



DB Enterprise, LLC  
4771 So. Danube Circle  
Aurora, Colorado 80015

Phone: (720) 231-1947  
E-Mail: [druble.jr@comcast.net](mailto:druble.jr@comcast.net)

November 25, 2022

Mr. Aaron Thompson  
Aperio Property Consultants  
4032 Defoe Street  
Strasburg, CO 80136

Re: Landing at Jewell Project  
Aurora, CO

Dear Mr. Thompson:

I am pleased to submit my Traffic Impact Analysis for the proposed Landing at Jewell Project in Aurora, Colorado. This revision has been prepared to respond to comments from the City of Aurora. The site is located near the intersection of East Jewell Avenue and South Rome Way.

This study first provides a summary of the existing roadways and traffic volumes in the vicinity of the proposed commercial project and a summary of planned improvements to the roadway system. Next, estimates are made of the amount and directional distribution of vehicular traffic likely to be generated by the proposed commercial project. This information is then combined with projected future traffic volumes in the vicinity to evaluate the impact of the proposed project will have on the future roadway system and, where appropriate, to make recommendations for the required roadway improvements.

I trust that my findings and recommendations will assist in the planning for the proposed Landing at Jewell Project. Please call me if I can be of further assistance.

Respectfully submitted,

DB Enterprise, LLC

By:

  
Dave L. Ruble Jr., P.E.

DLR/bar



# Landing at Jewell Project

November 25, 2022

Prepared by  
Dave L. Ruble, Jr., P.E.  
DB Enterprise LLC  
(DBE#220110)





# **Traffic Impact Analysis**

## **Landing at Jewell Project**

**Aurora, Colorado**

Prepared for

Aperio Property Consultants  
4032 Defoe Street  
Strasburg, CO 80136

Prepared by

DB Enterprise, LLC  
4771 So. Danube Circle  
Aurora, CO 80015  
(720) 231-1947

November 25, 2022  
(DBE #220110)

## TABLE OF CONTENTS

<b>Section</b>	<b>Description</b>	<b>Page</b>
A	Executive Summary	1
B	Introduction/Background	4
C	Existing Traffic Condition	8
	Total Year 2022 Existing Traffic	12
D	Proposed Conditions	14
	Trip Generation	14
	Trip Distribution	18
	Site-Generated Traffic	20
E	Future Conditions	23
	Background Traffic	23
	Total Traffic	23
F	Evaluation	28
G	Recommendations/Conclusions	43

Appendix A – Existing Traffic Counts

Appendix B – Methodology for Estimating Peak-Hour Traffic

Appendix C – Observed Car Wash Trip Information

Appendix D – Pioneer Business Park Traffic Impact Study

Appendix E – Capacity Analysis

Appendix D – Year 2050 Queue Length Analysis

## LIST OF FIGURES

<b>Figure</b>	<b>Description</b>	<b>Page</b>
1	Vicinity Map	6
2	Site Plan	7
3	Existing Lane Geometry and Traffic Control	9
4	Existing Traffic Volumes	10
5	Estimated Year 2022 Existing Traffic Volumes	13
6	Trip Distribution of Site-Generated Traffic	19
7	Assignment of Non-Passby Site-Generated Traffic	21
8	Assignment of Passby Site-Generated Traffic	22
9	Year 2030 Background Peak-Hour Traffic Volumes	24
10	Year 2050 Background Peak-Hour Traffic Volumes	25
11	Year 2030 Total Peak-Hour Traffic Volumes	26
12	Year 2050 Total Peak-Hour Traffic Volumes	27
13	Year 2030 Traffic Control and Lane Geometry	29
14	Year 2050 Traffic Control and Lane Geometry	30
15	Year 2050 Daily Traffic Impacts	36
16	Year 2050 Queue Length Analysis	38
17	Recommended Traffic Control and Lane Geometry	44

## LIST OF TABLES

<b>Table</b>	<b>Description</b>	<b>Page</b>
1	Daily Customers (Excluding Employees)	15
2	Hourly Customers (Excluding Employees)	15
3	Estimated Vehicle Trip Generation	16
4	Intersection Level of Service Analysis Results (Estimated Existing Traffic)	32
5	Intersection Level of Service Analysis Results (2030)	33
6	Intersection Level of Service Analysis Results (2050)	34
7	Auxiliary Traffic Lane Analysis	41

# Section A – Executive Summary

---

An executive summary of the analysis presented in this report is as follows:

1. The proposed Landing at Jewell Project is located in the City of Aurora. It is located near the intersection of East Jewell Avenue and South Rome Way. The site is bounded by East Jewell Avenue on the north, commercial development on the west, East Atlantic Place on the south, and South Rome Way on the east.
2. The proposed commercial project will be served by five accesses, one along East Jewell Avenue at South Rivera Street and three along East Atlantic Place at South Rivera Street, Access A and Access B, and one along South Rome Way at Road A. The access at East Jewell Avenue and South Rivera Street will be restricted to a right-in/right-out. All of the accesses along East Atlantic Place and East Rome Way will be full movement. A total of eight intersections are being analyzed in this report, three along South Rome Way at East Jewell Avenue, Road A and East Atlantic Place, three along South Rivera Street at East Jewell Avenue, Road A and East Atlantic Place, and two intersections along East Atlantic Place at Access A and Access B. These intersections will be impacted the most by the proposed commercial project.
3. The proposed commercial project will have one automatic car wash with one tunnel stall, an 8,200 square foot shopping center, a 3,500 square foot fast-food restaurant with a drive-through window, a gas station with convenience market with 16 fueling positions, and a 24,000 square foot general light industrial development. Based on this information at full build out, the site is expected to generate approximately 6,836 daily vehicle-trips with 3,418 vehicles entering and 3,418 vehicles leaving the site on a typical weekday. Of these, approximately 664 vehicle-trips will occur during the AM peak-hour, with 342 vehicles entering and 322 vehicles exiting the site,



and approximately 604 vehicle-trips will occur during the PM peak-hour, with 299 vehicles entering and 305 vehicles exiting the site. The shopping center, fast-food restaurant with drive-through window and gas station with convenience market are expected to have passby trips. When the passby trips are removed, the site is expected to generate approximately 3,549 daily vehicle-trips with 1,775 vehicles entering and 1,774 vehicles leaving the site on a typical weekday. Of these, approximately 319 vehicle-trips will occur during the AM peak-hour, with 169 vehicles entering and 150 vehicles exiting the site, and approximately 331 vehicle-trips will occur during the PM peak-hour, with 161 vehicles entering and 170 vehicles exiting the site.

4. The directional distribution for site-generated traffic is expected to be 50 percent from the west using East Jewell Avenue and 50 percent from the east using East Jewell Avenue.
5. A total of eight intersections are being analyzed in this report, three along South Rome Way (East Jewell Avenue, Road A and East Atlantic Place), three along South Rivera Street (East Jewell Avenue, Road A and East Atlantic Place), and two along East Atlantic Place (Access A and Access B). Two analysis years are being analyzed in this report, the Years 2030 (the year the site is expected to be completed) and the Year 2050 (20 years after opening day). The three existing intersections, East Jewell Avenue/South Rome Way, South Rome Way/East Atlantic Place, and East Atlantic Place/South Rivera Street are currently unsignalized intersections.
6. Based on the recommendations in the Pioneer Business Park traffic impact study, which is currently under review by the City of Aurora, the intersection of East Jewell Avenue and South Rome Way is assumed to be signalized by the Year 2030.
7. All but one of the traffic movements at the three existing unsignalized intersection are currently operating at a good Level of Service (LOS "C" or better) in the AM and PM peak-hours. The one exception is the northbound

approach which expected to experience problems (LOS “E”) in the PM peak-hour. By the Year 2030, the signalized intersection of East Jewell Avenue and South Rome Street is expected to operate at a very good Level of Service (LOS “B”). By the Year 2050, there is no change in the performance of this intersection. This intersection does meet the MUTCD Four-Hour and Eight-Hour Traffic Signal warrants in the Year 2023 based on the analysis contained in the Pioneer Business Park traffic impact study.

8. The traffic movements at other seven intersections analyzed in this report are expected to operate at a good Level of Service (LOS “C” or better) during the AM and PM peak-hours through the Year 2050.
9. The estimated queue lengths in the Year 2050 are not considered to be excessive at all eight intersections along East Jewell Avenue, South Rome Way, South Rivera Street, and East Atlantic Place.
10. Traffic impacts associated with the proposed Landing at Jewell Project are minor. The installation of a traffic signal at East Jewell Avenue and South Rome Way eliminates the problems at this intersection in the Years 2030 and 2050.

## Section B – Introduction/Background

---

The proposed Landing at Jewell Project is located near the intersection of East Jewell Avenue and South Rome Way in Aurora, Colorado. The proposed commercial project will have one automatic car wash with one tunnel stall, an 8,200 square foot shopping center, a 3,500 square foot fast-food restaurant with a drive-through window, a gas station with convenience market with 16 fueling positions, and a 24,000 square foot general light industrial development. Three intersections along South Rome Way (East Jewell Avenue, Road A, and East Atlantic Place), three intersections along South Rivera Street (East Jewell Avenue, Road A, and East Atlantic Place), and two intersections along East Atlantic Place (Access A and Access B) are being analyzed in this report. The three existing intersections along South Rome Way and East Atlantic Place are currently unsignalized.

DB Enterprise, LLC has been retained by Aperio Property Consultants, Inc. to assess the traffic impacts to the existing and proposed roadway network from the traffic generated by the proposed commercial project. This report summarizes the following analysis procedures which were utilized in the evaluation:

- A review and analysis of present roadway and traffic conditions in the vicinity of the site and a review of planned and proposed roadway improvements in the general vicinity.
- A determination of the daily and peak-hour vehicle-trip generation for the proposed commercial project.
- An analysis of the estimated directional distribution of site-generated traffic and an assignment of that traffic to the adjacent street network.
- A determination of the future traffic volumes in the vicinity of the site.

- An evaluation of the impacts of site-generated traffic expressed in terms of the development's traffic as an increment of total projected traffic on the surrounding roadway system and the resulting Levels of Service on the adjacent major roadways and intersections.
- A determination of appropriate roadway standards and improvements which will ensure optimum traffic operation for traffic entering and exiting the site.

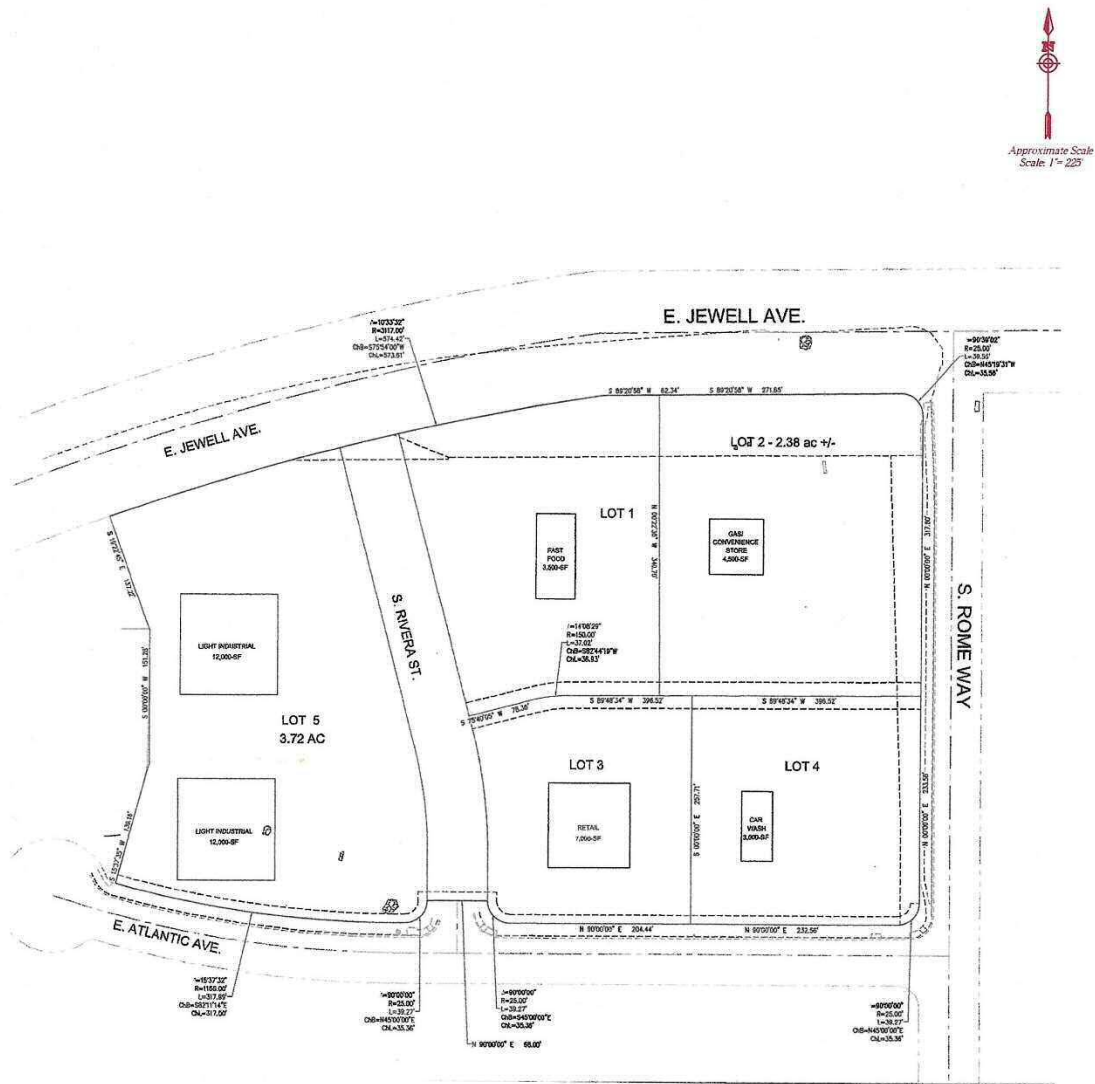
The location of the proposed Landing at Jewell Project is shown in Figure 1. As shown in this figure, the site is located near the intersection of East Jewell Avenue and South Rome Way in Aurora, Colorado. The site is bounded on the north by East Jewell Avenue, South Rome Way on the east, East Atlantic Place on the south, and commercial development on the west. Figure 2 depicts the preliminary site plan for the proposed commercial project. The site will be served by five accesses, one along East Jewell Avenue at South Rivera Street, one along South Rome Way at Road A, and three along East Atlantic Place at South Rivera Street, Access A and Access B. Since there are no active development plans for any of the five lots, assumptions had to be made as to how each lot would access the roadway network. The site plan is currently under review by the City of Aurora and may change as a result of this review.



Figure 1 – Vicinity Map



Figure 2 – Site Plan



Note: This site plan does not identify specific access points.

# Section C – Existing Traffic Condition

---

## Roadway Network

Major roadways in the vicinity of the site are illustrated in Figure 3 and described with a brief discussion of anticipated future roadway improvements. East Jewell Avenue is classified as an arterial roadway with one lane in each direction near South Rome Way. It runs in an east-west direction from Denver to Arapahoe County. West of South Dunkirk Street the name of the roadway is East Iliff Avenue. The posted speed limit is 45 mph near the proposed commercial project. The long range plan for this roadway is to be widened to six lanes, three in each direction. Aurora has also identified East Jewell Avenue as a rapid transit corridor, but there is no identified funding source for this improvement. South Rome Way is classified as a local roadway. It has a posted speed limit of 30 mph. This roadway runs in an north-south direction. It begins on the north at East Jewell Avenue and ends approximately 3,650 south of East Jewell Avenue. There are no plans to widen this roadway. South Rivera Street currently does not exist. This roadway is planned to begin at East Jewell Avenue on the north and end at East Atlantic Place on the south. When completed this roadway will be classified as a local roadway. Road A currently does not exist. It will begin on the west at South Rivera Street and end on the east at South Rome Way. When completed this roadway will be classified as a local roadway.

Figure 3 shows existing traffic control and lane geometry for the intersections along South Rome Way and East Atlantic Place. All of the existing intersections, two along South Rome Way and one along East Atlantic Place, are unsignalized with stop control on the side streets. Turning movement traffic counts were taken along South Rome Way at East Jewell Avenue and East Atlantic Place. Daily traffic counts were taken for the three approaches at the intersection of East Jewell Avenue and South Rome Way. Figure 4 depicts the traffic counts taken for this report. Appendix A contains the raw traffic counts.

Figure 3 – Existing Lane Geometry and Traffic Control

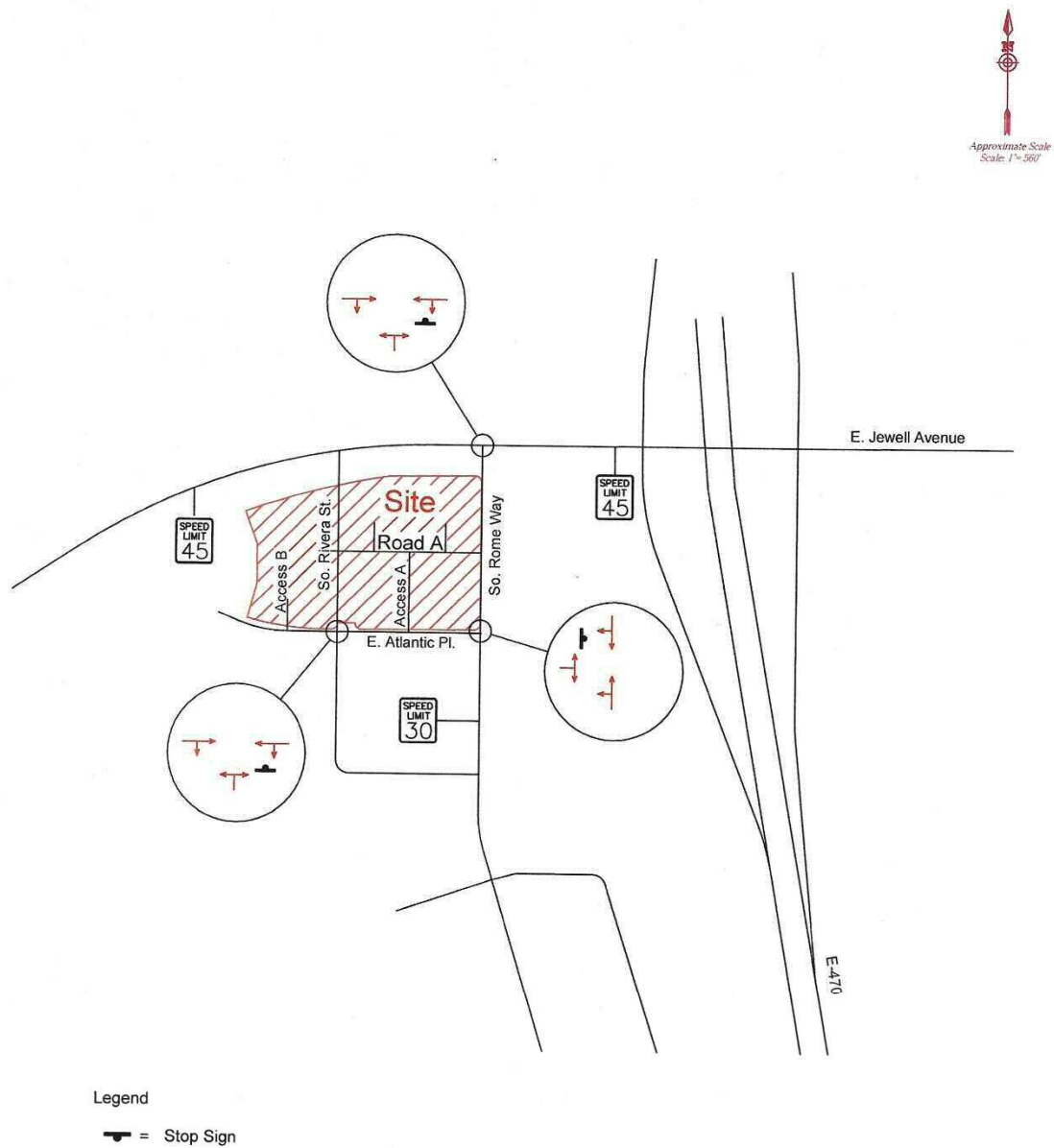
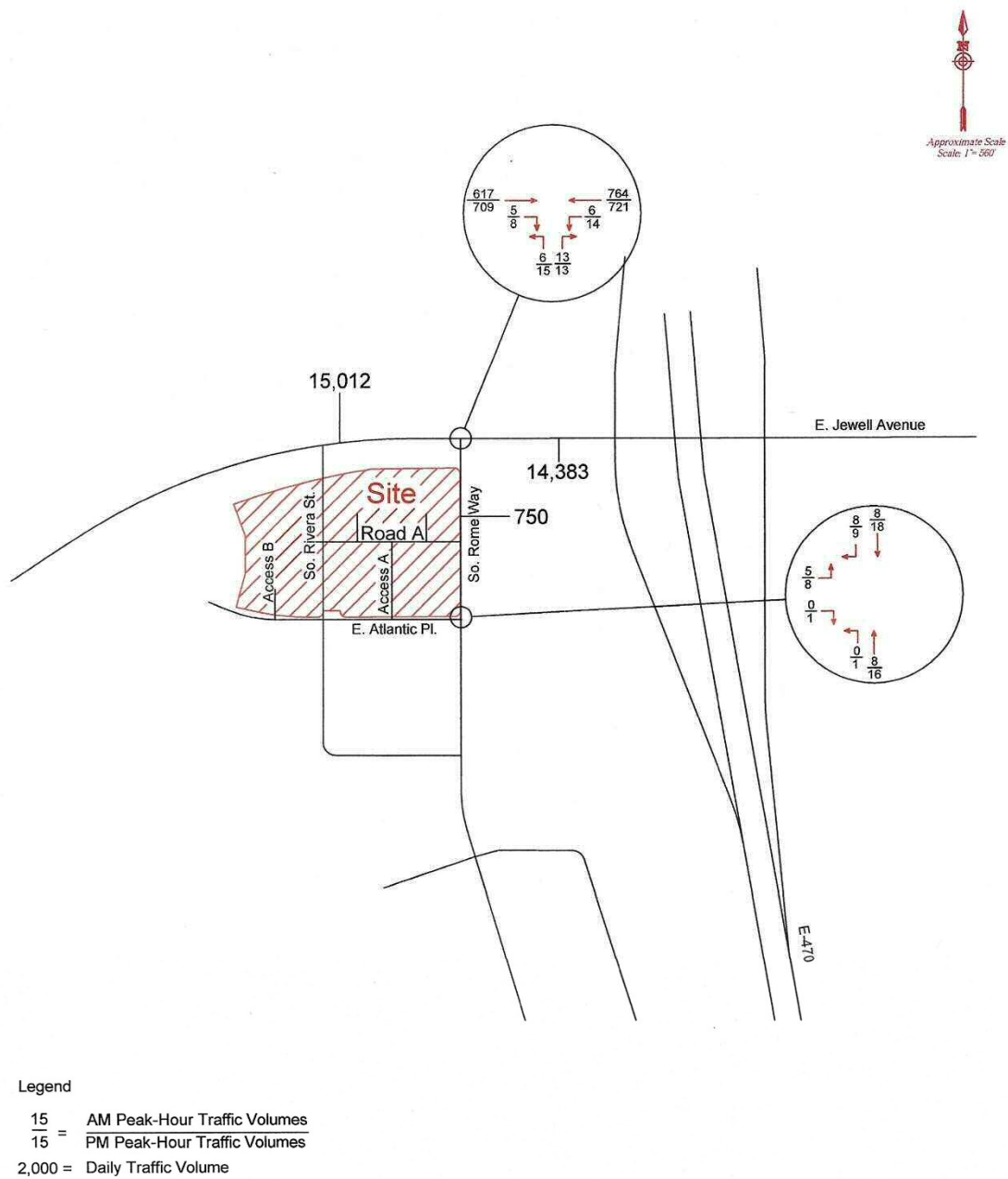




Figure 4 – Year 2021 Existing Traffic Volumes



The current traffic patterns have not fully recovered from the effects the COVID-19 pandemic, therefore an adjustment factor had to be developed. The Colorado Department of Transportation collects traffic counts on Gun Club Road (State Highway 30) just south of East Jewell Avenue. This location was used to develop the adjustment factor. This location had traffic counts for August 2008, April 2011, October 2015, and May 2017. Since traffic counts vary based on the month the counts are taken, all of these traffic counts were adjusted to an average annual daily traffic count by using the continuous traffic counter on State Highway 83, south of East Quincy Avenue. January, February, March, November, and December are lower than the annual average, while April, May, June, July, August, September, and October are higher than the annual average. The table below shows how each month compares to the annual average.

Month	Percent of AADT
January	92.8%
February	94.6%
March	98.5%
April	101.7%
May	103.2%
June	106.6%
July	103.2%
August	104.9%
September	102.5%
October	101.5%
November	95.4%
December	95.0%

These factors were applied to the Colorado Department of Transportation counts to arrive at average annual daily traffic counts for each year. From this information, the average annual daily traffic for State Highway 30 should have been 19,983 vehicles. A seven day traffic count was taken. The average traffic count was 18,723 vehicles. After applying the October adjusted factor of 1.015, the average annual traffic count is estimated to be 19,004. This information shows that traffic in the eastern portion of the City of Aurora has not fully recovered. An adjustment factor of 1.052 needs to be

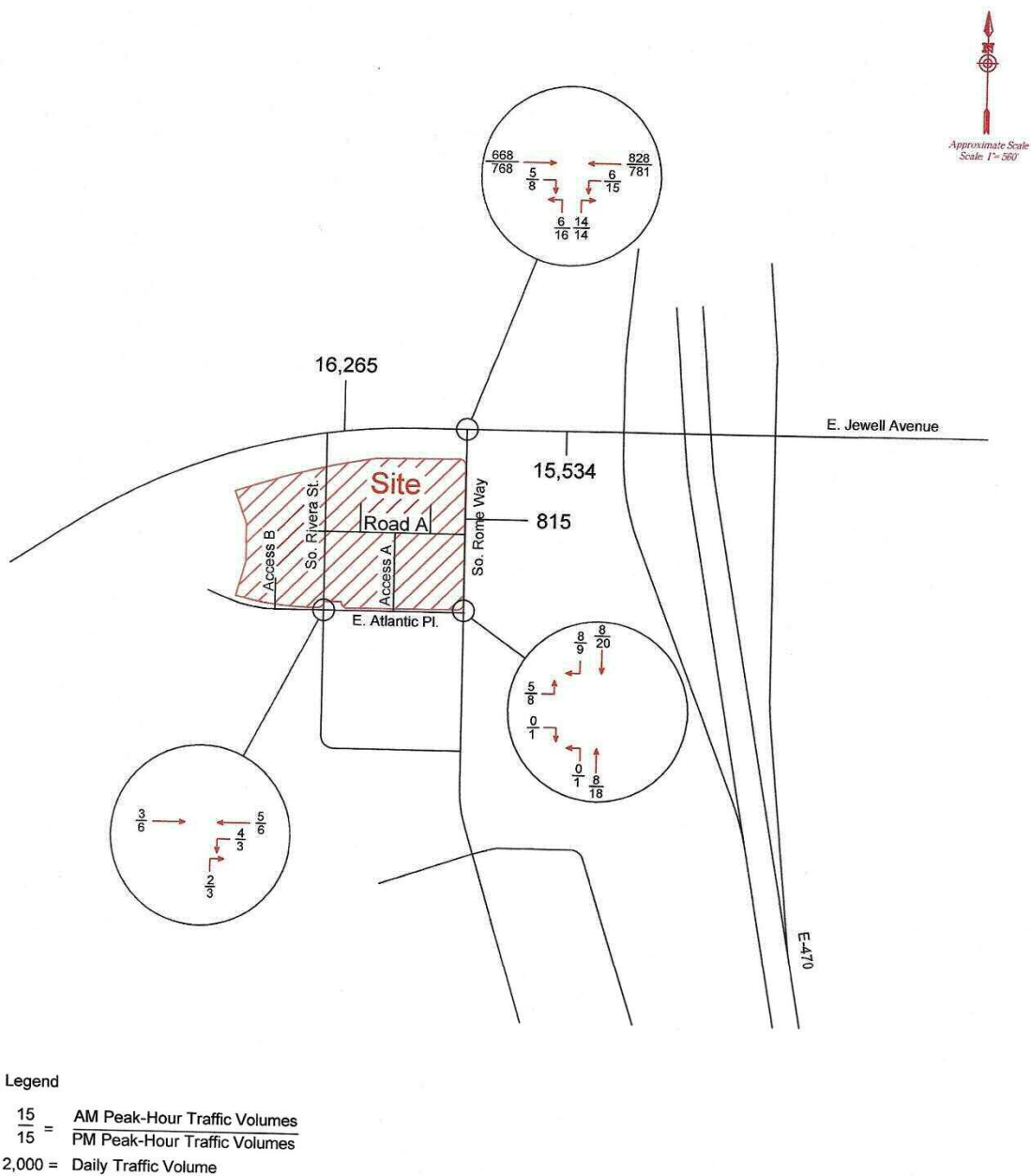
applied to the existing traffic counts to account for the effects of the COVID-19 pandemic. Appendix B contains the information used in calculating this adjustment factor.

Appendix B also contains spreadsheets for how the pandemic adjustment factor was developed as well as the estimated Year 2021 existing traffic and the Years 2030 and 2050 background and total peak-hour traffic volumes.

### Total Year 2022 Existing Traffic

Figure 5 depicts the estimated Year 2022 existing traffic volumes. The traffic volumes depicted in Figure 5 were arrived at by applying the pandemic adjustment factor of 1.052 and an annual growth rate of 3.0 percent to the traffic volumes depicted in Figure 4.

Figure 5 – Estimated Year 2022 Existing Traffic Volumes





## Section D – Proposed Conditions

---

### Trip Generation

The proposed commercial project will have one automatic car wash with one tunnel stall, an 8,200 square foot shopping center, a 3,500 square foot fast-food restaurant with a drive-through window, a gas station with convenience market with 16 fueling positions, and a 24,000 square foot general light industrial development. The amount of traffic that will be generated by the proposed commercial project has been estimated based upon trip generation rates published by the Institute of Transportation Engineers (ITE) in the 11<sup>th</sup> Edition, 2021, of *Trip Generation*.

The amount of traffic that is being generated by the proposed car wash at Lot 4 has been estimated based upon reported information for three sites – Littleton (6646 South Wadsworth Boulevard), East Littleton (6875 South Broadway), and County Line (5651 County Line Place, Highlands Ranch). These three facilities each have one tunnel car wash stall and range in size from 5,195 square feet for the South Wadsworth Boulevard site to 5,700 square feet for the County Line Place site). The proposed car wash at Lot 4 is expected to have one tunnel car wash stall consisting of 4,430 square feet in size. Information was provided for three existing car wash facilities from September 1, 2021 through September 11, 2021 with the exception of September 5, 2021 which was a holiday. Daily visitor totals were provided for each of the three existing sites along with the hourly totals for September 11, 2021 (Saturday) and September 8, 2021 (Wednesday). Appendix C contains this information. Tables 1 and 2 depicts this information.

Table1  
Daily Customers (Excluding Employees)

Day	Littleton	East Littleton	County Line	Average
9/1/2021	428	188	139	252
9/2/2021	407	199	151	252
9/3/2021	374	180	171	242
9/6/2021	392	266	241	300
9/7/2021	576	318	237	377
9/8/2021	477	243	199	306
9/9/2021	420	221	168	270
9/10/2021	496	217	226	313
Average	446	229	192	289
Employees	5	5	5	5
Total	451	234	197	294

Table 2  
Hourly Customers(Excluding Employees)

Day	Littleton	East Littleton	County Line	Average
7:00 to 8:00	14	11	9	11
8:00 to 9:00	33	20	6	20
9:00 to 10:00	44	12	18	25
10:00 to 11:00	44	17	17	26
11:00 to 12:00	32	20	16	23
12:00 to 13:00	43	18	24	28
13:00 to 14:00	36	19	22	26
14:00 to 15:00	43	24	21	29
15:00 to 16:00	52	29	16	32
16:00 to 17:00	43	28	17	29
17:00 to 18:00	50	27	18	32
18:00 to 19:00	28	13	11	17
19:00 to 20:00	15	5	4	8

Table 3 provides the daily and peak-hour trip generation estimates from the five lots contained in the proposed Landing at Jewell commercial project.

Based on this information at full build out, the site is expected to generate approximately 6,836 daily vehicle-trips with 3,418 vehicles entering and 3,418 vehicles leaving the site on a typical weekday. Of these, approximately 664 vehicle-trips will occur during the AM peak-hour, with 342 vehicles entering and 322 vehicles exiting the site, and approximately 604 vehicle-trips will occur during the PM peak-hour, with 299 vehicles entering and 305 vehicles exiting the site. The shopping center, fast-food restaurant with drive-through window and gas station with convenience market are expected to have passby trips. The methodology used to calculate the passby trips is contained in the ITE publication entitled Trip Generation Handbook, 3<sup>rd</sup> Edition. When the passby trips are removed, the site is expected to generate approximately 3,549 new daily vehicle-trips with 1,775 vehicles entering and 1,774 vehicles leaving the site on a typical weekday. Of these, approximately 319 vehicle-trips will occur during the AM peak-hour, with 169 vehicles entering and 150 vehicles exiting the site, and approximately 331 vehicle-trips will occur during the PM peak-hour, with 161 vehicles entering and 170 vehicles exiting the site.

Table 3 - Estimated Vehicle Trip Generation  
Weekday Daily

ITE Category	Quantity		Average Weekday (1)	
			Trip Rate	Vehicle Trips
Automatic Car Wash (4)	1	Tunnel	588.00	588
822 Strip Retail Plaza	7.00	KSF (2)	54.45	381
834 Fast-Food Restaurant with Drive-Through Window	3.50	KSF (2)	467.48	1,636
945 Gas Station with Convenience Market	16	FP (3)	257.13	4,114
110 General Light Industrial	24.0	KSF (2)	4.87	117
			Total	6,836
			Total Passby Trips	3,287
			Total Non-PassBy Trips	3,549

### AM Peak-Hour

ITE Category		Quantity		AM Peak-Hour			
				Trip Rate		Vehicle Trips	
				In	Out	In	Out
	Automatic Car Wash (4)	1	Tunnel	20	20	20	20
832	Strip Retail Plaza	7.0	KSF (2)	1.42	0.94	10	7
934	Fast-Food Restaurant with Drive-Through Window	3.50	KSF (2)	22.75	21.86	80	77
945	Gas Station with Convenience Market	16	FP (3)	13.52	13.52	216	216
110	General Light Industrial	24.0	KSF (2)	.0.65	0.09	16	2
			Total			342	322
			Total Passby Trips			173	172
			Total Non-PassBy Trips			169	150

### PM Peak-Hour

ITE Category		Quantity		PM Peak-Hour			
				Trip Rate		Vehicle Trips	
				In	Out	In	Out
	Automatic Car Wash (4)	1	Tunnel	32	32	32	32
832	Strip Retail Plaza	7.0	KSF (2)	3.30	3.29	23	23
934	Fast-Food Restaurant with Drive-Through Window	3.50	KSF (2)	17.18	15.85	60	55
945	Gas Station with Convenience Market	16	FP (3)	11.38	11.38	182	182
110	General Light Industrial	24.0	KSF (2)	.0.09	0.56	2	13
			Total			299	305
			Total Passby Trips			138	135
			Total Non-PassBy Trips			161	170

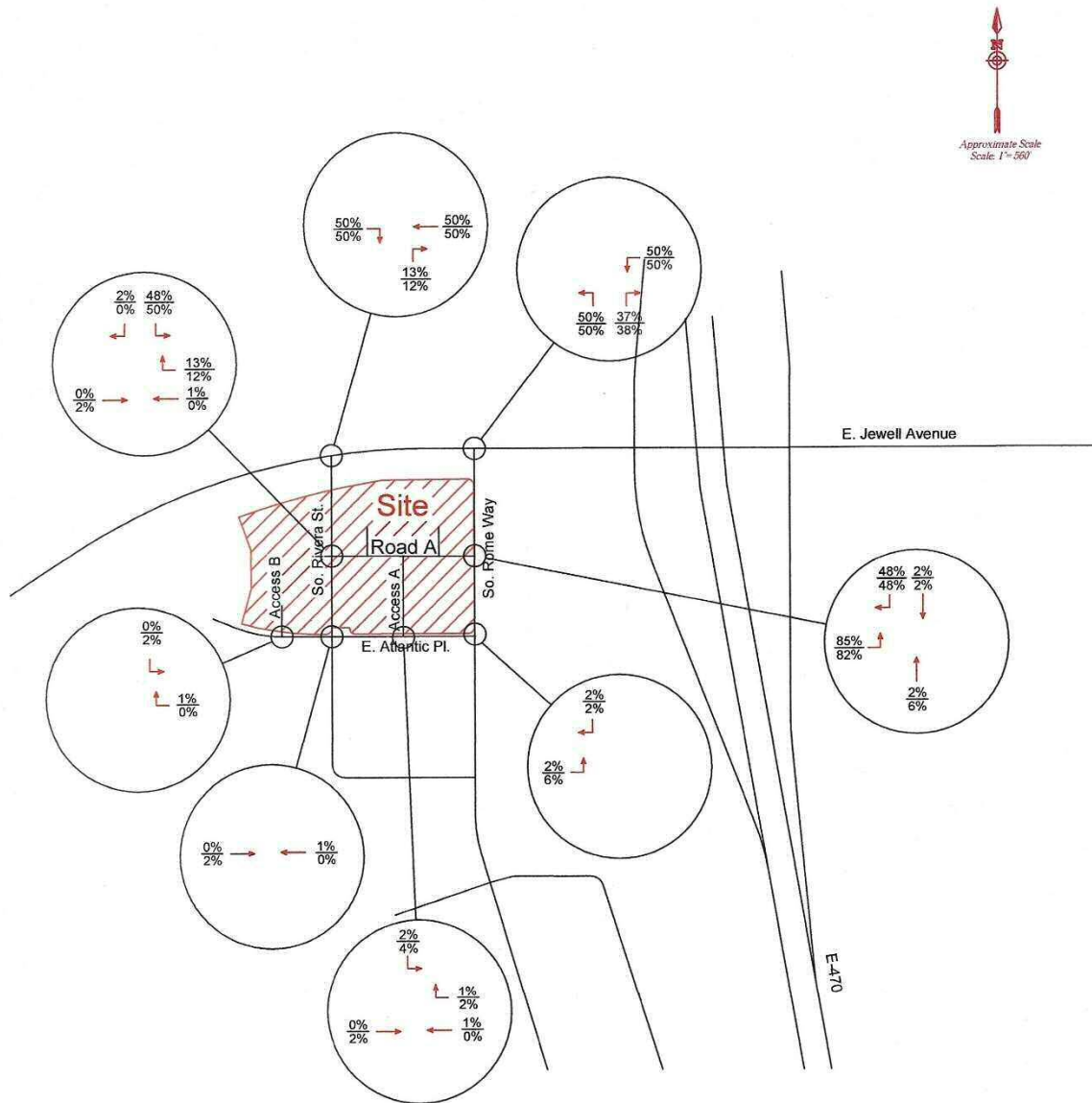
- (1) Source: "Trip Generation", Institute of Transportation Engineers, 11<sup>th</sup> Edition, 2021
- (2) KSF = 1,000 Square Feet
- (3) FP = Fueling Positions
- (4) Information from Existing Tunnel Car Wash Facilities

## Trip Distribution

The directional distribution of site-generated traffic onto adjacent roadways, which provide access to and from the proposed Landing at Jewell Project, is one of the most important components in the assessment of the proposed commercial project's traffic impacts. Major factors which influence the traffic distribution assumptions include the location of the site relative to the surrounding roadway network, the level of access serving the site, and the type of land use proposed for the development.

The directional distribution for site-generated traffic is expected to be 50 percent from the west using East Jewell Avenue and 50 percent from the east using East Jewell. Figure 6 depicts the trip distribution percentages being used in the report.

Figure 6 – Trip Distribution of Site-Generated Traffic



Legend

$\frac{40\%}{35\%} = \frac{\text{AM Peak-Hour Directional Distribution of Site-Generated Traffic}}{\text{PM Peak-Hour Directional Distribution of Site-Generated Traffic}}$



## Site-Generated Traffic

Figure 7 illustrates the assignment of non-passby site-generated peak-hour traffic on the adjacent street system for the intersections along East Jewell Avenue, South Rome Way, and East Atlantic Place. Figure 8 illustrates the assignment of passby site-generated peak-hour traffic on the adjacent street system for the intersections along East Jewell Avenue, South Rome Way, and East Atlantic Place. The assignment of site-generated traffic is based upon the traffic distribution percentages shown in Figure 6 and the vehicle-trip generation estimates contained in Table 3.

Figure 7 – Assignment of Non-Passby Site-Generated Traffic

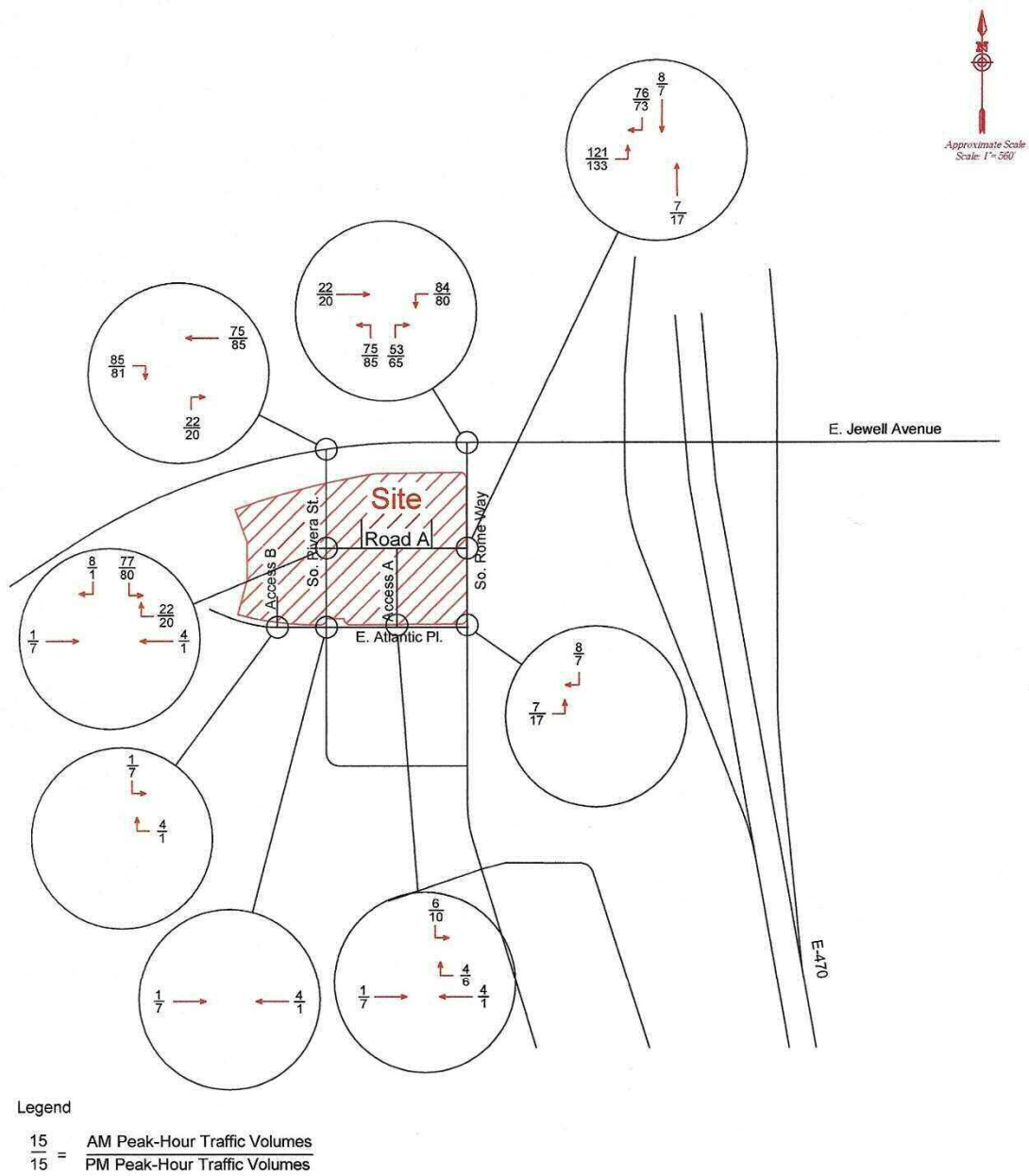
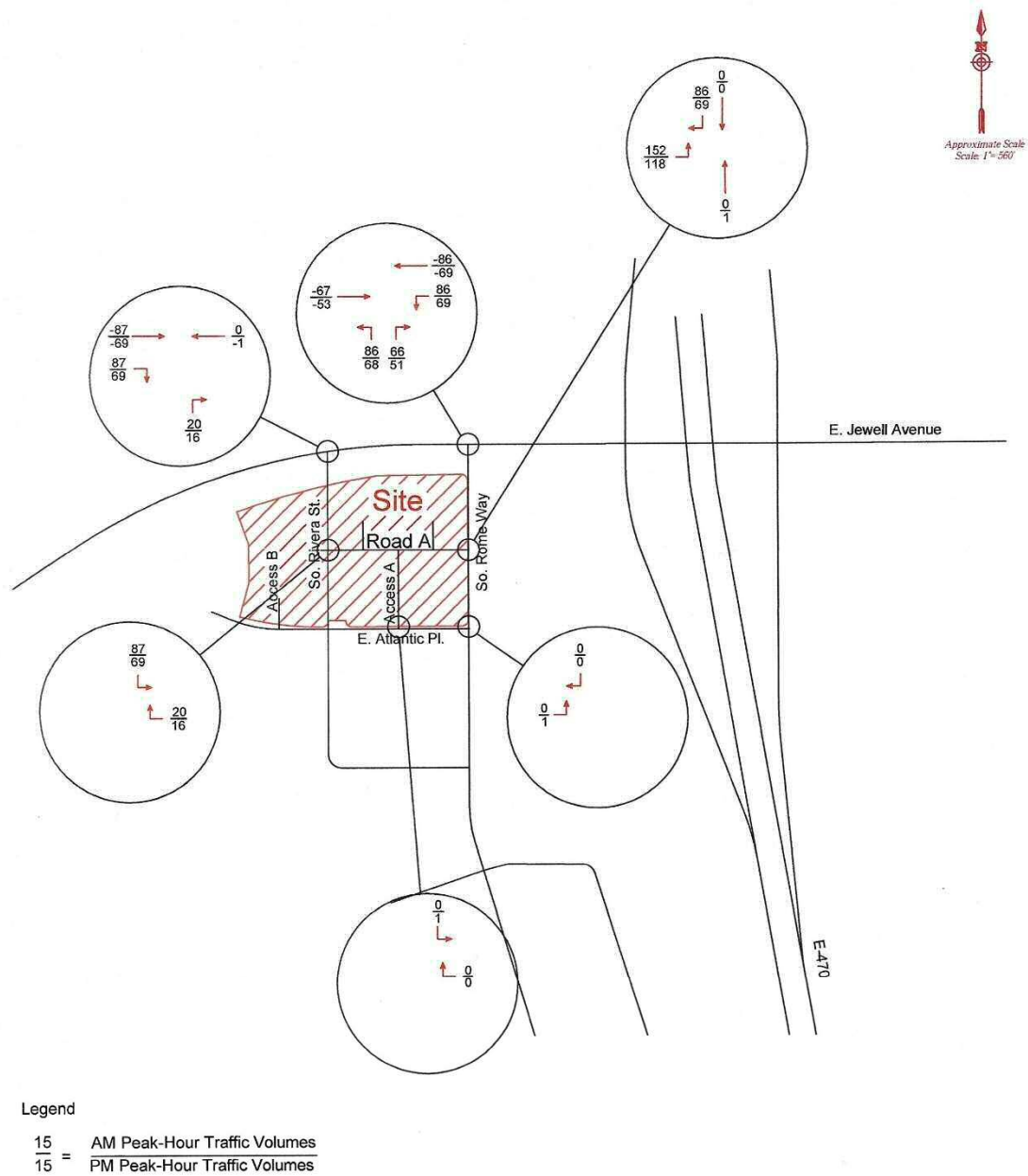


Figure 8 – Assignment of Passby Site-Generated Traffic



## Section E – Future Conditions

---

### Background Traffic

A growth factor of 1.267 (annual growth rate of 3 percent for eight years) was applied to the peak-hour traffic volumes depicted in Figure 5 to arrive at the initial Year 2030 peak-hour background traffic volumes. The traffic from the Pioneer Business Park project has been added to the initial Year 2030 peak-hour background traffic volumes to arrive at the final Year 2030 background peak-hour traffic volumes. Appendix D contains selected pages from the traffic impact study for the proposed Pioneer Business Park project. Figure 9 depicts the final Year 2030 background peak-hour traffic volumes.

A growth factor of 1.806 (annual growth rate of 3 percent for 20 years) was applied to the peak-hour traffic volumes depicted in Figure 9 to arrive at the initial Year 2050 peak-hour background traffic volumes. As was done for the Year 2030, the traffic from the Pioneer Business Park project has been added to the initial Year 2030 peak-hour background traffic volumes to arrive at the final Year 2050 background peak-hour traffic volumes. Figure 10 depicts the final Year 2050 background peak-hour traffic volumes.

### Total Traffic

Figure 11 depicts the Year 2030 total peak-hour traffic volumes. These peak-hour traffic volumes were arrived at by adding the Year 2030 background peak-hour traffic volumes depicted in Figure 9 to the non-passby site-generated traffic depicted in Figure 7 and the passby site-generated traffic depicted in Figure 8.

Figure 12 depicts the Year 2050 total peak-hour traffic volumes. These peak-hour traffic volumes were arrived at by adding the Year 2050 background peak-hour traffic volumes depicted in Figure 10 to the non-passby site-generated traffic depicted in Figure 7 and the passby site-generated traffic depicted in Figure 8.

Figure 9 – Year 2030 Background Peak-Hour Traffic Volumes

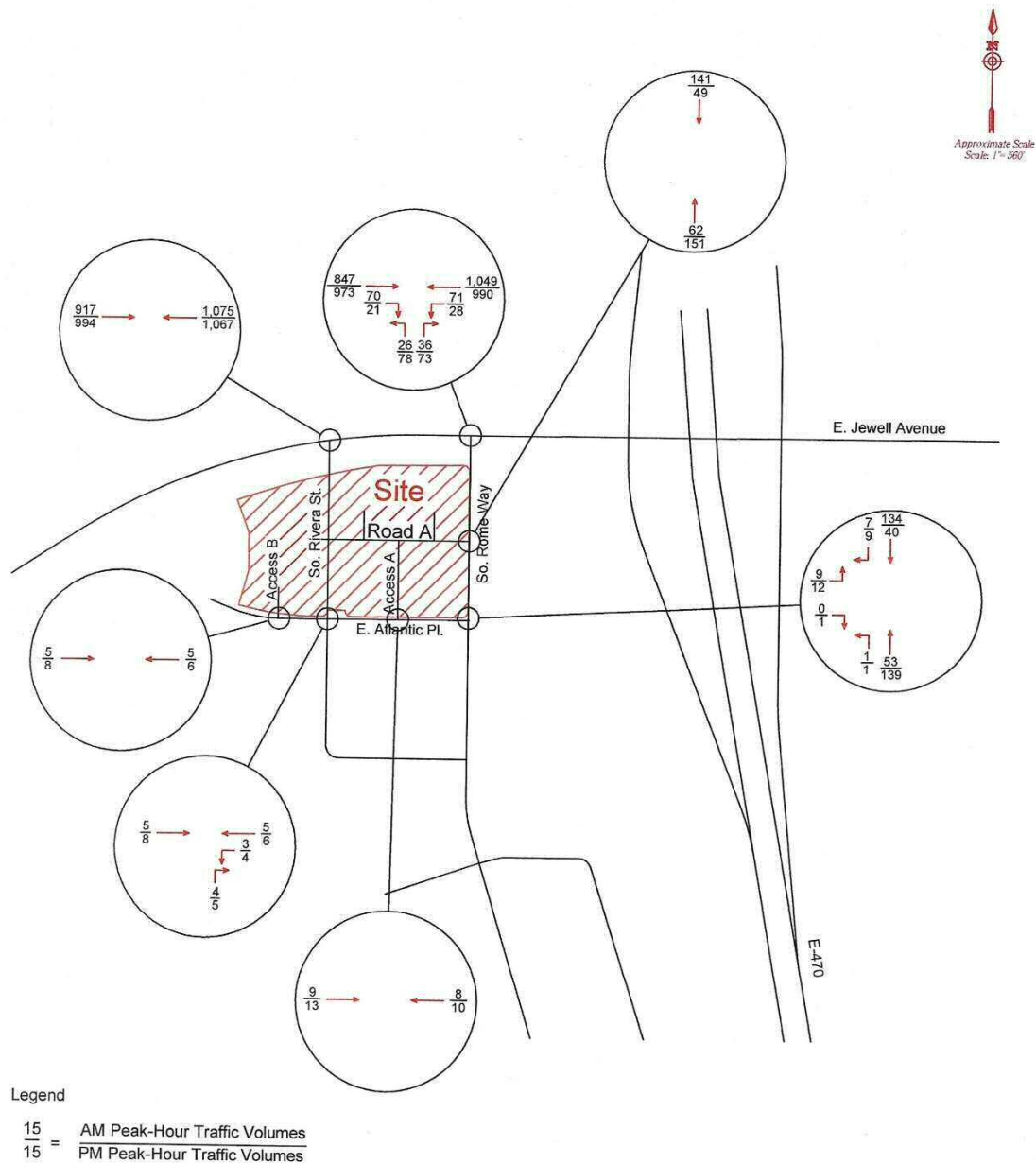


Figure 10 – Year 2050 Background Peak-Hour Traffic Volumes

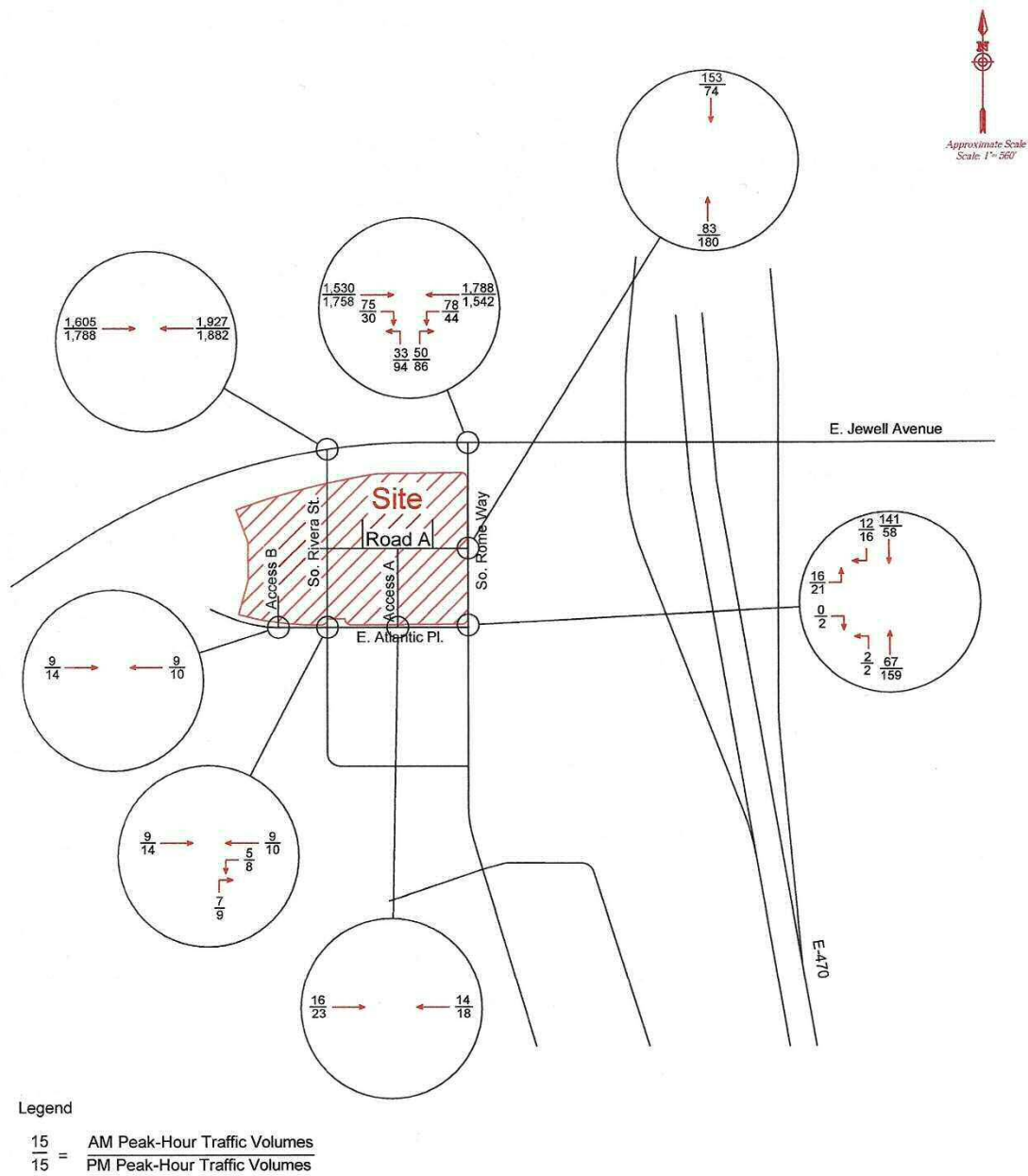




Figure 11 – Year 2030 Total Peak-Hour Traffic Volumes

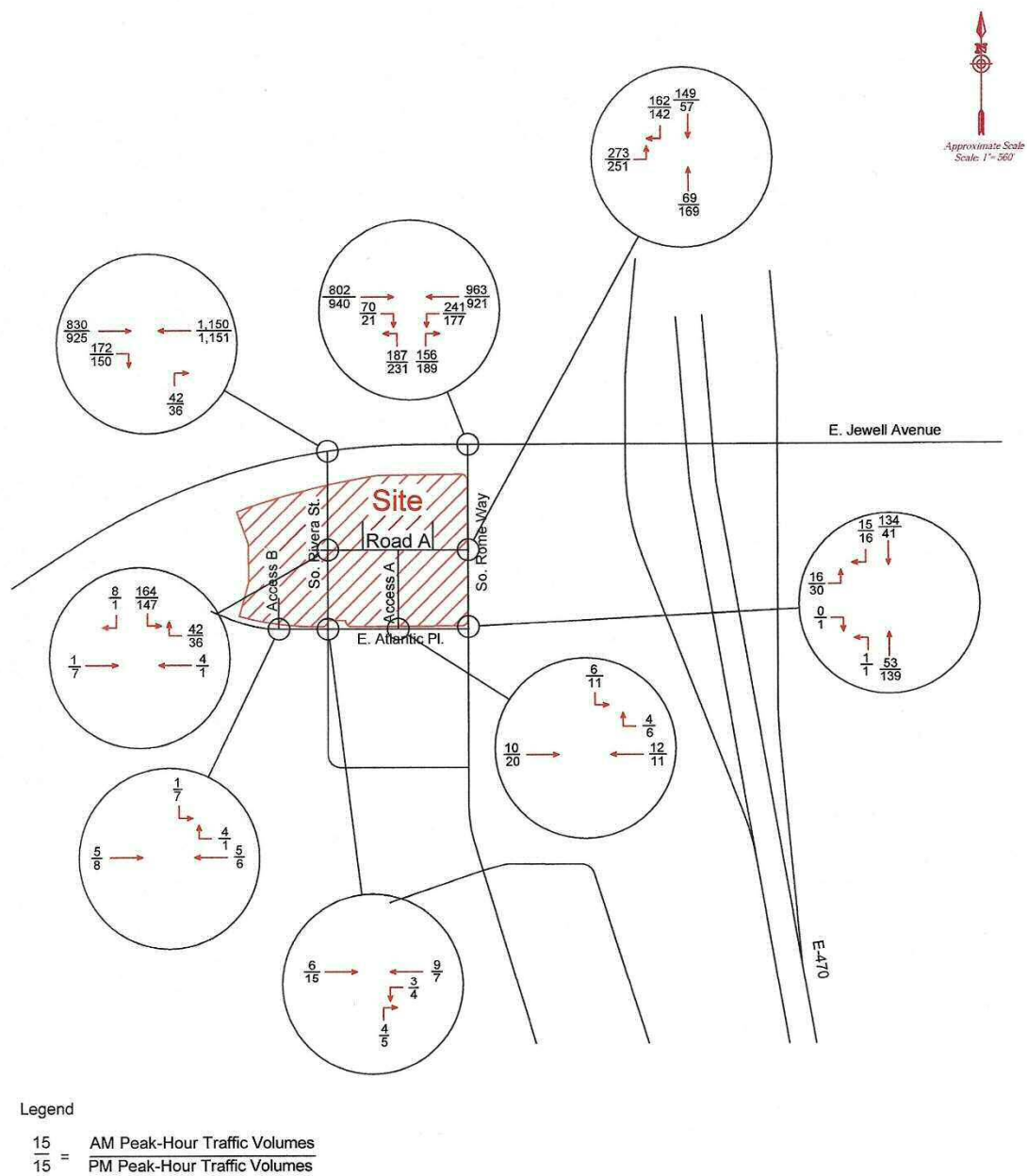
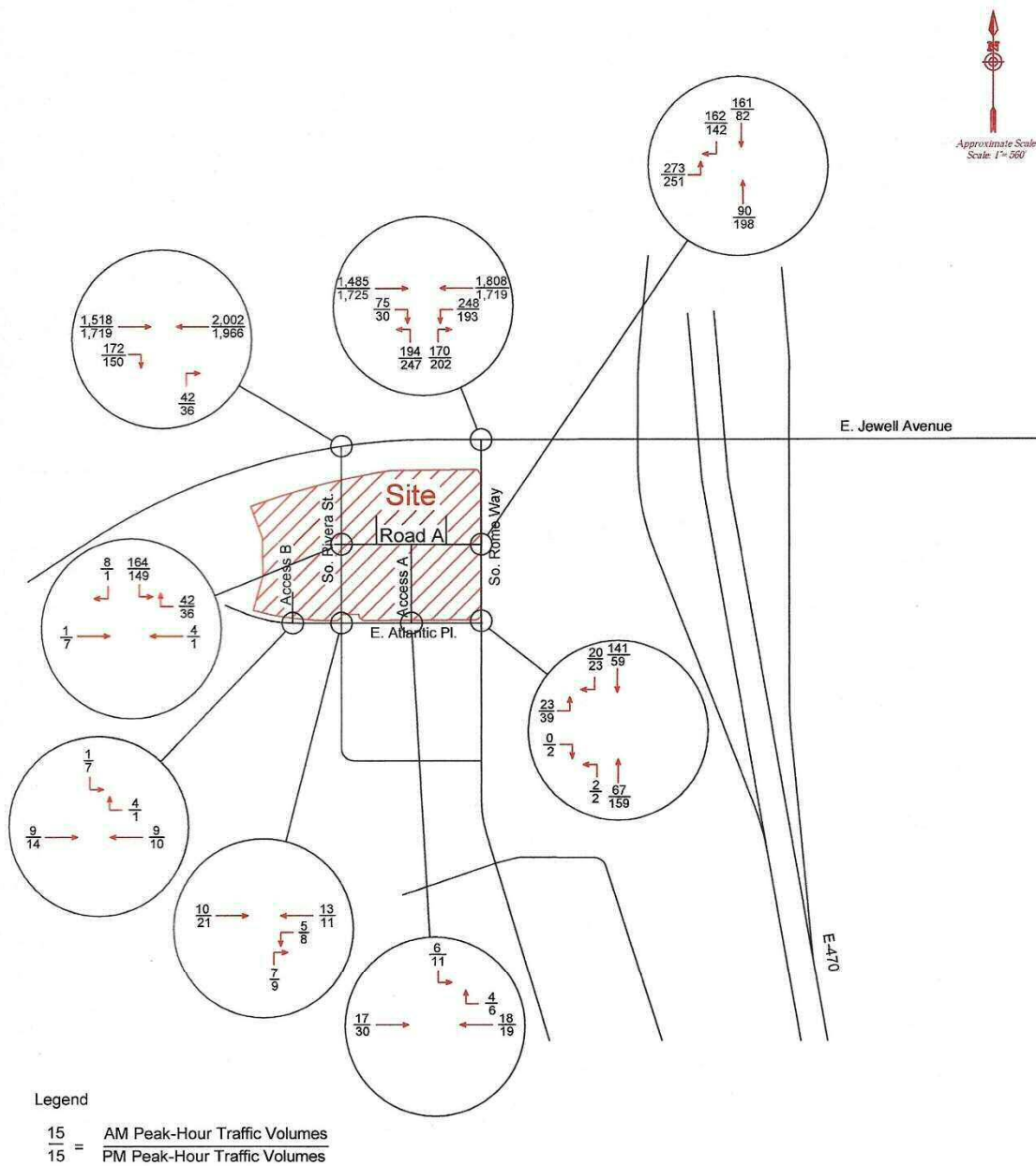


Figure 12 – Year 2050 Total Peak-Hour Traffic Volumes



## Section F - Evaluation

---

Traffic impacts associated with a development such as the proposed Landing at Jewell Project are best described in terms of the resulting affect they have on the major intersections that serve the proposed commercial project. In this particular case, the expected impacts are concentrated at three intersections along South Rome Way (East Jewell Avenue, Road A and East Atlantic Place), three intersections along South Rivera Place (East Jewell Avenue, Road A, and East Atlantic Place), and two intersections along East Atlantic Place (Access A and Access B).

Based upon the peak-hour traffic volumes shown in Figures 5, 9, 10, 11, and 12, “Signalized and Unsignalized Intersection Capacity” analyses have been performed using procedures set forth in the 2010 *Highway Capacity Manual*. The concept of Level of Service (LOS) is used as a basis for computing combinations of roadway operating conditions. By definition, six different Levels of Service are used (A, B, C, D, E, and F) with “A” being a free-flow condition and “E” representing the “capacity” of a given intersection or traffic movement. Analyses have been performed for the estimated Year 2022 existing traffic condition, Year 2030 background and total traffic conditions, and Year 2050 background and total traffic conditions.

The lane geometry and traffic control depicted in Figure 3 were used for this analysis of the estimated Year 2022 existing traffic condition. Figure 13 depicts the traffic control and lane geometry used for the Year 2030 background and total traffic conditions. Due to the expected daily traffic volumes on East Jewell Avenue by the Year 2030, this roadway warrants the widening to four lanes. Figure 14 depicts the traffic control and lane geometry for the Year 2050 background and total traffic conditions.

The Pioneer Business Park traffic impact analysis study included a Four-Hour and Eight-Hour MUTCD Traffic Signal Warrant analyses for the Year 2023. This analysis showed that the intersection of East Jewell Avenue and South Rome Way does meet the MUTCD Four-Hour traffic signal warrant and the MUTCD Eight-Hour traffic signal



Approximate Scale  
Scale: 1" = 560'

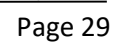
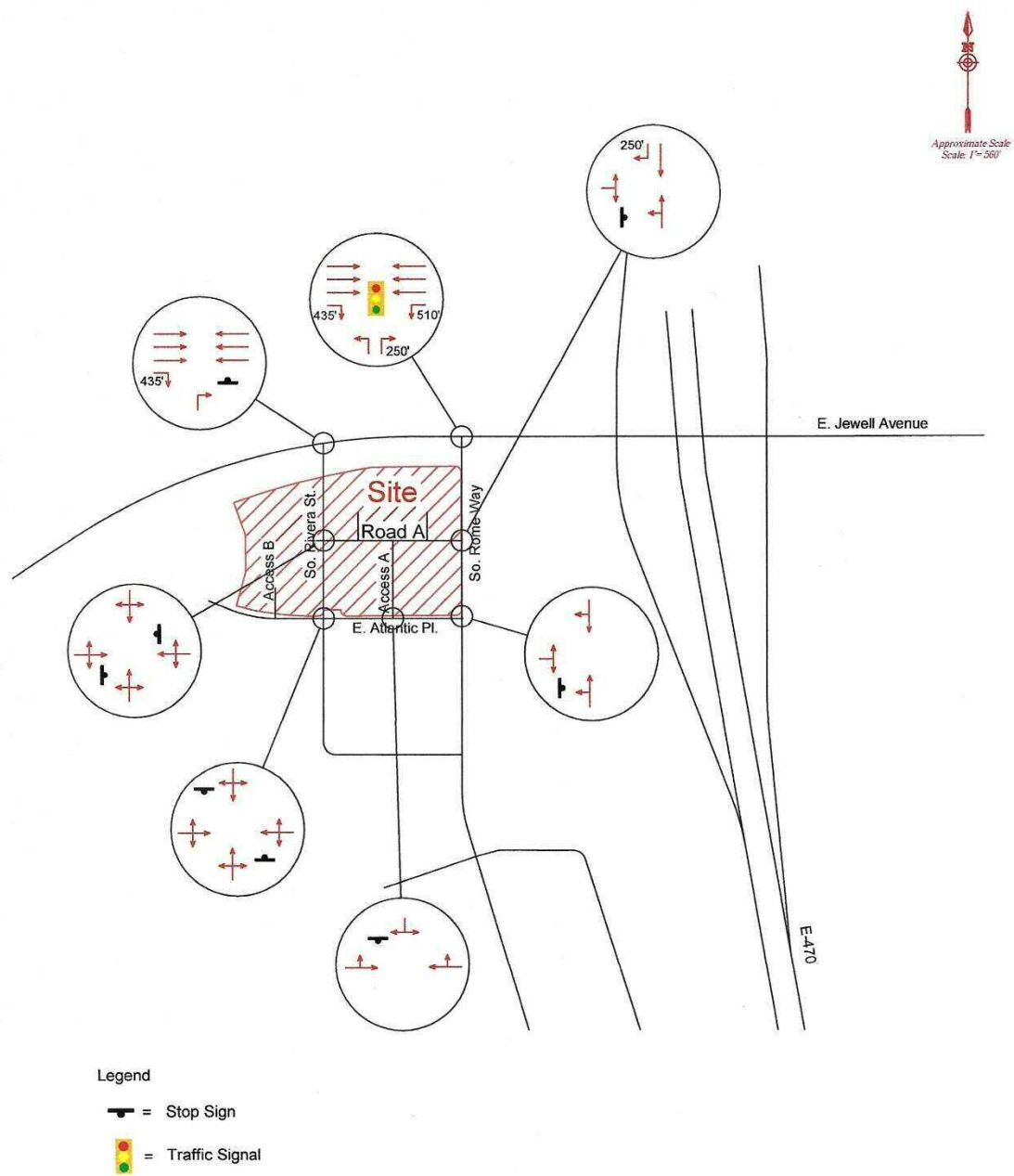


Figure 14 – Year 2050 Traffic Control and Lane Geometry



warrant (56 percent condition). Appendix D contains the tables from the Pioneer Business Park traffic impact analysis study that documents the need to signalize the intersection of East Jewell Avenue and South Rome Way. The City of Aurora agreed that a new traffic signal warrant study was not necessary for this report.

The results of these capacity analyses are found in Appendix E and are summarized in Table 4 for the estimated Year 2022 exiting traffic condition, Table 5 for the Year 2030, and Table 6 for the Year 2050.

East Jewell Avenue / South Rome Way: Currently, all but one of the traffic movements at this unsignalized intersection are operating at an acceptable Level of Service (LOS “D” or better) during the AM and PM peak-hours. The one exception is the northbound approach which expected to experience problems (LOS “E”) in the PM peak-hour. By the Year 2030 it is assumed that this intersection will be signalized, and East Jewell Avenue would be widened to four lanes. As a signalized intersection, this intersection operates at a very good Level of Service (LOS “B”) during the AM and PM peak-hours either with or without the traffic from the proposed commercial project. In the Year 2050, there is no change in the performance of this intersection.

East Jewell Avenue / South Rivera Street: The northbound right-turn traffic movement is expected to operate at good Level of Service (LOS “C”) during the AM and PM peak-hours through the Year 2050.

South Rome Way / East Atlantic Place: All the traffic movements at this unsignalized intersection are expected to operate at a very good Level of Service (LOS “B” or better) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial development.

South Rome Way / Road A: All the traffic movements at this unsignalized intersection are expected to operate at a very good Level of Service (LOS “B” or better) during the AM and PM peak-hours through the Year 2050.

Table 4 – Intersection Level of Service Analysis Results (Estimated Existing Traffic)

Intersection Location	Traffic Control	Year 2022 Existing	
		Level of Service	Level of Service
		AM Peak	PM Peak
East Jewell Avenue & South Rome Way	Unsignalized		
Northbound Approach		C (22.6)	E (37.2)
Westbound Approach		A (9.2)	A (9.6)
South Rome Way & East Atlantic Place	Unsignalized		
Northbound Approach		A (0.0)	A (7.3)
Eastbound Approach		A (8.6)	A (8.8)
East Atlantic Place & South Rivera Street	Unsignalized		
Northbound Approach		A (8.3)	A (8.4)
Westbound Approach		A (7.2)	A (7.2)



Table 5 -Intersection Level of Service Analysis Results (2030)

Intersection Location	Traffic Control	Year 2030 Background Traffic		Year 2030 Background Plus Site-Generated Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service
		AM Peak	PM Peak	AM Peak	PM Peak
East Jewell Avenue & South Rivera Street	Unsignalized				
Northbound Right-Turn		---	---	B (12.1)	B (12.6)
East Jewell Avenue & South Rome Way	Signalized				
Eastbound Through		C (20.4)	C 21.8)	C (26.1)	C (34.1)
Eastbound Right-Turn		B (14.4)	B (12.6)	B (16.1)	B (14.6)
Westbound Left-Turn		B (13.6)	B (13.4)	B (17.6)	B (15.9)
Westbound Through		B (13.8)	B (12.9)	B (11.4)	B (11.6)
Northbound Left-Turn		B (11.5)	B (12.3)	B (15.3)	B (15.7)
Northbound Right-Turn		B (11.7)	B (12.4)	B (15.2)	B (15.4)
Entire Intersection		B (16.4)	B (16.9)	B (17.6)	C (21.1)
South Rome Way & Road A	Unsignalized				
Eastbound Approach		---	---	B (14.6)	B (14.0)
South Rivera Street & Road A					
Eastbound Approach		---	---	---	---
Westbound Approach		---	---	---	---
Southbound Approach		---	---	---	---
South Rome Way & East Atlantic Place	Unsignalized				
Northbound Approach		A (0.0)	A (7.3)	A (7.5)	A (7.3)
Eastbound Approach		A (9.7)	A (9.6)	A (9.8)	A (9.8)
East Atlantic Place & Rivera Street	Unsignalized				
Northbound Approach		A (8.4)	A (8.4)	A (8.4)	A (8.4)
Westbound Approach		A (7.2)	A (7.2)	A (7.2)	A (7.3)
East Atlantic Place & Access A	Unsignalized				
Southbound Approach		---	---	A (8.7)	A (8.7)
East Atlantic Place & Access B	Unsignalized				
Southbound Approach		---	---	A (8.6)	A (8.6)

Table 6 -Intersection Level of Service Analysis Results (2050)

Intersection Location	Traffic Control	Year 2050 Background Traffic		Year 2050 Background Plus Site-Generated Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service
		AM Peak	PM Peak	AM Peak	PM Peak
East Jewell Avenue & South Rivera Street	Unsignalized				
Northbound Right-Turn		---	---	C (21.0)	C (23.8)
East Jewell Avenue & South Rome Way	Signalized				
Eastbound Through		C (22.4)	C (22.9)	C (23.2)	C (26.1)
Eastbound Right-Turn		B (15.2)	B (13.4)	B (16.0)	B (14.9)
Westbound Left-Turn		B (18.4)	B (18.1)	D (37.0)	C (29.7)
Westbound Through		B (16.3)	B (13.8)	B (13.6)	B (13.6)
Northbound Left-Turn		B (18.6)	C (20.7)	C (24.9)	C (26.1)
Northbound Right-Turn		B (19.1)	C (20.8)	C (25.1)	C (25.7)
Entire Intersection		B (19.0)	B (18.7)	B (19.8)	C (21.0)
South Rome Way & Road A	Unsignalized				
Eastbound Approach		---	--	B (13.5)	B (13.6)
South Rivera Street & Road A		---	---		---
Eastbound Approach		---	---	---	---
Westbound Approach		---	---	---	---
Southbound Approach		---	---	--	--
South Rome Way & East Atlantic Place	Unsignalized				
Northbound Approach		A (7.6)	A (7.4)	A (7.6)	A (7.4)
Eastbound Approach		A (9.9)	A (9.9)	B (10.0)	B (10.2)
East Atlantic Place & Rivera Street	Unsignalized				
Northbound Approach		A (8.4)	A (8.4)	A (8.4)	A (8.4)
Westbound Approach		A (7.2)	A (7.3)	A (7.2)	A (7.3)
East Atlantic Place & Access A	Unsignalized				
Southbound Approach		---	---	A (8.7)	A (8.8)
East Atlantic Place & Access B	Unsignalized				
Southbound Approach		---	---	A (8.6)	A (8.7)

East Atlantic Place / South Rivera Street: All the traffic movements at this unsignalized intersection are expected to operate at an excellent Level of Service (LOS “A”) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial project.

East Atlantic Place / Access A: All the traffic movements at this unsignalized intersection are expected to operate at an excellent Level of Service (LOS “A”) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial project.

East Atlantic Place / Access B: All the traffic movements at this unsignalized intersection are expected to operate at an excellent Level of Service (LOS “A”) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial project.

South Rivera Street / Road A: No level of service is being reported for this unsignalized intersection since there are forecasted peak-hour traffic volume for northbound South Rivera Street.

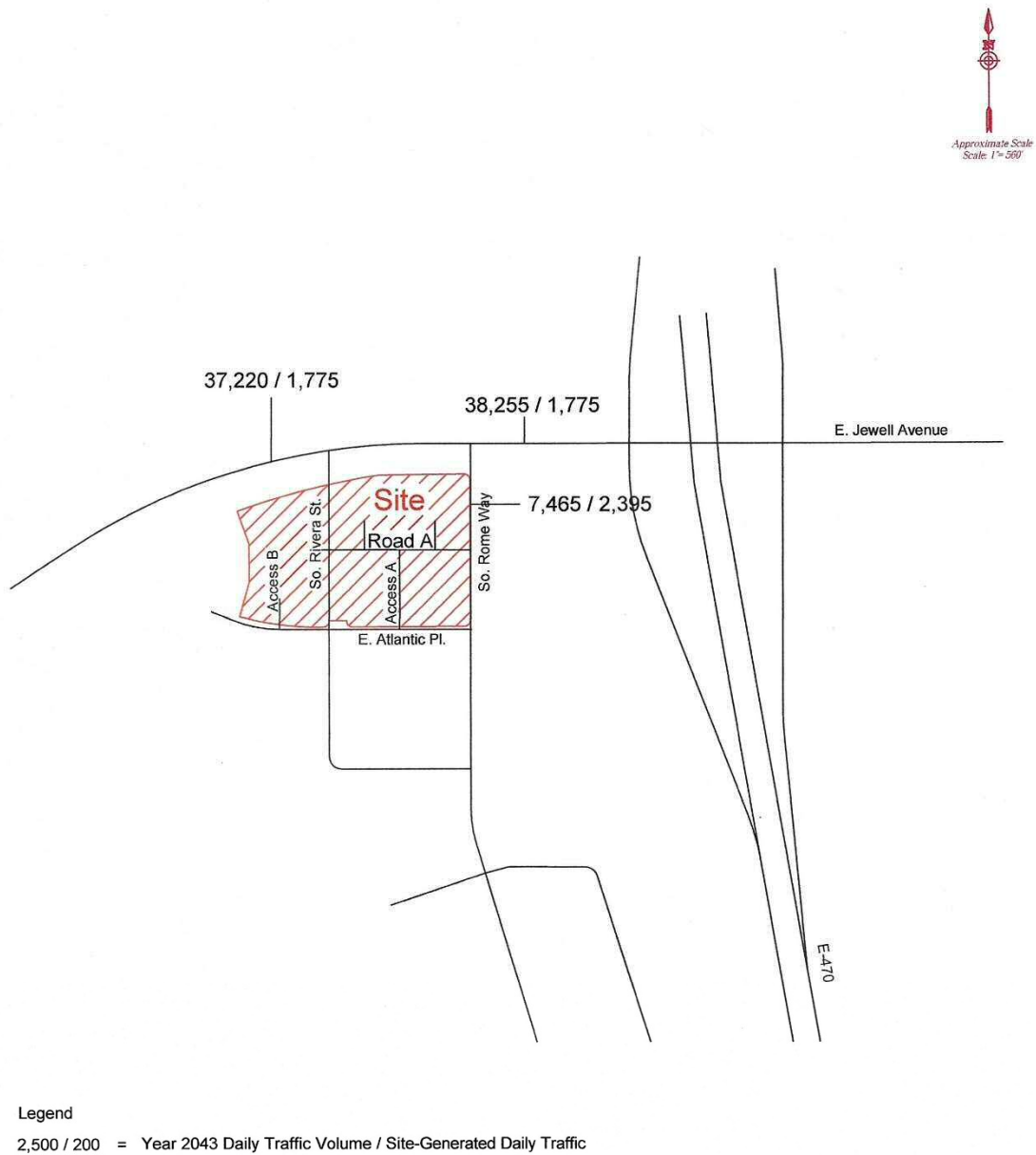
#### Year 2050 Daily Traffic Impacts

Figure 15 depicts the daily traffic impacts in the Year 2050 from the proposed commercial project. Site-generated traffic accounts for less than 5.0 percent of the traffic on East Jewell Avenue on west side of South Rivera Street and east of South Rome Way and 32 percent of the traffic on South Rome Way north of Road A.

#### Year 2050 Queue Length Analysis

A queue length analysis was performed for the two intersections along East Jewell Avenue (South Rivera Street and South Rome Way ), two intersections along South Rome Way (Road A and East Atlantic Place), three intersections along South Rivera Street (Road A and East Atlantic Place), and two intersection along East Atlantic Place (Access A and Access B) for the Year 2050 AM and PM peak-hour total traffic

Figure 15 – Year 2050 Daily Traffic Impacts



conditions. The software program *SimTraffic* was used to estimate these queue lengths. The queue lengths being reported for this analysis represent an average of five simulations with each simulation lasting 60 minutes (See Figure 16). None of the queue lengths at these eight intersections are considered to be excessive.

### Traffic Signal Warrant Analysis

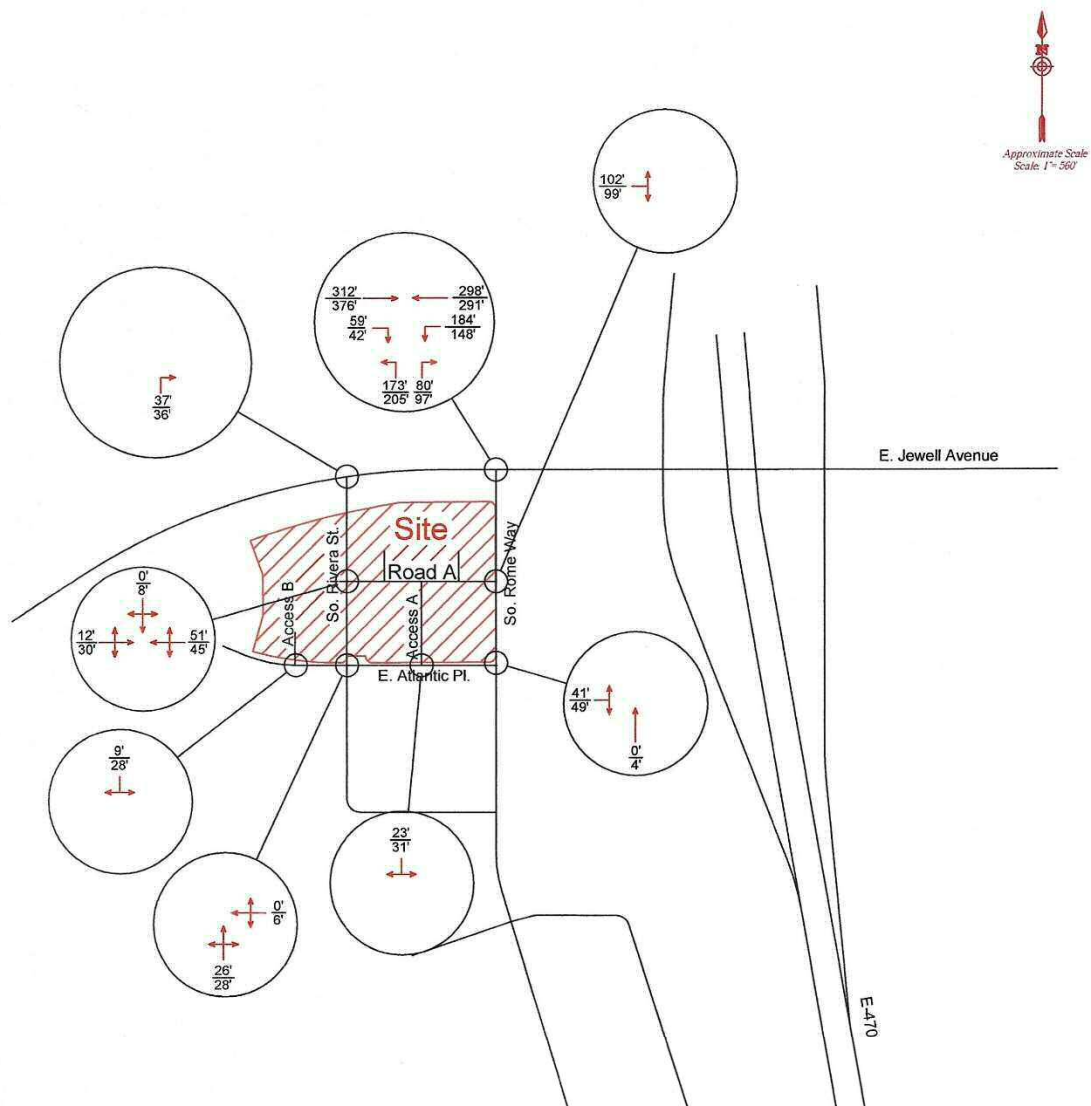
The Pioneer Business Park traffic impact analysis study was done for the Year 2023 with only the background traffic and the traffic from the proposed industrial development. When only the Year 2023 background traffic volumes are used, this intersection does not meet either the MUTCD Four Hour Traffic Signal Warrant or the MUTCD Eight-Hour Traffic Signal Warrant. When the traffic volumes for the Year 2023 total traffic condition are used, this intersection appears to meet the MUTCD Four-Hour Traffic Signal Warrant (see Table 6 from the Pioneer Business Park traffic impact analysis study – see Appendix D) and MUTCD Eight-Hour Traffic Signal Warrant (see Table 7 from the Pioneer Business Park traffic impact study – see Appendix C) for the Year 2023. For the Eight-Hour Traffic Signal Warrant, this warrant is only met for the 56% condition which is not normally used to warrant the installation of a traffic signal.

The installation of this traffic signal should only be undertaken after completing a traffic signal warrant study using observed hourly traffic counts.

### Pedestrian Safety

Some of the sites in the proposed commercial project could attract pedestrian traffic, namely the fast-food and gas station with convenience market. There is a lack of sidewalks along either side of East Jewell Avenue east of South Genoa Street. If pedestrian is going to visit the proposed Landing at Jewell project, they will more than likely use East Jewell Avenue. The length of area along East Jewell Avenue that does not have a sidewalk is approximately 7,450 feet. When a sidewalk is provided, it should only be on the south side of East Jewell Avenue. There is a sidewalk on the west side of South Rome Way from East Jewell Avenue to the proposed Pioneer Business Park site. As a part of the development of the Landing at Jewell project, a sidewalk should be provided on the east side of South Rome Way for the full length of the site. There is a pedestrian / bicycle path located on the west side of E-470. A connection should be

Figure 16 – Year 2045 Queue Length Analysis



15' = AM Peak-Hour Queue Length, in feet  
15' = PM Peak-Hour Queue Length, in feet

provided from this path to the proposed Landing at Jewell project on the south side of East Jewell Avenue. This connection is not located on any of the property owned by the owner of the Landing at Jewell site.

### Auxiliary Traffic Lane Analysis

An analysis was completed for the need for auxiliary traffic lanes for the intersection of East Jewell Avenue and South Rome Way for the Year 2030 using the State Highway Access Code. The assumption has been made that East Jewell Avenue has an access category designation of NR-A, non-rural principal highway. South Rome Way has an access category designation of NR-C, non-rural arterial. This is the lowest access category that the State Highway Access Code has for an urban roadway.

Left-Turn Deceleration Turn Lane (East Jewell Avenue) – The State Highway Access Code requires a separate left-turn deceleration turn lane if the peak-hour turning movement is greater than 10 vehicles per hour. This threshold is met for the westbound left-turn traffic movement when the site is fully developed. Therefore, a left-turn deceleration turn lane should be provided for westbound East Jewell Avenue. The recommended length of this westbound left-turn deceleration turn lane should be 580 feet which consists of 435 feet for deceleration and 145 feet of storage.

Right-Turn Deceleration Turn Lane (East Jewell Avenue) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 25 vehicles per hour. This threshold is met for the eastbound right-turn traffic movement when the site is fully developed. Therefore, an eastbound right-turn deceleration turn lane should be provided for eastbound East Jewell Avenue. The length of this right-turn deceleration lane should be 435 feet, based on a posted speed limit of 45 mph. Once East Jewell Avenue is widened to six lanes, this dedicated eastbound right-turn deceleration lane could be converted to a shared through/right-turn lane.



Right-Turn Deceleration Turn Lane (South Rome Way) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 50 vehicles per hour. This threshold is met for the northbound right-turn traffic movement when the site is fully developed. Therefore, a right-turn deceleration turn lane should be provided for northbound South Rome Way. The length of this right-turn deceleration lane should be 250 feet, based on a posted speed limit of 30 mph.

An analysis was completed for the need for auxiliary traffic lanes for the intersection of East Jewell Avenue and South Rivera Street for the Year 2030 using the State Highway Access Code. The assumption has been made that East Jewell Avenue has an access category designation of NR-A, non-rural principal highway.

Right-Turn Deceleration Turn Lane (East Jewell Avenue) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 25 vehicles per hour. This threshold is met for the eastbound right-turn traffic movement when the site is fully developed. The length of this right-turn deceleration lane should be 435 feet, based on a posted speed limit of 45 mph. Once East Jewell Avenue is widened to six lanes, this dedicated eastbound right-turn deceleration lane could be converted to a shared through/right-turn lane.

An analysis was completed for the need for auxiliary traffic lanes for the intersection of South Rome Way and Road A for the Year 2030 using the State Highway Access Code. The assumption has been made that South Rome Way has an access category designation of NR-C, non-rural arterial highway. This is the lowest access category that the State Highway Access Code has for an urban roadway.

Right-Turn Deceleration Turn Lane – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 50 vehicles per hour. This threshold is met for the southbound right-turn traffic movement when the site is fully developed. The length of this right-turn deceleration lane should be 250 feet, based on a posted speed limit of 30 mph.

A reevaluation of the auxiliary traffic lane analysis was completed for the Year 2050. Only one change is needed to what is being recommended in the Year 2030. The length of the westbound left-turn deceleration lane at East Jewell Avenue and South Rome Way will need to be lengthen by 40 feet to 620 feet.

Table 7 depicts the results of the auxiliary traffic lane analysis. This table shows the length of each auxiliary traffic lane for the Years 2030 and 2050.

Table 7 -Auxiliary Traffic Lane Analysis

Intersection	Analysis Year	
	2030	2050
East Jewell Avenue & South Rome Way		
Westbound Left-Turn Lane	580 feet	620 feet
Eastbound Right-Turn Lane	435 feet	435 feet
Northbound Right-Turn Lane	250 feet	250 feet
East Jewell Avenue & South Rivera Street		
Eastbound Right-Turn Lane	435 feet	435 feet
South Rome Way & Road A		
Southbound Right-Turn Lane	250 feet	250 feet

Based on using the State Highway Access Code thresholds.

If the storage lengths are based on the estimates in the State Highway Code (Table 4-8), there is no change the length of the westbound left-turn deceleration lane at East Jewell Avenue and South Rome Way.

### Traffic Calming

The City of Aurora requested that a discussion be provided for possible traffic calming strategies. Since there are no residential areas located along South Rome Way, no traffic calming strategies need to be implemented. South Rome Way already has a posted speed limit of 30 mph.

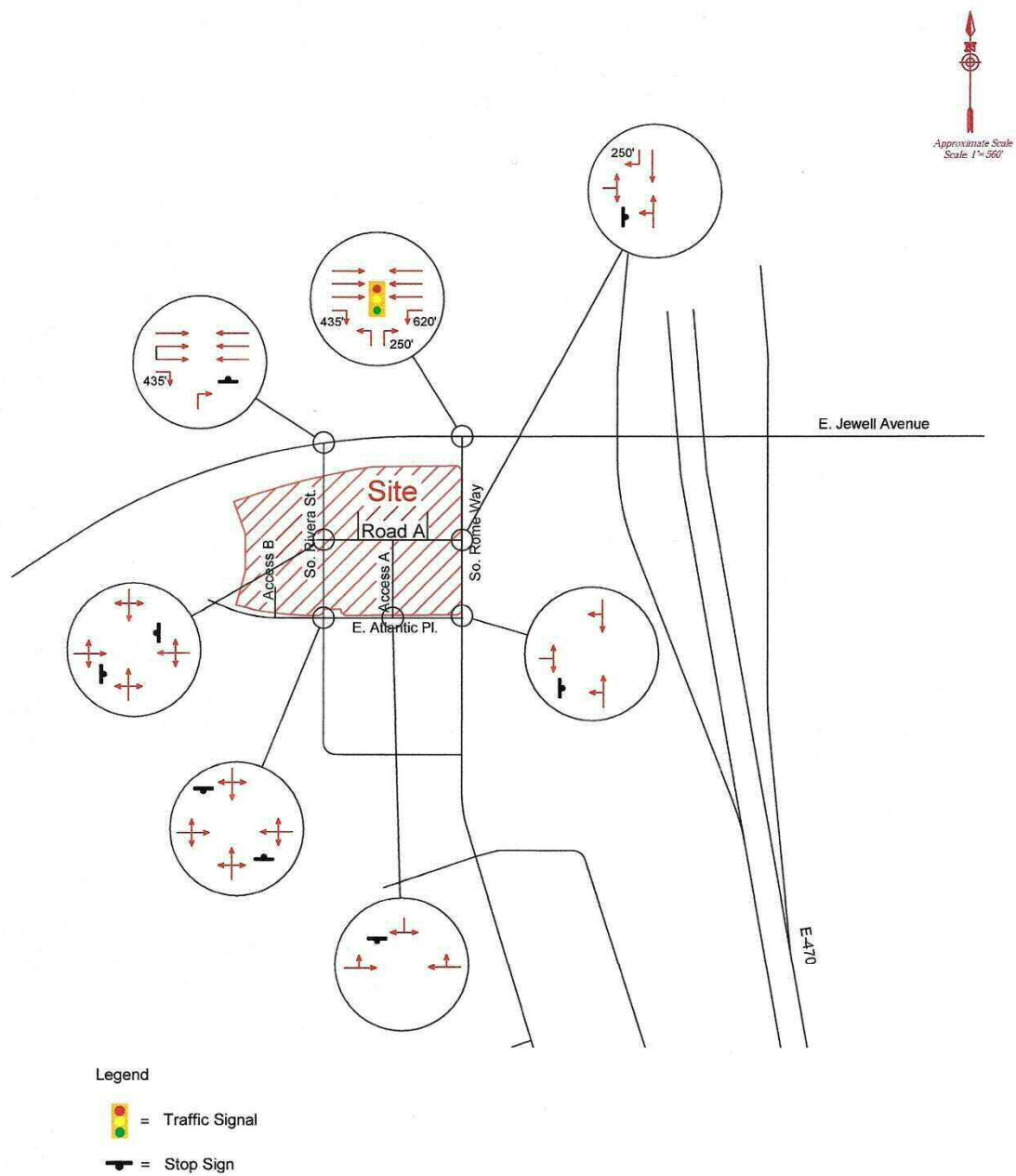
## Section G - Recommendations/Conclusions

---

Figure 17 contains the recommended traffic control and lane geometry for the eight intersections being analyzed in this report. Several improvements are identified in Figure 17. They are:

- Installation of the traffic signal at East Jewell Avenue and South Rome Way. The installation of this traffic signal should only be undertaken after completing a traffic signal warrant study based on observed traffic counts.
- A westbound left-turn deceleration lane should be provided at East Jewell Avenue and South Rome Way. The length of this left-turn deceleration lane should be 620 feet. There is adequate room between South Rome Way and the southbound E-470 ramp intersection to accommodate this turn lane.
- An eastbound right-turn deceleration lane should be provided at East Jewell Avenue and South Rome Way. The length of this left-turn deceleration lane should be 435 feet.
- The northbound approach at East Jewell Avenue and South Rome Way should have separate left-turn and right-turn lanes. The length of the right-turn deceleration lane should be 250 feet.
- An eastbound right-turn deceleration lane should be provided at East Jewell Avenue and South Rivera Street. The length of this left-turn deceleration lane should be 435 feet.
- A southbound right-turn deceleration lane should be provided at South Rome Way and Road A. The length of this right-turn deceleration lane should be 250 feet.

Figure 17 – Recommended Traffic Control and Lane Geometry



Appendix A  
Existing Traffic Counts



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

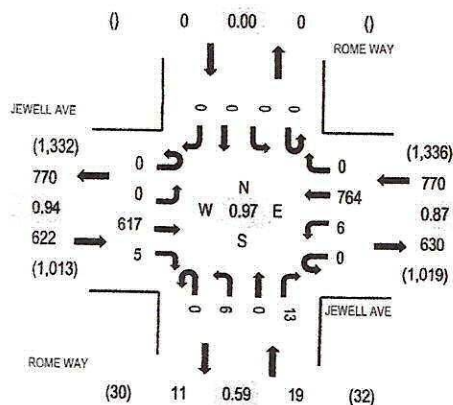
Location: 1 ROME WAY & JEWELL AVE AM

Date: Thursday, October 7, 2021

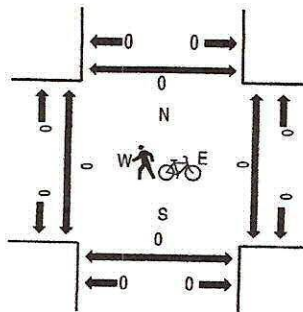
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	JEWELL AVE Eastbound				JEWELL AVE Westbound				ROME WAY Northbound				ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	165	0	0	0	164	0	0	1	0	7	0	0	0	0	337	1,411	0	0	0	0
7:15 AM	0	0	160	1	0	5	185	0	0	1	0	3	0	0	0	0	355	1,333	0	0	0	0
7:30 AM	0	0	162	1	0	0	195	0	0	1	0	3	0	0	0	0	362	1,258	0	0	0	0
7:45 AM	0	0	130	3	0	1	220	0	0	3	0	0	0	0	0	0	357	1,126	0	0	0	0
8:00 AM	0	0	94	2	0	3	156	0	0	3	0	1	0	0	0	0	259	970	0	0	0	0
8:15 AM	0	0	119	1	0	0	158	0	0	1	0	1	0	0	0	0	280		0	0	0	0
8:30 AM	0	0	88	4	0	3	130	0	0	2	0	3	0	0	0	0	230		0	0	0	0
8:45 AM	0	0	82	1	0	5	111	0	0	1	0	1	0	0	0	0	201		0	0	0	0
Count Total	0	0	1,000	13	0	17	1,319	0	0	13	0	19	0	0	0	0	2,381		0	0	0	0
Peak Hour	0	0	617	5	0	6	764	0	0	6	0	13	0	0	0	0	1,411		0	0	0	0





ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

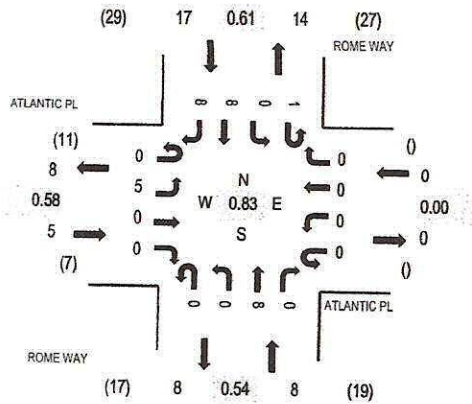
Location: 2 ROME WAY & ATLANTIC PL AM

Date: Thursday, October 7, 2021

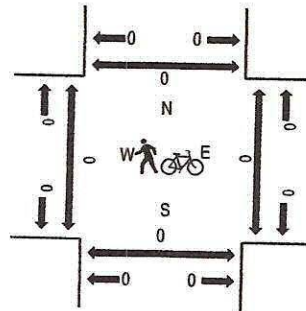
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	ATLANTIC PL Eastbound				ATLANTIC PL Westbound				ROME WAY Northbound				ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	27	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	4	9	30	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	24	0	0	0	0
7:45 AM	0	2	0	0	0	0	0	0	0	0	1	0	1	0	1	2	7	29	0	0	0	0
8:00 AM	0	3	0	0	0	0	0	0	0	0	1	0	0	0	3	2	9	28	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3		0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	3	0	0	0	4	2	10		0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6		0	0	0	0
Count Total	0	7	0	0	0	0	0	0	0	0	19	0	1	0	17	11	55		0	0	0	0
Peak Hour	0	5	0	0	0	0	0	0	0	0	8	0	1	0	8	8	30		0	0	0	0



(303) 216-2439  
www.alltrafficdata.net

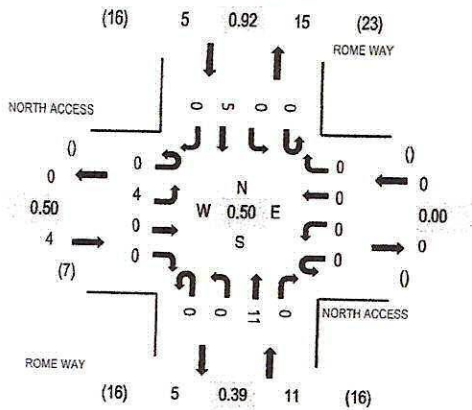
Location: 1 ROME WAY & NORTH ACCESS AM

Date: Tuesday, October 26, 2021

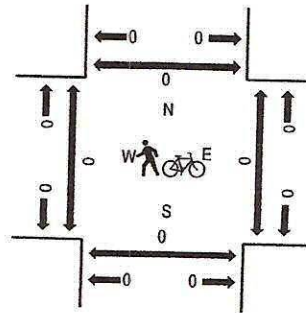
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	NORTH ACCESS Eastbound				NORTH ACCESS Westbound				ROME WAY Northbound				ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	2	0	0	0	0	0	0	0	0	7	0	0	0	1	0	10	20	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	13	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	0	5	15	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	17	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	17	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3	0	3	19	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	0	5		0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3	0	7		0	0	0	0
Count Total	0	7	0	0	0	0	0	0	0	0	16	0	0	0	2	0	4		0	0	0	0
Peak Hour	0	4	0	0	0	0	0	0	0	0	11	0	0	0	5	0	39		0	0	0	0



(303) 216-2439  
www.alltrafficdata.net

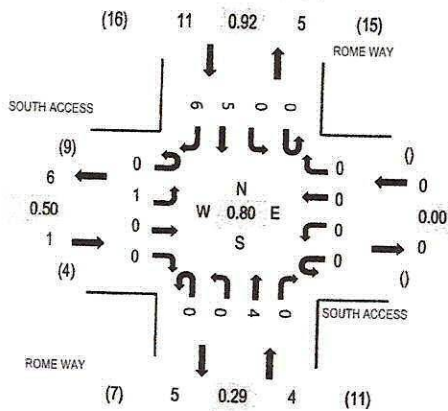
Location: 2 ROME WAY & SOUTH ACCESS AM

Date: Tuesday, October 26, 2021

Peak Hour: 08:00 AM - 09:00 AM

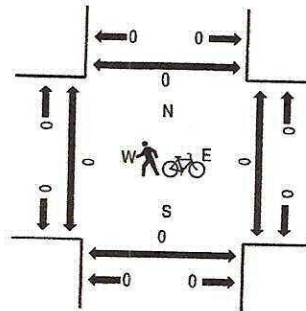
Peak 15-Minutes: 08:15 AM - 08:30 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	SOUTH ACCESS Eastbound				SOUTH ACCESS Westbound				ROME WAY Northbound				ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	7	15	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	11	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	4	14	0	0	0	0
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	3	3	16	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5		0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	3		0	0	0	0
Count Total	0	4	0	0	0	0	0	0	0	0	11	0	0	0	7	9	31		0	0	0	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	4	0	0	0	5	6	16		0	0	0	0





(303) 216-2439  
www.alltrafficdata.net

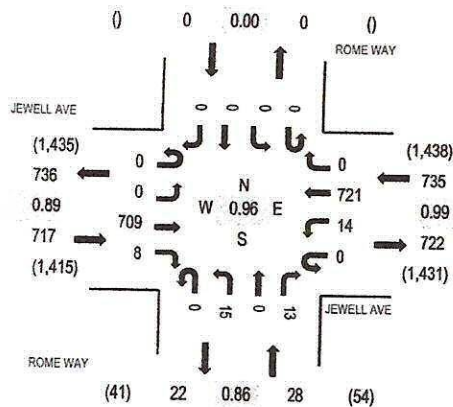
Location: 1 ROME WAY & JEWELL AVE PM

Date: Thursday, October 7, 2021

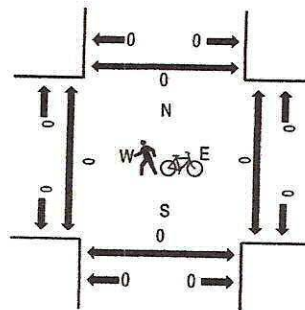
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	JEWELL AVE Eastbound				JEWELL AVE Westbound				ROME WAY Northbound				ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	166	2	0	4	181	0	0	4	0	5	0	0	0	0	362	1,458	0	0	0	0
4:15 PM	0	0	203	2	0	1	157	0	0	0	0	3	0	0	0	0	366	1,443	0	0	0	0
4:30 PM	0	0	158	1	0	5	175	0	0	3	0	4	0	0	0	0	346	1,452	0	0	0	0
4:45 PM	0	0	182	2	0	4	182	0	0	1	0	3	0	0	0	0	384	1,480	0	0	0	0
5:00 PM	0	0	150	2	0	2	184	0	0	7	0	2	0	0	0	0	347	1,449	0	0	0	0
5:15 PM	0	0	182	4	0	6	177	0	0	3	0	3	0	0	0	0	375		0	0	0	0
5:30 PM	0	0	185	0	0	2	178	0	0	4	0	5	0	0	0	0	374		0	0	0	0
5:45 PM	0	0	166	0	0	4	176	0	0	3	0	4	0	0	0	0	353		0	0	0	0
Count Total	0	0	1,402	13	0	28	1,410	0	0	25	0	29	0	0	0	0	2,907		0	0	0	0
Peak Hour	0	0	709	8	0	14	721	0	0	15	0	13	0	0	0	0	1,480		0	0	0	0



(303) 216-2439  
www.alltrafficdata.net

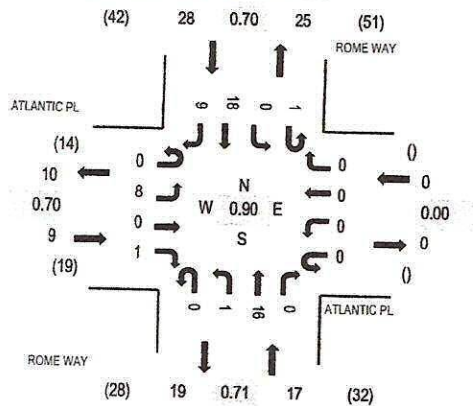
Location: 2 ROME WAY & ATLANTIC PL PM

Date: Thursday, October 7, 2021

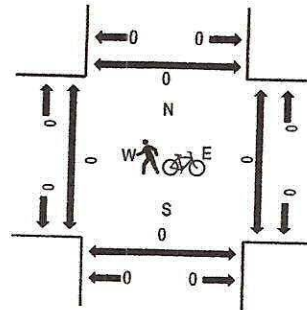
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	ATLANTIC PL Eastbound				ATLANTIC PL Westbound				ROME WAY Northbound				ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	3	0	0	0	0	0	0	0	0	3	0	1	0	3	1	11	44	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	2	6	45	0	0	0	0
4:30 PM	0	1	0	1	0	0	0	0	0	0	5	0	0	0	6	2	15	54	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	2	12	50	0	0	0	0
5:00 PM	0	5	0	0	0	0	0	0	0	1	2	0	0	0	2	2	12	49	0	0	0	0
5:15 PM	0	2	0	0	0	0	0	0	0	0	3	0	1	0	6	3	15		0	0	0	0
5:30 PM	0	5	0	0	0	0	0	0	0	0	4	0	0	0	1	1	11		0	0	0	0
5:45 PM	0	2	0	0	0	0	0	0	0	0	5	0	0	0	4	0	11		0	0	0	0
Count Total	0	18	0	1	0	0	0	0	0	1	31	0	2	0	27	13	93		0	0	0	0
Peak Hour	0	8	0	1	0	0	0	0	0	1	16	0	1	0	18	9	54		0	0	0	0



(303) 216-2439  
www.alltrafficdata.net

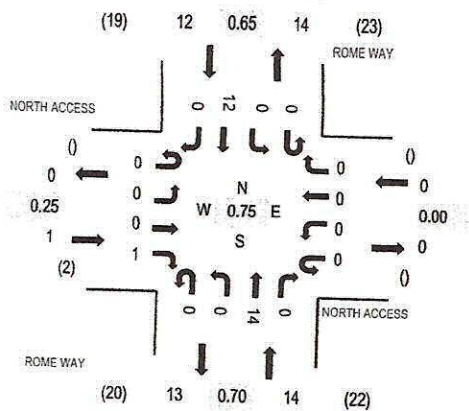
Location: 1 ROME WAY & NORTH ACCESS PM

Date: Tuesday, October 26, 2021

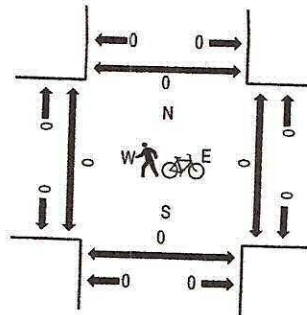
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	NORTH ACCESS Eastbound				NORTH ACCESS Westbound				ROME WAY Northbound			ROME WAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	16	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	5	19	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4	20	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	5	25	0	0	0	0
5:00 PM	0	0	0	1	0	0	0	0	0	0	3	0	0	1	0	5	27	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0	6		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	4	0	9		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	2	0	7		0	0	0	0
Count Total	0	1	0	1	0	0	0	0	0	0	22	0	0	2	0	7		0	0	0	0
Peak Hour	0	0	0	1	0	0	0	0	0	0	14	0	0	0	12	0	27	0	0	0	0







**All Traffic Data Services**  
www.alltrafficdata.net

Page 1

Date Start: 07-Oct-21  
Site Code: 5  
Station ID: 5  
JEWELL AVE E.O. ROME WAY

EB														
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	29	1	0	0	0	0	0	0	0	0	0	0	30
01:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
02:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
03:00	0	10	2	0	1	0	0	0	0	0	0	0	0	13
04:00	1	64	13	0	0	0	0	0	1	0	0	0	0	79
05:00	3	154	38	0	2	0	0	1	2	0	0	0	0	200
06:00	2	229	45	0	4	0	0	0	1	0	0	0	0	281
07:00	1	491	64	5	7	6	0	1	1	0	0	0	0	576
08:00	0	368	63	2	8	4	0	2	3	0	0	0	0	450
09:00	2	218	48	0	8	5	0	1	2	0	0	0	0	284
10:00	3	197	48	0	7	3	0	1	0	0	0	0	0	259
11:00	0	238	42	0	6	5	0	1	1	0	0	0	0	293
12 PM	0	273	45	1	7	2	0	3	1	0	0	0	0	332
13:00	1	271	48	2	4	4	0	1	0	0	0	0	0	331
14:00	3	392	70	1	7	4	0	0	1	0	0	0	0	478
15:00	4	429	87	2	7	1	0	1	2	0	0	0	0	533
16:00	1	602	91	1	7	4	0	2	3	1	0	0	0	712
17:00	1	620	111	1	5	1	0	2	2	0	0	0	0	743
18:00	2	439	84	1	8	1	0	5	1	0	0	0	0	541
19:00	1	245	50	0	5	1	0	1	0	0	0	0	0	303
20:00	1	172	29	0	2	1	0	1	0	0	0	0	0	206
21:00	0	105	14	0	0	0	0	0	0	0	0	0	0	119
22:00	1	77	10	0	0	0	0	0	0	0	0	0	0	88
23:00	0	59	6	0	2	0	0	0	0	0	0	0	0	67
Day Total	27	5696	1012	16	97	42	0	23	21	1	0	0	0	6935
Percent	0.4%	82.1%	14.6%	0.2%	1.4%	0.6%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	07:00	07:00	07:00	08:00	07:00		08:00	08:00					07:00
Vol.	3	491	64	5	8	6		2	3					576
PM Peak	15:00	17:00	17:00	13:00	18:00	13:00		18:00	16:00	16:00				17:00
Vol.	4	620	111	2	8	4		5	3	1				743
Grand Total	27	5696	1012	16	97	42	0	23	21	1	0	0	0	6935
Percent	0.4%	82.1%	14.6%	0.2%	1.4%	0.6%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	

**All Traffic Data Services**  
www.alltrafficdata.net

Page 2

Date Start: 07-Oct-21

Site Code: 5

Station ID: 5

JEWELL AVE E.O. ROME WAY

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	41	3	0	0	1	0	0	0	0	0	0	0	45
01:00	0	22	2	0	0	0	0	0	0	0	0	0	0	24
02:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
03:00	0	14	7	0	1	0	0	0	0	0	0	0	0	22
04:00	1	33	7	0	2	1	0	0	0	0	0	0	0	44
05:00	1	105	24	1	2	1	0	0	0	0	0	0	0	134
06:00	2	289	69	0	1	2	1	0	0	0	0	0	0	364
07:00	6	620	89	1	4	4	0	0	4	0	0	0	0	728
08:00	0	460	103	1	18	1	0	2	1	0	0	0	0	586
09:00	0	219	50	2	7	6	0	1	2	0	0	0	0	287
10:00	2	240	40	0	5	4	0	3	1	0	0	0	0	295
11:00	2	244	45	0	6	1	0	1	1	0	0	0	0	300
12 PM	1	269	51	1	6	4	0	3	1	0	0	0	0	336
13:00	4	302	50	0	4	5	0	0	0	0	0	0	0	365
14:00	2	401	70	1	3	3	0	1	0	0	0	0	0	481
15:00	4	461	76	0	3	4	0	1	0	0	0	0	0	549
16:00	3	656	85	0	7	5	1	1	1	0	0	0	0	759
17:00	3	586	90	0	1	1	0	2	1	0	0	0	0	684
18:00	2	378	56	0	5	1	1	2	1	0	0	0	0	446
19:00	1	328	30	0	1	0	0	1	0	1	0	0	0	362
20:00	0	225	25	0	3	0	0	0	0	0	0	0	0	253
21:00	0	142	16	0	1	1	0	0	0	0	0	0	0	160
22:00	1	133	10	0	0	0	1	0	0	0	0	0	0	145
23:00	1	60	6	0	0	0	0	0	0	0	0	0	0	67
Day Total	36	6239	1004	7	80	45	4	18	13	1	0	0	0	7447
Percent	0.5%	83.8%	13.5%	0.1%	1.1%	0.6%	0.1%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	08:00	09:00	08:00	09:00	06:00	10:00	07:00					07:00
Vol.	6	620	103	2	18	6	1	3	4					728
PM Peak	13:00	16:00	17:00	12:00	16:00	13:00	16:00	12:00	12:00	19:00				16:00
Vol.	4	656	90	1	7	5	1	3	1	1				759
Grand Total	36	6239	1004	7	80	45	4	18	13	1	0	0	0	7447
Percent	0.5%	83.8%	13.5%	0.1%	1.1%	0.6%	0.1%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	

**All Traffic Data Services**  
www.alltrafficdata.net

Page 1

Date Start: 07-Oct-21

Site Code: 3

Station ID: 3

JEWELL AVE W.O. ROME WAY

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	37	6	0	0	0	0	0	0	0	0	0	0	43
01:00	0	20	1	0	0	0	0	0	0	0	0	0	0	21
02:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
03:00	0	23	1	0	1	0	0	0	0	0	0	0	0	25
04:00	0	34	9	0	2	0	0	0	0	0	0	0	0	45
05:00	1	100	31	1	8	0	0	0	0	0	0	0	0	141
06:00	1	301	75	1	19	1	0	1	0	0	0	0	0	399
07:00	5	485	94	1	15	1	1	2	2	0	0	0	0	606
08:00	2	333	67	2	8	0	0	1	0	0	0	0	0	413
09:00	0	209	53	5	12	1	0	2	0	0	0	0	0	282
10:00	0	223	43	1	10	0	0	3	0	0	0	0	0	280
11:00	0	242	47	1	4	0	0	2	0	0	0	0	0	296
12 PM	1	255	45	1	14	0	0	2	0	0	0	0	0	318
13:00	0	275	64	1	11	0	0	1	0	0	0	0	0	352
14:00	1	384	79	1	15	0	0	3	0	0	0	0	0	483
15:00	1	487	90	1	16	0	0	4	0	0	0	0	0	599
16:00	1	595	118	3	18	0	0	5	0	0	0	0	0	740
17:00	6	560	105	1	4	0	0	2	0	0	0	0	0	678
18:00	2	382	60	0	10	0	0	2	0	0	0	0	0	456
19:00	0	320	40	0	0	0	0	0	0	0	0	0	0	360
20:00	0	210	35	0	6	0	0	0	0	0	0	0	0	251
21:00	1	136	23	1	1	2	0	0	3	0	0	0	0	167
22:00	1	123	15	0	1	4	0	0	3	0	0	0	0	147
23:00	1	57	7	0	1	3	0	0	0	0	0	0	0	69
Day Total	24	5802	1108	21	176	12	1	30	8	0	0	0	0	7182
Percent	0.3%	80.8%	15.4%	0.3%	2.5%	0.2%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	09:00	06:00	06:00	07:00	10:00	07:00	0.0%	0.0%	0.0%	0.0%	07:00
Vol.	5	485	94	5	19	1	1	3	2					606
PM Peak	17:00	16:00	16:00	16:00	16:00	22:00		16:00	21:00					16:00
Vol.	6	595	118	3	18	4		5	3					740
Grand Total	24	5802	1108	21	176	12	1	30	8	0	0	0	0	7182
Percent	0.3%	80.8%	15.4%	0.3%	2.5%	0.2%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	

**All Traffic Data Services**  
www.alltrafficdata.net

Page 2

Date Start: 07-Oct-21  
Site Code: 3  
Station ID: 3  
JEWELL AVE W.O. ROME WAY

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	33	1	0	0	0	0	0	0	0	0	0	0	34
01:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
02:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
03:00	0	16	1	0	0	0	0	0	0	0	0	0	0	17
04:00	3	84	17	0	0	1	0	0	0	0	0	0	0	105
05:00	2	194	48	0	3	0	0	1	2	0	0	0	0	250
06:00	3	271	54	0	2	1	0	0	0	0	0	0	0	331
07:00	3	634	80	3	8	5	1	1	1	0	0	0	0	736
08:00	3	498	79	0	9	3	0	2	3	0	0	0	0	597
09:00	0	297	59	0	6	6	0	1	2	0	0	0	0	371
10:00	3	272	45	0	2	2	0	1	0	0	0	0	0	325
11:00	1	320	55	0	4	5	0	0	1	0	0	0	0	386
12 PM	4	303	44	0	5	1	0	1	1	0	0	0	0	359
13:00	0	307	39	0	5	2	0	2	0	0	0	0	0	355
14:00	4	417	66	0	4	5	0	0	0	0	0	0	0	496
15:00	6	532	77	0	8	1	0	4	2	0	0	0	0	630
16:00	4	627	79	1	5	4	0	1	1	0	0	0	0	722
17:00	10	592	117	0	1	3	0	3	2	0	0	0	0	728
18:00	4	471	86	0	4	1	0	2	1	0	0	0	0	569
19:00	2	246	51	0	2	0	0	0	0	0	0	0	0	301
20:00	0	169	30	0	3	0	0	1	0	0	0	0	0	203
21:00	2	110	15	0	0	1	0	0	3	0	0	0	0	131
22:00	2	74	10	0	0	4	0	0	2	0	0	0	0	92
23:00	1	60	5	0	1	3	0	0	0	0	0	0	0	70
Day Total	57	6545	1061	4	73	48	1	20	21	0	0	0	0	7830
Percent	0.7%	83.6%	13.6%	0.1%	0.9%	0.6%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	04:00	07:00	07:00	07:00	08:00	09:00	07:00	08:00	08:00					07:00
Vol.	3	634	80	3	9	6	1	2	3					736
PM Peak	17:00	16:00	17:00	16:00	15:00	14:00		15:00	21:00					17:00
Vol.	10	627	117	1	8	5		4	3					728
Grand Total	57	6545	1061	4	73	48	1	20	21	0	0	0	0	7830
Percent	0.7%	83.6%	13.6%	0.1%	0.9%	0.6%	0.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	



All Traffic Data Services  
www.alltrafficdata.net

Page 1

Date Start: 07-Oct-21  
Site Code: 4  
Station ID: 4  
ROME WAY S.O. JEWELL AVE

Station ID: 4															
ROME WAY S.O. JEWELL AVE															
NB	Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
	10/07/21	0	3	0	0	1	0	0	0	0	0	0	0	0	4
	01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
	02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	03:00	0	3	2	0	1	0	0	0	0	0	0	0	0	6
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	06:00	0	4	9	0	1	1	0	0	0	0	0	0	0	1
	07:00	0	11	8	2	0	0	0	1	1	1	0	0	0	16
	08:00	0	5	5	0	2	0	0	1	1	1	0	0	0	24
	09:00	0	9	11	0	1	0	0	2	0	0	0	0	0	14
	10:00	0	14	9	0	1	0	0	0	0	0	0	0	0	21
	11:00	0	8	11	1	2	1	0	1	0	0	0	0	0	25
	12 PM	1	11	6	1	0	0	0	0	0	0	0	0	0	23
	13:00	0	10	1	1	0	0	0	1	0	0	0	0	0	20
	14:00	0	10	5	0	4	0	0	1	0	0	0	0	0	13
	15:00	0	18	7	0	6	0	0	1	0	0	0	0	0	20
	16:00	0	15	9	0	1	0	0	0	0	0	0	0	0	32
	17:00	1	22	9	0	0	0	0	0	0	0	0	0	0	25
	18:00	0	21	7	0	2	0	0	1	0	0	0	0	0	33
	19:00	0	15	4	0	1	0	0	0	0	0	0	0	0	30
	20:00	0	11	4	0	0	0	0	0	0	0	0	0	0	20
	21:00	1	12	9	2	1	2	0	0	0	0	0	0	0	15
	22:00	1	13	8	2	0	0	0	0	0	0	0	0	0	27
	23:00	0	7	2	0	0	3	0	0	0	0	0	0	0	25
	Day Total	4	224	127	9	24	8	0	10	2	1	0	0	0	12
	Percent	1.0%	54.8%	31.1%	2.2%	5.9%	2.0%	0.0%	2.4%	0.5%	0.2%	0.0%	0.0%	0.0%	409
	AM Peak Vol.	10:00	09:00	07:00	08:00	05:00		08:00	07:00	07:00					10:00
	PM Peak Vol.	12:00	17:00	16:00	21:00	15:00	23:00		12:00	22:00					25
		1	22	9	2	6	3		1	1					17:00
	Grand Total	4	224	127	9	24	8	0	10	2	1	0	0	0	33
	Percent	1.0%	54.8%	31.1%	2.2%	5.9%	2.0%	0.0%	2.4%	0.5%	0.2%	0.0%	0.0%	0.0%	409

All Traffic Data Services  
www.alltrafficdata.net

Page 2

Date Start: 07-Oct-21

Site Code: 4

Station ID: 4

ROME WAY S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	1	2	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	3	0	0	0	0	0	0	0	0	0	0	0	4
06:00	0	33	4	0	1	0	0	0	0	0	0	0	0	38
07:00	0	9	4	0	1	0	0	0	0	0	0	0	0	14
08:00	0	8	7	0	1	0	0	0	0	0	0	0	0	16
09:00	0	12	9	0	0	0	0	0	0	0	0	0	0	21
10:00	0	17	9	0	1	1	0	0	0	0	0	0	0	28
11:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
12 PM	0	17	3	0	0	0	0	0	0	0	0	0	0	20
13:00	0	12	3	0	0	1	0	0	0	0	0	0	0	16
14:00	0	13	2	0	1	1	0	0	1	0	0	0	0	18
15:00	2	10	5	0	0	0	0	0	0	1	0	0	0	18
16:00	0	14	9	0	0	1	0	0	0	1	0	0	0	25
17:00	0	13	4	0	2	1	0	0	0	0	0	0	0	20
18:00	0	9	7	0	1	0	0	0	0	0	0	0	0	17
19:00	0	10	3	0	2	0	0	0	0	0	0	0	0	15
20:00	0	7	5	0	1	1	0	0	0	0	0	0	0	14
21:00	2	8	2	0	0	2	0	0	2	0	0	0	0	16
22:00	1	4	0	0	0	4	0	0	3	0	0	0	0	12
23:00	0	6	1	0	0	4	0	0	0	0	0	0	0	11
Day Total	7	220	79	0	11	16	0	0	6	2	0	0	0	341
Percent	2.1%	64.5%	23.2%	0.0%	3.2%	4.7%	0.0%	0.0%	1.8%	0.6%	0.0%	0.0%	0.0%	
AM Peak	00:00	06:00	09:00		06:00	10:00								06:00
Vol.	1	33	9		1	1								38
PM Peak	15:00	12:00	16:00		17:00	22:00			22:00	15:00				16:00
Vol.	2	17	9		2	4			3	1				25
Grand Total	7	220	79	0	11	16	0	0	6	2	0	0	0	341
Percent	2.1%	64.5%	23.2%	0.0%	3.2%	4.7%	0.0%	0.0%	1.8%	0.6%	0.0%	0.0%	0.0%	

Appendix B  
Methodology for Estimating Peak-Hour Traffic and  
Spreadsheet for Estimating Future Peak-Hour Traffic Volumes

1.0193 Annual Growth Factor

		CDOT Counts
2008	15,586	15,586
2009	15,887	
2010	16,193	
2011	16,506	17,066
2012	16,825	
2013	17,149	
2014	17,480	
2015	17,818	16,361
2016	18,161	
2017	18,512	
2018	18,869	18,869
2019	19,233	
2020	19,605	
2021	19,983	

19,180

Actual 2021 Traffic Count 19,004

Estimated 2021 Traffic Count 19,983

1.052 Pandemic Adjustment Factor

C:\Desktop\ruble\DB Enterprise\2021\210300\SH 30 Traffic Counts.xlsx



SH 30 south of East Jewell Avenue

08/12/2020	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	48	46	52	64	173	446	755	842	687	535	531	557	597	512	644	697	749	782	684	468	358	231	137	65	10,761
S	76	45	26	48	93	220	588	718	580	588	567	582	581	568	650	827	905	893	697	440	327	198	136	121	10,474
05/25/2017	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	48	54	56	90	171	621	1027	1195	789	576	457	531	464	487	512	765	776	864	730	512	389	281	204	106	11,705
S	68	75	52	51	69	235	634	784	654	508	476	517	521	562	661	977	919	911	750	531	395	311	197	148	11,006
10/07/2015	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	48	54	56	90	171	621	1027	1195	789	576	457	531	464	487	512	765	776	864	730	512	389	281	204	106	11,705
S	68	75	52	51	69	235	634	784	654	508	476	517	521	562	661	977	919	911	750	531	395	311	197	148	11,006
04/26/2011	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	29	29	33	64	168	490	779	880	655	429	306	362	395	394	378	460	487	512	476	372	285	220	129	80	8,412
S	55	41	29	37	63	143	359	407	423	398	327	358	341	391	481	644	776	710	582	404	246	237	153	102	7,707
08/28/2008	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	21	22	18	43	125	422	930	1197	702	406	348	337	331	400	420	521	517	522	351	288	216	147	81	35	8,400
S	50	19	19	26	32	126	337	479	416	395	317	351	370	367	594	793	1032	1005	627	392	242	180	129	83	8,381
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	19	14	16	30	169	382	455	366	358	290	263	324	335	411	600	897	982	611	305	245	156	150	84	37	7,519
S	20	16	27	96	313	802	957	571	317	315	263	304	309	419	433	412	529	404	250	197	163	110	82	30	7,398
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600	840	947	527	371	271	190	149	119	8,810
06/21/5005	COUNTDIR HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	
P	69	68	67	37	106	356	745	893	623	465	461	481	471	552	542	754	660	727	467	327	235	164	117	87	9,474
S	96	75	54	33	68	250	808	596	487	370	344	352	417	407	439	600									

SH 83 (Parker Road) s/o Quincy Avenue													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2019	45,176	47,088	47,688	50,604	51,279	52,804	50,320	52,075	51,275	49,932	47,577	47,471	49,441
	91.4%	95.2%	96.5%	102.4%	103.7%	106.8%	101.8%	105.3%	103.7%	101.0%	96.2%	96.0%	
2018	45,551	46,113	48,558	50,037	50,211	51,709	50,583	51,692	49,936	49,299	46,994	46,728	48,951
	93.1%	94.2%	99.2%	102.2%	102.6%	105.6%	103.3%	105.6%	102.0%	100.7%	96.0%	95.5%	
2016	43,307	45,115	45,182	46,526	48,496	49,519	48,119	49,364	47,726	47,793	44,931	44,082	46,680
	92.8%	96.6%	96.8%	99.7%	103.9%	106.1%	103.1%	105.7%	102.2%	102.4%	96.3%	94.4%	
2015	43,490	42,860	47,048	47,567	47,602	50,008	48,554	47,722	47,349	47,213	43,131	43,690	46,353
	93.8%	92.5%	101.5%	102.6%	102.7%	107.9%	104.7%	103.0%	102.1%	101.9%	93.0%	94.3%	
	92.8%	94.6%	98.5%	101.7%	103.2%	106.6%	103.2%	104.9%	102.5%	101.5%	95.4%	95.0%	

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 1

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/07/21	0	46	1	0	1	0	0	0	4	0	0	0	0	0	52
01:00	1	25	3	0	0	0	0	1	5	0	0	0	0	0	35
02:00	1	42	3	0	0	2	0	0	5	0	0	0	0	0	53
03:00	1	71	7	0	0	0	0	1	2	0	0	0	0	0	82
04:00	2	171	32	0	1	2	0	0	1	0	0	0	0	0	209
05:00	4	424	55	0	2	3	0	1	3	0	0	0	0	0	492
06:00	4	698	80	0	2	2	1	1	2	0	0	0	0	0	790
07:00	12	862	55	0	2	18	0	1	5	0	0	0	0	0	955
08:00	11	679	59	1	5	11	1	4	9	1	0	0	0	0	781
09:00	7	377	40	0	7	19	0	1	7	0	0	0	0	0	458
10:00	1	327	41	0	4	14	0	5	17	1	0	1	0	0	411
11:00	7	412	48	1	7	13	0	1	9	0	0	0	0	0	498
12 PM	5	462	48	0	6	6	0	2	19	0	0	0	0	0	548
13:00	9	408	51	0	10	13	0	2	9	0	0	0	0	0	502
14:00	12	510	48	0	7	11	0	2	26	2	0	0	0	0	618
15:00	10	516	51	1	5	11	0	8	17	0	0	0	0	0	619
16:00	8	648	55	0	4	9	0	3	7	0	0	0	0	0	734
17:00	11	690	67	0	6	11	0	1	9	2	0	0	0	0	797
18:00	9	636	59	1	2	5	0	2	4	0	0	0	0	0	718
19:00	1	436	39	1	1	3	0	3	3	0	0	0	0	0	487
20:00	1	290	28	0	1	2	0	0	2	0	0	0	0	0	324
21:00	1	222	13	0	0	0	0	2	0	0	0	0	0	0	238
22:00	2	126	11	0	0	0	0	0	3	0	0	0	0	0	142
23:00	1	70	3	0	1	0	0	0	3	0	0	0	0	0	78
Total	121	9148	897	5	74	155	2	41	171	6	0	1	0	0	10621
Percent	1.1%	86.1%	8.4%	0.0%	0.7%	1.5%	0.0%	0.4%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	06:00	08:00	09:00	09:00	06:00	10:00	10:00	08:00		10:00			
Vol.	12	862	80	1	7	19	1	5	17	1		1			
PM Peak	14:00	17:00	17:00	15:00	13:00	13:00		15:00	14:00	14:00					
Vol.	12	690	67	1	10	13		8	26	2					

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 2

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/08/21	0	47	8	0	0	0	0	0	9	0	0	0	0	0	64
01:00	0	32	3	0	1	0	0	1	6	0	0	0	0	0	43
02:00	1	38	3	0	0	2	0	0	4	0	0	0	0	0	48
03:00	0	70	10	0	3	1	0	0	1	0	0	0	0	0	85
04:00	3	158	30	0	1	2	0	0	1	0	0	0	0	0	195
05:00	1	345	68	0	3	0	0	2	0	0	0	0	0	0	419
06:00	5	641	89	0	2	5	0	3	4	0	0	0	0	0	749
07:00	9	727	72	2	5	12	0	1	10	0	0	0	0	0	838
08:00	11	630	47	0	6	16	0	0	10	0	0	0	0	0	722
09:00	2	378	47	0	2	14	0	2	14	0	1	1	0	0	461
10:00	8	362	53	1	4	24	1	10	21	0	1	0	0	0	485
11:00	8	409	48	0	8	21	0	2	13	0	0	0	0	0	509
12 PM	10	447	54	1	9	17	0	2	31	0	0	0	0	0	571
13:00	8	459	56	0	3	19	0	2	16	1	0	0	0	0	564
14:00	7	545	53	1	10	14	1	4	30	0	0	0	0	0	666
15:00	15	552	65	0	5	7	1	6	13	1	0	0	0	0	665
16:00	16	674	54	1	5	9	0	1	12	0	0	0	0	0	772
17:00	5	716	55	0	3	3	0	1	2	1	0	0	0	0	786
18:00	6	596	42	0	2	2	1	3	1	0	0	0	0	0	653
19:00	3	475	42	0	1	1	0	1	2	0	0	0	0	0	525
20:00	7	363	26	0	3	0	0	0	2	0	0	0	0	0	401
21:00	0	299	12	0	0	0	0	2	0	0	0	0	0	0	313
22:00	1	220	13	0	1	0	0	0	1	0	0	0	0	0	236
23:00	0	133	7	0	1	1	0	1	2	0	0	0	0	0	145
Total	126	9316	957	6	78	170	4	44	205	3	2	1	3	0	10915
Percent	1.2%	85.4%	8.8%	0.1%	0.7%	1.6%	0.0%	0.4%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	07:00	06:00	07:00	11:00	10:00	10:00	10:00	10:00	0.0%	08:00	08:00	09:00	0.0%	
Vol.	11	727	89	2	8	24	1	10	21		1	1	2		
PM Peak	16:00	17:00	15:00	12:00	14:00	13:00	14:00	15:00	12:00	13:00			14:00		
Vol.	16	716	65	1	10	19	1	6	31	1			1		

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 3

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/09/21	1	61	6	0	0	0	0	0	4	0	0	0	1	0	73
01:00	0	38	6	0	0	0	0	0	6	0	0	0	0	0	50
02:00	1	45	4	0	0	0	0	0	3	0	0	0	0	0	53
03:00	0	47	6	0	0	0	0	0	1	0	0	0	0	0	54
04:00	1	92	15	0	0	0	0	0	2	0	0	0	0	0	110
05:00	0	126	23	0	4	0	0	1	1	0	0	0	0	0	155
06:00	3	174	32	0	1	1	0	0	5	0	0	0	0	0	216
07:00	3	279	32	1	2	2	0	1	4	0	0	0	0	0	324
08:00	3	337	44	1	2	7	0	2	11	0	0	0	0	0	407
09:00	4	447	53	0	4	5	0	2	10	0	0	0	0	0	525
10:00	6	478	42	0	0	3	0	3	10	0	0	0	0	0	542
11:00	6	506	56	0	6	1	0	3	7	0	0	0	0	0	585
12 PM	8	610	51	0	6	3	0	4	9	0	0	0	0	0	690
13:00	10	639	37	0	2	4	0	4	8	0	0	0	0	0	704
14:00	6	528	38	0	3	1	0	2	6	0	0	1	0	0	583
15:00	3	554	32	1	1	1	0	4	1	0	0	0	0	0	597
16:00	4	567	44	0	4	0	0	1	1	0	0	0	0	0	621
17:00	5	618	31	0	3	1	0	1	1	1	0	0	0	0	661
18:00	5	561	30	1	0	1	0	1	1	0	0	0	0	0	600
19:00	2	479	31	0	1	1	0	0	0	1	0	0	0	0	515
20:00	2	419	17	0	1	0	0	0	0	0	0	0	0	0	440
21:00	1	287	7	0	0	0	0	1	0	0	0	0	0	0	296
22:00	2	223	8	0	1	0	0	0	1	0	0	0	0	0	235
23:00	0	207	17	1	0	0	0	0	1	0	0	0	0	0	226
Total	76	8320	662	5	42	31	0	29	93	2	0	1	1	0	9262
Percent	0.8%	89.8%	7.1%	0.1%	0.5%	0.3%	0.0%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	11:00	07:00	11:00	08:00		10:00	08:00						
Vol.	6	506	56	1	6	7		3	11				00:00		
PM Peak	13:00	13:00	12:00	15:00	12:00	13:00		13:00	12:00	17:00		14:00			
Vol.	10	639	51	1	6	4		4	9	1		1			



**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 4

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/10/21	0	115	7	0	0	0	0	0	0	0	0	0	0	0	122
01:00	0	35	4	0	2	0	0	0	0	0	0	0	0	0	41
02:00	1	44	3	0	0	0	0	0	0	0	0	0	0	0	48
03:00	0	49	4	0	0	0	0	0	0	0	0	0	0	0	53
04:00	1	59	8	0	0	0	0	0	1	0	0	0	0	0	69
05:00	0	112	12	0	0	0	0	0	0	0	0	0	0	0	125
06:00	0	122	16	0	0	0	0	0	1	0	0	0	0	0	138
07:00	0	175	16	0	2	0	0	0	0	0	0	0	0	0	193
08:00	1	249	35	0	1	0	0	1	0	0	0	0	0	0	287
09:00	2	328	33	0	3	1	0	3	1	0	0	0	0	0	371
10:00	4	402	38	0	2	0	0	0	1	0	0	0	0	0	447
11:00	7	437	35	2	2	1	0	0	3	0	0	0	0	0	487
12 PM	5	492	38	0	1	0	0	0	0	0	0	0	0	0	536
13:00	7	530	39	1	1	0	0	1	1	0	0	0	0	0	581
14:00	1	503	35	0	1	0	0	1	1	0	0	0	0	0	542
15:00	2	558	27	0	4	0	0	1	1	0	0	0	0	0	594
16:00	3	530	38	1	1	0	0	0	0	0	1	0	0	0	573
17:00	3	495	35	0	1	1	0	0	0	0	0	0	0	0	535
18:00	1	483	34	0	2	2	0	2	0	0	0	0	0	0	524
19:00	0	376	28	0	0	0	0	0	0	0	0	0	0	0	404
20:00	1	272	21	0	0	0	0	0	2	0	0	0	0	0	296
21:00	0	184	11	0	0	1	0	0	0	0	0	0	0	0	196
22:00	1	124	4	0	0	0	0	1	0	0	0	0	0	0	130
23:00	0	66	3	0	1	0	0	0	1	0	0	0	0	0	71
Total	40	6740	524	4	24	7	0	10	13	0	1	0	0	0	7363
Percent	0.5%	91.5%	7.1%	0.1%	0.3%	0.1%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00	11:00	09:00	09:00		09:00	11:00	0.0%	0.0%	0.0%	0.0%	0.0%	
Vol.	7	437	38	2	3	1		3	3						
PM Peak	13:00	15:00	13:00	13:00	15:00	18:00		18:00	20:00		15:00				
Vol.	7	558	39	1	4	2		2	2		1				

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 5

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

NB																
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total	
10/11/21	0	47	1	0	0	0	0	0	0	0	0	0	0	0	48	
01:00	0	26	2	0	0	0	0	0	0	0	0	0	0	0	28	
02:00	2	34	9	0	0	1	0	0	0	0	0	0	0	0	46	
03:00	0	52	11	0	0	2	0	0	0	0	0	0	0	0	65	
04:00	0	137	36	0	2	1	0	0	0	0	0	0	0	0	176	
05:00	0	335	89	0	4	1	0	0	2	0	0	0	0	0	431	
06:00	6	587	105	3	8	0	0	0	0	0	0	0	0	0	709	
07:00	8	693	81	1	4	13	1	3	9	0	0	0	0	0	813	
08:00	4	572	79	0	3	10	2	4	8	0	0	0	0	0	682	
09:00	3	424	68	0	6	10	0	2	12	0	0	0	0	0	525	
10:00	1	363	60	2	10	11	0	4	13	0	0	0	0	0	464	
11:00	2	343	57	1	16	15	0	1	17	1	0	0	1	0	454	
12 PM	6	359	74	0	4	17	0	0	15	1	0	0	0	0	476	
13:00	5	417	62	0	5	13	0	2	23	1	0	0	0	0	528	
14:00	4	494	74	1	9	16	0	6	16	0	0	0	0	0	620	
15:00	5	561	98	0	8	23	0	1	14	0	0	0	1	0	711	
16:00	6	638	82	0	9	18	0	3	10	0	0	0	1	0	767	
17:00	13	612	97	0	1	17	0	2	10	0	0	1	0	0	753	
18:00	6	539	53	0	2	1	0	1	4	0	0	0	0	0	606	
19:00	2	381	54	0	0	1	0	0	1	0	0	0	0	0	439	
20:00	0	236	27	0	0	0	0	0	0	0	0	0	0	0	263	
21:00	0	200	18	0	1	1	0	0	1	0	0	0	0	0	221	
22:00	2	128	11	0	0	0	0	1	0	0	0	0	0	0	142	
23:00	0	55	7	0	0	1	0	0	2	0	0	0	0	0	65	
Total	75	8233	1255	8	92	172	3	30	157	3	0	1	3	0	10032	
Percent	0.7%	82.1%	12.5%	0.1%	0.9%	1.7%	0.0%	0.3%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%		
AM Peak	07:00	07:00	06:00	06:00	11:00	11:00	08:00	08:00	11:00	11:00						
Vol.	8	693	105	3	16	15	2	4	17	1			1			
PM Peak	17:00	16:00	15:00	14:00	14:00	15:00		14:00	13:00	12:00		16:00	15:00			
Vol.	13	638	98	1	9	23		6	23	1		1	1			

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 6

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

GUN CLUB RD S.O. JEWELL AVE

NB																
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total	
10/12/21	0	37	3	0	0	0	0	0	1	0	0	0	0	0	41	
01:00	0	22	3	0	0	0	0	1	1	0	0	0	0	0	27	
02:00	2	41	7	0	1	1	0	1	4	0	0	0	0	0	57	
03:00	0	69	7	0	1	0	0	0	3	0	0	0	0	0	80	
04:00	0	162	35	0	4	1	0	0	3	0	0	0	0	0	205	
05:00	2	420	87	0	2	0	0	0	3	0	0	0	0	0	512	
06:00	2	692	118	0	4	4	0	1	3	1	0	0	0	0	825	
07:00	12	865	101	0	2	10	0	1	4	0	1	0	0	0	996	
08:00	8	614	66	1	6	15	0	0	7	0	0	0	0	0	718	
09:00	1	415	51	1	5	10	1	1	17	1	0	0	0	0	502	
10:00	3	355	38	2	4	12	0	2	18	2	0	0	0	0	436	
11:00	9	396	55	0	10	9	1	0	14	0	0	0	0	0	494	
12 PM	4	405	47	1	6	11	0	2	19	0	0	1	0	0	496	
13:00	2	415	47	0	5	10	0	1	15	0	0	0	0	0	495	
14:00	9	484	51	0	9	16	0	2	15	0	0	0	0	0	586	
15:00	7	604	57	0	3	14	0	0	10	0	0	0	0	0	695	
16:00	11	467	46	1	8	5	0	2	9	2	0	0	0	0	551	
17:00	5	643	68	2	7	14	0	1	4	0	0	0	0	0	744	
18:00	4	579	48	0	2	3	0	2	2	0	0	0	0	0	640	
19:00	3	375	33	0	2	1	0	1	3	0	0	0	0	0	418	
20:00	0	293	17	0	3	0	0	0	3	0	0	0	0	0	316	
21:00	1	211	17	0	0	0	0	0	4	0	0	0	0	0	233	
22:00	2	146	4	0	0	0	0	0	1	0	0	0	0	0	153	
23:00	0	56	3	0	1	1	0	1	0	0	0	0	0	0	62	
Total	87	8766	1009	8	85	137	2	19	161	6	1	1	0	0	10282	
Percent	0.8%	85.3%	9.8%	0.1%	0.8%	1.3%	0.0%	0.2%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%		
AM Peak	07:00	07:00	06:00	10:00	11:00	08:00	09:00	10:00	10:00	10:00	07:00					
Vol.	12	865	118	2	10	15	1	2	18	2	1					
PM Peak	16:00	17:00	17:00	17:00	14:00	14:00		12:00	12:00	16:00		12:00				
Vol.	11	643	68	2	9	16		2	19	2		1				



**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 7

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

NB															
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/13/21	0	30	8	0	0	1	0	0	5	0	0	0	0	0	44
01:00	1	21	2	0	1	0	0	0	3	0	0	0	0	0	28
02:00	1	53	7	0	1	0	0	0	4	0	0	0	0	0	66
03:00	0	60	19	0	0	1	0	0	4	0	0	0	0	0	84
04:00	0	164	26	0	2	1	0	0	3	0	0	0	0	0	196
05:00	0	383	117	0	6	2	0	1	3	0	0	0	0	0	512
06:00	1	642	100	0	4	3	0	2	0	1	0	0	0	0	753
07:00	13	764	71	1	5	7	1	0	7	1	0	0	0	0	870
08:00	2	609	89	0	4	11	0	3	8	0	0	0	0	0	726
09:00	4	385	55	0	6	13	0	2	13	2	0	0	0	0	480
10:00	3	377	42	1	2	16	0	0	16	0	0	0	0	0	457
11:00	5	385	42	2	6	20	1	1	13	0	0	0	0	0	475
12 PM	5	430	23	1	4	15	0	1	16	1	0	0	0	0	496
13:00	9	434	47	1	3	11	0	1	16	0	0	0	0	0	522
14:00	8	486	42	2	3	16	0	1	18	0	0	0	0	0	576
15:00	8	520	45	0	6	25	0	6	13	3	0	0	0	0	626
16:00	3	660	55	0	8	22	0	3	7	0	0	0	0	0	758
17:00	12	702	77	0	6	23	0	2	2	0	0	0	0	0	824
18:00	6	636	68	0	2	5	0	2	6	1	0	0	0	0	726
19:00	5	382	33	0	0	0	0	2	4	0	0	0	0	0	426
20:00	4	249	24	0	1	1	0	1	2	0	0	0	0	0	282
21:00	2	201	21	0	2	0	0	2	3	0	0	0	0	0	231
22:00	1	118	9	0	0	0	0	0	0	0	0	0	0	0	128
23:00	0	73	2	0	0	0	0	0	5	0	0	0	0	0	80
Total	93	8764	1024	8	72	193	2	30	171	9	0	0	0	0	10366
Percent	0.9%	84.5%	9.9%	0.1%	0.7%	1.9%	0.0%	0.3%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	05:00	11:00	05:00	11:00	07:00	08:00	10:00	09:00	0.0%	0.0%	0.0%	0.0%	
Vol.	13	764	117	2	6	20	1	3	16	2					
PM Peak	17:00	17:00	17:00	14:00	16:00	15:00		15:00	14:00	15:00					
Vol.	12	702	77	2	8	25		6	18	3					
Grand Total	618	59287	6328	44	467	865	13	203	971	29	4	5	7	0	68841
Percent	0.9%	86.1%	9.2%	0.1%	0.7%	1.3%	0.0%	0.3%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 8

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/07/21	2	56	5	0	1	0	0	0	2	0	0	0	0	0	66
01:00	1	33	2	0	0	1	0	1	0	0	0	0	0	0	38
02:00	4	21	2	0	0	5	0	0	1	0	0	0	0	0	33
03:00	3	41	5	0	0	4	0	0	0	0	0	0	0	0	53
04:00	1	63	8	0	1	2	0	0	0	0	0	0	0	0	75
05:00	6	141	22	0	0	9	0	0	1	0	0	0	0	0	179
06:00	9	451	89	0	4	12	0	4	7	0	0	0	0	0	576
07:00	8	554	82	0	1	19	0	2	8	2	0	0	1	0	677
08:00	4	430	77	0	10	16	1	4	7	0	0	0	0	0	549
09:00	10	359	52	2	10	25	0	7	15	1	0	0	0	0	481
10:00	7	351	68	0	3	14	0	3	11	1	0	0	0	0	458
11:00	8	396	57	0	2	14	2	1	9	0	0	0	0	0	489
12 PM	6	400	55	0	4	13	0	0	0	1	0	0	0	0	488
13:00	10	379	65	1	3	22	0	3	15	0	0	0	0	0	498
14:00	13	478	92	0	4	13	1	2	9	1	0	0	0	0	613
15:00	16	584	80	0	3	11	0	1	7	0	0	0	0	0	702
16:00	8	690	93	0	2	13	0	2	4	0	0	0	0	0	812
17:00	5	591	74	1	4	5	0	0	3	0	0	0	0	0	683
18:00	9	542	57	0	1	7	0	0	1	0	0	0	0	0	617
19:00	3	398	37	0	0	4	0	0	4	0	0	0	0	0	446
20:00	2	234	35	1	3	1	0	0	0	0	0	0	0	0	276
21:00	1	202	14	0	0	1	0	0	2	0	0	0	0	0	220
22:00	0	151	14	0	0	0	0	0	1	0	0	0	0	0	166
23:00	3	106	6	0	2	3	0	0	0	0	0	0	0	0	120
Total	139	7651	1091	5	58	214	4	30	116	6	0	0	1	0	9315
Percent	1.5%	82.1%	11.7%	0.1%	0.6%	2.3%	0.0%	0.3%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	07:00	06:00	09:00	08:00	09:00	11:00	09:00	09:00	07:00			07:00		
Vol.	10	554	89	2	10	25	2	7	15	2					
PM Peak	15:00	16:00	16:00	13:00	12:00	13:00	14:00	13:00	13:00	12:00					
Vol.	16	690	93	1	4	22	1	3	15	1					

All Traffic Data Services, LLC  
www.alltrafficdata.net

Page 9

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/08/21	2	63	7	0	1	1	0	0	1	0	0	0	0	0	75
01:00	2	27	4	0	0	3	0	0	0	0	0	0	0	0	36
02:00	0	20	3	0	1	1	0	0	1	0	0	0	0	0	26
03:00	3	37	5	0	0	4	0	0	0	0	0	0	0	0	49
04:00	0	65	7	0	1	3	0	0	0	0	0	0	0	0	76
05:00	3	130	23	0	3	2	0	0	0	0	0	0	0	0	161
06:00	8	405	94	0	8	21	1	1	9	1	0	0	0	0	548
07:00	5	570	69	1	7	18	1	1	6	0	0	0	0	0	678
08:00	7	487	86	1	2	33	0	1	12	0	0	0	0	0	629
09:00	6	357	50	1	12	24	1	4	18	0	0	0	1	0	474
10:00	9	321	61	1	3	21	0	1	9	0	0	0	0	0	426
11:00	8	427	70	0	4	21	0	1	21	0	0	0	0	0	552
12 PM	11	421	64	0	7	20	1	3	8	0	0	0	0	0	535
13:00	13	420	69	0	3	22	1	1	10	0	1	0	0	0	540
14:00	13	533	83	1	4	20	1	0	9	1	0	0	0	0	665
15:00	10	579	85	0	4	12	2	2	7	1	0	0	0	0	702
16:00	6	607	81	1	4	9	0	3	0	0	0	0	0	0	711
17:00	5	615	76	0	0	1	0	1	0	0	0	0	0	0	698
18:00	13	581	53	1	2	5	0	0	4	0	0	0	0	0	659
19:00	0	370	43	0	1	0	1	1	0	0	0	0	0	0	416
20:00	4	277	22	0	1	1	0	0	2	0	0	0	0	0	307
21:00	3	221	13	0	1	3	0	0	0	0	0	0	0	0	241
22:00	1	167	14	0	0	0	0	0	0	0	0	0	0	0	182
23:00	1	152	8	1	1	1	0	0	0	0	0	0	0	0	164
Total	133	7852	1090	8	70	246	9	20	117	3	1	0	1	0	9550
Percent	1.4%	82.2%	11.4%	0.1%	0.7%	2.6%	0.1%	0.2%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	06:00	07:00	09:00	08:00	06:00	09:00	11:00	06:00			09:00		
Vol.	9	570	94	1	12	33	1	4	21	1			1		
PM Peak	13:00	17:00	15:00	14:00	12:00	13:00	15:00	12:00	13:00	14:00	13:00				
Vol.	13	615	85	1	7	22	2	3	10	1	1				

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 10

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/09/21	0	76	6	0	1	0	0	0	0	0	0	0	0	0	83
01:00	1	44	5	0	1	1	0	0	0	0	0	0	0	0	52
02:00	0	33	5	0	0	0	0	0	0	0	0	0	0	0	38
03:00	3	39	0	0	1	5	0	0	1	0	0	0	0	0	49
04:00	2	42	6	1	0	2	0	0	0	0	0	0	0	0	53
05:00	2	64	11	0	1	1	0	0	0	0	0	0	0	0	79
06:00	3	178	46	0	1	7	0	3	6	1	0	0	0	0	245
07:00	6	299	58	0	3	7	0	0	4	1	0	0	0	0	378
08:00	5	342	81	0	4	7	0	0	9	1	0	0	0	0	449
09:00	3	445	64	2	8	6	0	0	8	0	0	0	0	0	536
10:00	12	440	66	0	6	6	0	2	3	0	0	0	0	0	535
11:00	10	513	58	1	2	6	1	1	7	0	0	0	0	0	599
12 PM	6	527	63	0	3	3	1	1	5	0	0	0	0	0	609
13:00	9	491	72	0	2	3	0	1	6	0	0	0	0	0	584
14:00	8	502	61	0	1	3	0	0	0	0	0	0	0	0	575
15:00	5	517	47	0	1	1	0	0	0	0	0	0	0	0	571
16:00	3	560	47	0	2	1	0	0	0	0	0	0	0	0	616
17:00	8	505	45	0	3	1	0	2	1	0	0	0	0	0	562
18:00	4	451	38	1	0	1	0	0	0	0	0	0	0	0	495
19:00	1	385	37	0	0	0	0	1	0	0	0	0	0	0	424
20:00	4	294	22	0	2	2	0	0	2	0	0	0	0	0	326
21:00	1	212	13	0	3	0	0	0	1	0	0	0	0	0	230
22:00	2	188	18	0	1	1	0	1	0	0	0	0	0	0	211
23:00	0	128	13	0	1	0	0	0	0	0	0	0	0	0	142
Total	98	7275	882	5	47	64	2	12	53	3	0	0	0	0	8441
Percent	1.2%	86.2%	10.4%	0.1%	0.6%	0.8%	0.0%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	08:00	09:00	09:00	06:00	11:00	06:00	08:00	06:00					
Vol.	12	513	81	2	8	7	1	3	9	1					
PM Peak	13:00	16:00	13:00	18:00	12:00	12:00	12:00	16:00	13:00						
Vol.	9	560	72	1	3	3	1	2	6						

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 11

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/10/21	0	113	9	0	0	0	0	0	1	0	0	0	0	0	123
01:00	0	42	7	0	0	0	0	0	0	0	0	0	0	0	49
02:00	1	30	4	0	0	0	0	0	1	0	0	0	0	0	36
03:00	0	43	2	0	0	0	0	0	0	0	0	0	0	0	45
04:00	0	32	2	0	0	0	0	0	0	0	0	0	0	0	34
05:00	1	45	6	0	0	0	0	0	0	0	0	0	0	0	52
06:00	0	100	11	0	0	0	0	0	0	0	0	0	0	0	111
07:00	1	168	32	0	1	1	0	0	0	0	0	0	0	0	203
08:00	3	259	31	0	0	1	0	0	0	0	0	0	0	0	294
09:00	0	361	30	0	3	3	0	1	0	0	0	0	0	0	398
10:00	3	426	58	0	1	1	0	1	0	0	0	0	0	0	492
11:00	1	415	54	0	1	2	0	0	1	0	0	0	0	0	474
12 PM	4	448	45	0	2	1	0	0	1	0	0	0	0	0	501
13:00	9	439	68	0	1	1	0	1	1	0	0	0	0	0	520
14:00	6	461	49	0	3	2	0	0	0	0	0	0	0	0	521
15:00	6	495	67	0	1	3	0	0	0	0	0	0	0	0	572
16:00	3	442	37	0	0	2	0	0	0	0	0	0	0	0	485
17:00	4	429	38	0	0	1	0	0	0	0	0	0	0	0	472
18:00	2	421	43	0	0	2	0	0	0	0	0	0	0	0	468
19:00	1	282	32	0	0	1	0	0	0	0	0	0	0	0	316
20:00	0	186	19	0	0	0	0	0	1	0	0	0	0	0	206
21:00	0	172	14	0	0	0	0	0	0	0	0	0	0	0	186
22:00	0	107	3	0	0	1	0	0	0	0	0	0	0	0	111
23:00	0	65	6	0	0	1	0	0	0	0	0	0	0	0	72
Total	45	5981	667	0	13	23	0	4	8	0	0	0	0	0	6741
Percent	0.7%	88.7%	9.9%	0.0%	0.2%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	10:00	10:00		09:00	09:00		09:00	10:00						
Vol.	3	426	58		3	3		1	2						
PM Peak	13:00	15:00	13:00		14:00	15:00		13:00	12:00						
Vol.	9	495	68		3	3		1	1						



**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 12

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/11/21	1	46	7	0	0	0	0	0	0	0	0	0	0	0	54
01:00	0	28	1	0	0	1	0	0	0	0	0	0	0	0	30
02:00	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
03:00	0	29	1	0	0	2	0	0	1	0	0	0	0	0	33
04:00	3	58	7	0	0	3	0	0	1	0	0	0	0	0	72
05:00	7	126	28	0	3	6	0	0	1	0	0	0	0	0	170
06:00	5	375	75	0	13	19	0	1	4	0	0	0	0	0	492
07:00	11	489	94	2	6	21	1	1	4	0	0	0	0	0	629
08:00	7	492	83	1	10	18	1	4	7	0	0	0	0	0	623
09:00	8	353	73	0	9	22	0	2	3	1	0	0	0	0	471
10:00	13	334	95	0	5	28	2	5	18	1	0	0	0	0	501
11:00	7	367	88	1	9	15	0	0	7	0	0	0	0	0	494
12 PM	10	369	80	0	11	18	1	3	14	1	0	0	0	0	507
13:00	5	370	84	0	5	9	0	1	5	0	0	0	0	0	479
14:00	15	507	93	0	13	17	2	1	9	0	0	0	0	0	657
15:00	9	670	113	0	4	17	0	2	5	0	0	0	0	0	820
16:00	8	657	107	0	4	8	1	0	5	0	0	0	0	0	790
17:00	7	616	100	0	8	3	0	1	2	0	0	0	0	0	741
18:00	5	507	65	0	4	3	0	0	2	0	0	0	0	0	587
19:00	2	360	35	0	3	2	0	0	4	0	0	0	0	0	406
20:00	0	217	30	0	1	1	0	0	3	0	0	0	0	0	252
21:00	2	175	21	0	0	1	0	0	0	0	0	0	0	0	199
22:00	0	133	17	0	0	0	0	0	0	0	0	0	0	0	150
23:00	1	87	5	0	0	1	0	0	1	0	0	0	0	0	95
Total	126	7382	1305	4	108	220	8	21	95	3	0	0	0	0	9272
Percent	1.4%	79.6%	14.1%	0.0%	1.2%	2.4%	0.1%	0.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	08:00	10:00	07:00	06:00	10:00	10:00	10:00	10:00	09:00					
Vol.	13	492	95	2	13	28	2	5	18	1					
PM Peak	14:00	15:00	15:00		14:00	12:00	14:00	12:00	12:00	12:00					
Vol.	15	670	113		13	18	2	3	14	1					

All Traffic Data Services, LLC  
www.alltrafficdata.net

Page 13

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classified	Total
10/12/21	2	48	4	0	0	0	0	0	0	0	0	0	0	0	54
01:00	0	24	1	0	1	2	0	0	0	0	0	0	0	0	28
02:00	1	21	4	0	0	1	0	0	0	0	0	0	0	0	27
03:00	3	32	3	0	0	4	0	0	0	0	0	0	0	0	42
04:00	4	65	6	0	0	5	0	0	1	0	0	0	0	0	81
05:00	3	134	20	1	3	3	0	1	1	0	0	0	0	0	166
06:00	5	408	112	1	12	15	1	2	6	0	0	0	0	0	562
07:00	12	507	101	0	6	13	0	2	6	1	0	0	0	0	648
08:00	6	428	83	0	11	20	1	2	10	0	0	0	0	0	561
09:00	11	351	71	0	5	20	2	0	19	1	0	0	0	0	480
10:00	4	354	59	0	9	11	1	2	8	1	0	0	0	0	449
11:00	5	355	81	0	5	14	0	2	16	0	0	0	0	0	478
12 PM	15	381	49	0	7	17	1	0	13	1	0	0	0	0	484
13:00	6	418	67	0	11	17	0	0	8	2	0	0	0	0	529
14:00	8	526	83	0	4	16	2	4	5	2	0	0	0	0	650
15:00	15	700	93	0	5	10	1	0	5	1	0	0	0	0	830
16:00	21	582	74	1	4	18	3	0	2	0	0	0	0	0	705
17:00	8	629	82	0	2	7	0	1	1	0	0	0	0	0	730
18:00	5	568	62	1	0	8	0	2	1	0	0	0	0	0	647
19:00	4	357	38	0	1	6	0	1	2	0	0	0	0	0	409
20:00	2	262	29	0	1	3	0	1	2	0	0	0	0	0	300
21:00	2	143	17	0	0	1	0	0	1	0	0	0	0	0	164
22:00	2	152	5	0	0	2	0	0	0	0	0	0	0	0	161
23:00	2	109	5	0	0	2	0	0	0	0	0	0	0	0	118
Total	146	7554	1149	4	87	215	12	20	107	9	0	0	0	0	9303
Percent	1.6%	81.2%	12.4%	0.0%	0.9%	2.3%	0.1%	0.2%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	06:00	05:00	06:00	08:00	09:00	06:00	09:00	07:00					
Vol.	12	507	112	1	12	20	2	2	19	1					
PM Peak	16:00	15:00	15:00	16:00	13:00	16:00	16:00	14:00	12:00	13:00					
Vol.	21	700	93	1	11	18	3	4	13	2					

**All Traffic Data Services, LLC**  
www.alltrafficdata.net

Page 14

Date Start: 07-Oct-21  
Site Code: 6  
Station ID: 6  
GUN CLUB RD S.O. JEWELL AVE

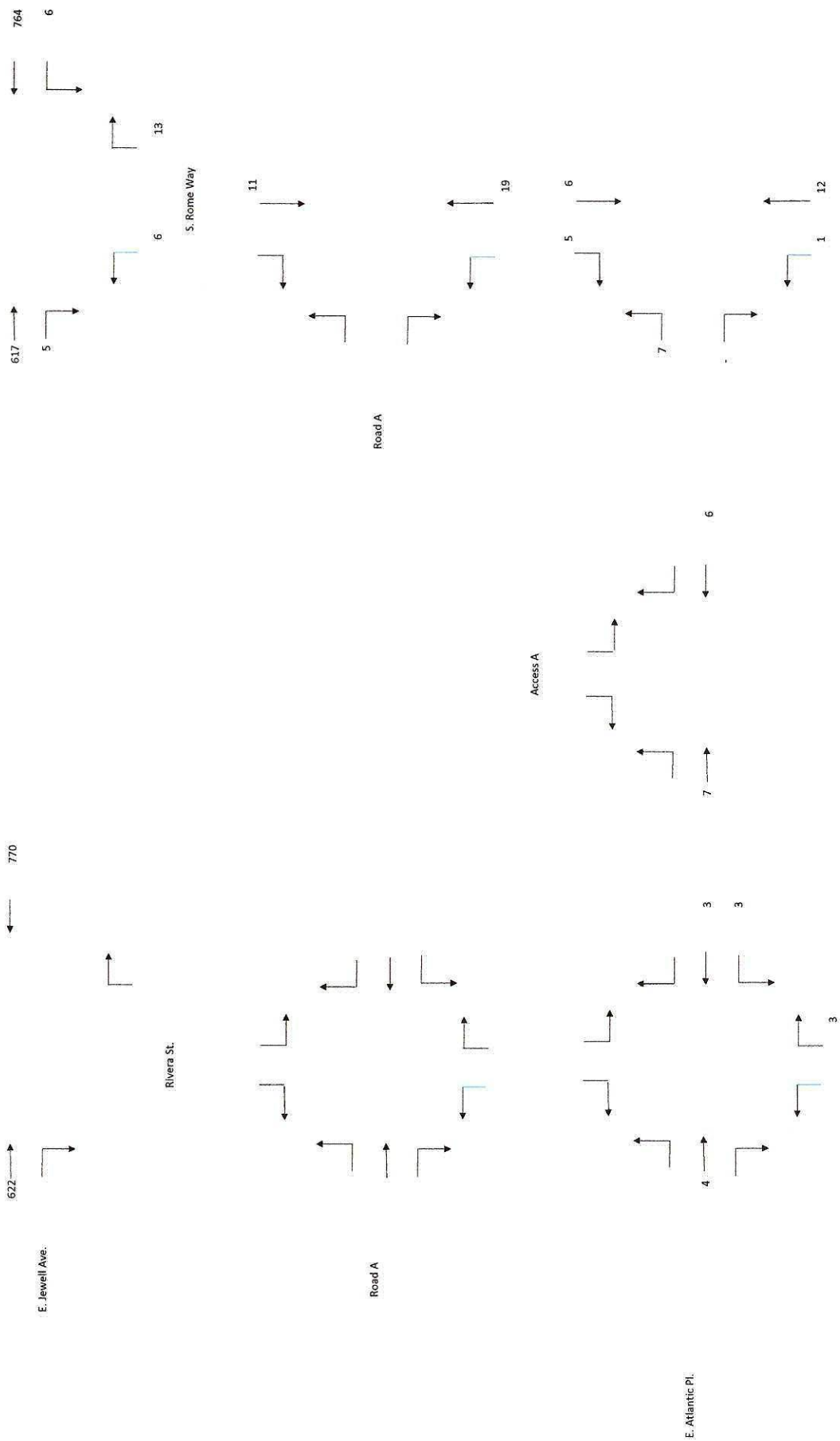
SB	Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
	10/13/21	2	58	4	0	1	0	0	0	1	0	0	0	0	0	66
	01:00	1	37	5	0	0	2	0	0	0	0	0	0	0	0	45
	02:00	2	19	4	0	0	2	0	0	0	0	0	0	0	0	27
	03:00	3	41	1	0	0	4	0	0	1	0	0	0	0	0	50
	04:00	6	61	8	0	0	8	0	0	0	0	0	0	0	0	83
	05:00	4	124	15	1	2	5	0	0	0	0	0	0	0	0	151
	06:00	9	426	85	0	2	18	0	0	9	3	0	0	0	0	552
	07:00	11	497	57	0	4	16	1	0	7	1	0	0	0	0	594
	08:00	5	424	89	1	6	19	1	2	5	2	0	0	0	0	554
	09:00	8	355	65	0	6	21	2	0	6	1	0	0	0	0	464
	10:00	5	332	63	0	8	25	0	1	5	1	0	0	0	0	440
	11:00	6	403	84	0	9	24	0	1	12	1	0	0	0	0	540
	12 PM	10	405	74	1	7	18	0	1	14	0	0	0	0	0	530
	13:00	11	503	82	1	8	17	0	3	5	1	0	0	0	0	631
	14:00	9	548	71	0	6	14	1	0	6	0	0	0	0	0	655
	15:00	12	660	98	0	6	17	0	2	4	1	0	0	0	0	800
	16:00	11	727	83	0	6	12	0	0	1	0	0	0	0	0	840
	17:00	8	607	83	0	2	9	0	0	1	0	0	0	0	0	710
	18:00	14	537	83	0	5	6	0	1	1	0	0	0	0	0	647
	19:00	4	348	52	0	4	6	0	1	1	0	0	0	0	0	416
	20:00	2	255	38	1	4	2	0	0	0	0	0	0	0	0	302
	21:00	3	183	23	0	1	3	0	0	0	0	0	0	0	0	213
	22:00	1	140	12	0	0	2	0	0	1	0	0	0	0	0	156
	23:00	1	115	16	0	0	1	0	0	0	0	0	0	0	0	133
	Total	148	7805	1195	5	87	251	5	12	80	11	0	0	0	0	9599
	Percent	1.5%	81.3%	12.4%	0.1%	0.9%	2.6%	0.1%	0.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	
	AM Peak	07:00	07:00	08:00	05:00	11:00	10:00	09:00	08:00	11:00	06:00					
	Vol.	11	497	89	1	9	25	2	2	12	3					
	PM Peak	18:00	16:00	15:00	12:00	13:00	12:00	14:00	13:00	12:00	13:00					
	Vol.	14	727	98	1	8	18	1	3	14	1					
	Grand Total	835	51500	7379	31	470	1233	40	119	576	35	1	0	2	0	62221
	Percent	1.3%	82.8%	11.9%	0.0%	0.8%	2.0%	0.1%	0.2%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	



Peak-Hour  
Year

AM

2021 Existing Traffic



Peak-Hour  
Year  
Growth Factor

AM

2021 Adjusted Existing Traffic

1.052



Road A

Road A

Access A



E. Atlantic Pl.

6

3

3

3

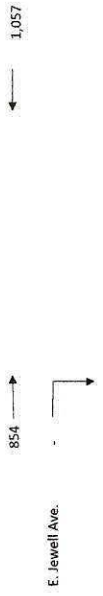
4

Peak-Hour  
Year  
Growth Factor

AM

2030 Initial Background Traffic

1.305

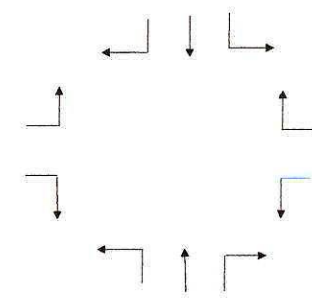


Rivera St.

8

18

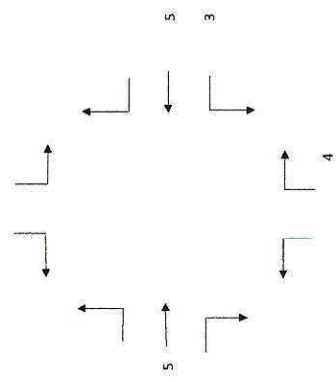
S. Rome Way



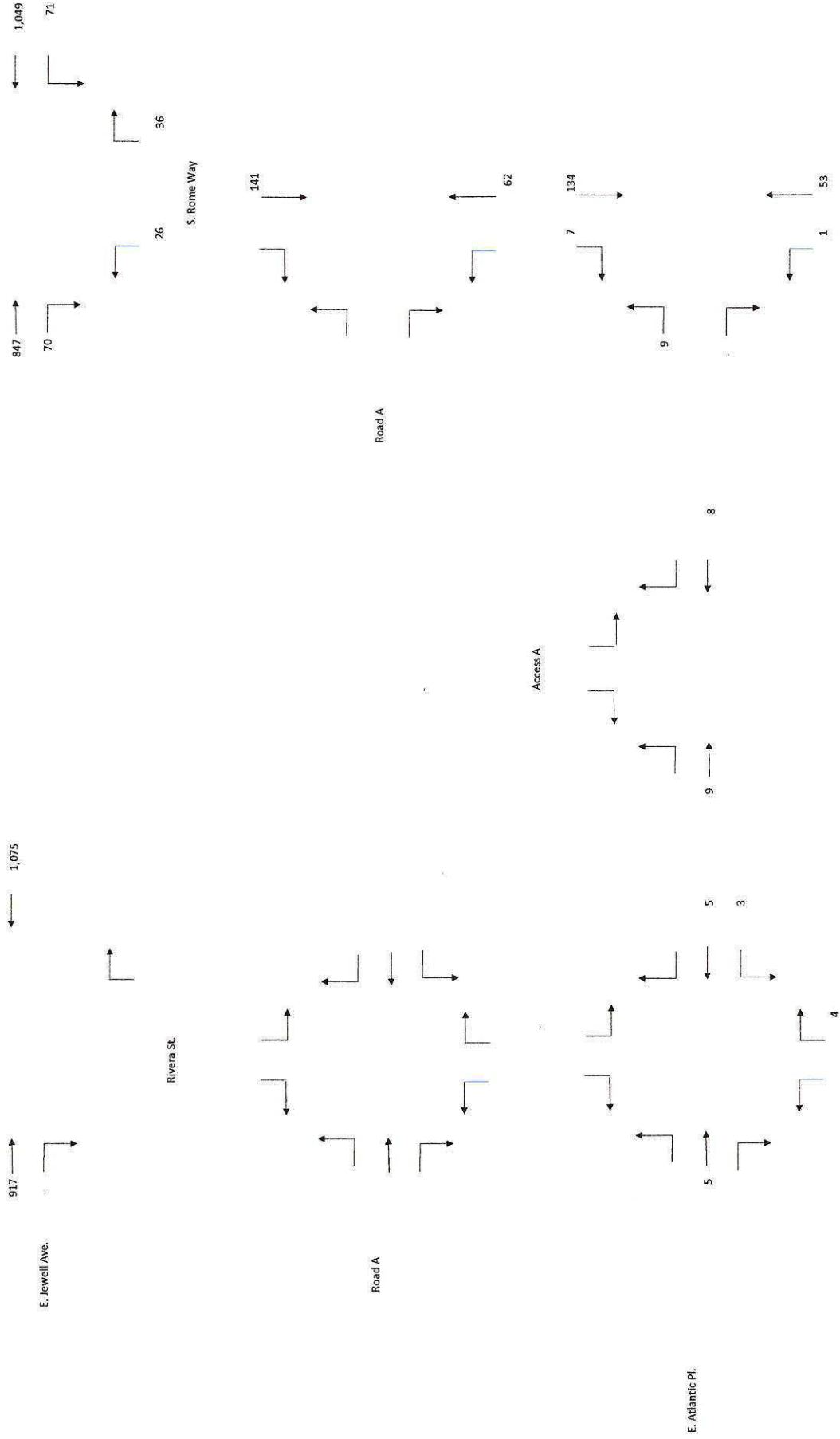
Road A

Road A

Access A



E. Atlantic Pl.



Peak-Hour  
Year  
Growth Factor

AM

2050 Initial Background Traffic

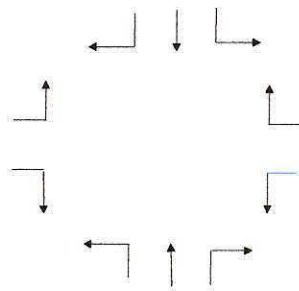
1,806

1,542

E. Jewell Ave.

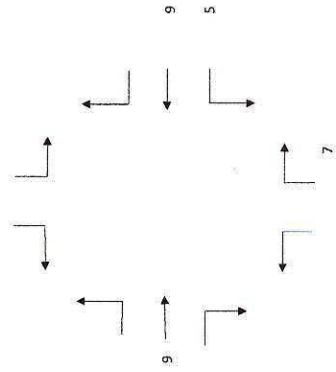
1,909

Rivera St.



Road A

Access A



E. Atlantic Pl.

9

9

5

7

14

16



14

16

Road A

27



47



15



12



16



31



2



S. Rome Way



15



32



1,530



12



1,894



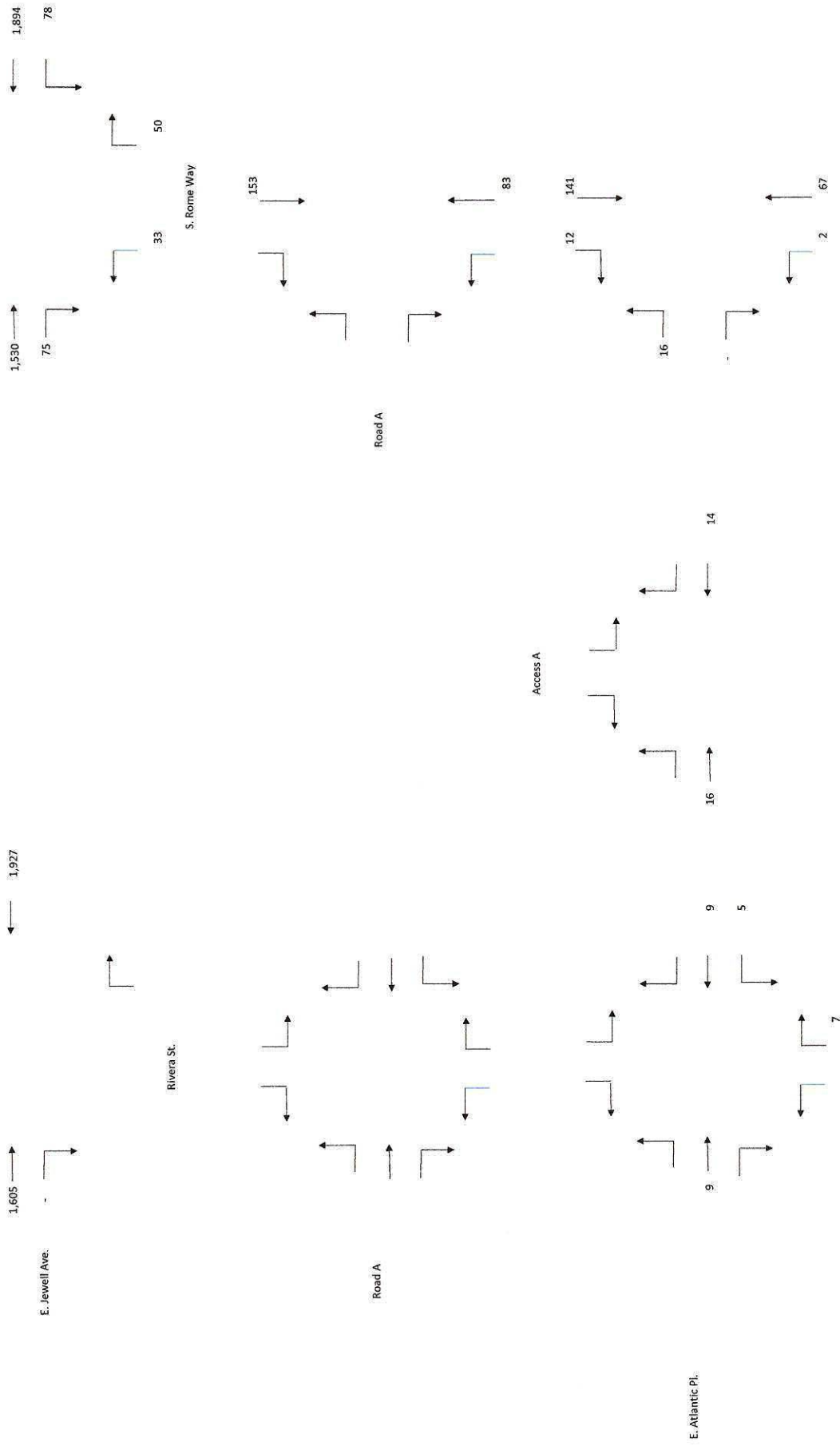
15



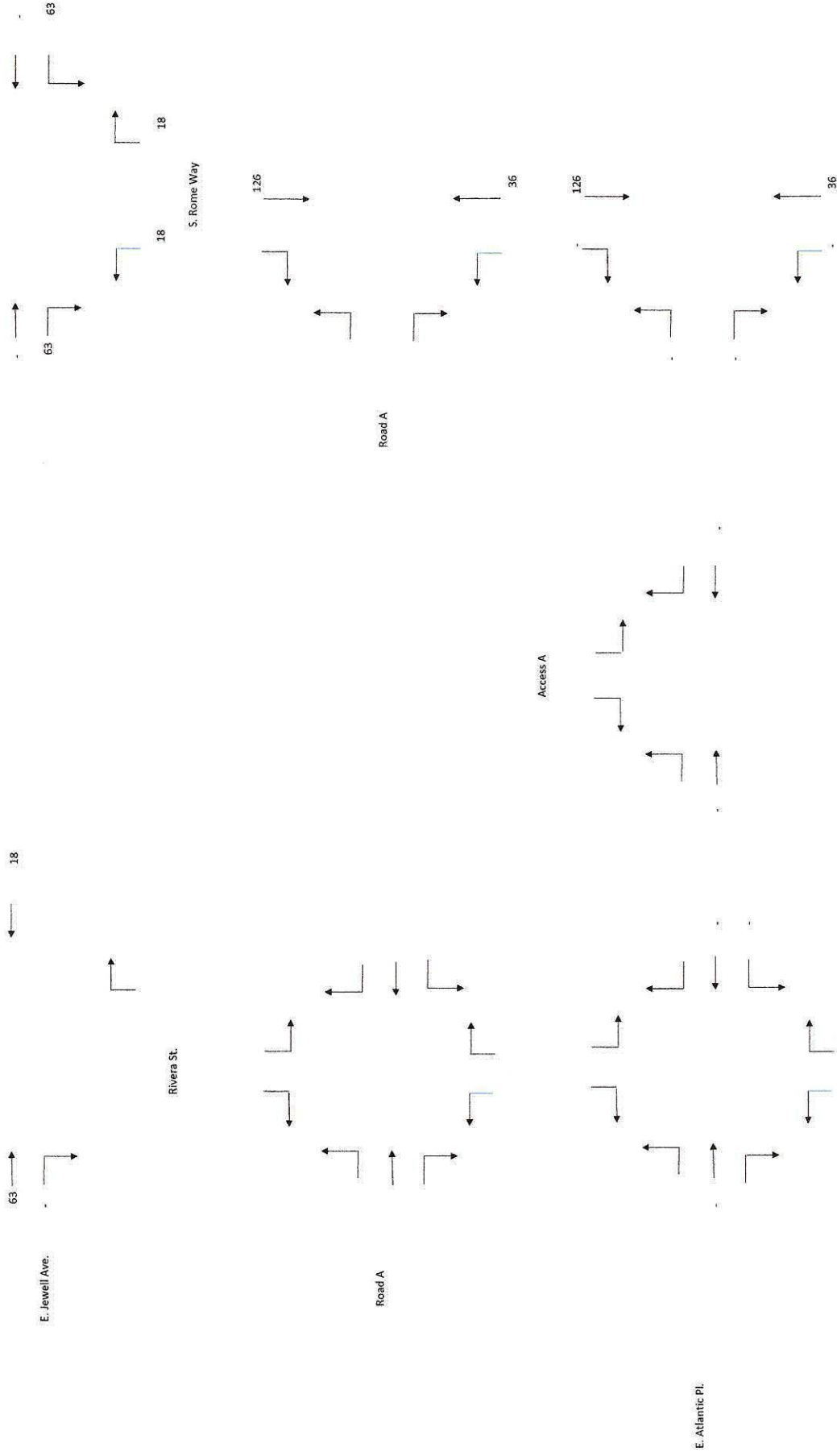
Peak-Hour  
Year

AM

2050 Final Background Traffic



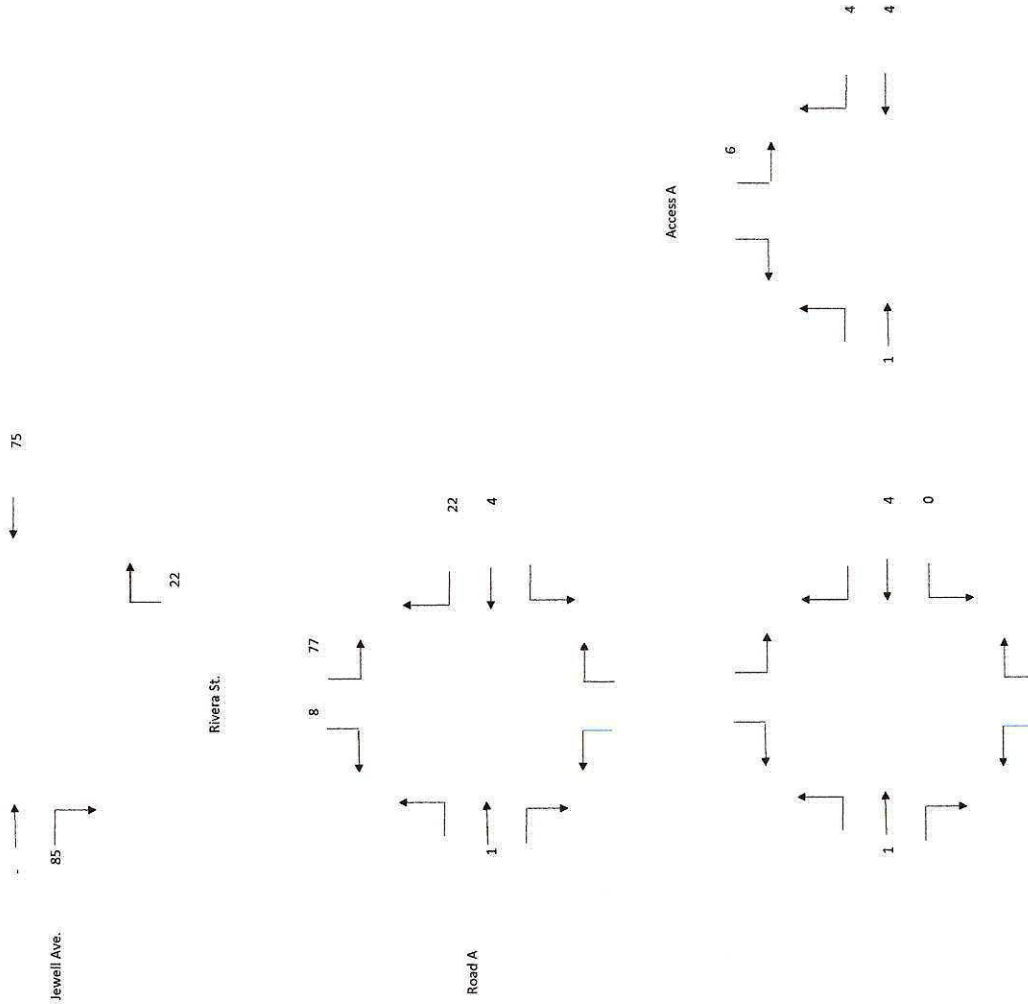
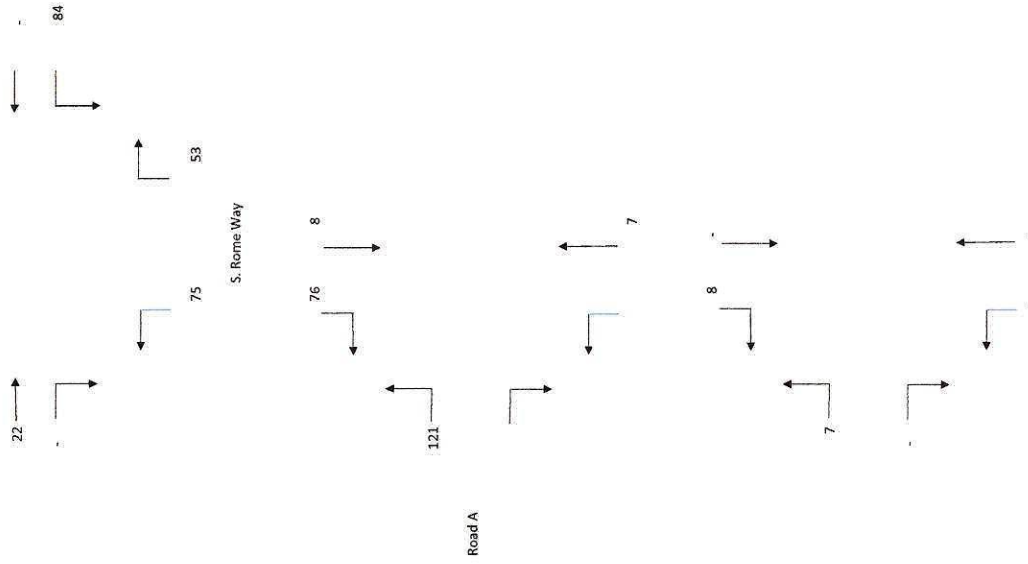




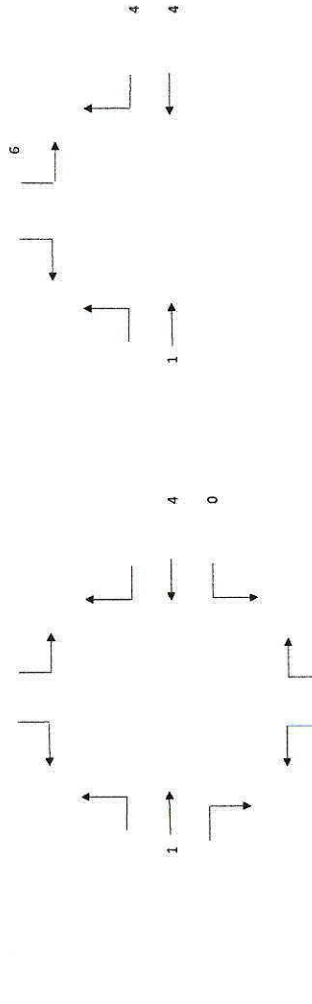
Peak-Hour  
Year

AM

Site-Generated Traffic - Non Passby

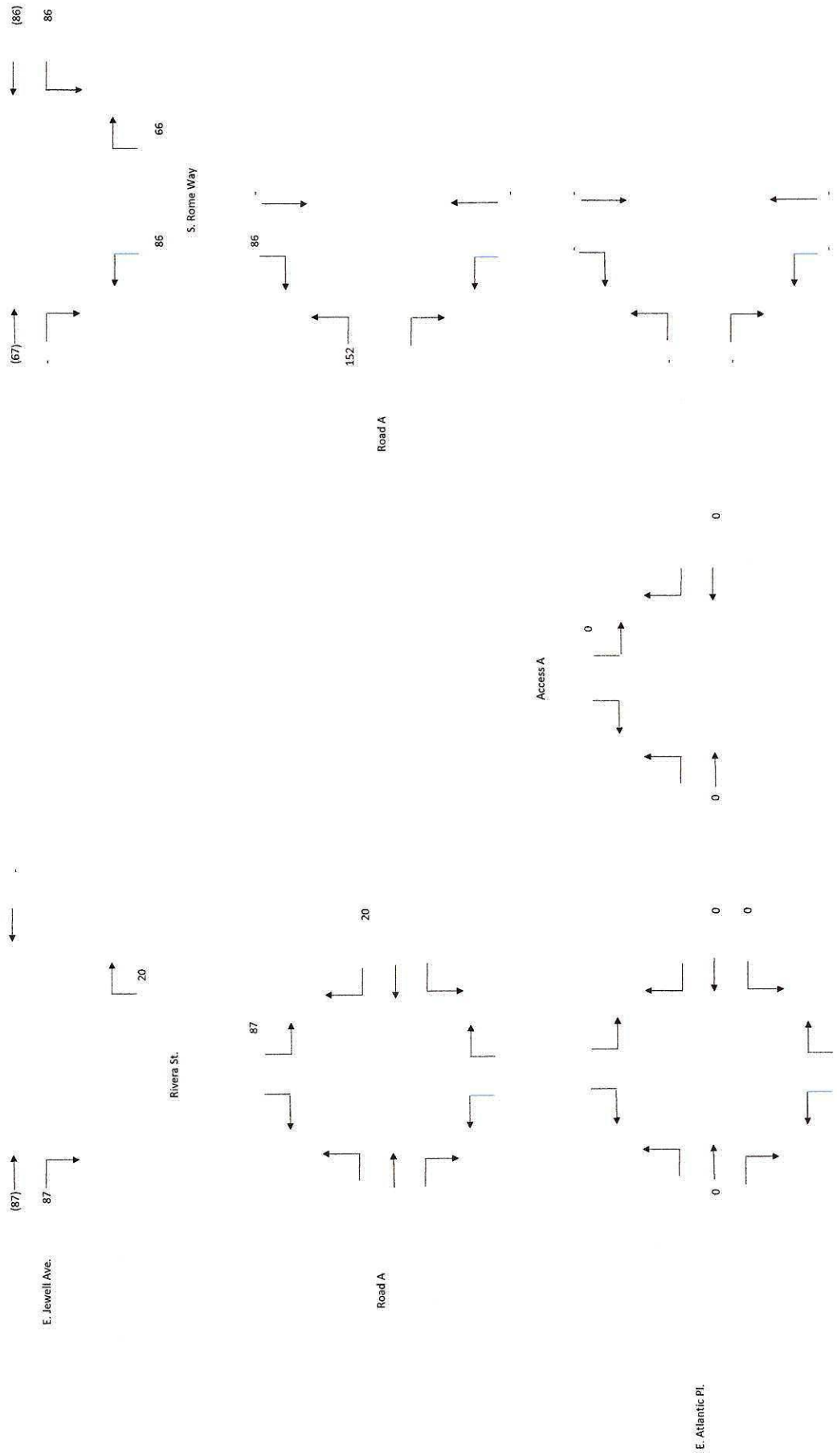


Access A



E. Atlantic Pl.

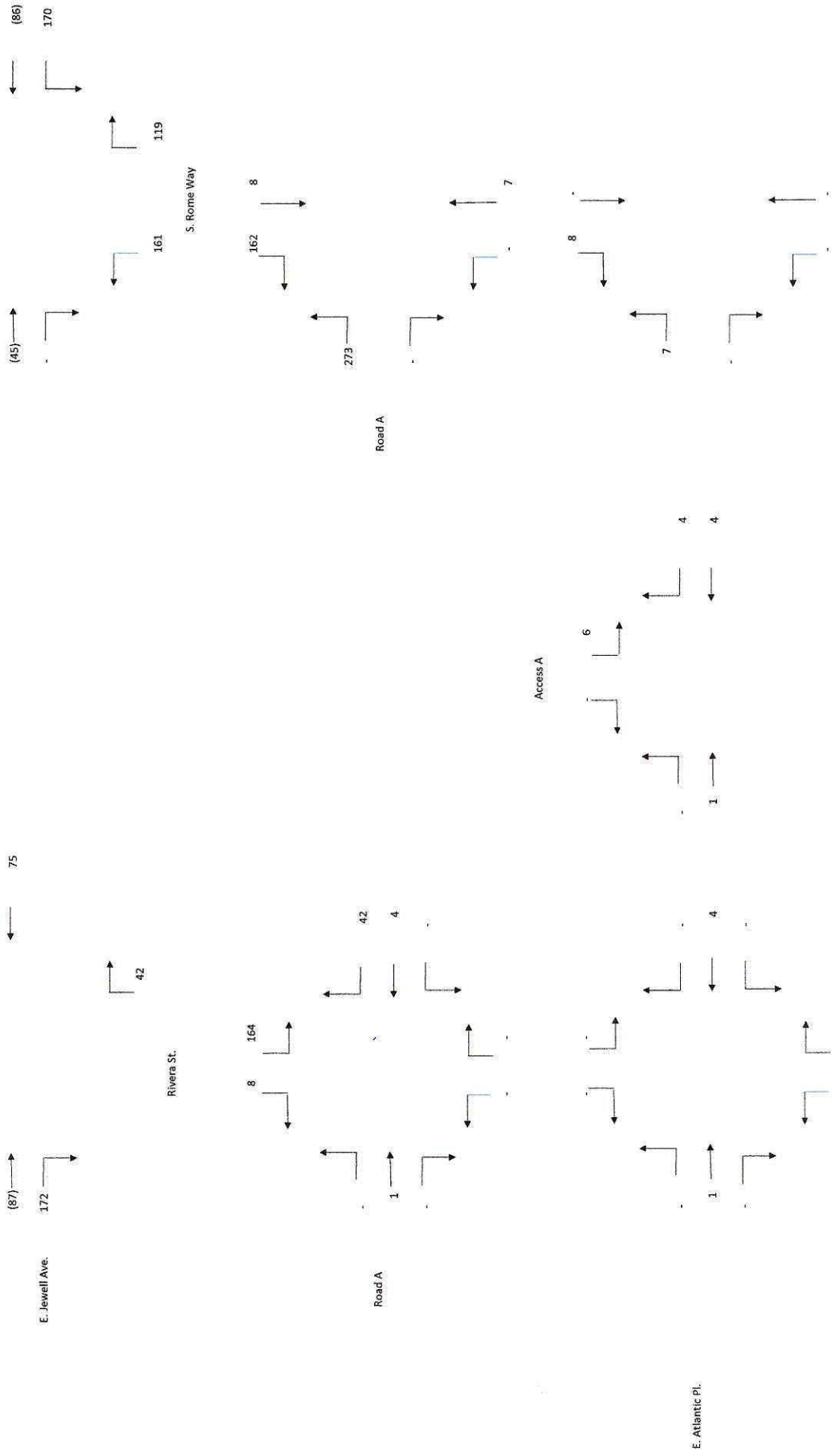
Site-Generated Traffic - Passby



Peak-Hour  
Year

AM

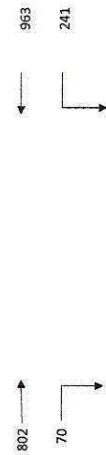
Site-Generated Traffic



Peak-Hour  
Year

AM

2030 Total Traffic



E. Jewell Ave.



River St.



S. Rome Way

8 164

162 149



Road A



Road A



Access A



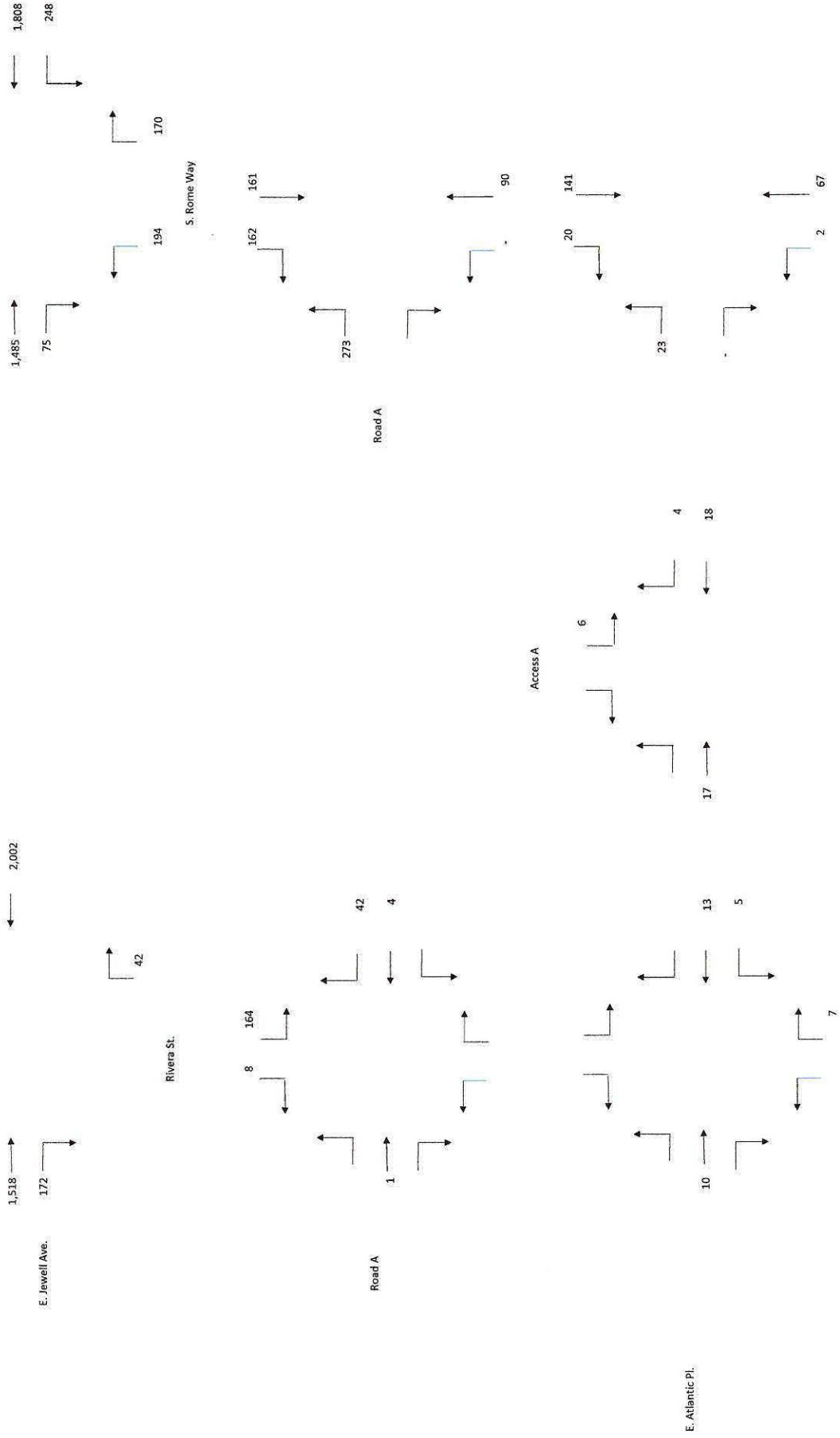
E. Atlantic Pl.



Peak-Hour  
Year

AM

2050 Total Traffic







DB Enterprise, LLC  
4771 So. Danube Circle  
Aurora, Colorado 80015

Phone: (720) 231-1947  
E-Mail: druble.jr@comcast.net

November 25, 2022

Mr. Aaron Thompson  
Aperio Property Consultants  
4032 Defoe Street  
Strasburg, CO 80136

Re: Landing at Jewell Park Project  
Aurora, CO

Dear Mr. Thompson:

I am pleased to submit my Traffic Impact Analysis for the proposed Landing at Jewell Project in Aurora, Colorado. This revision has been prepared to respond to comments from the City of Aurora. The site is located near the intersection of East Jewell Avenue and South Rome Way.

This study first provides a summary of the existing roadways and traffic volumes in the vicinity of the proposed commercial project and a summary of planned improvements to the roadway system. Next, estimates are made of the amount and directional distribution of vehicular traffic likely to be generated by the proposed commercial project. This information is then combined with projected future traffic volumes in the vicinity to evaluate the impact of the proposed project will have on the future roadway system and, where appropriate, to make recommendations for the required roadway improvements.

I trust that my findings and recommendations will assist in the planning for the proposed Landing at Jewell Project. Please call me if I can be of further assistance.

Respectfully submitted,

DB Enterprise, LLC

By:

  
Dave L. Ruble Jr., P.E.

DLR/bar



# Landing at Jewell Project

November 25, 2022

Prepared by  
Dave L. Ruble, Jr., P.E.  
DB Enterprise LLC  
(DBE#220110)



# **Traffic Impact Analysis**

## **Landing at Jewell Project**

**Aurora, Colorado**

Prepared for

Aperio Property Consultants  
4032 Defoe Street  
Strasburg, CO 80136

Prepared by

DB Enterprise, LLC  
4771 So. Danube Circle  
Aurora, CO 80015  
(720) 231-1947

November 25, 2022  
(DBE #220110)

## TABLE OF CONTENTS

Section	Description	Page
A	Executive Summary	1
B	Introduction/Background	4
C	Existing Traffic Condition	8
	Total Year 2022 Existing Traffic	12
D	Proposed Conditions	14
	Trip Generation	14
	Trip Distribution	18
	Site-Generated Traffic	20
E	Future Conditions	23
	Background Traffic	23
	Total Traffic	23
F	Evaluation	28
G	Recommendations/Conclusions	42

Appendix A – Existing Traffic Counts

Appendix B – Methodology for Estimating Peak-Hour Traffic

Appendix C – Observed Car Wash Trip Information

Appendix D – Pioneer Business Park Traffic Impact Study

Appendix E – Capacity Analysis

Appendix D – Year 2050 Queue Length Analysis

## LIST OF FIGURES

Figure	Description	Page
1	Vicinity Map	6
2	Site Plan	7
3	Existing Lane Geometry and Traffic Control	9
4	Existing Traffic Volumes	10
5	Estimated Year 2022 Existing Traffic Volumes	13
6	Trip Distribution of Site-Generated Traffic	19
7	Assignment of Non-Passby Site-Generated Traffic	21
8	Assignment of Passby Site-Generated Traffic	22
9	Year 2030 Background Peak-Hour Traffic Volumes	24
10	Year 2050 Background Peak-Hour Traffic Volumes	25
11	Year 2030 Total Peak-Hour Traffic Volumes	26
12	Year 2050 Total Peak-Hour Traffic Volumes	27
13	Year 2030 Traffic Control and Lane Geometry	29
14	Year 2050 Traffic Control and Lane Geometry	30
15	Year 2050 Daily Traffic Impacts	36
16	Year 2050 Queue Length Analysis	37
17	Recommended Traffic Control and Lane Geometry	43

## LIST OF TABLES

<b>Table</b>	<b>Description</b>	<b>Page</b>
1	Daily Customers (Excluding Employees)	15
2	Hourly Customers (Excluding Employees)	15
3	Estimated Vehicle Trip Generation	16
4	Intersection Level of Service Analysis Results (Estimated Existing Traffic)	32
5	Intersection Level of Service Analysis Results (2030)	33
6	Intersection Level of Service Analysis Results (2050)	34
7	Auxiliary Traffic Lane Analysis	41



# Section A – Executive Summary

---

An executive summary of the analysis presented in this report is as follows:

1. The proposed Landing at Jewell Project is located in the City of Aurora. It is located near the intersection of East Jewell Avenue and South Rome Way. The site is bounded by East Jewell Avenue on the north, commercial development on the west, East Atlantic Place on the south, and South Rome Way on the east.
2. The proposed commercial project will be served by five accesses, one along East Jewell Avenue at South Rivera Street and three along East Atlantic Place at South Rivera Street, Access A and Access B, and one along South Rome Way at Road A. The access at East Jewell Avenue and South Rivera Street will be restricted to a right-in/right-out. All of the accesses along East Atlantic Place and East Rome Way will be full movement. A total of eight intersections are being analyzed in this report, three along South Rome Way at East Jewell Avenue, Road A and East Atlantic Place, three along South Rivera Street at East Jewell Avenue, Road A and East Atlantic Plan, and two intersections along East Atlantic Place at Access A and Access B. These intersections will be impacted the most by the proposed commercial project.
3. The proposed commercial project will have one automatic car wash with one tunnel stall, an 8,200 square foot shopping center, a 3,500 square foot fast-food restaurant with a drive-through window, a gas station with convenience market with 16 fueling positions, and a 24,000 square foot general light industrial development. Based on this information at full build out, the site is expected to generate approximately 6,836 daily vehicle-trips with 3,418 vehicles entering and 3,418 vehicles leaving the site on a typical weekday. Of these, approximately 664 vehicle-trips will occur during the AM peak-hour, with 342 vehicles entering and 322 vehicles exiting the site,



and approximately 604 vehicle-trips will occur during the PM peak-hour, with 299 vehicles entering and 305 vehicles exiting the site. The shopping center, fast-food restaurant with drive-through window and gas station with convenience market are expected to have passby trips. When the passby trips are removed, the site is expected to generate approximately 3,549 daily vehicle-trips with 1,775 vehicles entering and 1,774 vehicles leaving the site on a typical weekday. Of these, approximately 319 vehicle-trips will occur during the AM peak-hour, with 169 vehicles entering and 150 vehicles exiting the site, and approximately 331 vehicle-trips will occur during the PM peak-hour, with 161 vehicles entering and 170 vehicles exiting the site.

4. The directional distribution for site-generated traffic is expected to be 50 percent from the west using East Jewell Avenue and 50 percent from the east using East Jewell Avenue.
5. A total of eight intersections are being analyzed in this report, three along South Rome Way (East Jewell Avenue, Road A and East Atlantic Place), three along South Rivera Street (East Jewell Avenue, Road A and East Atlantic Place), and two along East Atlantic Place (Access A and Access B). Two analysis years are being analyzed in this report, the Years 2030 (the year the site is expected to be completed) and the Year 2050 (20 years after opening day). The three existing intersections, East Jewell Avenue/South Rome Way, South Rome Way/East Atlantic Place, and East Atlantic Place/South Rivera Street are currently unsignalized intersections.
6. Based on the recommendations in the Pioneer Business Park traffic impact study, which is currently under review by the City of Aurora, the intersection of East Jewell Avenue and South Rome Way is assumed to be signalized by the Year 2030.
7. All but one of the traffic movements at the three existing unsignalized intersection are currently operating at a good Level of Service (LOS "C" or better) in the AM and PM peak-hours. The one exception is the northbound

approach which expected to experience problems (LOS “E”) in the PM peak-hour. By the Year 2030, the signalized intersection of East Jewell Avenue and South Rome Street is expected to operate at a very good Level of Service (LOS “B”). By the Year 2050, there is no change in the performance of this intersection. This intersection does meet the MUTCD Four-Hour and Eight-Hour Traffic Signal warrants in the Year 2023 based on the analysis contained in the Pioneer Business Park traffic impact study.

8. The traffic movements at other seven intersections analyzed in this report are expected to operate at a good Level of Service (LOS “C” or better) during the AM and PM peak-hours through the Year 2050.
9. The estimated queue lengths in the Year 2050 are not considered to be excessive at all eight intersections along East Jewell Avenue, South Rome Way, South Rivera Street, and East Atlantic Place.
10. Traffic impacts associated with the proposed Landing at Jewell Project are minor. The installation of a traffic signal at East Jewell Avenue and South Rome Way eliminates the problems at this intersection in the Years 2030 and 2050.

## Section B – Introduction/Background

---

The proposed Landing at Jewell Project is located near the intersection of East Jewell Avenue and South Rome Way in Aurora, Colorado. The proposed commercial project will have one automatic car wash with one tunnel stall, an 8,200 square foot shopping center, a 3,500 square foot fast-food restaurant with a drive-through window, a gas station with convenience market with 16 fueling positions, and a 24,000 square foot general light industrial development. Three intersections along South Rome Way (East Jewell Avenue, Road A, and East Atlantic Place), three intersections along South Rivera Street (East Jewell Avenue, Road A, and East Atlantic Place), and two intersections along East Atlantic Place (Access A and Access B) are being analyzed in this report. The three existing intersections along South Rome Way and East Atlantic Place are currently unsignalized.

DB Enterprise, LLC has been retained by Aperio Property Consultants, Inc. to assess the traffic impacts to the existing and proposed roadway network from the traffic generated by the proposed commercial project. This report summarizes the following analysis procedures which were utilized in the evaluation:

- A review and analysis of present roadway and traffic conditions in the vicinity of the site and a review of planned and proposed roadway improvements in the general vicinity.
- A determination of the daily and peak-hour vehicle-trip generation for the proposed commercial project.
- An analysis of the estimated directional distribution of site-generated traffic and an assignment of that traffic to the adjacent street network.
- A determination of the future traffic volumes in the vicinity of the site.

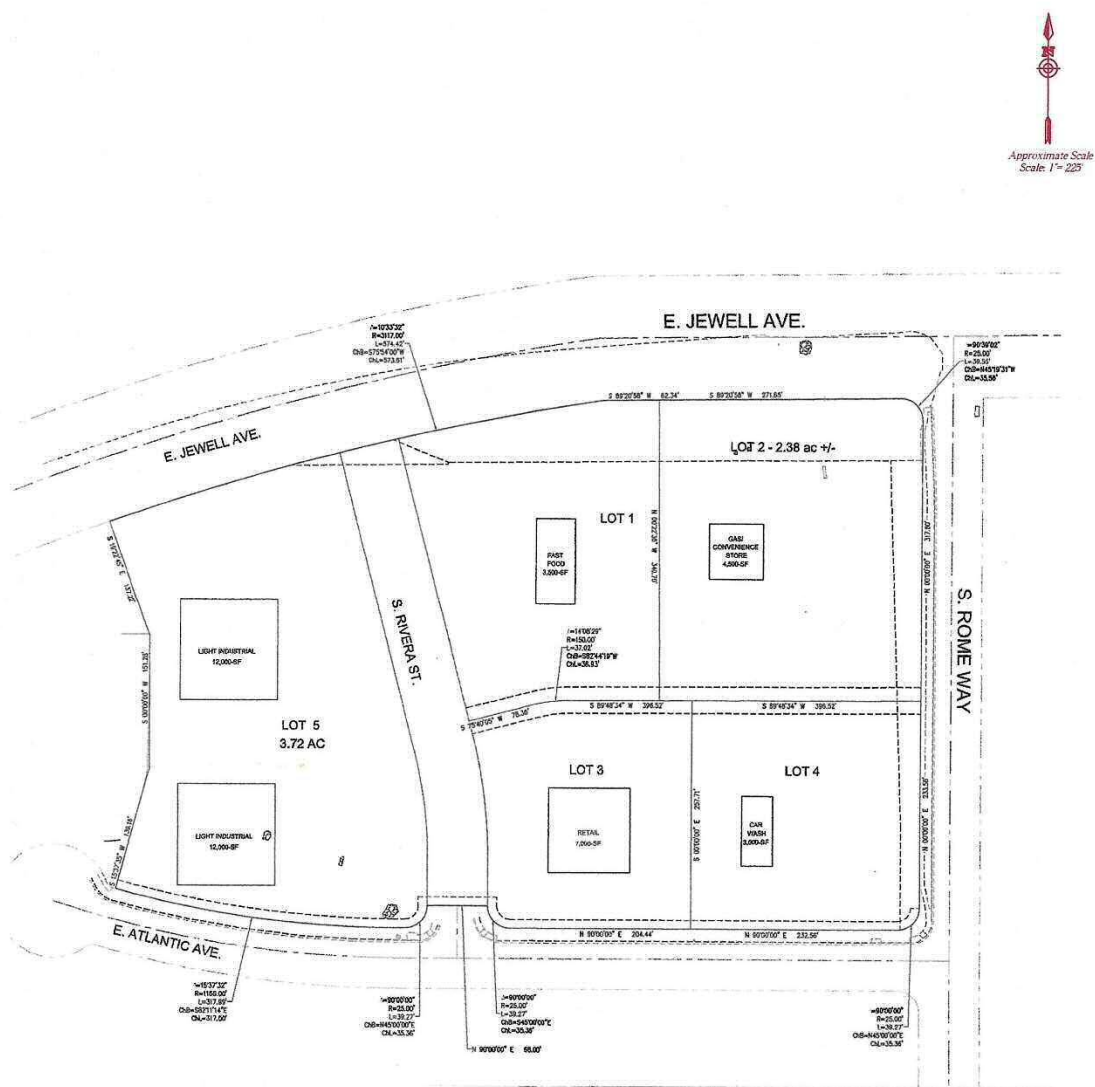
- An evaluation of the impacts of site-generated traffic expressed in terms of the development's traffic as an increment of total projected traffic on the surrounding roadway system and the resulting Levels of Service on the adjacent major roadways and intersections.
- A determination of appropriate roadway standards and improvements which will ensure optimum traffic operation for traffic entering and exiting the site.

The location of the proposed Landing at Jewell Project is shown in Figure 1. As shown in this figure, the site is located near the intersection of East Jewell Avenue and South Rome Way in Aurora, Colorado. The site is bounded on the north by East Jewell Avenue, South Rome Way on the east, East Atlantic Place on the south, and commercial development on the west. Figure 2 depicts the preliminary site plan for the proposed commercial project. The site will be served by four accesses, one along East Jewell Avenue at South Rivera Street, one along South Rome Way at Road A, and two along East Atlantic Place at Access A and Access B. Since there are no active development plans for any of the five lots, assumptions had to be made as to how each lot would access the roadway network. The site plan is currently under review by the City of Aurora and may change as a result of this review.

Figure 1 – Vicinity Map



Figure 2 – Site Plan



Note: This site plan does not identify specific access points.



## Section C – Existing Traffic Condition

---

### Roadway Network

Major roadways in the vicinity of the site are illustrated in Figure 3 and described with a brief discussion of anticipated future roadway improvements. East Jewell Avenue is classified as an arterial roadway with one lane in each direction near South Rome Way. It runs in an east-west direction from Denver to Arapahoe County. West of South Dunkirk Street the name of the roadway is East Iliff Avenue. The posted speed limit is 45 mph near the proposed commercial project. The long range plan for this roadway is to be widened to six lanes, three in each direction. Aurora has also identified East Jewell Avenue as a rapid transit corridor, but there is no identified funding source for this improvement. South Rome Way is classified as a local roadway. It has a posted speed limit of 30 mph. This roadway runs in an north-south direction. It begins on the north at East Jewell Avenue and ends approximately 3,650 south of East Jewell Avenue. There are no plans to widen this roadway. South Rivera Street currently does not exist. This roadway is planned to begin at East Jewell Avenue on the north and end at East Atlantic Place on the south. When completed this roadway will be classified as a local roadway. Road A currently does not exist. It will begin on the west at South Rivera Street and end on the east at South Rome Way. When completed this roadway will be classified as a local roadway.

Figure 3 shows existing traffic control and lane geometry for the intersections along South Rome Way. All of the existing intersections, two along South Rome Way and one along East Atlantic Place, are unsignalized with stop control on the side streets. Turning movement traffic counts were taken along South Rome Way at East Jewell Avenue and East Atlantic Place. Daily traffic counts were taken for the three approaches at the intersection of East Jewell Avenue and South Rome Way. Figure 4 depicts the traffic counts taken for this report. Appendix A contains the raw traffic counts.

Figure 3 – Existing Lane Geometry and Traffic Control

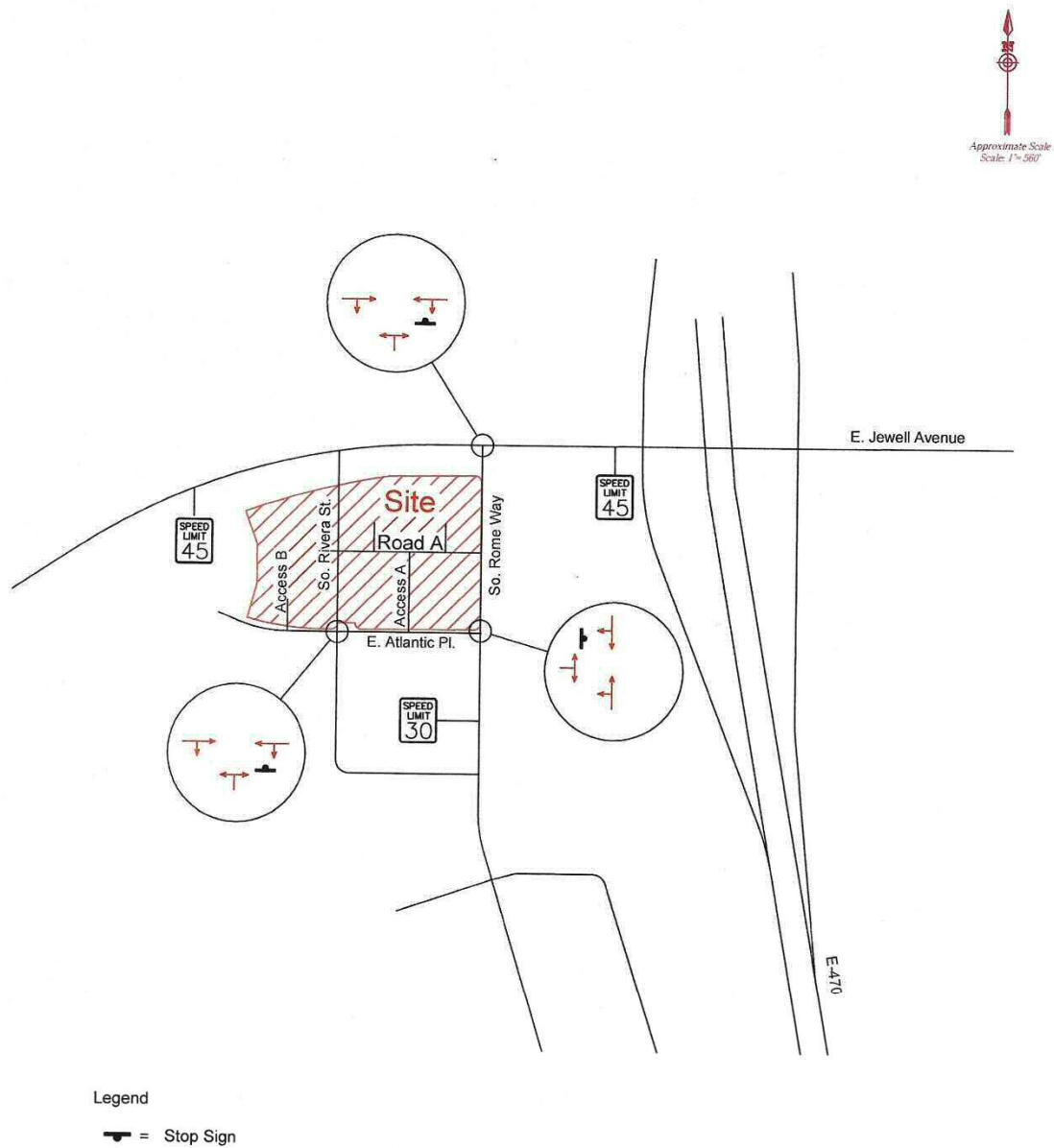
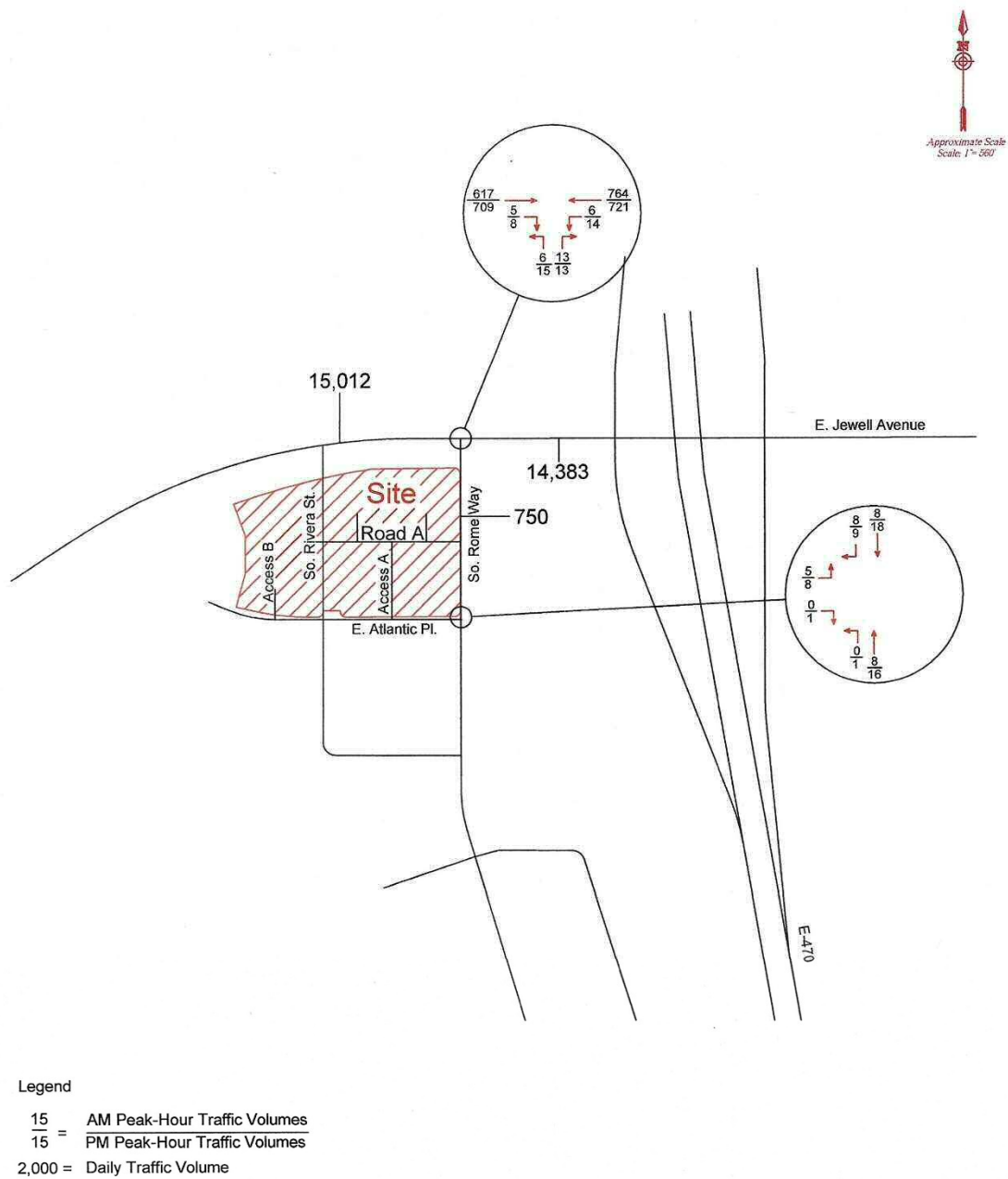


Figure 4 – Year 2021 Existing Traffic Volumes



The current traffic patterns have not fully recovered from the effects the COVID-19 pandemic, therefore an adjustment factor had to be developed. The Colorado Department of Transportation collects traffic counts on Gun Club Road (State Highway 30) just south of East Jewell Avenue. This location was used to develop the adjustment factor. This location had traffic counts for August 2008, April 2011, October 2015, and May 2017. Since traffic counts vary based on the month the counts are taken, all of these traffic counts were adjusted to an average annual daily traffic count by using the continuous traffic counter on State Highway 83, south of East Quincy Avenue. January, February, March, November, and December are lower than the annual average, while April, May, June, July, August, September, and October are higher than the annual average. The table below shows how each month compares to the annual average.

Month	Percent of AADT
January	92.8%
February	94.6%
March	98.5%
April	101.7%
May	103.2%
June	106.6%
July	103.2%
August	104.9%
September	102.5%
October	101.5%
November	95.4%
December	95.0%

These factors were applied to the Colorado Department of Transportation counts to arrive at average annual daily traffic counts for each year. From this information, the average annual daily traffic for State Highway 30 should have been 19,983 vehicles. A seven day traffic count was taken. The average traffic count was 18,723 vehicles. After applying the October adjusted factor of 1.015, the average annual traffic count is estimated to be 19,004. This information shows that traffic in the eastern portion of the City of Aurora has not fully recovered. An adjustment factor of 1.052 needs to be

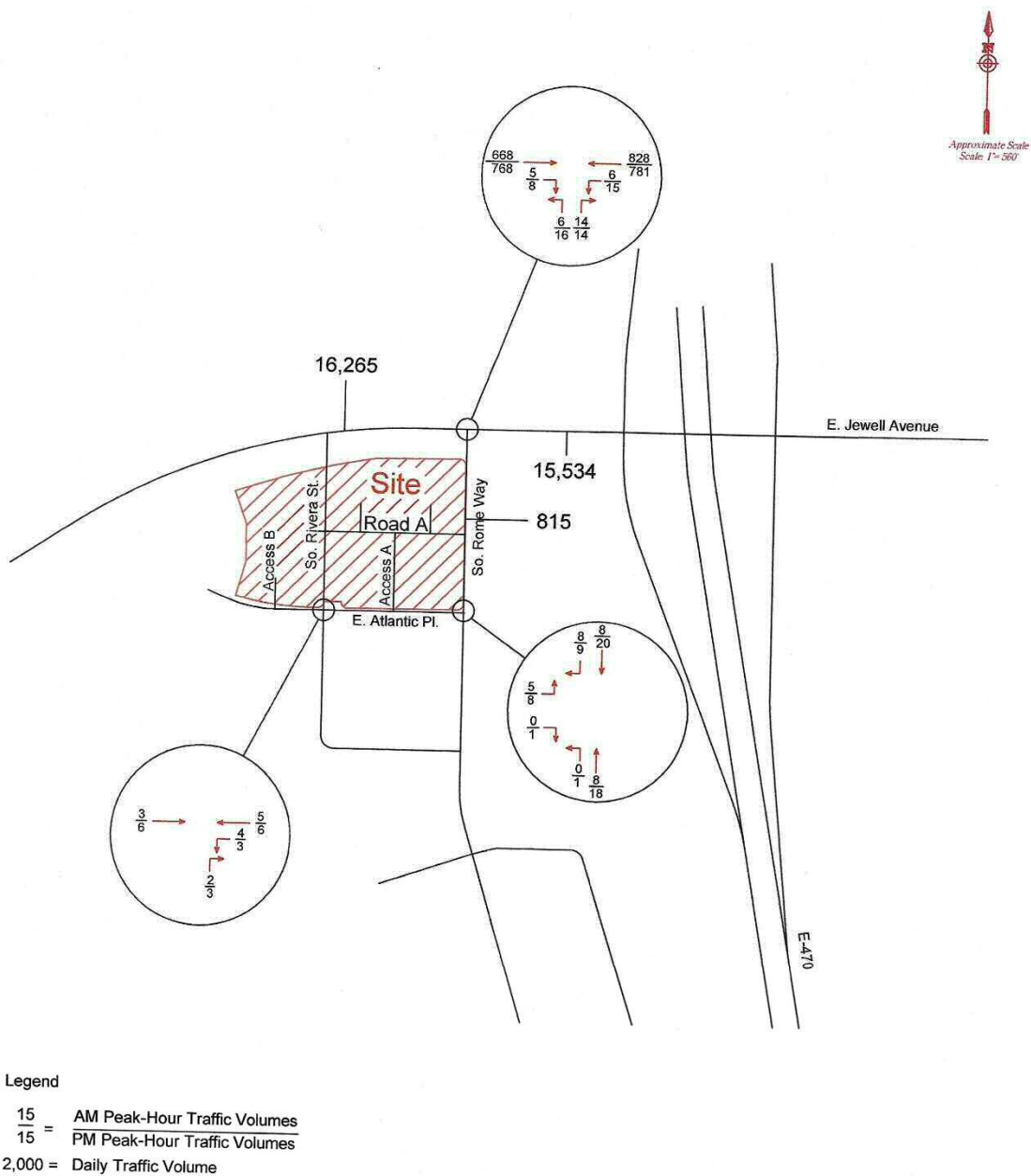
applied to the existing traffic counts to account for the effects of the COVID-19 pandemic. Appendix B contains the information used in calculating this adjustment factor.

Appendix B also contains spreadsheets for how the pandemic adjustment factor was developed as well as the estimated Year 2021 existing traffic and the Years 2030 and 2050 background and total daily and peak-hour traffic volumes.

### Total Year 2022 Existing Traffic

Figure 5 depicts the estimated Year 2022 existing peak-hour traffic volumes. The traffic volumes depicted in Figure 5 were arrived at by applying the pandemic adjustment factor of 1.052 and an annual growth rate of 3.0 percent to the traffic volumes depicted in Figure 4.

Figure 5 – Estimated Year 2022 Existing Traffic Volumes





## Section D – Proposed Conditions

---

### Trip Generation

The proposed commercial project will have one automatic car wash with one tunnel stall, an 8,200 square foot shopping center, a 3,500 square foot fast-food restaurant with a drive-through window, a gas station with convenience market with 16 fueling positions, and a 24,000 square foot general light industrial development. The amount of traffic that will be generated by the proposed commercial project has been estimated based upon trip generation rates published by the Institute of Transportation Engineers (ITE) in the 11<sup>th</sup> Edition, 2021, of *Trip Generation*.

The amount of traffic that is being generated by the proposed car wash at Lot 4 has been estimated based upon reported information for three sites – Littleton (6646 South Wadsworth Boulevard), East Littleton (6875 South Broadway), and County Line (5651 County Line Place, Highlands Ranch). These three facilities each have one tunnel car wash stall and range in size from 5,195 square feet for the South Wadsworth Boulevard site to 5,700 square feet for the County Line Place site). The proposed car wash at Lot 4 is expected to have one tunnel car wash stall consisting of 4,430 square feet in size. Information was provided for three existing car wash facilities from September 1, 2021 through September 11, 2021 with the exception of September 5, 2021 which was a holiday. Daily visitor totals were provided for each of the three existing sites along with the hourly totals for September 11, 2021 (Saturday) and September 8, 2021 (Wednesday). Appendix C contains this information. Tables 1 and 2 depicts this information.

Table1  
Daily Customers (Excluding Employees)

Day	Littleton	East Littleton	County Line	Average
9/1/2021	428	188	139	252
9/2/2021	407	199	151	252
9/3/2021	374	180	171	242
9/6/2021	392	266	241	300
9/7/2021	576	318	237	377
9/8/2021	477	243	199	306
9/9/2021	420	221	168	270
9/10/2021	496	217	226	313
Average	446	229	192	289
Employees	5	5	5	5
Total	451	234	197	294

Table 2  
Hourly Customers(Excluding Employees)

Day	Littleton	East Littleton	County Line	Average
7:00 to 8:00	14	11	9	11
8:00 to 9:00	33	20	6	20
9:00 to 10:00	44	12	18	25
10:00 to 11:00	44	17	17	26
11:00 to 12:00	32	20	16	23
12:00 to 13:00	43	18	24	28
13:00 to 14:00	36	19	22	26
14:00 to 15:00	43	24	21	29
15:00 to 16:00	52	29	16	32
16:00 to 17:00	43	28	17	29
17:00 to 18:00	50	27	18	32
18:00 to 19:00	28	13	11	17
19:00 to 20:00	15	5	4	8

Table 3 provides the daily and peak-hour trip generation estimates from the five lots contained in the proposed Landing at Jewell commercial project.

Based on this information at full build out, the site is expected to generate approximately 6,836 daily vehicle-trips with 3,418 vehicles entering and 3,418 vehicles leaving the site on a typical weekday. Of these, approximately 664 vehicle-trips will occur during the AM peak-hour, with 342 vehicles entering and 322 vehicles exiting the site, and approximately 604 vehicle-trips will occur during the PM peak-hour, with 299 vehicles entering and 305 vehicles exiting the site. The shopping center, fast-food restaurant with drive-through window and gas station with convenience market are expected to have passby trips. The methodology used to calculate the passby trips is contained in the ITE publication entitled Trip Generation Handbook, 3<sup>rd</sup> Edition. When the passby trips are removed, the site is expected to generate approximately 3,549 new daily vehicle-trips with 1,775 vehicles entering and 1,774 vehicles leaving the site on a typical weekday. Of these, approximately 319 vehicle-trips will occur during the AM peak-hour, with 169 vehicles entering and 150 vehicles exiting the site, and approximately 331 vehicle-trips will occur during the PM peak-hour, with 161 vehicles entering and 170 vehicles exiting the site.

Table 3 - Estimated Vehicle Trip Generation  
Weekday Daily

ITE Category	Quantity		Average Weekday (1)	
			Trip Rate	Vehicle Trips
Automatic Car Wash (4)	1	Tunnel	588.00	588
822 Strip Retail Plaza	7.00	KSF (2)	54.45	381
834 Fast-Food Restaurant with Drive-Through Window	3.50	KSF (2)	467.48	1,636
945 Gas Station with Convenience Market	16	FP (3)	257.13	4,114
110 General Light Industrial	24.0	KSF (2)	4.87	117
			Total	6,836
			Total Passby Trips	3,287
			Total Non-PassBy Trips	3,549

### AM Peak-Hour

ITE Category		Quantity		AM Peak-Hour			
				Trip Rate		Vehicle Trips	
				In	Out	In	Out
	Automatic Car Wash (4)	1	Tunnel	20	20	20	20
832	Strip Retail Plaza	7.0	KSF (2)	1.42	0.94	10	7
934	Fast-Food Restaurant with Drive-Through Window	3.50	KSF (2)	22.75	21.86	80	77
945	Gas Station with Convenience Market	16	FP (3)	13.52	13.52	216	216
110	General Light Industrial	24.0	KSF (2)	.0.65	0.09	16	2
			Total			342	322
			Total Passby Trips			173	172
			Total Non-PassBy Trips			169	150

### PM Peak-Hour

ITE Category		Quantity		PM Peak-Hour			
				Trip Rate		Vehicle Trips	
				In	Out	In	Out
	Automatic Car Wash (4)	1	Tunnel	32	32	32	32
832	Strip Retail Plaza	7.0	KSF (2)	3.30	3.29	23	23
934	Fast-Food Restaurant with Drive-Through Window	3.50	KSF (2)	17.18	15.85	60	55
945	Gas Station with Convenience Market	16	FP (3)	11.38	11.38	182	182
110	General Light Industrial	24.0	KSF (2)	.0.09	0.56	2	13
			Total			299	305
			Total Passby Trips			138	135
			Total Non-PassBy Trips			161	170

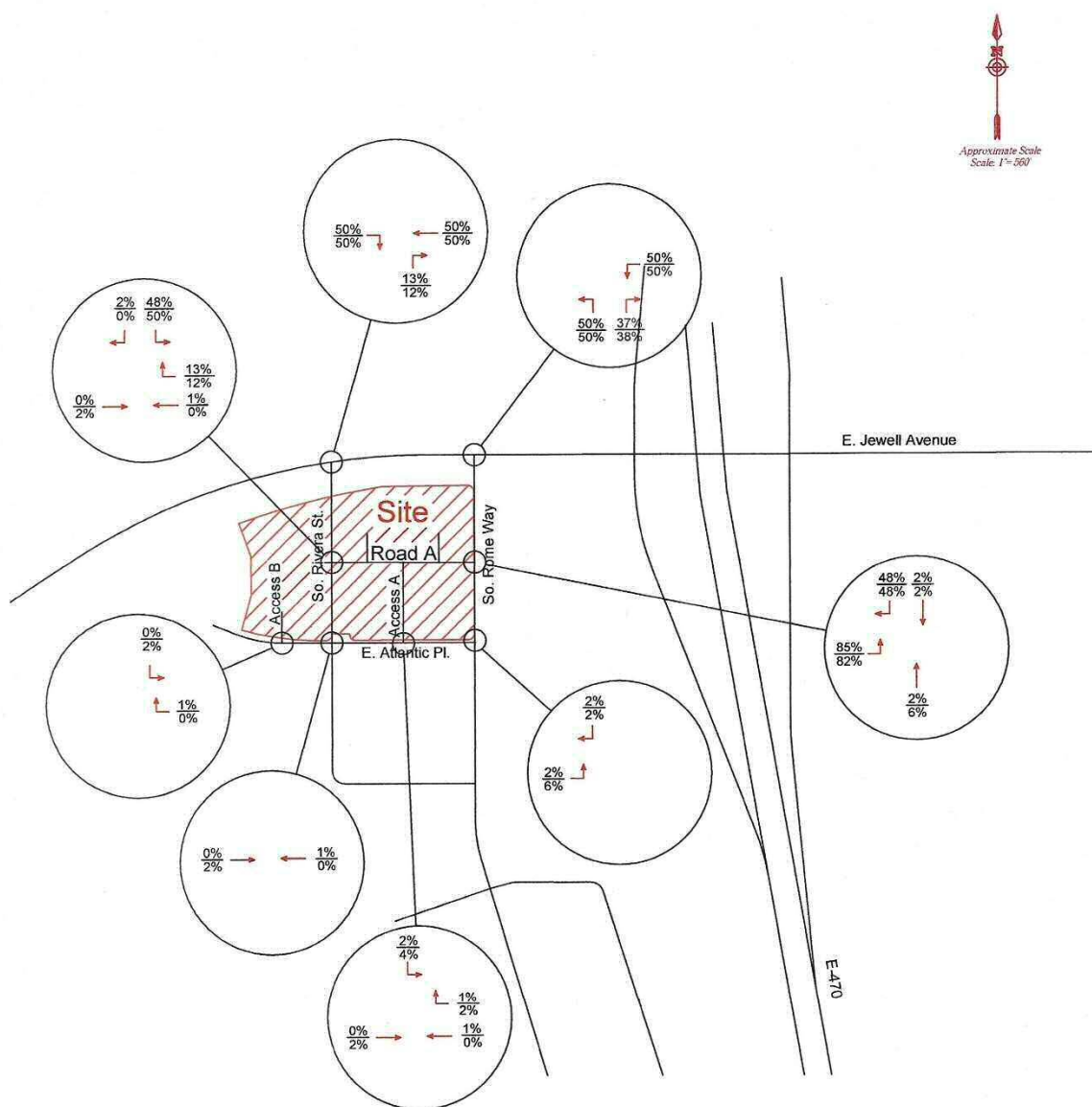
- (1) Source: "Trip Generation", Institute of Transportation Engineers, 11<sup>th</sup> Edition, 2021
- (2) KSF = 1,000 Square Feet
- (3) FP = Fueling Positions
- (4) Information from Existing Tunnel Car Wash Facilities

## Trip Distribution

The directional distribution of site-generated traffic onto adjacent roadways, which provide access to and from the proposed Landing at Jewell Project, is one of the most important components in the assessment of the proposed commercial project's traffic impacts. Major factors which influence the traffic distribution assumptions include the location of the site relative to the surrounding roadway network, the level of access serving the site, and the type of land use proposed for the development.

The directional distribution for site-generated traffic is expected to be 50 percent from the west using East Jewell Avenue and 50 percent from the east using East Jewell. Figure 6 depicts the trip distribution percentages being used in the report.

Figure 6 – Trip Distribution of Site-Generated Traffic



Legend

$\frac{40\%}{35\%} = \frac{\text{AM Peak-Hour Directional Distribution of Site-Generated Traffic}}{\text{PM Peak-Hour Directional Distribution of Site-Generated Traffic}}$



## Site-Generated Traffic

Figure 7 illustrates the assignment of non-passby site-generated peak-hour traffic on the adjacent street system for the intersections along East Jewell Avenue, South Rome Way, and East Atlantic Place. Figure 8 illustrates the assignment of passby site-generated peak-hour traffic on the adjacent street system for the intersections along East Jewell Avenue, South Rome Way, and East Atlantic Place. The assignment of site-generated traffic is based upon the traffic distribution percentages shown in Figure 6 and the vehicle-trip generation estimates contained in Table 3.

Figure 7 – Assignment of Non-Passby Site-Generated Traffic

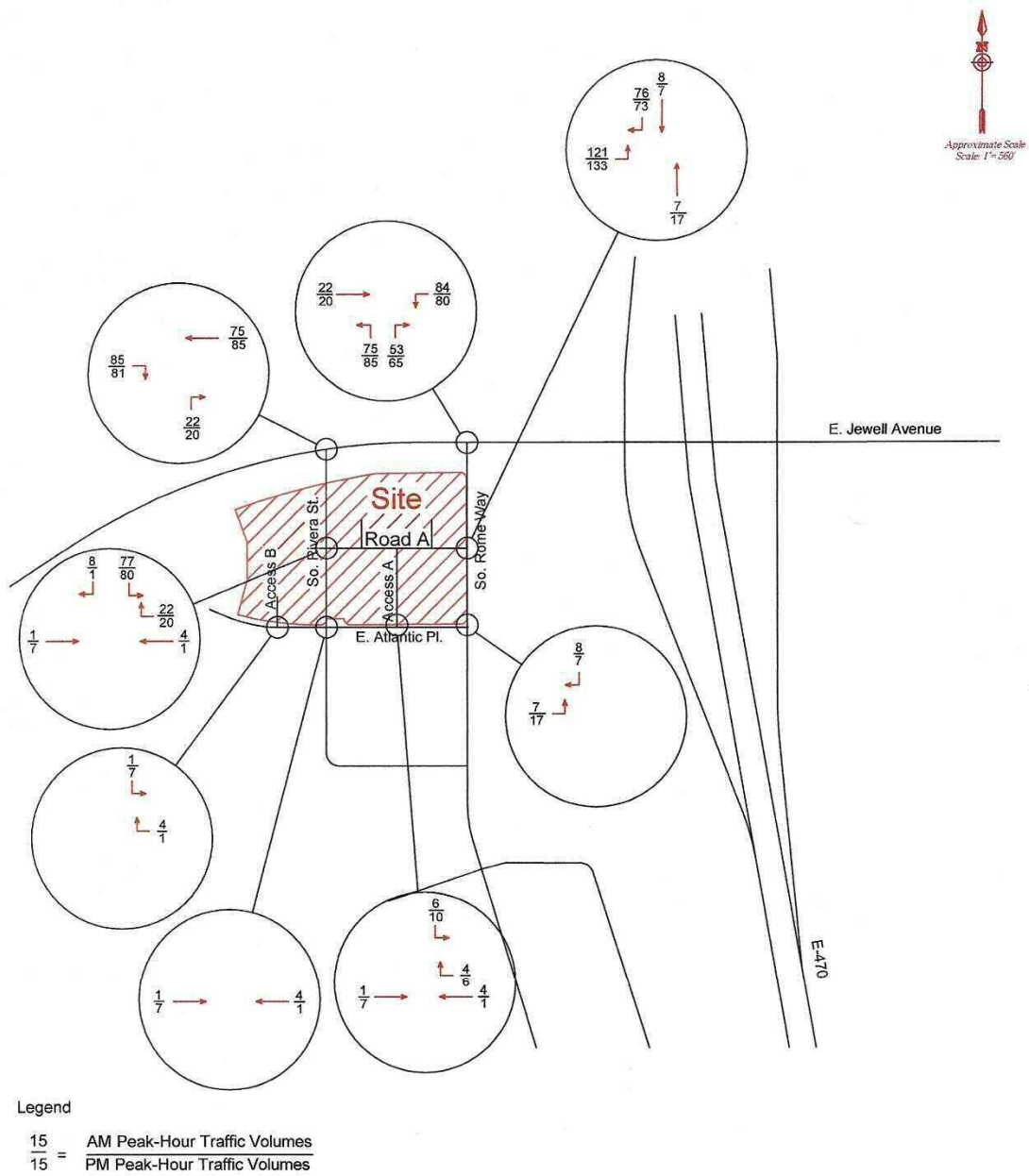
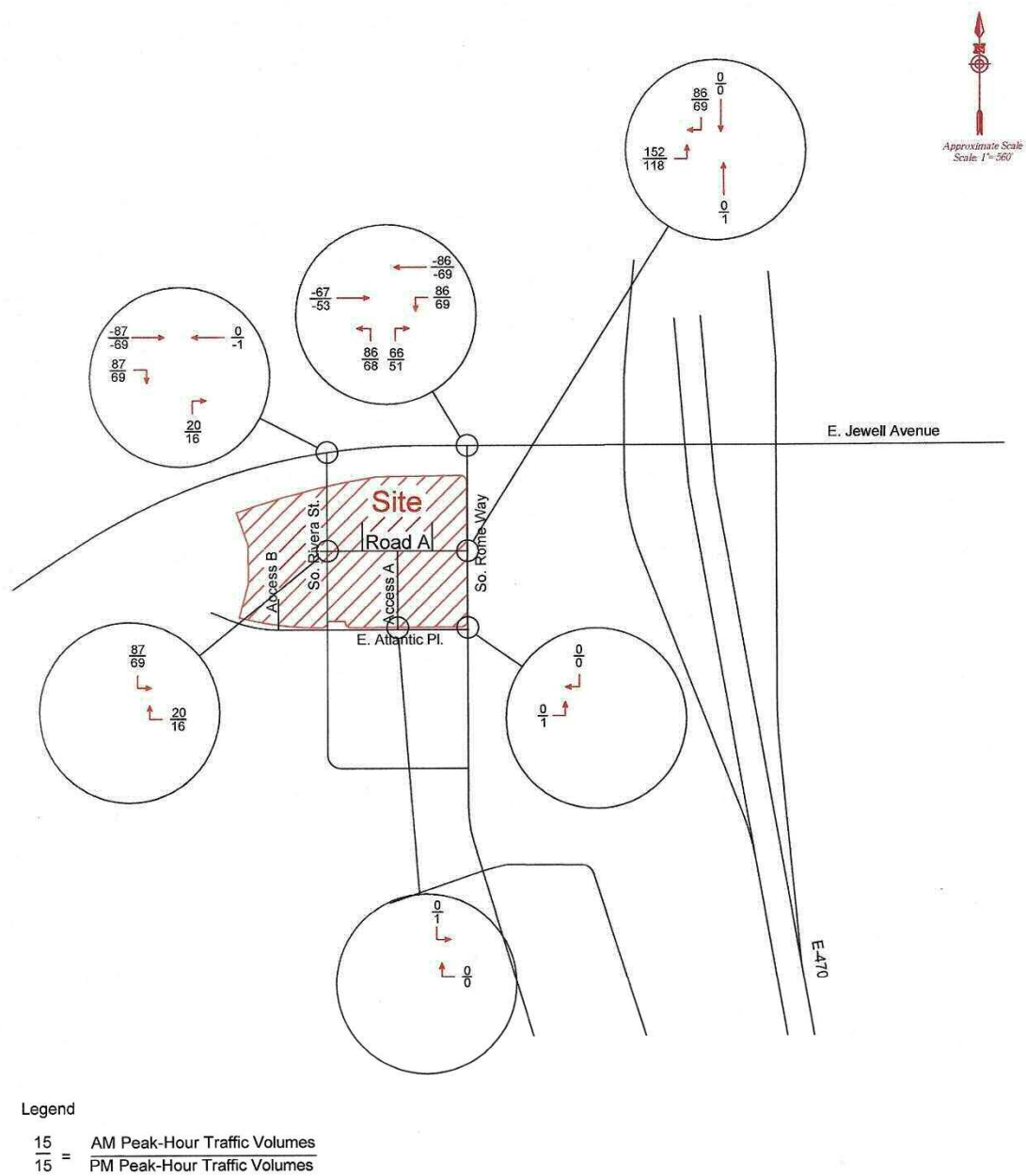


Figure 8 – Assignment of Passby Site-Generated Traffic



## Section E – Future Conditions

---

### Background Traffic

A growth factor of 1.305 (annual growth rate of 3 percent for five years) was applied to the peak-hour traffic volumes depicted in Figure 4 to arrive at the initial Year 2030 peak-hour background traffic volumes. The traffic from the Pioneer Business Park project has been added to the initial Year 2030 peak-hour background traffic volumes to arrive at the final Year 2030 background peak-hour traffic volumes. Appendix D contains selected pages from the traffic impact study for the proposed Pioneer Business Park project. Figure 9 depicts the final Year 2030 background peak-hour traffic volumes.

A growth factor of 1.806 (annual growth rate of 3 percent for 20 years) was applied to the peak-hour traffic volumes depicted in Figure 9 to arrive at the initial Year 2050 peak-hour background traffic volumes. As was done for the Year 2030, the traffic from the Pioneer Business Park project has been added to the initial Year 2030 peak-hour background traffic volumes to arrive at the final Year 2050 background peak-hour traffic volumes. Figure 10 depicts the final Year 2050 background peak-hour traffic volumes.

### Total Traffic

Figure 11 depicts the Year 2030 total peak-hour traffic volumes. These peak-hour traffic volumes were arrived at by adding the Year 2030 background peak-hour traffic volumes depicted in Figure 9 to the non-passby site-generated traffic depicted in Figure 7 and the passby site-generated traffic depicted in Figure 8.

Figure 12 depicts the Year 2050 total peak-hour traffic volumes. These peak-hour traffic volumes were arrived at by adding the Year 2050 background peak-hour traffic volumes depicted in Figure 10 to the non-passby site-generated traffic depicted in Figure 7 and the passby site-generated traffic depicted in Figure 8.

Figure 9 – Year 2030 Background Peak-Hour Traffic Volumes

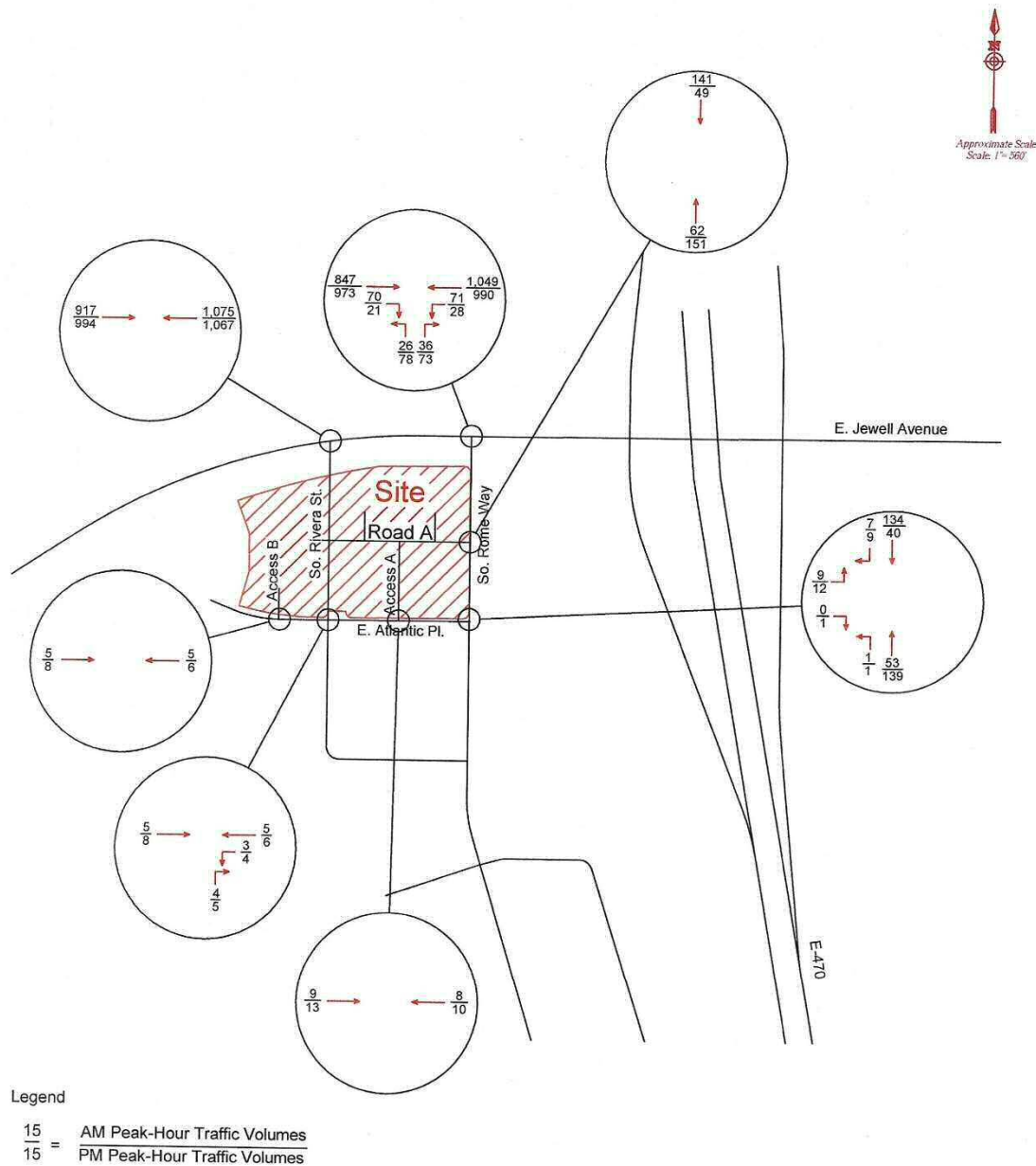


Figure 10 – Year 2050 Background Peak-Hour Traffic Volumes

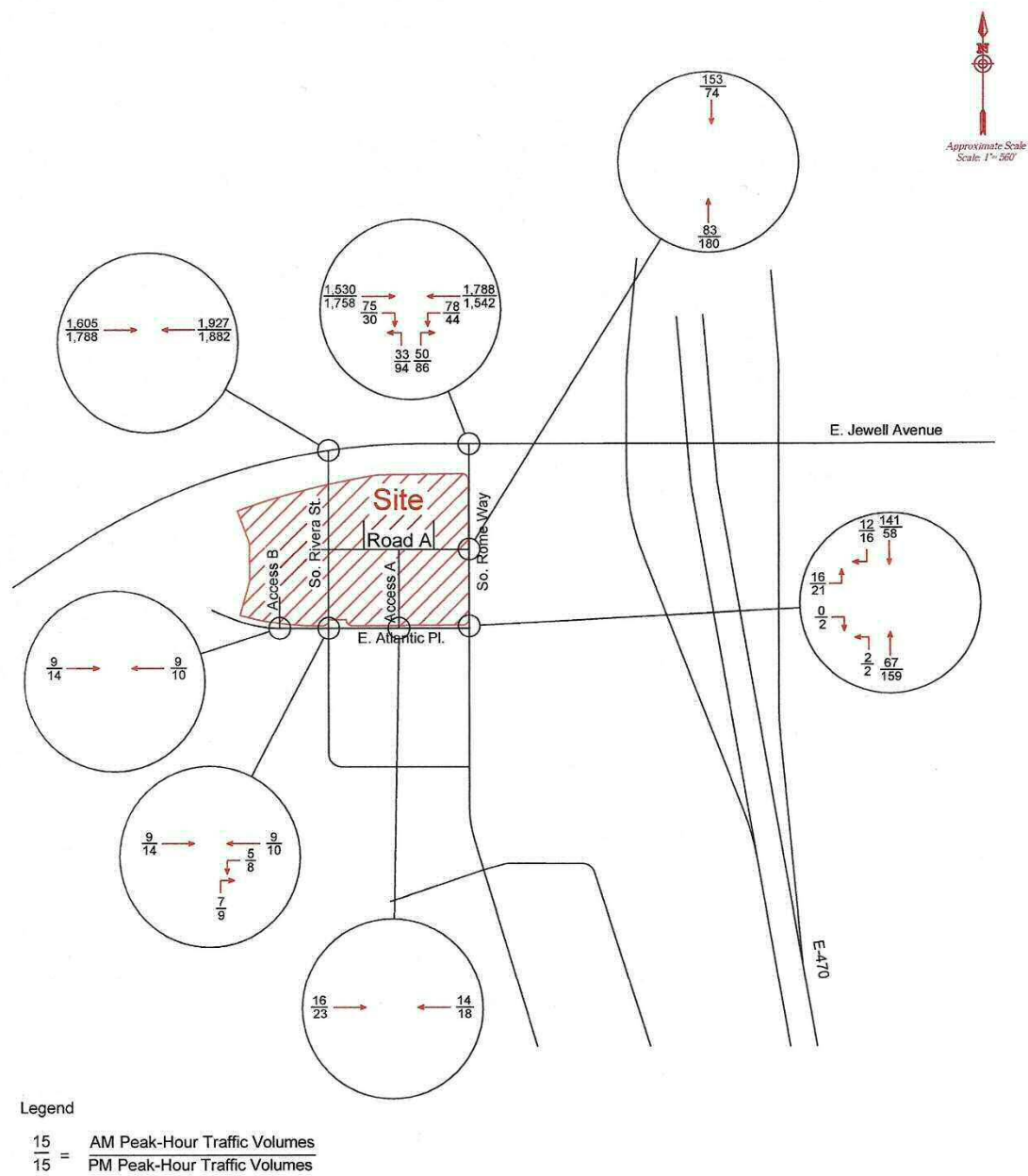


Figure 11 – Year 2030 Total Peak-Hour Traffic Volumes

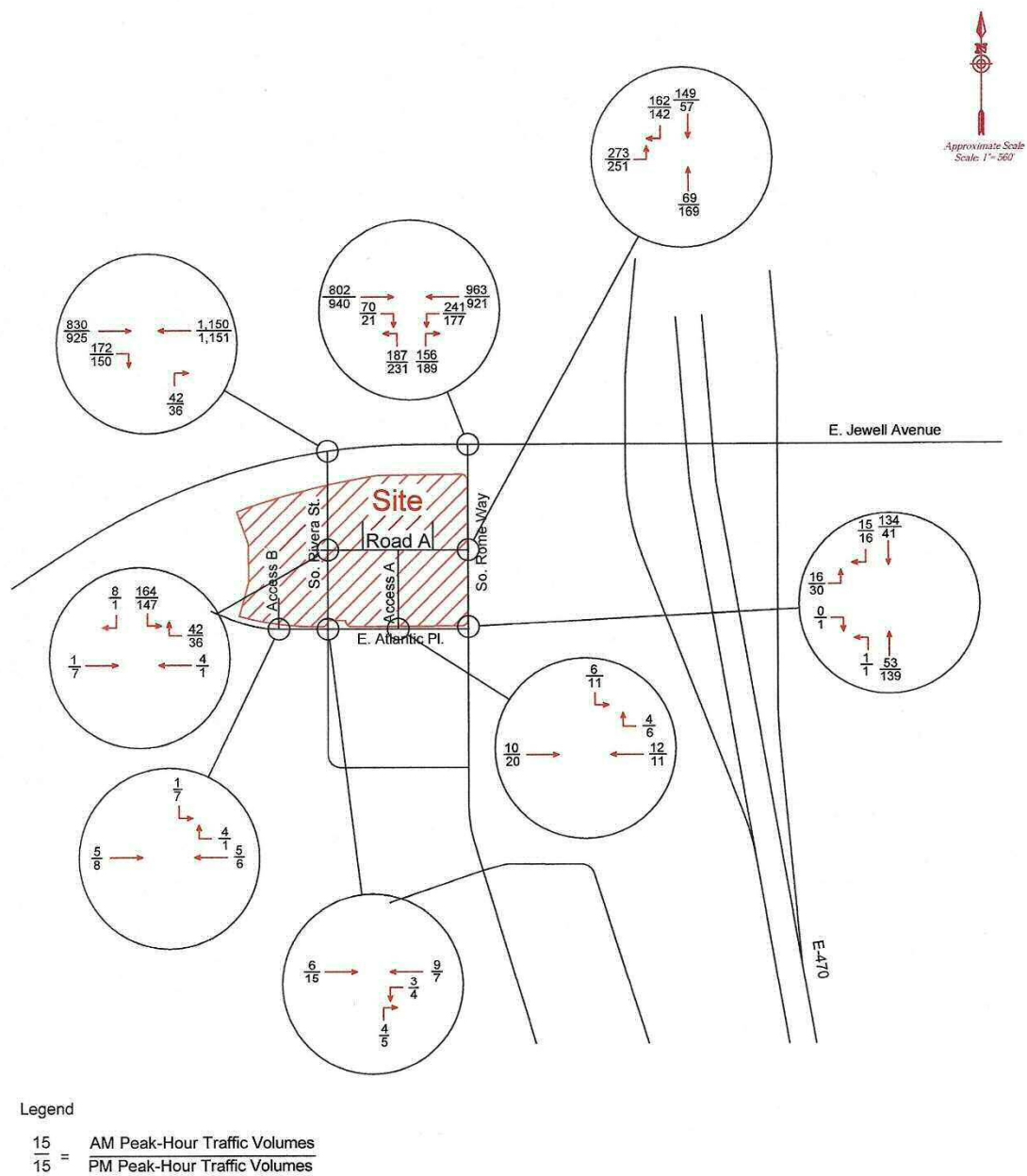
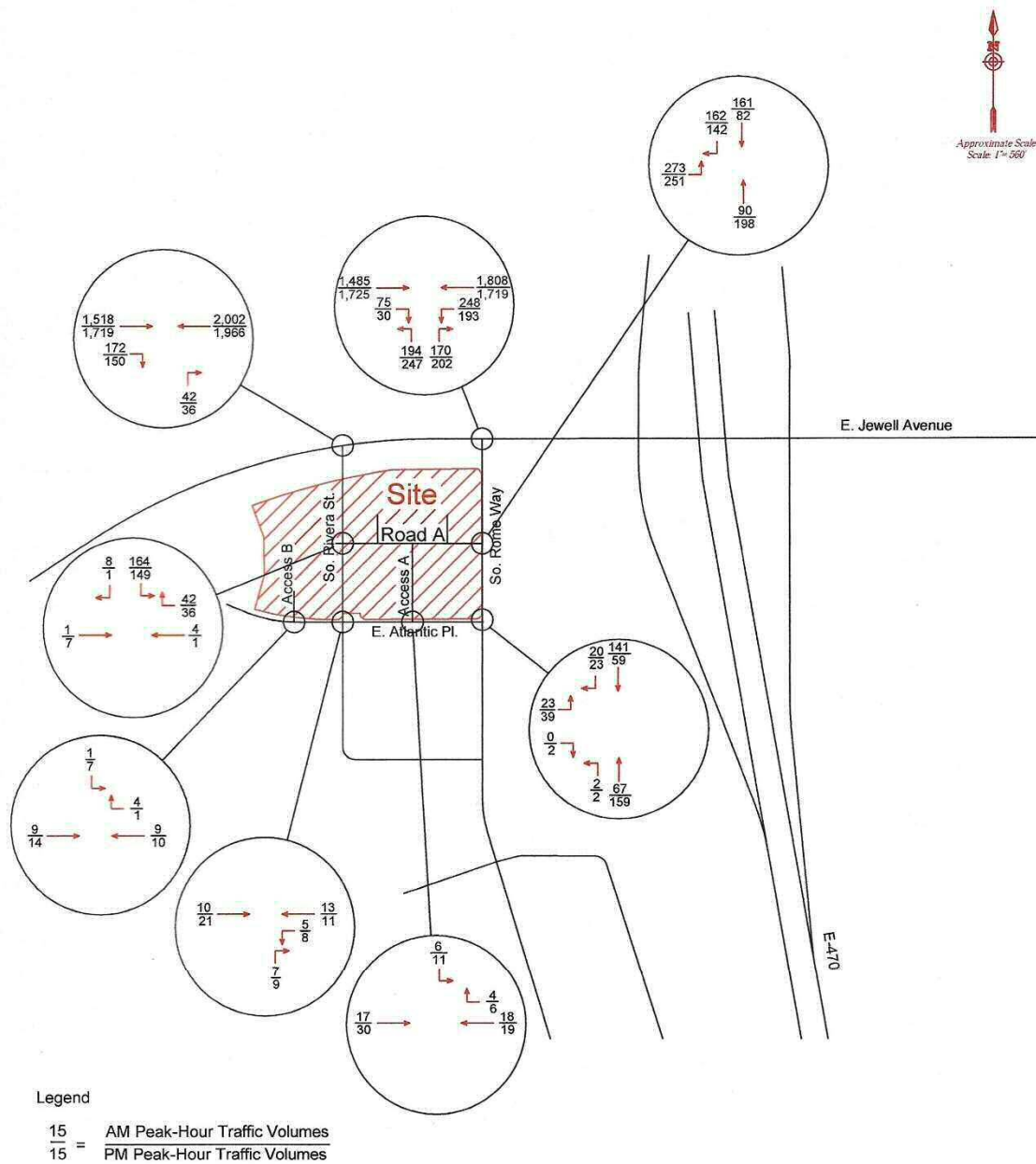




Figure 12 – Year 2050 Total Peak-Hour Traffic Volumes



## Section F - Evaluation

---

Traffic impacts associated with a development such as the proposed Landing at Jewell Project are best described in terms of the resulting affect they have on the major intersections that serve the proposed commercial project. In this particular case, the expected impacts are concentrated at three intersections along South Rome Way (East Jewell Avenue, Road A and East Atlantic Place), three intersections along South Rivera Place (East Jewell Avenue, Road A, and East Atlantic Place), and two intersections along East Atlantic Place (Access A and Access B).

Based upon the peak-hour traffic volumes shown in Figures 5, 9, 10, 11, and 12, “Signalized and Unsignalized Intersection Capacity” analyses have been performed using procedures set forth in the 2010 *Highway Capacity Manual*. The concept of Level of Service (LOS) is used as a basis for computing combinations of roadway operating conditions. By definition, six different Levels of Service are used (A, B, C, D, E, and F) with “A” being a free-flow condition and “E” representing the “capacity” of a given intersection or traffic movement. Analyses have been performed for the estimated Year 2022 existing traffic condition, Year 2030 background and total traffic conditions, and Year 2050 background and total traffic conditions.

The lane geometry and traffic control depicted in Figure 3 were used for this analysis of the estimated Year 2022 existing traffic condition. Figure 13 depicts the traffic control and lane geometry used for the Year 2030 background and total traffic conditions. Due to the expected daily traffic volumes on East Jewell Avenue by the Year 2030, this roadway warrants the widening to four lanes. Figure 14 depicts the traffic control and lane geometry for the Year 2050 background and total traffic conditions.

The Pioneer Business Park traffic impact analysis study included a Four-Hour and Eight-Hour MUTCD Traffic Signal Warrant analyses for the Year 2023. This analysis showed that the intersection of East Jewell Avenue and South Rome Way does meet the MUTCD Four-Hour traffic signal warrant and the MUTCD Eight-Hour traffic signal

Figure 13 – Year 2030 Traffic Control and Lane Geometry

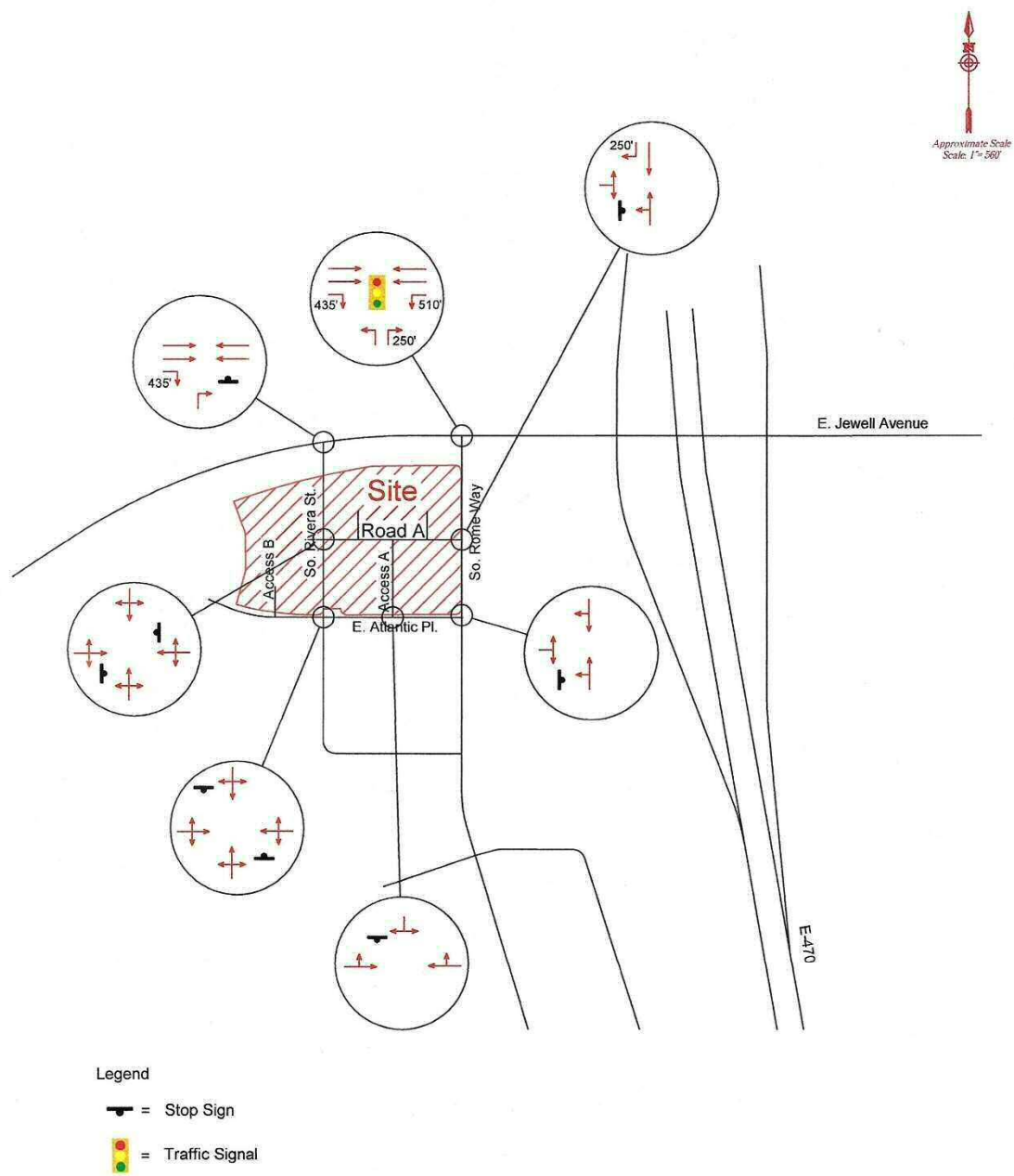
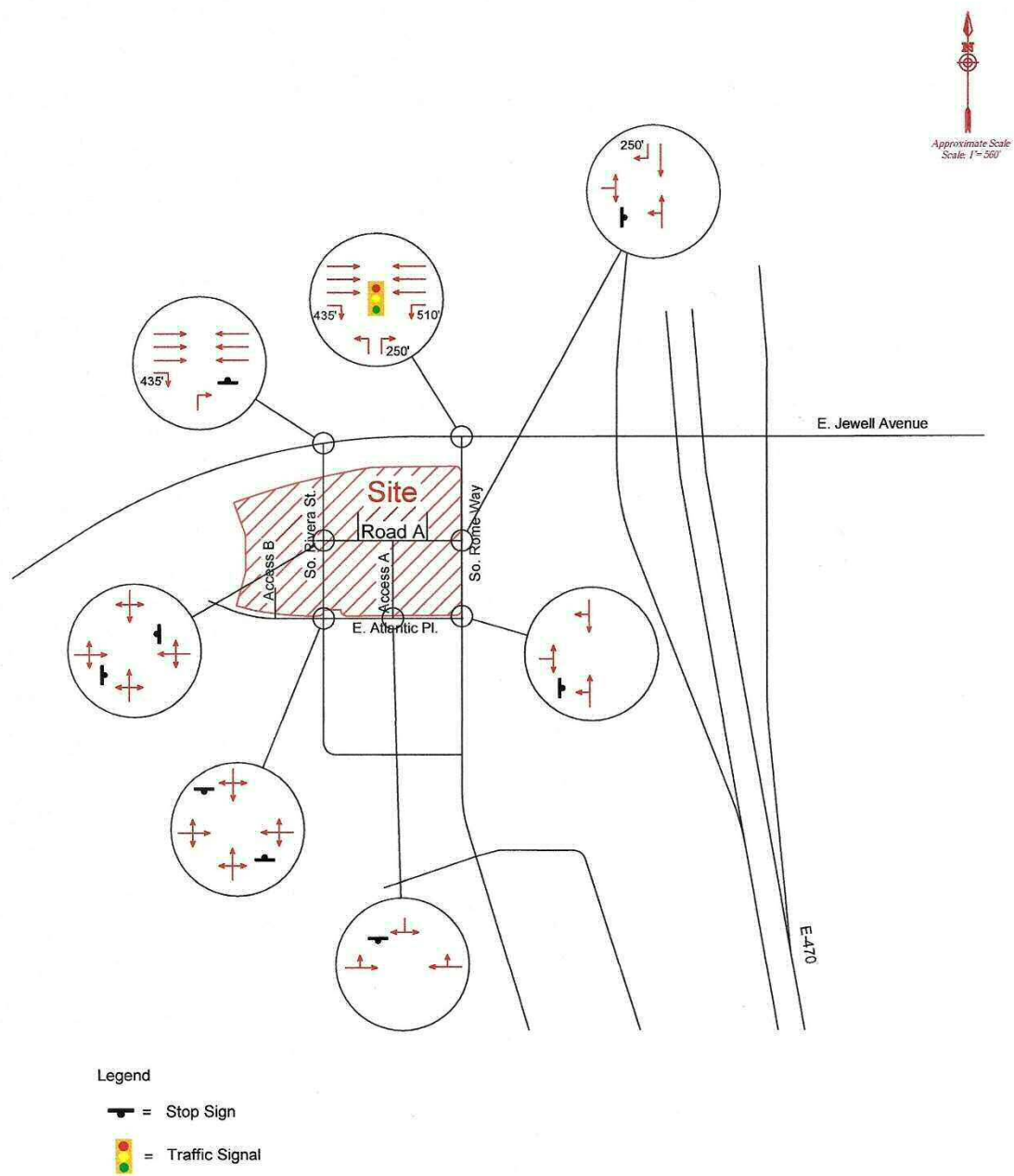


Figure 14 – Year 2050 Traffic Control and Lane Geometry



warrant (56 percent condition). Appendix D contains the tables from the Pioneer Business Park traffic impact analysis study that documents the need to signalize the intersection of East Jewell Avenue and South Rome Way. The City of Aurora agreed that a new traffic signal warrant study was not necessary for this report.

The results of these capacity analyses are found in Appendix E and are summarized in Table 4 for the estimated Year 2022 exiting traffic condition, Table 5 for the Year 2030, and Table 6 for the Year 2050.

East Jewell Avenue / South Rome Way: Currently, all but one of the traffic movements at this unsignalized intersection are operating at an acceptable Level of Service (LOS “D” or better) during the AM and PM peak-hours. The one exception is the northbound approach which is expected to experience problems (LOS “E”) in the PM peak-hour. By the Year 2030 it is assumed that this intersection will be signalized, and East Jewell Avenue would be widened to four lanes. As a signalized intersection, this intersection operates at a very good Level of Service (LOS “B”) during the AM and PM peak-hours either with or without the traffic from the proposed commercial project. In the Year 2050, there is no change in the performance of this intersection.

East Jewell Avenue / South Rivera Street: The northbound left-turn traffic movement is expected to operate at good Level of Service (LOS “C”) during the AM and PM peak-hours through the Year 2050.

South Rome Way / East Atlantic Place: All the traffic movements at this unsignalized intersection are expected to operate at a very good Level of Service (LOS “B” or better) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial development.

South Rome Way / Road A: All the traffic movements at this unsignalized intersection are expected to operate at a very good Level of Service (LOS “B” or better) during the AM and PM peak-hours through the Year 2050.

Table 4 – Intersection Level of Service Analysis Results (Estimated Existing Traffic)

Intersection Location	Traffic Control	Year 2022 Existing	
		Level of Service	Level of Service
		AM Peak	PM Peak
East Jewell Avenue & South Rome Way	Unsignalized		
Northbound Approach		C (22.6)	E (37.2)
Westbound Approach		A (9.2)	A (9.6)
South Rome Way & East Atlantic Place	Unsignalized		
Northbound Approach		A (0.0)	A (7.3)
Eastbound Approach		A (8.6)	A (8.8)
East Atlantic Place & South Rivera Street	Unsignalized		
Northbound Approach		A (8.3)	A (8.4)
Westbound Approach		A (7.2)	A (7.2)

Table 5 -Intersection Level of Service Analysis Results (2030)

Intersection Location	Traffic Control	Year 2030 Background Traffic		Year 2030 Background Plus Site-Generated Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service
		AM Peak	PM Peak	AM Peak	PM Peak
East Jewell Avenue & South Rivera Street	Unsignalized				
Northbound Right-Turn		---	---	B (12.1)	B (12.6)
East Jewell Avenue & South Rome Way	Signalized				
Eastbound Through		C (20.4)	C 21.8)	C (26.1)	C (34.1)
Eastbound Right-Turn		B (14.4)	B (12.6)	B (16.1)	B (14.6)
Westbound Left-Turn		B (13.6)	B (13.4)	B (17.6)	B (15.9)
Westbound Through		B (13.8)	B (12.9)	B (11.4)	B (11.6)
Northbound Left-Turn		B (11.5)	B (12.3)	B (15.3)	B (15.7)
Northbound Right-Turn		B (11.7)	B (12.4)	B (15.2)	B (15.4)
Entire Intersection		B (16.4)	B (16.9)	B (17.6)	C (21.1)
South Rome Way & Road A	Unsignalized				
Eastbound Approach		---	---	B (14.6)	B (14.0)
South Rivera Street & Road A					
Eastbound Approach		---	---	---	---
Westbound Approach		---	---	---	---
Southbound Approach		---	---	---	---
South Rome Way & East Atlantic Place	Unsignalized				
Northbound Approach		A (0.0)	A (7.3)	A (7.5)	A (7.3)
Eastbound Approach		A (9.7)	A (9.6)	A (9.8)	A (9.8)
East Atlantic Place & Rivera Street	Unsignalized				
Northbound Approach		A (8.4)	A (8.4)	A (8.4)	A (8.4)
Westbound Approach		A (7.2)	A (7.2)	A (7.2)	A (7.3)
East Atlantic Place & Access A	Unsignalized				
Southbound Approach		---	---	A (8.7)	A (8.7)
East Atlantic Place & Access B	Unsignalized				
Southbound Approach		---	---	A (8.6)	A (8.6)



Table 6 -Intersection Level of Service Analysis Results (2050)

Intersection Location	Traffic Control	Year 2050 Background Traffic		Year 2050 Background Plus Site-Generated Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service
		AM Peak	PM Peak	AM Peak	PM Peak
East Jewell Avenue & South Rivera Street	Unsignalized				
Northbound Right-Turn		---	---	C (21.0)	C (23.8)
East Jewell Avenue & South Rome Way	Signalized				
Eastbound Through		C (22.4)	C (22.9)	C (23.2)	C (26.1)
Eastbound Right-Turn		B (15.2)	B (13.4)	B (16.0)	B (14.9)
Westbound Left-Turn		B (18.4)	B (18.1)	D (37.0)	C (29.7)
Westbound Through		B (16.3)	B (13.8)	B (13.6)	B (13.6)
Northbound Left-Turn		B (18.6)	C (20.7)	C (24.9)	C (26.1)
Northbound Right-Turn		B (19.1)	C (20.8)	C (25.1)	C (25.7)
Entire Intersection		B (19.0)	B (18.7)	B (19.8)	C (21.0)
South Rome Way & Road A	Unsignalized				
Eastbound Approach		---	--	B (13.5)	B (13.6)
South Rivera Street & Road A		---	---		---
Eastbound Approach		---	---	---	---
Westbound Approach		---	---	---	---
Southbound Approach		---	---	--	--
South Rome Way & East Atlantic Place	Unsignalized				
Northbound Approach		A (7.6)	A (7.4)	A (7.6)	A (7.4)
Eastbound Approach		A (9.9)	A (9.9)	B (10.0)	B (10.2)
East Atlantic Place & Rivera Street	Unsignalized				
Northbound Approach		A (8.4)	A (8.4)	A (8.4)	A (8.4)
Westbound Approach		A (7.2)	A (7.3)	A (7.2)	A (7.3)
East Atlantic Place & Access A	Unsignalized				
Southbound Approach		---	---	A (8.7)	A (8.8)
East Atlantic Place & Access B	Unsignalized				
Southbound Approach		---	---	A (8.6)	A (8.7)

East Atlantic Place / South Rivera Street: All the traffic movements at this unsignalized intersection are expected to operate at an excellent Level of Service (LOS “A”) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial project.

East Atlantic Place / Access A: All the traffic movements at this unsignalized intersection are expected to operate at an excellent Level of Service (LOS “A”) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial project.

East Atlantic Place / Access B: All the traffic movements at this unsignalized intersection are expected to operate at an excellent Level of Service (LOS “A”) during the AM and PM peak-hours through the Year 2050, either with or without the traffic from the proposed commercial project.

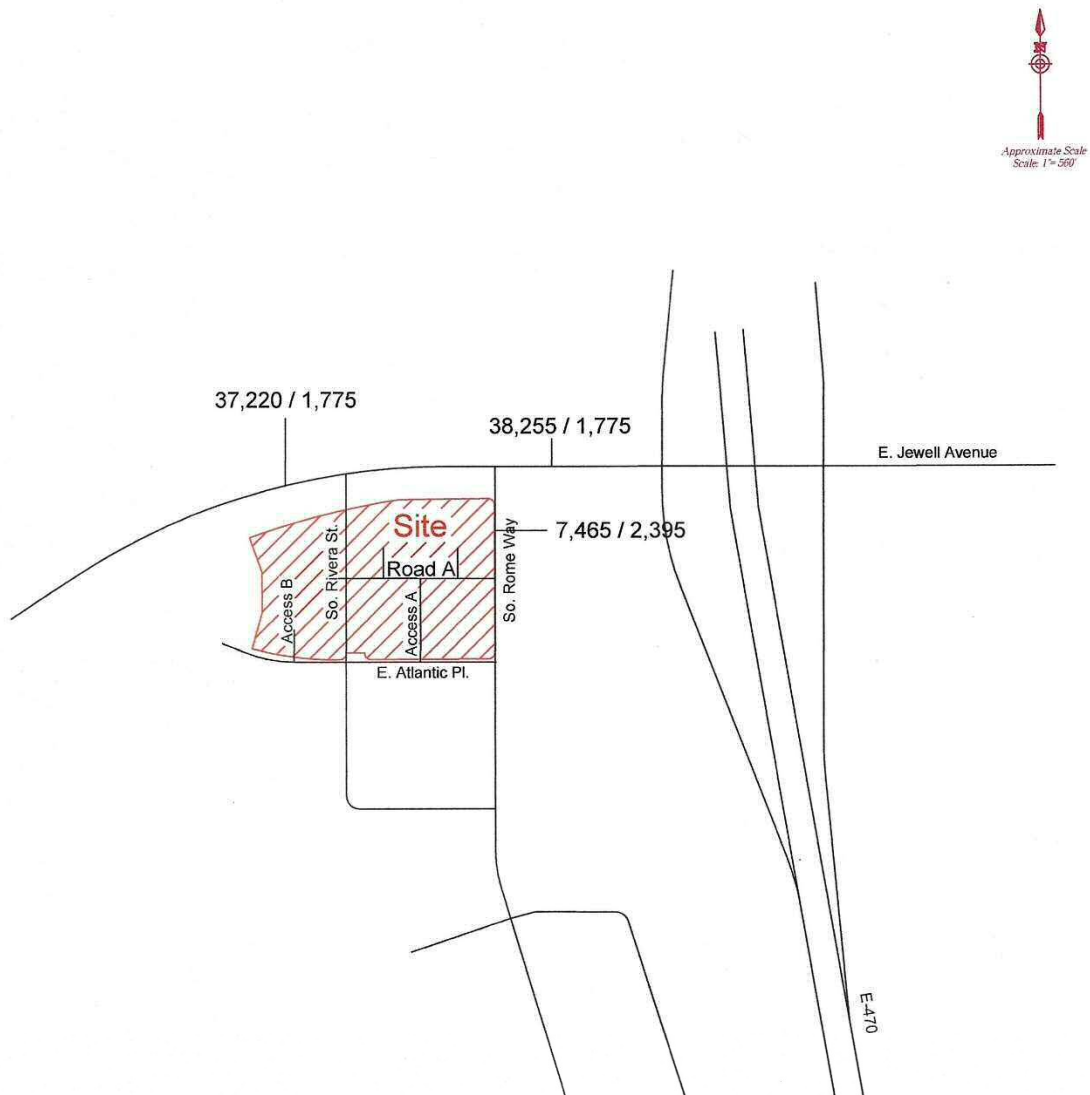
#### Year 2050 Daily Traffic Impacts

Figure 15 depicts the daily traffic impacts in the Year 2050 from the proposed commercial project. Site-generated traffic accounts for less than 5.0 percent of the traffic on East Jewell Avenue on west side of South Rivera Street and east of South Rome Way and 32 percent of the traffic on South Rome Way north of Road A.

#### Year 2050 Queue Length Analysis

A queue length analysis was performed for the two intersections along East Jewell Avenue (South Rivera Street and South Rome Way ), two intersections along South Rome Way (Road A and East Atlantic Place), three intersections along South Rivera Street (Road A and East Atlantic Place), and two intersection along East Atlantic Place (Access A and Access B) for the Year 2050 AM and PM peak-hour total traffic conditions. The software program *SimTraffic* was used to estimate these queue lengths. The queue lengths being reported for this analysis represent an average of five simulations with each simulation lasting 60 minutes (See Figure 16). None of the queue lengths at these eight intersections are considered to be excessive.

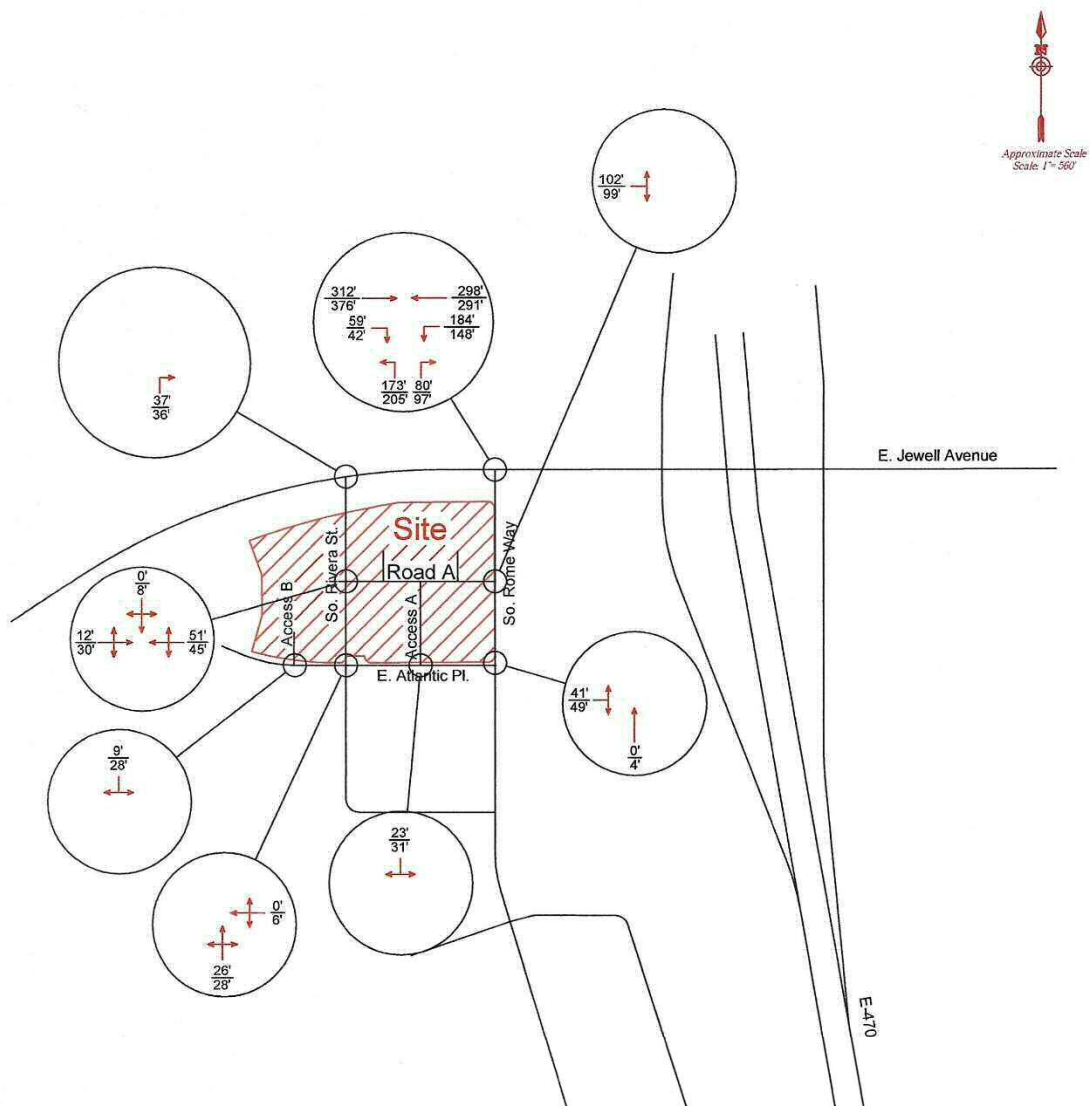
Figure 15 – Year 2050 Daily Traffic Impacts



Legend

2,500 / 200 = Year 2043 Daily Traffic Volume / Site-Generated Daily Traffic

Figure 16 – Year 2045 Queue Length Analysis



15' = AM Peak-Hour Queue Length, in feet  
15' = PM Peak-Hour Queue Length, in feet

### Traffic Signal Warrant Analysis

The Pioneer Business Park traffic impact analysis study was done for the Year 2023 with only the background traffic and the traffic from the proposed industrial development. When only the Year 2023 background traffic volumes are used, this intersection does not meet either the MUTCD Four Hour Traffic Signal Warrant or the MUTCD Eight-Hour Traffic Signal Warrant. When the traffic volumes for the Year 2023 total traffic condition are used, this intersection appears to meet the MUTCD Four-Hour Traffic Signal Warrant (see Table 6 from the Pioneer Business Park traffic impact analysis study – see Appendix D) and MUTCD Eight-Hour Traffic Signal Warrant (see Table 7 from the Pioneer Business Park traffic impact study – see Appendix C) for the Year 2023. For the Eight-Hour Traffic Signal Warrant, this warrant is only met for the 56% condition which is not normally used to warrant the installation of a traffic signal.

The installation of this traffic signal should only be undertaken after completing a traffic signal warrant study using observed hourly traffic counts.

### Pedestrian Safety

Some of the sites in the proposed commercial project could attract pedestrian traffic, namely the fast-food and gas station with convenience market. There is a lack of sidewalks along either side of East Jewell Avenue east of South Genoa Street. If pedestrian is going to visit the proposed Landing at Jewell project, they will more than likely use East Jewell Avenue. The length of area along East Jewell Avenue that does not have a sidewalk is approximately 7,450 feet. When a sidewalk is provided, it should only be on the south side of East Jewell Avenue. There is a sidewalk on the west side of South Rome Way from East Jewell Avenue to the proposed Pioneer Business Park site. As a part of the development of the Landing at Jewell project, a sidewalk should be provided on the east side of South Rome Way for the full length of the site. There is a pedestrian / bicycle path located on the west side of E-470. A connection should be provided from this path to the proposed Landing at Jewell project on the south side of East Jewell Avenue. This connection is not located on any of the property owned by the owner of the Landing at Jewell site.

## Auxiliary Traffic Lane Analysis

An analysis was completed of the need for the auxiliary traffic lanes for the intersection of East Jewell Avenue and South Rome Way for the Year 2030 using the State Highway Access Code. The assumption has been made that East Jewell Avenue has an access category designation of NR-A, non-rural principal highway. South Rome Way has an access category designation of NR-C, non-rural arterial. This is the lowest access category that the State Highway Access Code has for an urban roadway.

Left-Turn Deceleration Turn Lane (East Jewell Avenue) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 10 vehicles per hour. This threshold is met for the westbound left-turn traffic movement when the site is fully developed. Therefore, a left-turn deceleration turn lane should be provided for westbound East Jewell Avenue. The recommended length of this westbound left-turn deceleration turn lane should be 580 feet which consists of 435 feet for deceleration and 185 feet of storage.

Right-Turn Deceleration Turn Lane (East Jewell Avenue) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 25 vehicles per hour. This threshold is met for the eastbound right-turn traffic movement when the site is fully developed. Therefore, an eastbound right-turn deceleration turn lane should be provided for eastbound East Jewell Avenue. The length of this right-turn deceleration lane should be 435 feet, based on a posted speed limit of 45 mph. Once East Jewell Avenue is widened to six lanes, this dedicated eastbound right-turn deceleration lane could be converted to a shared through/right-turn lane.

Right-Turn Deceleration Turn Lane (South Rome Way) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 50 vehicles per hour. This threshold is met for the northbound right-turn traffic movement when the site is fully developed. Therefore, a right-turn deceleration turn lane should be provided for

northbound South Rome Way. The length of this right-turn deceleration lane should be 250 feet, based on a posted speed limit of 30 mph.

An analysis was completed of the need for the auxiliary traffic lanes for the intersection of East Jewell Avenue and South Rivera Street for the Year 2030 using the State Highway Access Code. The assumption has been made that East Jewell Avenue has an access category designation of NR-A, non-rural principal highway.

Right-Turn Deceleration Turn Lane (East Jewell Avenue) – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 25 vehicles per hour. This threshold is met for the eastbound right-turn traffic movement when the site is fully developed. The length of this right-turn deceleration lane should be 435 feet, based on a posted speed limit of 45 mph. Once East Jewell Avenue is widened to six lanes, this dedicated eastbound right-turn deceleration lane could be converted to a shared through/right-turn lane.

An analysis was completed of the need for the auxiliary traffic lanes for the intersection of South Rome Way and Road A for the Year 2030 using the State Highway Access Code. The assumption has been made that South Rome Way has an access category designation of NR-C, non-rural arterial highway. This is the lowest access category that the State Highway Access Code has for an urban roadway.

Right-Turn Deceleration Turn Lane – The State Highway Access Code requires a separate right-turn deceleration turn lane if the peak-hour turning movement is greater than 50 vehicles per hour. This threshold is met for the eastbound right-turn traffic movement when the site is fully developed. The length of this right-turn deceleration lane should be 250 feet, based on a posted speed limit of 30 mph.

A reevaluation of the auxiliary traffic lane analysis was completed for the Year 2050. Only one change is needed to what is being recommended in the Year 2030. The length of the westbound left-turn deceleration lane at East Jewell Avenue and South Rome Way will need to be lengthen by 40 feet to 620 feet.



Table 7 depicts the results of the auxiliary traffic lane analysis. This table shows the length of each auxiliary traffic lane for the Years 2030 and 2050.

Table 7 -Auxiliary Traffic Lane Analysis

Intersection	Analysis Year	
	2030	2050
East Jewell Avenue & South Rome Way		
Westbound Left-Turn Lane	580 feet	620 feet
Eastbound Right-Turn Lane	435 feet	435 feet
Northbound Right-Turn Lane	250 feet	250 feet
East Jewell Avenue & South Rivera Street		
Eastbound Right-Turn Lane	435 feet	435 feet
South Rome Way & Road A		
Southbound Right-Turn Lane	250 feet	250 feet

Based on using the State Highway Access Code thresholds.

If the storage lengths are used from the State Highway Code (Table 4-8), there is no change the length of the westbound left-turn deceleration lane at East Jewell Avenue and South Rome Way.

### Traffic Calming

The City of Aurora requested that a discussion be provided for possible traffic calming strategies. Since there are no residential areas located along South Rome Way, no traffic calming strategies need to be implemented. South Rome Way already has a posted speed limit of 30 mph.

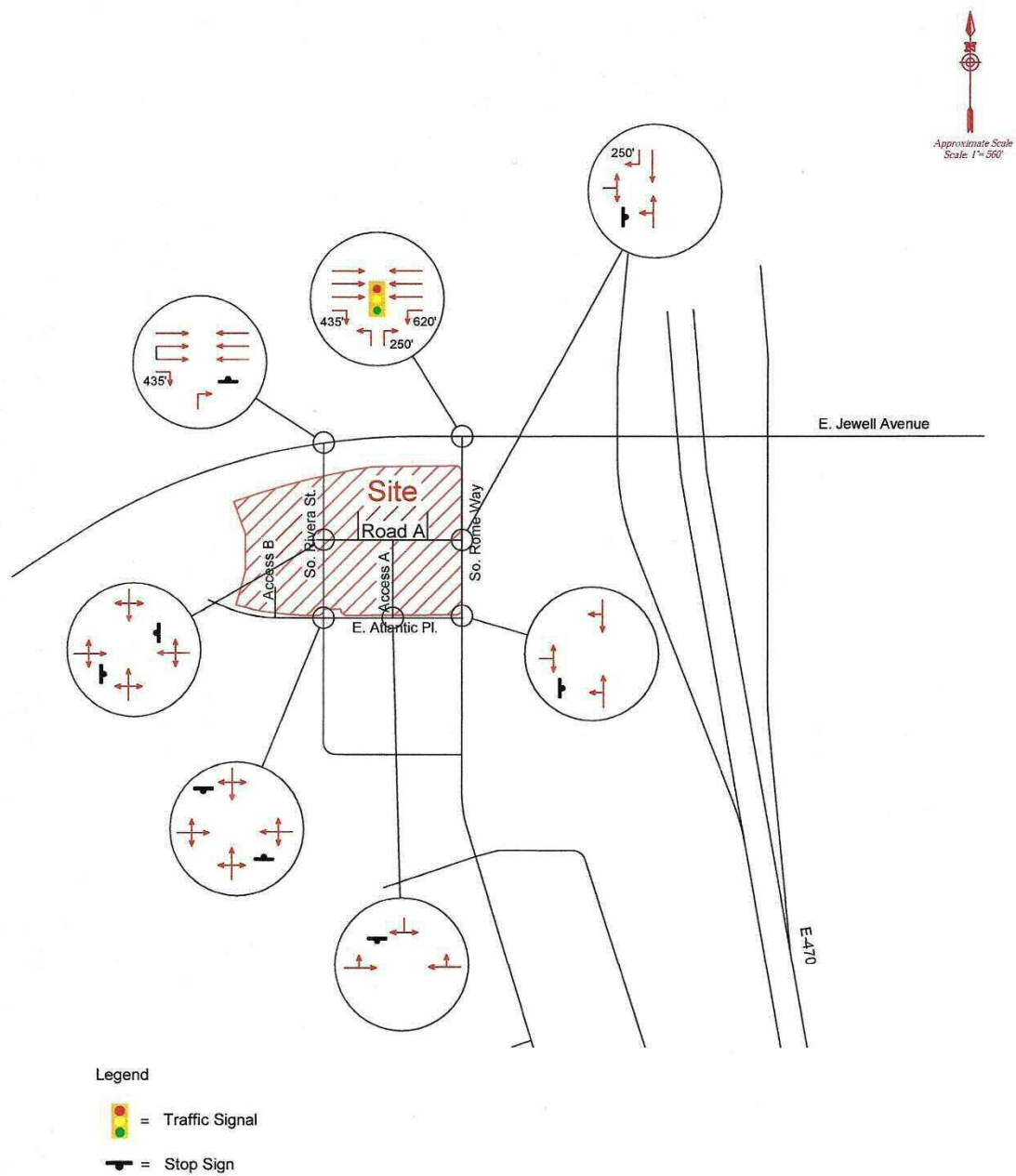
## Section G - Recommendations/Conclusions

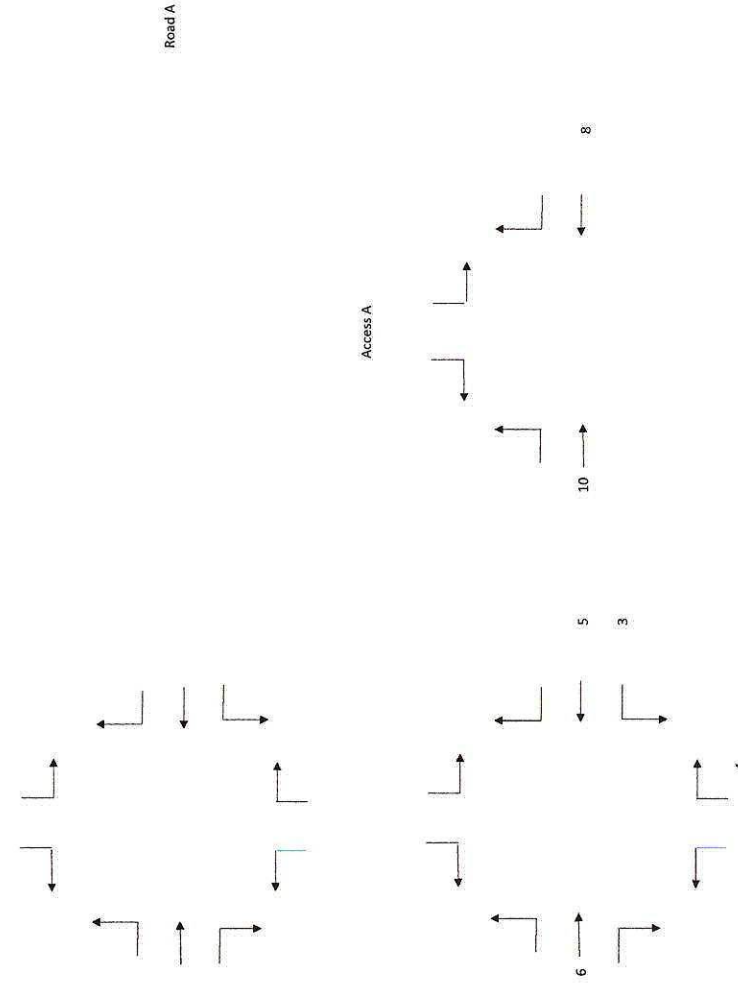
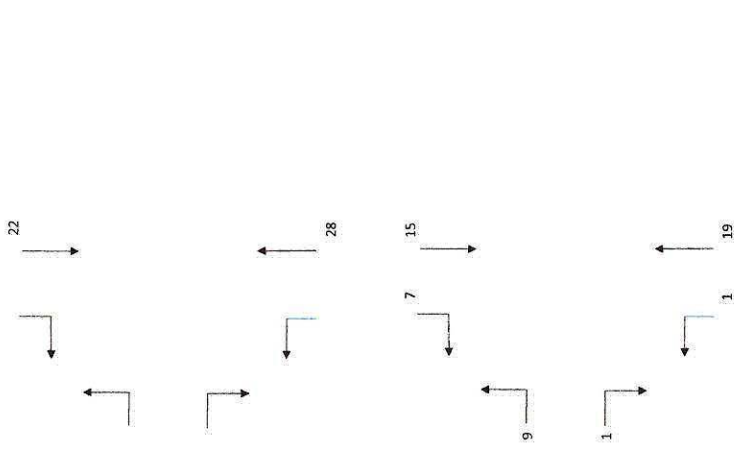
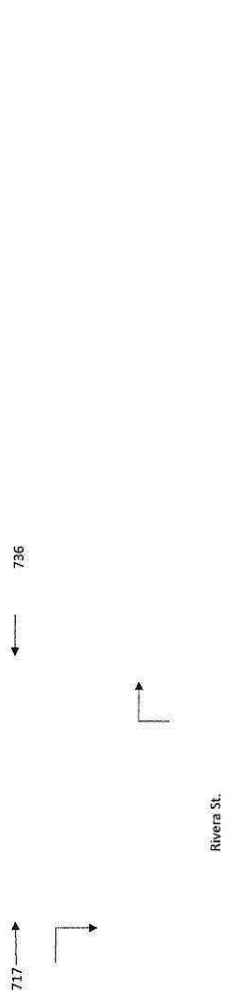
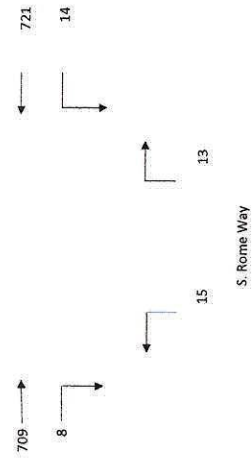
---

Figure 17 contains the recommended traffic control and lane geometry for the seven intersections being analyzed in this report. Several improvements are identified in Figure 17. They are:

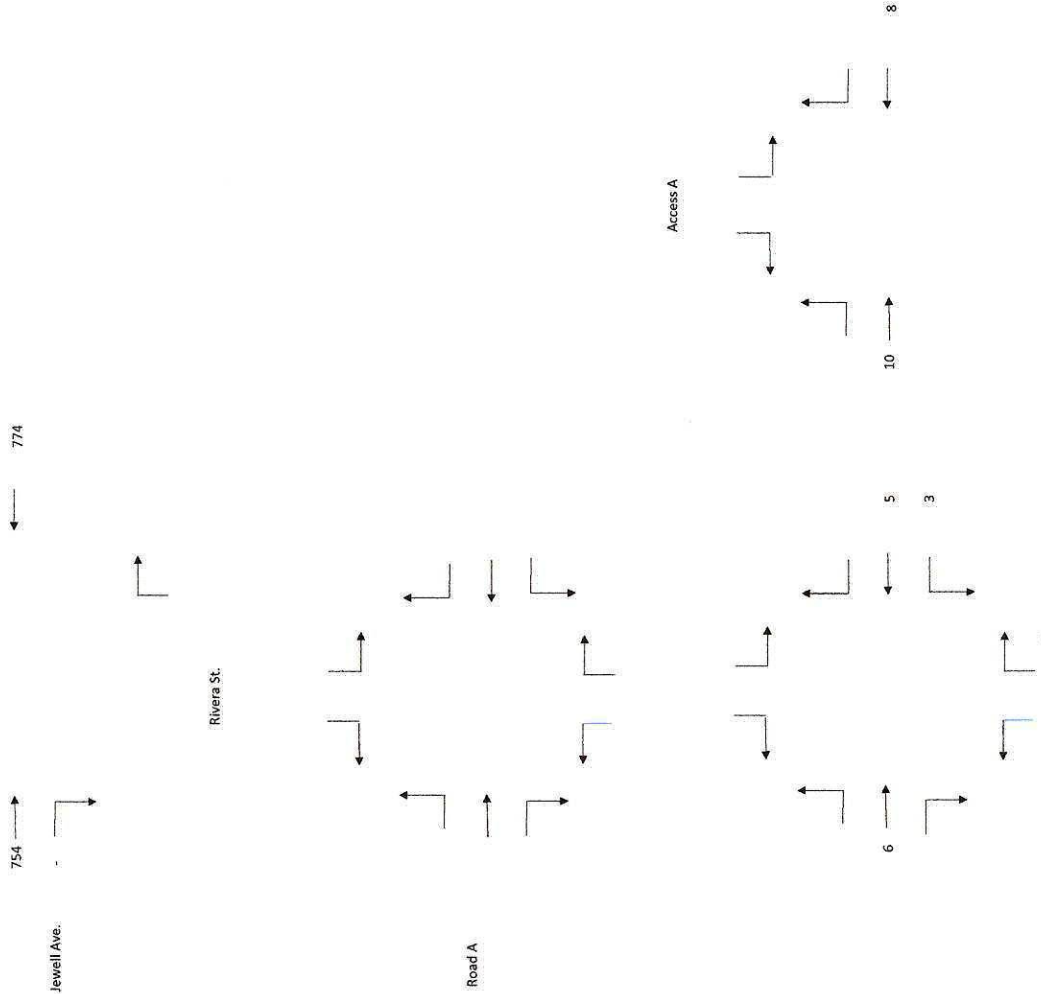
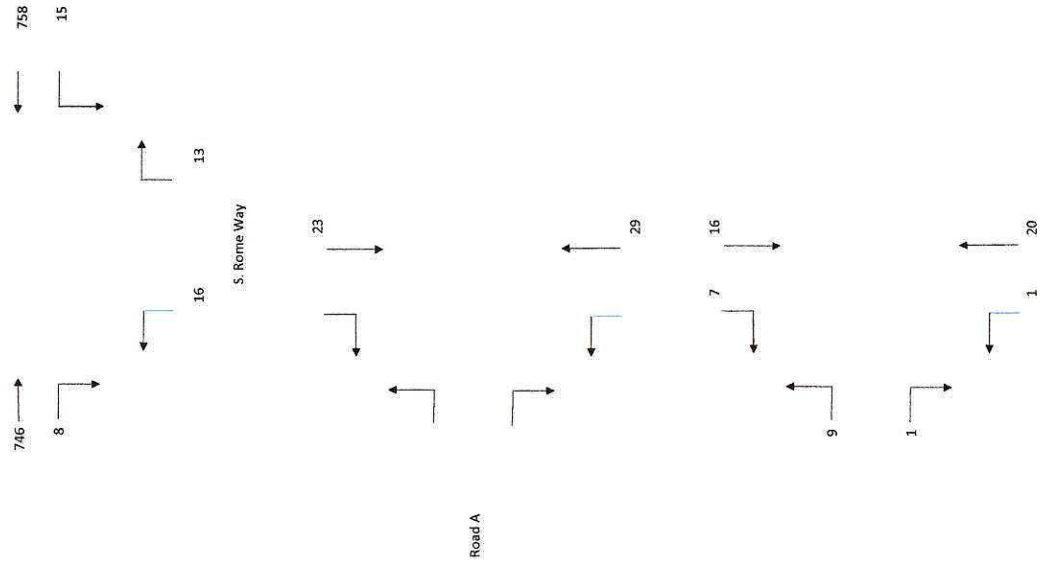
- Installation of the traffic signal at East Jewell Avenue and South Rome Way. The installation of this traffic signal should only be undertaken after completing a traffic signal warrant study based on observed traffic counts.
- A westbound left-turn deceleration lane should be provided at East Jewell Avenue and South Rome Way. The length of this left-turn deceleration lane should be 620 feet. There is adequate room between South Rome Way and the southbound E-470 ramp intersection to accommodate this turn lane.
- An eastbound right-turn deceleration lane should be provided at East Jewell Avenue and South Rome Way. The length of this left-turn deceleration lane should be 435 feet.
- The northbound approach at East Jewell Avenue and South Rome Way should have separate left-turn and right-turn lanes. The length of the right-turn deceleration lane should be 250 feet.
- An eastbound right-turn deceleration lane should be provided at East Jewell Avenue and South Rivera Street. The length of this left-turn deceleration lane should be 435 feet.
- A southbound right-turn deceleration lane should be provided at South Rome Way and Road A. The length of this right-turn deceleration lane should be 250 feet.

Figure 17 – Recommended Traffic Control and Lane Geometry

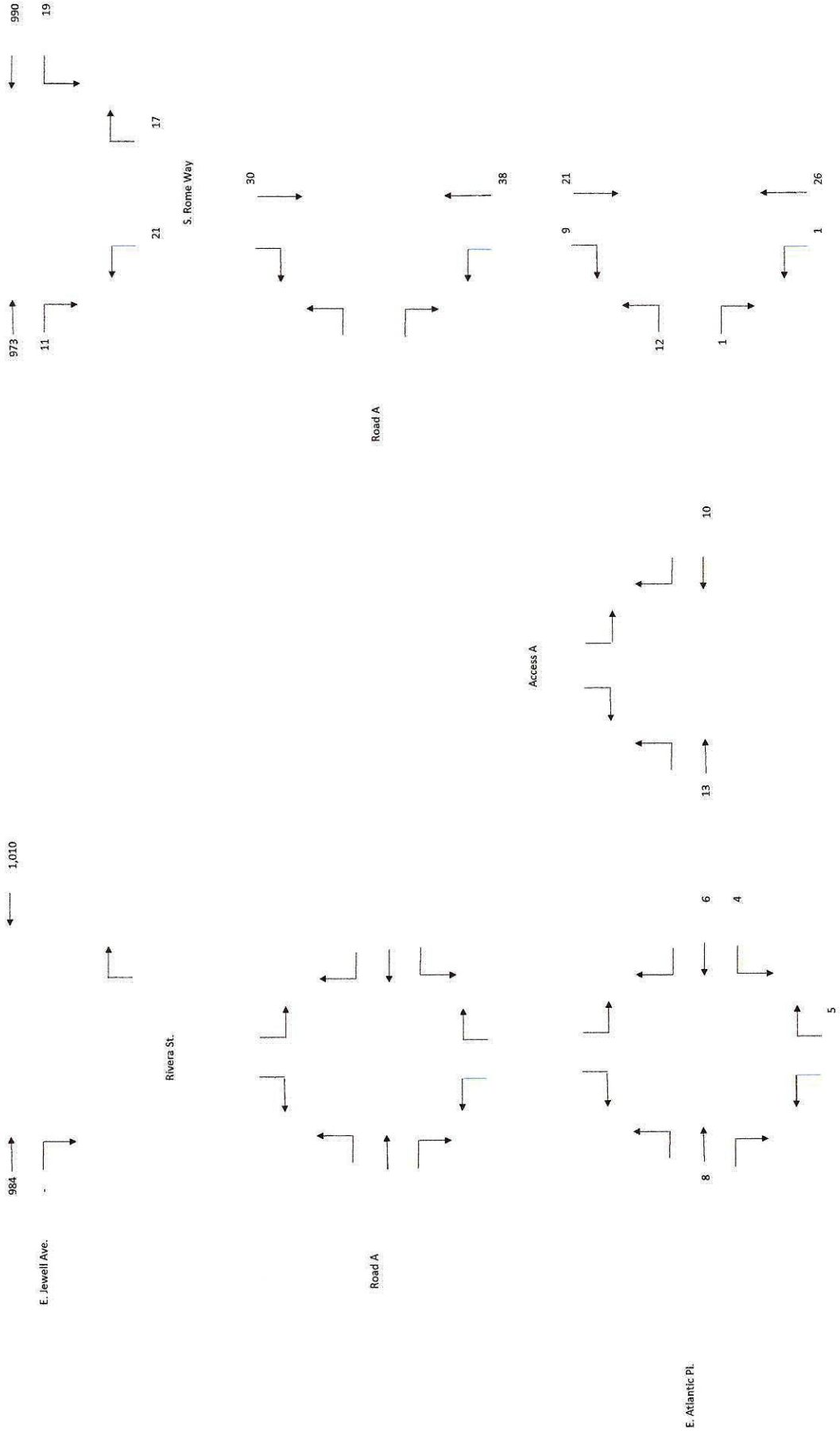




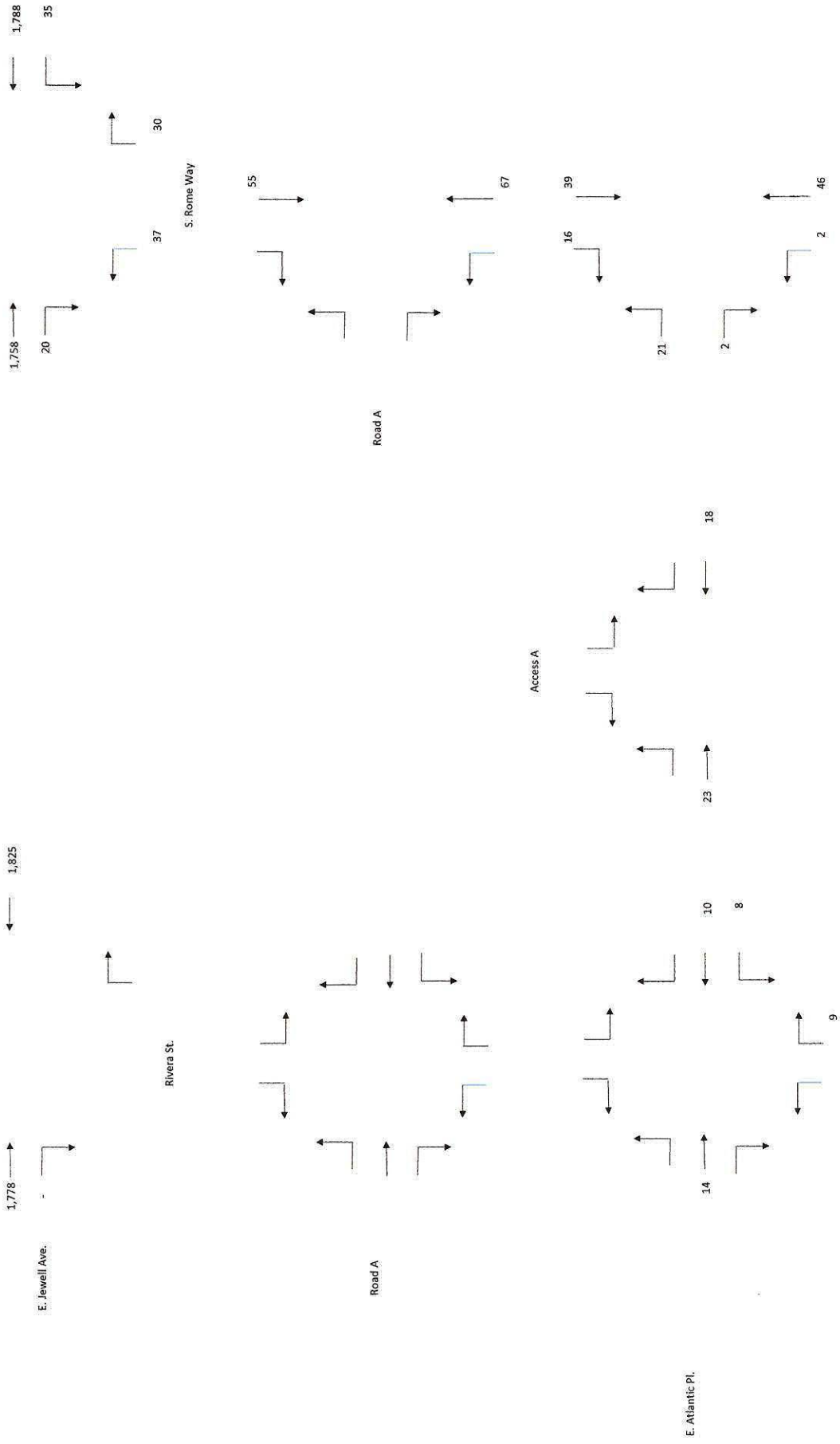
Peak-Hour PM  
Year 2021 Adjusted Existing Traffic  
Growth Factor 1.052



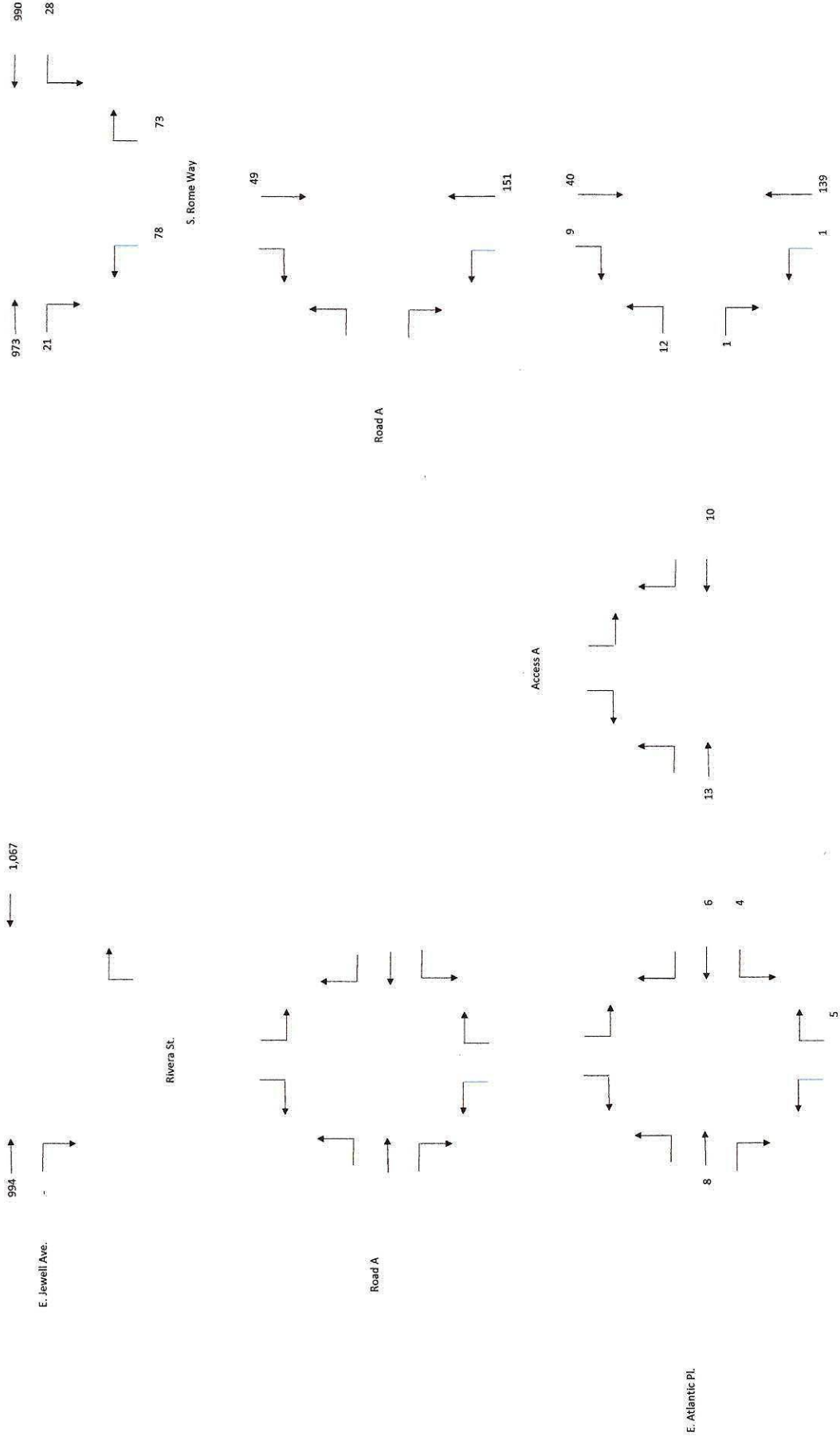
Peak-Hour PM  
 Year 2030 Initial Background Traffic  
 Growth Factor 1.305

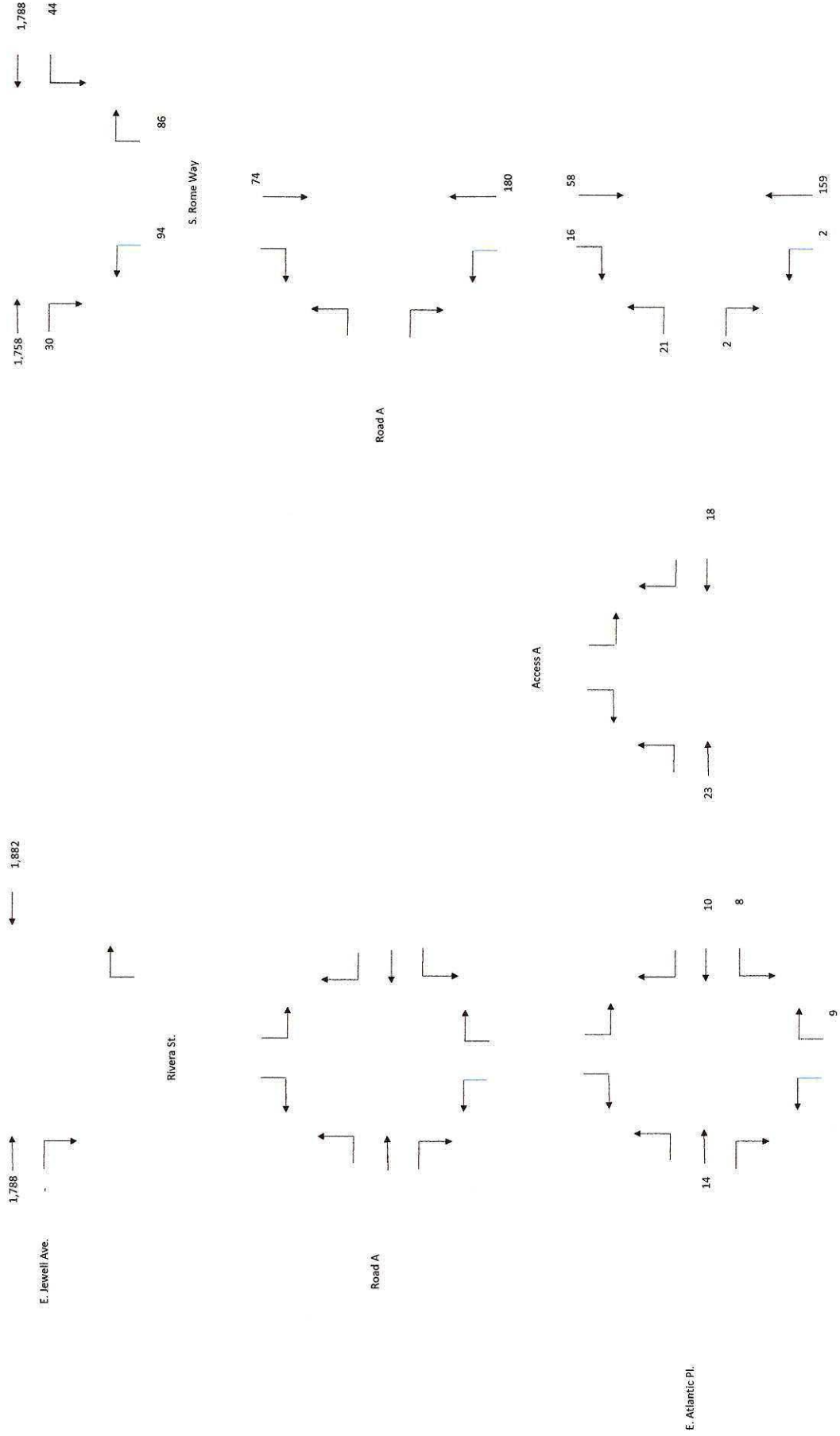


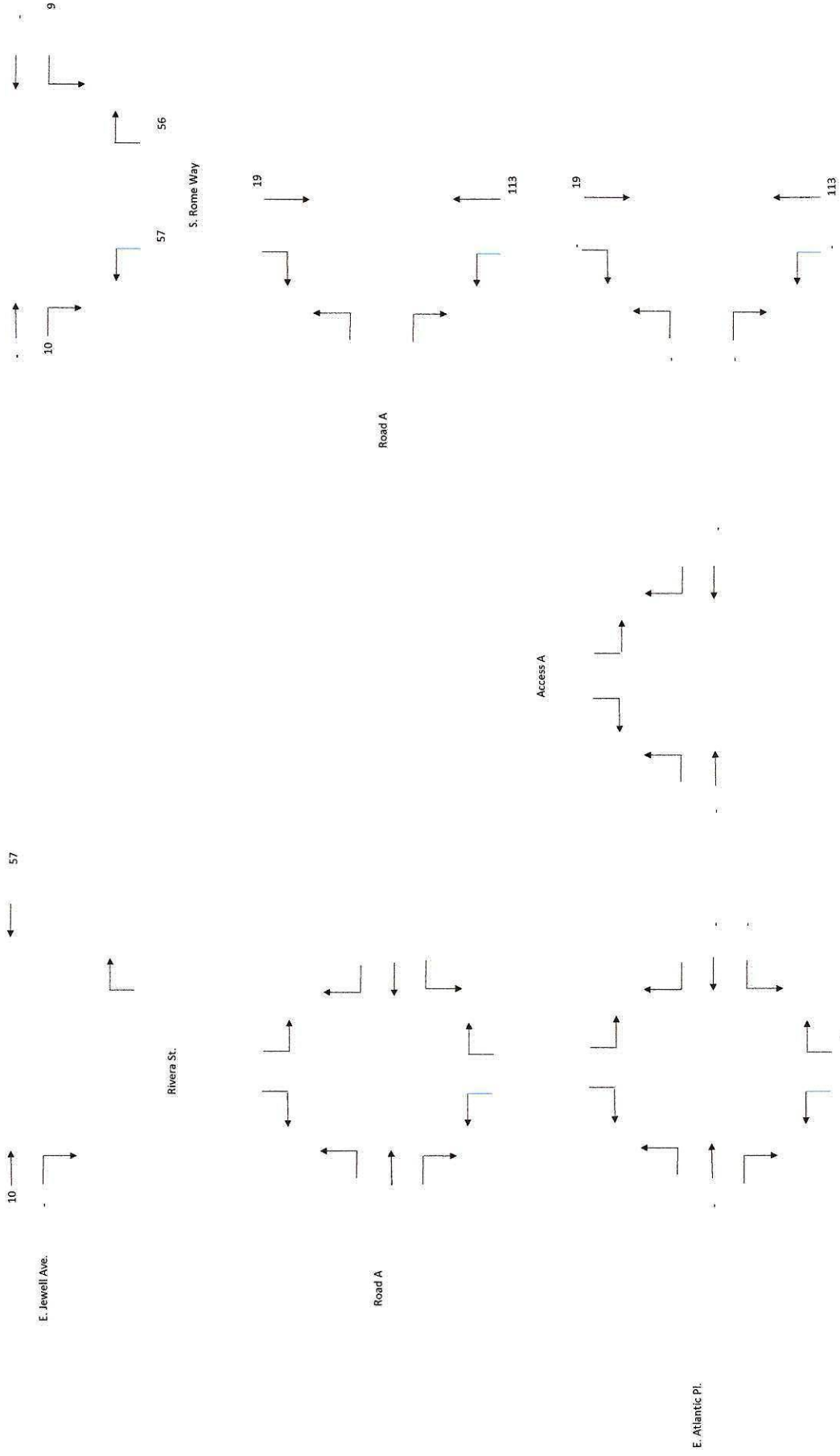
Peak-Hour PM  
 Year 2050 Initial Background Traffic  
 Growth Factor 1.806

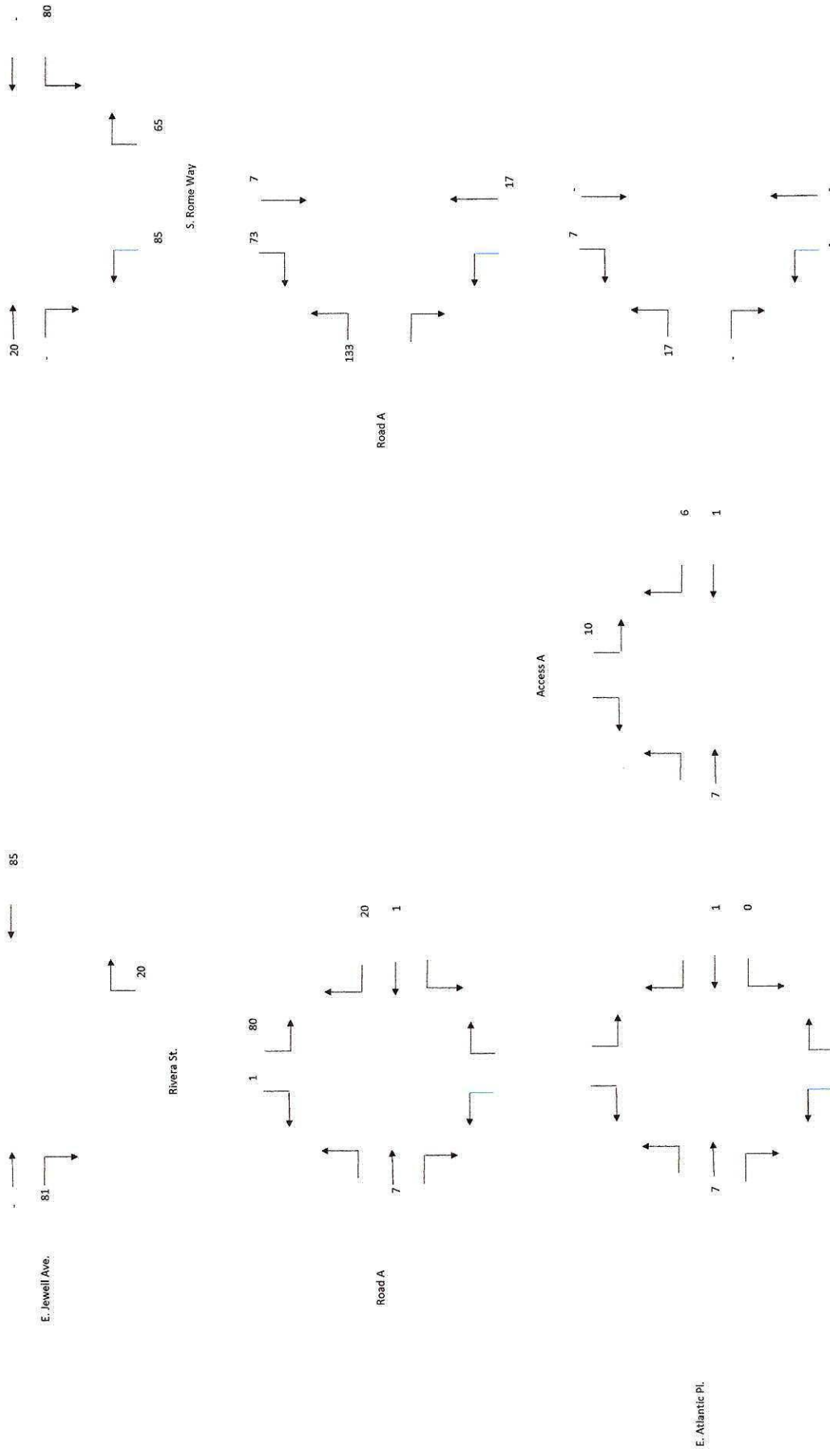








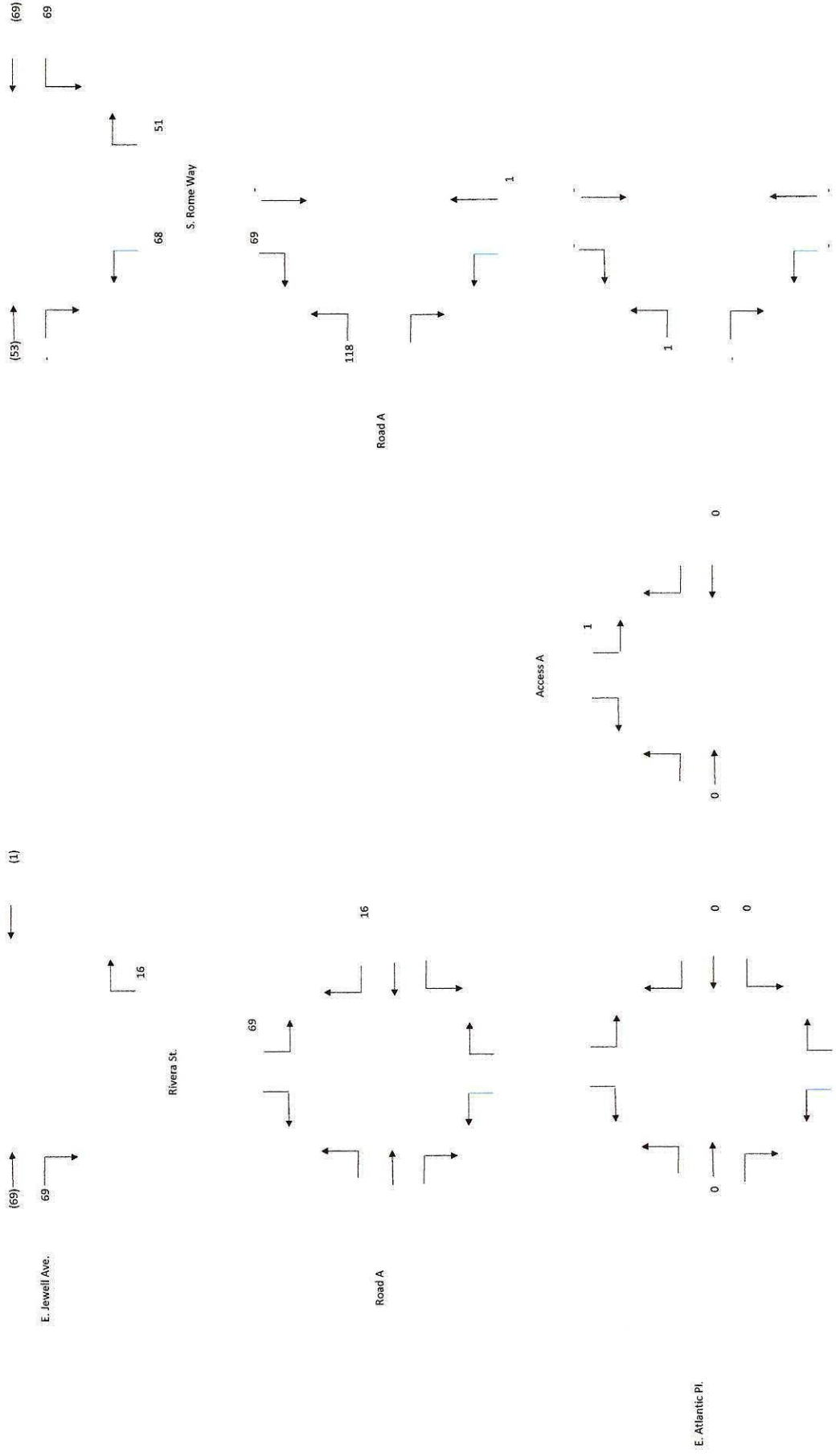




Peak-Hour  
Year

PM

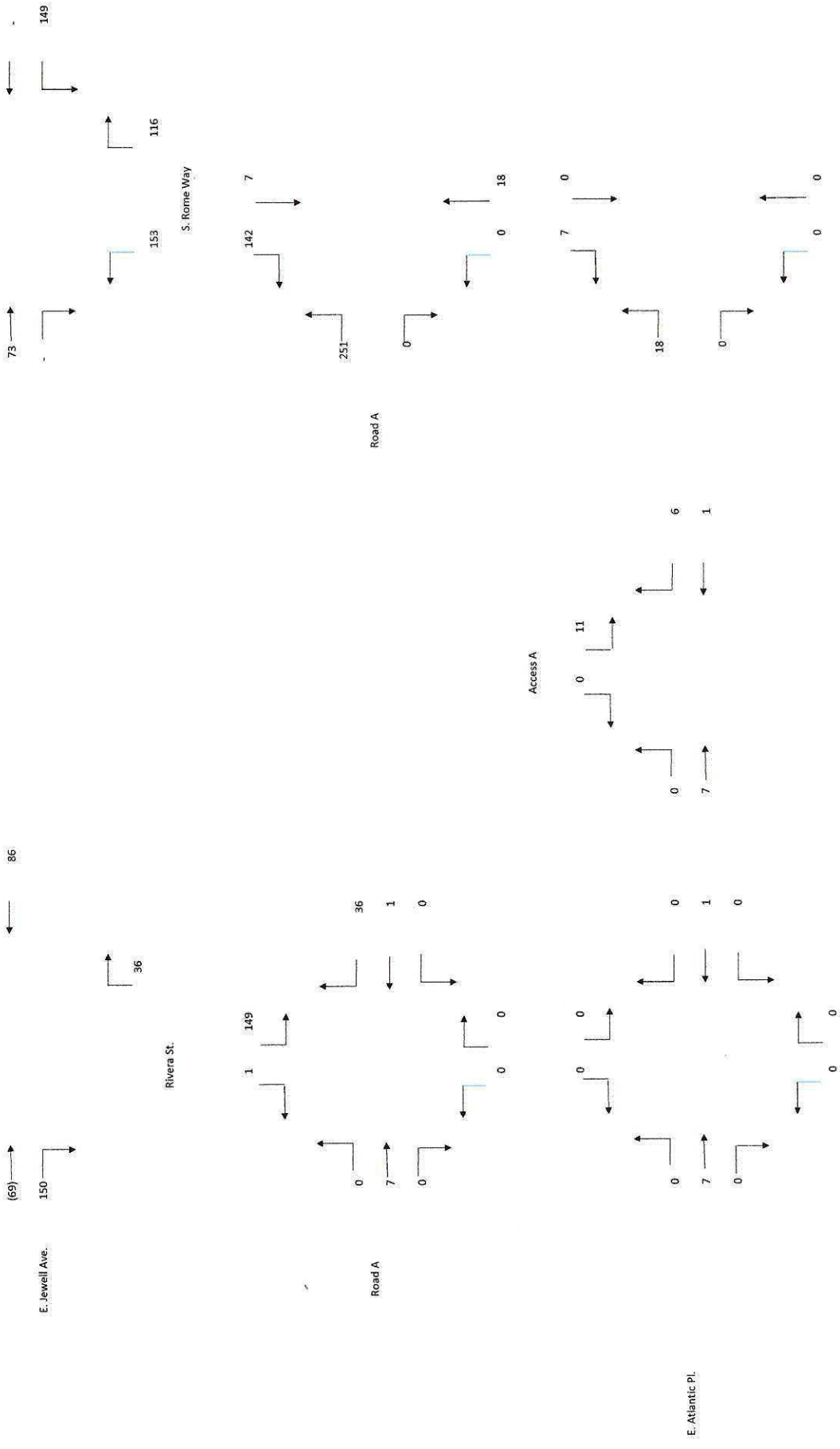
Site-Generated Traffic - Passby



Peak-Hour  
Year

PM

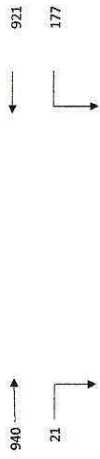
Site-Generated Traffic



Peak-Hour  
Year

PM

2030 Total Traffic



1,151



E. Jewell Ave.

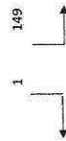


Rivera St.

S. Rome Way



231



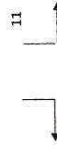
Road A

251

Road A



Access A



6

11

20

7

4

E. Atlantic Pl.

15

5

1

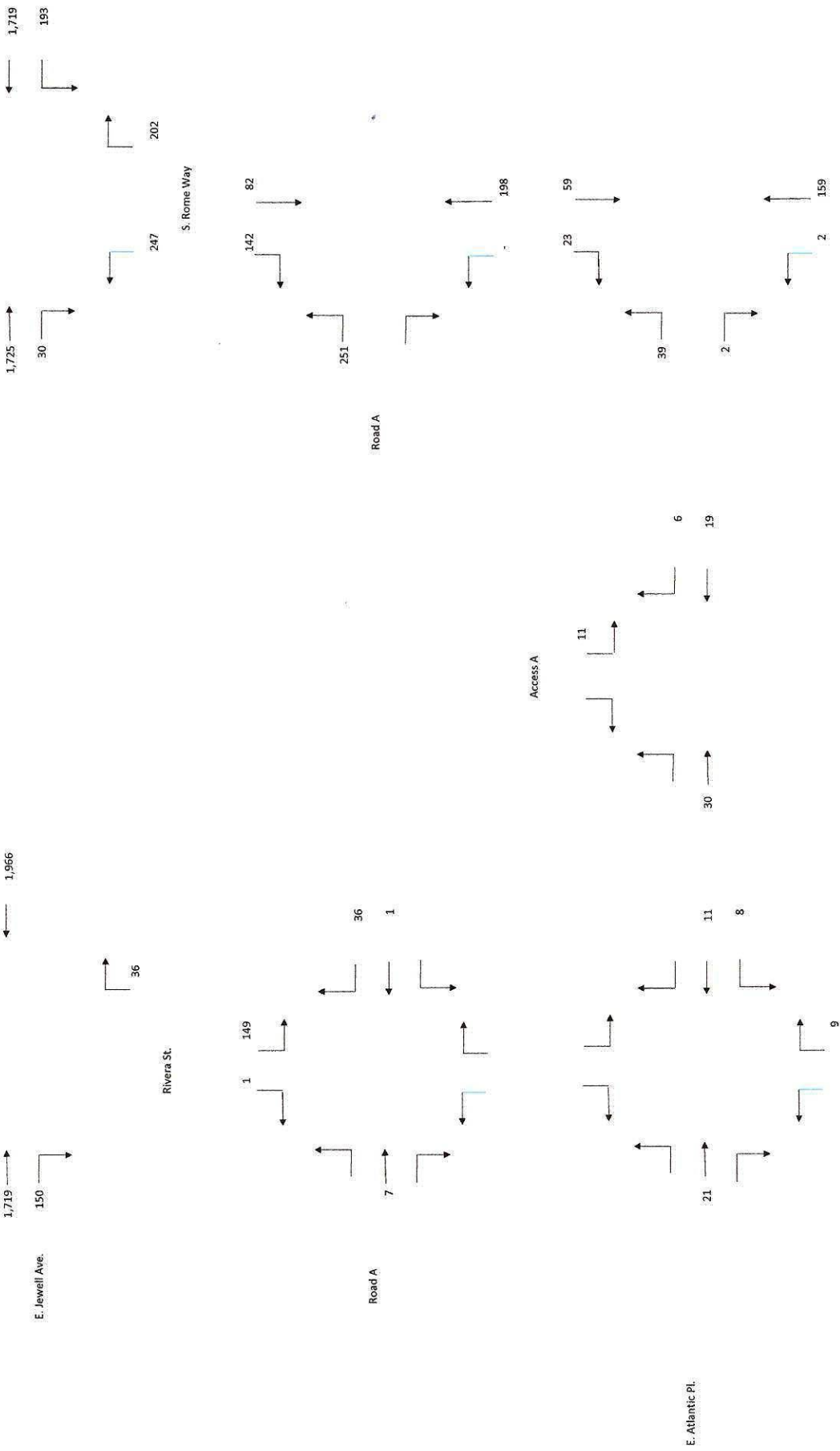
139

30

16

41





Appendix C  
Observed Car Wash Trip Information

## Weekday Hourly Peaks - Sept 8

Time (Hour)	Living Water - Littleton	Living Water - East Littleton	Living Water - County Line	Average	Total
9/8/2021 7:00	14	11	9	11.34	34
9/8/2021 8:00	33	20	6	19.67	59
9/8/2021 9:00	44	12	18	24.67	74
9/8/2021 10:00	44	17	17	26.01	78
9/8/2021 11:00	32	20	16	22.67	68
9/8/2021 12:00	43	18	24	28.33	85
9/8/2021 13:00	36	19	22	25.66	77
9/8/2021 14:00	43	24	21	29.33	88
9/8/2021 15:00	52	29	16	32.33	97
9/8/2021 16:00	43	28	17	29.33	88
9/8/2021 17:00	50	27	18	31.67	95
9/8/2021 18:00	28	13	11	17.33	52
9/8/2021 19:00	15	5	4	8	24
Total Cars	477	243	199	306.33	919

# Saturday Hourly Peaks - Sept 11

Time (Hour)	Living Water - Littleton	Living Water - East Littleton	Living Water - County Line	Average	Total
9/11/2021 7:00	11	4	8	7.67	23
9/11/2021 8:00	37	12	14	21	63
9/11/2021 9:00	60	29	12	33.67	101
9/11/2021 10:00	60	42	26	42.67	128
9/11/2021 11:00	61	50	39	50	150
9/11/2021 12:00	44	33	30	35.67	107
9/11/2021 13:00	56	39	16	37	111
9/11/2021 14:00	44	25	25	31.33	94
9/11/2021 15:00	23	28	13	21.33	64
9/11/2021 16:00	35	17	18	23.34	70
9/11/2021 17:00	54	23	19	32	96
9/11/2021 18:00	19	10	5	11.33	34
9/11/2021 19:00	10	4	2	5.33	16
Total Cars	514	316	227	352.33	1057

# Daily Totals for the month of September

Date	Living Water - Littleton	Living Water - East Littleton	Living Water - County Line	Average	Total
9/1/2021	428	188	139	252	755
9/2/2021	407	199	151	252	757
9/3/2021	374	180	171	242	725
9/4/2021	630	334	264	409	1228
9/6/2021	392	266	241	300	899
9/7/2021	576	318	237	377	1131
9/8/2021	477	243	199	306	919
9/9/2021	420	221	168	270	809
9/10/2021	496	217	226	313	939
9/11/2021	514	316	227	352	1057
Total Cars	4714	2482	2023	307	9219

Appendix D  
Pioneer Business Park Traffic Impact Study  
(Selected Pages)

# Pioneer Business Park Project

November 1, 2021

Prepared by  
Dave L. Ruble, Jr., P.E.  
DB Enterprise LLC  
(DBE#210300)





# Traffic Impact Analysis

## Pioneer Business Park Project

Aurora, Colorado

Prepared for

Resolute Investment, Inc.  
RV Vault Jewell  
Parker, CO 80134

Prepared by

DB Enterprise, LLC  
4771 So. Danube Circle  
Aurora, CO 80015  
(720) 231-1947

November 1, 2021  
(DBE #210300)

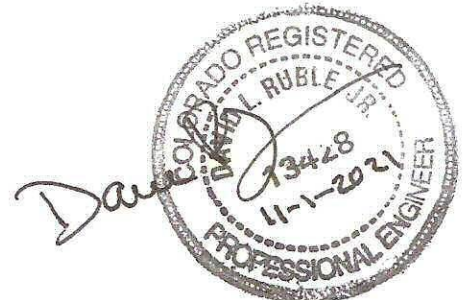


Figure 1 – Vicinity Map





Table 1 – Estimated Vehicle Trip Generation

Table 1 Estimated Vehicle Trip Generation Pioneer Business Park Project Aurora, Colorado (DBE #210300; November, 2021)												
ITE Category	Quantity	Average Weekday (3)	Trip Generation Rates (1)				Total Vehicle Trips Generated					
			AM Peak-Hour (4)		PM Peak-Hour		Average Weekday		AM Peak-Hour		PM Peak-Hour	
			In	Out	In	Out	In	Out	In	Out	In	Out
110 General Light Industrial	200.00 KSF (2)	4.96	0.62	0.18	0.08	0.55	992	124	36	16	110	
151 Mini-Warehouse	3.50 HSU (3)	17.96	0.71	0.68	0.98	0.97	63	2	2	3	3	
							Total	1,055	126	38	19	113

Notes:

(1) Source: "Trip Generation", Institute of Transportation Engineers, 10th Edition, 2017.

(2) KSF = 1,000 Square Feet

(3) HSU = Hundred Storage Units

Table 6 – MUTCD Four-Hour Traffic Signal Warrant

<p>Table 6 MUTCD Four-Hour Traffic Signal Warrant Year 2023 Total Traffic Volumes - Pioneer Business Park</p>				
Condition	<u>1 Lanes Major &amp; 1 Lanes Minor</u>			
Major Street	<u>East Jewell Avenue</u>			
Minor Street	<u>South Rome Way</u>			
Posted Speed Limit	<u>45</u>			
		Major Street Approach	Minor Street Approach	Does Volume Meet Threshold Volume
12:00 AM	1:00 AM	58	8	No
1:00 AM	2:00 AM	37	4	No
2:00 AM	3:00 AM	25	2	No
3:00 AM	4:00 AM	21	12	No
4:00 AM	5:00 AM	35	5	No
5:00 AM	6:00 AM	123	46	No
6:00 AM	7:00 AM	438	128	No
7:00 AM	8:00 AM	677	111	Yes
8:00 AM	9:00 AM	551	164	Yes
9:00 AM	10:00 AM	424	171	Yes
10:00 AM	11:00 AM	390	186	Yes
11:00 AM	12:00 PM	438	190	Yes
12:00 PM	1:00 PM	422	218	Yes
1:00 PM	2:00 PM	451	157	Yes
2:00 PM	3:00 PM	586	187	Yes
3:00 PM	4:00 PM	733	224	Yes
4:00 PM	5:00 PM	996	263	Yes
5:00 PM	6:00 PM	1,220	206	Yes
6:00 PM	7:00 PM	887	91	Yes
7:00 PM	8:00 PM	575	48	No
8:00 PM	9:00 PM	450	32	No
9:00 PM	10:00 PM	270	62	No
10:00 PM	11:00 PM	170	50	No
11:00 PM	12:00 AM	76	24	No
Number of Hours Threshold Volumes Are Met				12
Does intersection meet warrant?				Yes
Notes: Figure 4C-2				

Table 7 – MUTCD Eight-Hour Traffic Signal Warrant

Table 7							
MUTCD Eight-Hour Traffic Signal Warrant (Table 4C-1)							
Year 2023 Total Traffic - Pioneer Business Park (Aurora)							
Condition	<u>B</u>	Laneage Condition					
Major Street	<u>East Jewell Avenue</u>	<u>1 Lane Major &amp; 1 Lane Minor</u>					
Minor Street	<u>South Rome Street</u>						
		Major Street Approach	Minor Street Approach	Do Volumes Meet Threshold Volumes?			
				100% Condition	80% Condition	70% Condition	56% Condition
12:00 AM to	1:00 AM	58	4	No	No	No	No
1:00 AM	2:00 AM	37	2	No	No	No	No
2:00 AM	3:00 AM	25	1	No	No	No	No
3:00 AM	4:00 AM	21	7	No	No	No	No
4:00 AM	5:00 AM	35	1	No	No	No	No
5:00 AM	6:00 AM	123	12	No	No	No	No
6:00 AM	7:00 AM	438	42	No	No	No	Yes
7:00 AM	8:00 AM	677	65	No	Yes	Yes	Yes
8:00 AM	9:00 AM	551	50	No	No	No	Yes
9:00 AM	10:00 AM	424	56	No	No	No	Yes
10:00 AM	11:00 AM	390	62	No	No	No	No
11:00 AM	12:00 PM	438	62	No	No	No	Yes
12:00 PM	1:00 PM	422	67	No	No	No	Yes
1:00 PM	2:00 PM	451	48	No	No	No	Yes
2:00 PM	3:00 PM	586	59	No	No	Yes	Yes
3:00 PM	4:00 PM	733	76	No	Yes	Yes	Yes
4:00 PM	5:00 PM	996	141	Yes	Yes	Yes	Yes
5:00 PM	6:00 PM	1,220	72	No	Yes	Yes	Yes
6:00 PM	7:00 PM	887	41	No	No	No	No
7:00 PM	8:00 PM	575	24	No	No	No	No
8:00 PM	9:00 PM	450	17	No	No	No	No
9:00 PM	10:00 PM	270	32	No	No	No	No
10:00 PM	11:00 PM	170	28	No	No	No	No
11:00 PM	12:00 AM	76	13	No	No	No	No
Number of Hours Threshold Volumes Are Met				1	4	5	11
Does intersection meet warrant?				No	No	No	Yes
Notes:							

Appendix E  
Capacity Analysis  
(Synchro Printouts)

Estimated Existing Year 2022 Peak-Hour  
Level of Service Analysis



HCM 6th TWSC  
3: So. Rome Way & E. Jewell Ave.

11/24/2022

Intersection

Int Delay, s/veh 0.4

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	668	5	6	828	6	14
Future Vol, veh/h	668	5	6	828	6	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	726	5	7	900	7	15

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	731	0	1643	729
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	914	-
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	-	-	873	-	110	423
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	873	-	108	423
Mov Cap-2 Maneuver	-	-	-	-	108	-
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	385	-

Approach EB WB NB

HCM Control Delay, s	0	0.1	22.6
HCM LOS			C

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	226	-	-	873	-
HCM Lane V/C Ratio	0.096	-	-	0.007	-
HCM Control Delay (s)	22.6	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 1.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 5 0 0 8 8 8

Future Vol, veh/h 5 0 0 8 8 8

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 5 0 0 9 9 9

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 23 14 18 0 - 0

Stage 1 14 - - - - -

Stage 2 9 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 993 1066 1599 - - -

Stage 1 1009 - - - - -

Stage 2 1014 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 993 1066 1599 - - -

Mov Cap-2 Maneuver 993 - - - - -

Stage 1 1009 - - - - -

Stage 2 1014 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.6 0 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1599 - 993 - -

HCM Lane V/C Ratio - - 0.005 - -

HCM Control Delay (s) 0 - 8.6 - -

HCM Lane LOS A - A - -

HCM 95th %tile Q(veh) 0 - 0 - -

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	3	0	4	5	0	0	0	2	0	0	0
Future Vol, veh/h	0	3	0	4	5	0	0	0	2	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	0	4	5	0	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	3	0	0	16	16	3	17	16	5
Stage 1	-	-	-	-	-	-	3	3	-	13	13	-
Stage 2	-	-	-	-	-	-	13	13	-	4	3	-
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	1616	-	-	1619	-	-	999	878	1081	998	878	1078
Stage 1	-	-	-	-	-	-	1020	893	-	1007	885	-
Stage 2	-	-	-	-	-	-	1007	885	-	1018	893	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1616	-	-	1619	-	-	997	876	1081	994	876	1078
Mov Cap-2 Maneuver	-	-	-	-	-	-	997	876	-	994	876	-
Stage 1	-	-	-	-	-	-	1020	893	-	1007	883	-
Stage 2	-	-	-	-	-	-	1005	883	-	1016	893	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.2	8.3	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1081	1616	-	-	1619	-	-	-
HCM Lane V/C Ratio	0.002	-	-	-	0.003	-	-	-
HCM Control Delay (s)	8.3	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

HCM 6th TWSC  
3: So. Rome Way & E. Jewell Ave.

11/24/2022

Intersection

Int Delay, s/veh 0.8

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↰			↱	↷	
Traffic Vol, veh/h	768	8	15	781	16	14
Future Vol, veh/h	768	8	15	781	16	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	835	9	16	849	17	15

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	844	0	1721	840
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	881	-
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	-	-	792	-	98	365
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	405	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	792	-	94	365
Mov Cap-2 Maneuver	-	-	-	-	94	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	390	-

Approach EB WB NB

HCM Control Delay, s	0	0.2	37.2
HCM LOS			E

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	144	-	-	792	-
HCM Lane V/C Ratio	0.226	-	-	0.021	-
HCM Control Delay (s)	37.2	-	-	9.6	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 1.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	8	1	1	18	20	9
Future Vol, veh/h	8	1	1	18	20	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	1	1	20	22	10

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	49	27	32	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1048	1580	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	959	1048	1580	-	-	-
Mov Cap-2 Maneuver	959	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1001	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	8.8	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1580	-	968	-	-
HCM Lane V/C Ratio	0.001	-	0.01	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	0	3	6	0	0	0	3	0	0	0
Future Vol, veh/h	0	6	0	3	6	0	0	0	3	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	0	3	7	0	0	0	3	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	7	0	0	20	20	7	22	20	7
Stage 1	-	-	-	-	-	-	7	7	-	13	13	-
Stage 2	-	-	-	-	-	-	13	13	-	9	7	-
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	1614	-	-	1614	-	-	993	874	1075	990	874	1075
Stage 1	-	-	-	-	-	-	1015	890	-	1007	885	-
Stage 2	-	-	-	-	-	-	1007	885	-	1012	890	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1614	-	-	1614	-	-	991	872	1075	985	872	1075
Mov Cap-2 Maneuver	-	-	-	-	-	-	991	872	-	985	872	-
Stage 1	-	-	-	-	-	-	1015	890	-	1007	883	-
Stage 2	-	-	-	-	-	-	1005	883	-	1009	890	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.4	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1075	1614	-	-	1614	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-	0.002	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

## Year 2030 Background and Total Peak-Hour



# HCM 6th Signalized Intersection Summary

## 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (veh/h)	847	70	71	1049	26	36
Future Volume (veh/h)	847	70	71	1049	26	36
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	921	76	77	1140	28	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1156	516	278	1637	694	617
Arrive On Green	0.33	0.33	0.06	0.46	0.39	0.39
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	921	76	77	1140	28	39
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	14.2	2.0	1.6	15.3	0.6	0.9
Cycle Q Clear(g_c), s	14.2	2.0	1.6	15.3	0.6	0.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1156	516	278	1637	694	617
V/C Ratio(X)	0.80	0.15	0.28	0.70	0.04	0.06
Avail Cap(c_a), veh/h	1333	594	334	1925	694	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	14.3	13.1	12.9	11.4	11.5
Incr Delay (d2), s/veh	2.0	0.1	0.5	0.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.7	0.6	5.3	0.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.4	14.4	13.6	13.8	11.5	11.7
LnGrp LOS	C	B	B	B	B	B
Approach Vol, veh/h	997			1217	67	
Approach Delay, s/veh	19.9			13.7	11.6	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		27.9	8.1	24.0		32.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.5	5.5	22.5		32.5
Max Q Clear Time (g_c+I1), s		2.9	3.6	16.2		17.3
Green Ext Time (p_c), s		0.1	0.0	3.4		7.3
Intersection Summary						
HCM 6th Ctrl Delay			16.4			
HCM 6th LOS			B			

# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (vph)	847	70	71	1049	26	36
Future Volume (vph)	847	70	71	1049	26	36
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	27.0	27.0	10.0	37.0	23.0	23.0
Total Split (%)	45.0%	45.0%	16.7%	61.7%	38.3%	38.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effect Green (s)	23.1	23.1	29.1	29.1	21.9	21.9
Actuated g/C Ratio	0.38	0.38	0.48	0.48	0.36	0.36
v/c Ratio	0.68	0.12	0.28	0.66	0.04	0.06
Control Delay	18.5	4.2	9.6	13.4	14.8	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	4.2	9.6	13.4	14.8	6.1
LOS	B	A	A	B	B	A
Approach Delay	17.4			13.2	9.7	
Approach LOS	B			B	A	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.9

Intersection LOS: B

Intersection Capacity Utilization 43.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R)	↘ Ø3	→ Ø4
23 s	10 s	27 s
	↖ Ø8	
	37 s	

HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 0.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			4	4	
Traffic Vol, veh/h	9	0	1	53	134	7
Future Vol, veh/h	9	0	1	53	134	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	0	1	58	146	8

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	210	150	154	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	778	896	1426	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	777	896	1426	-	-	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.7	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1426	-	777	-	-
HCM Lane V/C Ratio	0.001	-	0.013	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	5	0	3	5	0	0	0	4	0	0	0
Future Vol, veh/h	0	5	0	3	5	0	0	0	4	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	0	3	5	0	0	0	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	5	0	0	16	16	5	18	16	5
Stage 1	-	-	-	-	-	-	5	5	-	11	11	-
Stage 2	-	-	-	-	-	-	11	11	-	7	5	-
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	1616	-	-	1616	-	-	999	878	1078	996	878	1078
Stage 1	-	-	-	-	-	-	1017	892	-	1010	886	-
Stage 2	-	-	-	-	-	-	1010	886	-	1015	892	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1616	-	-	1616	-	-	997	876	1078	990	876	1078
Mov Cap-2 Maneuver	-	-	-	-	-	-	997	876	-	990	876	-
Stage 1	-	-	-	-	-	-	1017	892	-	1010	884	-
Stage 2	-	-	-	-	-	-	1008	884	-	1011	892	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.7	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1078	1616	-	-	1616	-	-	-
HCM Lane V/C Ratio	0.004	-	-	-	0.002	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

# HCM 6th Signalized Intersection Summary 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (veh/h)	973	21	28	990	78	73
Future Volume (veh/h)	973	21	28	990	78	73
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1058	23	30	1076	85	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1271	567	223	1654	685	610
Arrive On Green	0.36	0.36	0.03	0.47	0.38	0.38
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1058	23	30	1076	85	79
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	16.3	0.6	0.6	13.9	1.9	1.9
Cycle Q Clear(g_c), s	16.3	0.6	0.6	13.9	1.9	1.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1271	567	223	1654	685	610
V/C Ratio(X)	0.83	0.04	0.13	0.65	0.12	0.13
Avail Cap(c_a), veh/h	1392	621	313	1955	685	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	12.6	13.1	12.3	11.9	12.0
Incr Delay (d2), s/veh	4.2	0.0	0.3	0.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.2	4.8	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.8	12.6	13.4	12.9	12.3	12.4
LnGrp LOS	C	B	B	B	B	B
Approach Vol, veh/h	1081			1106	164	
Approach Delay, s/veh	21.6			12.9	12.4	
Approach LOS	C			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		27.6	6.5	26.0		32.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		18.0	5.0	23.5		33.0
Max Q Clear Time (g_c+l1), s		3.9	2.6	18.3		15.9
Green Ext Time (p_c), s		0.4	0.0	3.1		7.4
Intersection Summary						
HCM 6th Ctrl Delay			16.9			
HCM 6th LOS			B			



# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (vph)	973	21	28	990	78	73
Future Volume (vph)	973	21	28	990	78	73
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	28.0	28.0	9.5	37.5	22.5	22.5
Total Split (%)	46.7%	46.7%	15.8%	62.5%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	23.2	23.2	27.0	27.0	24.0	24.0
Actuated g/C Ratio	0.39	0.39	0.45	0.45	0.40	0.40
v/c Ratio	0.77	0.04	0.12	0.68	0.12	0.12
Control Delay	20.6	5.6	8.2	14.8	14.6	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	5.6	8.2	14.8	14.6	5.1
LOS	C	A	A	B	B	A
Approach Delay	20.2			14.6	10.0	
Approach LOS	C			B	B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 39.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R)	↘ Ø3	→ Ø4
22.5 s	9.5 s	28 s
	← Ø8	
	37.5 s	

Intersection

Int Delay, s/veh 0.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	12	1	1	139	40	9
Future Vol, veh/h	12	1	1	139	40	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	1	1	151	43	10

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	201	48	53	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	788	1021	1553	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	787	1021	1553	-	-	-
Mov Cap-2 Maneuver	787	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1553	-	801	-	-
HCM Lane V/C Ratio	0.001	-	0.018	-	-
HCM Control Delay (s)	7.3	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	8	0	4	6	0	0	0	5	0	0	0
Future Vol, veh/h	0	8	0	4	6	0	0	0	5	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	9	0	4	7	0	0	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	9	0	0	24	24	9	27	24	7
Stage 1	-	-	-	-	-	-	9	9	-	15	15	-
Stage 2	-	-	-	-	-	-	15	15	-	12	9	-
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	1614	-	-	1611	-	-	987	869	1073	983	869	1075
Stage 1	-	-	-	-	-	-	1012	888	-	1005	883	-
Stage 2	-	-	-	-	-	-	1005	883	-	1009	888	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1614	-	-	1611	-	-	985	867	1073	976	867	1075
Mov Cap-2 Maneuver	-	-	-	-	-	-	985	867	-	976	867	-
Stage 1	-	-	-	-	-	-	1012	888	-	1005	881	-
Stage 2	-	-	-	-	-	-	1003	881	-	1004	888	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.9	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1073	1614	-	-	1611	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	0.003	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

HCM 6th TWSC  
1: So. Rivera St. & E. Jewell Ave.

11/24/2022

Intersection

Int Delay, s/veh 0.2

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	830	172	0	1150	0	42
Future Vol, veh/h	830	172	0	1150	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	435	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	902	187	0	1250	0	46

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	-	-	451
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	556
Stage 1	-	-	0	-	0
Stage 2	-	-	0	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	556
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach EB WB NB

HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt NBLn1 EBT EBR WBT

Capacity (veh/h)	556	-	-	-
HCM Lane V/C Ratio	0.082	-	-	-
HCM Control Delay (s)	12.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

# HCM 6th Signalized Intersection Summary 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (veh/h)	802	70	241	963	187	156
Future Volume (veh/h)	802	70	241	963	187	156
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	872	76	262	1047	203	170
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1030	459	383	1751	636	566
Arrive On Green	0.29	0.29	0.13	0.49	0.36	0.36
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	872	76	262	1047	203	170
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	13.9	2.1	5.7	12.7	5.0	4.6
Cycle Q Clear(g_c), s	13.9	2.1	5.7	12.7	5.0	4.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1030	459	383	1751	636	566
V/C Ratio(X)	0.85	0.17	0.68	0.60	0.32	0.30
Avail Cap(c_a), veh/h	1096	489	419	1889	636	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	15.9	13.5	10.9	14.0	13.9
Incr Delay (d2), s/veh	6.0	0.2	4.1	0.5	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.7	2.3	4.2	2.0	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	16.1	17.6	11.4	15.3	15.2
LnGrp LOS	C	B	B	B	B	B
Approach Vol, veh/h	948			1309	373	
Approach Delay, s/veh	25.3			12.6	15.3	
Approach LOS	C			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		25.9	12.2	21.9		34.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		19.1	8.9	18.5		31.9
Max Q Clear Time (g_c+I1), s		7.0	7.7	15.9		14.7
Green Ext Time (p_c), s		1.0	0.1	1.5		7.2
Intersection Summary						
HCM 6th Ctrl Delay			17.6			
HCM 6th LOS			B			

# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (vph)	802	70	241	963	187	156
Future Volume (vph)	802	70	241	963	187	156
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	23.0	23.0	13.4	36.4	23.6	23.6
Total Split (%)	38.3%	38.3%	22.3%	60.7%	39.3%	39.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	18.0	18.0	31.2	31.2	19.8	19.8
Actuated g/C Ratio	0.30	0.30	0.52	0.52	0.33	0.33
v/c Ratio	0.82	0.14	0.69	0.57	0.35	0.27
Control Delay	27.4	5.3	20.0	11.2	17.7	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.3	20.0	11.2	17.7	4.3
LOS	C	A	C	B	B	A
Approach Delay	25.6			13.0	11.6	
Approach LOS	C			B	B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 57.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R)	↘ Ø3	→ Ø4
23.6 s	13.4 s	23 s
	↙ Ø8	
	36.4 s	

Landing at Jewell

Year 2030 AM Peak-Hour Total Traffic

Synchro 11

Page 1

HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 0.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			4	4	
Traffic Vol, veh/h	16	0	1	53	134	15
Future Vol, veh/h	16	0	1	53	134	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	0	1	58	146	16

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	214	154	162	0	-	0
Stage 1	154	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	774	892	1417	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	773	892	1417	-	-	-
Mov Cap-2 Maneuver	773	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.8	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1417	-	773	-	-
HCM Lane V/C Ratio	0.001	-	0.022	-	-
HCM Control Delay (s)	7.5	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	0	3	9	0	0	0	4	0	0	0
Future Vol, veh/h	0	6	0	3	9	0	0	0	4	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	0	3	10	0	0	0	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	7	0	0	23	23	7	25	23	10
Stage 1	-	-	-	-	-	-	7	7	-	16	16	-
Stage 2	-	-	-	-	-	-	16	16	-	9	7	-
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	1610	-	-	1614	-	-	989	870	1075	986	870	1071
Stage 1	-	-	-	-	-	-	1015	890	-	1004	882	-
Stage 2	-	-	-	-	-	-	1004	882	-	1012	890	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1610	-	-	1614	-	-	987	868	1075	980	868	1071
Mov Cap-2 Maneuver	-	-	-	-	-	-	987	868	-	980	868	-
Stage 1	-	-	-	-	-	-	1015	890	-	1004	880	-
Stage 2	-	-	-	-	-	-	1002	880	-	1008	890	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.8	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1075	1610	-	-	1614	-	-	-
HCM Lane V/C Ratio	0.004	-	-	-	0.002	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

HCM 6th TWSC  
9: So. Rivera St. & Road A

11/24/2022

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	0	0	4	42	0	0	0	164	0	8
Future Vol, veh/h	0	1	0	0	4	42	0	0	0	164	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	4	46	0	0	0	178	0	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	386	361	5	361	365	0	9	0	0	0	0	0
Stage 1	361	361	-	0	0	-	-	-	-	-	-	-
Stage 2	25	0	-	361	365	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	573	566	1078	595	563	-	1611	-	-	-	-	-
Stage 1	657	626	-	-	-	-	-	-	-	-	-	-
Stage 2	993	-	-	657	623	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	566	1078	594	563	-	1611	-	-	-	-	-
Mov Cap-2 Maneuver	-	566	-	594	563	-	-	-	-	-	-	-
Stage 1	657	626	-	-	-	-	-	-	-	-	-	-
Stage 2	993	-	-	656	623	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0	
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1611	-	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-






HCM 6th TWSC  
10: So. Rome Way & Road A

11/24/2022

Intersection

Int Delay, s/veh 6.1

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	273	0	0	69	149	162
Future Vol, veh/h	273	0	0	69	149	162
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	297	0	0	75	162	176

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	325	250	338	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	75	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	669	789	1221	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	669	789	1221	-	-	-
Mov Cap-2 Maneuver	669	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	948	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1221	-	669	-	-
HCM Lane V/C Ratio	-	-	0.444	-	-
HCM Control Delay (s)	0	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	2.3	-	-

HCM 6th TWSC  
12: E. Atlantic Pl. & Access A

11/24/2022

Intersection

Int Delay, s/veh 1.6

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	10	12	4	6	0
Future Vol, veh/h	0	10	12	4	6	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	13	4	7	0

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	17	0	-	0	26	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	11	-
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	1600	-	-	-	989	1065
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1600	-	-	-	989	1065
Mov Cap-2 Maneuver	-	-	-	-	989	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	1012	-

Approach EB WB SB

HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1600	-	-	-	989
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	8.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection

Int Delay, s/veh 0.6

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	5	5	4	1	0
Future Vol, veh/h	0	5	5	4	1	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	5	4	1	0

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	9	0	-	0	12	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	5	-
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	1611	-	-	-	1008	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1611	-	-	-	1008	1075
Mov Cap-2 Maneuver	-	-	-	-	1008	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1018	-

Approach EB WB SB

HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1611	-	-	-	1008
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC  
1: So. Rivera St. & E. Jewell Ave.

11/24/2022

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	925	150	0	1151	0	36
Future Vol, veh/h	925	150	0	1151	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	435	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1005	163	0	1251	0	39

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 503
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	- 6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	- 3.32
Pot Cap-1 Maneuver	-	0	0 514
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 514
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	514	-	-	-
HCM Lane V/C Ratio	0.076	-	-	-
HCM Control Delay (s)	12.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

# HCM 6th Signalized Intersection Summary

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (veh/h)	940	21	177	921	231	189
Future Volume (veh/h)	940	21	177	921	231	189
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1022	23	192	1001	251	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1096	489	312	1714	655	583
Arrive On Green	0.31	0.31	0.10	0.48	0.37	0.37
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	1022	23	192	1001	251	205
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	16.8	0.6	4.1	12.2	6.2	5.6
Cycle Q Clear(g_c), s	16.8	0.6	4.1	12.2	6.2	5.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1096	489	312	1714	655	583
V/C Ratio(X)	0.93	0.05	0.62	0.58	0.38	0.35
Avail Cap(c_a), veh/h	1096	489	400	1889	655	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	14.6	13.9	11.2	14.0	13.8
Incr Delay (d2), s/veh	13.9	0.0	2.0	0.4	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.2	1.5	4.1	2.5	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.1	14.6	15.9	11.6	15.7	15.4
LnGrp LOS	C	B	B	B	B	B
Approach Vol, veh/h	1045			1193	456	
Approach Delay, s/veh	33.7			12.3	15.6	
Approach LOS	C			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		26.6	10.4	23.0		33.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		19.1	8.9	18.5		31.9
Max Q Clear Time (g_c+I1), s		8.2	6.1	18.8		14.2
Green Ext Time (p_c), s		1.2	0.1	0.0		6.9
Intersection Summary						
HCM 6th Ctrl Delay			21.1			
HCM 6th LOS			C			



# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑
Traffic Volume (vph)	940	21	177	921	231	189
Future Volume (vph)	940	21	177	921	231	189
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	23.0	23.0	13.4	36.4	23.6	23.6
Total Split (%)	38.3%	38.3%	22.3%	60.7%	39.3%	39.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	19.1	19.1	31.7	31.7	19.3	19.3
Actuated g/C Ratio	0.32	0.32	0.53	0.53	0.32	0.32
v/c Ratio	0.91	0.04	0.53	0.53	0.44	0.32
Control Delay	34.2	7.3	13.3	10.6	19.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	7.3	13.3	10.6	19.2	4.3
LOS	C	A	B	B	B	A
Approach Delay	33.6			11.0	12.5	
Approach LOS	C			B	B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 20.0

Intersection LOS: C

Intersection Capacity Utilization 59.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R) 23.6 s	↖ Ø3 13.4 s	→ Ø4 23 s
	↖ Ø8 36.4 s	

Landing at Jewell




Year 2030 PM Peak-Hour Total Traffic

Synchro 11

Page 1

HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1	1	139	41	16
Future Vol, veh/h	30	1	1	139	41	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	1	1	151	45	17

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	207	54	62	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	781	1013	1541	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	780	1013	1541	-	-	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1541	-	786	-	-
HCM Lane V/C Ratio	0.001	-	0.043	-	-
HCM Control Delay (s)	7.3	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	15	0	4	7	0	0	0	5	0	0	0
Future Vol, veh/h	0	15	0	4	7	0	0	0	5	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	0	4	8	0	0	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	8	0	0	16	0	0	32	32	16	35	32	8
Stage 1	-	-	-	-	-	-	16	16	-	16	16	-
Stage 2	-	-	-	-	-	-	16	16	-	19	16	-
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	1612	-	-	1602	-	-	976	861	1063	971	861	1074
Stage 1	-	-	-	-	-	-	1004	882	-	1004	882	-
Stage 2	-	-	-	-	-	-	1004	882	-	1000	882	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1612	-	-	1602	-	-	974	858	1063	964	858	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	974	858	-	964	858	-
Stage 1	-	-	-	-	-	-	1004	882	-	1004	879	-
Stage 2	-	-	-	-	-	-	1001	879	-	995	882	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.6	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1063	1612	-	-	1602	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	0.003	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.3	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	7	0	0	1	36	0	0	0	147	0	1
Future Vol, veh/h	0	7	0	0	1	36	0	0	0	147	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	1	39	0	0	0	160	0	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	341	321	1	325	321	0	1	0	0	0	0	0
Stage 1	321	321	-	0	0	-	-	-	-	-	-	-
Stage 2	20	0	-	325	321	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	613	596	1084	628	596	-	1622	-	-	-	-	-
Stage 1	691	652	-	-	-	-	-	-	-	-	-	-
Stage 2	999	-	-	687	652	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	596	1084	622	596	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	596	-	622	596	-	-	-	-	-	-	-
Stage 1	691	652	-	-	-	-	-	-	-	-	-	-
Stage 2	999	-	-	679	652	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0	
HCM LOS	-	-		




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-

HCM 6th TWSC  
10: So. Rome Way & Road A

11/24/2022

Intersection

Int Delay, s/veh 5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	251	0	0	169	57	142
Future Vol, veh/h	251	0	0	169	57	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	273	0	0	184	62	154

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	323	139	216
Stage 1	139	-	-
Stage 2	184	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	671	909	1354
Stage 1	888	-	-
Stage 2	848	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	671	909	1354
Mov Cap-2 Maneuver	671	-	-
Stage 1	888	-	-
Stage 2	848	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1354	-	671	-	-
HCM Lane V/C Ratio	-	-	0.407	-	-
HCM Control Delay (s)	0	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	2	-	-

Intersection

Int Delay, s/veh 2

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations

Traffic Vol, veh/h 0 20 11 6 11 0

Future Vol, veh/h 0 20 11 6 11 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 - - - - 0 -

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 0 0 - 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 0 22 12 7 12 0

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 19 0 - 0 38 16

Stage 1 - - - - 16 -

Stage 2 - - - - 22 -

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 1597 - - - 974 1063

Stage 1 - - - - 1007 -

Stage 2 - - - - 1001 -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver 1597 - - - 974 1063

Mov Cap-2 Maneuver - - - - 974 -

Stage 1 - - - - 1007 -

Stage 2 - - - - 1001 -

Approach EB WB SB

HCM Control Delay, s 0 0 8.7

HCM LOS A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h) 1597 - - - 974

HCM Lane V/C Ratio - - - - 0.012

HCM Control Delay (s) 0 - - - 8.7

HCM Lane LOS A - - - A

HCM 95th %tile Q(veh) 0 - - - 0

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Traffic Vol, veh/h	0	8	6	1	7	0
Future Vol, veh/h	0	8	6	1	7	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	7	1	8	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	8	0	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	1612	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1612	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1001
HCM Lane V/C Ratio	-	-	-	-	0.008
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

## Year 2050 Background and Total Peak-Hour



# HCM 6th Signalized Intersection Summary 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Volume (veh/h)	1530	75	78	1788	30	50
Future Volume (veh/h)	1530	75	78	1788	30	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1663	82	85	1943	33	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2223	690	212	2729	651	580
Arrive On Green	0.44	0.44	0.05	0.53	0.37	0.37
Sat Flow, veh/h	5274	1585	1781	5274	1781	1585
Grp Volume(v), veh/h	1663	82	85	1943	33	54
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1702	1781	1585
Q Serve(g_s), s	24.5	2.8	2.2	25.7	1.1	2.0
Cycle Q Clear(g_c), s	24.5	2.8	2.2	25.7	1.1	2.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2223	690	212	2729	651	580
V/C Ratio(X)	0.75	0.12	0.40	0.71	0.05	0.09
Avail Cap(c_a), veh/h	2525	784	353	3432	651	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	15.1	17.2	15.8	18.5	18.7
Incr Delay (d2), s/veh	1.1	0.1	1.2	0.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	1.0	0.9	9.3	0.5	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.4	15.2	18.4	16.3	18.6	19.1
LnGrp LOS	C	B	B	B	B	B
Approach Vol, veh/h	1745			2028	87	
Approach Delay, s/veh	22.0			16.4	18.9	
Approach LOS	C			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		37.4	8.9	43.7		52.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		20.5	11.5	44.5		60.5
Max Q Clear Time (g_c+I1), s		4.0	4.2	26.5		27.7
Green Ext Time (p_c), s		0.2	0.1	11.8		20.4
Intersection Summary						
HCM 6th Ctrl Delay			19.0			
HCM 6th LOS			B			



# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Volume (vph)	1530	75	78	1788	30	50
Future Volume (vph)	1530	75	78	1788	30	50
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	49.0	49.0	16.0	65.0	25.0	25.0
Total Split (%)	54.4%	54.4%	17.8%	72.2%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	45.9	45.9	55.5	55.5	25.5	25.5
Actuated g/C Ratio	0.51	0.51	0.62	0.62	0.28	0.28
v/c Ratio	0.64	0.10	0.39	0.62	0.07	0.11
Control Delay	17.3	2.8	12.1	11.4	27.1	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	2.8	12.1	11.4	27.1	8.9
LOS	B	A	B	B	C	A
Approach Delay	16.7			11.4	15.8	
Approach LOS	B			B	B	

## Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 13.9

Intersection LOS: B

Intersection Capacity Utilization 49.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R)	↖ Ø3	→ Ø4
25 s	16 s	49 s
	↖ Ø8	
	65 s	

Landing at Jewell

Year 2050 AM Peak-Hour Background Traffic

Synchro 11

Page 1

HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 0.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y					
Traffic Vol, veh/h	16	0	2	67	141	12
Future Vol, veh/h	16	0	2	67	141	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	0	2	73	153	13

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	237	160	166	0	-	0
Stage 1	160	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	751	885	1412	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	750	885	1412	-	-	-
Mov Cap-2 Maneuver	750	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	946	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.9	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1412	-	750	-	-
HCM Lane V/C Ratio	0.002	-	0.023	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	9	0	5	9	0	0	0	7	0	0	0
Future Vol, veh/h	0	9	0	5	9	0	0	0	7	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	10	0	5	10	0	0	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	30	30	10	34	30	10
Stage 1	-	-	-	-	-	-	10	10	-	20	20	-
Stage 2	-	-	-	-	-	-	20	20	-	14	10	-
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	1610	-	-	1610	-	-	979	863	1071	973	863	1071
Stage 1	-	-	-	-	-	-	1011	887	-	999	879	-
Stage 2	-	-	-	-	-	-	999	879	-	1006	887	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	977	860	1071	964	860	1071
Mov Cap-2 Maneuver	-	-	-	-	-	-	977	860	-	964	860	-
Stage 1	-	-	-	-	-	-	1011	887	-	999	876	-
Stage 2	-	-	-	-	-	-	996	876	-	999	887	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.6	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1071	1610	-	-	1610	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-	0.003	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

# HCM 6th Signalized Intersection Summary

## 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↙	↑↑↑	↙	↗
Traffic Volume (veh/h)	1758	30	44	1542	94	86
Future Volume (veh/h)	1758	30	44	1542	94	86
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1911	33	48	1676	102	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2354	731	181	2807	624	555
Arrive On Green	0.46	0.46	0.04	0.55	0.35	0.35
Sat Flow, veh/h	5274	1585	1781	5274	1781	1585
Grp Volume(v), veh/h	1911	33	48	1676	102	93
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1702	1781	1585
Q Serve(g_s), s	29.0	1.0	1.2	19.8	3.6	3.6
Cycle Q Clear(g_c), s	29.0	1.0	1.2	19.8	3.6	3.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2354	731	181	2807	624	555
V/C Ratio(X)	0.81	0.05	0.27	0.60	0.16	0.17
Avail Cap(c_a), veh/h	2525	784	339	3432	624	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	13.4	17.3	13.6	20.2	20.2
Incr Delay (d2), s/veh	2.0	0.0	0.8	0.2	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	0.4	0.5	7.0	1.5	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.9	13.4	18.1	13.8	20.7	20.8
LnGrp LOS	C	B	B	B	C	C
Approach Vol, veh/h	1944			1724	195	
Approach Delay, s/veh	22.7			13.9	20.8	
Approach LOS	C			B	C	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	36.0		8.0	46.0	54.0	
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5	
Max Green Setting (Gmax), s	20.5		11.5	44.5	60.5	
Max Q Clear Time (g_c+I1), s	5.6		3.2	31.0	21.8	
Green Ext Time (p_c), s	0.5		0.0	10.5	18.3	
Intersection Summary						
HCM 6th Ctrl Delay			18.7			
HCM 6th LOS			B			

# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Volume (vph)	1758	30	44	1542	94	86
Future Volume (vph)	1758	30	44	1542	94	86
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	49.0	49.0	16.0	65.0	25.0	25.0
Total Split (%)	54.4%	54.4%	17.8%	72.2%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	47.3	47.3	54.1	54.1	26.9	26.9
Actuated g/C Ratio	0.53	0.53	0.60	0.60	0.30	0.30
v/c Ratio	0.71	0.04	0.24	0.55	0.19	0.17
Control Delay	17.8	3.6	8.4	11.2	28.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.8	3.6	8.4	11.2	28.0	7.3
LOS	B	A	A	B	C	A
Approach Delay	17.6			11.1	18.2	
Approach LOS	B			B	B	

## Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.7

Intersection LOS: B

Intersection Capacity Utilization 49.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R)	↖ Ø3	→ Ø4
25 s	16 s	49 s
	↖ Ø8	
	65 s	

Landing at Jewell

Year 2050 PM Peak-Hour Background Traffic

Synchro 11

Page 1



HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 0.9

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			4	4	
Traffic Vol, veh/h	21	2	2	159	58	16
Future Vol, veh/h	21	2	2	159	58	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	2	2	173	63	17

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	249	72	80	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	739	990	1518	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	738	990	1518	-	-	-
Mov Cap-2 Maneuver	738	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	854	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.9	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1518	-	755	-	-
HCM Lane V/C Ratio	0.001	-	0.033	-	-
HCM Control Delay (s)	7.4	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	14	0	8	10	0	0	0	9	0	0	0
Future Vol, veh/h	0	14	0	8	10	0	0	0	9	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	0	9	11	0	0	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	11	0	0	15	0	0	44	44	15	49	44	11
Stage 1	-	-	-	-	-	-	15	15	-	29	29	-
Stage 2	-	-	-	-	-	-	29	29	-	20	15	-
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	1608	-	-	1603	-	-	958	848	1065	951	848	1070
Stage 1	-	-	-	-	-	-	1005	883	-	988	871	-
Stage 2	-	-	-	-	-	-	988	871	-	999	883	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1608	-	-	1603	-	-	953	843	1065	938	843	1070
Mov Cap-2 Maneuver	-	-	-	-	-	-	953	843	-	938	843	-
Stage 1	-	-	-	-	-	-	1005	883	-	988	866	-
Stage 2	-	-	-	-	-	-	982	866	-	990	883	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.2	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1065	1608	-	-	1603	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	0.005	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.3	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-



Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1518	172	0	2002	0	42
Future Vol, veh/h	1518	172	0	2002	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	435	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1650	187	0	2176	0	46

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 825
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.14
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.92
Pot Cap-1 Maneuver	-	-	0 - 0 271
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 271
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	271	-	-	-
HCM Lane V/C Ratio	0.168	-	-	-
HCM Control Delay (s)	21	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-

# HCM 6th Signalized Intersection Summary

## 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↙	↑↑↑	↙	↗
Traffic Volume (veh/h)	1485	75	248	1808	194	170
Future Volume (veh/h)	1485	75	248	1808	194	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1614	82	270	1965	211	185
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2144	666	311	2936	579	515
Arrive On Green	0.42	0.42	0.11	0.57	0.33	0.33
Sat Flow, veh/h	5274	1585	1781	5274	1781	1585
Grp Volume(v), veh/h	1614	82	270	1965	211	185
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1702	1781	1585
Q Serve(g_s), s	24.1	2.8	7.3	23.9	8.2	8.0
Cycle Q Clear(g_c), s	24.1	2.8	7.3	23.9	8.2	8.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2144	666	311	2936	579	515
V/C Ratio(X)	0.75	0.12	0.87	0.67	0.36	0.36
Avail Cap(c_a), veh/h	2525	784	352	3432	579	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.95	0.95
Uniform Delay (d), s/veh	22.1	16.0	18.6	13.2	23.3	23.2
Incr Delay (d2), s/veh	1.1	0.1	18.5	0.4	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	1.0	4.3	8.4	3.6	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	16.0	37.0	13.6	24.9	25.1
LnGrp LOS	C	B	D	B	C	C
Approach Vol, veh/h	1696			2235	396	
Approach Delay, s/veh	22.9			16.4	25.0	
Approach LOS	C			B	C	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	33.8		14.0	42.3	56.2	
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5	
Max Green Setting (Gmax), s	20.5		11.5	44.5	60.5	
Max Q Clear Time (g_c+I1), s	10.2		9.3	26.1	25.9	
Green Ext Time (p_c), s	1.0		0.2	11.7	21.3	
Intersection Summary						
HCM 6th Ctrl Delay			19.8			
HCM 6th LOS			B			

# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Volume (vph)	1485	75	248	1808	194	170
Future Volume (vph)	1485	75	248	1808	194	170
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	49.0	49.0	16.0	65.0	25.0	25.0
Total Split (%)	54.4%	54.4%	17.8%	72.2%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	41.8	41.8	57.8	57.8	23.2	23.2
Actuated g/C Ratio	0.46	0.46	0.64	0.64	0.26	0.26
v/c Ratio	0.68	0.11	0.88	0.60	0.46	0.34
Control Delay	20.3	3.3	50.1	10.1	35.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	3.3	50.1	10.1	35.6	12.5
LOS	C	A	D	B	D	B
Approach Delay	19.5			14.9	24.8	
Approach LOS	B			B	C	

## Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 17.6

Intersection LOS: B

Intersection Capacity Utilization 64.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↙ Ø2 (R)	↘ Ø3	→ Ø4
25 s	16 s	49 s
	← Ø8	
	65 s	

Intersection

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	23	0	2	67	141	20
Future Vol, veh/h	23	0	2	67	141	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	0	2	73	153	22

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	241	164	175
Stage 1	164	-	-
Stage 2	77	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	747	881	1401
Stage 1	865	-	-
Stage 2	946	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	746	881	1401
Mov Cap-2 Maneuver	746	-	-
Stage 1	864	-	-
Stage 2	946	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1401	-	746	-	-
HCM Lane V/C Ratio	0.002	-	0.034	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	10	0	5	13	0	0	0	7	0	0	0
Future Vol, veh/h	0	10	0	5	13	0	0	0	7	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	0	5	14	0	0	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	11	0	0	35	35	11	39	35	14
Stage 1	-	-	-	-	-	-	11	11	-	24	24	-
Stage 2	-	-	-	-	-	-	24	24	-	15	11	-
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	1604	-	-	1608	-	-	971	857	1070	966	857	1066
Stage 1	-	-	-	-	-	-	1010	886	-	994	875	-
Stage 2	-	-	-	-	-	-	994	875	-	1005	886	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1604	-	-	1608	-	-	969	854	1070	957	854	1066
Mov Cap-2 Maneuver	-	-	-	-	-	-	969	854	-	957	854	-
Stage 1	-	-	-	-	-	-	1010	886	-	994	872	-
Stage 2	-	-	-	-	-	-	991	872	-	998	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1070	1604	-	-	1608	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-	0.003	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-



HCM 2010 TWSC  
9: So. Rivera St. & Road A

11/24/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	1	0	0	4	42	0	0	0	164	0	8
Future Vol, veh/h	0	1	0	0	4	42	0	0	0	164	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	4	46	0	0	0	178	0	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	386	361	5	361	365	0	9	0	0	0	0	0
Stage 1	361	361	-	0	0	-	-	-	-	-	-	-
Stage 2	25	0	-	361	365	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	573	566	1078	595	563	-	1611	-	-	-	-	-
Stage 1	657	626	-	-	-	-	-	-	-	-	-	-
Stage 2	993	-	-	657	623	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	566	1078	594	563	-	1611	-	-	-	-	-
Mov Cap-2 Maneuver	-	566	-	594	563	-	-	-	-	-	-	-
Stage 1	657	626	-	-	-	-	-	-	-	-	-	-
Stage 2	993	-	-	656	623	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0			
HCM LOS	-	-	-	-

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1611	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-

Intersection

Int Delay, s/veh 5.4

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	W			4	↑	↑
Traffic Vol, veh/h	273	0	0	90	161	162
Future Vol, veh/h	273	0	0	90	161	162
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	297	0	0	98	175	176

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	273	175	351	0	-	0
Stage 1	175	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	716	868	1208	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	716	868	1208	-	-	-
Mov Cap-2 Maneuver	716	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	926	-	-	-	-	-




Approach EB NB SB

HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1208	-	716	-	-
HCM Lane V/C Ratio	-	-	0.414	-	-
HCM Control Delay (s)	0	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	2	-	-



Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	18	4	6	0
Future Vol, veh/h	0	17	18	4	6	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	20	4	7	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	24	0	0	40	22
Stage 1	-	-	-	22	-
Stage 2	-	-	-	18	-
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	1591	-	-	972	1055
Stage 1	-	-	-	1001	-
Stage 2	-	-	-	1005	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1591	-	-	972	1055
Mov Cap-2 Maneuver	-	-	-	972	-
Stage 1	-	-	-	1001	-
Stage 2	-	-	-	1005	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	972
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	8.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	9	9	4	1	0
Future Vol, veh/h	0	9	9	4	1	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	10	4	1	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	14	0	0 22 12
Stage 1	-	-	- 12 -
Stage 2	-	-	- 10 -
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	1604	-	- 995 1069
Stage 1	-	-	- 1011 -
Stage 2	-	-	- 1013 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1604	-	- 995 1069
Mov Cap-2 Maneuver	-	-	- 995 -
Stage 1	-	-	- 1011 -
Stage 2	-	-	- 1013 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1604	-	-	-	995
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC  
1: So. Rivera St. & E. Jewell Ave.

11/24/2022

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1719	150	0	1966	0	36
Future Vol, veh/h	1719	150	0	1966	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	435	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1868	163	0	2137	0	39

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 934
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	- 7.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	- 3.92
Pot Cap-1 Maneuver	-	0	0 230
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 230
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	230	-	-	-
HCM Lane V/C Ratio	0.17	-	-	-
HCM Control Delay (s)	23.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-

# HCM 6th Signalized Intersection Summary 3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↘	↑↑↑	↘	↑
Traffic Volume (veh/h)	1725	30	193	1719	247	202
Future Volume (veh/h)	1725	30	193	1719	247	202
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1875	33	210	1868	268	220
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2205	685	257	2900	591	526
Arrive On Green	0.43	0.43	0.09	0.57	0.33	0.33
Sat Flow, veh/h	5274	1585	1781	5274	1781	1585
Grp Volume(v), veh/h	1875	33	210	1868	268	220
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1702	1781	1585
Q Serve(g_s), s	29.7	1.1	5.5	22.4	10.6	9.7
Cycle Q Clear(g_c), s	29.7	1.1	5.5	22.4	10.6	9.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2205	685	257	2900	591	526
V/C Ratio(X)	0.85	0.05	0.82	0.64	0.45	0.42
Avail Cap(c_a), veh/h	2298	713	351	3262	591	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	14.8	19.5	13.2	23.6	23.3
Incr Delay (d2), s/veh	3.1	0.0	10.2	0.4	2.5	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.4	2.8	7.9	4.8	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	14.9	29.7	13.6	26.1	25.7
LnGrp LOS	C	B	C	B	C	C
Approach Vol, veh/h	1908			2078	488	
Approach Delay, s/veh	25.9			15.2	26.0	
Approach LOS	C			B	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		34.4	12.2	43.4		55.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		23.5	12.5	40.5		57.5
Max Q Clear Time (g_c+I1), s		12.6	7.5	31.7		24.4
Green Ext Time (p_c), s		1.2	0.3	7.2		19.5
Intersection Summary						
HCM 6th Ctrl Delay			21.0			
HCM 6th LOS			C			

# Timings

3: So. Rome Way & E. Jewell Ave.

11/24/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↑	↑
Traffic Volume (vph)	1725	30	193	1719	247	202
Future Volume (vph)	1725	30	193	1719	247	202
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	45.0	45.0	17.0	62.0	28.0	28.0
Total Split (%)	50.0%	50.0%	18.9%	68.9%	31.1%	31.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max
Act Effct Green (s)	41.5	41.5	56.5	56.5	24.5	24.5
Actuated g/C Ratio	0.46	0.46	0.63	0.63	0.27	0.27
v/c Ratio	0.80	0.04	0.73	0.59	0.56	0.37
Control Delay	24.0	5.3	31.3	10.6	33.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	5.3	31.3	10.6	33.8	5.9
LOS	C	A	C	B	C	A
Approach Delay	23.7			12.7	21.2	
Approach LOS	C			B	C	

## Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: So. Rome Way & E. Jewell Ave.

↖ Ø2 (R) 28 s	↖ Ø3 17 s	→ Ø4 45 s
	↖ Ø8 62 s	

Landing at Jewell

Year 2050 PM Peak-Hour Total Traffic

Synchro 11

Page 1



HCM 6th TWSC  
5: So. Rome Way & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 1.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y					
Traffic Vol, veh/h	39	2	2	159	59	23
Future Vol, veh/h	39	2	2	159	59	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	2	2	173	64	25

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	254	77	89	0	-	0
Stage 1	77	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	735	984	1506	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	734	984	1506	-	-	-
Mov Cap-2 Maneuver	734	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	854	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	10.2	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1506	-	743	-	-
HCM Lane V/C Ratio	0.001	-	0.06	-	-
HCM Control Delay (s)	7.4	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 6th TWSC  
6: So. Rivera St. & E. Atlantic Pl.

11/24/2022

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	21	0	8	11	0	0	0	9	0	0	0
Future Vol, veh/h	0	21	0	8	11	0	0	0	9	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	0	9	12	0	0	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	12	0	0	23	0	0	53	53	23	58	53	12
Stage 1	-	-	-	-	-	-	23	23	-	30	30	-
Stage 2	-	-	-	-	-	-	30	30	-	28	23	-
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	1607	-	-	1592	-	-	946	838	1054	939	838	1069
Stage 1	-	-	-	-	-	-	995	876	-	987	870	-
Stage 2	-	-	-	-	-	-	987	870	-	989	876	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1607	-	-	1592	-	-	941	833	1054	926	833	1069
Mov Cap-2 Maneuver	-	-	-	-	-	-	941	833	-	926	833	-
Stage 1	-	-	-	-	-	-	995	876	-	987	865	-
Stage 2	-	-	-	-	-	-	981	865	-	980	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.1	8.4	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1054	1607	-	-	1592	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	0.005	-	-	-
HCM Control Delay (s)	8.4	0	-	-	7.3	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-



HCM 6th TWSC  
9: So. Rivera St. & Road A

11/24/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	7	0	0	1	36	0	0	0	149	0	1
Future Vol, veh/h	0	7	0	0	1	36	0	0	0	149	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	1	39	0	0	0	162	0	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	345	325	1	329	325	0	1	0	0	0	0	0
Stage 1	325	325	-	0	0	-	-	-	-	-	-	-
Stage 2	20	0	-	329	325	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	609	593	1084	624	593	-	1622	-	-	-	-	-
Stage 1	687	649	-	-	-	-	-	-	-	-	-	-
Stage 2	999	-	-	684	649	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	593	1084	618	593	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	593	-	618	593	-	-	-	-	-	-	-
Stage 1	687	649	-	-	-	-	-	-	-	-	-	-
Stage 2	999	-	-	676	649	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0			
HCM LOS	-	-	-	-

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-

HCM 6th TWSC  
10: So. Rome Way & Road A

11/24/2022

Intersection

Int Delay, s/veh 5.1

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 251 0 0 198 82 142

Future Vol, veh/h 251 0 0 198 82 142

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - 250

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 273 0 0 215 89 154

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 304 89 243 0 - 0

Stage 1 89 - - - - -

Stage 2 215 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 688 969 1323 - - -

Stage 1 934 - - - - -

Stage 2 821 - - - - -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver 688 969 1323 - - -

Mov Cap-2 Maneuver 688 - - - - -

Stage 1 934 - - - - -

Stage 2 821 - - - - -

Approach EB NB SB

HCM Control Delay, s 13.6 0 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1323 - 688 - -

HCM Lane V/C Ratio - - 0.397 - -

HCM Control Delay (s) 0 - 13.6 - -

HCM Lane LOS A - B - -

HCM 95th %tile Q(veh) 0 - 1.9 - -

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	30	19	6	11	0
Future Vol, veh/h	0	30	19	6	11	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	21	7	12	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	28	0	0 58 25
Stage 1	-	-	- 25 -
Stage 2	-	-	- 33 -
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	1585	-	- 949 1051
Stage 1	-	-	- 998 -
Stage 2	-	-	- 989 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1585	-	- 949 1051
Mov Cap-2 Maneuver	-	-	- 949 -
Stage 1	-	-	- 998 -
Stage 2	-	-	- 989 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	949
HCM Lane V/C Ratio	-	-	-	-	0.013
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations		↕	↕		↕	
---------------------	--	---	---	--	---	--

Traffic Vol, veh/h	0	14	10	1	7	0
--------------------	---	----	----	---	---	---

Future Vol, veh/h	0	14	10	1	7	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	-	-	-	-	0	-
----------------	---	---	---	---	---	---

Veh in Median Storage, #	-	0	0	-	0	-
--------------------------	---	---	---	---	---	---

Grade, %	-	0	0	-	0	-
----------	---	---	---	---	---	---

Peak Hour Factor	92	92	92	92	92	92
------------------	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2
-------------------	---	---	---	---	---	---

Mvmt Flow	0	15	11	1	8	0
-----------	---	----	----	---	---	---

Major/Minor	Major1	Major2	Minor2
-------------	--------	--------	--------

Conflicting Flow All	12	0	0	27	12
----------------------	----	---	---	----	----

Stage 1	-	-	-	12	-
---------	---	---	---	----	---

Stage 2	-	-	-	15	-
---------	---	---	---	----	---

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	1607	-	-	988	1069
--------------------	------	---	---	-----	------

Stage 1	-	-	-	1011	-
---------	---	---	---	------	---

Stage 2	-	-	-	1008	-
---------	---	---	---	------	---

Platoon blocked, %	-	-	-	-	-
--------------------	---	---	---	---	---

Mov Cap-1 Maneuver	1607	-	-	988	1069
--------------------	------	---	---	-----	------

Mov Cap-2 Maneuver	-	-	-	988	-
--------------------	---	---	---	-----	---

Stage 1	-	-	-	1011	-
---------	---	---	---	------	---

Stage 2	-	-	-	1008	-
---------	---	---	---	------	---

Approach	EB	WB	SB
----------	----	----	----

HCM Control Delay, s	0	0	8.7
----------------------	---	---	-----

HCM LOS			A
---------	--	--	---

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
-----------------------	-----	-----	-----	-----	-------

Capacity (veh/h)	1607	-	-	-	988
------------------	------	---	---	---	-----

HCM Lane V/C Ratio	-	-	-	-	0.008
--------------------	---	---	---	---	-------

HCM Control Delay (s)	0	-	-	-	8.7
-----------------------	---	---	---	---	-----

HCM Lane LOS	A	-	-	-	A
--------------	---	---	---	---	---

HCM 95th %tile Q(veh)	0	-	-	-	0
-----------------------	---	---	---	---	---

Appendix F  
Year 2050 Queue Length Analysis  
(SimTraffic Printouts)

Queuing and Blocking Report  
Year 2050 AM Peak-Hour Total Traffic

11/24/2022

Intersection: 1: So. Rivera St. & E. Jewell Ave.

Movement	NB
Directions Served	R
Maximum Queue (ft)	44
Average Queue (ft)	18
95th Queue (ft)	37
Link Distance (ft)	277
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: So. Rome Way & E. Jewell Ave.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB
Directions Served	T	T	T	R	L	T	T	T	L	R
Maximum Queue (ft)	350	339	244	70	215	345	308	219	206	107
Average Queue (ft)	225	196	130	27	110	205	166	79	103	42
95th Queue (ft)	312	288	218	59	184	298	274	172	173	80
Link Distance (ft)	474	474	474			508	508	508	267	267
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)				435	510					
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 5: So. Rome Way & E. Atlantic Pl.

Movement	EB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	16
95th Queue (ft)	41
Link Distance (ft)	213
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report  
Year 2050 AM Peak-Hour Total Traffic

11/24/2022

Intersection: 6: So. Rivera St. & E. Atlantic Pl.

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	313
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: So. Rivera St. & Road A

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	25	58
Average Queue (ft)	1	26
95th Queue (ft)	12	51
Link Distance (ft)	337	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: So. Rome Way & Road A

Movement	EB
Directions Served	LR
Maximum Queue (ft)	121
Average Queue (ft)	60
95th Queue (ft)	102
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



Queuing and Blocking Report  
Year 2050 AM Peak-Hour Total Traffic

11/24/2022

Intersection: 12: E. Atlantic Pl. & Access A

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: Access A & Road A

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: E. Atlantic Pl. & Access B

Movement	SB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	197
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Queuing and Blocking Report  
Year 2050 PM Peak-Hour Total Traffic

11/24/2022

Intersection: 1: So. Rivera St. & E. Jewell Ave.

Movement	EB	NB
Directions Served	R	R
Maximum Queue (ft)	10	35
Average Queue (ft)	0	16
95th Queue (ft)	7	36
Link Distance (ft)		277
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	435	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: So. Rome Way & E. Jewell Ave.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB
Directions Served	T	T	T	R	L	T	T	T	L	R
Maximum Queue (ft)	418	372	293	50	165	317	278	171	251	134
Average Queue (ft)	269	234	163	13	87	212	173	76	126	50
95th Queue (ft)	376	339	260	42	148	291	260	154	205	97
Link Distance (ft)	474	474	474			508	508	508	267	267
Upstream Blk Time (%)	0	0							0	
Queuing Penalty (veh)	0	0							0	
Storage Bay Dist (ft)				435	510					
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 5: So. Rome Way & E. Atlantic Pl.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	54	6
Average Queue (ft)	24	0
95th Queue (ft)	49	4
Link Distance (ft)	213	517
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report  
Year 2050 PM Peak-Hour Total Traffic

11/24/2022

Intersection: 6: So. Rivera St. & E. Atlantic Pl.

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	12	31
Average Queue (ft)	0	7
95th Queue (ft)	6	28
Link Distance (ft)	208	313
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: So. Rivera St. & Road A

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	36	36	12
Average Queue (ft)	8	20	1
95th Queue (ft)	30	45	8
Link Distance (ft)	337		277
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: So. Rome Way & Road A

Movement	EB
Directions Served	LR
Maximum Queue (ft)	120
Average Queue (ft)	55
95th Queue (ft)	99
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report  
Year 2050 PM Peak-Hour Total Traffic

11/24/2022

Intersection: 12: E. Atlantic Pl. & Access A

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	9
95th Queue (ft)	31
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: Access A & Road A

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: E. Atlantic Pl. & Access B

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	197
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1
---------------------------------