0	18	0	21	55
08:15 AM	43	1	0	44	0	2	0	2	2	33	0	33	79
08:30 AM	36	0	0	36	0	1	0	1	1	28	0	28	65
08:45 AM	53	0	0	53	0	0	0	0	0	41	0	42	95
Total	166	1	0	167	0	3	0	3	3	120	0	124	294
Grand Total	290	2	0	292	0	4	0	4	4	189	0	197	493
Apprch %	99.3	0.7	0		0	100	0			4.1	95.9	0	
Total %	58.8	0.4	0	59.2	0	0.8	0	0.8	1.6	38.3	0	40	



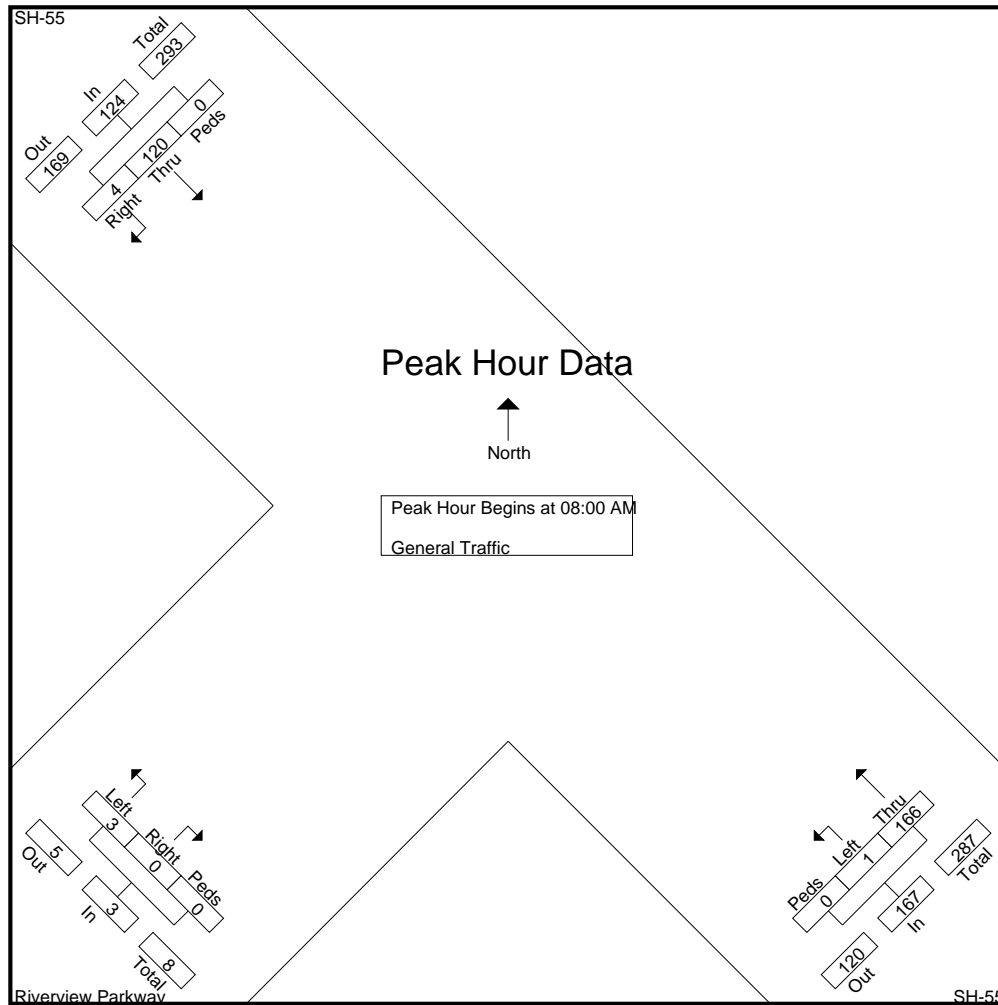
L2 Data Collection

L2DataCollection.com
 (208) 860-7554 Utah (801) 413-2993

Study: CR0052
 Intersection: SH-55 / Riverview Pkwy
 City, State: Cascade, Idaho
 Control: Stop Sign

File Name : SH-55 & Riverview Parkway AM
 Site Code : 00000000
 Start Date : 11/21/2019
 Page No : 2

Start Time	SH-55 From Southeast				Riverview Parkway From Southwest				SH-55 From Northwest				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	34	0	0	34	0	0	0	0	3	18	0	21	55
08:15 AM	43	1	0	44	0	2	0	2	0	33	0	33	79
08:30 AM	36	0	0	36	0	1	0	1	0	28	0	28	65
08:45 AM	53	0	0	53	0	0	0	0	1	41	0	42	95
Total Volume	166	1	0	167	0	3	0	3	4	120	0	124	294
% App. Total	99.4	0.6	0		0	100	0		3.2	96.8	0		
PHF	.783	.250	.000	.788	.000	.375	.000	.375	.333	.732	.000	.738	.774



L2 Data Collection

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 Control: Stop Sign

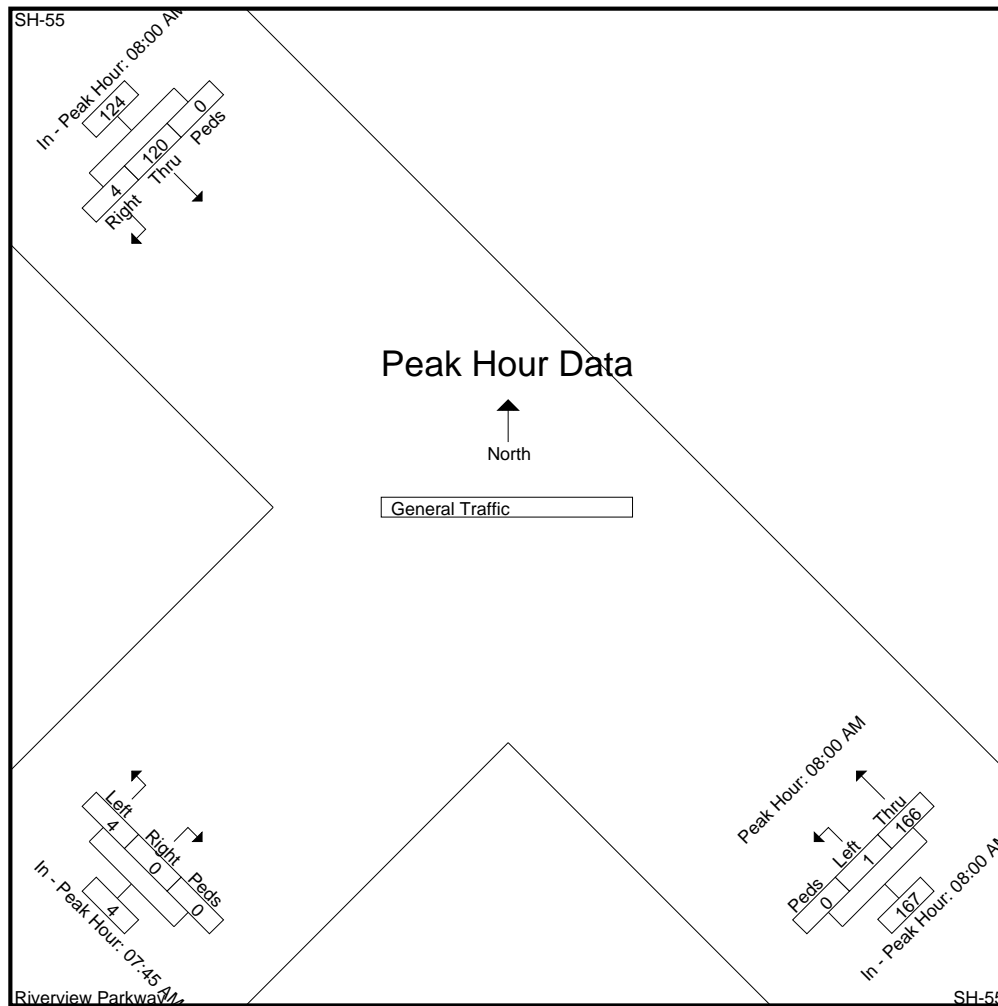
File Name : SH-55 & Riverview Parkway AM
 Site Code : 00000000
 Start Date : 11/21/2019
 Page No : 3

Start Time	SH-55 From Southeast				Riverview Parkway From Southwest				SH-55 From Northwest				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				08:00 AM			
+0 mins.	34	0	0	34	0	1	0	1	3	18	0	21
+15 mins.	43	1	0	44	0	0	0	0	0	33	0	33
+30 mins.	36	0	0	36	0	2	0	2	0	28	0	28
+45 mins.	53	0	0	53	0	1	0	1	1	41	0	42
Total Volume	166	1	0	167	0	4	0	4	4	120	0	124
% App. Total	99.4	0.6	0		0	100	0		3.2	96.8	0	
PHF	.783	.250	.000	.788	.000	.500	.000	.500	.333	.732	.000	.738



L2 Data Collection

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Control: Stop Sign

File Name : SH-55 & Riverview Parkway AM
Site Code : 00000000
Start Date : 11/21/2019
Page No : 4

Image 1



L2 Data Collection

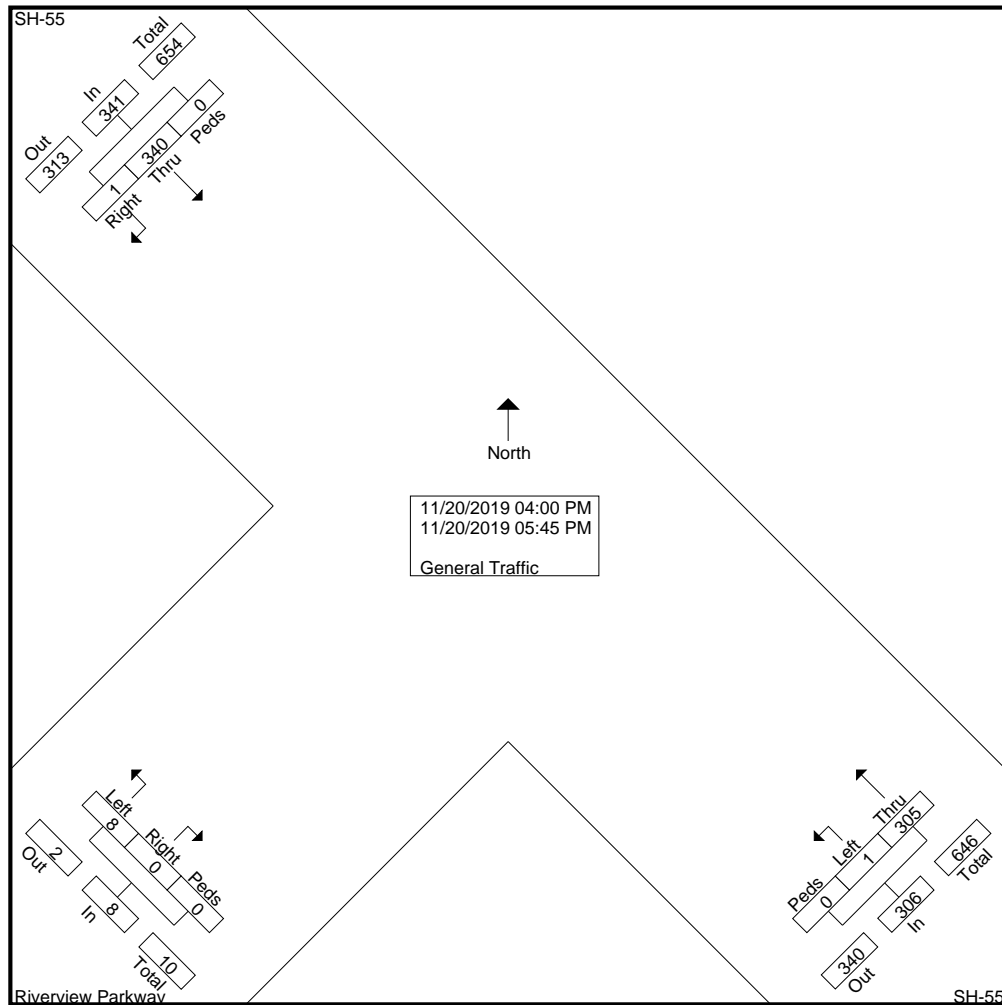
L2DataCollection.com
 (208) 860-7554 Utah (801) 413-2993

Study: CR0052
 Intersection: SH-55 / Riverview Pkwy
 City, State: Cascade, Idaho
 Control: Stop Sign

File Name : SH-55 & Riverview Parkway PM
 Site Code : 00000000
 Start Date : 11/20/2019
 Page No : 1

Groups Printed- General Traffic

Start Time	SH-55 From Southeast				Riverview Parkway From Southwest				SH-55 From Northwest				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
04:00 PM	0	52	0	52	36	0	0	36	0	4	0	4	92
04:15 PM	0	40	0	40	44	0	0	44	0	1	0	1	85
04:30 PM	0	34	0	34	43	0	0	43	0	1	0	1	78
04:45 PM	0	31	0	31	37	0	0	37	0	0	0	0	68
Total	0	157	0	157	160	0	0	160	0	6	0	6	323
05:00 PM	0	41	0	41	27	0	0	27	0	0	0	0	68
05:15 PM	0	58	0	58	40	0	0	40	0	1	0	1	99
05:30 PM	1	48	0	49	35	1	0	36	0	1	0	1	86
05:45 PM	0	36	0	36	43	0	0	43	0	0	0	0	79
Total	1	183	0	184	145	1	0	146	0	2	0	2	332
Grand Total	1	340	0	341	305	1	0	306	0	8	0	8	655
Apprch %	0.3	99.7	0		99.7	0.3	0		0	100	0		
Total %	0.2	51.9	0	52.1	46.6	0.2	0	46.7	0	1.2	0	1.2	



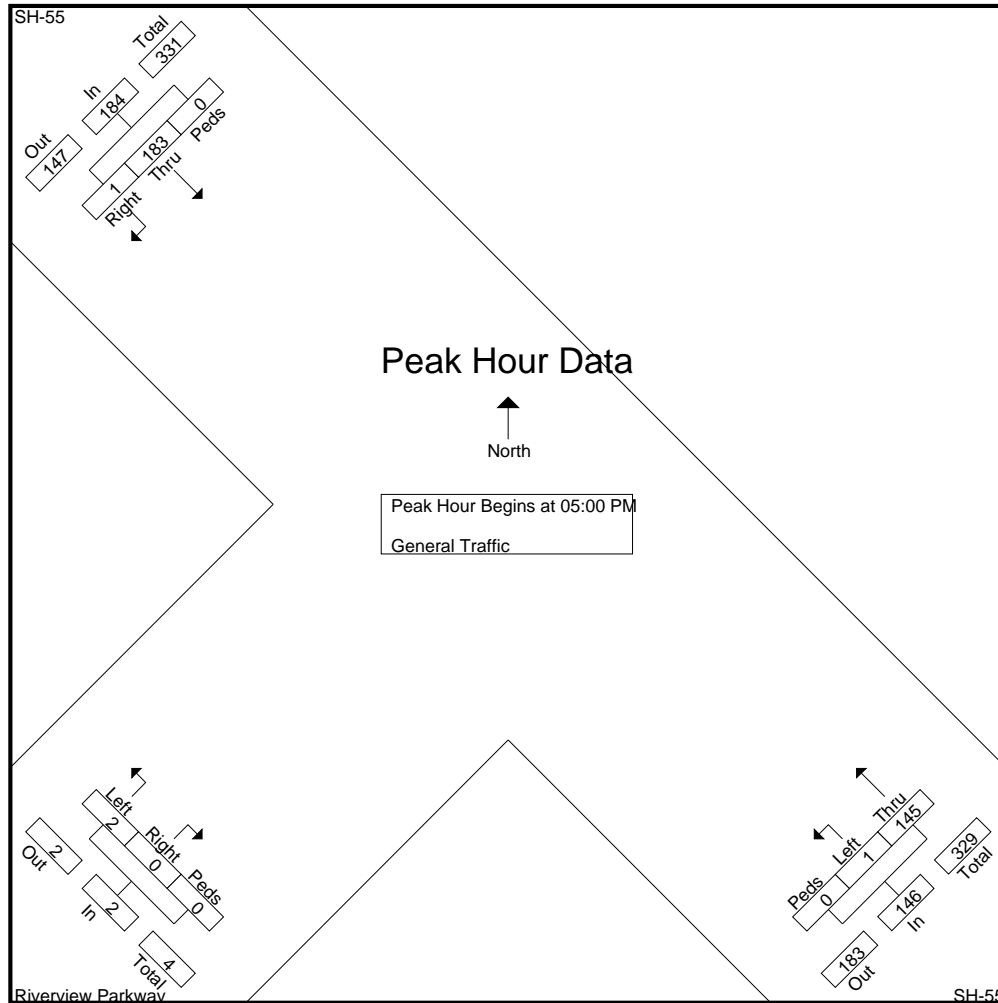
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 Intersection: SH-55 / Riverview Pkwy
 City, State: Cascade, Idaho
 Control: Stop Sign

File Name : SH-55 & Riverview Parkway PM
 Site Code : 00000000
 Start Date : 11/20/2019
 Page No : 2

Start Time	SH-55 From Southeast				Riverview Parkway From Southwest				SH-55 From Northwest				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	41	0	41	27	0	0	27	0	0	0	0	68
05:15 PM	0	58	0	58	40	0	0	40	0	1	0	1	99
05:30 PM	1	48	0	49	35	1	0	36	0	1	0	1	86
05:45 PM	0	36	0	36	43	0	0	43	0	0	0	0	79
Total Volume	1	183	0	184	145	1	0	146	0	2	0	2	332
% App. Total	0.5	99.5	0		99.3	0.7	0		0	100	0		
PHF	.250	.789	.000	.793	.843	.250	.000	.849	.000	.500	.000	.500	.838



L2 Data Collection

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(208) 860-7554 Utah (801) 413-2993

Study: CR0052
 Intersection: SH-55 / Riverview Pkwy
 City, State: Cascade, Idaho
 Control: Stop Sign

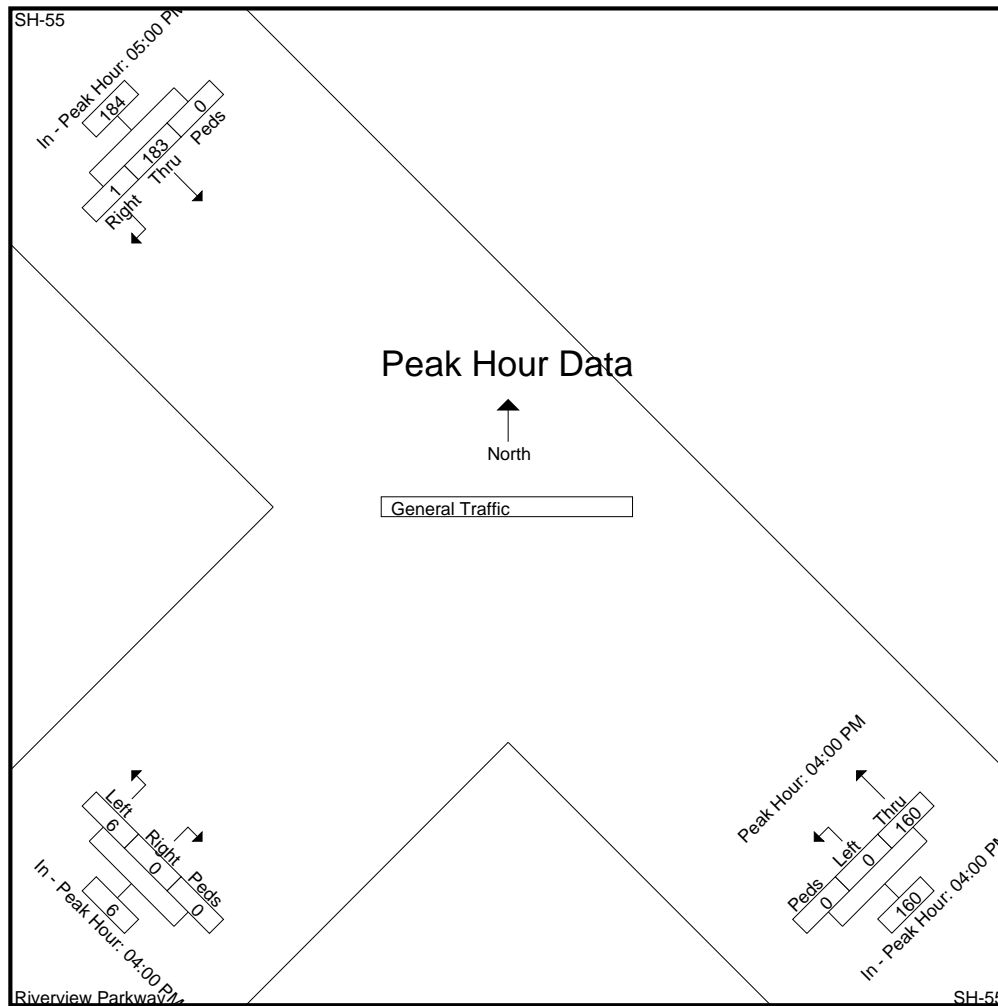
File Name : SH-55 & Riverview Parkway PM
 Site Code : 00000000
 Start Date : 11/20/2019
 Page No : 3

Start Time	SH-55 From Southeast				Riverview Parkway From Southwest				SH-55 From Northwest				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	41	0	41	36	0	0	36	0	4	0	4
+15 mins.	0	58	0	58	44	0	0	44	0	1	0	1
+30 mins.	1	48	0	49	43	0	0	43	0	1	0	1
+45 mins.	0	36	0	36	37	0	0	37	0	0	0	0
Total Volume	1	183	0	184	160	0	0	160	0	6	0	6
% App. Total	0.5	99.5	0		100	0	0		0	100	0	
PHF	.250	.789	.000	.793	.909	.000	.000	.909	.000	.375	.000	.375



L2 Data Collection

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Intersection: SH-55 / Riverview Pkwy
City, State: Cascade, Idaho
Control: Stop Sign

File Name : SH-55 & Riverview Parkway PM
Site Code : 00000000
Start Date : 11/20/2019
Page No : 4

Image 1



Road, Monthly Hourly Volume for July 2018

Site names: 043 Valley

Seasonal Factor Grp: 8

Daily Factor Grp: 6

Funct Class: R Principal Arterial - Other

Axle Factor Grp: 8

Location: SH-55 3.6 Mi. S of Roseberry Rd.

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00
01	19	13	7	20	33	80	178	320	358	403	526	497
02	30	11	7	12	19	52	144	270	323	362	453	489
03	36	21	6	10	17	52	127	237	324	387	533	665
04	91	44	26	18	24	30	85	172	340	588	740	610
05	98	30	21	9	26	57	112	220	318	540	659	823
06	41	19	11	8	13	40	89	200	350	575	779	913
07	42	20	16	8	16	41	124	251	459	645	719	917
08	20	12	10	6	34	89	198	365	439	482	573	604
09	20	14	9	13	13	52	135	257	306	375	402	443
10	13	8	9	7	23	51	155	257	314	381	431	473
11	19	12	12	12	18	55	169	293	380	376	460	499
12	25	14	9	11	22	42	135	283	338	461	552	713
13	38	19	11	6	9	32	98	203	304	470	551	650
14	33	16	9	8	11	30	62	162	310	473	724	847
15	23	7	9	14	40	103	205	303	367	478	556	589
16	11	6	10	11	20	38	159	242	321	376	386	420
17	25	11	10	9	13	42	137	256	349	370	434	477
18	30	6	10	10	15	54	131	266	346	421	503	616
19	24	17	11	14	14	50	129	231	356	476	597	654
20	47	25	23	13	19	30	96	206	331	449	679	746
21	33	25	19	6	16	20	68	159	316	515	657	912
22	22	13	8	17	27	87	155	331	404	434	579	625
23	18	16	10	18	23	51	145	222	310	336	407	505
24	13	21	17	8	18	42	162	295	370	402	446	573
25	12	5	8	8	20	52	153	259	321	410	472	603
26	24	19	16	8	17	54	116	268	342	470	577	661
27	43	18	8	11	14	26	67	192	381	558	605	781
28	29	20	9	6	11	26	74	153	322	540	717	909
29	22	13	9	16	24	85	210	287	401	462	534	529
30	18	9	14	7	16	58	134	250	305	365	435	463
31	25	13	10	7	15	40	140	242	328	364	507	472

Two-Way Hourly Sum for General Weekdays 2650 3444

Two-Way Hourly Daily Average 265 344

November 2018 Two-Way Hourly Daily Average 176

AM Seasonal Adjustment Factor 1.96

Road, Monthly Hourly Volume for July 2018

12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
377	604	554	503	519	487	369	261	213	146	80	26	6,593
502	492	533	582	501	579	450	352	290	218	108	48	6,827
742	721	752	833	785	848	743	686	588	481	269	186	10,049
789	731	602	490	389	362	354	267	238	174	80	356	7,600
830	870	806	725	682	722	578	496	376	257	135	68	9,458
950	865	793	743	618	628	524	420	354	269	132	66	9,400
891	841	738	693	596	755	566	417	270	146	110	39	9,320
561	523	513	563	551	418	367	198	198	117	59	29	6,929
453	430	418	433	426	454	346	226	182	105	69	38	5,619
413	488	487	495	406	470	333	227	182	168	76	44	5,911
519	557	588	581	564	573	426	348	279	208	112	71	7,131
678	666	701	758	761	706	642	544	406	293	141	91	8,992
664	679	626	641	507	441	451	286	296	247	149	68	7,446
806	845	807	684	748	681	532	430	256	176	92	39	8,781
553	547	526	513	521	494	316	223	192	100	61	21	6,761
414	452	455	493	438	446	328	202	155	131	89	46	5,649
539	500	482	528	515	468	311	269	223	126	80	46	6,220
594	537	560	595	574	578	456	333	237	189	106	80	7,247
725	673	718	757	710	687	618	501	378	262	141	80	8,823
719	684	689	661	588	544	474	326	273	260	147	81	8,110
939	874	829	738	765	683	572	445	300	213	72	48	9,224
622	574	587	552	484	497	356	245	178	157	58	33	7,045
477	493	522	470	412	408	330	244	206	134	75	40	5,872
507	518	478	508	498	499	401	247	192	144	95	53	6,507
561	563	584	628	551	602	412	348	271	200	113	61	7,217
732	734	793	733	875	787	700	568	395	339	158	80	9,466
647	628	549	627	597	497	406	331	282	254	120	58	7,700
835	839	820	794	682	653	536	430	276	175	92	37	8,985
507	584	539	536	548	459	297	215	153	117	77	36	6,660
453	490	447	457	412	384	337	206	131	125	85	31	5,632
505	496	482	458	467	452	318	217	177	149	81	34	5,999

Two-Way Hourly Sum for General Weekdays 5921 5822
 Two-Way Hourly Daily Average 592 582

November 2018 Two-Way Hourly Daily Average 221
 PM Seasonal Adjustment Factor 2.67

Road, Monthly Hourly Volume for November 2018

Site names: 043 Valley

Seasonal Factor Grp: 8

Daily Factor Grp: 6

Funct Class: R Principal Arterial - Other

Axle Factor Grp: 8

Location: SH-55 3.6 Mi. S of Roseberry Rd.

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00
01	3	4	0	3	4	28	57	122	113	134	221	240
02	8	3	4	2	13	15	46	131	222	205	275	326
03	17	6	8	5	8	21	36	48	92	102	144	292
05	4	0	3	1	5	20	66	185	186	225	217	233
06	10	2	5	10	12	20	99	154	171	204	218	209
07	9	3	3	5	8	28	90	159	194	214	190	232
08	5	6	2	9	13	33	95	172	184	216	245	239
09	12	8	7	5	16	34	77	183	172	236	301	354
10	17	15	4	7	11	23	43	70	147	177	285	292
11	13	4	5	4	6	13	22	60	100	196	335	382
12	13	3	4	5	15	31	62	155	183	245	226	245
13	10	3	3	13	17	26	84	186	203	193	230	216
14	6	5	1	1	18	30	90	171	209	221	252	228
15	4	4	1	5	4	24	55	151	220	213	228	228
16	1	3	0	4	4	11	60	155	170	253	255	276
17	10	11	2	10	6	15	36	53	116	193	264	309
18	11	9	3	1	9	9	18	50	71	159	258	336
19	9	1	7	8	10	13	89	158	195	236	308	261
20	8	4	6	2	9	19	84	147	152	199	251	292
21	11	6	3	1	5	24	54	119	123	229	307	330
22	14	18	8	6	11	16	12	23	68	165	199	208
24	2	4	3	1	7	9	29	29	52	138	298	390
25	6	6	2	1	6	17	25	34	53	140	348	469
26	3	4	4	3	8	27	78	145	177	187	220	242
27	13	3	4	4	7	20	84	147	167	167	168	164
28	4	7	3	6	11	19	62	120	161	153	147	182
29	6	7	5	7	8	20	79	142	162	163	171	201
30	7	2	1	7	14	23	53	148	145	168	185	239

Two-Way Hourly Sum for General Weekdays 1671 1936

Two-Way Hourly Daily Average 152 176

Road, Monthly Hourly Volume for November 2018

12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
247	274	266	286	295	223	119	70	37	41	24	21	2,832
291	381	395	413	327	164	126	149	91	58	33	25	3,703
296	312	315	341	287	155	134	84	70	73	20	15	2,881
223	211	244	249	266	230	125	75	42	34	20	6	2,870
202	210	223	238	218	202	138	73	67	26	19	9	2,739
222	208	257	258	264	236	149	100	55	39	21	12	2,956
241	239	278	304	295	298	217	136	100	64	36	27	3,454
372	329	379	425	449	401	376	282	152	105	50	25	4,750
363	343	321	324	263	219	154	146	74	48	47	21	3,414
405	435	443	445	394	257	187	122	73	60	23	13	3,997
259	287	244	295	215	260	124	76	66	32	18	16	3,079
229	214	243	234	265	249	137	65	47	35	21	11	2,934
235	247	244	263	237	237	146	85	33	42	17	13	3,031
263	259	293	251	199	196	124	90	62	37	24	11	2,946
305	339	353	416	438	300	242	148	97	79	27	15	3,951
360	384	252	250	249	194	114	67	54	48	25	12	3,034
421	384	392	247	281	168	135	104	76	49	19	6	3,216
328	290	216	246	267	192	109	62	48	45	18	18	3,134
312	314	230	228	292	183	140	75	62	34	20	21	3,084
412	425	425	465	470	235	194	147	62	54	25	26	4,152
210	168	118	129	57	86	52	51	39	73	12	11	1,754
411	409	419	401	316	181	138	62	53	28	24	11	3,415
540	524	460	479	330	196	111	88	38	15	13	7	3,908
235	218	211	243	211	219	101	65	47	37	18	6	2,709
158	161	158	165	159	173	88	59	48	32	23	17	2,189
223	180	150	95	94	138	86	69	35	41	17	12	2,015
171	63	95	152	118	157	81	89	77	44	26	20	2,064
194	232	223	261	240	264	174	160	149	95	37	26	3,047

Two-Way Hourly Sum for General Weekdays 2436 2292

Two-Way Hourly Daily Average 221 208

APPENDIX B: 2019 CAPACITY ANALYSIS REPORTS

Intersection						
Int Delay, s/veh	0.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	235	4	1	325	3	0
Future Vol, veh/h	235	4	1	325	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	261	4	1	361	3	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	265	0	626	263
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	363	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1299	-	448	776
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1299	-	448	776
Mov Cap-2 Maneuver	-	-	-	-	607	-
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	703	-
Approach	SE	NW	NE			
HCM Control Delay, s	0	0	11			
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	607	1299	-	-	-	
HCM Lane V/C Ratio	0.005	0.001	-	-	-	
HCM Control Delay (s)	11	7.8	-	-	-	
HCM Lane LOS	B	A	-	-	-	
HCM 95th %tile Q(veh)	0	0	-	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	489	1	1	388	2	0
Future Vol, veh/h	489	1	1	388	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	582	1	1	462	2	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	583	0	1047
Stage 1	-	-	-	-	583
Stage 2	-	-	-	-	464
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	991	-	253
Stage 1	-	-	-	-	558
Stage 2	-	-	-	-	633
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	991	-	253
Mov Cap-2 Maneuver	-	-	-	-	453
Stage 1	-	-	-	-	558
Stage 2	-	-	-	-	632

Approach	SE	NW	NE
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	453	991	-	-	-
HCM Lane V/C Ratio	0.005	0.001	-	-	-
HCM Control Delay (s)	13	8.6	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

APPENDIX C: 2040 CAPACITY ANALYSIS REPORTS

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	356	14	2	493	33	3
Future Vol, veh/h	356	14	2	493	33	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	396	16	2	548	37	3

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	412	0	956
Stage 1	-	-	-	-	404
Stage 2	-	-	-	-	552
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1147	-	286
Stage 1	-	-	-	-	674
Stage 2	-	-	-	-	577
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1147	-	285
Mov Cap-2 Maneuver	-	-	-	-	480
Stage 1	-	-	-	-	674
Stage 2	-	-	-	-	576

Approach	SE	NW	NE
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	491	1147	-	-	-
HCM Lane V/C Ratio	0.081	0.002	-	-	-
HCM Control Delay (s)	13	8.1	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.3	0	-	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	741	33	5	588	21	2
Future Vol, veh/h	741	33	5	588	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	823	37	6	653	23	2

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	860	0	1507 842
Stage 1	-	-	-	-	842 -
Stage 2	-	-	-	-	665 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	781	-	133 364
Stage 1	-	-	-	-	423 -
Stage 2	-	-	-	-	511 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	781	-	132 364
Mov Cap-2 Maneuver	-	-	-	-	332 -
Stage 1	-	-	-	-	423 -
Stage 2	-	-	-	-	507 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.1	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	335	781	-	-	-
HCM Lane V/C Ratio	0.076	0.007	-	-	-
HCM Control Delay (s)	16.6	9.6	-	-	-
HCM Lane LOS	C	A	-	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	356	14	2	493	33	3
Future Vol, veh/h	356	14	2	493	33	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	396	16	2	548	37	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	412	0	948
Stage 1	-	-	-	-	396
Stage 2	-	-	-	-	552
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1147	-	289
Stage 1	-	-	-	-	680
Stage 2	-	-	-	-	577
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1147	-	288
Mov Cap-2 Maneuver	-	-	-	-	482
Stage 1	-	-	-	-	680
Stage 2	-	-	-	-	576

Approach	SE	NW	NE
HCM Control Delay, s	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	493	1147	-	-	-
HCM Lane V/C Ratio	0.081	0.002	-	-	-
HCM Control Delay (s)	12.9	8.1	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.3	0	-	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗	↖	↑	↘	
Traffic Vol, veh/h	741	33	5	588	21	2
Future Vol, veh/h	741	33	5	588	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	823	37	6	653	23	2

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	860	0	1488 823
Stage 1	-	-	-	-	823 -
Stage 2	-	-	-	-	665 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	781	-	137 373
Stage 1	-	-	-	-	431 -
Stage 2	-	-	-	-	511 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	781	-	136 373
Mov Cap-2 Maneuver	-	-	-	-	336 -
Stage 1	-	-	-	-	431 -
Stage 2	-	-	-	-	507 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.1	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	339	781	-	-	-
HCM Lane V/C Ratio	0.075	0.007	-	-	-
HCM Control Delay (s)	16.5	9.6	-	-	-
HCM Lane LOS	C	A	-	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

HCM 6th TWSC
1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
AM Peak Hour

Intersection												
Int Delay, s/veh	4.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↖	↖	↗	↖		↕			↕	
Traffic Vol, veh/h	71	365	14	2	501	9	33	0	3	16	0	148
Future Vol, veh/h	71	365	14	2	501	9	33	0	3	16	0	148
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	406	16	2	557	10	37	0	3	18	0	164

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	567	0	0	422	0	0	1212	1135	406	1135	1141	557
Stage 1	-	-	-	-	-	-	564	564	-	561	561	-
Stage 2	-	-	-	-	-	-	648	571	-	574	580	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1005	-	-	1137	-	-	159	202	645	179	201	530
Stage 1	-	-	-	-	-	-	510	508	-	512	510	-
Stage 2	-	-	-	-	-	-	459	505	-	504	500	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1005	-	-	1137	-	-	103	186	645	167	185	530
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	186	-	167	185	-
Stage 1	-	-	-	-	-	-	470	468	-	472	509	-
Stage 2	-	-	-	-	-	-	316	504	-	462	461	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1.4			0			54.7			19		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	111	1137	-	-	1005	-	437
HCM Lane V/C Ratio	0.36	0.002	-	-	0.078	-	0.417
HCM Control Delay (s)	54.7	8.2	-	-	8.9	-	19
HCM Lane LOS	F	A	-	-	A	-	C
HCM 95th %tile Q(veh)	1.5	0	-	-	0.3	-	2

HCM 6th TWSC
2: SH 55 & Payette Street

2040 Total
AM Peak Hour

Intersection												
Int Delay, s/veh	1.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗	↖		↕			↕	
Traffic Vol, veh/h	80	441	3	3	674	8	3	3	3	9	3	76
Future Vol, veh/h	80	441	3	3	674	8	3	3	3	9	3	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	89	490	3	3	749	9	3	3	3	10	3	84

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	758	0	0	493	0	0	1473	1434	492	1428	1426	749
Stage 1	-	-	-	-	-	-	670	670	-	755	755	-
Stage 2	-	-	-	-	-	-	803	764	-	673	671	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	853	-	-	1071	-	-	105	134	577	113	135	412
Stage 1	-	-	-	-	-	-	446	455	-	401	417	-
Stage 2	-	-	-	-	-	-	377	413	-	445	455	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	853	-	-	1071	-	-	76	120	577	102	121	412
Mov Cap-2 Maneuver	-	-	-	-	-	-	183	263	-	268	298	-
Stage 1	-	-	-	-	-	-	400	408	-	359	416	-
Stage 2	-	-	-	-	-	-	296	412	-	393	408	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	1.5	0	18.7	17.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	273	1071	-	-	853	-	386
HCM Lane V/C Ratio	0.037	0.003	-	-	0.104	-	0.253
HCM Control Delay (s)	18.7	8.4	-	-	9.7	-	17.5
HCM Lane LOS	C	A	-	-	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.3	-	1

HCM 6th TWSC
1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
PM Peak Hour

Intersection												
Int Delay, s/veh	8.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗		↕			↕	
Traffic Vol, veh/h	151	737	33	5	590	22	21	0	2	22	0	97
Future Vol, veh/h	151	737	33	5	590	22	21	0	2	22	0	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	168	819	37	6	656	24	23	0	2	24	0	108

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	680	0	0	856	0	0	1889	1847	819	1843	1860	656
Stage 1	-	-	-	-	-	-	1155	1155	-	668	668	-
Stage 2	-	-	-	-	-	-	734	692	-	1175	1192	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	912	-	-	784	-	-	53	75	375	58	73	465
Stage 1	-	-	-	-	-	-	240	271	-	448	456	-
Stage 2	-	-	-	-	-	-	412	445	-	233	261	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	912	-	-	784	-	-	35	61	375	49	59	465
Mov Cap-2 Maneuver	-	-	-	-	-	-	35	61	-	49	59	-
Stage 1	-	-	-	-	-	-	196	221	-	366	452	-
Stage 2	-	-	-	-	-	-	314	441	-	189	213	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1.6			0.1			210.7			65.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	38	784	-	-	912	-	181
HCM Lane V/C Ratio	0.673	0.007	-	-	0.184	-	0.731
HCM Control Delay (s)	210.7	9.6	-	-	9.8	-	65.3
HCM Lane LOS	F	A	-	-	A	-	F
HCM 95th %tile Q(veh)	2.4	0	-	-	0.7	-	4.6

HCM 6th TWSC
2: SH 55 & Payette Street

2040 Total
PM Peak Hour

Intersection												
Int Delay, s/veh	2.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	89	899	3	3	685	23	3	3	3	22	3	90
Future Vol, veh/h	89	899	3	3	685	23	3	3	3	22	3	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	99	999	3	3	761	26	3	3	3	24	3	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	787	0	0	1002	0	0	2031	1992	1001	1969	1967	761
Stage 1	-	-	-	-	-	-	1199	1199	-	767	767	-
Stage 2	-	-	-	-	-	-	832	793	-	1202	1200	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	832	-	-	691	-	-	42	61	295	47	63	405
Stage 1	-	-	-	-	-	-	226	259	-	395	411	-
Stage 2	-	-	-	-	-	-	363	400	-	225	258	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	832	-	-	691	-	-	28	53	295	42	55	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	125	178	-	161	191	-
Stage 1	-	-	-	-	-	-	199	228	-	348	409	-
Stage 2	-	-	-	-	-	-	270	398	-	193	227	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.9	0	26.7	24.8
HCM LOS			D	C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	176	691	-	-	832	-	307
HCM Lane V/C Ratio	0.057	0.005	-	-	0.119	-	0.416
HCM Control Delay (s)	26.7	10.2	-	-	9.9	-	24.8
HCM Lane LOS	D	B	-	-	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.4	-	2

HCM 6th TWSC
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access
 AM Peak Hour

Intersection												
Int Delay, s/veh	11.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↖	↖	↗	↖		↕			↕	
Traffic Vol, veh/h	151	356	14	2	493	17	33	0	3	25	0	224
Future Vol, veh/h	151	356	14	2	493	17	33	0	3	25	0	224
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	168	396	16	2	548	19	37	0	3	28	0	249

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	567	0	0	412	0	0	1418	1303	396	1294	1300	548
Stage 1	-	-	-	-	-	-	732	732	-	552	552	-
Stage 2	-	-	-	-	-	-	686	571	-	742	748	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1005	-	-	1147	-	-	114	161	653	139	161	536
Stage 1	-	-	-	-	-	-	413	427	-	518	515	-
Stage 2	-	-	-	-	-	-	438	505	-	408	420	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1005	-	-	1147	-	-	53	134	653	120	134	536
Mov Cap-2 Maneuver	-	-	-	-	-	-	53	134	-	120	134	-
Stage 1	-	-	-	-	-	-	344	356	-	431	514	-
Stage 2	-	-	-	-	-	-	234	504	-	338	350	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	2.7	0	157.4	32.3
HCM LOS			F	D

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	57	1147	-	-	1005	-	398
HCM Lane V/C Ratio	0.702	0.002	-	-	0.167	-	0.695
HCM Control Delay (s)	157.4	8.1	-	-	9.3	-	32.3
HCM Lane LOS	F	A	-	-	A	-	D
HCM 95th %tile Q(veh)	3	0	-	-	0.6	-	5.1

HCM 6th TWSC
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access
 PM Peak Hour

Intersection												
Int Delay, s/veh	68											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↖	↖	↗	↖		↕			↕	
Traffic Vol, veh/h	240	715	33	5	567	45	21	0	2	44	0	187
Future Vol, veh/h	240	715	33	5	567	45	21	0	2	44	0	187
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	267	794	37	6	630	50	23	0	2	49	0	208

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	680	0	0	831	0	0	2099	2020	794	1990	2007	630
Stage 1	-	-	-	-	-	-	1328	1328	-	642	642	-
Stage 2	-	-	-	-	-	-	771	692	-	1348	1365	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	912	-	-	801	-	-	38	58	388	~45	59	482
Stage 1	-	-	-	-	-	-	191	224	-	463	469	-
Stage 2	-	-	-	-	-	-	393	445	-	186	215	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	801	-	-	~17	41	388	~34	41	482
Mov Cap-2 Maneuver	-	-	-	-	-	-	~17	41	-	~34	41	-
Stage 1	-	-	-	-	-	-	135	158	-	327	466	-
Stage 2	-	-	-	-	-	-	222	442	-	131	152	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	2.6			0.1			\$ 619.5			\$ 474.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	19	801	-	-	912	-	137
HCM Lane V/C Ratio	1.345	0.007	-	-	0.292	-	1.873
HCM Control Delay (s)	\$ 619.5	9.5	-	-	10.6	-	\$ 474.3
HCM Lane LOS	F	A	-	-	B	-	F
HCM 95th %tile Q(veh)	3.5	0	-	-	1.2	-	19.8

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon





















HCM 6th Roundabout
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
 AM Peak Hour

Intersection				
Intersection Delay, s/veh	7.5			
Intersection LOS	A			
Approach	SE	NW	NE	SW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	501	569	40	182
Demand Flow Rate, veh/h	523	597	41	185
Vehicles Circulating, veh/h	20	119	525	625
Vehicles Exiting, veh/h	790	447	18	91
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	8.4	5.1	8.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	523	597	41	185
Cap Entry Lane, veh/h	1352	1222	808	729
Entry HV Adj Factor	0.957	0.953	0.976	0.984
Flow Entry, veh/h	501	569	40	182
Cap Entry, veh/h	1294	1165	788	718
V/C Ratio	0.387	0.488	0.051	0.254
Control Delay, s/veh	6.5	8.4	5.1	8.0
LOS	A	A	A	A
95th %tile Queue, veh	2	3	0	1





















HCM Signalized Intersection Capacity Analysis
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
 AM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	71	365	14	2	201	9	33	0	3	16	0	148
Future Volume (vph)	71	365	14	2	201	9	33	0	3	16	0	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1801		1770	1800		1770	1583		1770	1583	
Flt Permitted	0.61	1.00		0.52	1.00		0.74	1.00		0.76	1.00	
Satd. Flow (perm)	1143	1801		961	1800		1380	1583		1408	1583	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	406	16	2	223	10	37	0	3	18	0	164
RTOR Reduction (vph)	0	2	0	0	2	0	0	3	0	0	137	0
Lane Group Flow (vph)	79	420	0	2	231	0	37	0	0	18	27	0
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	17.1	17.1		17.1	17.1		5.4	5.4		5.4	5.4	
Effective Green, g (s)	17.1	17.1		17.1	17.1		5.4	5.4		5.4	5.4	
Actuated g/C Ratio	0.53	0.53		0.53	0.53		0.17	0.17		0.17	0.17	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	601	947		505	947		229	263		233	263	
v/s Ratio Prot		c0.23			0.13			0.00			0.02	
v/s Ratio Perm	0.07			0.00			c0.03			0.01		
v/c Ratio	0.13	0.44		0.00	0.24		0.16	0.00		0.08	0.10	
Uniform Delay, d1	3.9	4.8		3.7	4.2		11.6	11.3		11.4	11.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3		0.0	0.1		0.3	0.0		0.1	0.2	
Delay (s)	4.0	5.1		3.7	4.3		11.9	11.3		11.6	11.7	
Level of Service	A	A		A	A		B	B		B	B	
Approach Delay (s)		4.9			4.3			11.9			11.7	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			6.3			HCM 2000 Level of Service				A		
HCM 2000 Volume to Capacity ratio			0.38									
Actuated Cycle Length (s)			32.5			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			54.2%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
 AM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	71	365	14	2	201	9	33	0	3	16	0	148
Future Volume (veh/h)	71	365	14	2	201	9	33	0	3	16	0	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1826	1826	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	406	16	2	223	10	37	0	3	18	0	164
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	5	5	2	5	5	2	2	2	2	2	2
Cap, veh/h	670	707	28	523	703	32	396	0	269	544	0	269
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.17	0.00	0.17	0.17	0.00	0.17
Sat Flow, veh/h	1147	1745	69	965	1734	78	1222	0	1585	1414	0	1585
Grp Volume(v), veh/h	79	0	422	2	0	233	37	0	3	18	0	164
Grp Sat Flow(s),veh/h/ln	1147	0	1814	965	0	1812	1222	0	1585	1414	0	1585
Q Serve(g_s), s	1.2	0.0	4.2	0.0	0.0	2.1	0.7	0.0	0.0	0.3	0.0	2.3
Cycle Q Clear(g_c), s	3.3	0.0	4.2	4.3	0.0	2.1	2.9	0.0	0.0	0.3	0.0	2.3
Prop In Lane	1.00		0.04	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	670	0	735	523	0	734	396	0	269	544	0	269
V/C Ratio(X)	0.12	0.00	0.57	0.00	0.00	0.32	0.09	0.00	0.01	0.03	0.00	0.61
Avail Cap(c_a), veh/h	2449	0	3547	2019	0	3544	1436	0	1617	1746	0	1617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.9	0.0	5.4	7.1	0.0	4.8	10.4	0.0	8.1	8.2	0.0	9.0
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.7	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.0	0.0	6.1	7.1	0.0	5.0	10.5	0.0	8.1	8.3	0.0	11.3
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	B
Approach Vol, veh/h		501			235			40				182
Approach Delay, s/veh		6.1			5.0			10.3				11.0
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.5		9.0		14.5		9.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0				
Max Q Clear Time (g_c+I1), s		6.3		4.9		6.2		4.3				
Green Ext Time (p_c), s		1.2		0.1		3.3		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				6.9								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	3.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↗				↗			↗
Traffic Vol, veh/h	71	381	14	2	534	7	0	0	33	0	0	173
Future Vol, veh/h	71	381	14	2	534	7	0	0	33	0	0	173
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	79	423	16	2	593	8	0	0	37	0	0	192

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	601	0	0	439	0	0	-	-	423	-	-	597
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	976	-	-	1121	-	-	0	0	631	0	0	503
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	976	-	-	1121	-	-	-	-	631	-	-	503
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1.4			0			11.1			16.5		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	631	1121	-	-	976	-	503
HCM Lane V/C Ratio	0.058	0.002	-	-	0.081	-	0.382
HCM Control Delay (s)	11.1	8.2	-	-	9	-	16.5
HCM Lane LOS	B	A	-	-	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.3	-	1.8

Intersection												
Int Delay, s/veh	1.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗	↖			↖			↖
Traffic Vol, veh/h	80	441	9	28	674	8	0	0	9	0	0	76
Future Vol, veh/h	80	441	9	28	674	8	0	0	9	0	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	89	490	10	31	749	9	0	0	10	0	0	84

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	758	0	0	500	0	0	-	-	495	-	-	749
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	853	-	-	1064	-	-	0	0	575	0	0	412
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	853	-	-	1064	-	-	-	-	575	-	-	412
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1.5			0.3			11.4			16		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	575	1064	-	-	853	-	412
HCM Lane V/C Ratio	0.017	0.029	-	-	0.104	-	0.205
HCM Control Delay (s)	11.4	8.5	-	-	9.7	-	16
HCM Lane LOS	B	A	-	-	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.3	-	0.8























HCM 6th Roundabout
1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
PM Peak Hour

Intersection				
Intersection Delay, s/veh	14.4			
Intersection LOS	B			
Approach	SE	NW	NE	SW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1024	686	25	132
Demand Flow Rate, veh/h	1069	719	25	134
Vehicles Circulating, veh/h	30	194	1055	718
Vehicles Exiting, veh/h	822	886	44	195
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	16.8	12.1	8.3	7.9
Approach LOS	C	B	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	1069	719	25	134
Cap Entry Lane, veh/h	1338	1132	470	663
Entry HV Adj Factor	0.958	0.954	1.000	0.985
Flow Entry, veh/h	1024	686	25	132
Cap Entry, veh/h	1282	1080	470	654
V/C Ratio	0.799	0.635	0.053	0.202
Control Delay, s/veh	16.8	12.1	8.3	7.9
LOS	C	B	A	A
95th %tile Queue, veh	9	5	0	1






















HCM Signalized Intersection Capacity Analysis
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
 PM Peak Hour

													
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Volume (vph)	151	737	33	5	590	22	21	0	2	22	0	97	
Future Volume (vph)	151	737	33	5	590	22	21	0	2	22	0	97	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0		
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Frt	1.00	0.99		1.00	0.99		1.00	0.85		1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1800		1770	1802		1770	1583		1770	1583		
Flt Permitted	0.21	1.00		0.34	1.00		0.74	1.00		0.76	1.00		
Satd. Flow (perm)	387	1800		642	1802		1380	1583		1409	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	168	819	37	6	656	24	23	0	2	24	0	108	
RTOR Reduction (vph)	0	2	0	0	1	0	0	2	0	0	98	0	
Lane Group Flow (vph)	168	854	0	6	679	0	23	0	0	24	10	0	
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases	1	6			2			4				8	
Permitted Phases	6			2			4			8			
Actuated Green, G (s)	40.4	40.4		28.7	28.7		5.4	5.4		5.4	5.4		
Effective Green, g (s)	40.4	40.4		28.7	28.7		5.4	5.4		5.4	5.4		
Actuated g/C Ratio	0.72	0.72		0.51	0.51		0.10	0.10		0.10	0.10		
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	446	1303		330	926		133	153		136	153		
v/s Ratio Prot	0.05	c0.47			c0.38			0.00				0.01	
v/s Ratio Perm	0.23			0.01			0.02			c0.02			
v/c Ratio	0.38	0.66		0.02	0.73		0.17	0.00		0.18	0.07		
Uniform Delay, d1	5.5	4.0		6.6	10.6		23.1	22.8		23.2	22.9		
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.5	1.2		0.0	3.0		0.6	0.0		0.6	0.2		
Delay (s)	6.0	5.2		6.7	13.6		23.8	22.8		23.8	23.1		
Level of Service	A	A		A	B		C	C		C	C		
Approach Delay (s)		5.4			13.5			23.7			23.2		
Approach LOS		A			B			C			C		
Intersection Summary													
HCM 2000 Control Delay			9.9			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			55.8			Sum of lost time (s)		15.0					
Intersection Capacity Utilization			65.3%			ICU Level of Service			C				
Analysis Period (min)			15										
c	Critical Lane Group												

HCM 6th Signalized Intersection Summary
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total
 PM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	151	737	33	5	590	22	21	0	2	22	0	97
Future Volume (veh/h)	151	737	33	5	590	22	21	0	2	22	0	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1826	1826	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	819	37	6	656	24	23	0	2	24	0	108
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	5	5	2	5	5	2	2	2	2	2	2
Cap, veh/h	437	1159	52	399	805	29	217	0	174	313	0	174
Arrive On Green	0.10	0.67	0.67	0.46	0.46	0.46	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	1733	78	645	1750	64	1286	0	1585	1415	0	1585
Grp Volume(v), veh/h	168	0	856	6	0	680	23	0	2	24	0	108
Grp Sat Flow(s),veh/h/ln	1781	0	1812	645	0	1814	1286	0	1585	1415	0	1585
Q Serve(g_s), s	1.9	0.0	13.4	0.3	0.0	14.6	0.8	0.0	0.1	0.7	0.0	2.9
Cycle Q Clear(g_c), s	1.9	0.0	13.4	4.3	0.0	14.6	3.7	0.0	0.1	0.7	0.0	2.9
Prop In Lane	1.00		0.04	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	0	1211	399	0	834	217	0	174	313	0	174
V/C Ratio(X)	0.38	0.00	0.71	0.02	0.00	0.82	0.11	0.00	0.01	0.08	0.00	0.62
Avail Cap(c_a), veh/h	540	0	2092	676	0	1612	590	0	634	724	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	4.7	9.0	0.0	10.5	20.9	0.0	17.9	18.2	0.0	19.2
Incr Delay (d2), s/veh	0.6	0.0	0.8	0.0	0.0	2.0	0.2	0.0	0.0	0.1	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.3	0.0	0.0	3.4	0.2	0.0	0.0	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	0.0	5.5	9.0	0.0	12.5	21.1	0.0	17.9	18.3	0.0	22.8
LnGrp LOS	A	A	A	A	A	B	C	A	B	B	A	C
Approach Vol, veh/h		1024			686			25				132
Approach Delay, s/veh		5.9			12.5			20.9				22.0
Approach LOS		A			B			C				C
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.4	25.7		9.9		35.1		9.9				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	7.0	40.0		18.0		52.0		18.0				
Max Q Clear Time (g_c+I1), s	3.9	16.6		5.7		15.4		4.9				
Green Ext Time (p_c), s	0.1	4.1		0.0		8.1		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			9.7									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	2.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↖	↖	↗	↖			↖			↖
Traffic Vol, veh/h	151	768	33	5	617	22	0	0	22	0	0	141
Future Vol, veh/h	151	768	33	5	617	22	0	0	22	0	0	141
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	168	853	37	6	686	24	0	0	24	0	0	157

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	710	0	0	890	0	0	-	-	853	-	-	686
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	889	-	-	761	-	-	0	0	359	0	0	447
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	889	-	-	761	-	-	-	-	359	-	-	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1.6			0.1			15.8			17.3		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	359	761	-	-	889	-	447
HCM Lane V/C Ratio	0.068	0.007	-	-	0.189	-	0.35
HCM Control Delay (s)	15.8	9.8	-	-	10	-	17.3
HCM Lane LOS	C	A	-	-	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.7	-	1.6

Intersection												
Int Delay, s/veh	1.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗	↖			↖			↖
Traffic Vol, veh/h	89	899	6	47	685	23	0	0	9	0	0	93
Future Vol, veh/h	89	899	6	47	685	23	0	0	9	0	0	93
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	99	999	7	52	761	26	0	0	10	0	0	103

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	787	0	0	1006	0	0	-	-	1003	-	-	761
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	832	-	-	689	-	-	0	0	294	0	0	405
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	832	-	-	689	-	-	-	-	294	-	-	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	0.9			0.7			17.7			16.9		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	294	689	-	-	832	-	405
HCM Lane V/C Ratio	0.034	0.076	-	-	0.119	-	0.255
HCM Control Delay (s)	17.7	10.7	-	-	9.9	-	16.9
HCM Lane LOS	C	B	-	-	A	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.4	-	1





















HCM 6th Roundabout
1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access Roundabout
AM Peak Hour

Intersection				
Intersection Delay, s/veh	8.5			
Intersection LOS	A			
Approach	SE	NW	NE	SW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	580	569	40	277
Demand Flow Rate, veh/h	591	580	41	283
Vehicles Circulating, veh/h	31	209	604	599
Vehicles Exiting, veh/h	851	436	18	190
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.1	9.4	5.5	9.7
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	591	580	41	283
Cap Entry Lane, veh/h	1337	1115	745	749
Entry HV Adj Factor	0.982	0.981	0.976	0.979
Flow Entry, veh/h	580	569	40	277
Cap Entry, veh/h	1312	1094	727	733
V/C Ratio	0.442	0.520	0.055	0.378
Control Delay, s/veh	7.1	9.4	5.5	9.7
LOS	A	A	A	A
95th %tile Queue, veh	2	3	0	2






















HCM Signalized Intersection Capacity Analysis
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access Signal
 AM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	151	356	14	2	493	17	33	0	3	25	0	224
Future Volume (vph)	151	356	14	2	493	17	33	0	3	25	0	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1801		1770	1802		1770	1583		1770	1583	
Flt Permitted	0.38	1.00		0.52	1.00		0.60	1.00		0.76	1.00	
Satd. Flow (perm)	702	1801		961	1802		1126	1583		1408	1583	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	168	396	16	2	548	19	37	0	3	28	0	249
RTOR Reduction (vph)	0	2	0	0	2	0	0	2	0	0	197	0
Lane Group Flow (vph)	168	410	0	2	565	0	37	1	0	28	52	0
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	18.2	18.2		18.2	18.2		7.4	7.4		7.4	7.4	
Effective Green, g (s)	18.2	18.2		18.2	18.2		7.4	7.4		7.4	7.4	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.21	0.21		0.21	0.21	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	358	920		491	921		234	329		292	329	
v/s Ratio Prot		0.23			c0.31			0.00			0.03	
v/s Ratio Perm	0.24			0.00			c0.03			0.02		
v/c Ratio	0.47	0.45		0.00	0.61		0.16	0.00		0.10	0.16	
Uniform Delay, d1	5.6	5.5		4.3	6.2		11.5	11.2		11.4	11.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.3		0.0	1.2		0.3	0.0		0.1	0.2	
Delay (s)	6.6	5.9		4.3	7.4		11.9	11.2		11.5	11.8	
Level of Service	A	A		A	A		B	B		B	B	
Approach Delay (s)		6.1			7.4			11.8			11.7	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			7.8			HCM 2000 Level of Service				A		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			35.6			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			70.0%			ICU Level of Service				C		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM 6th Signalized Intersection Summary
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access Signal
 AM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	151	356	14	2	493	17	33	0	3	25	0	224
Future Volume (veh/h)	151	356	14	2	493	17	33	0	3	25	0	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1826	1826	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	396	16	2	548	19	37	0	3	28	0	249
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	5	5	2	5	5	2	2	2	2	2	2
Cap, veh/h	446	926	37	561	932	32	265	0	352	489	0	352
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.22	0.00	0.22	0.22	0.00	0.22
Sat Flow, veh/h	844	1743	70	974	1754	61	1131	0	1585	1414	0	1585
Grp Volume(v), veh/h	168	0	412	2	0	567	37	0	3	28	0	249
Grp Sat Flow(s),veh/h/ln	844	0	1813	974	0	1815	1131	0	1585	1414	0	1585
Q Serve(g_s), s	6.9	0.0	5.6	0.1	0.0	8.6	1.3	0.0	0.1	0.6	0.0	5.9
Cycle Q Clear(g_c), s	15.5	0.0	5.6	5.6	0.0	8.6	7.1	0.0	0.1	0.7	0.0	5.9
Prop In Lane	1.00		0.04	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	0	963	561	0	964	265	0	352	489	0	352
V/C Ratio(X)	0.38	0.00	0.43	0.00	0.00	0.59	0.14	0.00	0.01	0.06	0.00	0.71
Avail Cap(c_a), veh/h	999	0	2150	1198	0	2152	628	0	861	944	0	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	5.8	7.5	0.0	6.5	17.8	0.0	12.3	12.6	0.0	14.5
Incr Delay (d2), s/veh	0.5	0.0	0.3	0.0	0.0	0.6	0.2	0.0	0.0	0.0	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.4	0.0	0.0	1.2	0.3	0.0	0.0	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	6.1	7.5	0.0	7.0	18.1	0.0	12.3	12.6	0.0	17.2
LnGrp LOS	B	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		580			569			40				277
Approach Delay, s/veh		7.9			7.0			17.6				16.7
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.5		14.0		26.5		14.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		48.0		22.0		48.0		22.0				
Max Q Clear Time (g_c+I1), s		10.6		9.1		17.5		7.9				
Green Ext Time (p_c), s		3.4		0.1		4.0		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				9.5								
HCM 6th LOS				A								

HCM 6th TWSC
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access RCUT
 AM Peak Hour

Intersection												
Int Delay, s/veh	5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↗	↗	↘	↗	↗			↗			↗
Traffic Vol, veh/h	151	381	14	2	526	14	0	0	36	0	0	249
Future Vol, veh/h	151	381	14	2	526	14	0	0	36	0	0	249
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	168	423	16	2	584	16	0	0	40	0	0	277

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	600	0	0	439	0	0	-	-	423	-	-	584
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	977	-	-	1121	-	-	0	0	631	0	0	512
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	977	-	-	1121	-	-	-	-	631	-	-	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	2.6	0	11.1	20
HCM LOS			B	C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	631	1121	-	-	977	-	512
HCM Lane V/C Ratio	0.063	0.002	-	-	0.172	-	0.54
HCM Control Delay (s)	11.1	8.2	-	-	9.4	-	20
HCM Lane LOS	B	A	-	-	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.6	-	3.2

Intersection						
Int Delay, s/veh	0.3					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↔		↔	↔		↔
Traffic Vol, veh/h	521	6	28	750	0	9
Future Vol, veh/h	521	6	28	750	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	579	7	31	833	0	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	586	0	583
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	3.318
Pot Cap-1 Maneuver	-	-	989	-	512
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	989	-	512
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	512	989	-	-	-
HCM Lane V/C Ratio	0.02	0.031	-	-	-
HCM Control Delay (s)	12.2	8.8	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-





















HCM 6th Roundabout
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access Roundabout
 PM Peak Hour

Intersection				
Intersection Delay, s/veh	18.9			
Intersection LOS	C			
Approach	SE	NW	NE	SW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1098	686	25	257
Demand Flow Rate, veh/h	1144	719	25	262
Vehicles Circulating, veh/h	56	295	1156	690
Vehicles Exiting, veh/h	896	886	44	323
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	23.3	15.5	9.3	10.6
Approach LOS	C	C	A	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	1144	719	25	262
Cap Entry Lane, veh/h	1303	1021	424	683
Entry HV Adj Factor	0.960	0.955	1.000	0.981
Flow Entry, veh/h	1098	686	25	257
Cap Entry, veh/h	1251	975	424	670
V/C Ratio	0.878	0.704	0.059	0.384
Control Delay, s/veh	23.3	15.5	9.3	10.6
LOS	C	C	A	B
95th %tile Queue, veh	13	6	0	2






















HCM Signalized Intersection Capacity Analysis
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access Signal
 PM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	240	715	33	5	567	45	21	0	2	44	0	187
Future Volume (vph)	240	715	33	5	567	45	21	0	2	44	0	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1800		1770	1793		1770	1583		1770	1583	
Flt Permitted	0.17	1.00		0.35	1.00		0.51	1.00		0.76	1.00	
Satd. Flow (perm)	315	1800		658	1793		955	1583		1409	1583	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	794	37	6	630	50	23	0	2	49	0	208
RTOR Reduction (vph)	0	2	0	0	3	0	0	2	0	0	181	0
Lane Group Flow (vph)	267	829	0	6	677	0	23	0	0	49	27	0
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	1	6			2			4				8
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	42.5	42.5		28.3	28.3		7.8	7.8		7.8	7.8	
Effective Green, g (s)	42.5	42.5		28.3	28.3		7.8	7.8		7.8	7.8	
Actuated g/C Ratio	0.70	0.70		0.47	0.47		0.13	0.13		0.13	0.13	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	444	1268		308	841		123	204		182	204	
v/s Ratio Prot	0.09	c0.46			c0.38			0.00				0.02
v/s Ratio Perm	0.33			0.01			0.02			c0.03		
v/c Ratio	0.60	0.65		0.02	0.80		0.19	0.00		0.27	0.13	
Uniform Delay, d1	7.9	4.9		8.6	13.6		23.4	22.9		23.7	23.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	1.2		0.0	5.6		0.7	0.0		0.8	0.3	
Delay (s)	10.2	6.1		8.6	19.3		24.2	22.9		24.5	23.5	
Level of Service	B	A		A	B		C	C		C	C	
Approach Delay (s)		7.1			19.2			24.1			23.7	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			13.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			60.3			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			75.8%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access Signal
 PM Peak Hour

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	240	715	33	5	567	45	21	0	2	44	0	187
Future Volume (veh/h)	240	715	33	5	567	45	21	0	2	44	0	187
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1826	1826	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	267	794	37	6	630	50	23	0	2	49	0	208
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	5	5	2	5	5	2	2	2	2	2	2
Cap, veh/h	407	1112	52	354	734	58	192	0	281	379	0	281
Arrive On Green	0.11	0.64	0.64	0.44	0.44	0.44	0.18	0.00	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1781	1731	81	660	1670	133	1174	0	1585	1415	0	1585
Grp Volume(v), veh/h	267	0	831	6	0	680	23	0	2	49	0	208
Grp Sat Flow(s),veh/h/ln	1781	0	1811	660	0	1802	1174	0	1585	1415	0	1585
Q Serve(g_s), s	4.0	0.0	16.8	0.3	0.0	18.9	1.1	0.0	0.1	1.6	0.0	6.9
Cycle Q Clear(g_c), s	4.0	0.0	16.8	5.9	0.0	18.9	8.0	0.0	0.1	1.7	0.0	6.9
Prop In Lane	1.00		0.04	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	0	1164	354	0	793	192	0	281	379	0	281
V/C Ratio(X)	0.66	0.00	0.71	0.02	0.00	0.86	0.12	0.00	0.01	0.13	0.00	0.74
Avail Cap(c_a), veh/h	558	0	1695	492	0	1168	364	0	514	587	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	0.0	6.5	12.2	0.0	14.0	25.4	0.0	18.8	19.5	0.0	21.6
Incr Delay (d2), s/veh	1.8	0.0	0.8	0.0	0.0	4.4	0.3	0.0	0.0	0.2	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	4.3	0.0	0.0	6.0	0.3	0.0	0.0	0.5	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	0.0	7.4	12.2	0.0	18.4	25.7	0.0	18.8	19.7	0.0	25.5
LnGrp LOS	B	A	A	B	A	B	C	A	B	B	A	C
Approach Vol, veh/h		1098			686			25			257	
Approach Delay, s/veh		8.7			18.4			25.1			24.4	
Approach LOS		A			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.3	29.4		14.8		40.7		14.8				
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s	11.0	36.0		18.0		52.0		18.0				
Max Q Clear Time (g_c+I1), s	6.0	20.9		10.0		18.8		8.9				
Green Ext Time (p_c), s	0.4	3.6		0.0		7.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				14.1								
HCM 6th LOS				B								

HCM 6th TWSC
 1: Riverview Parkway/Ponderosa Street & SH 55

2040 Total - 1 Access RCUT
 PM Peak Hour

Intersection												
Int Delay, s/veh	4.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↗	↗	↘	↗	↗			↗			↗
Traffic Vol, veh/h	240	759	33	5	588	45	0	0	23	0	0	231
Future Vol, veh/h	240	759	33	5	588	45	0	0	23	0	0	231
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	267	843	37	6	653	50	0	0	26	0	0	257

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	703	0	0	880	0	0	-	-	843	-	-	653
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	895	-	-	768	-	-	0	0	364	0	0	467
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	895	-	-	768	-	-	-	-	364	-	-	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	2.5			0.1			15.6			21.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	364	768	-	-	895	-	467
HCM Lane V/C Ratio	0.07	0.007	-	-	0.298	-	0.55
HCM Control Delay (s)	15.6	9.7	-	-	10.7	-	21.7
HCM Lane LOS	C	A	-	-	B	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	1.3	-	3.3

Intersection						
Int Delay, s/veh	0.4					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↔		↔	↔		↔
Traffic Vol, veh/h	988	6	47	775	0	9
Future Vol, veh/h	988	6	47	775	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	5	2	2
Mvmt Flow	1098	7	52	861	0	10

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	1105	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	632	0
Stage 1	-	-	-	0
Stage 2	-	-	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	632	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.6	19.6
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	257	632	-	-	-
HCM Lane V/C Ratio	0.039	0.083	-	-	-
HCM Control Delay (s)	19.6	11.2	-	-	-
HCM Lane LOS	C	B	-	-	-
HCM 95th %tile Q(veh)	0.1	0.3	-	-	-

HCM 6th TWSC
 1: Riverview Parkway/Ponderosa Street & SH 55

2025 Total (144 SFDU)
 PM Peak Hour

Intersection												
Int Delay, s/veh	1.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙	↑	↗	↙	↗			↕			↕	
Traffic Vol, veh/h	53	553	33	5	441	5	21	0	2	3	0	25
Future Vol, veh/h	53	553	33	5	441	5	21	0	2	3	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	59	614	37	6	490	6	23	0	2	3	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	496	0	0	651	0	0	1251	1240	614	1257	1274	493
Stage 1	-	-	-	-	-	-	732	732	-	505	505	-
Stage 2	-	-	-	-	-	-	519	508	-	752	769	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1068	-	-	935	-	-	149	175	492	148	167	576
Stage 1	-	-	-	-	-	-	413	427	-	549	540	-
Stage 2	-	-	-	-	-	-	540	539	-	402	411	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1068	-	-	935	-	-	135	164	492	140	157	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	135	164	-	140	157	-
Stage 1	-	-	-	-	-	-	390	404	-	519	537	-
Stage 2	-	-	-	-	-	-	511	536	-	378	388	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.7	0.1	35.3	14
HCM LOS			E	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	144	935	-	-	1068	-	432
HCM Lane V/C Ratio	0.177	0.006	-	-	0.055	-	0.072
HCM Control Delay (s)	35.3	8.9	-	-	8.6	-	14
HCM Lane LOS	E	A	-	-	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	0.2

Intersection						
Int Delay, s/veh	0.5					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	29	637	483	4	2	23
Future Vol, veh/h	29	637	483	4	2	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	5	5	2	2	2
Mvmt Flow	32	708	537	4	2	26

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	541	0	-	0	1311 539
Stage 1	-	-	-	-	539 -
Stage 2	-	-	-	-	772 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1028	-	-	-	175 542
Stage 1	-	-	-	-	585 -
Stage 2	-	-	-	-	456 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1028	-	-	-	170 542
Mov Cap-2 Maneuver	-	-	-	-	370 -
Stage 1	-	-	-	-	567 -
Stage 2	-	-	-	-	456 -

Approach	SE	NW	SW
HCM Control Delay, s	0.4	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1028	- 523
HCM Lane V/C Ratio	-	-	0.031	- 0.053
HCM Control Delay (s)	-	-	8.6	- 12.3
HCM Lane LOS	-	-	A	- B
HCM 95th %tile Q(veh)	-	-	0.1	- 0.2

Intersection												
Int Delay, s/veh	1.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙	↑	↗	↙	↗			↕			↕	
Traffic Vol, veh/h	68	540	28	4	428	6	18	0	2	5	0	41
Future Vol, veh/h	68	540	28	4	428	6	18	0	2	5	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	76	600	31	4	476	7	20	0	2	6	0	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	631	0	0	1263	1243	600	1257	1271	480
Stage 1	-	-	-	-	-	-	752	752	-	488	488	-
Stage 2	-	-	-	-	-	-	511	491	-	769	783	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1080	-	-	951	-	-	147	174	501	148	168	586
Stage 1	-	-	-	-	-	-	402	418	-	561	550	-
Stage 2	-	-	-	-	-	-	545	548	-	394	404	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1080	-	-	951	-	-	128	161	501	139	156	586
Mov Cap-2 Maneuver	-	-	-	-	-	-	128	161	-	139	156	-
Stage 1	-	-	-	-	-	-	374	389	-	522	548	-
Stage 2	-	-	-	-	-	-	501	546	-	365	376	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.9	0.1	36	14.4
HCM LOS			E	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	138	951	-	-	1080	-	434
HCM Lane V/C Ratio	0.161	0.005	-	-	0.07	-	0.118
HCM Control Delay (s)	36	8.8	-	-	8.6	-	14.4
HCM Lane LOS	E	A	-	-	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	0.4

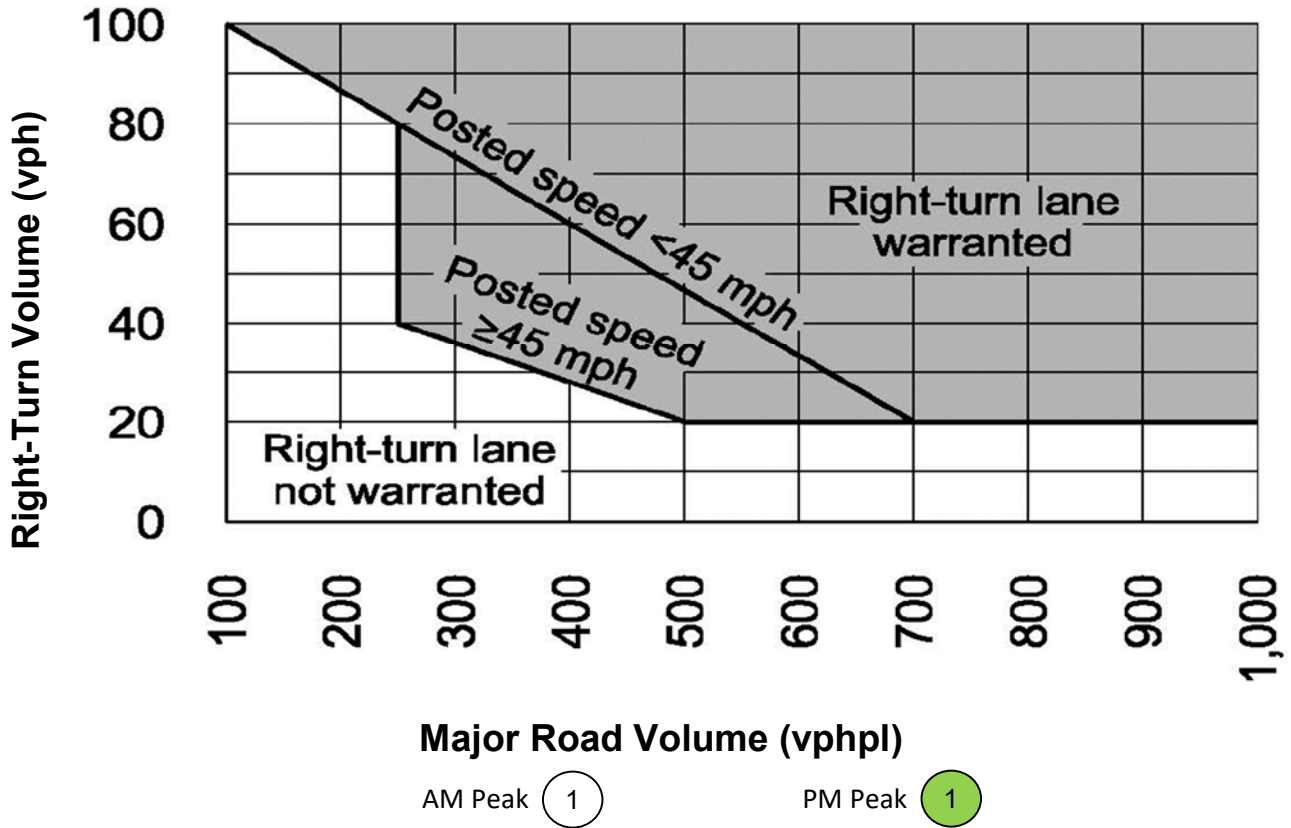
APPENDIX D: TURN LANE WARRANT WORKSHEETS

The River District
 ITD Right-Turn Lane Analysis

2019 Existing Traffic (Seasonally Adjusted)

Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
① SH 55 and Riverview Parkway	SEB	50	AM	4	239	No*
			PM	1	490	No*

*Approach volume per lane < 100 vphpl or right-turn volume < 20 vph = Not Warranted

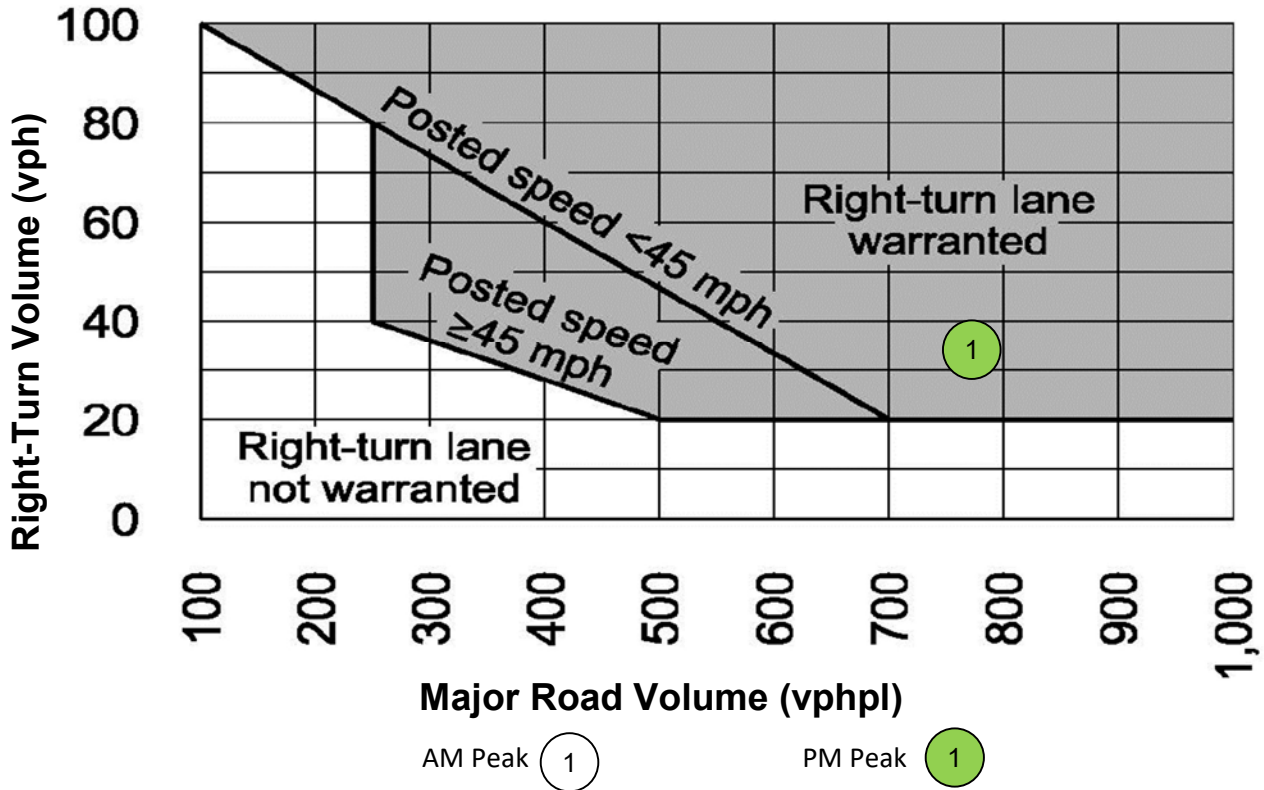


The River District
ITD Right-Turn Lane Analysis

2040 Background Traffic

Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
① SH 55 and Riverview Parkway	SEB	50	AM	14	370	No*
			PM	33	774	Yes

*Approach volume per lane < 100 vphpl or right-turn volume < 20 vph = Not Warranted

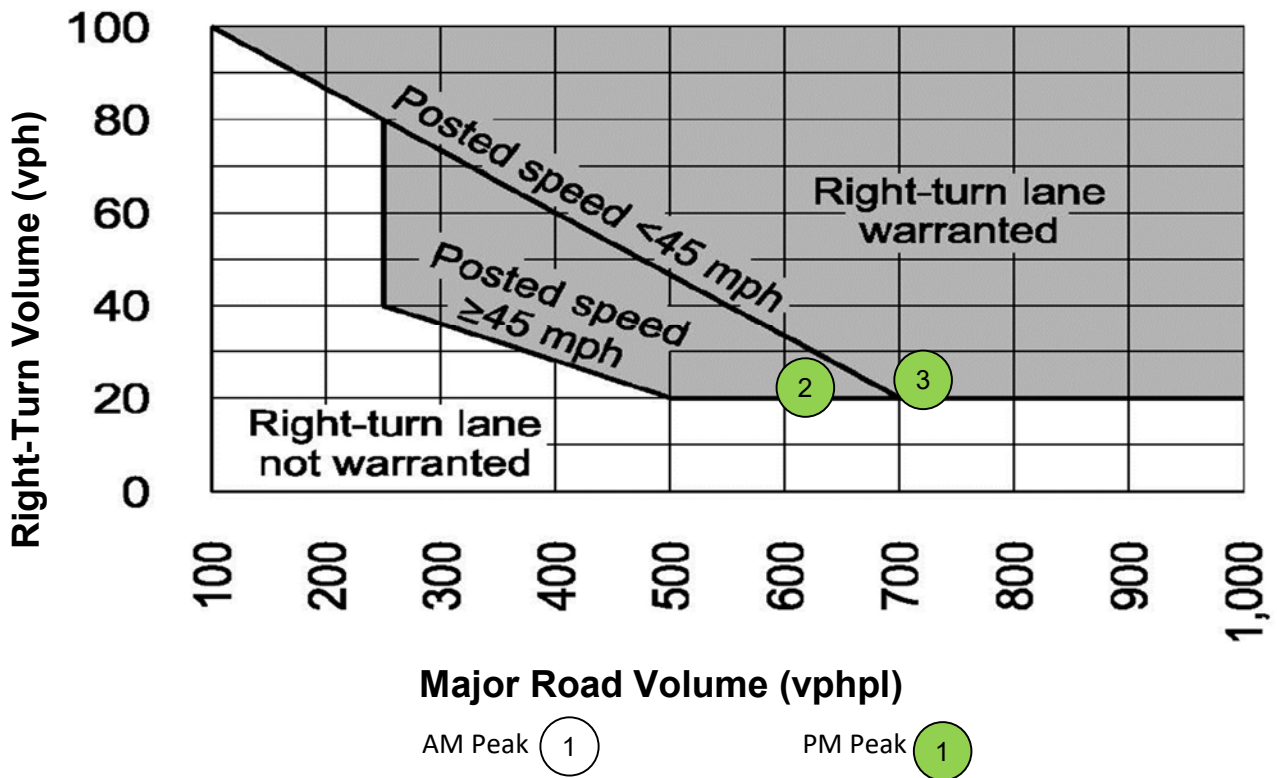


The River District
ITD Right-Turn Lane Analysis

2040 Total Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vphpl)	Meet Warrant?
1	SH 55 and Riverview Parkway	SEB	50	AM PM	Warranted Under 2040 Background		
2	SH 55 and Ponderosa Street	NWB	50	AM	9	512	No*
				PM	22	617	Yes
3	SH 55 and Payette Street	NWB	35	AM	8	685	No*
				PM	23	711	Yes

*Approach volume per lane < 100 vphpl or right-turn volume < 20 vph = Not Warranted

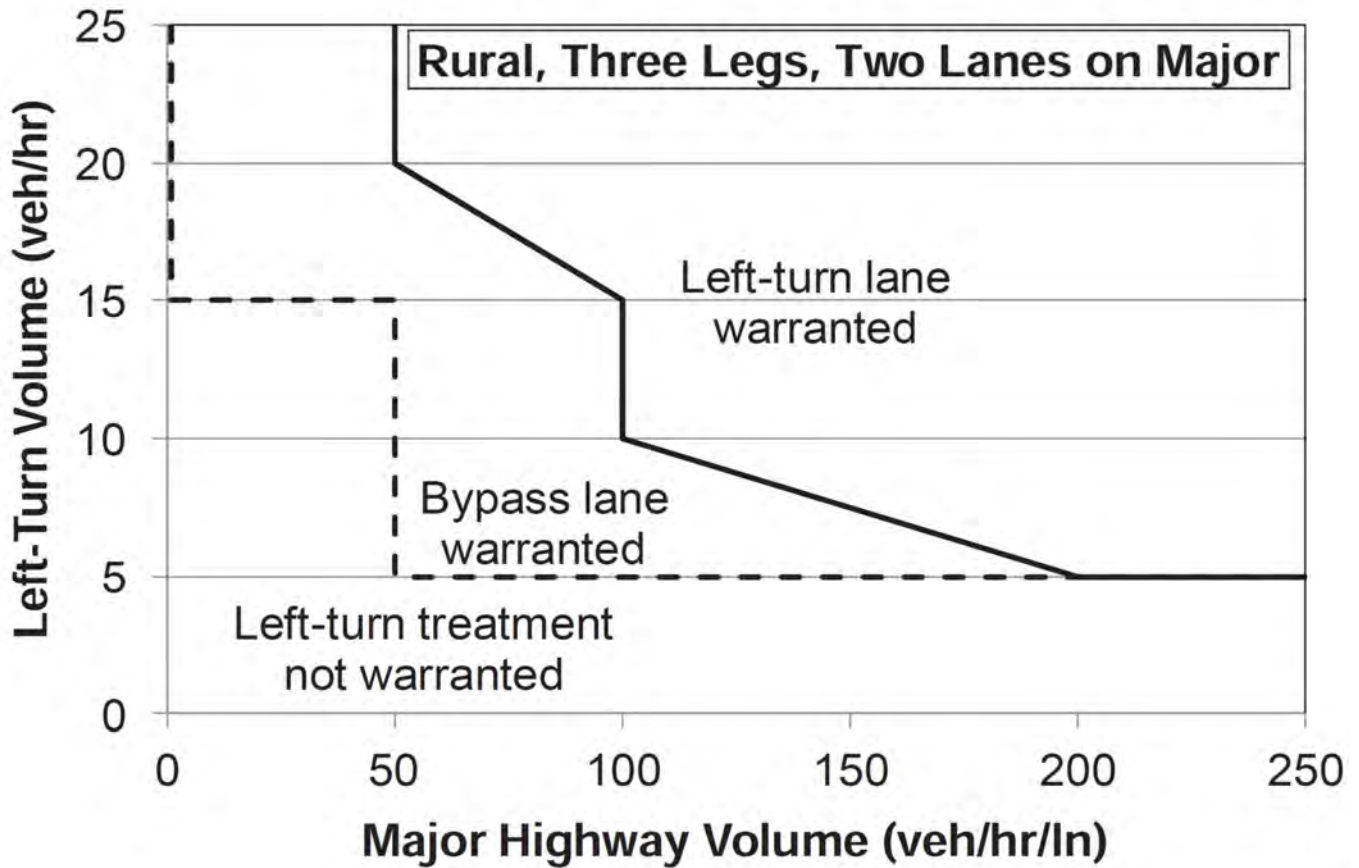


The River District
 NCHRP Report 745 Left-turn Lane Guidelines

2019 Existing Traffic (Seasonally Adjusted)

Intersection	Approach	Speed Limit [mph]	Peak Hour	Turning Volume [vph]	Opposing Volume [vph]	Meet Warrant?
① SH 55 and Riverview Driveway	NWB	50	AM	1	239	No*
			PM	1	490	No*

* Left-turn Volume less than 5 vph - Not Warranted



AM Peak ①

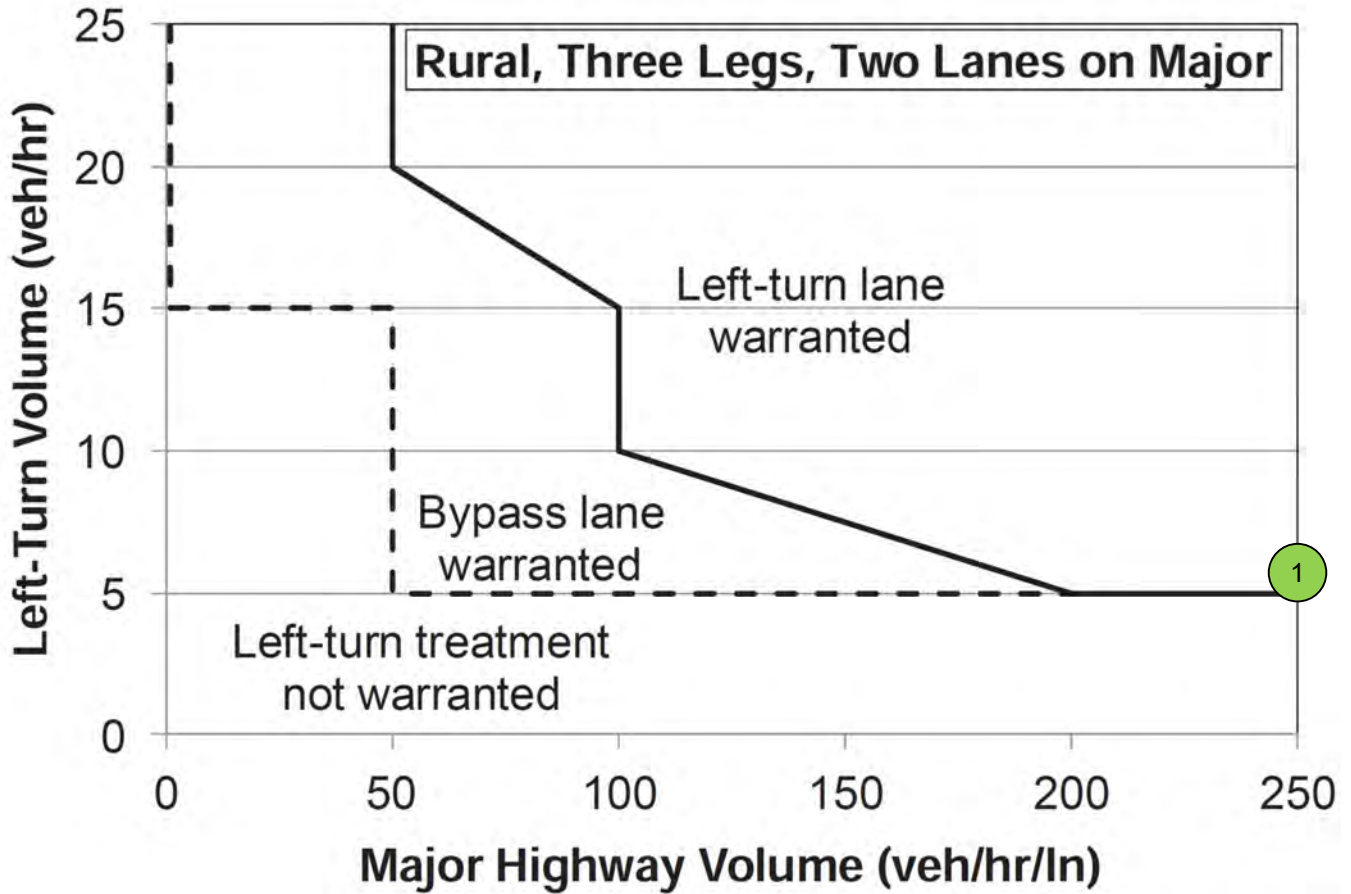
PM Peak ①

The River District
 NCHRP Report 745 Left-turn Lane Guidelines

2040 Background Traffic

Intersection	Approach	Speed Limit [mph]	Peak Hour	Turning Volume [vph]	Opposing Volume [vph]	Meet Warrant?
① SH 55 and Riverview Driveway	NWB	50	AM	2	370	No*
			PM	5	774	Yes

* Left-turn Volume less than 5 vph - Not Warranted



AM Peak ①

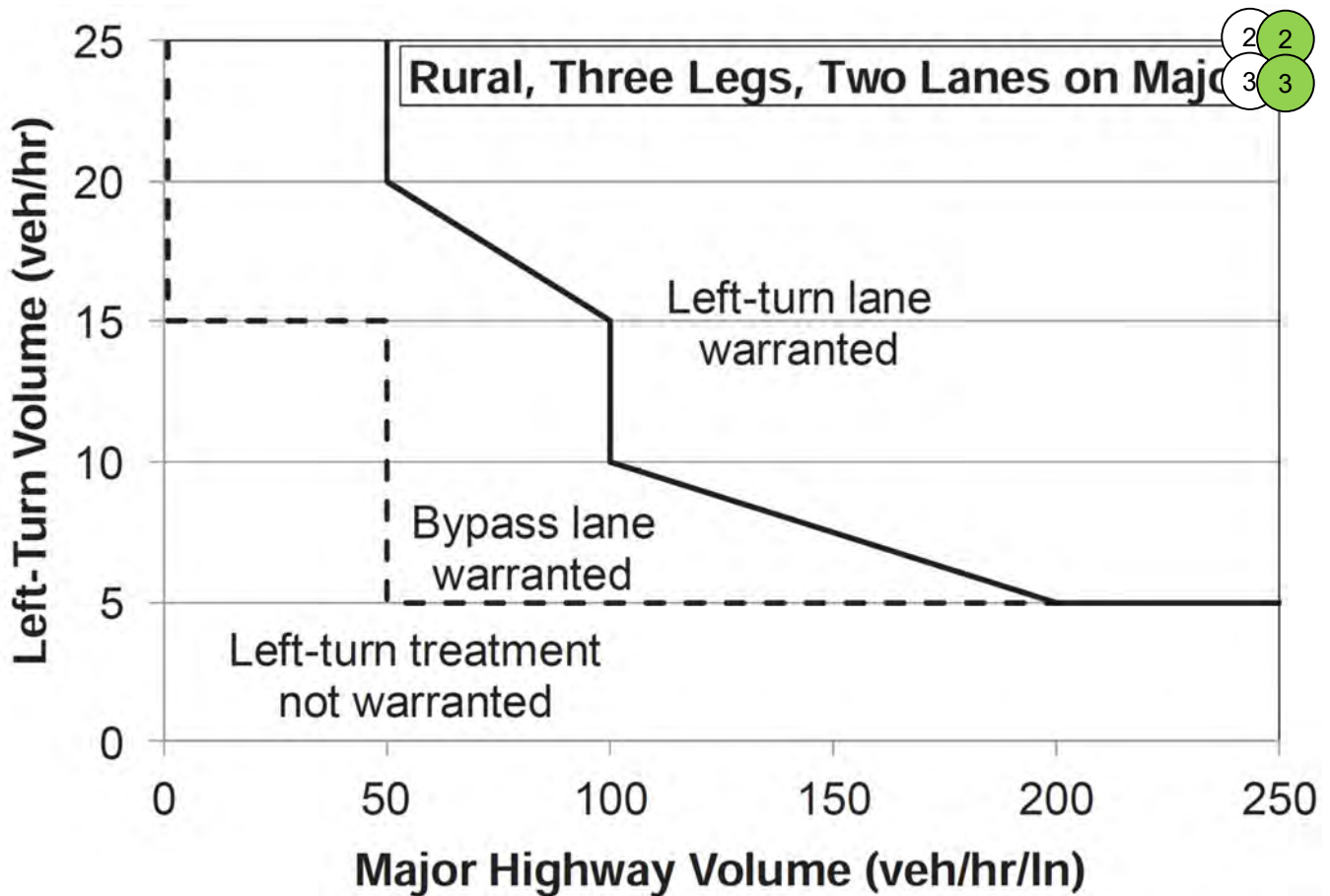
PM Peak ①

The River District
NCHRP Report 745 Left-turn Lane Guidelines

2040 Total Traffic

Intersection	Approach	Speed Limit [mph]	Peak Hour	Turning Volume [vph]	Opposing Volume [vph]	Meet Warrant?
① SH 55 and Riverview Driveway	NWB	50	AM	Warranted Under Background Conditions		
			PM			
② SH 55 and Payette Street	SEB	50	AM	80	682	Yes
			PM	89	708	Yes
③ SH 55 and Ponderosa Street	SEB	50	AM	71	510	Yes
			PM	151	612	Yes
④ SH 55 and Payette Street	NWB	50	AM	3	444	No*
			PM	3	902	No*

* Left-turn Volume less than 5 vph - Not Warranted



AM Peak ①

PM Peak ①