

Transportation Mobility Study

Regis University – Regis Village

Denver, Colorado

Prepared for:

REGIS  UNIVERSITY

Kimley»Horn

Regis University – Regis Village

Denver, Colorado

Prepared for



3333 Regis Boulevard,
Denver, Colorado 80221

Prepared by

Curtis D. Rowe, P.E., PTOE
Kimley-Horn and Associates, Inc.

6200 South Syracuse Way
Suite 300
Greenwood Village, Colorado 80111
(303) 228-2300



March 2024

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF TABLES	ii
LIST OF FIGURES	ii
1.0 EXECUTIVE SUMMARY	1
2.0 INTRODUCTION.....	5
3.0 EXISTING AND FUTURE CONDITIONS	7
3.1 Existing Study Area	7
3.2 Existing Roadway Network	7
3.3 Existing Traffic Volumes	20
3.4 Unspecified Development Traffic Growth	20
4.0 PROJECT TRAFFIC CHARACTERISTICS	24
4.1 Trip Generation.....	24
4.2 Trip Distribution	25
4.3 Traffic Assignment.....	25
4.4 Total (Background Plus Project) Traffic.....	25
5.0 TRAFFIC OPERATIONS ANALYSIS	30
5.1 Analysis Methodology	30
5.2 Key Intersection Operational Analysis	31
5.3 CDOT Turn Bay Length Analysis	43
5.4 Vehicle Queuing Analysis	45
5.5 Pedestrian, Bicycle, and Transit Evaluation	47
5.6 Improvement Summary	50
6.0 CONCLUSIONS AND RECOMMENDATIONS	54

APPENDICES

- Appendix A – Conceptual Site Plan
- Appendix B – Intersection Count Sheets
- Appendix C – Future Traffic Projections
- Appendix D – Trip Generation Worksheets
- Appendix E – Intersection Analysis Worksheets
- Appendix F – Queue Analysis Worksheets

LIST OF TABLES

Table 1 – Regis Village Traffic Generation	25
Table 2 – Level of Service Definitions	30
Table 3 – 54 th Avenue & Federal Boulevard (US-287) LOS Results	31
Table 4 – 52 nd Avenue & Federal Boulevard (US-287) LOS Results	32
Table 5 – 51 st Avenue & Federal Boulevard (US-287) LOS Results	33
Table 6 – Regis Boulevard & Federal Boulevard (US-287) LOS Results.....	34
Table 7 – Regis Boulevard East Access (#5) LOS Results.....	35
Table 8 – Regis Boulevard West Access (#6) LOS Results.....	36
Table 9 – Regis Boulevard & Lowell Boulevard (#7) LOS Results.....	37
Table 10 – Lowell Boulevard South Access (#8) LOS Results	38
Table 11 – 51 st Avenue & Lowell Boulevard (#9) LOS Results	39
Table 12 – 52 nd Avenue & Lowell Boulevard (#10) LOS Results	40
Table 13 – Lowell Boulevard North Access (#11) LOS Results	41
Table 14 – Regis Village Access Level of Service Results	42
Table 15 – Turn Lane Queuing Analysis Results.....	46

LIST OF FIGURES

Figure 1 – Vicinity Map.....	6
Figure 2 – Existing Geometry and Control.....	19
Figure 3 – 2024 Existing Traffic Volumes	21
Figure 4 – 2030 Background Traffic Volumes.....	22
Figure 5 – 2045 Background Traffic Volumes.....	23
Figure 6 – Project Trip Distribution	26
Figure 7 – Project Traffic Assignment	27
Figure 8 – 2030 Total Traffic Volumes	28
Figure 9 – 2045 Total Traffic Volumes	29
Figure 10 – Recommended Geometry and Control	51
Figure 11 – Federal Boulevard Recommended Improvements.....	52
Figure 12 – Regis Boulevard Recommended Improvements.....	53

1.0 EXECUTIVE SUMMARY

Regis Village, a mixed-use redevelopment project on the campus of Regis University, is proposed to be located on the northwest corner of the Federal Boulevard (US-287) and Regis Boulevard/50th Avenue intersection in Denver, Colorado. The project is proposed to include approximately 50 single family attached homes, 350 multifamily dwelling units, 110,000 square feet of commercial uses, and 110,000 square feet of office uses. It is expected that Regis Village will be completed in the next several years. Therefore, analysis was conducted for the 2030 short-term buildout horizon as well as the 2045 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with the City and County of Denver and State of Colorado Department of Transportation (CDOT) standards and requirements:

1. 54th Avenue & Federal Boulevard (US-287)
2. 52nd Avenue & Federal Boulevard (US-287)
3. 51st Avenue & Federal Boulevard (US-287)
4. Regis Boulevard & Federal Boulevard (US-287)
5. Regis Boulevard East Access
6. Regis Boulevard West Access
7. Regis Boulevard & Lowell Boulevard
8. Lowell Boulevard South Access
9. 51st Avenue & Lowell Boulevard
10. 52nd Avenue & Lowell Boulevard
11. Lowell Boulevard North Access

In addition, existing accesses to Regis University along Regis Boulevard that aligns with Grove Road and the proposed right-in/right-out access aligning with Green Court, as well as the existing right-in/right-out access along Federal Boulevard (US-287) were evaluated.

Regional access to Regis Village of Regis University will be provided by Interstate 76 (I-76) and Interstate 70 (I-70). Primary access will be provided by Federal Boulevard (US-287) and 50th



Avenue/Regis Boulevard. Direct access will be provided by four existing driveways and one proposed access. The existing accesses are located at Grove Street along Regis Boulevard, at 51st Avenue along Federal Boulevard, at 52nd Avenue along Federal Boulevard, and a right-in/right-out access between 52nd Avenue and 51st Avenue along Federal Boulevard. The proposed new access will align with Green Court along Regis Boulevard and be restricted to right-in/right-out movements.

Regis Village is expected to generate approximately 9,564 weekday daily trips, with 407 of these trips occurring during the morning peak hour and 770 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes Regis University's Regis Village will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways for an access or intersection occurs when project traffic is anticipated to increase existing traffic volumes by more than 20 percent. Based on traffic projections, the addition of Regis Village project traffic on the west legs of 52nd Avenue, right-in/right-out access, 51st Avenue, and Regis Boulevard along Federal Boulevard (US-287) are all anticipated to increase existing traffic by more than 20 percent. Therefore, CDOT access permits are anticipated to be needed at all four access intersections along Federal Boulevard (US-287) as Regis Village development occurs. Additionally, CDOT may require access permits to close three (3) accesses along Federal Boulevard (US-287).
- The development area for Regis Village as part of Regis University will continue to utilize the existing accesses along Federal Boulevard at 52nd Avenue, right-in/right-out driveway between 52nd Avenue and 51st Avenue, at 51st Avenue, and at the existing access along Regis Boulevard at Grove Street. Additionally, a new right-in/right-out access is proposed along Regis Boulevard between Grove Street and Federal Boulevard, aligning with Green Court. The following improvement recommendations related to these access intersections are as follows:

- The west leg of the 52nd Avenue and Federal Boulevard (#2) intersection will need to be reconstructed and realigned with 52nd Avenue. Construction of the west leg at this intersection will require a traffic signal modification to include replacing the signal poles and mast arms on the east and west legs. Separate 225-foot eastbound and continuous westbound left turn lanes are also recommended to be provided. These eastbound and westbound left turns are recommended to operate with protected-permissive left turn phasing. Additionally, a southbound right turn lane is warranted to be constructed with a length of 225 feet with a 145-foot taper (based on a 40-mph speed limit).
- The existing right-in/right-out access along southbound Federal Boulevard (US-287) between 52nd Avenue and 51st Avenue (#102) will remain as a right-in/right-out access for Regis Village. A R1-1 “STOP” sign is recommended to be installed on the exiting eastbound approach. A southbound right turn deceleration lane is warranted. Based on the separation distance of only 310 feet between this right-in/right-out access and 52nd Avenue to the north, the southbound right turn lane is recommended to provide a length of 100 feet with a 120-foot taper.
- The existing 51st Avenue and Federal Boulevard (#3) intersection allows full turning movements to and from Federal Boulevard. However, full turning movements are not projected to work well at this intersection with two-way stop control and the intersection doesn’t meet CDOT’s minimum spacing for signalization. Therefore, it is recommended that this access be restricted to three-quarter movements (right-in/left-in/right-out only for the minor approaches). A R3-2 No Left Turn sign is recommended to be placed below the R1-1 “STOP” signs on the eastbound and westbound approaches. Additional permanent features such as a pork-chop median island within the exiting approaches and/or a raised median along Federal Boulevard in the middle of the intersection could be installed to further restrict left turn and through movements from the minor street. The northbound left turn lane is recommended to be extended from 125 feet to 235 feet to meet CDOT turn lane standards. Lastly, a southbound right turn lane is recommended to provide a length of 100 feet with a 120-foot taper based on only 240 feet of separation between 51st Avenue and the right-in/right-out access to the north.

- The project development will continue to use the north leg of the Regis Boulevard / Grove Street (#105) intersection as an access. No changes to the existing geometry or control are recommended.
 - Lastly, the project is proposing a right-in/right-out access along Regis Boulevard, aligning with Green Court (#106). A R1-1 “STOP” sign is recommended to be placed on the southbound approach, exiting the development. Additionally, a R3-2 No Left Turn Lane sign should be placed below the “STOP” sign and a R6-1(R) “ONE WAY” sign placed in the existing raised median with Regis Boulevard to further inform drivers of the right-out only movement requirement.
- A southbound right turn lane is warranted at the Regis Boulevard/50th Avenue and Federal Boulevard (#4) intersection. Therefore, a southbound right turn lane is recommended to provide a length of 190 feet with a 120-foot taper.
- The southbound left turn lane along Lowell Boulevard at the Regis Boulevard (#7) intersection is recommended to be extended from 25 feet to 150 feet. This left turn lane can be extended by restriping the existing southbound approach. However, some on-street parking on the west side of Lowell Boulevard will need to be restricted.
- The 52nd Avenue and Lowell Boulevard (#10) intersection is recommended to be converted from two-way stop control to a single-lane mini roundabout. The mini roundabout can be accommodated within the existing intersection and will not impact on-street parking. A mini roundabout provides roundabout control for passenger vehicles (most of the traffic through this intersection), while providing fully traversable center and splitter islands for trucks to travel through the intersection as a standard configuration (as they do today).
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City and County of Denver and/or the Colorado Department of Transportation (CDOT), as applicable, as well as the Manual on Uniform Traffic Control Devices (MUTCD) – 11th Edition, 2023.

2.0 INTRODUCTION

Kimley-Horn has prepared this report to document the results of a Transportation Mobility Study for the proposed Regis Village mixed-use redevelopment on the Regis University campus located on the northwest corner of the Federal Boulevard (US-287) and Regis Boulevard/50th Avenue intersection in Denver, Colorado. A vicinity map illustrating the overall campus location is shown in **Figure 1**. The Regis Village is proposed to include approximately 50 single family attached homes, 350 multifamily dwelling units, 110,000 square feet of commercial uses, and 110,000 square feet of office uses. A conceptual site plan of the redevelopment area is attached in **Appendix A**. It is expected that the campus redevelopment will be completed in the next several years; therefore, analysis was conducted for the 2030 short-term buildout horizon as well as the 2045 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with the City and County of Denver and State of Colorado Department of Transportation (CDOT) standards and requirements:

1. 54th Avenue & Federal Boulevard (US-287)
2. 52nd Avenue & Federal Boulevard (US-287)
3. 51st Avenue & Federal Boulevard (US-287)
4. Regis Boulevard & Federal Boulevard (US-287)
5. Regis Boulevard East Access
6. Regis Boulevard West Access
7. Regis Boulevard & Lowell Boulevard
8. Lowell Boulevard South Access
9. 51st Avenue & Lowell Boulevard
10. 52nd Avenue & Lowell Boulevard
11. Lowell Boulevard North Access

In addition, existing accesses to Regis University along Regis Boulevard that aligns with Grove Road and the proposed right-in/right-out access aligning with Green Court, as well as the existing right-in/right-out access along Federal Boulevard (US-287) were evaluated.

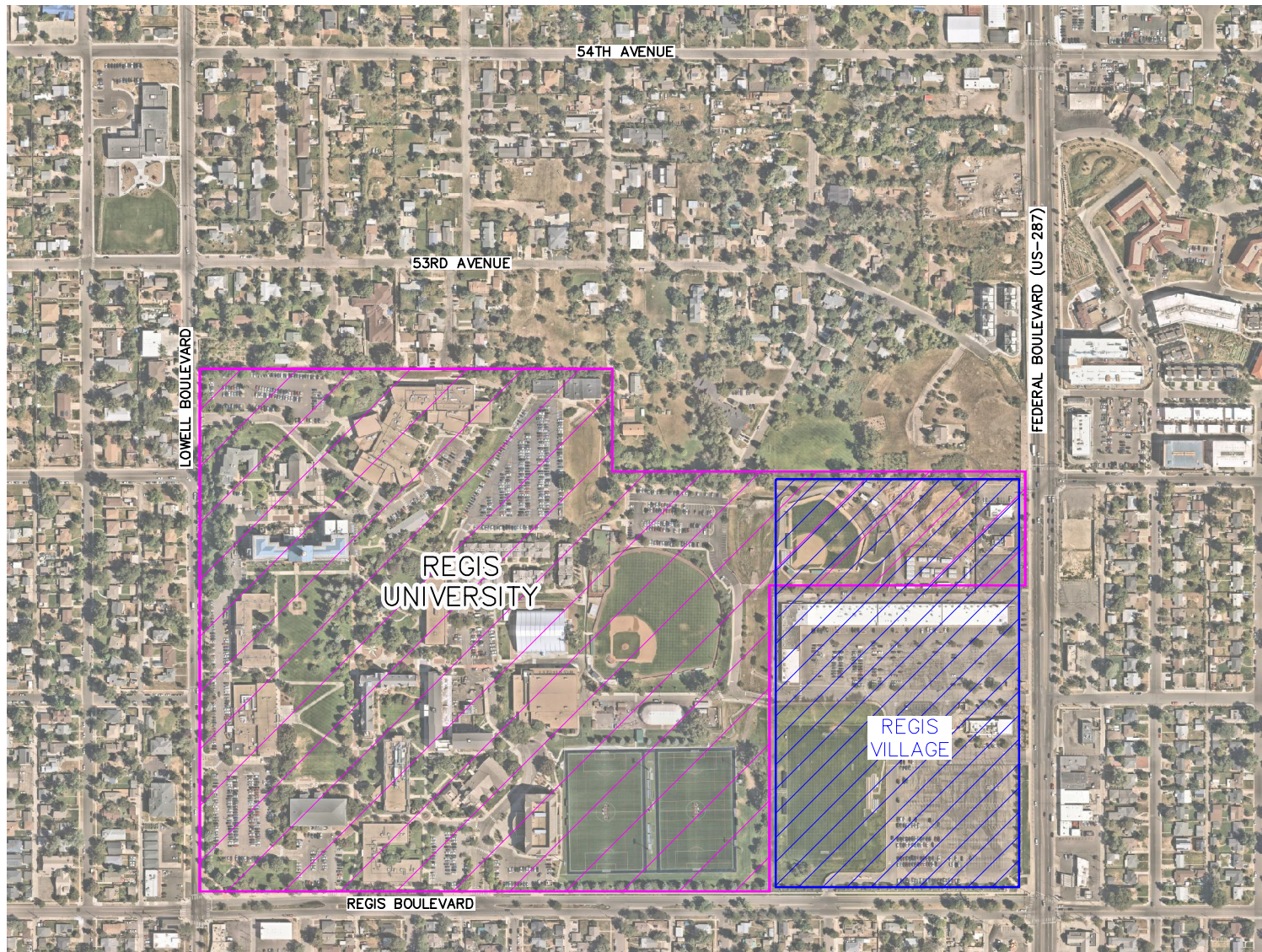


FIGURE 1
REGIS UNIVERSITY — REGIS VILLAGE
DENVER, COLORADO
VICINITY MAP



3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area

The existing site planned to be redeveloped by Regis Village consists of two sport fields for the university, parking lots, a strip retail plaza, and fast-food restaurants. Surrounding the overall campus are residential homes. Extending to the north is the Federal Boulevard (US-287) and I-76 interchange and to the south is the Federal Boulevard (US-287) and I-70 interchange.

3.2 Existing Roadway Network

Regional access to Regis Village of Regis University will be provided by Interstate 76 (I-76) and Interstate 70 (I-70). Primary access will be provided by Federal Boulevard (US-287) and 50th Avenue/Regis Boulevard. Direct access will be provided by four existing driveways and one proposed access. The existing accesses are located at Grove Street along Regis Boulevard, at 51st Avenue along Federal Boulevard, at 52nd Avenue along Federal Boulevard, and a right-in/right-out access between 52nd Avenue and 51st Avenue along Federal Boulevard. The proposed new access will align with Green Court along Regis Boulevard and be restricted to right-in/right-out movements.

Federal Boulevard (US-287) is a four-lane undivided roadway that provides two through lanes each in the northbound and southbound direction. The posted speed limit ranges from 35 miles per hour to 45 miles per hour. The northbound speed limit is 35 mph between 50th Avenue and 52nd Avenue and 45 mph north of 52nd Avenue. The southbound speed limit is 45 miles per hour near 52nd Avenue and 40 mph south of 52nd Avenue. Of note, it was observed that there are two posted speed limit signs placed 135 feet apart along southbound Federal Boulevard (US-287) near RTD Bus Stop 13732 with different posted speeds of 40 mph and 35-mph. Due to this, CDOT may wish to evaluate the speed limits in this area.

Regis Boulevard extends east-west as a two-lane divided roadway. Separated on-street bicycle lanes are provided which includes a buffer between the vehicles and the bicycles. The posted speed limit along Regis Boulevard is 30 miles per hour.

Lowell Boulevard is a two-lane roadway in the northbound and southbound direction. The posted speed limit is 30 miles per hour and on-street parking is allowed.

54th Avenue extends east-west and provides one through lane in each direction. The posted speed limit west of Federal Boulevard (US-287) is 25 miles per hour whereas east of Federal Boulevard (US-287) it is 20 miles per hour.

The signalized intersection of 54th Avenue and Federal Boulevard (US-287) (key intersection #1) operates with protected-permissive left turn phasing on the northbound and southbound approaches of Federal Boulevard and permissive-only left turn phasing the east-west 54th Avenue approaches. The northbound and southbound approaches each provide a separate left turn lane, two through lanes, and a right turn lane. The eastbound and westbound approaches each provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below (north is up - typical).



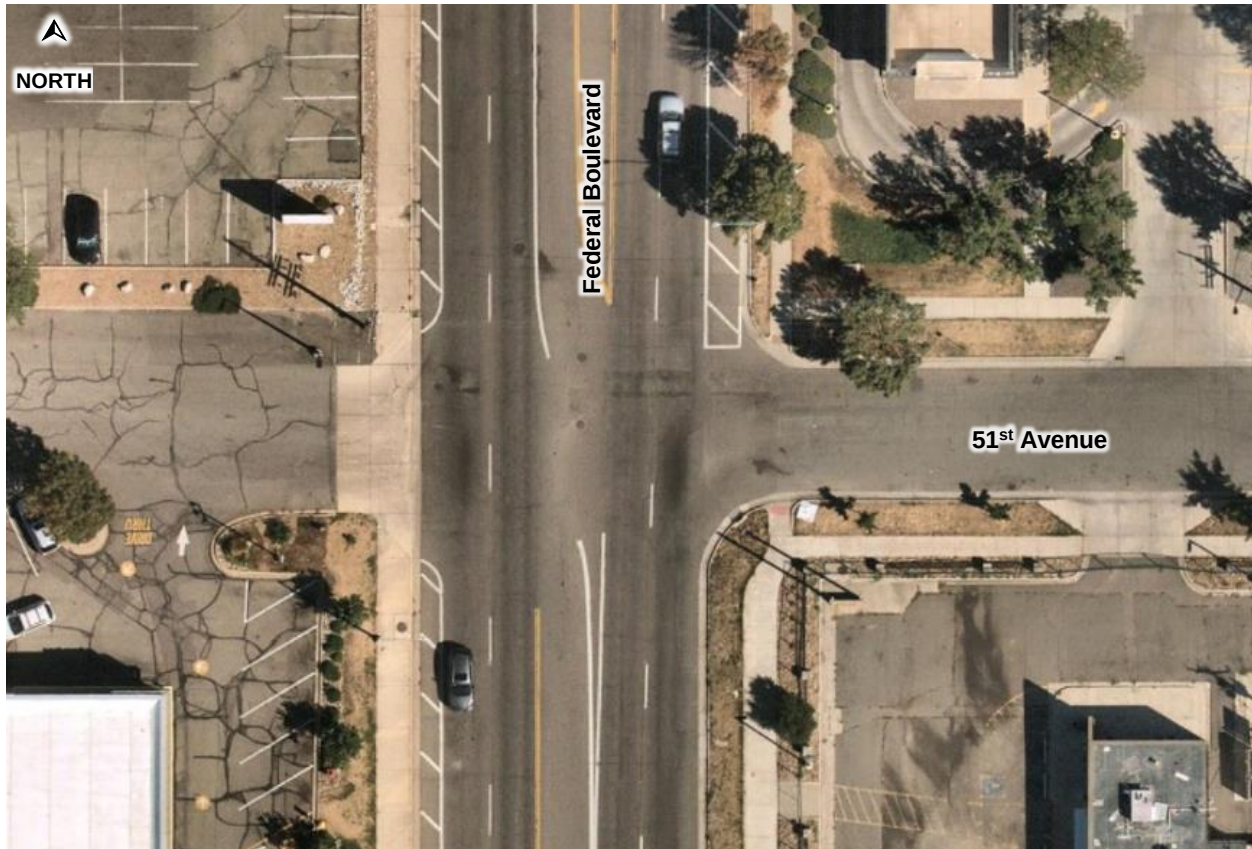
54th Avenue & Federal Boulevard (#1)

The signalized 52nd Avenue and Federal Boulevard (US-287) (#2) intersection operates with protected-permissive left turn phasing on the southbound approach and permissive-only left turn phasing on the other three approaches. The northbound and southbound Federal Boulevard (US-287) approaches provide a left turn lane and two through lanes with the outside through lane being a shared right turn. The eastbound and westbound approaches of 52nd Avenue each provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below.



52nd Avenue & Federal Boulevard (#2)

The unsignalized 51st Avenue and Federal Boulevard (US-287) (#3) intersection operates with stop control on the eastbound aligning access and westbound 51st Avenue approaches. The northbound and southbound Federal Boulevard (US-287) approaches provide a left turn lane and two through lanes with the outside through lane being a shared right. The eastbound access and westbound 51st Avenue approaches each provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below.



51st Avenue & Federal Boulevard (#3)

The signalized intersection of Regis Boulevard/50th Avenue and Federal Boulevard (US-287) (#4) operates with protected-permissive left turn phasing on the northbound approach of Federal Boulevard and permissive-only left turn phasing on the three other approaches. The northbound approach provides a separate left turn lane, two through lanes, and a right turn lane while the southbound approach provides a left turn lane and two through lanes with the outside lane being a shared through/right turn lane. The eastbound approach of Regis Boulevard provides separate left turn, through, and right turn lanes while the westbound approach provides a left turn lane and a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.



Regis Boulevard/50th Avenue & Federal Boulevard (#4)

The unsignalized Regis Boulevard East Access (#5) T-intersection, between Knox Court and Julian Street, operates with stop control on the southbound approach exiting the University. Separate left and right turn lanes are provided on the southbound approaches. The eastbound Regis Boulevard approach provides a left turn lane and a through lane while the westbound approach provides a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.



Regis Boulevard East Access (#5)

The unsignalized Regis Boulevard West Access (#6) T-intersection, between King Street and Knox Court, operates with stop control on the southbound approach exiting the University. A single lane for shared left and right turning movements is provided on the southbound approach. The eastbound Regis Boulevard approach provides a short tapered left turn lane and a through lane while the westbound approach provides a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.



Regis Boulevard West Access (#6)

The signalized intersection of Regis Boulevard and Lowell Boulevard (#7) operates with permissive-only left turn phasing on all four approaches. The westbound Regis Boulevard approach provides a single lane for shared movements. The other three approaches each provide a left turn lane and a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.



Regis Boulevard & Lowell Boulevard (#7)

The unsignalized Lowell Boulevard South Access (#8) T-intersection operates with stop control on the westbound approach exiting the university. The westbound approach is restricted to right-out only movements. The northbound and southbound Lowell Boulevard approaches each provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below.



Lowell Boulevard South Access (#8)

The unsignalized T-intersection of 51st Avenue and Lowell Boulevard (#9) operates with stop control on the eastbound approach of 51st Avenue. All three approaches provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below.



51st Avenue & Lowell Boulevard (#9)

The unsignalized T-intersection of 52nd Avenue and Lowell Boulevard (#10) operates with stop control on the eastbound approach of 52nd Avenue. All three approaches provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below.



52nd Avenue & Lowell Boulevard (#10)

The unsignalized Lowell Boulevard North Access (#11) T-intersection operates with stop control on the westbound approach exiting the University. The westbound approach provides a separate left turn lane and right turn lane. The southbound Lowell Boulevard approach provides a separate left turn lane and a through lane while the northbound approach provides a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.



52nd Avenue North Access (#11)

The intersection lane configuration and control for the study area intersections are shown in **Figure 2**.

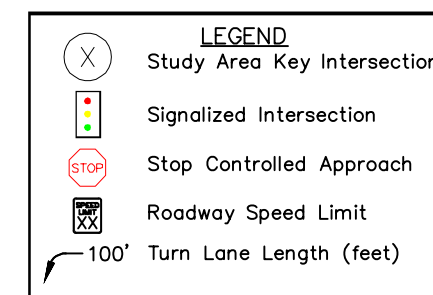
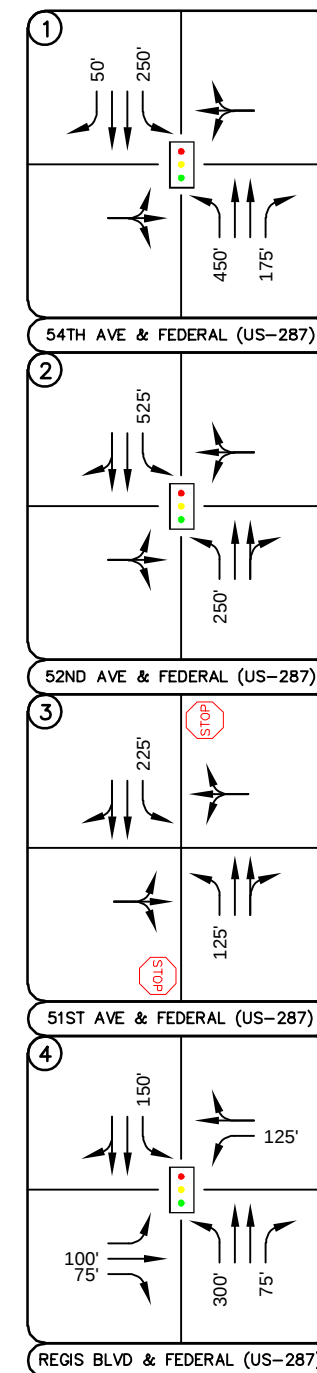
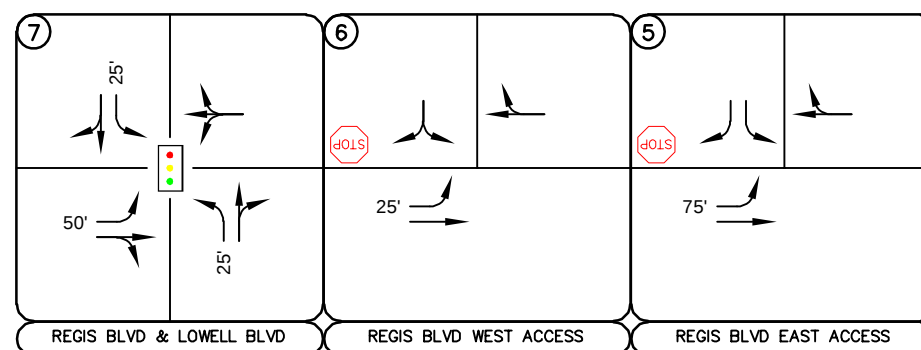
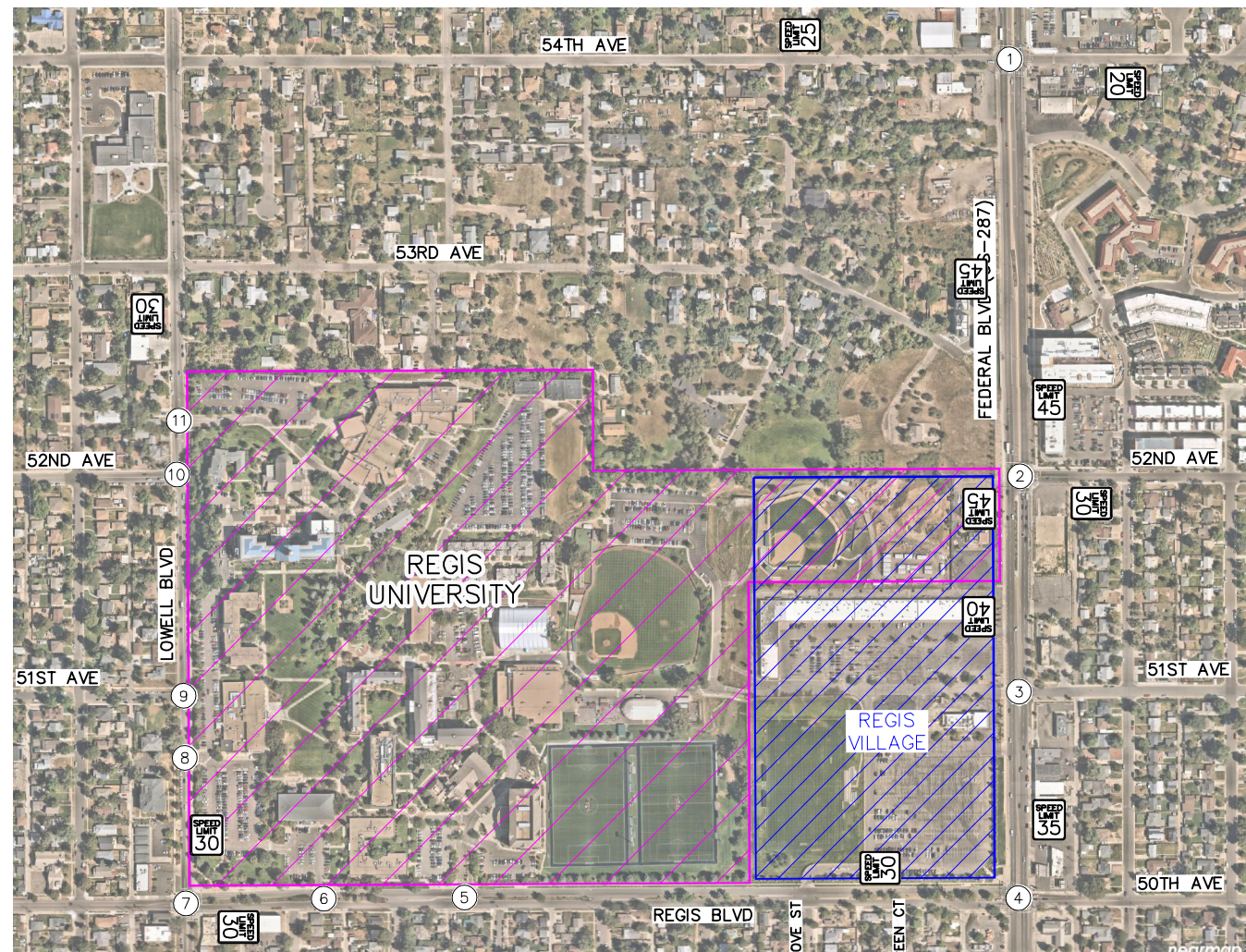
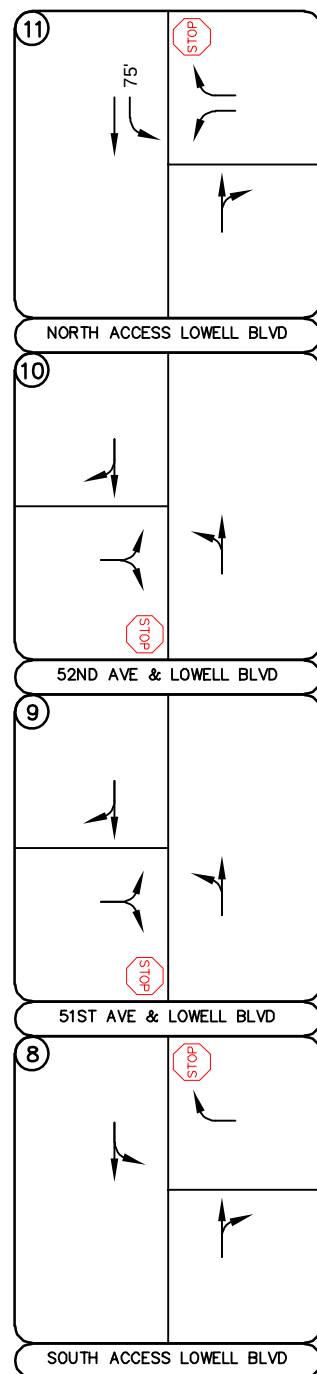


FIGURE 2
REGIS UNIVERSITY — REGIS VILLAGE
DENVER, COLORADO
EXISTING GEOMETRY AND CONTROL

3.3 Existing Traffic Volumes

Existing turning movement counts were conducted at the study intersections on Thursday, January 18, 2024 during the weekday morning and afternoon peak hours while school was in session. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 3:00 PM to 6:00 PM on this count date.

Additionally, the existing four (4) accesses along Federal Boulevard (US-287) and the existing access along Regis Boulevard were included for count data collection. Of note, the existing driveway volumes along Federal Boulevard and Regis Boulevard in the redevelopment area of the eastern part of campus were not removed from the surrounding intersections in the future scenario. A proportion of these volumes are Regis University students parking in the parking lots that are accessed from driveways. Much of the commercial space is vacant in this area, but the portion of it that is occupied provides an overall conservative analysis of the intersections, to provide some flexibility for higher traffic generating uses. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix B**.

3.4 Unspecified Development Traffic Growth

According to traffic projections from the Denver Regional Council of Governments (DRCOG) traffic model, the area surrounding the site is expected to have an average 30-year growth factor of 1.20. Likewise, according to information provided on the website for the Colorado Department of Transportation (CDOT), the 20-year growth factor along US-287 (Federal Boulevard) in the vicinity of the site is between 1.1 and 1.14. These DRCOG and CDOT growth factors equate to an annual growth rate of 0.61 percent and 0.57 percent, respectively. Future traffic volume projections and growth rate calculations are provided in **Appendix C**. Therefore, based on this data, a 0.75 percent annual growth rate was used to calculate future traffic volumes at the study area intersections. This annual growth rate was used to estimate short-term 2030 and long-term 2045 traffic volume projections at the key intersections. Of note, no growth was applied to the existing Regis University accesses since traffic growth for the school will be accounted in the proposed redevelopment. The calculated background traffic volumes for 2030 and 2045 are shown in **Figure 4** and **Figure 5**, respectively.

Count Collection:
All intersections were counted on
Thursday, January 18, 2024
between 7:00–10:00 AM and
3:00–6:00 PM.

X

Study Area Key Intersection

XXX(XXX)

Weekday AM(PM)

Peak Hour Traffic Volumes

XX,X00

Estimated Daily Traffic Volume

LEGEND

1	45(45) 1665(1184) 25(41) 18(23) 14(6) 16(13)	7:15–8:15 AM (4:30–5:30 PM) 54TH AVE & FEDERAL (US-287)
---	--	---

2	7(5) 1410(1127) 170(97) 91(100) 4(1) 135(11)	8:00–9:00 AM (4:30–5:30 PM) 52ND AVE & FEDERAL (US-287)
---	--	---

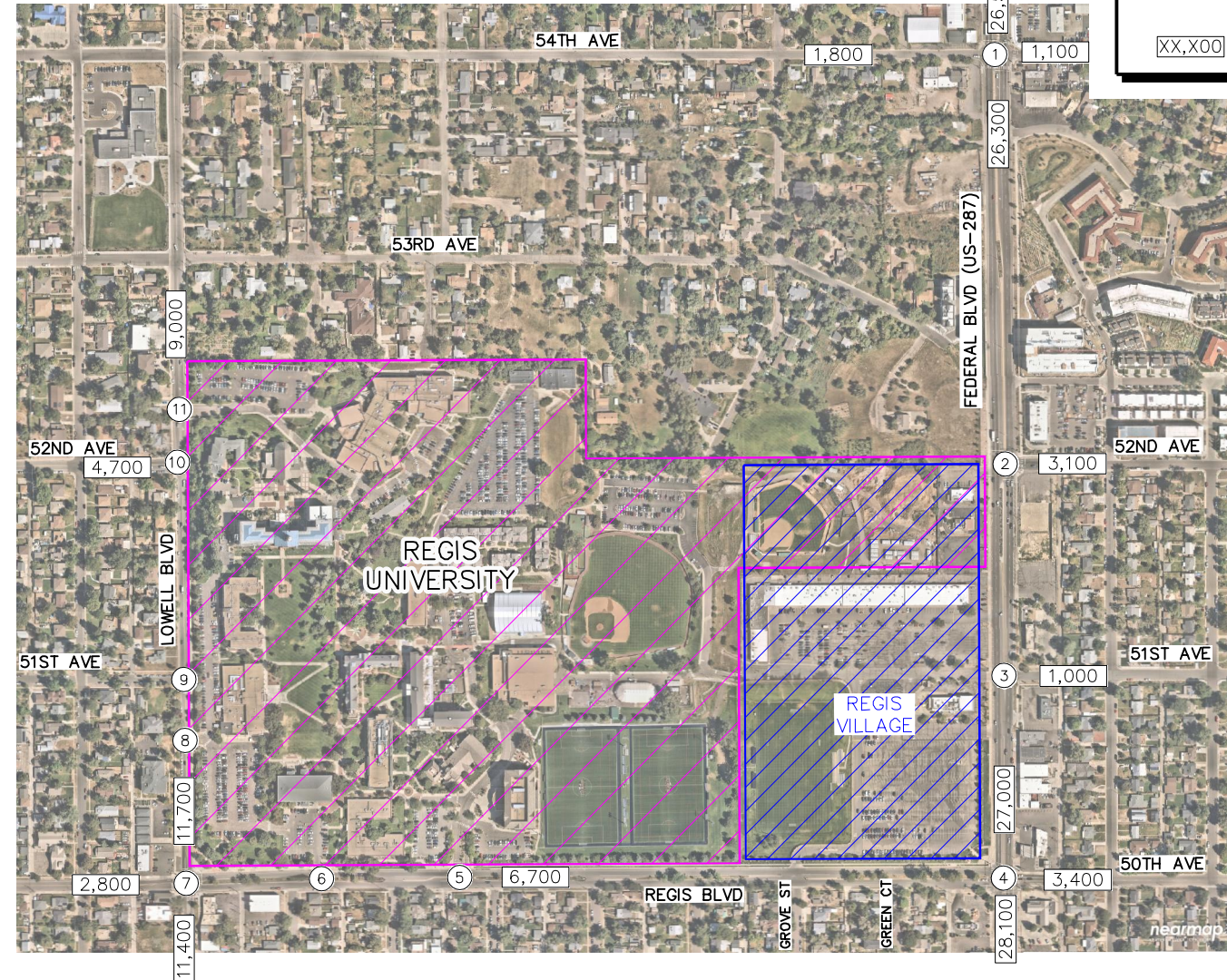
101	5(0) 1540(1239) 7(4) 759(1374)	8:00–9:00 AM (4:30–5:30 PM) FEDERAL (US-287) NORTH ACCESS
-----	--	---

102	1(4) 1546(1224) 1(0) 1(11) 0(3)	8:00–9:00 AM (4:30–5:30 PM) FEDERAL (US-287) MID ACCESS
-----	--	---

103	14(26) 1544(1202) 5(6) 9(28)	8:00–9:00 AM (4:30–5:30 PM) FEDERAL (US-287) SOUTH ACCESS
-----	--	---

104	1(4) 1503(1268) 6(5) 57(31)	8:00–9:00 AM (4:30–5:30 PM) FEDERAL (US-287) MCD ACCESS
-----	---	---

3	60(27) 1484(1206) 21(22) 12(21) 0(2) 1(10)	8:00–9:00 AM (4:30–5:30 PM) 51ST AVE & FEDERAL (US-287)
---	--	---



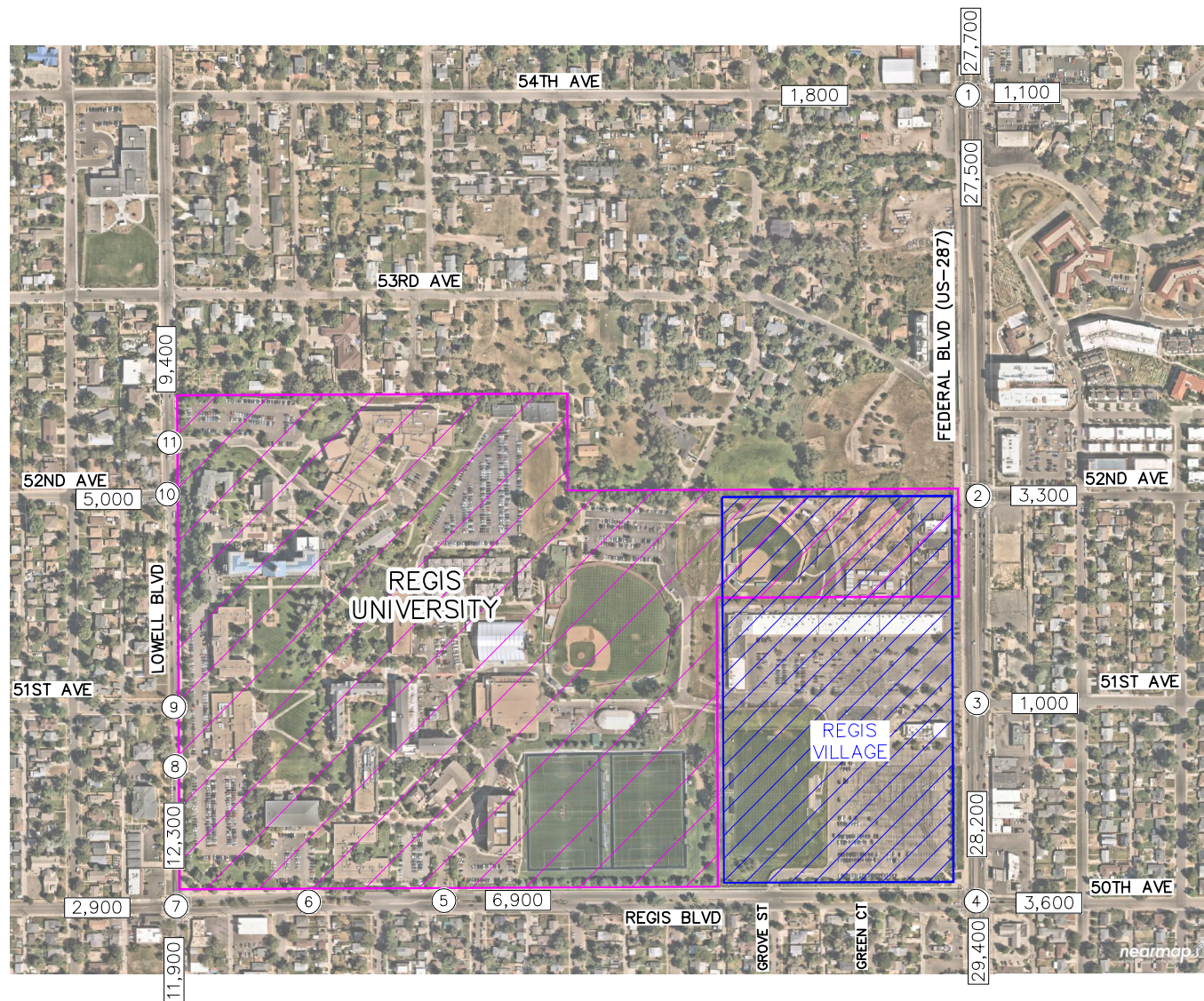
11	572(330) 26(15) 4(18) 233(533) 58(40)	7:45–8:45 AM (3:45–4:45 PM) NORTH ACCESS LOWELL BLVD
10	67(64) 507(309) 26(44) 201(154)	7:45–8:45 AM (4:30–5:30 PM) 52ND AVE & LOWELL BLVD
9	7(2) 686(452) 2(6) 5(12)	7:30–8:30 AM (4:15–5:15 PM) 51ST AVE & LOWELL BLVD
8	639(457) 53(8) 383(695) 35(9)	7:30–8:30 AM (4:15–5:15 PM) SOUTH ACCESS LOWELL BLVD

7	5(6) 545(368) 92(80) 13(21) 74(90) 60(46)	7:30–8:30 AM (4:15–5:15 PM) REGIS BLVD & LOWELL BLVD
6	3(23) 12(49) 18(6) 222(223)	7:45–8:45 AM (4:00–5:00 PM) REGIS BLVD WEST ACCESS
5	26(36) 15(54) 19(25) 223(256)	7:45–8:45 AM (4:15–5:15 PM) REGIS BLVD EAST ACCESS
105	22(40) 1(11) 13(19) 227(290) 2(6)	7:30–8:30 AM (4:15–5:15 PM) REGIS BLVD & GROVE ST
4	132(121) 1383(1128) 24(22) 88(132) 62(74) 83(127)	8:00–9:00 AM (4:30–5:30 PM) REGIS BLVD & FEDERAL (US-287)



FIGURE 3
REGIS UNIVERSITY – REGIS VILLAGE
DENVER, COLORADO
2024 EXISTING TRAFFIC VOLUMES

11	← 598(345) ← 26(15) ← 4(18) ← 2(39) 244(557) 58(40)
NORTH ACCESS LOWELL BLVD	
10	70(67) 530(323) 27(46) 210(161) 102(221) 276(530)
52ND AVE & LOWELL BLVD	
9	7(2) 717(473) 2(6) 5(13) 19(13) 400(752)
51ST AVE & LOWELL BLVD	
8	← 668(478) ← 53(8) ← 11(46) 401(727) 35(9)
SOUTH ACCESS LOWELL BLVD	



7	← 5(6) ← 570(385) ← 96(84) 100(167) 54(88) 61(109) 14(22) 77(94) 63(48) 16(31) 330(560) 70(59)	6	← 3(23) ← 12(49) ← 88(19) ← 211(320) 18(6) 232(233)	5	← 26(36) ← 15(54) ← 56(68) ← 277(302) 19(25) 233(268)
REGIS BLVD & LOWELL BLVD		REGIS BLVD WEST ACCESS		REGIS BLVD EAST ACCESS	

1	← 47(47) ← 1741(1238) ← 26(43) ← 19(24) ← 15(6) ← 17(14) 33(27) 13(8) 23(33) 19(63) 750(1388) 2(16)	54TH AVE & FEDERAL (US-287)	
2	← 7(6) ← 1475(1179) ← 178(101) ← 95(105) ← 4(1) ← 141(12) 16(25) 4(8) 0(1) 12(9) 671(1329) 111(98)	52ND AVE & FEDERAL (US-287)	
3	← 60(27) ← 1552(1261) ← 21(22) ← 12(21) ← 0(2) ← 1(10) 6(7) 0(2) 7(44) 46(34) 776(1401) 10(41)	51ST AVE & FEDERAL (US-287)	
4	← 138(127) ← 1446(1180) ← 25(23) ← 21(36) ← 47(71) ← 77(72) 92(138) 65(77) 87(133) 137(163) 724(1318) 35(77)	REGIS BLVD & FEDERAL (US-287)	



FIGURE 4
REGIS UNIVERSITY — REGIS VILLAGE
DENVER, COLORADO
2030 BACKGROUND TRAFFIC VOLUMES

LEGEND	
(X)	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

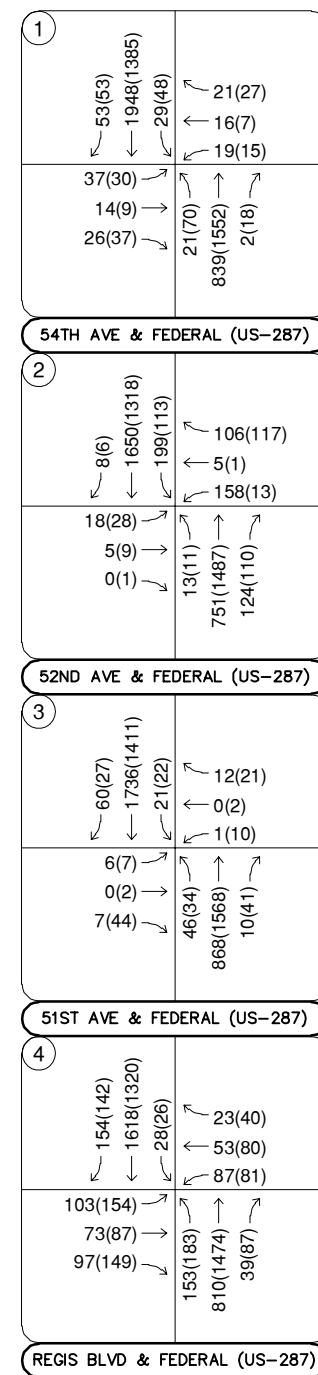
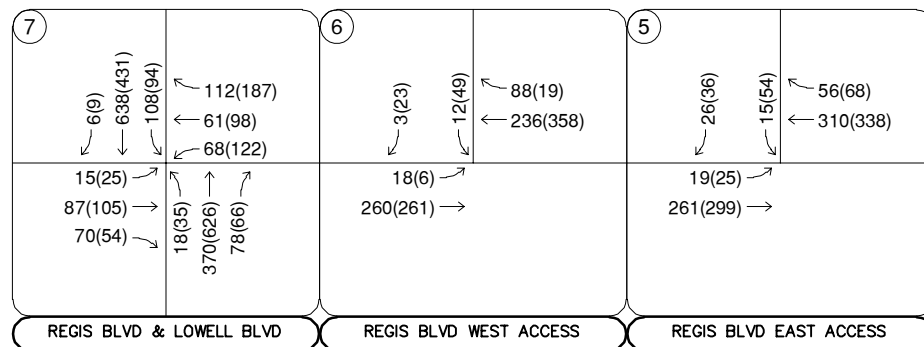
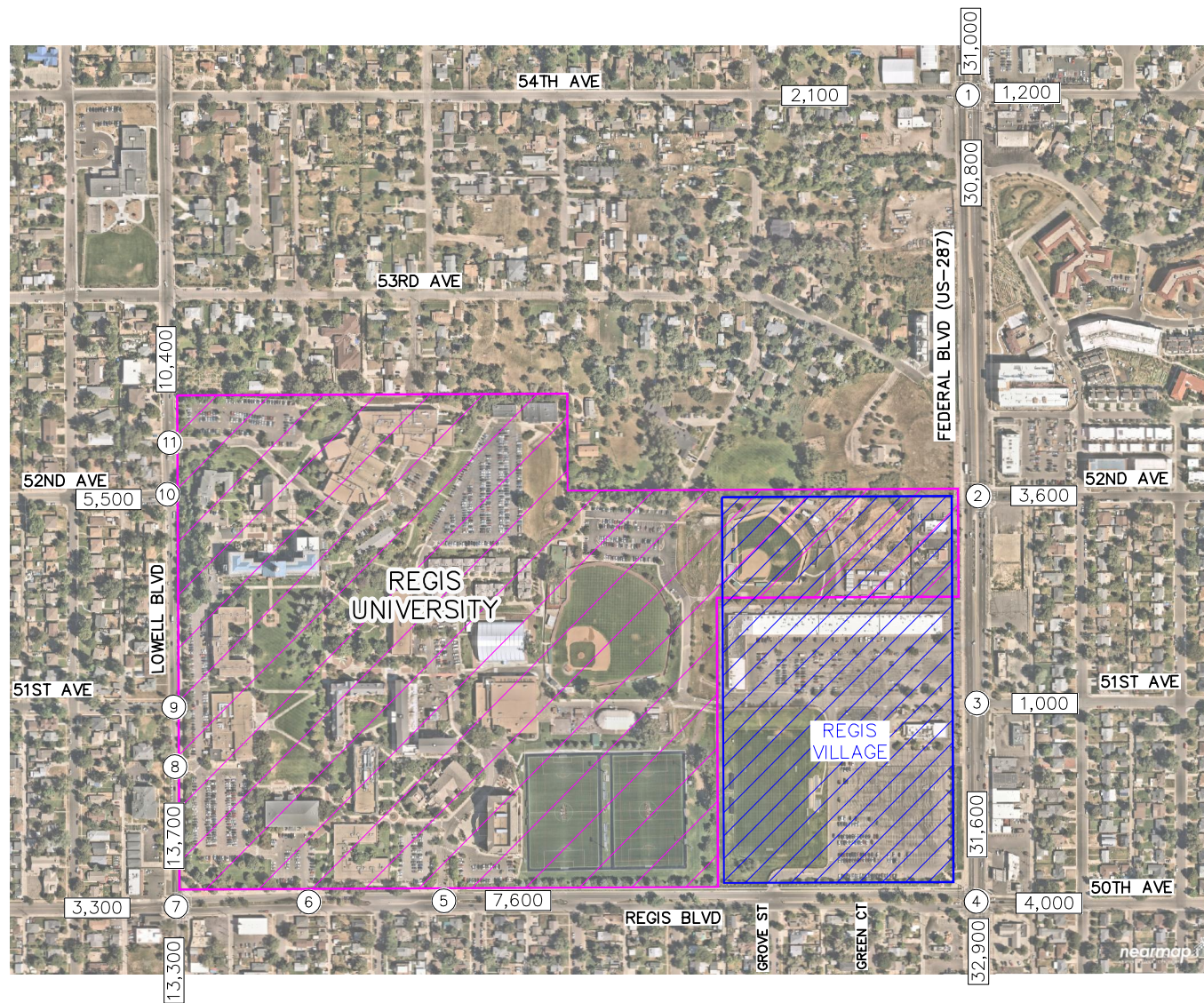
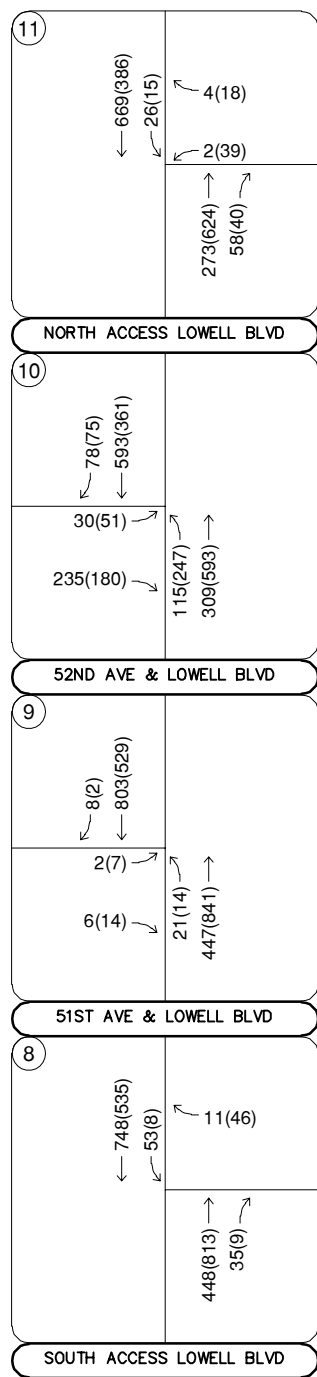


FIGURE 5
REGIS UNIVERSITY — REGIS VILLAGE
DENVER, COLORADO
2045 BACKGROUND TRAFFIC VOLUMES

LEGEND	
	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates that apply to Single Family Attached Housing (ITE Land Use Code 215), Multifamily Low-Rise Housing (ITE 220), General Office Building (ITE 710), and Shopping Plaza (ITE 821) for traffic associated with the development.

Of note, the dense multi-use urban setting/location was utilized for the Single Family Attached, Multifamily Low-Rise Housing, and General Office Building since these are applicable trip generation rates for this development area. Since the site is located less than a mile from the Clear Creek-Federal Station RTD Commuter Rail and adjacent to RTD bus stops #52 along Regis Boulevard and #31 along Federal Boulevard, the multi-use urban setting trip generation rates are appropriate for this project redevelopment. The multi-use urban setting also accounts for trip sharing that occurs from mixed use developments as well as multi-modal transportation options that are available and used at a university campus.

Regis Village is expected to generate approximately 9,564 weekday daily trips, with 407 of these trips occurring during the morning peak hour and 770 of these trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11th Edition – Volume 1: User's Guide and Handbook*, 2021. **Table 1** summarizes the estimated trip generation for Regis Village. The trip generation worksheets are included in **Appendix D**.

¹ Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

Table 1 – Regis Village Traffic Generation

Land Use and Size	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Single Family Attached (ITE 215) – 50 Dwelling Units	296	7	13	20	9	6	15
Multifamily Low-Rise (ITE 220) – 350 Dwelling Units	880	11	94	105	79	9	88
General Office Building (ITE 710) – 110,000 Square Feet	960	80	12	92	15	81	96
Shopping Plaza (ITE 821) – 110,000 Square Feet	7,428	118	72	190	280	291	571
Total Project Trips	9,564	216	191	407	383	387	770

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic, employment, and attraction information, as well as the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution for the proposed development is illustrated in **Figure 6**.

4.3 Traffic Assignment

Regis Village traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Traffic assignment is shown in **Figure 7**.

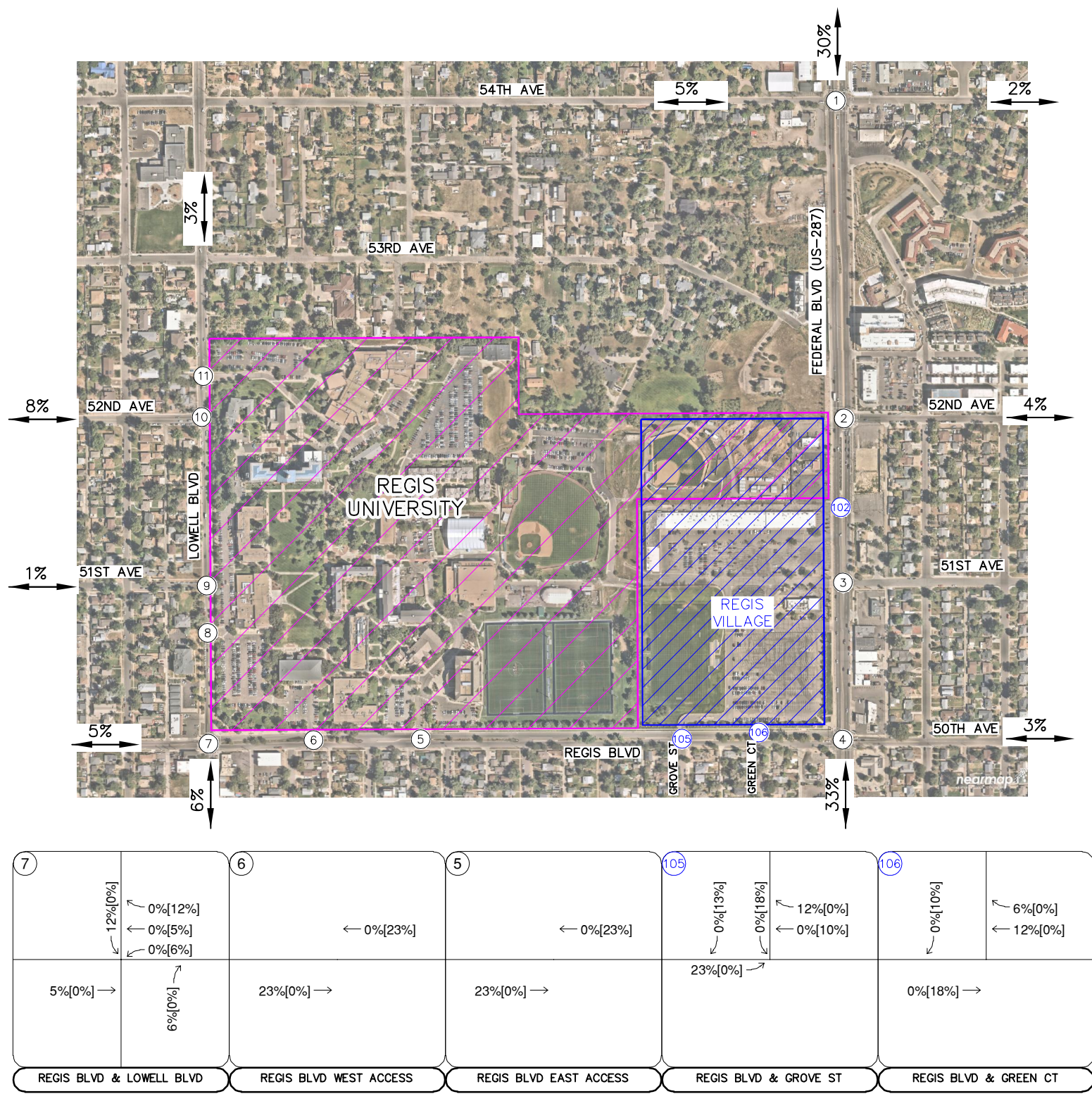
4.4 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short-term 2030 buildout horizon and long-term 2045 twenty-year planning horizon. These total traffic volumes for the study area are illustrated for the 2030 and 2045 horizon years in **Figures 8** and **9**, respectively.



FIGURE 6
REGIS UNIVERSITY – REGIS VILLAGE
DENVER, COLORADO
PROJECT TRIP DISTRIBUTION

11	← 3%[0%]	0%[3%] →
NORTH ACCESS LOWELL BLVD		
10	← 3%[0%]	
	8%[0%] ↘	0%[8%] ↗ 0%[3%] →
52ND AVE & LOWELL BLVD		
9	← 11%[0%]	
	1%[0%] ↘	0%[1%] ↗ 0%[11%] →
51ST AVE & LOWELL BLVD		
8	← 12%[0%]	0%[12%] →
SOUTH ACCESS LOWELL BLVD		



102	← 12%[0%] ← 17%[4%]	
	0%[8%] ↘	6%[6%] →
FEDERAL (US-287) ACCESS		

1	← 30%[0%]	
	5%[0%] ↘	0%[5%] ↗ 0%[30%] ↗ 0%[2%] ↗
54TH AVE & FEDERAL (US-287)		
2	← 10%[0%] ← 27%[0%]	← 2%[0%] ← 2%[0%]
	0%[31%] ↗ 0%[4%] ↗ 0%[4%] ↗	6%[0%] ↗ 0%[6%] ↗
52ND AVE & FEDERAL (US-287)		
3	← 17%[0%] ← 0%[12%]	
	0%[12%] ↘	12%[0%] ↗ 6%[6%] →
51ST AVE & FEDERAL (US-287)		
4	← 0%[24%]	← 3%[0%]
	0%[6%] ↗ 0%[3%] ↗ 0%[9%] ↗	15%[0%] ↗ 18%[0%] →
REGIS BLVD & FEDERAL (US-287)		

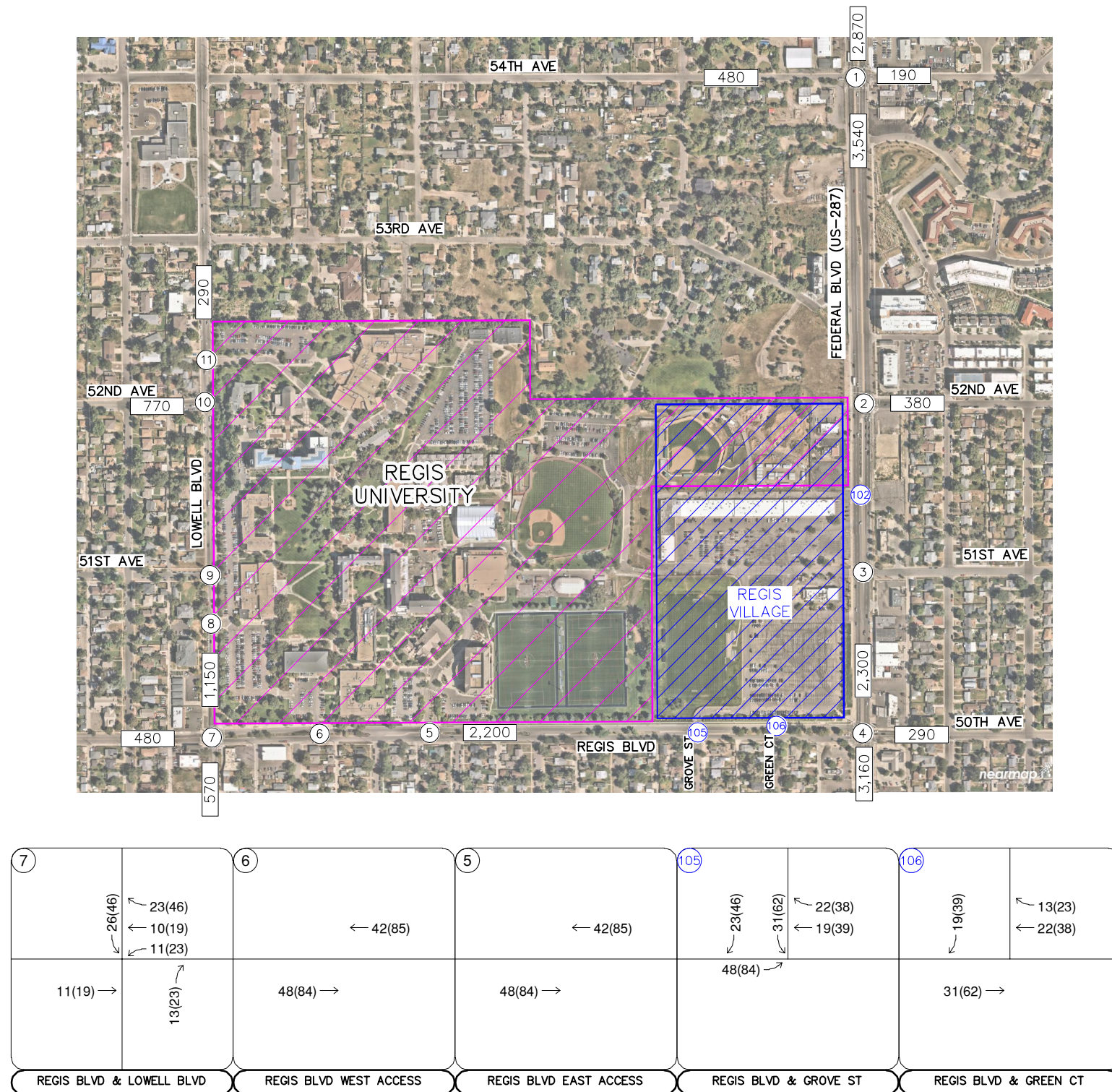
LEGEND

(X) Study Area Key Intersection
(X) Project Access Intersection
XX% External Trip Distribution Percentage
XX%[XX%] Entering[Exiting]
Trip Distribution Percentage



FIGURE 7
REGIS UNIVERSITY – REGIS VILLAGE
DENVER, COLORADO
PROJECT TRAFFIC ASSIGNMENT

11	← 6(11)	6(12) →
NORTH ACCESS LOWELL BLVD		
10	← 6(11)	17(31) →
	15(31) →	6(12) →
52ND AVE & LOWELL BLVD		
9	← 24(42)	2(4) →
	2(4) →	21(43) →
51ST AVE & LOWELL BLVD		
8	← 26(46)	23(46) →
SOUTH ACCESS LOWELL BLVD		



1	← 65(115)	4(8) →
	11(19) →	10(19) → 57(116) → 4(8) →
54TH AVE & FEDERAL (US-287)		
2	22(38) ← 58(103) ←	4(8) → 4(8) →
	36(74) → 8(15) → 2(4) →	13(23) → 32(66) →
52ND AVE & FEDERAL (US-287)		
3	37(65) ← 11(23) ←	2(4) →
	32(66) → 2(4) → 23(46) →	26(46) → 13(23) →
51ST AVE & FEDERAL (US-287)		
4	34(70) ←	4(8) →
	4(8) → 29(58) →	32(57) → 39(69) →
REGIS BLVD & FEDERAL (US-287)		

102	26(46) ← 41(73) ←	45(89) →
FEDERAL (US-287) ACCESS		

LEGEND

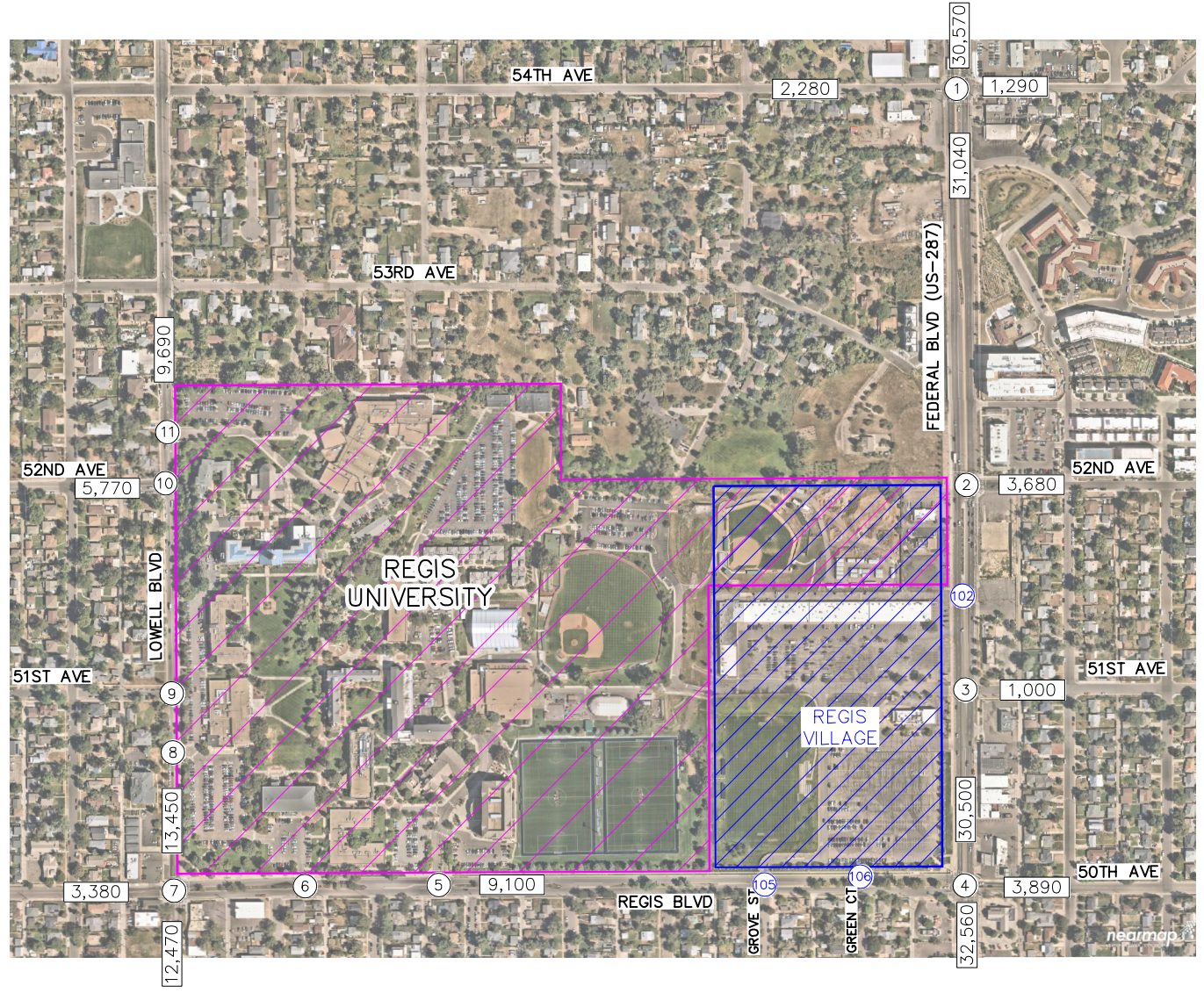
- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM)
Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume



FIGURE 8
REGIS UNIVERSITY – REGIS VILLAGE
DENVER, COLORADO
2030 TOTAL TRAFFIC VOLUMES

11	← 604(356) ← 26(15) ← 4(18) 250(569) → 58(40) →
NORTH ACCESS LOWELL BLVD	
10	← 70(67) ← 536(334) 27(46) → 227(192) → 117(252) → 282(542) →
52ND AVE & LOWELL BLVD	
9	← 7(2) ← 741(515) 2(6) → 7(17) → 21(17) → 421(795) →
51ST AVE & LOWELL BLVD	
8	← 694(524) ← 53(8) 11(46) → 424(773) → 35(9) →
SOUTH ACCESS LOWELL BLVD	

7	5(6) → 570(385) → 122(130) → 123(213) → 64(107) → 72(132) → 14(22) → 88(113) → 63(48) → 16(31) → 330(560) → 83(82) →	6	3(23) → 12(49) → 88(19) → 253(405) → 18(6) → 280(317) →	5	26(36) → 15(54) → 56(68) → 319(387) → 19(25) → 281(352) →	105	23(46) → 34(70) → 26(46) → 333(376) → 11(19) → 48(84) → 237(303) → 2(6) → 4(2) → 8(8) →	106	19(39) → 13(23) → 340(383) → 271(373) → 2(5) → 5(2) →
REGIS BLVD & LOWELL BLVD		REGIS BLVD WEST ACCESS		REGIS BLVD EAST ACCESS		REGIS BLVD & GROVE ST		REGIS BLVD & GREEN CT	



1	47(47) → 1806(1353) → 26(43) → 19(24) → 15(6) → 21(22) → 33(27) → 13(8) → 34(52) → 29(82) → 807(1504) → 6(24) →
54TH AVE & FEDERAL (US-287)	
2	29(43) → 1533(1282) → 178(101) → 95(105) → 8(9) → 145(20) → 75(145) → 12(23) → 8(16) → 25(32) → 682(1352) → 111(98) →
52ND AVE & FEDERAL (US-287)	
102	27(50) → 1662(1360) → 1(11) → 0(3) → 15(31) → 814(1471) →
FEDERAL (US-287) ACCESS	
3	37(65) → 1575(1307) → 21(22) → 12(21) → 23(46) → 26(46) → 800(1447) → 10(41) →
51ST AVE & FEDERAL (US-287)	
4	138(127) → 1492(1273) → 25(23) → 21(36) → 53(82) → 77(72) → 103(161) → 71(89) → 104(168) → 169(220) → 763(1387) → 35(77) →
REGIS BLVD & FEDERAL (US-287)	

LEGEND

(X) Study Area Key Intersection

(X) Project Access Intersection

XXX(XXX) Weekday AM(PM)
Peak Hour Traffic Volumes

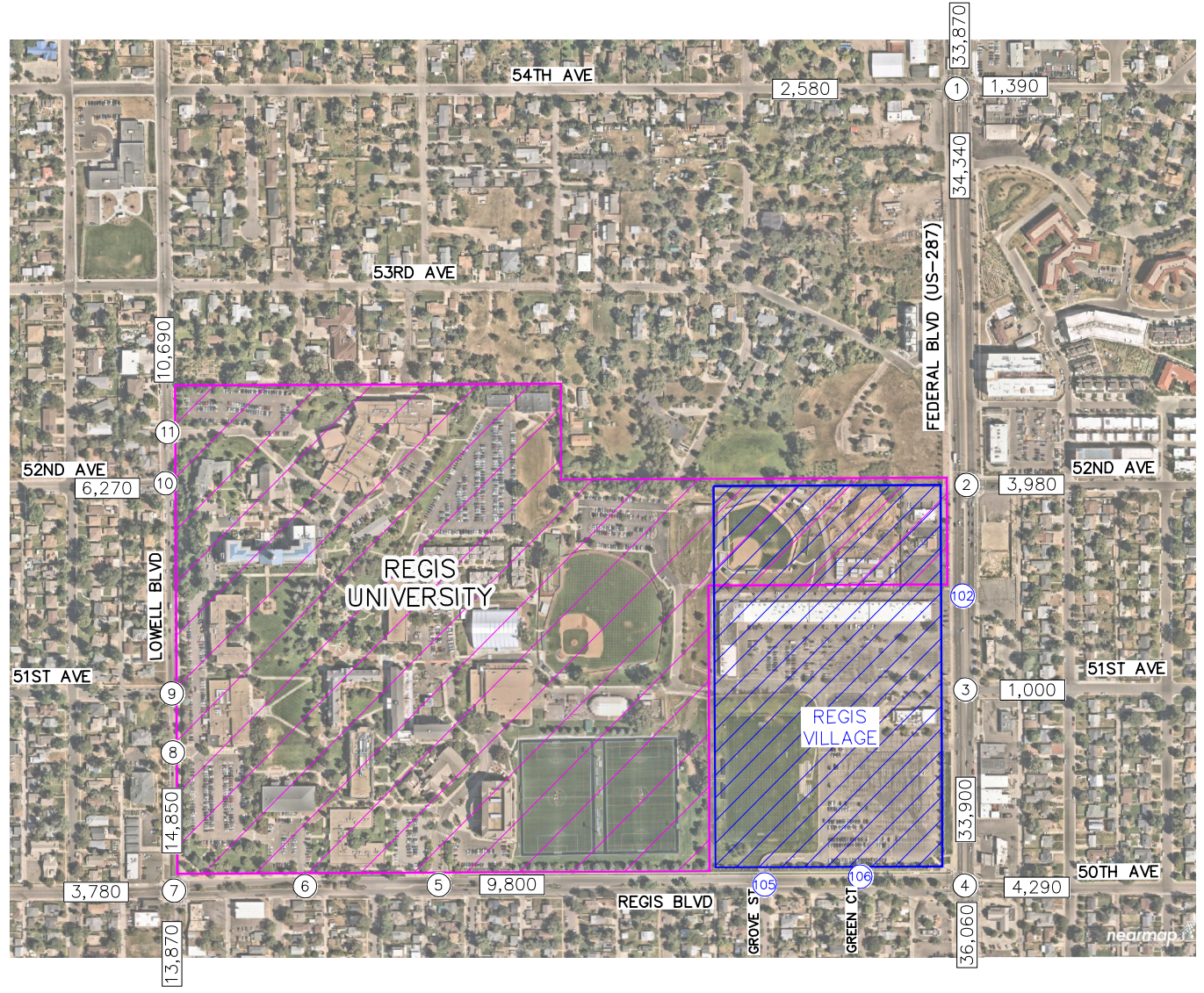
XX,X00 Estimated Daily Traffic Volume



FIGURE 9
REGIS UNIVERSITY – REGIS VILLAGE
DENVER, COLORADO
2045 TOTAL TRAFFIC VOLUMES

11	← 675(397) ← 26(15) 4(18) 2(39) 279(636) 58(40)	NORTH ACCESS LOWELL BLVD
10	78(75) 599(372) 30(51) 252(211) 130(278) 315(605)	52ND AVE & LOWELL BLVD
9	8(2) 827(571) 2(7) 8(18) 23(18) 468(884)	51ST AVE & LOWELL BLVD
8	← 774(581) ← 53(8) 11(46) 471(859) 35(9)	SOUTH ACCESS LOWELL BLVD

7	6(9) 638(431) 134(140) 135(233) 71(117) 79(145) 15(25) 98(124) 70(54) 18(35) 370(626) 91(89)	REGIS BLVD & LOWELL BLVD
6	3(23) 12(49) 88(19) 278(443) 18(6) 308(345)	REGIS BLVD WEST ACCESS
5	26(36) 15(54) 56(68) 352(423) 19(25) 309(383)	REGIS BLVD EAST ACCESS
105	23(46) 34(70) 26(46) 370(416) 11(19) 48(84) 266(339) 2(6) 4(2) 8(8)	REGIS BLVD & GROVE ST
106	19(39) 13(23) 377(423) 300(409) 2(5) 5(2)	REGIS BLVD & GREEN CT



1	53(63) 2013(1500) 29(48) 21(27) 16(7) 23(23) 37(30) 14(9) 37(56) 31(89) 896(1669) 6(26)	54TH AVE & FEDERAL (US-287)
2	30(44) 1708(1421) 199(113) 106(117) 9(9) 162(21) 77(148) 13(24) 8(16) 26(34) 762(1510) 124(110)	52ND AVE & FEDERAL (US-287)
102	27(50) 1854(1512) 1(11) 0(3) 15(31) 907(1641)	FEDERAL (US-287) ACCESS
3	37(65) 1759(1457) 21(22) 12(21) 23(46) 26(46) 892(1614) 10(41)	51ST AVE & FEDERAL (US-287)
4	154(142) 1664(1413) 28(26) 23(40) 59(91) 87(81) 114(177) 79(99) 114(184) 185(240) 849(1543) 39(87)	REGIS BLVD & FEDERAL (US-287)

LEGEND

(X) Study Area Key Intersection

(X) Project Access Intersection

XXX(XXX) Weekday AM(PM)
Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2030 and 2045 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways in this study area, standard traffic engineering practice recommends overall intersection LOS D and movement/approach LOS E as the minimum desirable thresholds for acceptable operations. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Definitions provided from the Highway Capacity Manual, Sixth Edition, Transportation Research Board, 2016.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the whole intersection. LOS for signalized, roundabout, and all-way stop controlled intersections are defined for each approach and for the overall intersection.

² Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix E**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the analysis. The existing heavy vehicle percentages obtained from the turning movement counts were also used in each horizon year. The signalized intersection analysis utilizes the observed cycle lengths with optimized phasing and timing. Based on increased national attention given to establishing appropriate yellow and all-red clearance intervals to improve intersection safety, these have been calculated and are applied for approaches at the signalized intersections. The increase in yellow and all red time sacrifices intersection capacity for improved safety. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service.

54th Avenue and Federal Boulevard (US-287) (#1)

The signalized intersection of 54th Avenue and Federal Boulevard (US-287) (#1) operates with protected-permissive left turn phasing on the northbound and southbound approaches of Federal Boulevard and permissive-only left turn phasing the east-west 54th Avenue approaches. As such, the intersection operates acceptably at LOS A during both weekday morning and afternoon studied peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of Regis Village project traffic and this operational level of service analysis. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – 54th Avenue & Federal Boulevard (US-287) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing	8.7	A	8.0	A
2030 Background	9.1	A	8.2	A
2030 Background Plus Project	10.3	B	9.6	A
2045 Background	10.7	B	9.2	A
2045 Background Plus Project	12.3	B	10.8	B

52nd Avenue and Federal Boulevard (US-287) (#2)

The signalized 52nd Avenue and Federal Boulevard (US-287) (#2) intersection operates with protected-permissive left turn phasing on the southbound approach and permissive-only left turn phasing on the other three approaches. Under existing conditions, the intersection operates acceptably at LOS B and A during the weekday morning and afternoon peak hours, respectively. In the 2030 background year prior to the addition of project traffic, this intersection is anticipated to operate at LOS B during both studied peak hours. With project traffic, the west leg will serve as an access to Regis Village and be better realigned with 52nd Avenue. With this improvement, separate eastbound and westbound left turn lanes are recommended to be provided. The eastbound and westbound left turns are recommended to operate with protected-permissive left turn phasing. The westbound approach currently provides 20 feet of pavement width that can be designated to provide a separate left turn lane and a shared through/right turn lane. Additionally, a southbound right turn lane along Federal Boulevard is warranted based on project traffic volumes. With these improvements, the intersection is anticipated to continue operating at LOS B in the 2030 horizon and LOS C or better through the long-term 2045 horizon. **Table 4** provides the results of the LOS analysis conducted at this intersection.

Table 4 – 52nd Avenue & Federal Boulevard (US-287) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing	15.0	B	9.7	A
2030 Background	16.0	B	10.3	B
2030 Background Plus Project #	16.0	B	18.6	B
2045 Background	19.7	B	11.9	B
2045 Background Plus Project #	18.0	B	21.2	C

Separate EB and WB Left Turn Lanes, Protected-Permissive EB/WB Left Turn Phasing, Separate SB Right Turn Lane

51st Avenue and Federal Boulevard (US-287) (#3)

The unsignalized 51st Avenue and Federal Boulevard (US-287) (#3) intersection operates with stop control on the eastbound and westbound approaches of 51st Avenue. The intersection movements operate at LOS E or better during both peak hours under existing conditions. As LOS E on the eastbound and westbound approaches are approaching a failing level of service, with the addition of Regis Village project traffic, the east and west legs are recommended to be restricted to three quarter movements with restricting the left turn and through exiting movements. Signalization with allowing full turning movements is not possible at this intersection based on the eighth-mile (660 feet) spacing to the existing signalized intersections of 52nd Avenue to the north and Regis Boulevard/50th Avenue to the south. Federal Boulevard (US-287) has a NR-A category which identifies half-mile spacing for traffic signals. As a three-quarter, the intersection movements are anticipated to operate with LOS B or C during both peak hours throughout the 2045 horizon. **Table 5** provides the results of the LOS analysis conducted at this intersection.

Table 5 – 51st Avenue & Federal Boulevard (US-287) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Northbound Left	15.4	C	12.4	B
Eastbound Approach	36.5	E	22.6	C
Westbound Approach	12.6	B	33.0	D
Southbound Left	9.5	A	13.3	B
2030 Background				
Northbound Left	16.1	C	12.8	B
Eastbound Approach	40.5	E	24.1	C
Westbound Approach	12.9	B	36.2	E
Southbound Left	9.6	A	13.9	B
2030 Background Plus Project #				
Northbound Left	15.4	C	13.8	B
Eastbound Right	17.4	C	15.7	C
Westbound Right	11.4	B	16.6	C
Southbound Left	9.7	A	14.3	B
2045 Background				
Northbound Left	18.6	C	14.1	B
Eastbound Approach	52.7	F	29.3	D
Westbound Approach	13.8	B	47.0	E
Southbound Left	10.1	B	15.5	C
2045 Background Plus Project #				
Northbound Left	17.6	C	15.3	C
Eastbound Right	19.6	C	17.3	C
Westbound Right	11.9	B	18.4	C
Southbound Left	10.2	B	16.0	C

= Convert to Three-Quarter Movement Access, Separate SB Right Turn Lane

Regis Boulevard/50th Avenue and Federal Boulevard (US-287) (#4)

The signalized intersection of Regis Boulevard/50th Avenue and Federal Boulevard (US-287) (#4) operates with protected-permissive left turn phasing on the northbound approach of Federal Boulevard and permissive-only left turn phasing the three other approaches. The intersection currently operates with a LOS B during the weekday morning and afternoon peak hours. Based on existing southbound right turn volumes, a separate right turn lane is warranted based on CDOT turn lane volume thresholds. Therefore, with a separate southbound right turn lane, the intersection will continue operating acceptably throughout the 2045 horizon. **Table 6** provides the results of the LOS analysis conducted at this intersection.

Table 6 – Regis Boulevard & Federal Boulevard (US-287) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing	15.6	B	16.8	B
2030 Background	16.3	B	17.7	B
2030 Background Plus Project #	16.2	B	19.9	B
2045 Background	19.4	B	20.9	C
2045 Background Plus Project #	18.9	B	22.9	C

= Separate SB Right Turn Lane

Regis Boulevard East Access (#5)

The unsignalized Regis Boulevard East Access (#5) T-intersection operates with stop control on the southbound approach exiting the University. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 7** provides the results of the LOS analysis conducted at this intersection.

Table 7 – Regis Boulevard East Access (#5) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Eastbound Left	8.0	A	8.1	A
Southbound Left	11.7	B	12.7	B
Southbound Right	10.2	B	10.4	B
2030 Background				
Eastbound Left	8.0	A	8.1	A
Southbound Left	11.9	B	12.9	B
Southbound Right	10.3	B	10.5	B
2030 Background Plus Project				
Eastbound Left	8.2	A	8.4	A
Southbound Left	12.5	B	14.4	B
Southbound Right	10.6	B	11.2	B
2045 Background				
Eastbound Left	8.1	A	8.2	A
Southbound Left	12.3	B	13.5	B
Southbound Right	10.5	B	10.8	B
2045 Background Plus Project				
Eastbound Left	8.3	A	8.5	A
Southbound Left	12.9	B	15.0	C
Southbound Right	10.9	B	11.5	B

Regis Boulevard West Access (#6)

The unsignalized Regis Boulevard West Access (#6) T-intersection operates with stop control on the southbound approach exiting the University. Under existing conditions, the intersection movements operate acceptably at LOS B or better during both peak hours. With Regis Village project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 8** provides the results of the LOS analysis conducted at this intersection.

Table 8 – Regis Boulevard West Access (#6) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Eastbound Left	8.0	A	8.0	A
Southbound Approach	11.3	B	11.9	B
2030 Background				
Eastbound Left	8.0	A	8.0	A
Southbound Approach	11.4	B	12.1	B
2030 Background Plus Project				
Eastbound Left	8.1	A	8.3	A
Southbound Approach	11.9	B	13.3	B
2045 Background				
Eastbound Left	8.1	A	8.1	A
Southbound Approach	11.7	B	12.6	B
2045 Background Plus Project				
Eastbound Left	8.2	A	8.4	A
Southbound Approach	12.3	B	13.9	B

Regis Boulevard and Lowell Boulevard (#7)

The signalized intersection of Regis Boulevard and Lowell Boulevard (#7) operates with permissive-only left turn phasing on all four approaches. The intersection currently operates at LOS B during the morning and afternoon peak hours. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no intersection geometry recommendations are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 9** provides the results of the LOS analysis conducted at this intersection.

Table 9 – Regis Boulevard & Lowell Boulevard (#7) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing	11.7	B	15.1	B
2030 Background	12.0	B	15.7	B
2030 Background Plus Project	13.1	B	19.3	B
2045 Background	13.1	B	18.1	B
2045 Background Plus Project	14.5	B	24.7	C

Lowell Boulevard South Access (#8)

The unsignalized three-quarter Lowell Boulevard South Access (#8) T-intersection operates with stop control on the westbound approach exiting the University. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. **Table 10** provides the results of the LOS analysis conducted at this intersection.

Table 10 – Lowell Boulevard South Access (#8) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Westbound Right	11.0	B	14.4	B
Southbound Left	8.4	A	9.1	A
2030 Background				
Westbound Right	11.1	B	14.8	B
Southbound Left	8.5	A	9.2	A
2030 Background Plus Project				
Westbound Right	11.3	B	15.6	C
Southbound Left	8.6	A	9.4	A
2045 Background				
Westbound Right	11.5	B	16.2	C
Southbound Left	8.7	A	9.6	A
2045 Background Plus Project				
Westbound Right	11.8	B	17.1	C
Southbound Left	8.8	A	9.8	A

51st Avenue and Lowell Boulevard (#9)

The unsignalized T-intersection of 51st Avenue and Lowell Boulevard (#9) operates with stop control on the eastbound approach of 51st Avenue. The intersection movements operate acceptably at LOS C or better during both peak hours under existing conditions. With project traffic, the intersection movements are anticipated to continue operating with LOS C or better during both peak hours. **Table 11** provides the results of the LOS analysis conducted at this intersection.

Table 11 – 51st Avenue & Lowell Boulevard (#9) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Northbound Left	9.3	A	8.3	A
Eastbound Approach	16.9	C	15.7	C
2030 Background				
Northbound Left	9.5	A	8.4	A
Eastbound Approach	17.7	C	16.2	C
2030 Background Plus Project				
Northbound Left	9.6	A	8.5	A
Eastbound Approach	17.7	C	16.7	C
2045 Background				
Northbound Left	9.9	A	8.6	A
Eastbound Approach	19.6	C	18.8	C
2045 Background Plus Project				
Northbound Left	10.0	B	8.7	A
Eastbound Approach	19.8	C	19.5	C

52nd Avenue and Lowell Boulevard (#10)

The unsignalized T-intersection of 52nd Avenue and Lowell Boulevard (#10) operates with stop control on the eastbound approach of 52nd Avenue. The intersection movements operate acceptably at LOS D or better during both peak hours under existing conditions. However, by 2030, the eastbound approach may experience higher delays and poor level of service. To improve the overall intersection operations, a single lane mini roundabout could be considered. Of note, all-way stop control was evaluated but it didn't provide acceptable level of service operating conditions. A mini-roundabout provides benefits as it would not impact on-street parking significantly compared to adding separate turn lanes within the existing roadway ROW. Likewise, a mini roundabout provides roundabout control for passenger vehicles (most of the traffic through this intersection), while providing fully traversable center and splitter islands for trucks to travel through the intersection as a standard intersection configuration (as they do today). As a single lane roundabout, the intersection is anticipated to operate at LOS A in 2030 and LOS B in 2045 with the addition of project traffic. **Table 12** provides the results of the LOS analysis conducted at this intersection.

Table 12 – 52nd Avenue & Lowell Boulevard (#10) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Northbound Left	9.5	A	8.8	A
Eastbound Approach	28.9	D	29.6	D
2030 Background				
Northbound Left	9.6	A	8.9	A
Eastbound Approach	34.2	D	36.9	E
2030 Background Plus Project				
Northbound Left	9.7	A	9.1	A
Eastbound Approach	41.0	E	54.3	F
2030 Background Plus Project #	9.2	A	9.3	A
2045 Background				
Northbound Left	10.1	B	9.2	A
Eastbound Approach	66.8	F	84.9	F
2045 Background Plus Project				
Northbound Left	10.	B	9.5	A
Eastbound Approach	87.1	F	151.2	F
2045 Background Plus Project #	11.0	B	11.1	B

= Single Lane Mini Roundabout

Lowell Boulevard North Access (#11)

The unsignalized Lowell Boulevard North Access (#11) T-intersection operates with stop control on the westbound approach exiting the University. The intersection movements operate acceptably at LOS C or better during the morning and afternoon peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 13** provides the results of the LOS analysis conducted at this intersection.

Table 13 – Lowell Boulevard North Access (#11) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Westbound Left	19.2	C	20.4	C
Westbound Right	9.9	A	12.4	B
Southbound Left	8.0	A	8.8	A
2030 Background				
Westbound Left	20.0	C	21.5	C
Westbound Right	10.0	B	12.6	B
Southbound Left	8.0	A	8.9	A
2030 Background Plus Project				
Westbound Left	20.3	C	22.1	C
Westbound Right	10.0	B	12.7	B
Southbound Left	8.1	A	8.9	A
2045 Background				
Westbound Left	22.7	C	24.9	C
Westbound Right	10.2	B	13.4	B
Southbound Left	8.1	A	9.1	A
2045 Background Plus Project				
Westbound Left	23.0	C	25.8	D
Westbound Right	10.3	B	13.6	B
Southbound Left	8.2	A	9.2	A

Regis Village Accesses

Regis Village will utilize the exiting right-in/right access along Federal Boulevard (US-287), approximately 325 feet south of 52nd Avenue (measured edge to edge) and the existing full movement access along Regis Boulevard aligning with Grove Street. Additionally, a right-in/right-out access is proposed along Regis Boulevard, east of Grove Street, and aligning with Green Court. R1-1 “STOP” signs are recommended be provided on the approaches exiting the development. A R3-2 No Left Turn sign should be placed below the “STOP” signs at the accesses restricting left turn out movements. **Table 14** provides the results of the level of service for the Regis Village accesses. As shown in the table, the project street access intersections are anticipated to have all movements operating with acceptable LOS D or better during the peak hours in both the buildout year 2030 and the 2045 long-term horizons.

Table 14 – Regis Village Access Level of Service Results

Intersection	2030 Total				2045 Total			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
RIRO North Federal Access (#102)								
Eastbound Right	18.0	C	15.7	C	20.3	C	17.3	C
Westbound Right	11.3	B	16.1	C	11.8	B	17.8	C
Regis Blvd & Grove St (#105)								
Northbound Approach	12.3	B	12.9	B	13.0	B	13.6	B
Eastbound Left	8.2	A	8.5	A	8.3	A	8.6	A
Westbound Left	7.8	A	8.0	A	7.9	A	8.1	A
Southbound Approach	15.9	C	26.0	D	17.2	C	30.4	D
Regis Blvd & Green Ct (#106)								
Northbound Right	9.9	A	10.6	B	10.1	B	10.9	B
Southbound Right	10.5	B	11.2	B	10.9	B	11.6	B

5.3 CDOT Turn Bay Length Analysis

The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on the west legs of 52nd Avenue, right-in/right-out access, 51st Avenue, and Regis Boulevard along Federal Boulevard (US-287) are all anticipated to increase existing traffic by more than 20 percent. Therefore, CDOT access permits are anticipated to be needed at all four intersections as development occurs within Regis Village. Additionally, three (3) access permits will be needed to close three (3) driveways along Federal Boulevard (US-287).

Auxiliary turn lanes along CDOT controlled highways are to be implemented based on volume threshold requirements set forth in the State Highway Access Code (SHAC). Further, turn lane lengths should also be designed based on the State Highway Access Code. Federal Boulevard (US-287) is categorized as a Non-Rural Arterial (NR-A) and has a speed limit of 35 miles per hour northbound and 45-40 mph speed limit southbound adjacent to the site. However, the posted speed limit southbound is 40 miles per hour near 52nd Avenue and 35 miles per hour near the right-in/right-out access. According to the State Highway Access Code for category Non-Rural Arterial (NR-A) roadways, turn lane warrants are as follows:

- A left turn deceleration lane and taper is required for any access with a projected peak hour ingress turning volume greater than 10 vehicles per hour (vph). The taper length will be included within the required deceleration length.
- A right turn deceleration lane and taper is required for any access with a projected peak hour ingress turning volume greater than 25 vph. The taper length will be included within the required deceleration length.
- Right turn acceleration lane and taper is required for any access with a projected peak hour right turning volume greater than 50 vph when the posted speed on the highway is greater than 40 mph. The taper length will be included within the required acceleration length.

Based on the 2030 traffic volume projections, turn lane requirements at the access intersections along Federal Boulevard (US-287) are as follows:

52nd Avenue & Federal Boulevard (US-287) (#2)

- A northbound left turn lane is warranted along Federal Boulevard (US-287) at 52nd Avenue based on projected 2030 background plus project traffic volumes being 32 northbound left turns during the peak hour and the threshold being 10 vph. Of note, a northbound left turn lane currently exists and provides a length of 250 feet.
- A southbound right turn lane is warranted along Federal Boulevard (US-287) at 52nd Avenue based on projected 2030 background plus project traffic volumes being 43 southbound right turns during the peak hour and the threshold being 25 vph. Based on the 40 mile per hour posted speed limit, the deceleration length is recommended to provide 225 feet, plus a 145-foot taper (12:1). Therefore, a southbound right turn lane is recommended to be constructed at this intersection to provide a length of 225 feet with a 145-foot taper.

Federal Boulevard (US-287) Right-in/Right-out Access (#102)

- A southbound right turn lane is warranted along Federal Boulevard (US-287) at the right-in/right-out access based on projected 2030 background plus project traffic volumes being 50 southbound right turns during the peak hour and the threshold being 25 vph. Based on the 35 mile per hour posted speed limit, the deceleration length is recommended to provide 190 feet, plus a 120-foot taper (10:1). However, this turn lane length cannot be accommodated between the access and 52nd Avenue since the distance between the two intersections is 310 feet. Therefore, the turn lane is recommended to provide a length of 100 feet with a 120-foot taper.

51st Avenue & Federal Boulevard (US-287) (#3)

- A northbound left turn lane is warranted along Federal Boulevard (US-287) at 51st Avenue based on projected 2030 background plus project traffic volumes being 46 northbound left turns during the peak hour and the threshold being 10 vph. Of note, a northbound left turn lane currently exists and provides a length of 125 feet. To meet CDOT turn lane standards, a length of 235 feet (190 feet plus 45 feet of storage) with a 120-foot taper is required. Therefore, a 235-foot with a 120-foot taper is recommended to be striped for the northbound left turn lane. The turn lane taper can be shared with the southbound left turn lane at 50th Avenue.

- A southbound right turn lane **is** warranted along Federal Boulevard (US-287) at 52nd Avenue based on projected 2030 background plus project traffic volumes being 65 southbound right turns during the peak hour and the threshold being 25 vph. Based on the 35 mile per hour posted speed limit, the deceleration length is recommended to provide 190 feet, plus a 120-foot taper (10:1). However, this turn lane length cannot be accommodated between 51st Avenue and the right-in/right access since the distance between the two intersections is 270 feet. Therefore, the southbound right turn lane is recommended to provide a length of 100 feet with a 120-foot taper.

Regis Boulevard/50th Avenue & Federal Boulevard (US-287) (#4)

- A northbound left turn lane **is** warranted along Federal Boulevard (US-287) at Regis Boulevard/50th Avenue based on projected 2030 background plus project traffic volumes being 220 northbound left turns during the peak hour and the threshold being 10 vph. A northbound left turn lane currently exists and provides a length of 300 feet. Of note, the turn lane should provide a length of 410 feet (190 feet plus 220 feet of storage) with a 120-foot taper to meet CDOT turn lane standards. However, the northbound left turn lane cannot be further extended due to back-to-back left turn lanes with 49th Avenue to the south. Notable, the reported 95th percentile queue length remains within the existing northbound left turn lane length.
- A southbound right turn lane **is** warranted along Federal Boulevard (US-287) at Regis Boulevard/50th Avenue based on projected 2030 background plus project traffic volumes being 138 southbound right turns during the peak hour and the threshold being 25 vph. Based on the 35 mile per hour posted speed limit, a southbound right turn lane of 190 feet plus a 120-foot taper (10:1) is recommended.

5.4 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 15** with calculations provided within the level of service operational sheets of **Appendix E** for unsignalized intersections and **Appendix F** for signalized intersections.

Table 15 – Turn Lane Queuing Analysis Results

Intersection Turn Lane	Existing Turn Lane Length	2030 Calculated Queue AM / PM	2030 Recommended Length AM / PM	2045 Calculated Queue AM / PM	2045 Recommended Length AM / PM
54th & Federal (#1)					
Northbound Left	450'	11'/22'	450'	12'/24'	450'
Northbound Right	175'	0'/0'	175'	0'/0'	175'
Southbound Left	250'	10'/13'	250'	15'/12'	250'
Southbound Right	50'	5'/4'	50'	7'/7'	50'
52nd & Federal (#2)					
Eastbound Left	DNE	93'/207'	225'	96'/223'	225'
Westbound Left	DNE	164'/34'	C	202'/36'	C
Northbound Left	250'	33'/29'	250'	42'/33'	250'
Southbound Left	525'	70'/53'	525'	78'/108'	525'
Southbound Right	DNE	2'/6'	225'+145'T	2'/6'	225'+145'T
51st & Federal (#3)					
Northbound Left	125'	25'/25'	235'+120'T	25'/25'	235'+120'T
Southbound Left	225'	25'/25'	225'	25'/25'	225'
Southbound Right	DNE	25'/25'	100'+120'T	25'/25'	100'+120'T
Regis/50th & Federal (#4)					
Eastbound Left	C	138'/202'	C	152'/248'	C
Eastbound Right	75'	51'/59'	75'	53'/61'	75'
Westbound Left	125'	107'/95'	125'	120'/105'	125'
Northbound Left	300'	15'/146'	300'	184'/261'	300'
Northbound Right	75'	8'/24'	75'	8'/27'	75'
Southbound Left	150'	22'/26'	230'+120'T	24'/31'	230'+120'T
Southbound Right	DNE	47'/50'	190'+120'T	55'/58'	190'+120'T
Regis Blvd East Access (#5)					
Eastbound Left	75'	25'/25'	75'	25'/25'	75'
Regis Blvd East Access (#6)					
Eastbound Left	25'	25'/25'	100'	25'/25'	100'
Regis Blvd & Lowell (#7)					
Eastbound Left	50'	17'/20'	50'	17'/22'	50'
Northbound Left	25'	9'/17'	25'	10'/19'	25'
Southbound Left	25'	45'/108'	150'	52'/140'	150'
Lowell North Access (#11)					
Southbound Left	75'	25'/25'	75'	25'/25'	75'
Federal RIRO Access (#102)					
Southbound Right	DNE	25'	100'+120'T	25'	100'+120'T
Regis Blvd & Grove (#105)					
Eastbound Left	100'	25'/25'	100'		100'
Westbound Left	75'	25'/25'	75'	25'/25'	75'

DNE = Does Not Exist; C = Continuous Lane; **Blue** Text = Recommendation; XX' + XX'T = Storage + Taper Length

All queues are anticipated to remain within the existing turn lane lengths through the long-term 2045 horizon other than the southbound left turn at the Regis Boulevard and Lowell Boulevard (#7) intersection. Therefore, the existing 25-foot southbound left turn lane should be extended to 150 feet. This improvement is possible with restriping the north leg of Lowell Boulevard.

Several new turn lanes are recommended with development of the project. The eastbound left turn lane at 52nd Avenue and Federal Boulevard (#2) is recommended to provide a length of 225 feet to accommodate the reported 95th percentile queue lengths. Additionally, the southbound right turn lane is warranted based on CDOT turn lane warrants and is recommended to provide a length of 225 feet with a 145-foot taper. Due to driveway spacing constraints, the southbound right turn lanes can only provide a 100-foot turn lane length with a taper of 120 feet at the 51st Avenue (#3) and right-in/right-out access (#102) along Federal Boulevard. The northbound left turn lane at the 51st Avenue/Federal Boulevard (US-287) intersection is recommended to be extended to a length of 235 feet with a 120-foot taper. The taper length will be shared with the southbound left turn lane at 50th Avenue/Federal Boulevard (US-287) (#4) to the south. Additionally, the southbound left turn lane at this 50th Avenue/Federal Boulevard intersection is recommended to be extended to meet the CDOT turn lane standards of 230 feet. A southbound right turn lane is warranted and is recommended to provide a length of 190 feet with a 120-foot taper at this intersection as well.

The eastbound left turn lane at the East Access (#6) along Regis Boulevard is recommended to be extended from 25 feet to 100 feet. This extension can be provided within the existing raised median. Additionally, the median nose on the east leg of the intersection should be reconstructed to allow for a safer vehicle travel path for southbound left turning exiting vehicles.

5.5 Pedestrian, Bicycle, and Transit Evaluation

To address components of a transportation mobility study, pedestrian, bicycle, and transit evaluations were conducted. There is existing sidewalk along Federal Boulevard (US-287) and Regis Avenue. Designated crosswalks with pedestrian signal indications are provided across all legs of the signalized intersections within the study area. There are on-street bicycle lanes with a buffer between the bicycle and through lanes along Regis Boulevard.

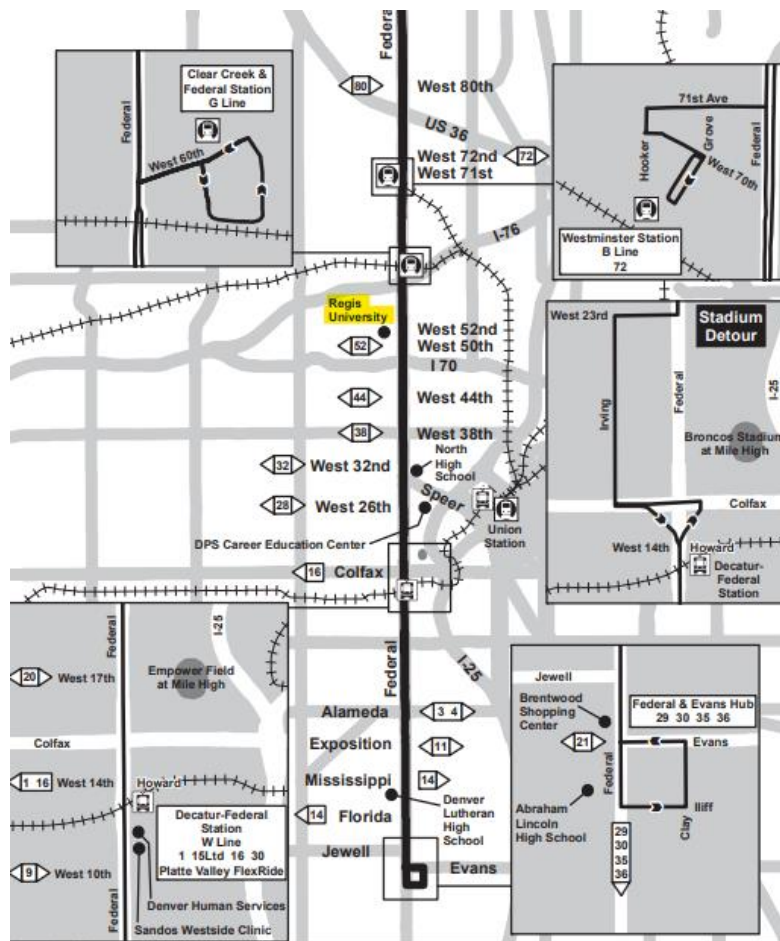
It is believed that a High-Intensity Activated Crosswalk (HAWK) pedestrian crossing, or a rapid rectangular flashing beacon (RRFB) would be beneficial along Federal Boulevard (US-287), north of 51st Avenue (#3). A pedestrian crossing along Federal Boulevard (US-287) will provide connection between the residential to the east and the proposed mixed use to the west. Additionally, a HAWK pedestrian crossing, or a RRFB along Regis Boulevard, east of King Street (#6) would provide a safer and marked crossing location. Currently, 26 pedestrians cross Regis

Boulevard at King Street during the morning peak hour and 38 pedestrians cross during the afternoon peak hour. The spacing between the proposed mid-block crossings and the existing signals meet the City's 300 feet spacing requirement. Therefore, coordination with the City and County of Denver and the developer will be needed to determine which pedestrian control is more favorable or feasible based on future pedestrian crossings. It is believed that adequate pedestrian crossings would be provided with the HAWK or RRFB location.

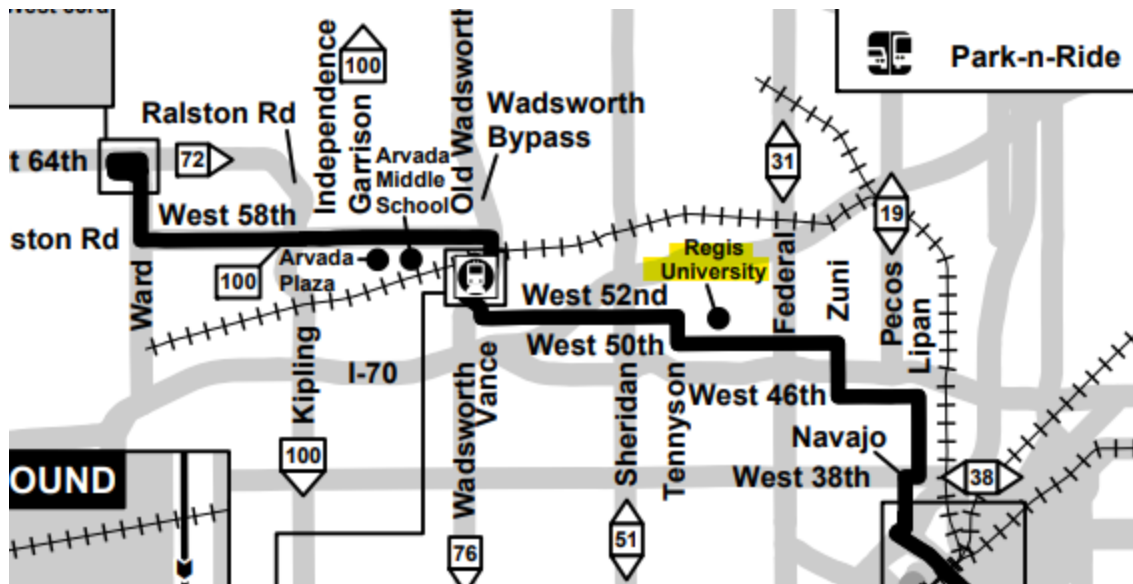
The Regional Transportation District (RTD) Clear Creek – Federal Station is located less than one-mile north of the development. The station serves the Light Rail G-Line and Bus #31. The E-Line travels between Wheat Ridge and Downtown Denver (Union Station). Union Station provides transfers from the G-Line to the A, B, E, N, and W Lines for travel to Northglenn, Aurora, Littleton, and Lone Tree. The RTD rail station located less than a mile from the University is highlighted in the RTD Rail Map below to illustrate the rail line connections.



Bus Route #31 travels north-south along Federal Boulevard from West 112th Avenue to Evans Avenue. There is a bus stop along the Regis University frontage along Federal Boulevard, 200 feet south of 52nd Avenue for southbound travel and a bus stop for northbound travel 145 feet south of 52nd Avenue. Additionally, a bus stop is located along Regis Boulevard adjacent to Regis University, 130 feet west of Federal Boulevard which services Bus #52. Bus #52 travels east-west with stops at Olde Town Arvada Station, Union Station, and Alameda Station for light rail or bus connections. Views of the Bus #31 route along Federal Boulevard and the Bus #52 route along Regis Boulevard are provided below.



RTD Bus Route #31



RTD Bus Route #52

5.6 Improvement Summary

Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 10**. Additionally, the recommended improvements along Federal Boulevard (US-287) are shown in **Figure 11** and the recommended improvements along Regis Boulevard are shown in **Figure 12**.

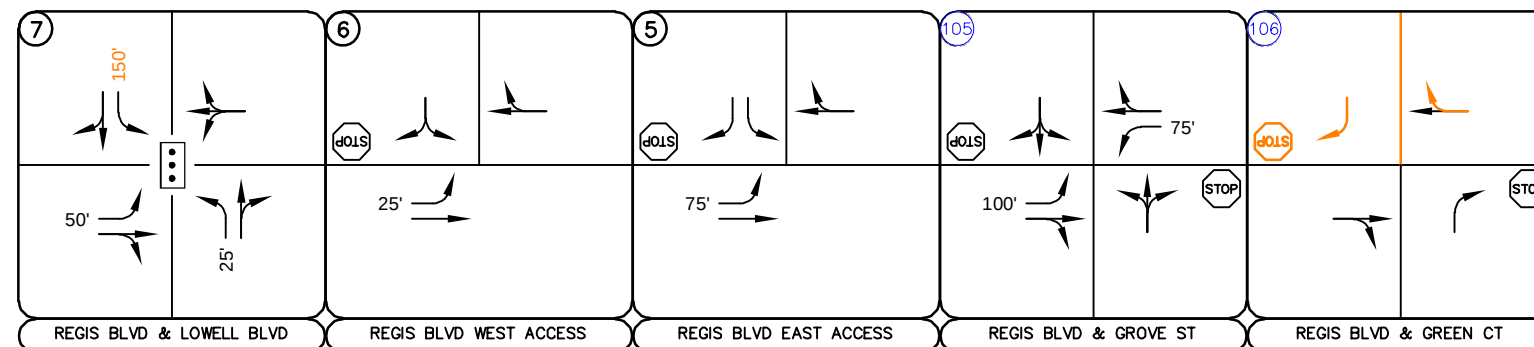
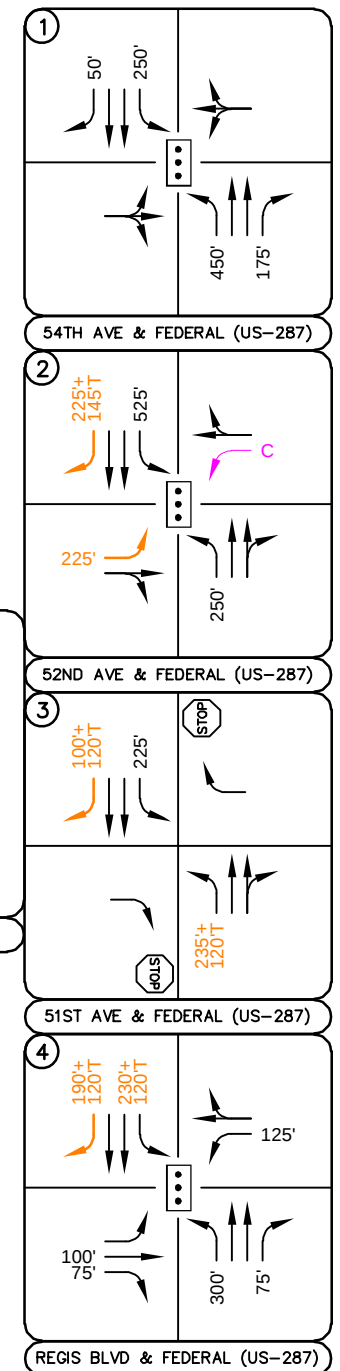
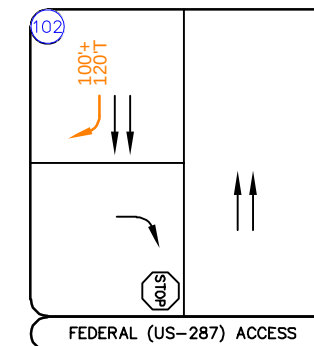
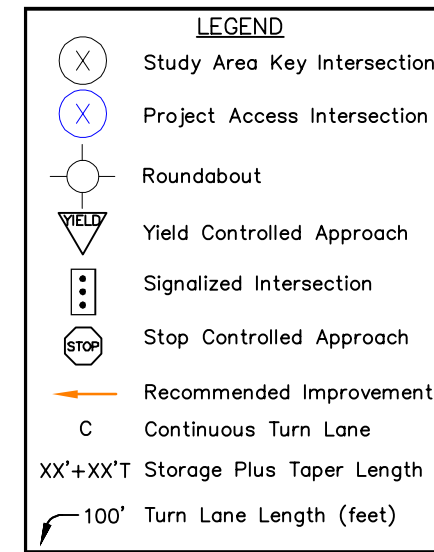
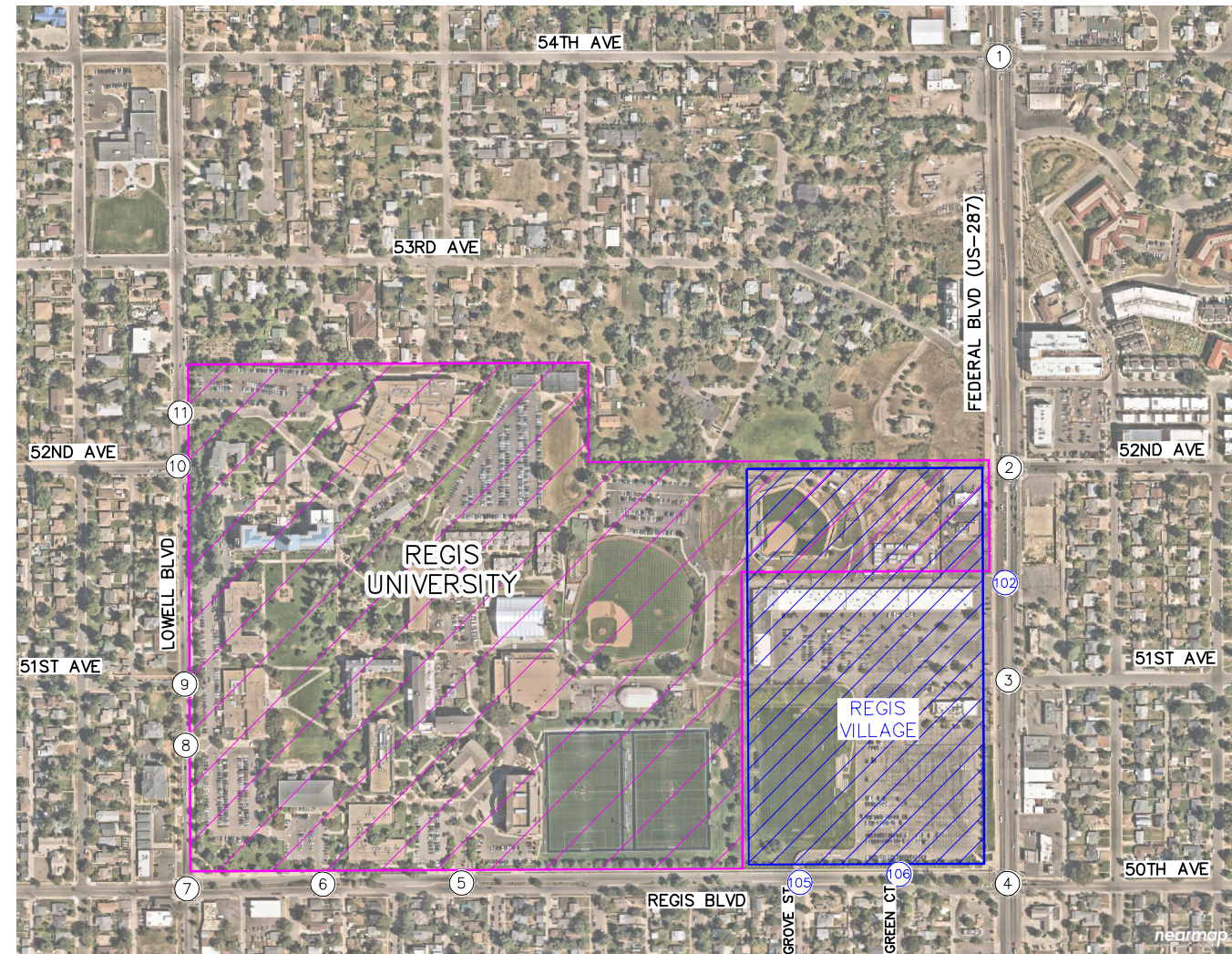
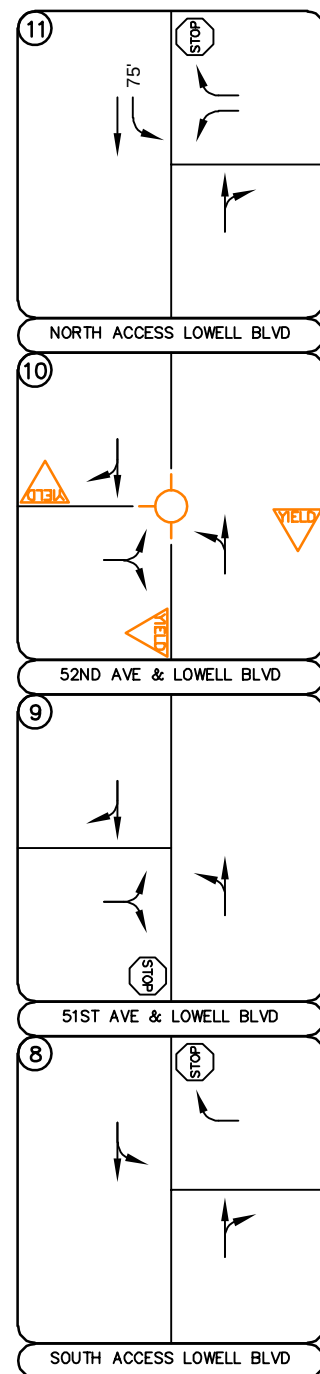


FIGURE 10
REGIS UNIVERSITY – REGIS VILLAGE
DENVER, COLORADO
RECOMMENDED GEOMETRY AND CONTROL

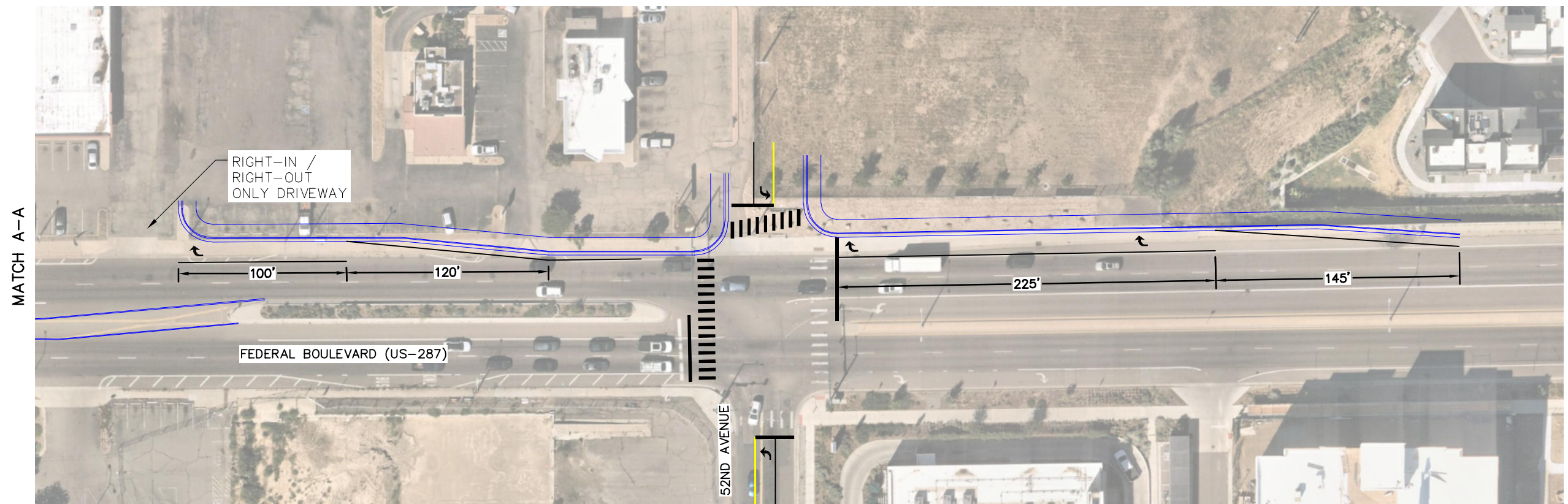
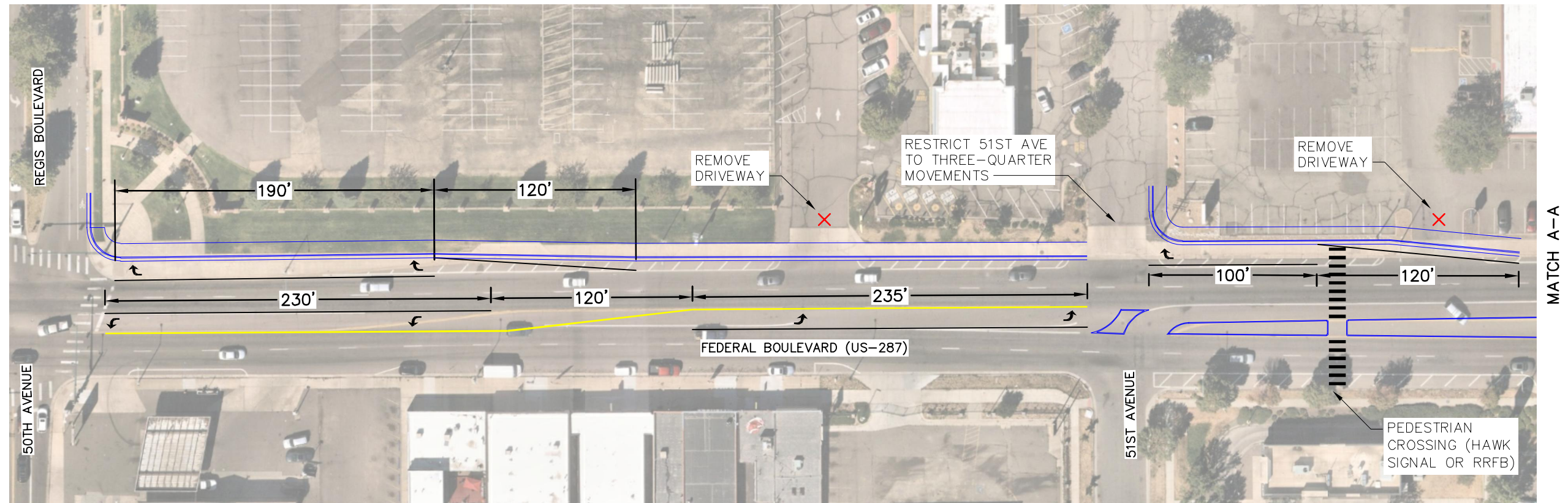
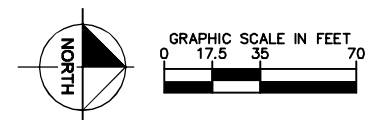


FIGURE 11
REGIS UNIVERSITY — REGIS VILLAGE
DENVER, COLORADO
FEDERAL BOULEVARD IMPROVEMENTS



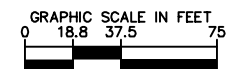
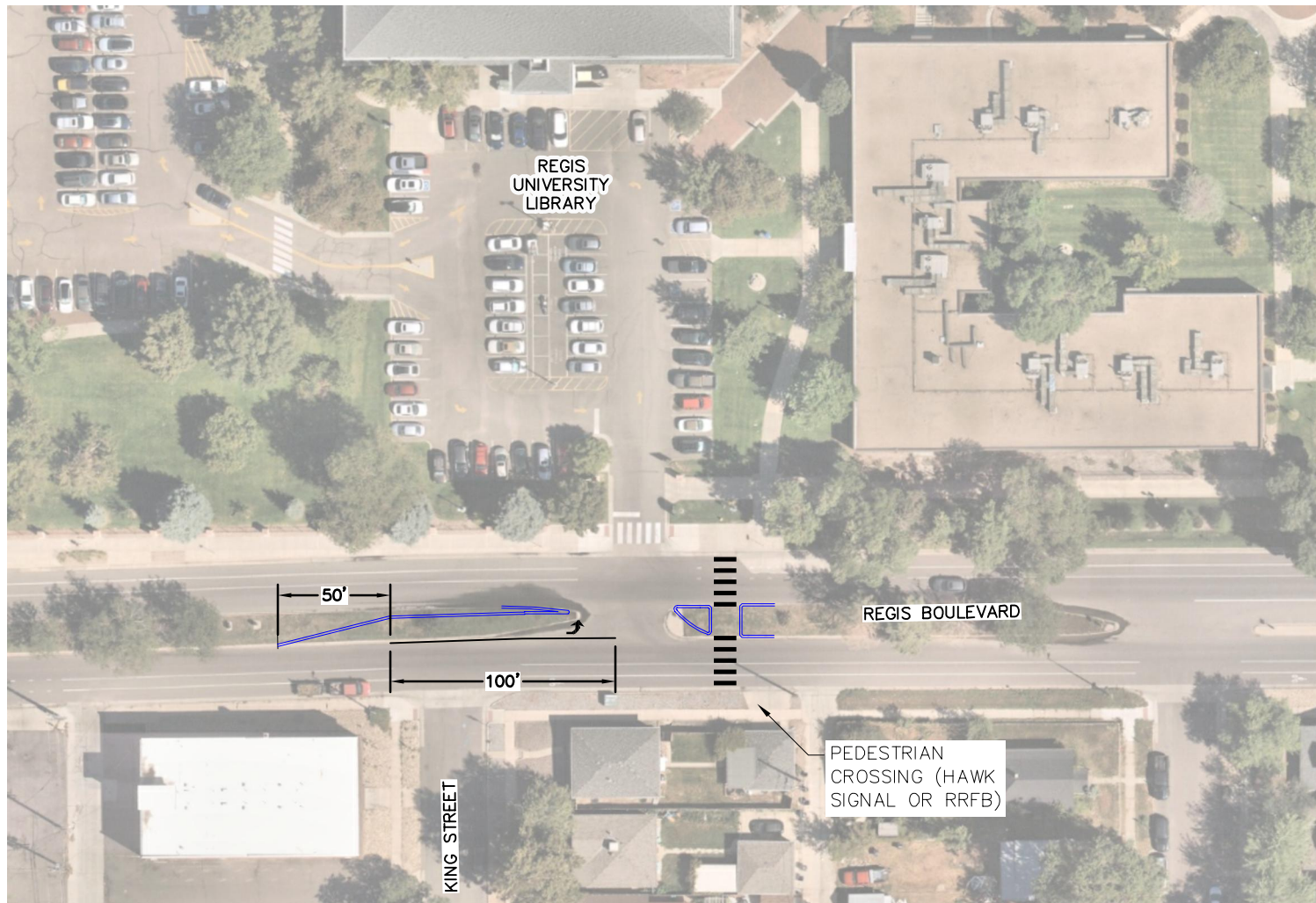


FIGURE 12
 REGIS UNIVERSITY — REGIS VILLAGE
 DENVER, COLORADO
 REGIS BOULEVARD IMPROVEMENTS

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes Regis University's Regis Village will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways for an access or intersection occurs when project traffic is anticipated to increase existing traffic volumes by more than 20 percent. Based on traffic projections, the addition of Regis Village project traffic on the west legs of 52nd Avenue, right-in/right-out access, 51st Avenue, and Regis Boulevard along Federal Boulevard (US-287) are all anticipated to increase existing traffic by more than 20 percent. Therefore, CDOT access permits are anticipated to be needed at all four access intersections along Federal Boulevard (US-287) as Regis Village development occurs. Additionally, CDOT may require access permits to close three (3) accesses along Federal Boulevard (US-287).
- The development area for Regis Village as part of Regis University will continue to utilize the existing accesses along Federal Boulevard at 52nd Avenue, right-in/right-out driveway between 52nd Avenue and 51st Avenue, at 51st Avenue, and at the existing access along Regis Boulevard at Grove Street. Additionally, a new right-in/right-out access is proposed along Regis Boulevard between Grove Street and Federal Boulevard, aligning with Green Court. The following improvement recommendations related to these access intersections are as follows:
 - The west leg of the 52nd Avenue and Federal Boulevard (#2) intersection will need to be reconstructed and realigned with 52nd Avenue. Construction of the west leg at this intersection will require a traffic signal modification to include replacing the signal poles and mast arms on the east and west legs. Separate 225-foot eastbound and continuous westbound left turn lanes are also recommended to be provided. These eastbound and westbound left turns are recommended to operate with protected-permissive left turn phasing. Additionally, a southbound right turn lane is warranted to be constructed with a length of 225 feet with a 145-foot taper (based on a 40-mph speed limit).

- The existing right-in/right-out access along southbound Federal Boulevard (US-287) between 52nd Avenue and 51st Avenue (#102) will remain as a right-in/right-out access for Regis Village. A R1-1 “STOP” sign is recommended to be installed on the exiting eastbound approach. A southbound right turn deceleration lane is warranted. Based on the separation distance of only 310 feet between this right-in/right-out access and 52nd Avenue to the north, the southbound right turn lane is recommended to provide a length of 100 feet with a 120-foot taper.
- The existing 51st Avenue and Federal Boulevard (#3) intersection allows full turning movements to and from Federal Boulevard. However, full turning movements are not projected to work well at this intersection with two-way stop control and the intersection doesn’t meet CDOT’s minimum spacing for signalization. Therefore, it is recommended that this access be restricted to three-quarter movements (right-in/left-in/right-out only for the minor approaches). A R3-2 No Left Turn sign is recommended to be placed below the R1-1 “STOP” signs on the eastbound and westbound approaches. Additional permanent features such as a pork-chop median island within the exiting approaches and/or a raised median along Federal Boulevard in the middle of the intersection could be installed to further restrict left turn and through movements from the minor street. The northbound left turn lane is recommended to be extended from 125 feet to 235 feet to meet CDOT turn lane standards. Lastly, a southbound right turn lane is recommended to provide a length of 100 feet with a 120-foot taper based on only 240 feet of separation between 51st Avenue and the right-in/right-out access to the north.
- The project development will continue to use the north leg of the Regis Boulevard / Grove Street (#105) intersection as an access. No changes to the existing geometry or control are recommended.
- Lastly, the project is proposing a right-in/right-out access along Regis Boulevard, aligning with Green Court (#106). A R1-1 “STOP” sign is recommended to be placed on the southbound approach, exiting the development. Additionally, a R3-2 No Left Turn Lane sign should be placed below the “STOP” sign and a R6-1(R) “ONE WAY” sign placed in the existing raised median with Regis Boulevard to further inform drivers of the right-out only movement requirement.

- A southbound right turn lane is warranted at the Regis Boulevard/50th Avenue and Federal Boulevard (#4) intersection. Therefore, a southbound right turn lane is recommended to provide a length of 190 feet with a 120-foot taper.
- The eastbound left turn lane at the East Access (#6) along Regis Boulevard is recommended to be extended from 25 feet to 100 feet. This extension can be provided within the existing raised median. Additionally, the median nose on the east leg of the intersection should be reconstructed to allow for a safer vehicle travel path for southbound left turning vehicles.
- The southbound left turn lane along Lowell Boulevard at the Regis Boulevard (#7) intersection is recommended to be extended from 25 feet to 150 feet. This left turn lane can be extended by restriping the existing southbound approach. However, some on-street parking on the west side of Lowell Boulevard will need to be restricted.
- The 52nd Avenue and Lowell Boulevard (#10) intersection is recommended to be converted from two-way stop control to a single-lane mini roundabout. The mini roundabout can be accommodated within the existing intersection and will not impact on-street parking. A mini roundabout provides roundabout control for passenger vehicles (most of the traffic through this intersection), while providing fully traversable center and splitter islands for trucks to travel through the intersection as a standard configuration (as they do today).
- It is believed that a High-Intensity Activated Crosswalk (HAWK) pedestrian crossing, or a rapid rectangular flashing beacon (RRFB) would be beneficial along Federal Boulevard (US-287), north of 51st Avenue (#3) and along Regis Boulevard, east of King Street (#6). The spacing between the proposed mid-block crossings and the existing signals meet the City's 300 feet spacing requirement. Therefore, coordination with the City of Denver and the developer will be needed to determine which pedestrian control is more favorable or feasible based on future pedestrian crossings. It is believed that adequate pedestrian crossings would be provided with the HAWK or RRFB location.
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City and County of Denver and/or the Colorado Department of

Transportation (CDOT), as applicable, as well as the Manual on Uniform Traffic Control Devices (MUTCD) – 11th Edition, 2023.

APPENDICES

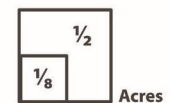
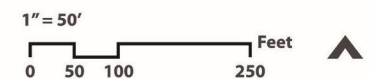
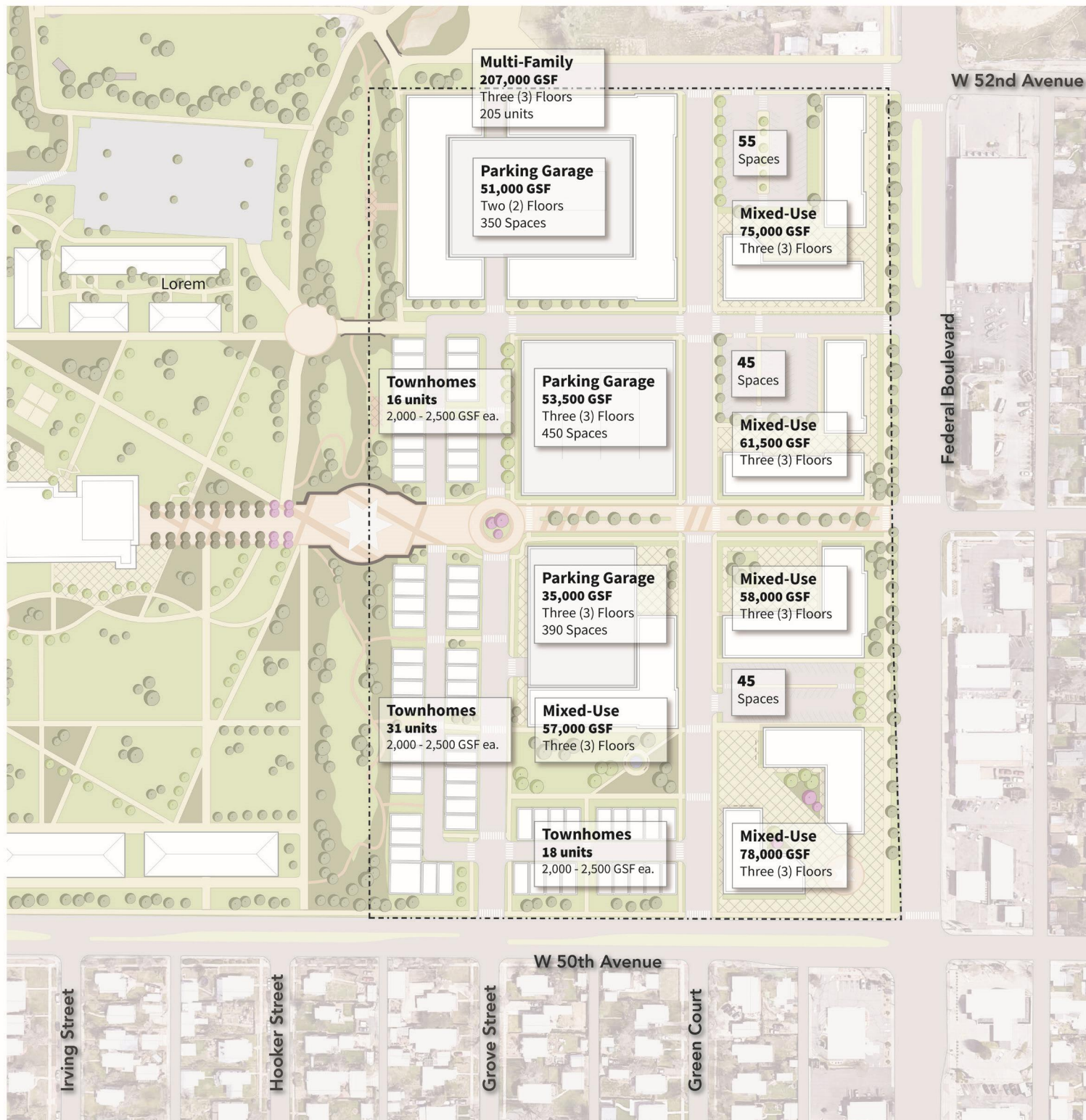
APPENDIX A

Conceptual Site Plan

Concept Plan

Base Conditions

-  Site Boundary
-  Building
-  Parking Garage
-  Vegetation
-  Road Pavement, Parking
-  Plaza
-  Multi-use Path



APPENDIX B

Intersection Count Sheets



Denver, CO
Regis University
AM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

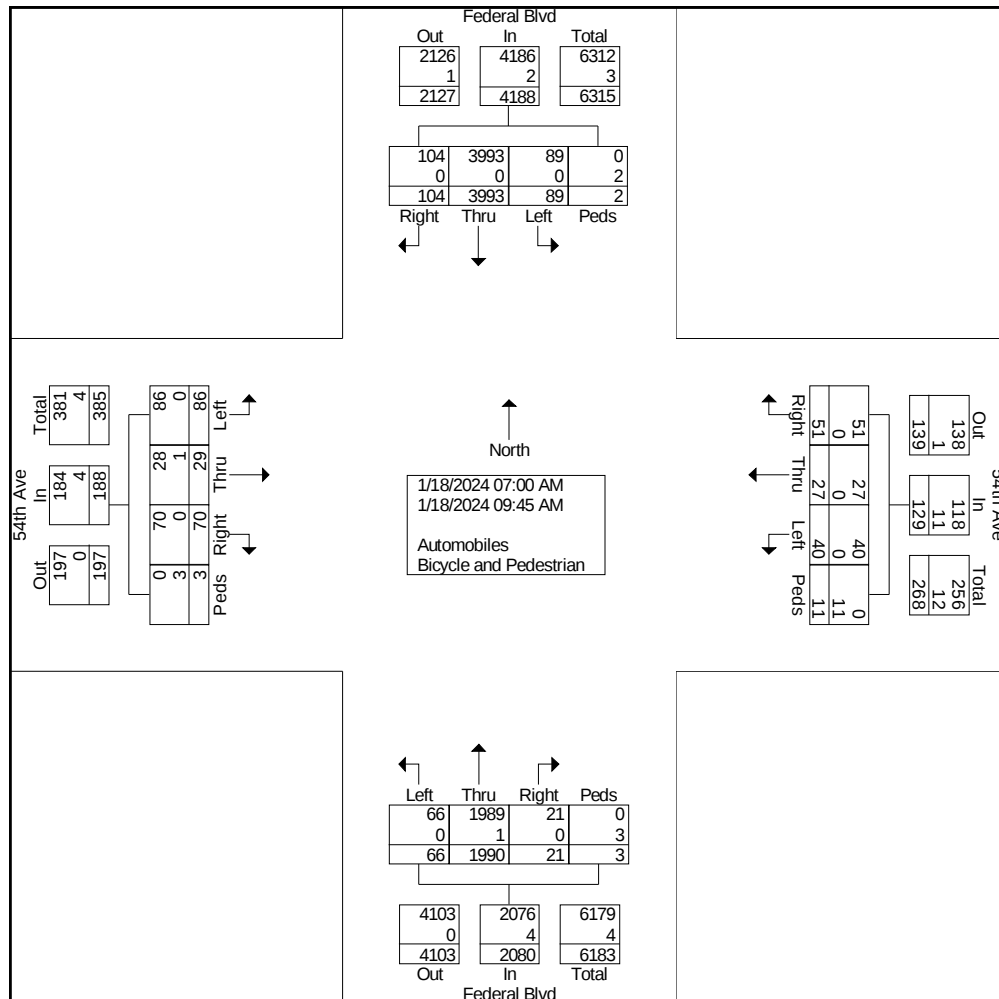
	54th Ave Eastbound					54th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	5	2	6	0	13	2	0	3	0	5	2	126	0	0	128	2	333	2	0	337	483
07:15 AM	9	1	3	1	14	4	1	4	0	9	5	167	0	2	174	3	435	10	0	448	645
07:30 AM	12	1	3	0	16	1	3	5	0	9	3	187	0	1	191	5	411	12	0	428	644
07:45 AM	8	6	4	0	18	5	6	5	1	17	8	178	1	0	187	9	380	10	0	399	621
Total	34	10	16	1	61	12	10	17	1	40	18	658	1	3	680	19	1559	34	0	1612	2393
08:00 AM	3	4	12	0	19	6	4	4	1	15	2	185	1	0	188	8	439	13	2	462	684
08:15 AM	8	4	7	0	19	6	5	9	1	21	4	178	3	0	185	8	349	10	0	367	592
08:30 AM	10	7	2	0	19	2	1	4	1	8	8	200	3	0	211	11	380	14	0	405	643
08:45 AM	9	1	8	0	18	2	2	5	1	10	9	169	2	0	180	5	366	9	0	380	588
Total	30	16	29	0	75	16	12	22	4	54	23	732	9	0	764	32	1534	46	2	1614	2507
09:00 AM	6	2	10	0	18	7	0	4	0	11	4	163	2	0	169	10	271	6	0	287	485
09:15 AM	3	0	6	0	9	2	3	3	1	9	7	145	3	0	155	9	241	7	0	257	430
09:30 AM	10	1	4	1	16	1	0	0	1	2	6	144	4	0	154	4	195	8	0	207	379
09:45 AM	3	0	5	1	9	2	2	5	4	13	8	148	2	0	158	15	193	3	0	211	391
Total	22	3	25	2	52	12	5	12	6	35	25	600	11	0	636	38	900	24	0	962	1685
Grand Total	86	29	70	3	188	40	27	51	11	129	66	1990	21	3	2080	89	3993	104	2	4188	6585
Apprch %	45.7	15.4	37.2	1.6		31	20.9	39.5	8.5		3.2	95.7	1	0.1		2.1	95.3	2.5	0		
Total %	1.3	0.4	1.1	0	2.9	0.6	0.4	0.8	0.2	2	1	30.2	0.3	0	31.6	1.4	60.6	1.6	0	63.6	
Automobiles	86	28	70	0	184	40	27	51	0	118	66	1989	21	0	2076	89	3993	104	0	4186	6564
% Automobiles	100	96.6	100	0	97.9	100	100	100	0	91.5	100	99.9	100	0	99.8	100	100	100	0	100	99.7
Bicycle and Pedestrian	0	1	0	3	4	0	0	0	11	11	0	1	0	3	4	0	0	0	2	2	21
% Bicycle and Pedestrian	0	3.4	0	100	2.1	0	0	0	100	8.5	0	0.1	0	100	0.2	0	0	0	100	0	0.3



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



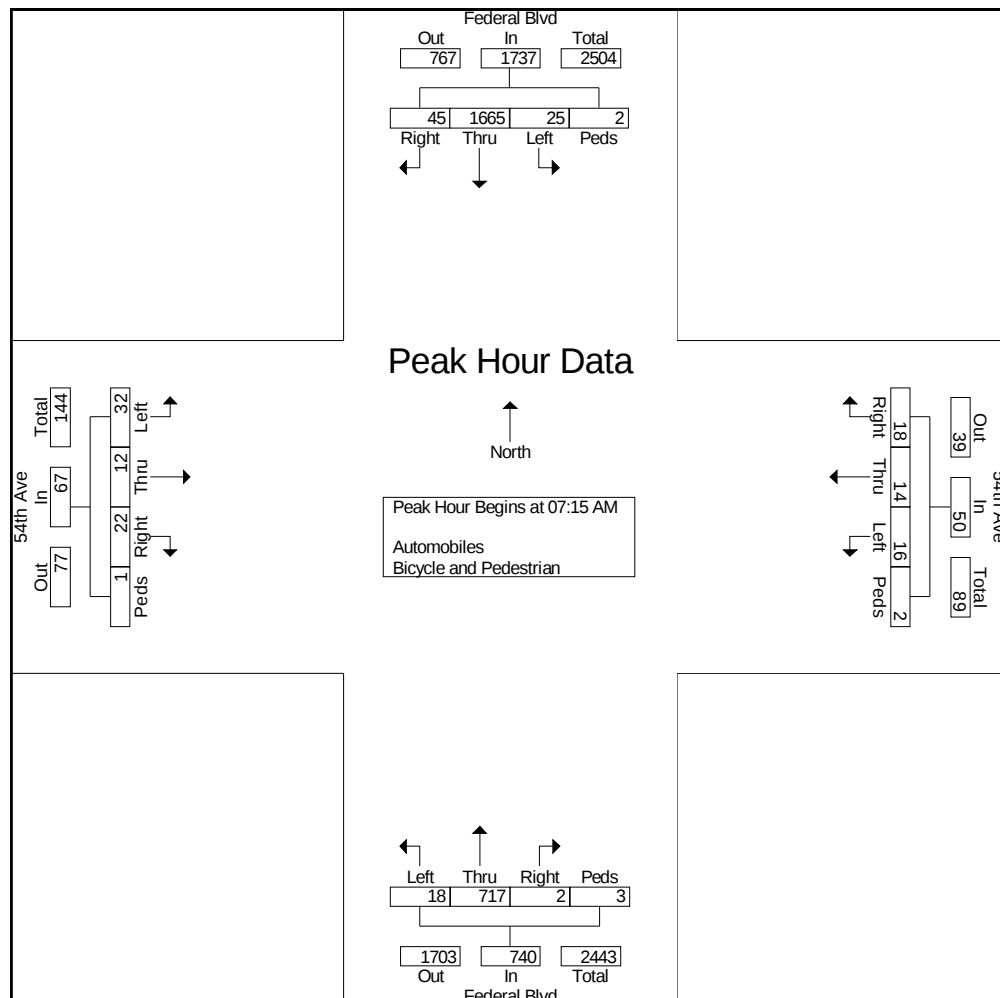


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	54th Ave Eastbound					54th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	9	1	3	1	14	4	1	4	0	9	5	167	0	2	174	3	435	10	0	448	645
07:30 AM	12	1	3	0	16	1	3	5	0	9	3	187	0	1	191	5	411	12	0	428	644
07:45 AM	8	6	4	0	18	5	6	5	1	17	8	178	1	0	187	9	380	10	0	399	621
08:00 AM	3	4	12	0	19	6	4	4	1	15	2	185	1	0	188	8	439	13	2	462	684
Total Volume	32	12	22	1	67	16	14	18	2	50	18	717	2	3	740	25	1665	45	2	1737	2594
% App. Total	47.8	17.9	32.8	1.5		32	28	36	4		2.4	96.9	0.3	0.4		1.4	95.9	2.6	0.1		
PHF	.667	.500	.458	.250	.882	.667	.583	.900	.500	.735	.563	.959	.500	.375	.969	.694	.948	.865	.250	.940	.948





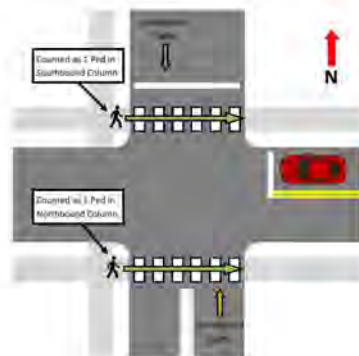
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

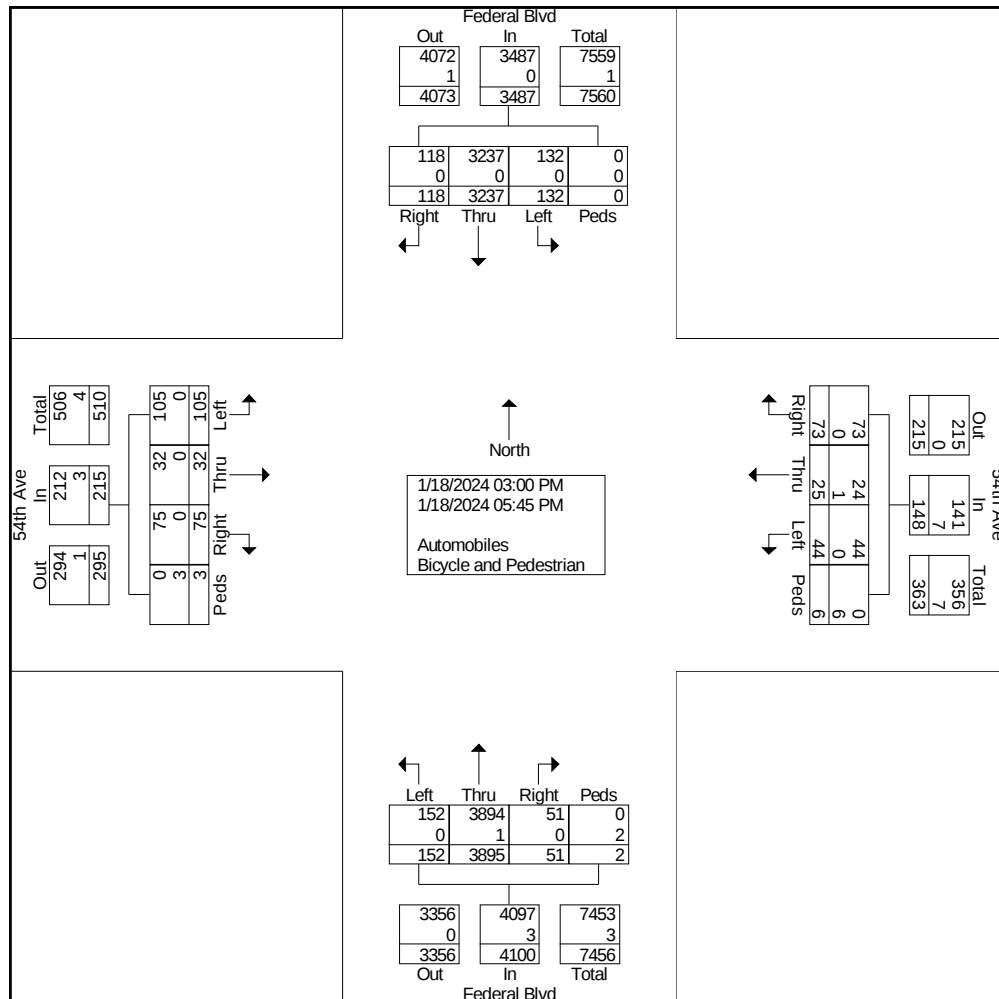
	54th Ave Eastbound					54th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	6	1	3	0	10	3	2	7	0	12	7	226	3	0	236	18	209	12	0	239	497
03:15 PM	13	5	7	0	25	1	2	11	1	15	12	289	4	0	305	9	244	11	0	264	609
03:30 PM	17	5	10	1	33	8	3	9	1	21	14	346	6	1	367	15	256	8	0	279	700
03:45 PM	13	3	9	0	25	7	3	5	0	15	11	336	2	0	349	13	288	10	0	311	700
Total	49	14	29	1	93	19	10	32	2	63	44	1197	15	1	1257	55	997	41	0	1093	2506
04:00 PM	4	3	4	0	11	3	3	3	1	10	10	338	6	0	354	8	268	7	0	283	658
04:15 PM	12	5	1	0	18	2	4	5	1	12	13	336	4	0	353	9	221	4	0	234	617
04:30 PM	3	3	7	0	13	5	2	8	0	15	14	335	5	0	354	3	304	18	0	325	707
04:45 PM	11	2	11	0	24	3	0	8	0	11	18	323	5	0	346	9	308	8	0	325	706
Total	30	13	23	0	66	13	9	24	2	48	55	1332	20	0	1407	29	1101	37	0	1167	2688
05:00 PM	8	1	6	2	17	2	0	4	1	7	10	333	0	1	344	11	272	14	0	297	665
05:15 PM	4	2	8	0	14	3	4	3	1	11	18	336	5	0	359	18	300	5	0	323	707
05:30 PM	7	2	5	0	14	2	1	5	0	8	9	366	6	0	381	10	267	12	0	289	692
05:45 PM	7	0	4	0	11	5	1	5	0	11	16	331	5	0	352	9	300	9	0	318	692
Total	26	5	23	2	56	12	6	17	2	37	53	1366	16	1	1436	48	1139	40	0	1227	2756
Grand Total	105	32	75	3	215	44	25	73	6	148	152	3895	51	2	4100	132	3237	118	0	3487	7950
Apprch %	48.8	14.9	34.9	1.4		29.7	16.9	49.3	4.1		3.7	95	1.2	0		3.8	92.8	3.4	0		
Total %	1.3	0.4	0.9	0	2.7	0.6	0.3	0.9	0.1	1.9	1.9	49	0.6	0	51.6	1.7	40.7	1.5	0	43.9	
Automobiles	105	32	75	0	212	44	24	73	0	141	152	3894	51	0	4097	132	3237	118	0	3487	7937
% Automobiles	100	100	100	0	98.6	100	96	100	0	95.3	100	100	100	0	99.9	100	100	100	0	100	99.8
Bicycle and Pedestrian	0	0	0	3	3	0	1	0	6	7	0	1	0	2	3	0	0	0	0	0	13
% Bicycle and Pedestrian	0	0	0	100	1.4	0	4	0	100	4.7	0	0	0	100	0.1	0	0	0	0	0	0.2



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



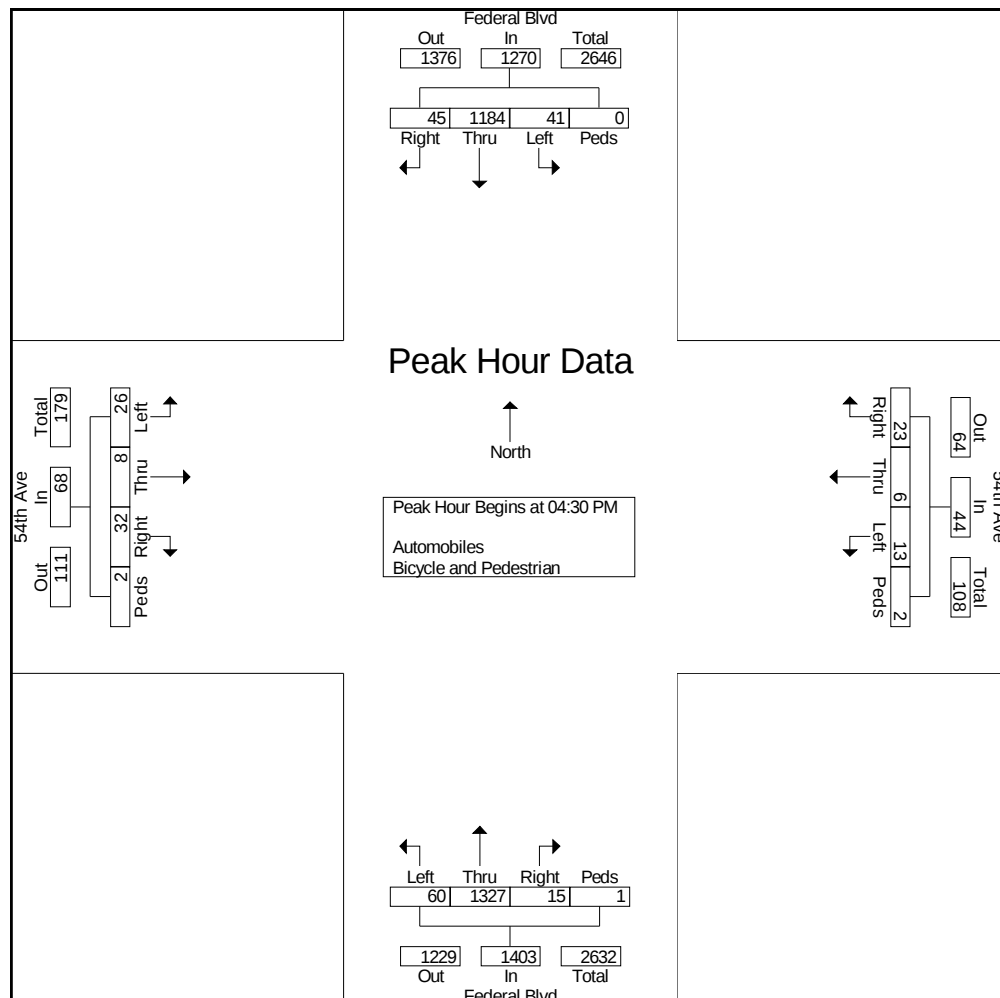


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	54th Ave Eastbound					54th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	3	7	0	13	5	2	8	0	15	14	335	5	0	354	3	304	18	0	325	707
04:45 PM	11	2	11	0	24	3	0	8	0	11	18	323	5	0	346	9	308	8	0	325	706
05:00 PM	8	1	6	2	17	2	0	4	1	7	10	333	0	1	344	11	272	14	0	297	665
05:15 PM	4	2	8	0	14	3	4	3	1	11	18	336	5	0	359	18	300	5	0	323	707
Total Volume	26	8	32	2	68	13	6	23	2	44	60	1327	15	1	1403	41	1184	45	0	1270	2785
% App. Total	38.2	11.8	47.1	2.9		29.5	13.6	52.3	4.5		4.3	94.6	1.1	0.1		3.2	93.2	3.5	0		
PHF	.591	.667	.727	.250	.708	.650	.375	.719	.500	.733	.833	.987	.750	.250	.977	.569	.961	.625	.000	.977	.985





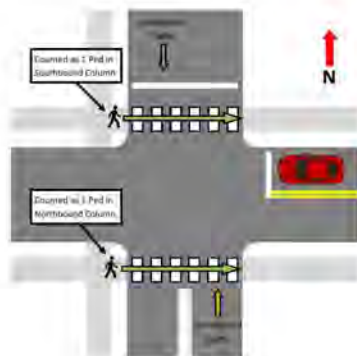
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
54th Ave & Federal Blvd

File Name : 54th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

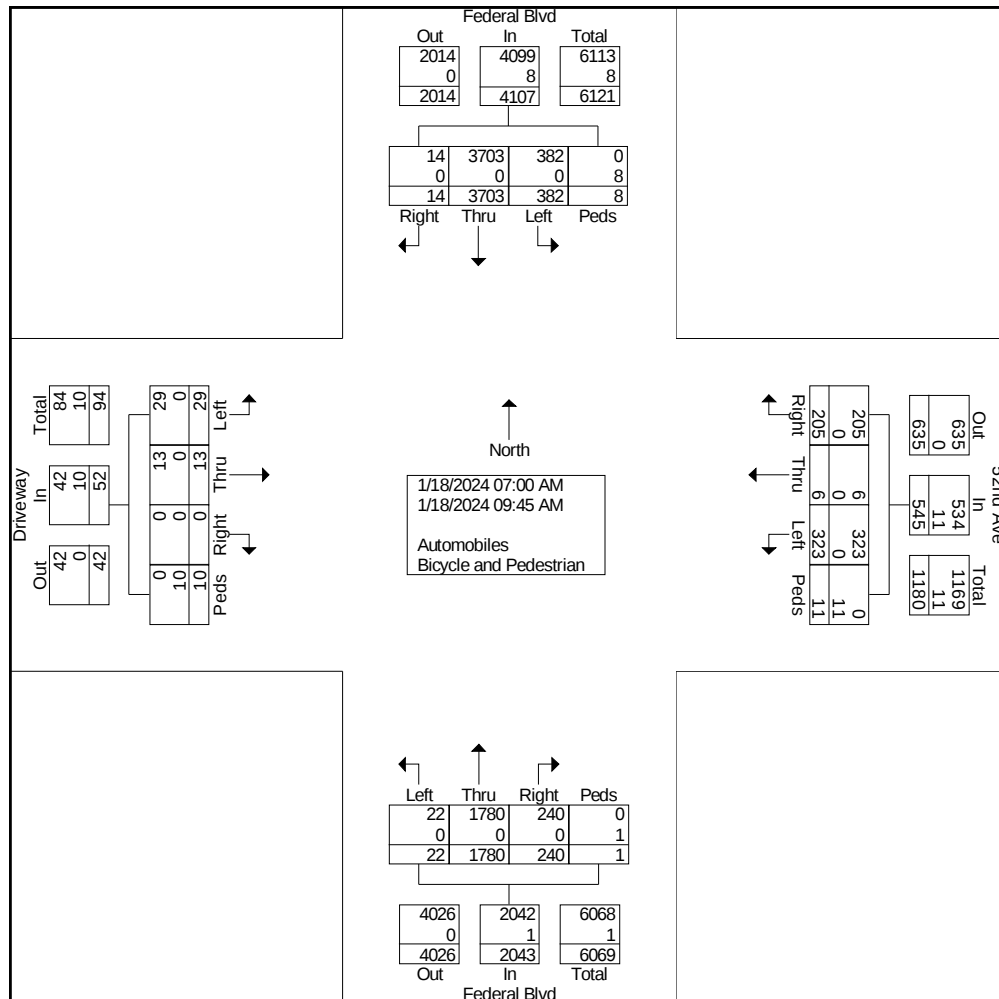
	Driveway Eastbound					52nd Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	0	0	0	3	21	0	8	1	30	1	121	16	0	138	21	318	1	0	340	511
07:15 AM	2	1	0	1	4	27	1	15	0	43	1	145	10	0	156	19	399	2	1	421	624
07:30 AM	1	3	0	1	5	24	1	16	0	41	1	166	21	0	188	48	382	1	0	431	665
07:45 AM	2	0	0	0	2	20	0	18	0	38	2	151	19	0	172	55	318	0	0	373	585
Total	8	4	0	2	14	92	2	57	1	152	5	583	66	0	654	143	1417	4	1	1565	2385
08:00 AM	2	1	0	0	3	30	1	27	1	59	5	166	18	1	190	78	390	3	0	471	723
08:15 AM	4	1	0	0	5	40	2	21	3	66	1	143	30	0	174	37	330	0	0	367	612
08:30 AM	4	2	0	0	6	26	1	21	0	48	5	185	30	0	220	31	343	1	0	375	649
08:45 AM	5	0	0	2	7	39	0	22	2	63	0	148	28	0	176	24	347	3	2	376	622
Total	15	4	0	2	21	135	4	91	6	236	11	642	106	1	760	170	1410	7	2	1589	2606
09:00 AM	3	1	0	1	5	27	0	14	2	43	0	156	23	0	179	23	269	3	1	296	523
09:15 AM	1	1	0	1	3	20	0	18	0	38	2	132	13	0	147	14	232	0	1	247	435
09:30 AM	1	1	0	3	5	23	0	9	0	32	3	132	17	0	152	12	190	0	3	205	394
09:45 AM	1	2	0	1	4	26	0	16	2	44	1	135	15	0	151	20	185	0	0	205	404
Total	6	5	0	6	17	96	0	57	4	157	6	555	68	0	629	69	876	3	5	953	1756
Grand Total	29	13	0	10	52	323	6	205	11	545	22	1780	240	1	2043	382	3703	14	8	4107	6747
Apprch %	55.8	25	0	19.2		59.3	1.1	37.6	2		1.1	87.1	11.7	0		9.3	90.2	0.3	0.2		
Total %	0.4	0.2	0	0.1	0.8	4.8	0.1	3	0.2	8.1	0.3	26.4	3.6	0	30.3	5.7	54.9	0.2	0.1	60.9	
Automobiles	29	13	0	0	42	323	6	205	0	534	22	1780	240	0	2042	382	3703	14	0	4099	6717
% Automobiles	100	100	0	0	80.8	100	100	100	0	98	100	100	100	0	100	100	100	100	0	99.8	99.6
Bicycle and Pedestrian	0	0	0	10	10	0	0	0	11	11	0	0	0	1	1	0	0	0	8	8	30
% Bicycle and Pedestrian	0	0	0	100	19.2	0	0	0	100	2	0	0	0	100	0	0	0	0	100	0.2	0.4



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



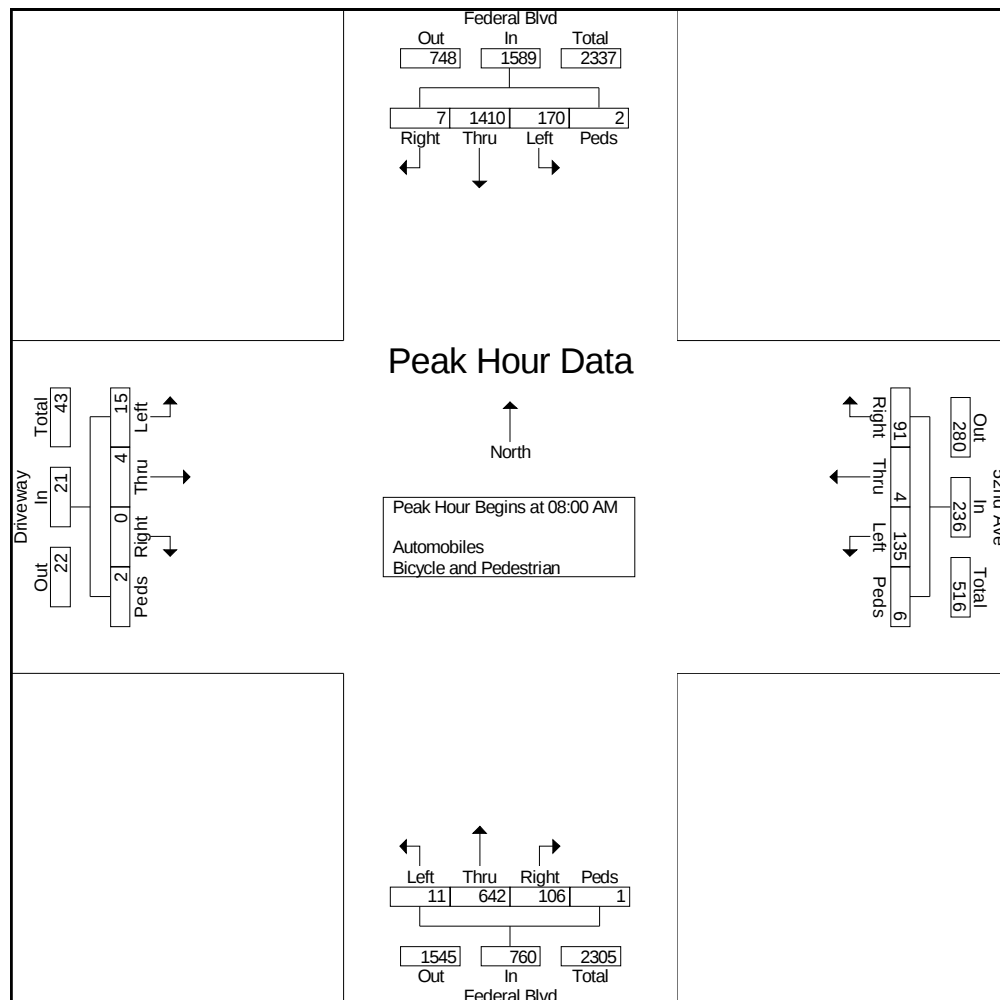


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Driveway Eastbound					52nd Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	1	0	0	3	30	1	27	1	59	5	166	18	1	190	78	390	3	0	471	723
08:15 AM	4	1	0	0	5	40	2	21	3	66	1	143	30	0	174	37	330	0	0	367	612
08:30 AM	4	2	0	0	6	26	1	21	0	48	5	185	30	0	220	31	343	1	0	375	649
08:45 AM	5	0	0	2	7	39	0	22	2	63	0	148	28	0	176	24	347	3	2	376	622
Total Volume	15	4	0	2	21	135	4	91	6	236	11	642	106	1	760	170	1410	7	2	1589	2606
% App. Total	71.4	19	0	9.5		57.2	1.7	38.6	2.5		1.4	84.5	13.9	0.1		10.7	88.7	0.4	0.1		
PHF	.750	.500	.000	.250	.750	.844	.500	.843	.500	.894	.550	.868	.883	.250	.864	.545	.904	.583	.250	.843	.901





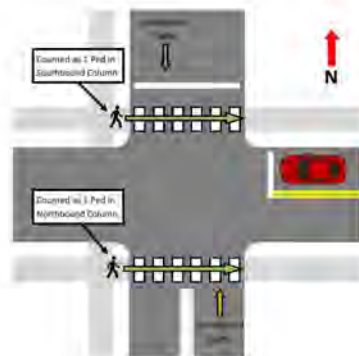
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

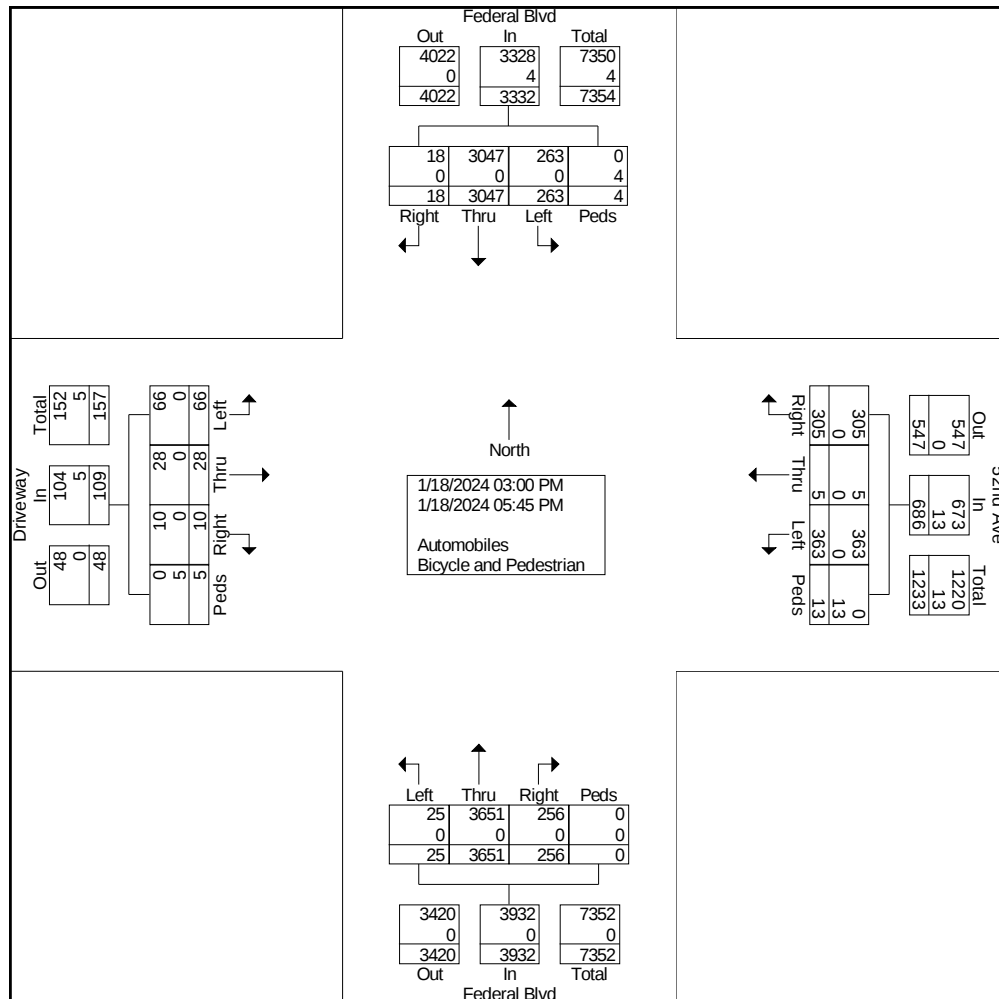
	Driveway Eastbound					52nd Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	5	6	3	0	14	30	0	23	3	56	3	214	15	0	232	22	195	2	0	219	521
03:15 PM	8	3	0	0	11	27	0	21	0	48	1	266	15	0	282	16	236	2	0	254	595
03:30 PM	6	1	1	4	12	43	0	35	2	80	4	311	24	0	339	22	245	3	4	274	705
03:45 PM	4	2	1	0	7	40	1	31	3	75	1	307	25	0	333	24	275	1	0	300	715
Total	23	12	5	4	44	140	1	110	8	259	9	1098	79	0	1186	84	951	8	4	1047	2536
04:00 PM	8	4	2	0	14	28	1	22	0	51	1	325	17	0	343	22	261	1	0	284	692
04:15 PM	6	0	1	0	7	29	0	38	1	68	3	289	34	0	326	17	188	2	0	207	608
04:30 PM	5	1	1	0	7	37	0	21	1	59	1	332	24	0	357	20	305	1	0	326	749
04:45 PM	8	4	0	1	13	23	0	25	0	48	6	297	29	0	332	26	287	1	0	314	707
Total	27	9	4	1	41	117	1	106	2	226	11	1243	104	0	1358	85	1041	5	0	1131	2756
05:00 PM	6	0	0	0	6	26	1	21	1	49	1	306	22	0	329	23	269	2	0	294	678
05:15 PM	5	3	0	0	8	25	0	33	1	59	1	336	19	0	356	28	266	1	0	295	718
05:30 PM	2	1	0	0	3	25	2	16	0	43	1	357	13	0	371	15	254	0	0	269	686
05:45 PM	3	3	1	0	7	30	0	19	1	50	2	311	19	0	332	28	266	2	0	296	685
Total	16	7	1	0	24	106	3	89	3	201	5	1310	73	0	1388	94	1055	5	0	1154	2767
Grand Total	66	28	10	5	109	363	5	305	13	686	25	3651	256	0	3932	263	3047	18	4	3332	8059
Apprch %	60.6	25.7	9.2	4.6		52.9	0.7	44.5	1.9		0.6	92.9	6.5	0		7.9	91.4	0.5	0.1		
Total %	0.8	0.3	0.1	0.1	1.4	4.5	0.1	3.8	0.2	8.5	0.3	45.3	3.2	0	48.8	3.3	37.8	0.2	0	41.3	
Automobiles	66	28	10	0	104	363	5	305	0	673	25	3651	256	0	3932	263	3047	18	0	3328	8037
% Automobiles	100	100	100	0	95.4	100	100	100	0	98.1	100	100	100	0	100	100	100	100	0	99.9	99.7
Bicycle and Pedestrian	0	0	0	5	5	0	0	0	13	13	0	0	0	0	0	0	0	0	4	4	22
% Bicycle and Pedestrian	0	0	0	100	4.6	0	0	0	100	1.9	0	0	0	0	0	0	0	0	100	0.1	0.3



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



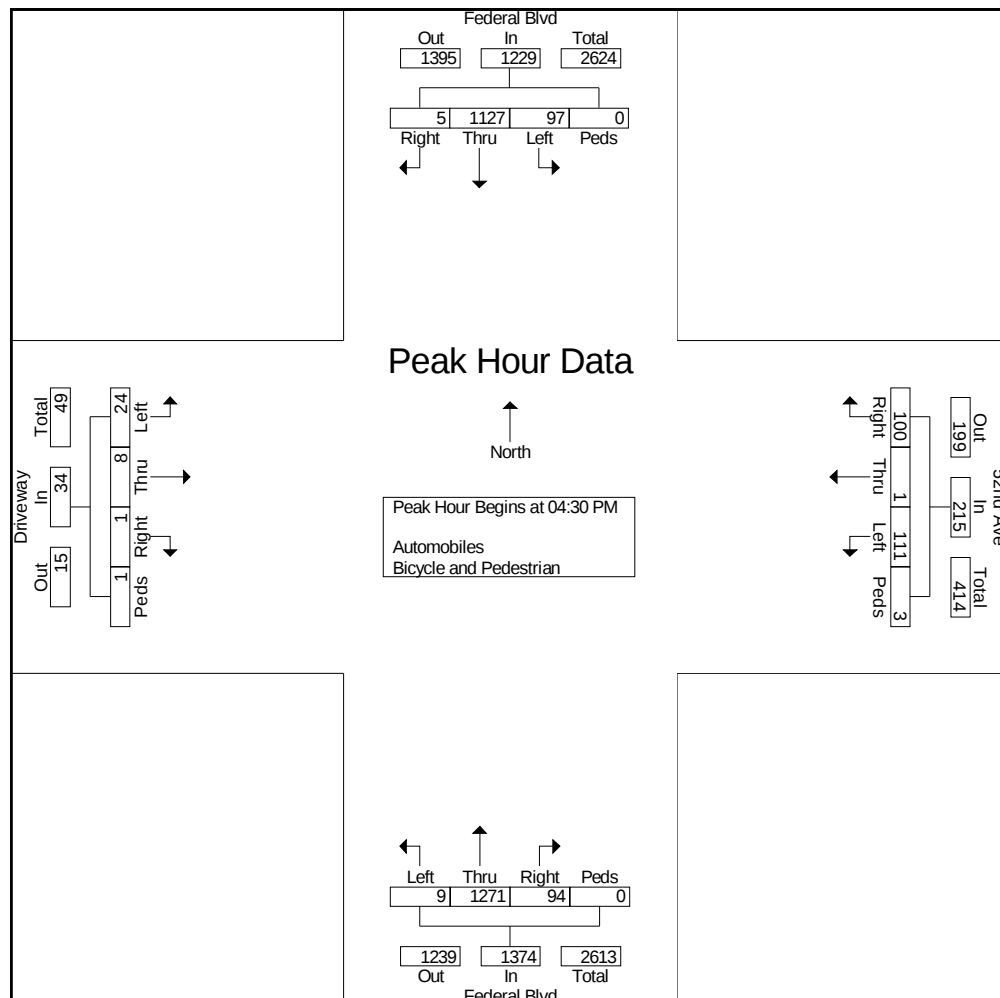


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Driveway Eastbound					52nd Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	5	1	1	0	7	37	0	21	1	59	1	332	24	0	357	20	305	1	0	326	749
04:45 PM	8	4	0	1	13	23	0	25	0	48	6	297	29	0	332	26	287	1	0	314	707
05:00 PM	6	0	0	0	6	26	1	21	1	49	1	306	22	0	329	23	269	2	0	294	678
05:15 PM	5	3	0	0	8	25	0	33	1	59	1	336	19	0	356	28	266	1	0	295	718
Total Volume	24	8	1	1	34	111	1	100	3	215	9	1271	94	0	1374	97	1127	5	0	1229	2852
% App. Total	70.6	23.5	2.9	2.9		51.6	0.5	46.5	1.4		0.7	92.5	6.8	0		7.9	91.7	0.4	0		
PHF	.750	.500	.250	.250	.654	.750	.250	.758	.750	.911	.375	.946	.810	.000	.962	.866	.924	.625	.000	.942	.952





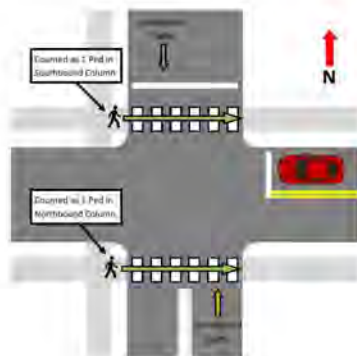
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Federal Blvd

File Name : 52nd Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





File Name : 51st Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

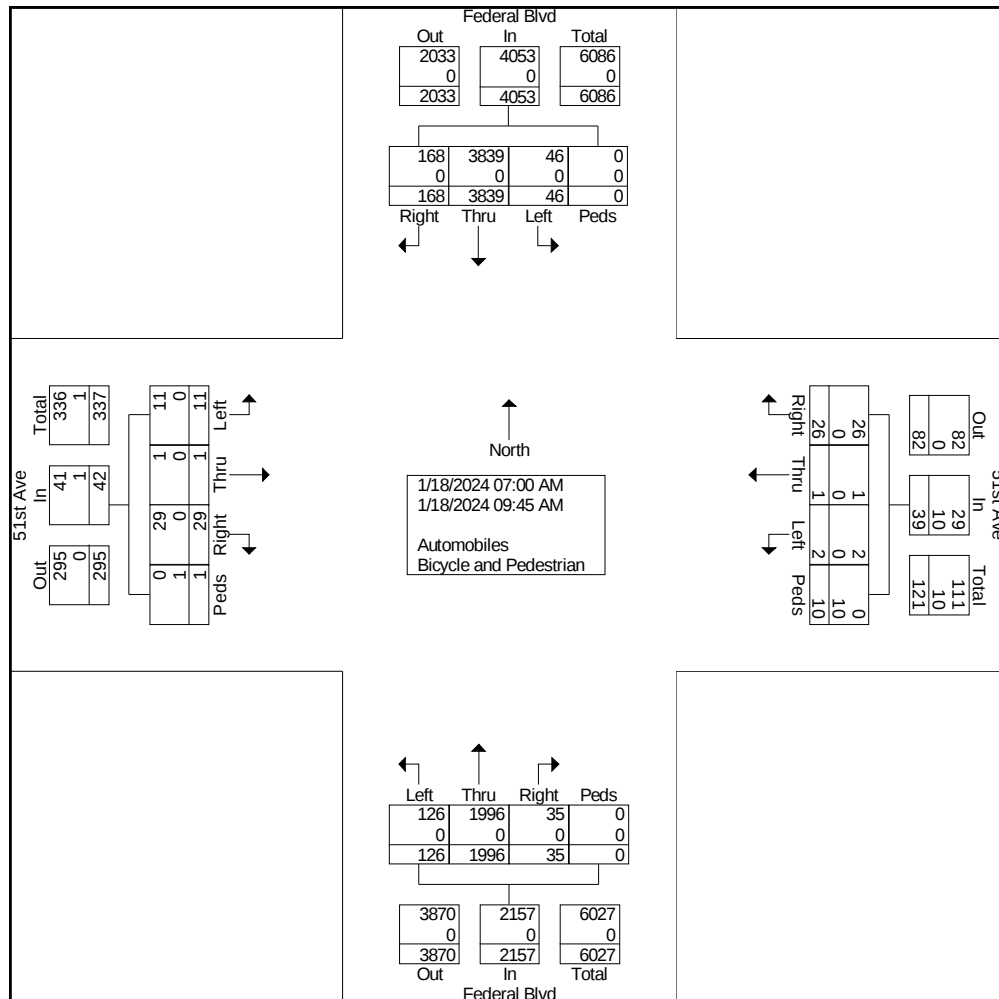
[illegible]



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



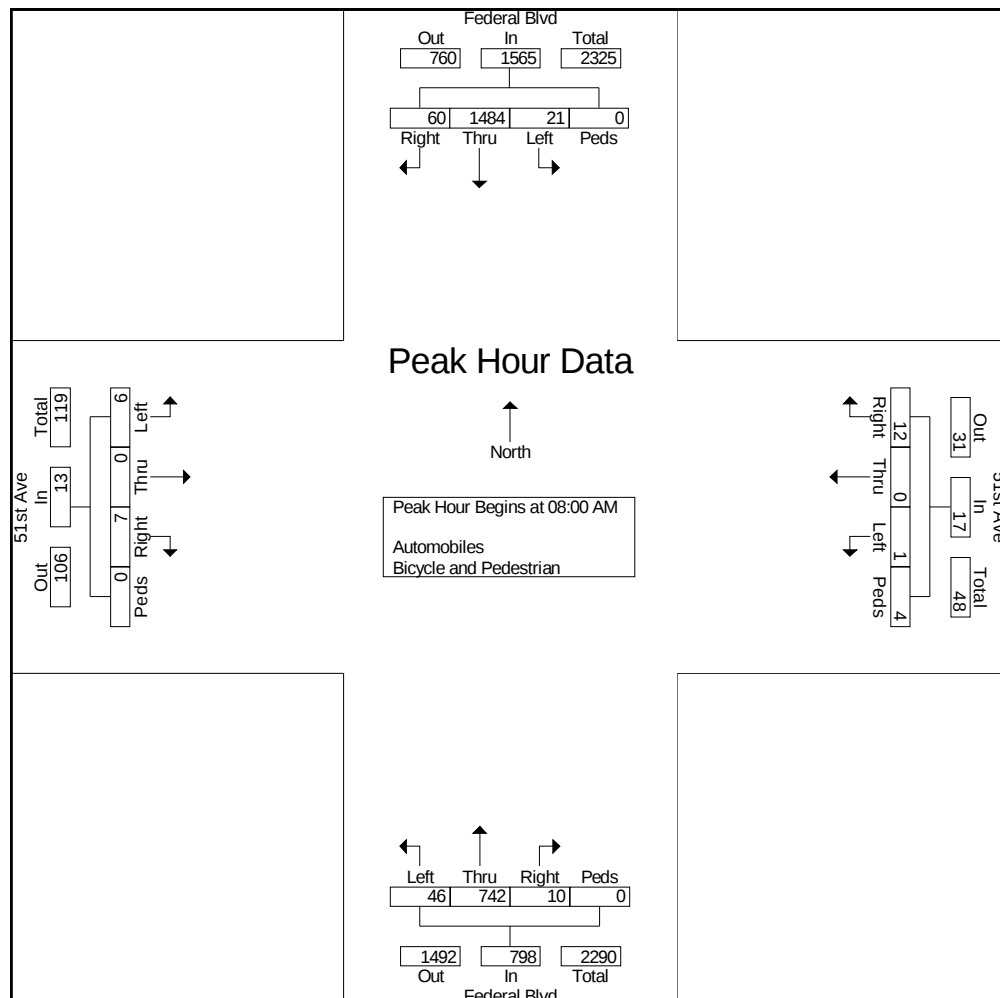


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	51st Ave Eastbound					51st Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	2	0	2	0	0	4	1	5	13	178	3	0	194	9	395	22	0	426	627
08:15 AM	2	0	1	0	3	0	0	2	2	4	9	179	2	0	190	6	358	17	0	381	578
08:30 AM	2	0	0	0	2	1	0	4	1	6	17	203	1	0	221	1	363	4	0	368	597
08:45 AM	2	0	4	0	6	0	0	2	0	2	7	182	4	0	193	5	368	17	0	390	591
Total Volume	6	0	7	0	13	1	0	12	4	17	46	742	10	0	798	21	1484	60	0	1565	2393
% App. Total	46.2	0	53.8	0		5.9	0	70.6	23.5		5.8	93	1.3	0		1.3	94.8	3.8	0		
PHF	.750	.000	.438	.000	.542	.250	.000	.750	.500	.708	.676	.914	.625	.000	.903	.583	.939	.682	.000	.918	.954





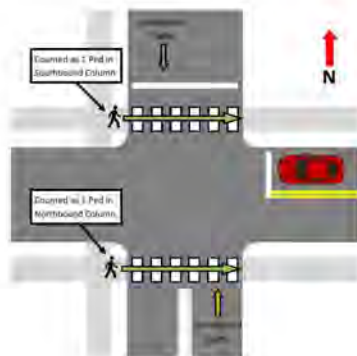
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Denver, CO
Regis University
PM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

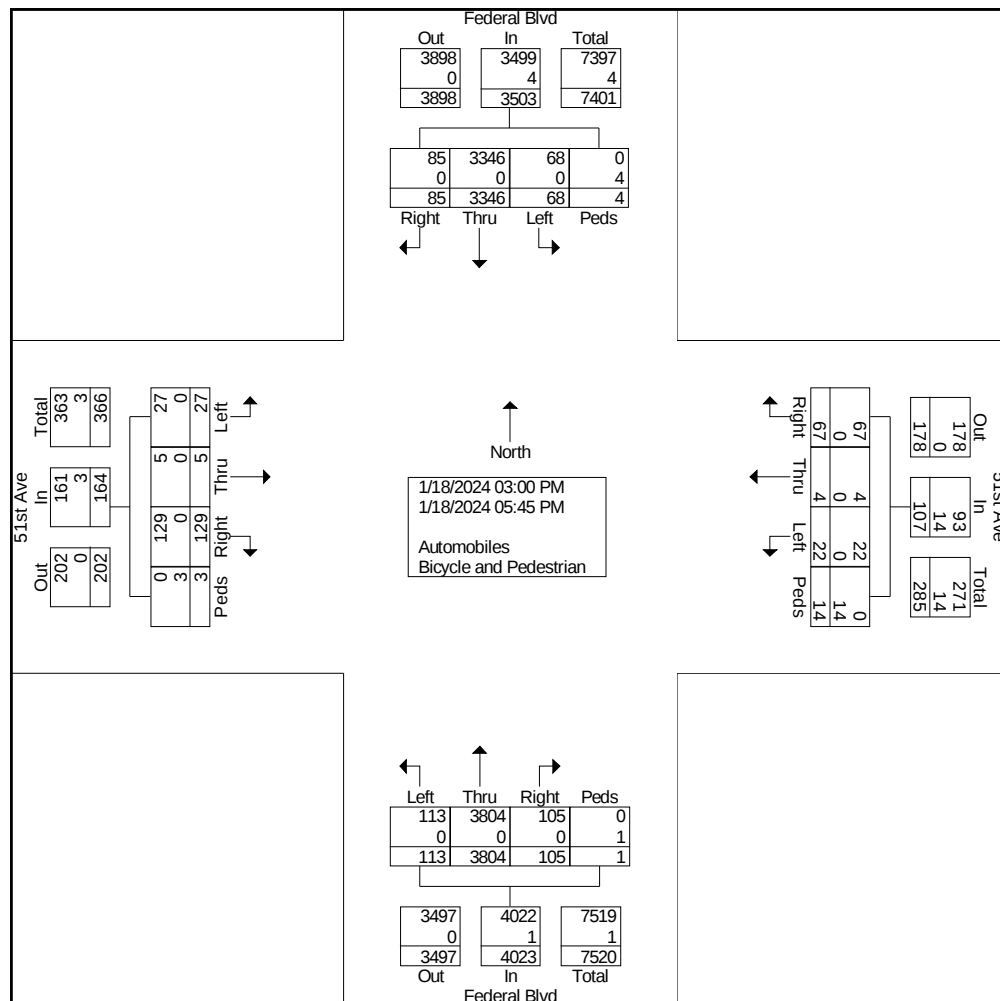
	51st Ave Eastbound					51st Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	4	2	15	0	21	1	0	3	3	7	17	233	8	0	258	6	226	7	0	239	525
03:15 PM	1	0	13	0	14	2	0	3	2	7	10	268	4	0	282	9	250	5	0	264	567
03:30 PM	2	0	10	0	12	0	0	9	2	11	11	324	10	0	345	8	283	8	0	299	667
03:45 PM	4	0	10	0	14	3	0	15	2	20	8	320	5	0	333	11	295	9	0	315	682
Total	11	2	48	0	61	6	0	30	9	45	46	1145	27	0	1218	34	1054	29	0	1117	2441
04:00 PM	2	0	10	1	13	0	2	4	0	6	12	322	5	0	339	2	278	9	0	289	647
04:15 PM	3	1	14	0	18	2	0	2	0	4	7	318	9	0	334	0	226	5	0	231	587
04:30 PM	3	1	15	0	19	4	0	5	2	11	8	350	10	0	368	5	323	8	1	337	735
04:45 PM	1	1	12	0	14	3	0	3	1	7	9	328	8	0	345	5	310	4	2	321	687
Total	9	3	51	1	64	9	2	14	3	28	36	1318	32	0	1386	12	1137	26	3	1178	2656
05:00 PM	2	0	10	0	12	2	1	5	2	10	9	314	14	0	337	4	291	7	0	302	661
05:15 PM	1	0	7	0	8	1	1	8	0	10	8	348	9	0	365	8	282	8	0	298	681
05:30 PM	2	0	9	0	11	1	0	9	0	10	8	349	11	0	368	6	285	7	0	298	687
05:45 PM	2	0	4	2	8	3	0	1	0	4	6	330	12	1	349	4	297	8	1	310	671
Total	7	0	30	2	39	7	2	23	2	34	31	1341	46	1	1419	22	1155	30	1	1208	2700
Grand Total	27	5	129	3	164	22	4	67	14	107	113	3804	105	1	4023	68	3346	85	4	3503	7797
Apprch %	16.5	3	78.7	1.8		20.6	3.7	62.6	13.1		2.8	94.6	2.6	0		1.9	95.5	2.4	0.1		
Total %	0.3	0.1	1.7	0	2.1	0.3	0.1	0.9	0.2	1.4	1.4	48.8	1.3	0	51.6	0.9	42.9	1.1	0.1	44.9	
Automobiles	27	5	129	0	161	22	4	67	0	93	113	3804	105	0	4022	68	3346	85	0	3499	7775
% Automobiles	100	100	100	0	98.2	100	100	100	0	86.9	100	100	100	0	100	100	100	100	0	99.9	99.7
Bicycle and Pedestrian	0	0	0	3	3	0	0	0	14	14	0	0	0	1	1	0	0	0	4	4	22
% Bicycle and Pedestrian	0	0	0	100	1.8	0	0	0	100	13.1	0	0	0	100	0	0	0	0	100	0.1	0.3



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



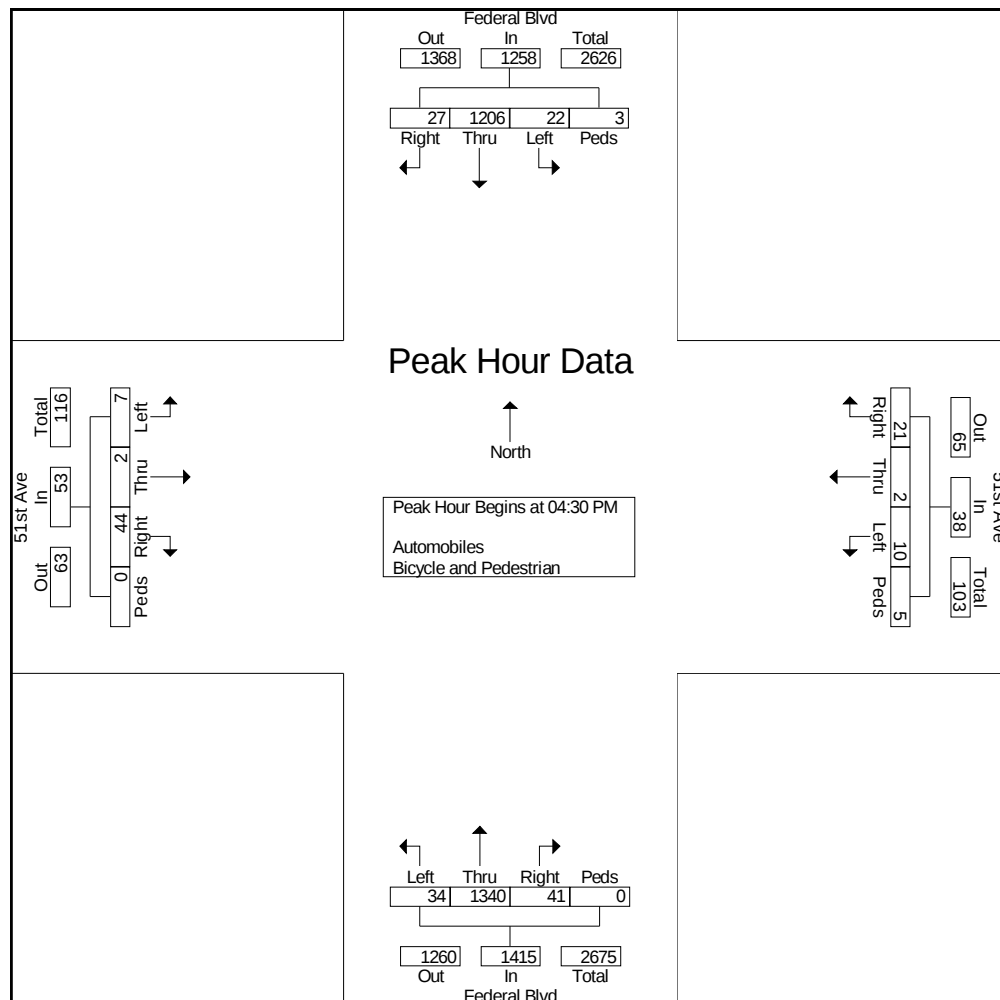


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	51st Ave Eastbound					51st Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	1	15	0	19	4	0	5	2	11	8	350	10	0	368	5	323	8	1	337	735
04:45 PM	1	1	12	0	14	3	0	3	1	7	9	328	8	0	345	5	310	4	2	321	687
05:00 PM	2	0	10	0	12	2	1	5	2	10	9	314	14	0	337	4	291	7	0	302	661
05:15 PM	1	0	7	0	8	1	1	8	0	10	8	348	9	0	365	8	282	8	0	298	681
Total Volume	7	2	44	0	53	10	2	21	5	38	34	1340	41	0	1415	22	1206	27	3	1258	2764
% App. Total	13.2	3.8	83	0		26.3	5.3	55.3	13.2		2.4	94.7	2.9	0		1.7	95.9	2.1	0.2		
PHF	.583	.500	.733	.000	.697	.625	.500	.656	.625	.864	.944	.957	.732	.000	.961	.688	.933	.844	.375	.933	.940





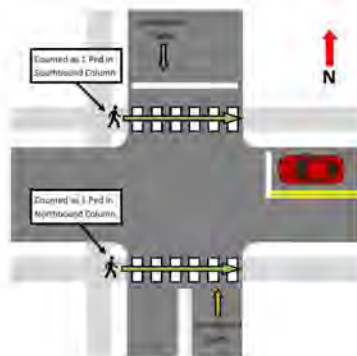
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
51st Ave & Federal Blvd

File Name : 51st Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

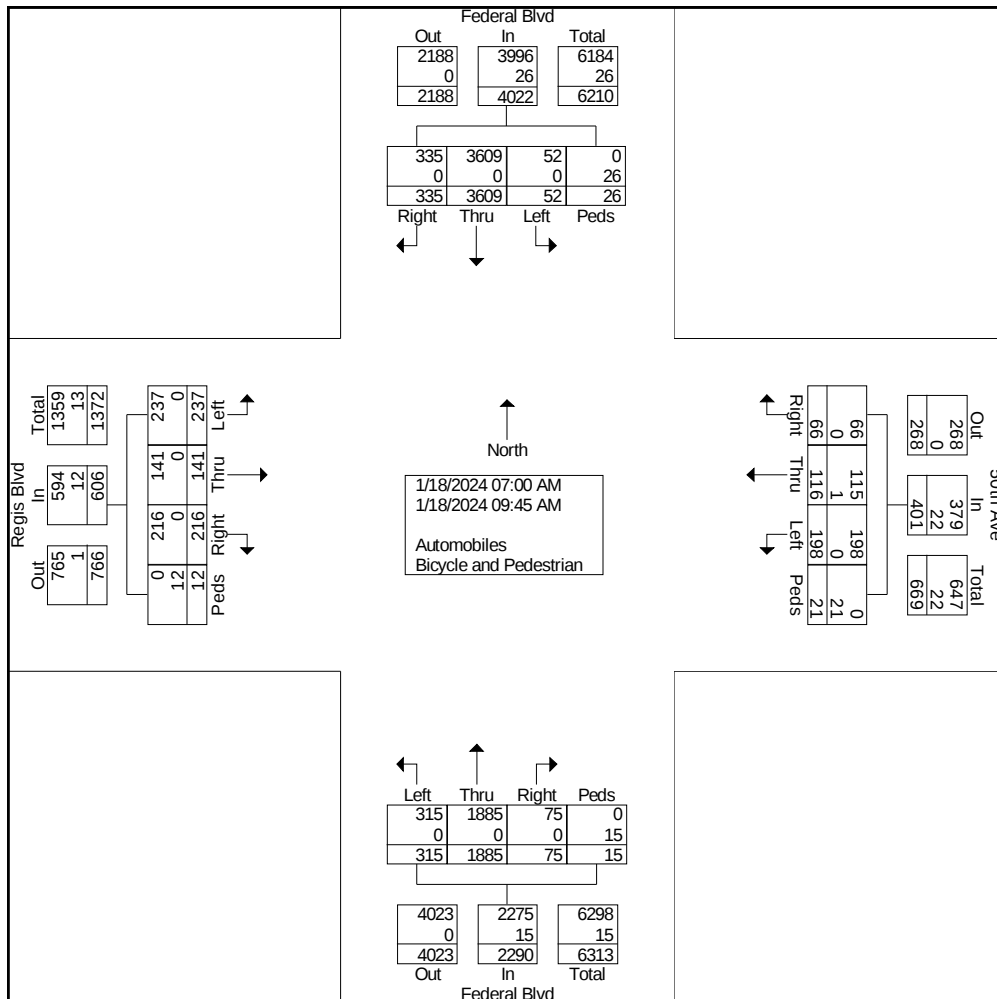
	Regis Blvd Eastbound					50th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	16	3	17	1	37	18	10	16	1	45	11	117	3	0	131	3	321	18	2	344	557
07:15 AM	15	6	20	0	41	16	4	2	1	23	11	168	3	1	183	3	380	18	0	401	648
07:30 AM	28	8	20	2	58	19	9	3	1	32	30	161	5	2	198	3	342	39	5	389	677
07:45 AM	21	24	18	0	63	14	9	2	5	30	37	175	6	3	221	5	347	31	3	386	700
Total	80	41	75	3	199	67	32	23	8	130	89	621	17	6	733	14	1390	106	10	1520	2582
08:00 AM	27	17	15	0	59	20	13	2	2	37	30	159	5	2	196	2	346	31	3	382	674
08:15 AM	26	20	18	1	65	13	9	2	3	27	39	172	11	0	222	10	354	37	6	407	721
08:30 AM	24	12	25	2	63	27	17	12	3	59	26	177	10	2	215	5	321	31	2	359	696
08:45 AM	11	13	25	3	52	14	6	4	0	24	36	184	7	0	227	7	362	33	2	404	707
Total	88	62	83	6	239	74	45	20	8	147	131	692	33	4	860	24	1383	132	13	1552	2798
09:00 AM	20	10	13	0	43	18	19	7	2	46	25	155	4	0	184	3	244	36	1	284	557
09:15 AM	19	12	21	1	53	14	7	5	2	28	36	135	5	1	177	5	225	24	0	254	512
09:30 AM	16	8	14	2	40	16	5	6	1	28	21	151	9	2	183	3	182	18	2	205	456
09:45 AM	14	8	10	0	32	9	8	5	0	22	13	131	7	2	153	3	185	19	0	207	414
Total	69	38	58	3	168	57	39	23	5	124	95	572	25	5	697	14	836	97	3	950	1939
Grand Total	237	141	216	12	606	198	116	66	21	401	315	1885	75	15	2290	52	3609	335	26	4022	7319
Apprch %	39.1	23.3	35.6	2		49.4	28.9	16.5	5.2		13.8	82.3	3.3	0.7		1.3	89.7	8.3	0.6		
Total %	3.2	1.9	3	0.2	8.3	2.7	1.6	0.9	0.3	5.5	4.3	25.8	1	0.2	31.3	0.7	49.3	4.6	0.4	55	
Automobiles	237	141	216	0	594	198	115	66	0	379	315	1885	75	0	2275	52	3609	335	0	3996	7244
% Automobiles	100	100	100	0	98	100	99.1	100	0	94.5	100	100	100	0	99.3	100	100	100	0	99.4	99
Bicycle and Pedestrian	0	0	0	12	12	0	1	0	21	22	0	0	0	15	15	0	0	0	26	26	75
% Bicycle and Pedestrian	0	0	0	100	2	0	0.9	0	100	5.5	0	0	0	100	0.7	0	0	0	100	0.6	1



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



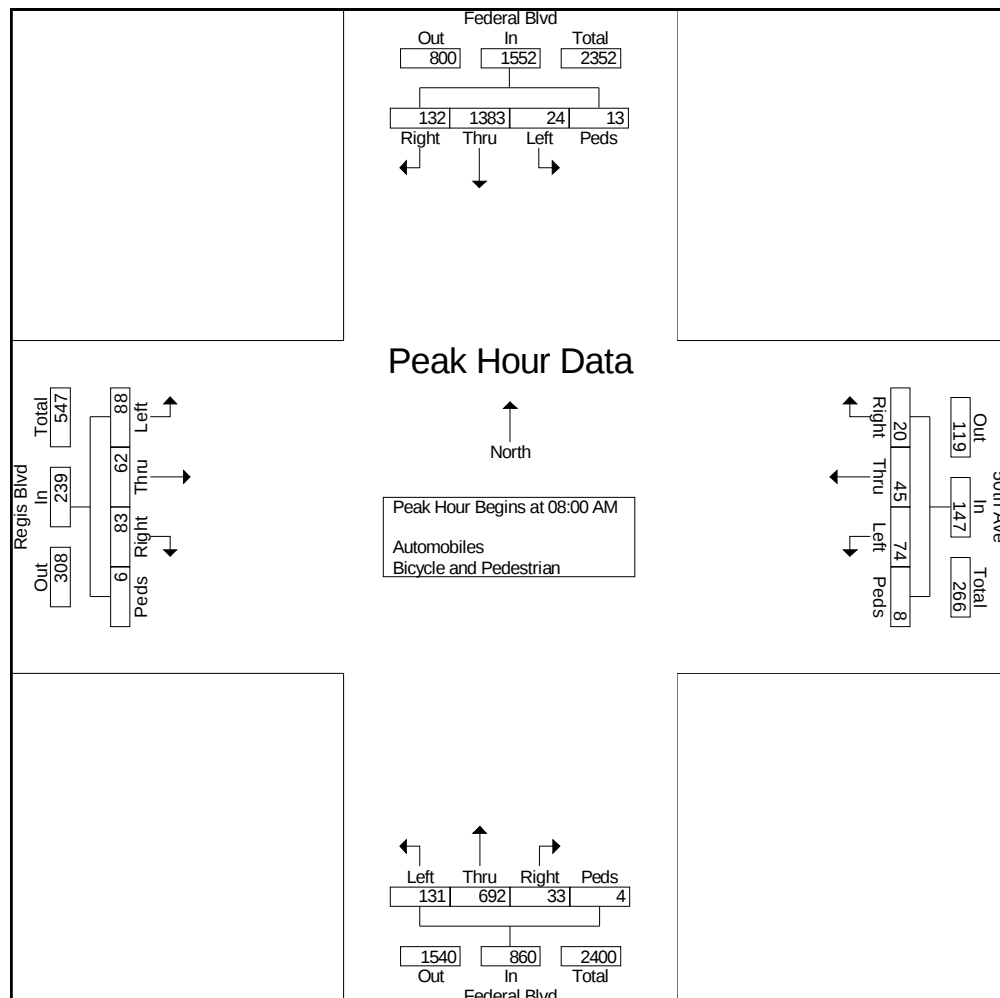


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound					50th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	27	17	15	0	59	20	13	2	2	37	30	159	5	2	196	2	346	31	3	382	674
08:15 AM	26	20	18	1	65	13	9	2	3	27	39	172	11	0	222	10	354	37	6	407	721
08:30 AM	24	12	25	2	63	27	17	12	3	59	26	177	10	2	215	5	321	31	2	359	696
08:45 AM	11	13	25	3	52	14	6	4	0	24	36	184	7	0	227	7	362	33	2	404	707
Total Volume	88	62	83	6	239	74	45	20	8	147	131	692	33	4	860	24	1383	132	13	1552	2798
% App. Total	36.8	25.9	34.7	2.5		50.3	30.6	13.6	5.4		15.2	80.5	3.8	0.5		1.5	89.1	8.5	0.8		
PHF	.815	.775	.830	.500	.919	.685	.662	.417	.667	.623	.840	.940	.750	.500	.947	.600	.955	.892	.542	.953	.970





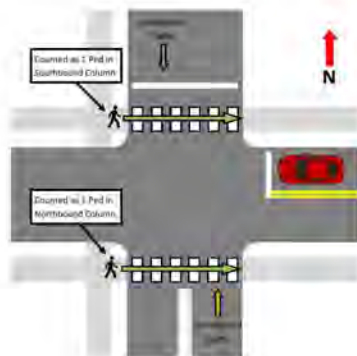
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

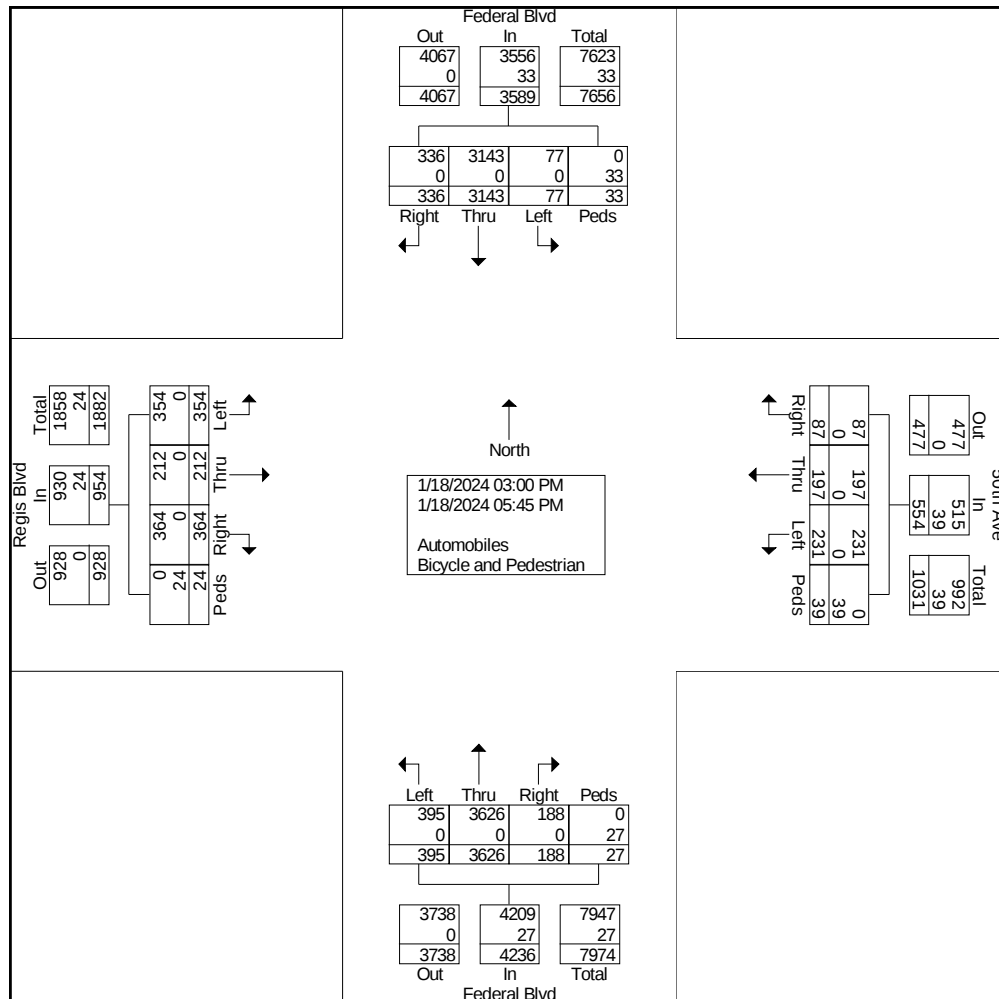
	Regis Blvd Eastbound					50th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	19	12	22	1	54	17	7	4	5	33	19	226	11	3	259	6	227	22	7	262	608
03:15 PM	35	23	45	1	104	23	11	8	1	43	28	248	11	2	289	5	231	27	2	265	701
03:30 PM	26	14	38	4	82	22	27	11	3	63	29	301	15	3	348	7	279	22	2	310	803
03:45 PM	23	16	23	5	67	23	14	6	5	48	27	318	14	5	364	9	248	33	6	296	775
Total	103	65	128	11	307	85	59	29	14	187	103	1093	51	13	1260	27	985	104	17	1133	2887
04:00 PM	33	11	23	3	70	17	18	3	1	39	29	305	17	1	352	4	278	29	2	313	774
04:15 PM	25	27	34	0	86	18	19	7	4	48	32	318	15	1	366	10	207	23	1	241	741
04:30 PM	30	24	33	1	88	13	16	7	2	38	31	322	21	0	374	5	317	28	3	353	853
04:45 PM	38	15	32	4	89	20	16	8	8	52	43	314	19	4	380	8	269	34	5	316	837
Total	126	77	122	8	333	68	69	25	15	177	135	1259	72	6	1472	27	1071	114	11	1223	3205
05:00 PM	25	19	26	1	71	16	22	11	2	51	44	292	24	2	362	6	281	33	0	320	804
05:15 PM	39	16	36	1	92	20	14	8	2	44	38	332	10	1	381	3	261	26	0	290	807
05:30 PM	27	17	22	1	67	19	16	7	2	44	24	339	13	2	378	5	278	29	3	315	804
05:45 PM	34	18	30	2	84	23	17	7	4	51	51	311	18	3	383	9	267	30	2	308	826
Total	125	70	114	5	314	78	69	33	10	190	157	1274	65	8	1504	23	1087	118	5	1233	3241
Grand Total	354	212	364	24	954	231	197	87	39	554	395	3626	188	27	4236	77	3143	336	33	3589	9333
Apprch %	37.1	22.2	38.2	2.5		41.7	35.6	15.7	7		9.3	85.6	4.4	0.6		2.1	87.6	9.4	0.9		
Total %	3.8	2.3	3.9	0.3	10.2	2.5	2.1	0.9	0.4	5.9	4.2	38.9	2	0.3	45.4	0.8	33.7	3.6	0.4	38.5	
Automobiles	354	212	364	0	930	231	197	87	0	515	395	3626	188	0	4209	77	3143	336	0	3556	9210
% Automobiles	100	100	100	0	97.5	100	100	100	0	93	100	100	100	0	99.4	100	100	100	0	99.1	98.7
Bicycle and Pedestrian	0	0	0	24	24	0	0	0	39	39	0	0	0	27	27	0	0	0	33	33	123
% Bicycle and Pedestrian	0	0	0	100	2.5	0	0	0	100	7	0	0	0	100	0.6	0	0	0	100	0.9	1.3



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



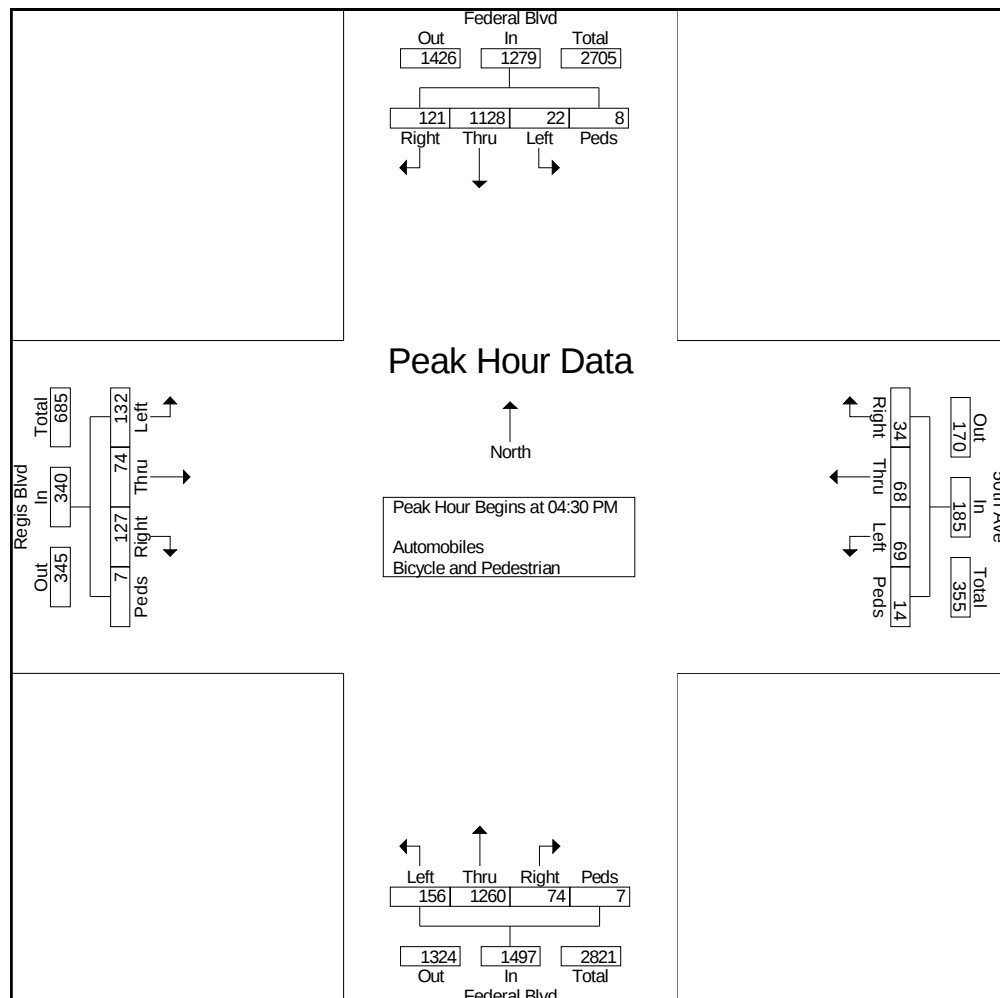


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound					50th Ave Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	30	24	33	1	88	13	16	7	2	38	31	322	21	0	374	5	317	28	3	353	853
04:45 PM	38	15	32	4	89	20	16	8	8	52	43	314	19	4	380	8	269	34	5	316	837
05:00 PM	25	19	26	1	71	16	22	11	2	51	44	292	24	2	362	6	281	33	0	320	804
05:15 PM	39	16	36	1	92	20	14	8	2	44	38	332	10	1	381	3	261	26	0	290	807
Total Volume	132	74	127	7	340	69	68	34	14	185	156	1260	74	7	1497	22	1128	121	8	1279	3301
% App. Total	38.8	21.8	37.4	2.1		37.3	36.8	18.4	7.6		10.4	84.2	4.9	0.5		1.7	88.2	9.5	0.6		
PHF	.846	.771	.882	.438	.924	.863	.773	.773	.438	.889	.886	.949	.771	.438	.982	.688	.890	.890	.400	.906	.967





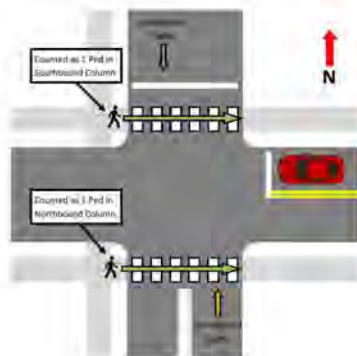
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Federal Blvd

File Name : Regis Blvd 50th Ave & Federal Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

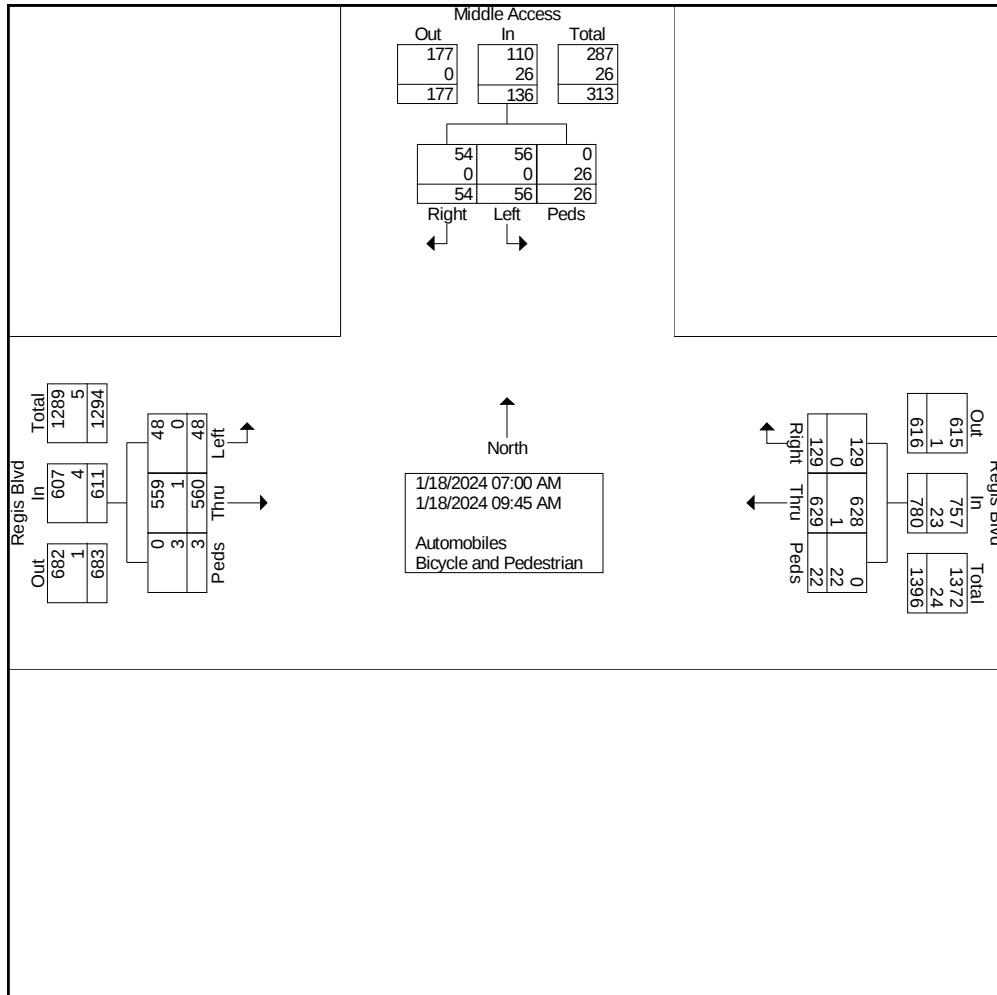
	Regis Blvd Eastbound				Regis Blvd Westbound				Middle Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	2	34	1	37	33	5	0	38	5	0	1	6	81
07:15 AM	6	41	0	47	25	9	0	34	1	4	0	5	86
07:30 AM	1	55	0	56	69	9	6	84	2	2	0	4	144
07:45 AM	6	62	0	68	66	20	3	89	7	4	1	12	169
Total	15	192	1	208	193	43	9	245	15	10	2	27	480
08:00 AM	3	47	0	50	65	14	1	80	3	6	1	10	140
08:15 AM	3	64	1	68	71	12	1	84	3	4	3	10	162
08:30 AM	7	50	0	57	63	10	3	76	2	12	7	21	154
08:45 AM	2	46	0	48	62	14	1	77	2	9	2	13	138
Total	15	207	1	223	261	50	6	317	10	31	13	54	594
09:00 AM	3	45	0	48	65	9	2	76	7	4	0	11	135
09:15 AM	7	49	0	56	48	11	4	63	11	3	7	21	140
09:30 AM	3	43	1	47	31	8	1	40	8	3	4	15	102
09:45 AM	5	24	0	29	31	8	0	39	5	3	0	8	76
Total	18	161	1	180	175	36	7	218	31	13	11	55	453
Grand Total	48	560	3	611	629	129	22	780	56	54	26	136	1527
Apprch %	7.9	91.7	0.5		80.6	16.5	2.8		41.2	39.7	19.1		
Total %	3.1	36.7	0.2	40	41.2	8.4	1.4	51.1	3.7	3.5	1.7	8.9	
Automobiles	48	559	0	607	628	129	0	757	56	54	0	110	1474
% Automobiles	100	99.8	0	99.3	99.8	100	0	97.1	100	100	0	80.9	96.5
Bicycle and Pedestrian	0	1	3	4	1	0	22	23	0	0	26	26	53
% Bicycle and Pedestrian	0	0.2	100	0.7	0.2	0	100	2.9	0	0	100	19.1	3.5



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



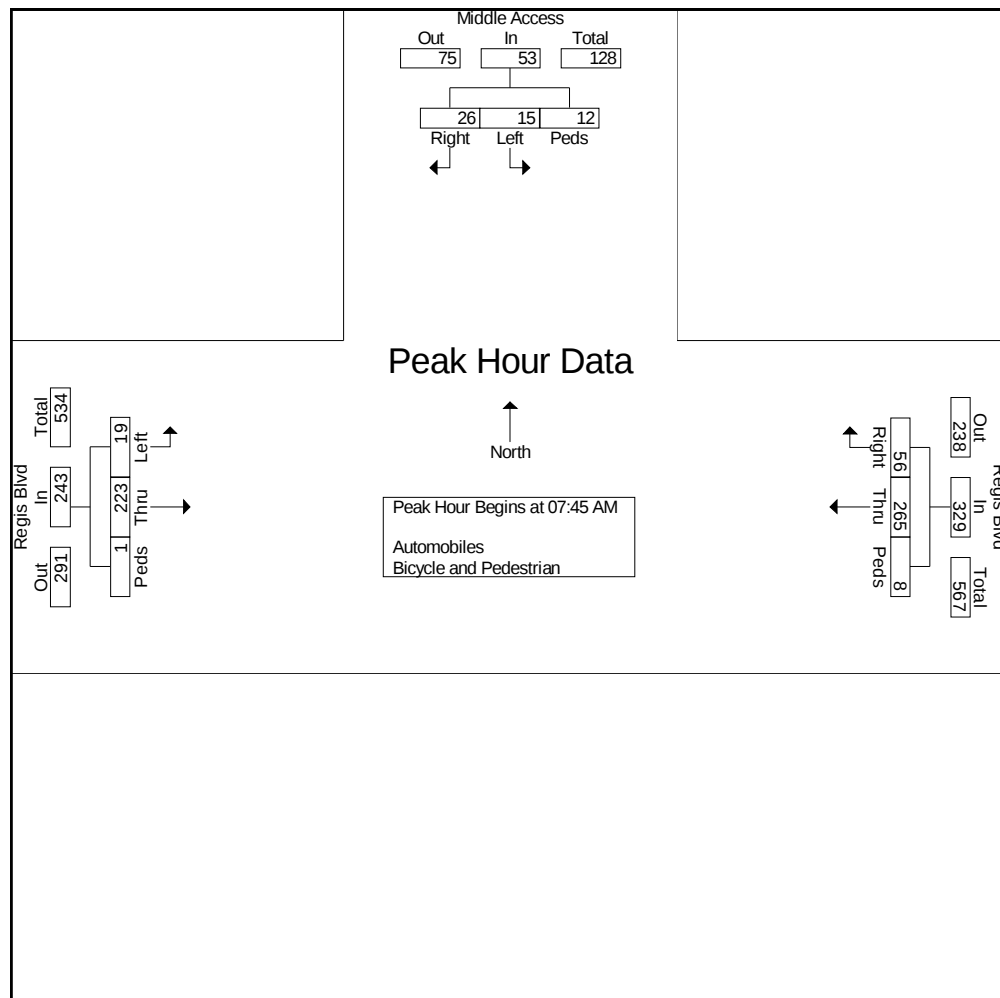


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound				Regis Blvd Westbound				Middle Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	6	62	0	68	66	20	3	89	7	4	1	12	169
08:00 AM	3	47	0	50	65	14	1	80	3	6	1	10	140
08:15 AM	3	64	1	68	71	12	1	84	3	4	3	10	162
08:30 AM	7	50	0	57	63	10	3	76	2	12	7	21	154
Total Volume	19	223	1	243	265	56	8	329	15	26	12	53	625
% App. Total	7.8	91.8	0.4		80.5	17	2.4		28.3	49.1	22.6		
PHF	.679	.871	.250	.893	.933	.700	.667	.924	.536	.542	.429	.631	.925





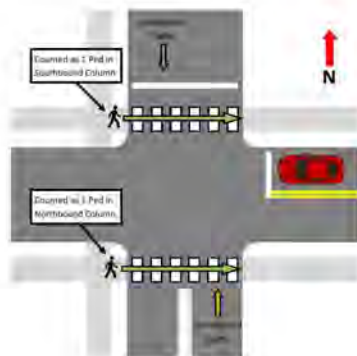
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

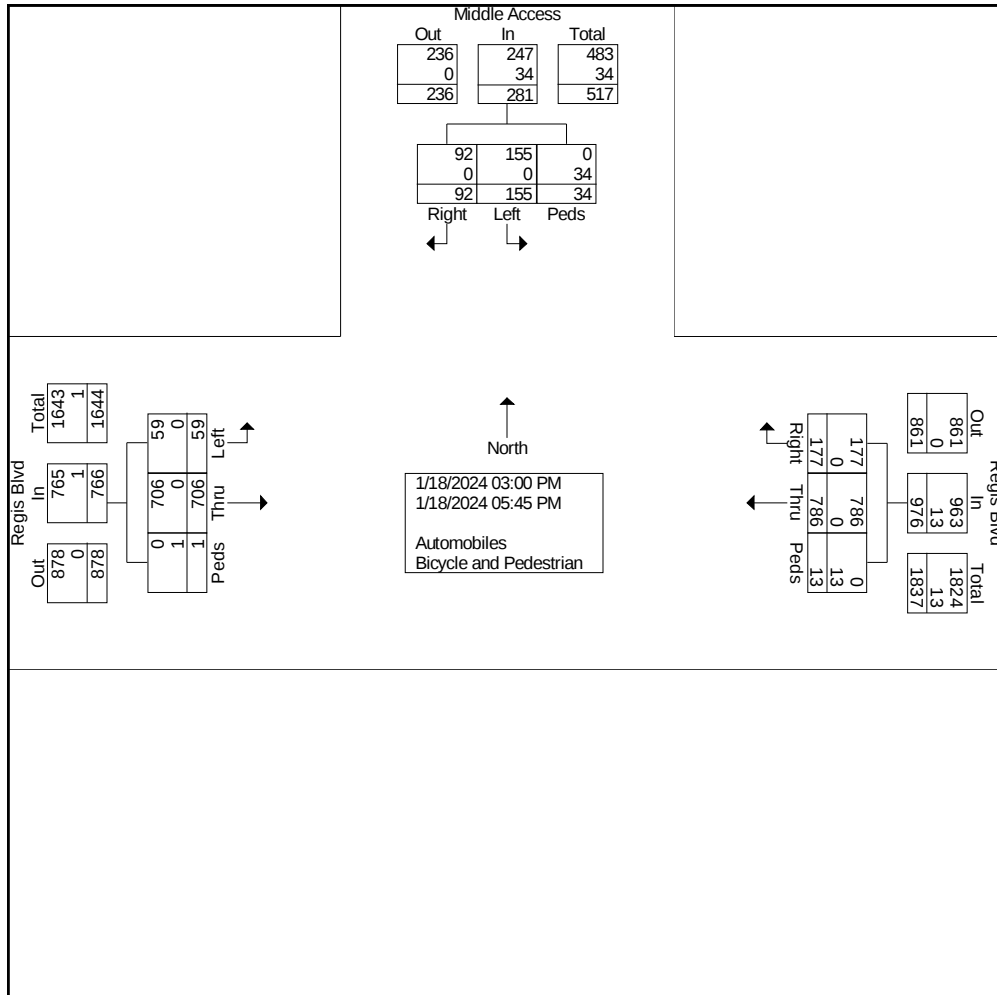
	Regis Blvd Eastbound				Regis Blvd Westbound				Middle Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
03:00 PM	2	51	0	53	44	5	0	49	7	4	0	11	113
03:15 PM	6	71	1	78	62	14	3	79	18	13	5	36	193
03:30 PM	4	61	0	65	74	10	0	84	12	10	4	26	175
03:45 PM	2	44	0	46	65	7	0	72	8	4	3	15	133
Total	14	227	1	242	245	36	3	284	45	31	12	88	614
04:00 PM	2	61	0	63	69	9	0	78	14	10	2	26	167
04:15 PM	5	70	0	75	74	5	0	79	7	6	5	18	172
04:30 PM	6	73	0	79	73	9	2	84	18	5	0	23	186
04:45 PM	7	62	0	69	74	26	1	101	7	10	5	22	192
Total	20	266	0	286	290	49	3	342	46	31	12	89	717
05:00 PM	7	51	0	58	68	28	2	98	22	15	2	39	195
05:15 PM	4	48	0	52	62	12	2	76	18	4	2	24	152
05:30 PM	6	52	0	58	56	18	1	75	14	6	4	24	157
05:45 PM	8	62	0	70	65	34	2	101	10	5	2	17	188
Total	25	213	0	238	251	92	7	350	64	30	10	104	692
Grand Total	59	706	1	766	786	177	13	976	155	92	34	281	2023
Apprch %	7.7	92.2	0.1		80.5	18.1	1.3		55.2	32.7	12.1		
Total %	2.9	34.9	0	37.9	38.9	8.7	0.6	48.2	7.7	4.5	1.7	13.9	
Automobiles	59	706	0	765	786	177	0	963	155	92	0	247	1975
% Automobiles	100	100	0	99.9	100	100	0	98.7	100	100	0	87.9	97.6
Bicycle and Pedestrian	0	0	1	1	0	0	13	13	0	0	34	34	48
% Bicycle and Pedestrian	0	0	100	0.1	0	0	100	1.3	0	0	100	12.1	2.4



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



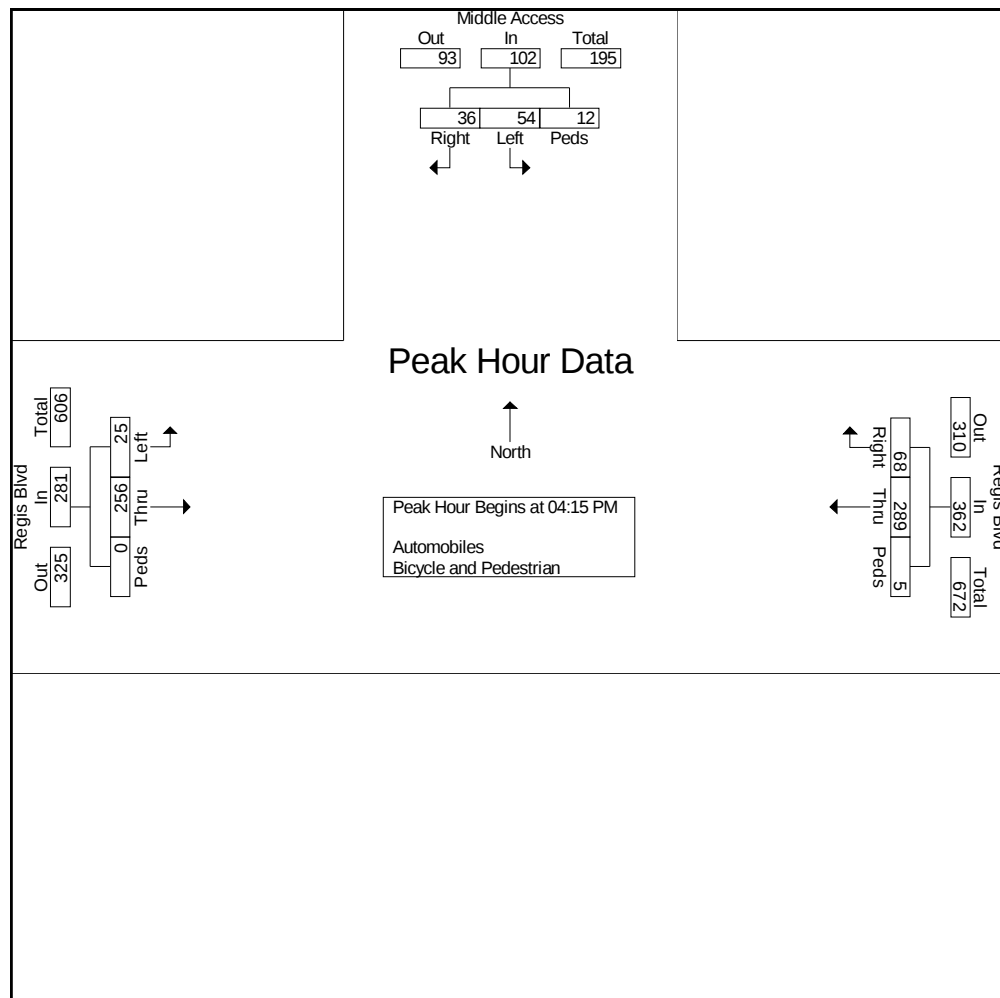


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound				Regis Blvd Westbound				Middle Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	5	70	0	75	74	5	0	79	7	6	5	18	172
04:30 PM	6	73	0	79	73	9	2	84	18	5	0	23	186
04:45 PM	7	62	0	69	74	26	1	101	7	10	5	22	192
05:00 PM	7	51	0	58	68	28	2	98	22	15	2	39	195
Total Volume	25	256	0	281	289	68	5	362	54	36	12	102	745
% App. Total	8.9	91.1	0		79.8	18.8	1.4		52.9	35.3	11.8		
PHF	.893	.877	.000	.889	.976	.607	.625	.896	.614	.600	.600	.654	.955





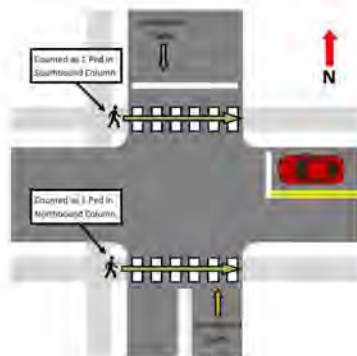
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & Middle Access

File Name : Regis Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Denver, CO
 Regis University
 AM Peak
 Regis Blvd & West Access

File Name : Regis Blvd & West Access AM
 Site Code : IPO 660
 Start Date : 1/18/2024
 Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

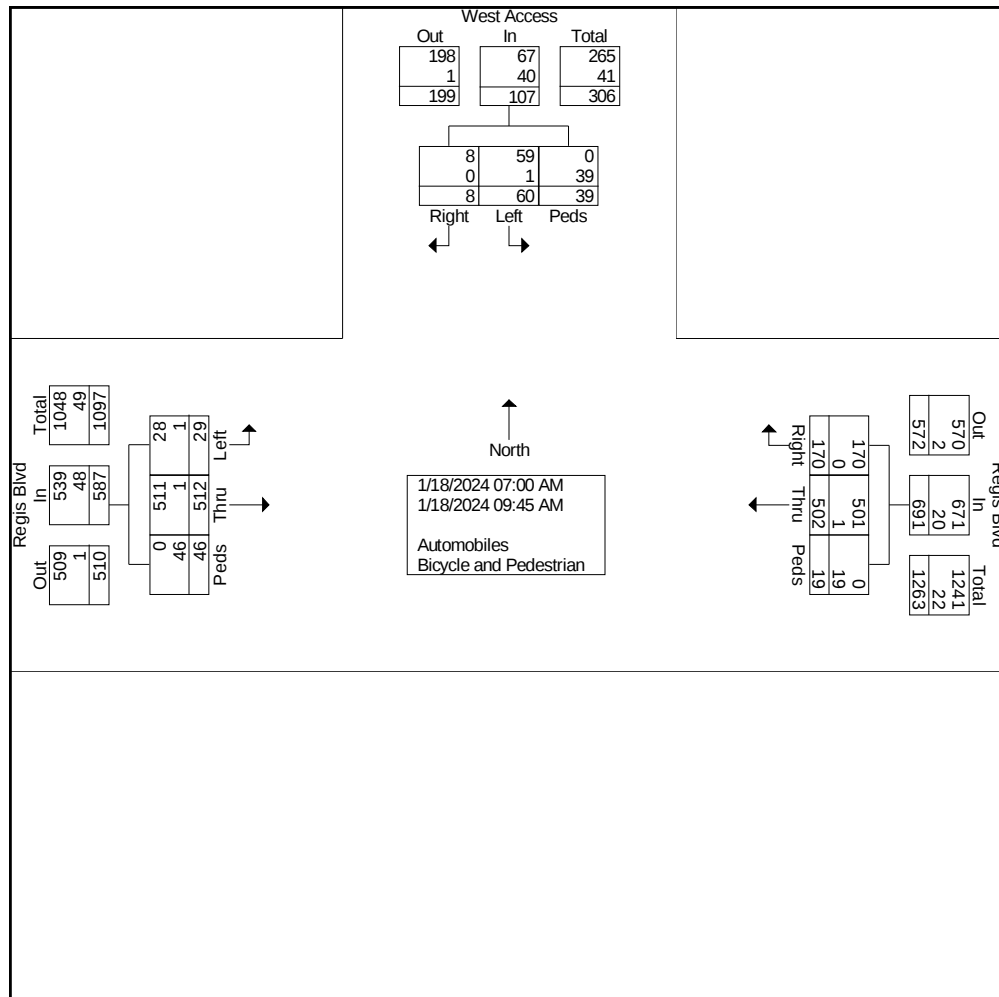
	Regis Blvd Eastbound				Regis Blvd Westbound				West Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	1	27	1	29	25	8	1	34	0	0	0	0	63
07:15 AM	3	37	1	41	22	6	0	28	5	0	1	6	75
07:30 AM	0	50	3	53	52	18	0	70	2	1	3	6	129
07:45 AM	7	64	11	82	50	21	2	73	2	2	8	12	167
Total	11	178	16	205	149	53	3	205	9	3	12	24	434
08:00 AM	5	44	6	55	46	27	2	75	6	0	7	13	143
08:15 AM	5	63	2	70	56	18	2	76	0	1	2	3	149
08:30 AM	1	51	1	53	50	22	0	72	4	0	1	5	130
08:45 AM	2	41	2	45	49	21	2	72	4	1	2	7	124
Total	13	199	11	223	201	88	6	295	14	2	12	28	546
09:00 AM	3	38	3	44	54	13	2	69	10	0	1	11	124
09:15 AM	1	41	11	53	44	4	6	54	13	0	7	20	127
09:30 AM	0	33	3	36	23	12	1	36	8	3	5	16	88
09:45 AM	1	23	2	26	31	0	1	32	6	0	2	8	66
Total	5	135	19	159	152	29	10	191	37	3	15	55	405
Grand Total	29	512	46	587	502	170	19	691	60	8	39	107	1385
Apprch %	4.9	87.2	7.8		72.6	24.6	2.7		56.1	7.5	36.4		
Total %	2.1	37	3.3	42.4	36.2	12.3	1.4	49.9	4.3	0.6	2.8	7.7	
Automobiles	28	511	0	539	501	170	0	671	59	8	0	67	1277
% Automobiles	96.6	99.8	0	91.8	99.8	100	0	97.1	98.3	100	0	62.6	92.2
Bicycle and Pedestrian	1	1	46	48	1	0	19	20	1	0	39	40	108
% Bicycle and Pedestrian	3.4	0.2	100	8.2	0.2	0	100	2.9	1.7	0	100	37.4	7.8



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



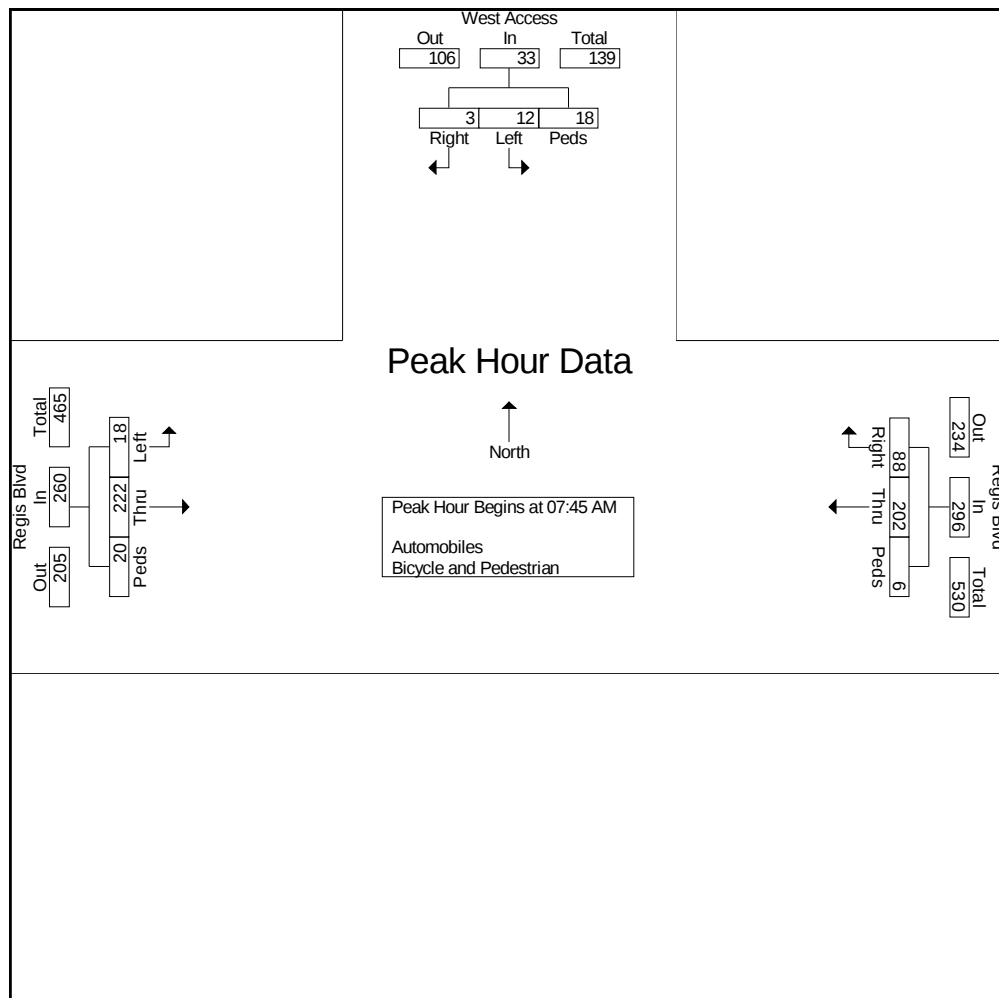


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound				Regis Blvd Westbound				West Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	7	64	11	82	50	21	2	73	2	2	8	12	167
08:00 AM	5	44	6	55	46	27	2	75	6	0	7	13	143
08:15 AM	5	63	2	70	56	18	2	76	0	1	2	3	149
08:30 AM	1	51	1	53	50	22	0	72	4	0	1	5	130
Total Volume	18	222	20	260	202	88	6	296	12	3	18	33	589
% App. Total	6.9	85.4	7.7		68.2	29.7	2		36.4	9.1	54.5		
PHF	.643	.867	.455	.793	.902	.815	.750	.974	.500	.375	.563	.635	.882





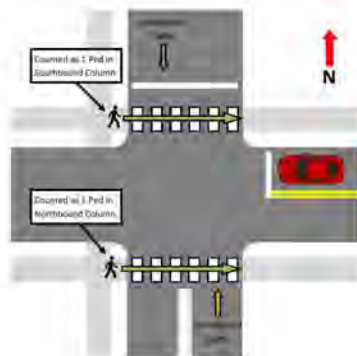
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

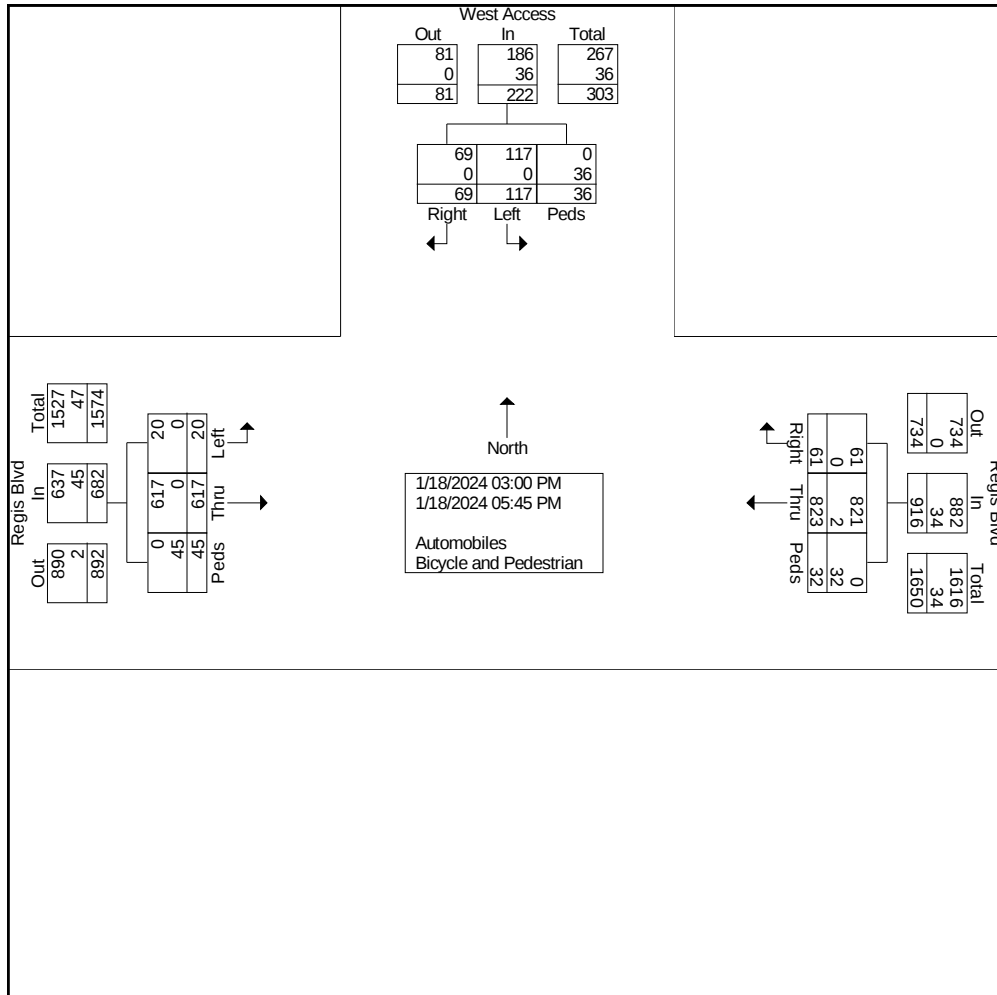
	Regis Blvd Eastbound				Regis Blvd Westbound				West Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
03:00 PM	2	40	0	42	42	5	0	47	10	4	4	18	107
03:15 PM	0	54	3	57	68	6	10	84	19	11	6	36	177
03:30 PM	1	56	3	60	83	4	3	90	8	5	4	17	167
03:45 PM	2	44	2	48	62	7	0	69	3	5	2	10	127
Total	5	194	8	207	255	22	13	290	40	25	16	81	578
04:00 PM	1	50	7	58	73	6	4	83	8	5	3	16	157
04:15 PM	2	60	6	68	74	4	3	81	10	7	5	22	171
04:30 PM	0	59	2	61	74	5	5	84	17	7	2	26	171
04:45 PM	3	54	9	66	85	4	2	91	14	4	5	23	180
Total	6	223	24	253	306	19	14	339	49	23	15	87	679
05:00 PM	2	45	3	50	79	4	3	86	7	9	4	20	156
05:15 PM	3	44	2	49	66	3	0	69	10	7	0	17	135
05:30 PM	2	48	6	56	56	6	2	64	6	4	1	11	131
05:45 PM	2	63	2	67	61	7	0	68	5	1	0	6	141
Total	9	200	13	222	262	20	5	287	28	21	5	54	563
Grand Total	20	617	45	682	823	61	32	916	117	69	36	222	1820
Apprch %	2.9	90.5	6.6		89.8	6.7	3.5		52.7	31.1	16.2		
Total %	1.1	33.9	2.5	37.5	45.2	3.4	1.8	50.3	6.4	3.8	2	12.2	
Automobiles	20	617	0	637	821	61	0	882	117	69	0	186	1705
% Automobiles	100	100	0	93.4	99.8	100	0	96.3	100	100	0	83.8	93.7
Bicycle and Pedestrian	0	0	45	45	2	0	32	34	0	0	36	36	115
% Bicycle and Pedestrian	0	0	100	6.6	0.2	0	100	3.7	0	0	100	16.2	6.3



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



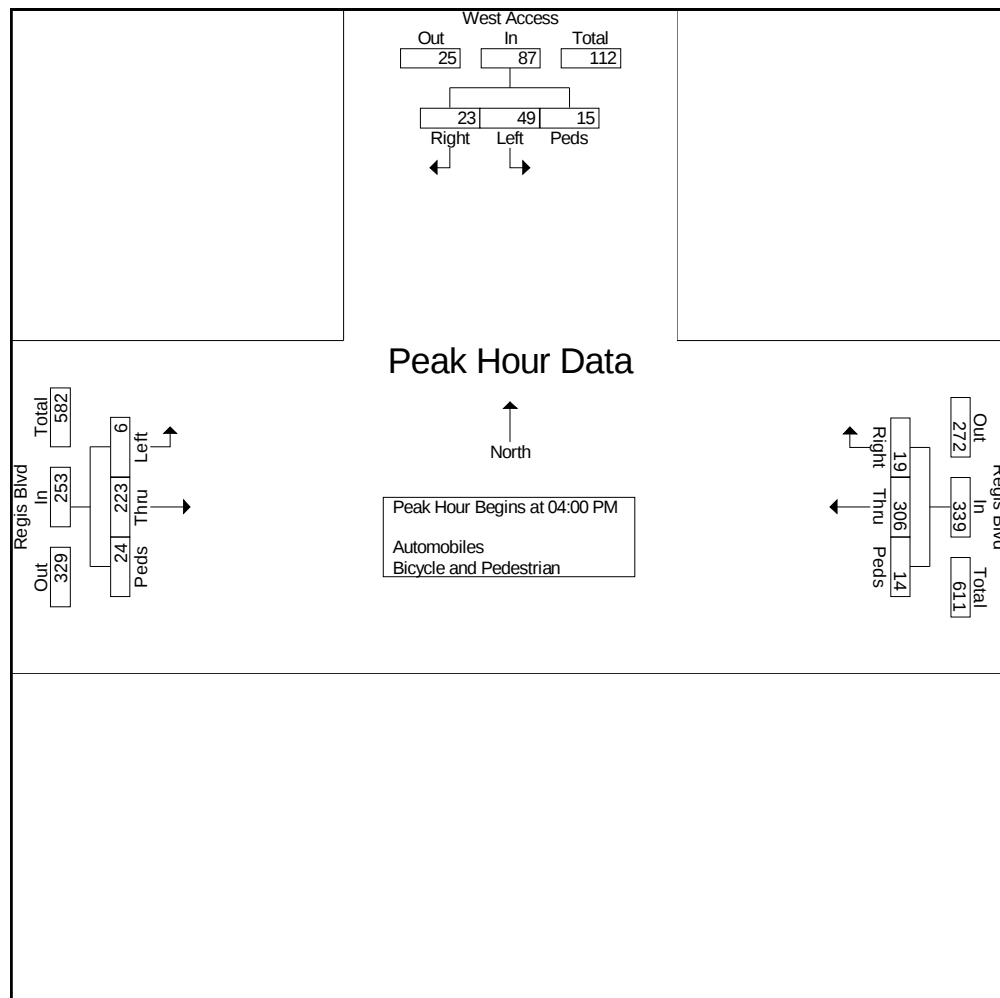


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound				Regis Blvd Westbound				West Access Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	1	50	7	58	73	6	4	83	8	5	3	16	157
04:15 PM	2	60	6	68	74	4	3	81	10	7	5	22	171
04:30 PM	0	59	2	61	74	5	5	84	17	7	2	26	171
04:45 PM	3	54	9	66	85	4	2	91	14	4	5	23	180
Total Volume	6	223	24	253	306	19	14	339	49	23	15	87	679
% App. Total	2.4	88.1	9.5		90.3	5.6	4.1		56.3	26.4	17.2		
PHF	.500	.929	.667	.930	.900	.792	.700	.931	.721	.821	.750	.837	.943





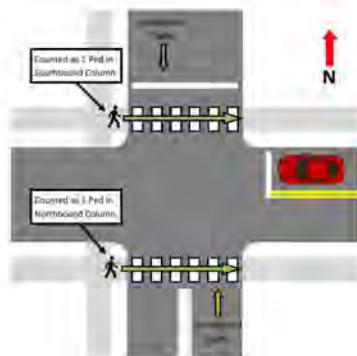
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & West Access

File Name : Regis Blvd & West Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

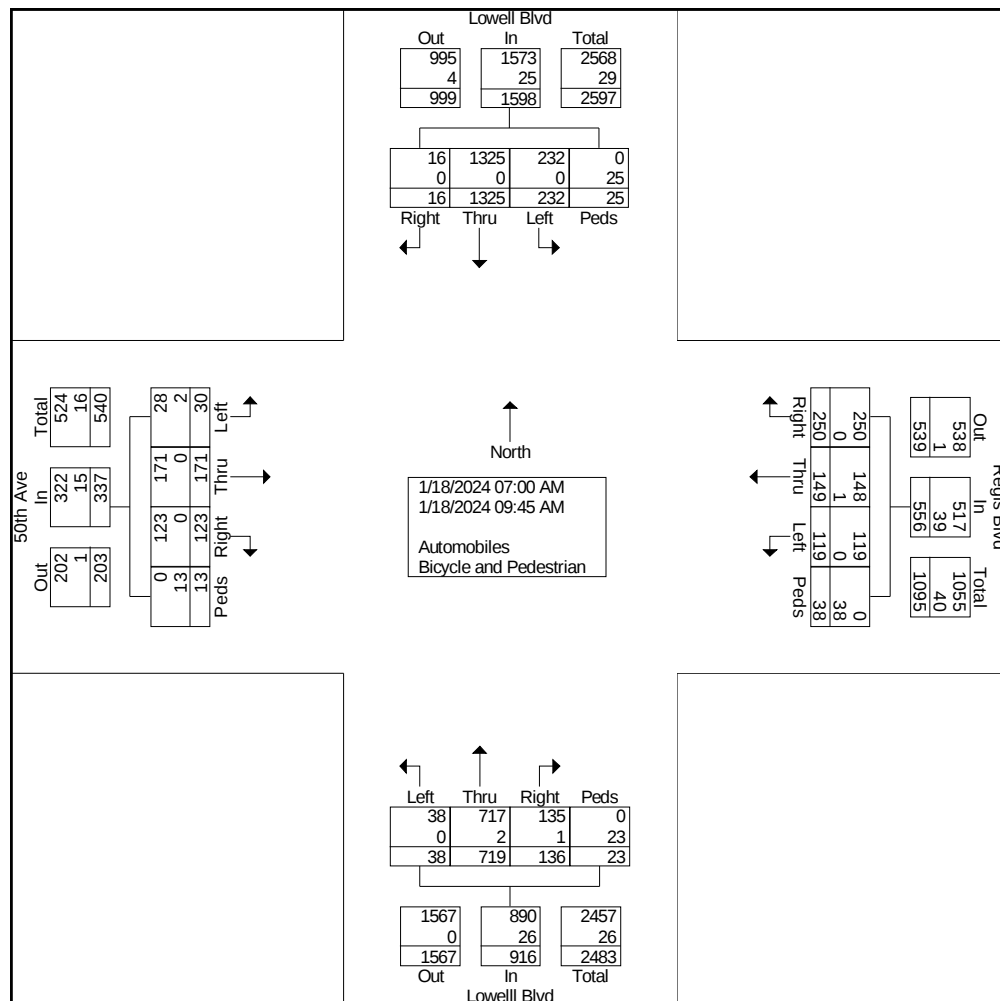
	50th Ave Eastbound					Regis Blvd Westbound					Lowell Blvd Northbound					Lowell Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	12	11	1	25	5	13	5	0	23	2	30	5	0	37	12	109	2	0	123	208
07:15 AM	3	13	5	0	21	3	8	14	3	28	2	59	6	3	70	19	138	1	2	160	279
07:30 AM	5	16	12	0	33	13	13	27	3	56	4	76	8	3	91	25	134	1	0	160	340
07:45 AM	3	21	15	2	41	14	15	23	5	57	2	90	20	3	115	26	138	2	1	167	380
Total	12	62	43	3	120	35	49	69	11	164	10	255	39	9	313	82	519	6	3	610	1207
08:00 AM	4	17	18	3	42	16	13	17	3	49	3	77	18	0	98	15	142	2	1	160	349
08:15 AM	1	20	15	1	37	15	11	29	5	60	6	73	21	2	102	26	131	0	0	157	356
08:30 AM	2	18	13	2	35	11	13	28	1	53	2	55	10	0	67	22	147	0	6	175	330
08:45 AM	4	13	12	0	29	8	16	27	7	58	0	56	9	2	67	22	128	4	2	156	310
Total	11	68	58	6	143	50	53	101	16	220	11	261	58	4	334	85	548	6	9	648	1345
09:00 AM	1	14	7	0	22	16	16	25	3	60	6	61	13	1	81	17	71	1	1	90	253
09:15 AM	3	10	3	2	18	5	13	26	6	50	3	53	9	6	71	23	62	2	8	95	234
09:30 AM	2	11	4	1	18	6	5	17	0	28	4	43	8	0	55	13	56	1	3	73	174
09:45 AM	1	6	8	1	16	7	13	12	2	34	4	46	9	3	62	12	69	0	1	82	194
Total	7	41	22	4	74	34	47	80	11	172	17	203	39	10	269	65	258	4	13	340	855
Grand Total	30	171	123	13	337	119	149	250	38	556	38	719	136	23	916	232	1325	16	25	1598	3407
Apprch %	8.9	50.7	36.5	3.9		21.4	26.8	45	6.8		4.1	78.5	14.8	2.5		14.5	82.9	1	1.6		
Total %	0.9	5	3.6	0.4	9.9	3.5	4.4	7.3	1.1	16.3	1.1	21.1	4	0.7	26.9	6.8	38.9	0.5	0.7	46.9	
Automobiles	28	171	123	0	322	119	148	250	0	517	38	717	135	0	890	232	1325	16	0	1573	3302
% Automobiles	93.3	100	100	0	95.5	100	99.3	100	0	93	100	99.7	99.3	0	97.2	100	100	100	0	98.4	96.9
Bicycle and Pedestrian	2	0	0	13	15	0	1	0	38	39	0	2	1	23	26	0	0	0	25	25	105
% Bicycle and Pedestrian	6.7	0	0	100	4.5	0	0.7	0	100	7	0	0.3	0.7	100	2.8	0	0	0	100	1.6	3.1



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



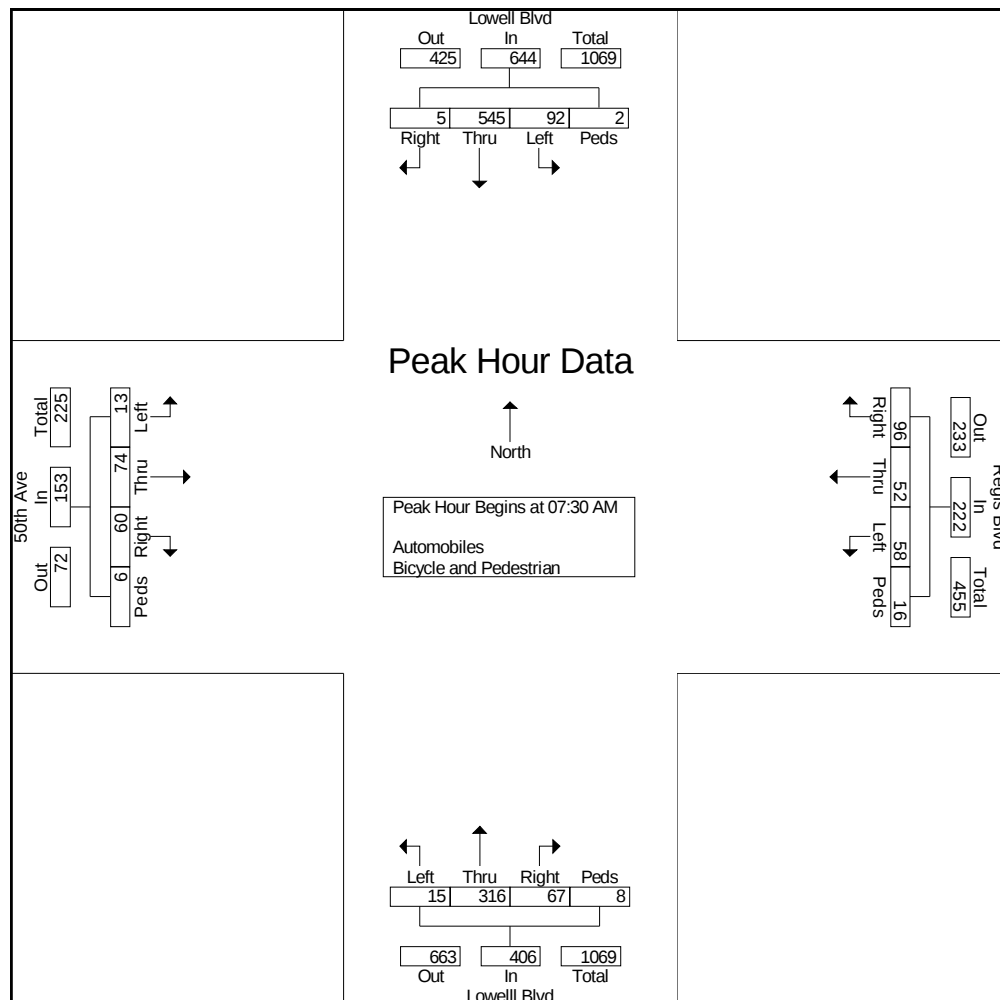


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	50th Ave Eastbound					Regis Blvd Westbound					Lowell Blvd Northbound					Lowell Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	16	12	0	33	13	13	27	3	56	4	76	8	3	91	25	134	1	0	160	340
07:45 AM	3	21	15	2	41	14	15	23	5	57	2	90	20	3	115	26	138	2	1	167	380
08:00 AM	4	17	18	3	42	16	13	17	3	49	3	77	18	0	98	15	142	2	1	160	349
08:15 AM	1	20	15	1	37	15	11	29	5	60	6	73	21	2	102	26	131	0	0	157	356
Total Volume	13	74	60	6	153	58	52	96	16	222	15	316	67	8	406	92	545	5	2	644	1425
% App. Total	8.5	48.4	39.2	3.9		26.1	23.4	43.2	7.2		3.7	77.8	16.5	2		14.3	84.6	0.8	0.3		
PHF	.650	.881	.833	.500	.911	.906	.867	.828	.800	.925	.625	.878	.798	.667	.883	.885	.960	.625	.500	.964	.938





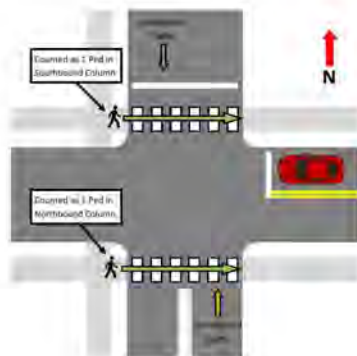
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

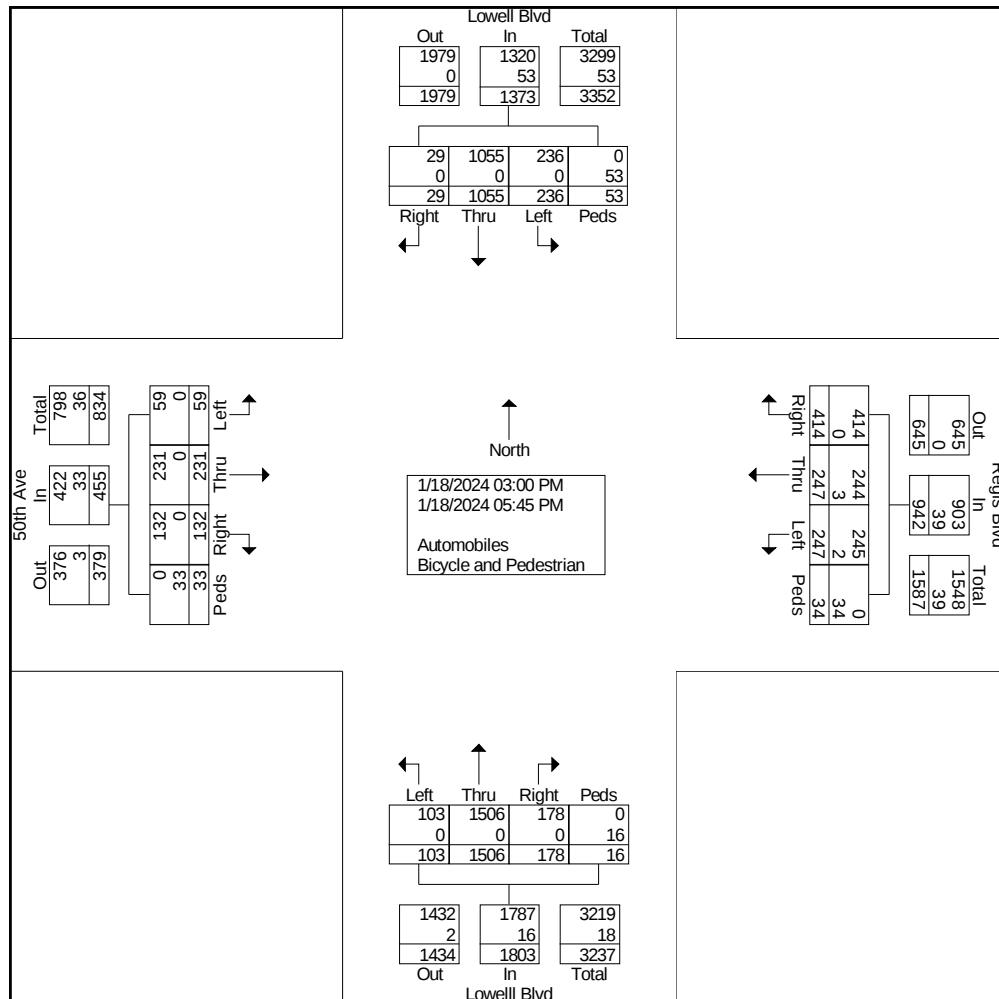
	50th Ave Eastbound					Regis Blvd Westbound					Lowell Blvd Northbound					Lowell Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	5	17	14	4	40	14	10	23	3	50	5	91	8	4	108	16	84	1	1	102	300
03:15 PM	3	16	10	4	33	23	19	38	4	84	8	100	11	2	121	28	81	3	5	117	355
03:30 PM	2	22	12	3	39	23	25	39	5	92	12	133	13	1	159	23	101	1	6	131	421
03:45 PM	8	15	2	3	28	16	24	30	1	71	11	125	16	0	152	16	101	3	6	126	377
Total	18	70	38	14	140	76	78	130	13	297	36	449	48	7	540	83	367	8	18	476	1453
04:00 PM	6	15	11	0	32	24	14	42	5	85	11	132	15	1	159	22	79	1	5	107	383
04:15 PM	7	26	8	2	43	26	13	42	6	87	0	134	14	1	149	22	83	2	6	113	392
04:30 PM	4	22	10	0	36	28	17	38	0	83	13	128	13	2	156	22	110	0	5	137	412
04:45 PM	3	19	11	3	36	21	29	41	0	91	10	120	19	0	149	23	98	2	7	130	406
Total	20	82	40	5	147	99	73	163	11	346	34	514	61	4	613	89	370	5	23	487	1593
05:00 PM	7	23	17	1	48	29	25	39	8	101	7	153	10	1	171	13	77	4	7	101	421
05:15 PM	4	15	12	4	35	17	25	27	1	70	4	133	13	3	153	18	80	2	1	101	359
05:30 PM	4	20	13	2	39	19	19	26	0	64	10	129	24	0	163	11	94	6	2	113	379
05:45 PM	6	21	12	7	46	7	27	29	1	64	12	128	22	1	163	22	67	4	2	95	368
Total	21	79	54	14	168	72	96	121	10	299	33	543	69	5	650	64	318	16	12	410	1527
Grand Total	59	231	132	33	455	247	247	414	34	942	103	1506	178	16	1803	236	1055	29	53	1373	4573
Apprch %	13	50.8	29	7.3		26.2	26.2	43.9	3.6		5.7	83.5	9.9	0.9		17.2	76.8	2.1	3.9		
Total %	1.3	5.1	2.9	0.7	9.9	5.4	5.4	9.1	0.7	20.6	2.3	32.9	3.9	0.3	39.4	5.2	23.1	0.6	1.2	30	
Automobiles	59	231	132	0	422	245	244	414	0	903	103	1506	178	0	1787	236	1055	29	0	1320	4432
% Automobiles	100	100	100	0	92.7	99.2	98.8	100	0	95.9	100	100	100	0	99.1	100	100	100	0	96.1	96.9
Bicycle and Pedestrian	0	0	0	33	33	2	3	0	34	39	0	0	0	16	16	0	0	0	53	53	141
% Bicycle and Pedestrian	0	0	0	100	7.3	0.8	1.2	0	100	4.1	0	0	0	100	0.9	0	0	0	100	3.9	3.1



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



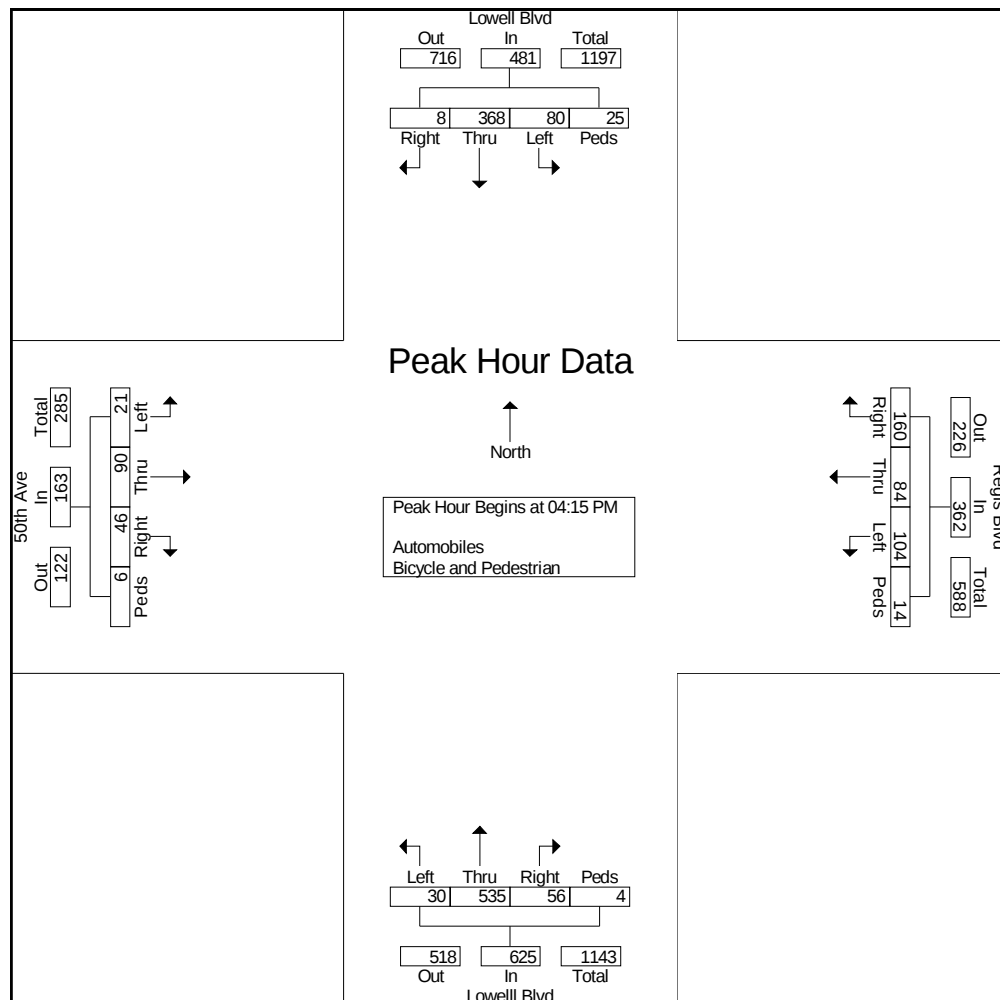


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	50th Ave Eastbound					Regis Blvd Westbound					Lowell Blvd Northbound					Lowell Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	7	26	8	2	43	26	13	42	6	87	0	134	14	1	149	22	83	2	6	113	392
04:30 PM	4	22	10	0	36	28	17	38	0	83	13	128	13	2	156	22	110	0	5	137	412
04:45 PM	3	19	11	3	36	21	29	41	0	91	10	120	19	0	149	23	98	2	7	130	406
05:00 PM	7	23	17	1	48	29	25	39	8	101	7	153	10	1	171	13	77	4	7	101	421
Total Volume	21	90	46	6	163	104	84	160	14	362	30	535	56	4	625	80	368	8	25	481	1631
% App. Total	12.9	55.2	28.2	3.7		28.7	23.2	44.2	3.9		4.8	85.6	9	0.6		16.6	76.5	1.7	5.2		
PHF	.750	.865	.676	.500	.849	.897	.724	.952	.438	.896	.577	.874	.737	.500	.914	.870	.836	.500	.893	.878	.969





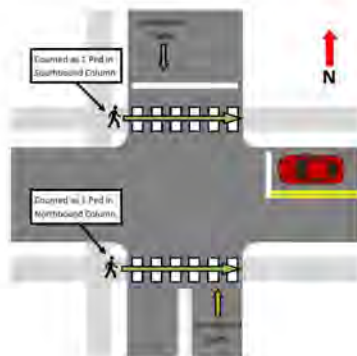
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd/50th Ave & Lowell Blvd

File Name : Regis Blvd 50th Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

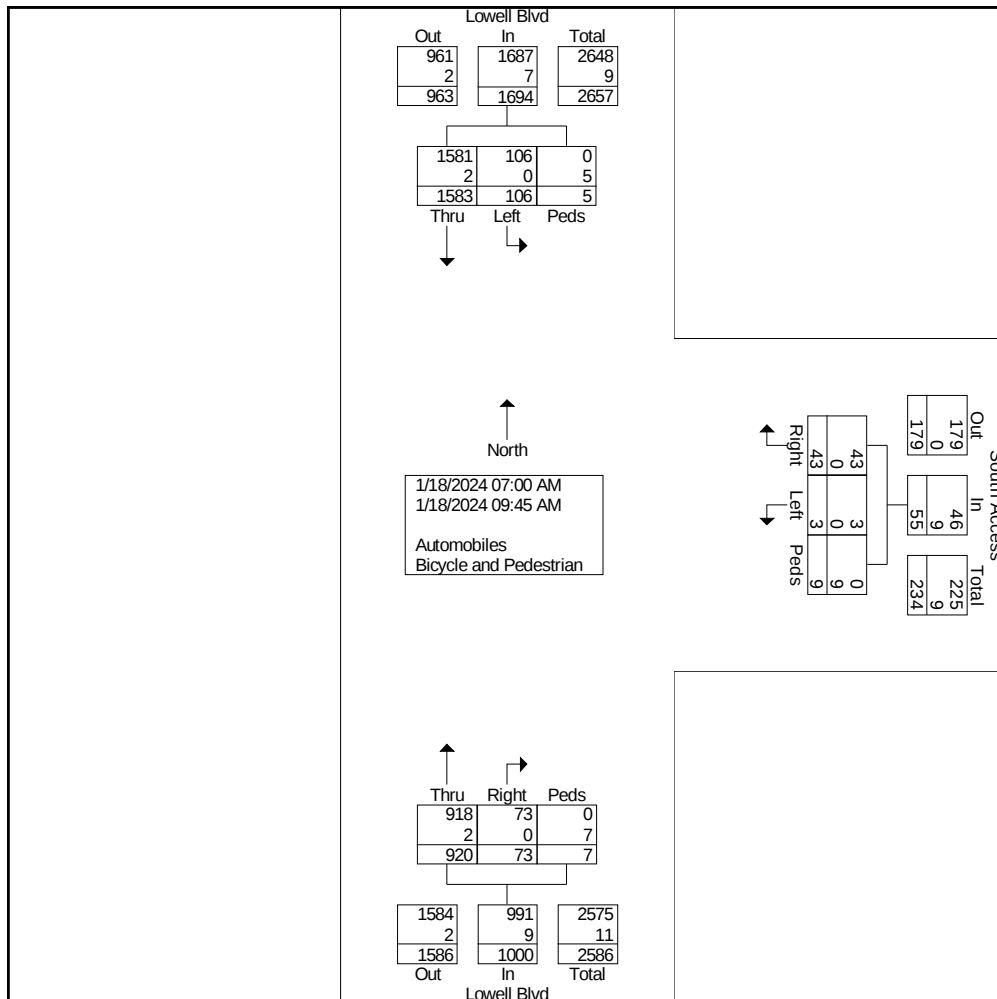
	South Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	0	5	0	5	36	1	0	37	3	125	0	128	170
07:15 AM	0	1	1	2	71	4	0	75	5	161	0	166	243
07:30 AM	0	0	1	1	100	8	0	108	8	161	0	169	278
07:45 AM	0	4	2	6	106	10	0	116	20	166	1	187	309
Total	0	10	4	14	313	23	0	336	36	613	1	650	1000
08:00 AM	0	4	0	4	86	7	0	93	7	156	0	163	260
08:15 AM	0	3	1	4	91	10	0	101	18	156	1	175	280
08:30 AM	0	1	1	2	84	8	0	92	5	172	0	177	271
08:45 AM	0	4	0	4	77	7	0	84	14	151	0	165	253
Total	0	12	2	14	338	32	0	370	44	635	1	680	1064
09:00 AM	0	7	1	8	77	10	0	87	8	88	3	99	194
09:15 AM	1	4	0	5	79	4	4	87	7	90	0	97	189
09:30 AM	1	4	1	6	59	1	2	62	6	74	0	80	148
09:45 AM	1	6	1	8	54	3	1	58	5	83	0	88	154
Total	3	21	3	27	269	18	7	294	26	335	3	364	685
Grand Total	3	43	9	55	920	73	7	1000	106	1583	5	1694	2749
Apprch %	5.5	78.2	16.4		92	7.3	0.7		6.3	93.4	0.3		
Total %	0.1	1.6	0.3	2	33.5	2.7	0.3	36.4	3.9	57.6	0.2	61.6	
Automobiles	3	43	0	46	918	73	0	991	106	1581	0	1687	2724
% Automobiles	100	100	0	83.6	99.8	100	0	99.1	100	99.9	0	99.6	99.1
Bicycle and Pedestrian	0	0	9	9	2	0	7	9	0	2	5	7	25
% Bicycle and Pedestrian	0	0	100	16.4	0.2	0	100	0.9	0	0.1	100	0.4	0.9



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



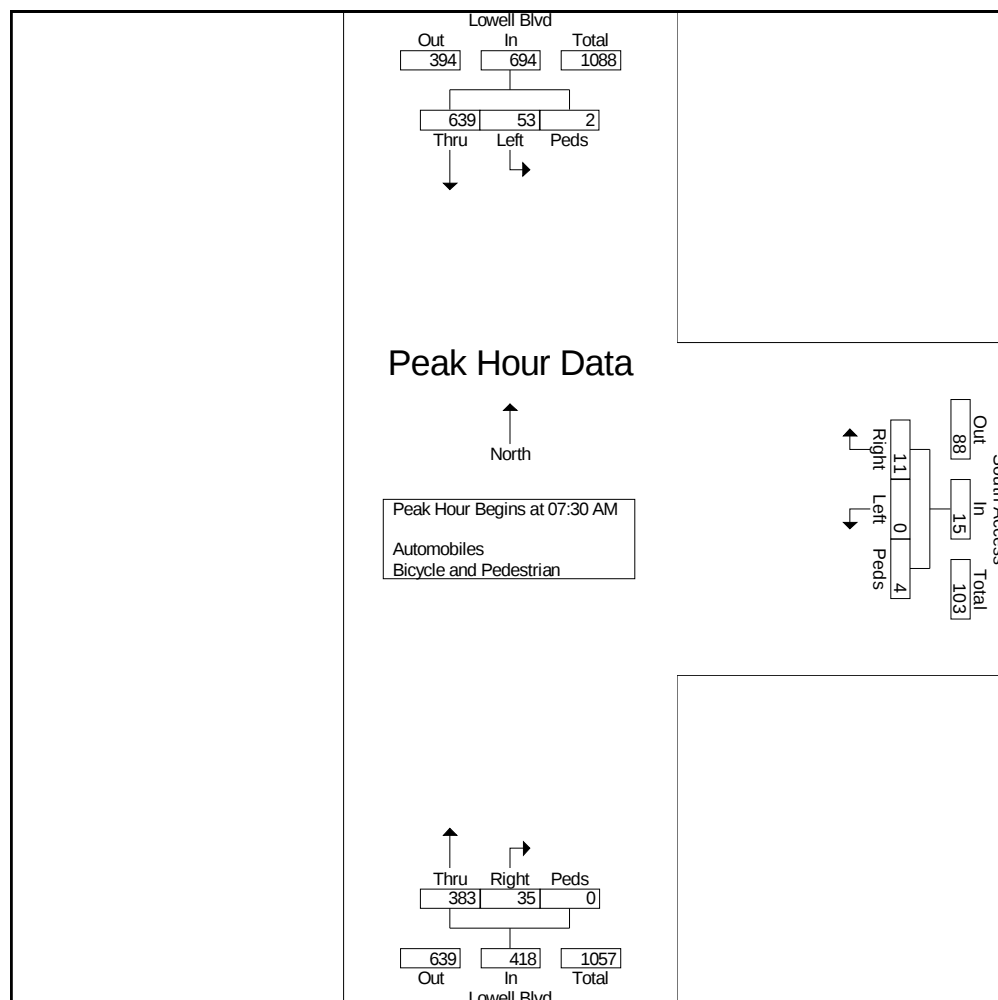


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	South Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	0	1	1	100	8	0	108	8	161	0	169	278
07:45 AM	0	4	2	6	106	10	0	116	20	166	1	187	309
08:00 AM	0	4	0	4	86	7	0	93	7	156	0	163	260
08:15 AM	0	3	1	4	91	10	0	101	18	156	1	175	280
Total Volume	0	11	4	15	383	35	0	418	53	639	2	694	1127
% App. Total	0	73.3	26.7		91.6	8.4	0		7.6	92.1	0.3		
PHF	.000	.688	.500	.625	.903	.875	.000	.901	.663	.962	.500	.928	.912





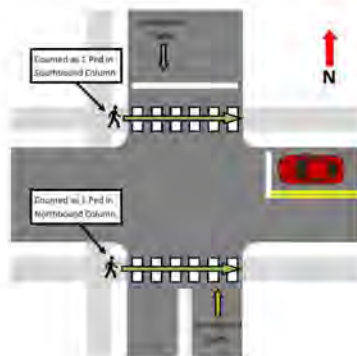
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

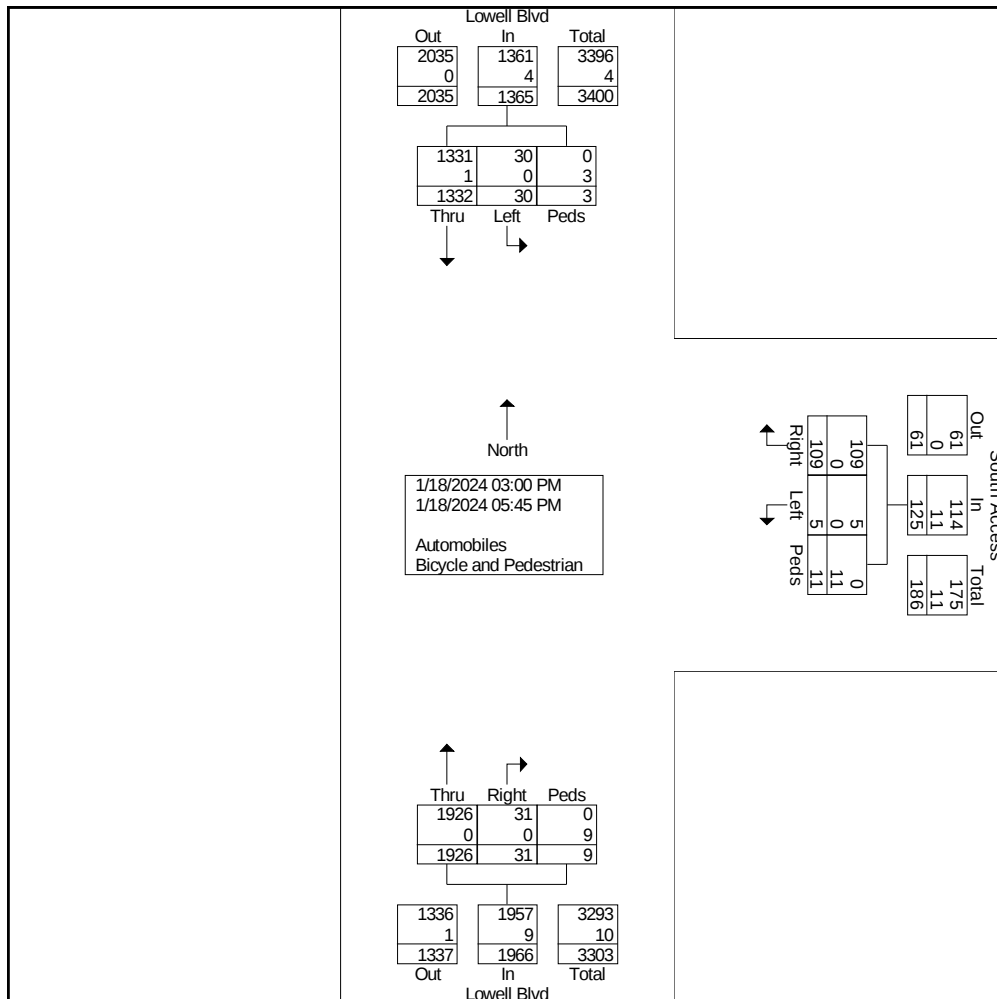
	South Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
03:00 PM	1	8	0	9	110	4	1	115	3	99	0	102	226
03:15 PM	1	14	0	15	130	8	1	139	5	107	2	114	268
03:30 PM	2	15	1	18	177	1	1	179	1	127	0	128	325
03:45 PM	0	4	0	4	161	0	1	162	3	122	0	125	291
Total	4	41	1	46	578	13	4	595	12	455	2	469	1110
04:00 PM	1	5	0	6	177	3	0	180	2	101	0	103	289
04:15 PM	0	7	2	9	176	1	1	178	2	112	0	114	301
04:30 PM	0	10	3	13	163	2	0	165	3	132	0	135	313
04:45 PM	0	15	0	15	164	1	2	167	3	115	0	118	300
Total	1	37	5	43	680	7	3	690	10	460	0	470	1203
05:00 PM	0	14	5	19	192	5	0	197	0	98	0	98	314
05:15 PM	0	9	0	9	165	0	1	166	3	111	1	115	290
05:30 PM	0	6	0	6	153	5	0	158	3	113	0	116	280
05:45 PM	0	2	0	2	158	1	1	160	2	95	0	97	259
Total	0	31	5	36	668	11	2	681	8	417	1	426	1143
Grand Total	5	109	11	125	1926	31	9	1966	30	1332	3	1365	3456
Apprch %	4	87.2	8.8		98	1.6	0.5		2.2	97.6	0.2		
Total %	0.1	3.2	0.3	3.6	55.7	0.9	0.3	56.9	0.9	38.5	0.1	39.5	
Automobiles	5	109	0	114	1926	31	0	1957	30	1331	0	1361	3432
% Automobiles	100	100	0	91.2	100	100	0	99.5	100	99.9	0	99.7	99.3
Bicycle and Pedestrian	0	0	11	11	0	0	9	9	0	1	3	4	24
% Bicycle and Pedestrian	0	0	100	8.8	0	0	100	0.5	0	0.1	100	0.3	0.7



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



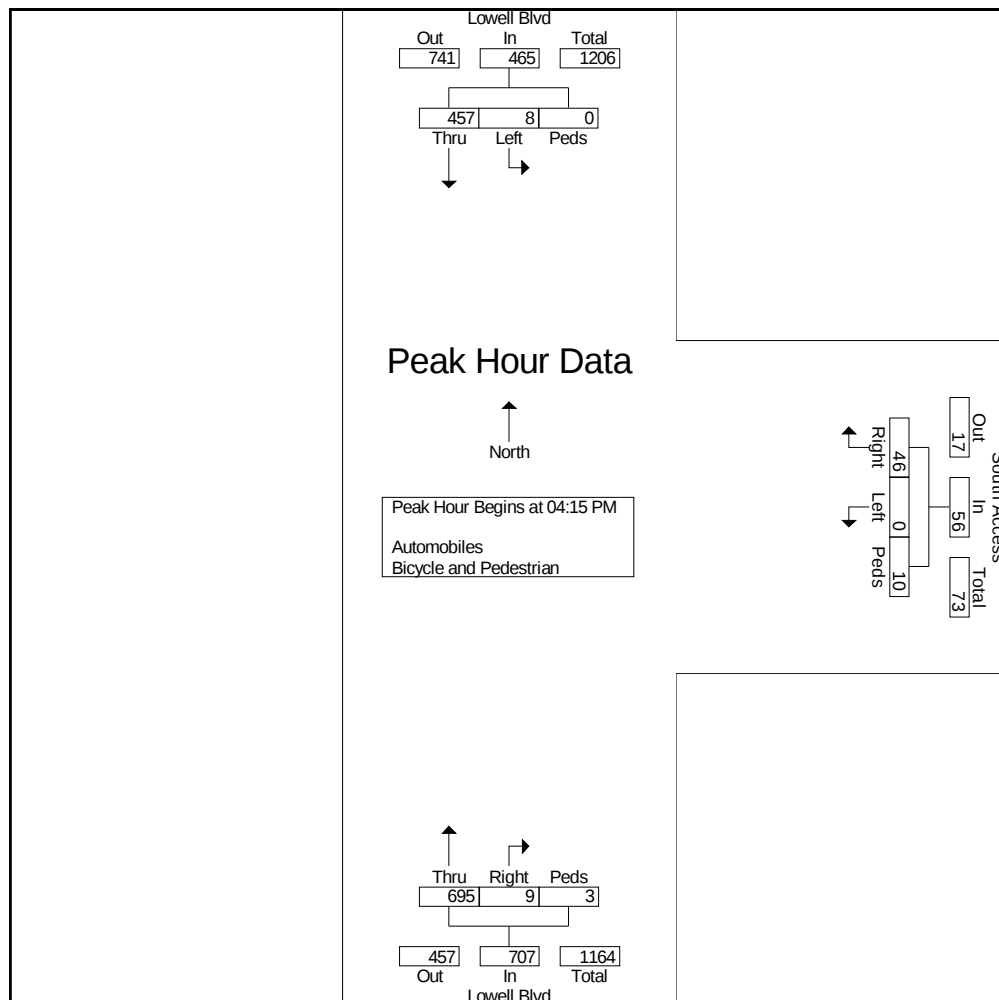


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	South Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	7	2	9	176	1	1	178	2	112	0	114	301
04:30 PM	0	10	3	13	163	2	0	165	3	132	0	135	313
04:45 PM	0	15	0	15	164	1	2	167	3	115	0	118	300
05:00 PM	0	14	5	19	192	5	0	197	0	98	0	98	314
Total Volume	0	46	10	56	695	9	3	707	8	457	0	465	1228
% App. Total	0	82.1	17.9		98.3	1.3	0.4		1.7	98.3	0		
PHF	.000	.767	.500	.737	.905	.450	.375	.897	.667	.866	.000	.861	.978





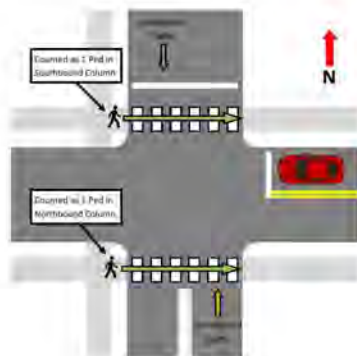
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & South Access

File Name : Lowell Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

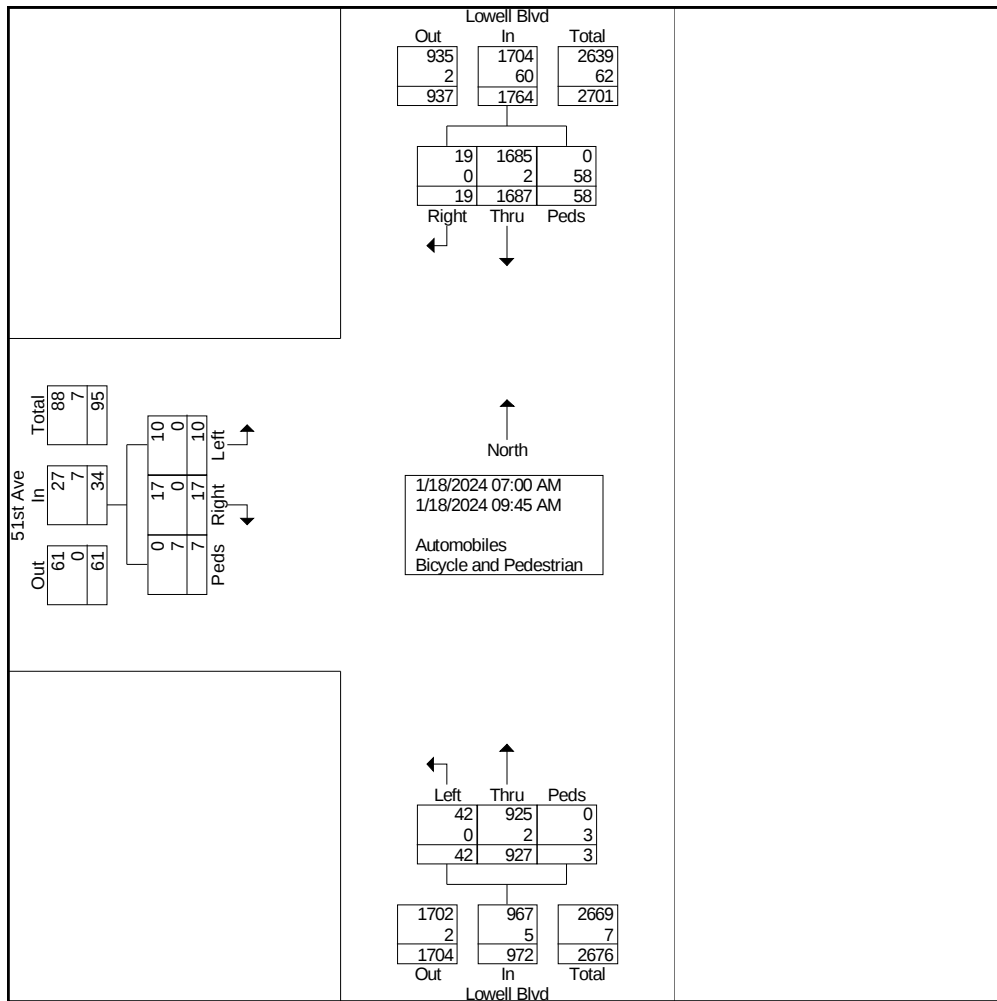
	51st Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	1	0	1	2	39	0	41	129	0	0	129	171
07:15 AM	0	1	0	1	3	66	0	69	171	0	3	174	244
07:30 AM	2	0	2	4	5	99	1	105	168	2	9	179	288
07:45 AM	0	1	0	1	3	106	0	109	186	3	13	202	312
Total	2	3	2	7	13	310	1	324	654	5	25	684	1015
08:00 AM	0	1	0	1	4	86	0	90	165	1	5	171	262
08:15 AM	0	3	2	5	6	91	0	97	167	1	3	171	273
08:30 AM	2	1	1	4	5	81	1	87	181	3	6	190	281
08:45 AM	3	0	1	4	1	80	0	81	163	2	2	167	252
Total	5	5	4	14	16	338	1	355	676	7	16	699	1068
09:00 AM	1	4	0	5	2	82	0	84	95	1	3	99	188
09:15 AM	1	1	1	3	6	76	1	83	99	2	9	110	196
09:30 AM	1	1	0	2	2	62	0	64	78	2	3	83	149
09:45 AM	0	3	0	3	3	59	0	62	85	2	2	89	154
Total	3	9	1	13	13	279	1	293	357	7	17	381	687
Grand Total	10	17	7	34	42	927	3	972	1687	19	58	1764	2770
Apprch %	29.4	50	20.6		4.3	95.4	0.3		95.6	1.1	3.3		
Total %	0.4	0.6	0.3	1.2	1.5	33.5	0.1	35.1	60.9	0.7	2.1	63.7	
Automobiles	10	17	0	27	42	925	0	967	1685	19	0	1704	2698
% Automobiles	100	100	0	79.4	100	99.8	0	99.5	99.9	100	0	96.6	97.4
Bicycle and Pedestrian	0	0	7	7	0	2	3	5	2	0	58	60	72
% Bicycle and Pedestrian	0	0	100	20.6	0	0.2	100	0.5	0.1	0	100	3.4	2.6



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



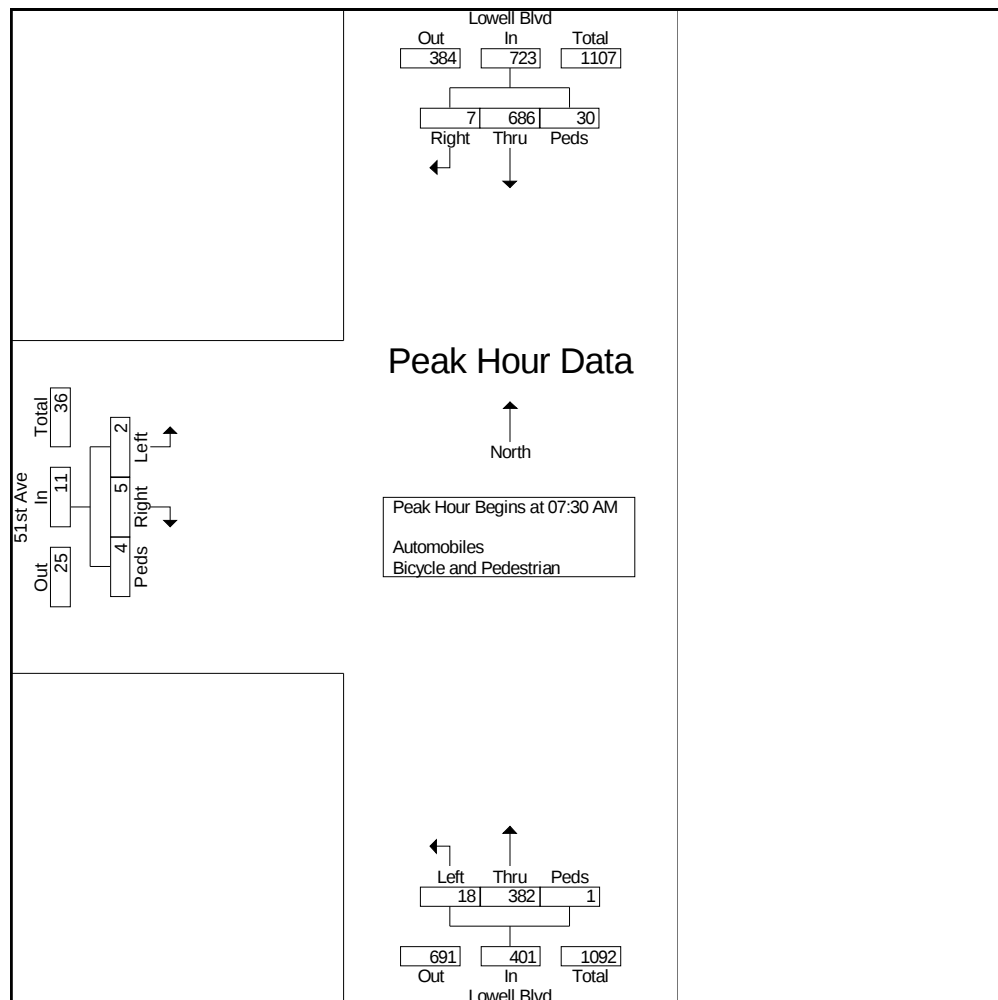


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	51st Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	2	0	2	4	5	99	1	105	168	2	9	179	288
07:45 AM	0	1	0	1	3	106	0	109	186	3	13	202	312
08:00 AM	0	1	0	1	4	86	0	90	165	1	5	171	262
08:15 AM	0	3	2	5	6	91	0	97	167	1	3	171	273
Total Volume	2	5	4	11	18	382	1	401	686	7	30	723	1135
% App. Total	18.2	45.5	36.4		4.5	95.3	0.2		94.9	1	4.1		
PHF	.250	.417	.500	.550	.750	.901	.250	.920	.922	.583	.577	.895	.909





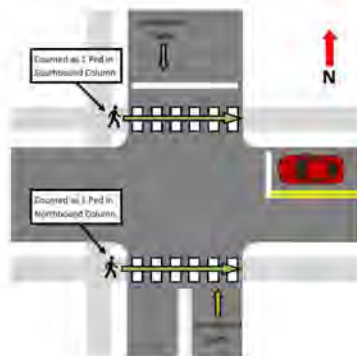
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Denver, CO
 Regis University
 PM Peak
 51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd PM
 Site Code : IPO 660
 Start Date : 1/18/2024
 Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

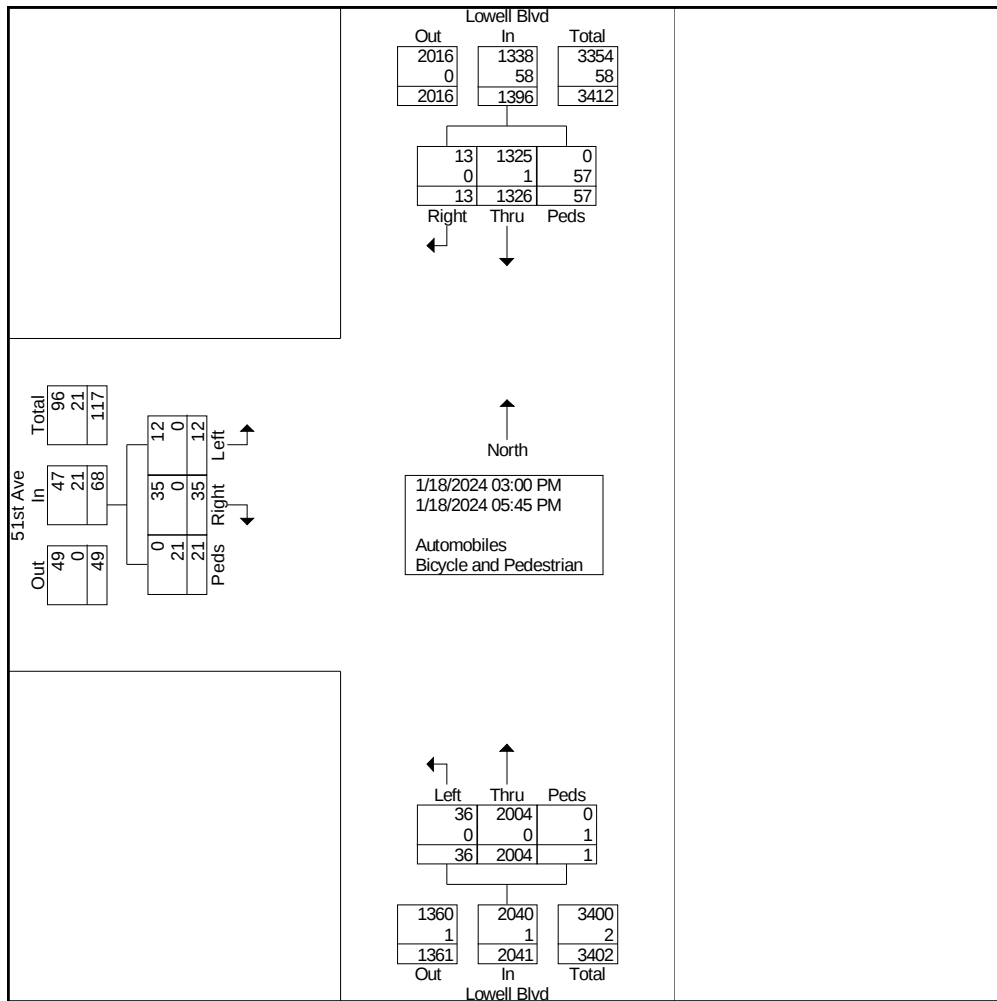
	51st Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	4	1	5	3	116	0	119	97	2	1	100	224
03:15 PM	1	4	1	6	3	139	1	143	107	1	12	120	269
03:30 PM	2	3	3	8	8	189	0	197	128	1	1	130	335
03:45 PM	1	0	4	5	0	166	0	166	124	1	4	129	300
Total	4	11	9	24	14	610	1	625	456	5	18	479	1128
04:00 PM	0	2	0	2	1	187	0	188	102	2	4	108	298
04:15 PM	2	6	3	11	2	177	0	179	106	0	1	107	297
04:30 PM	0	3	0	3	2	171	0	173	132	1	6	139	315
04:45 PM	2	0	3	5	4	173	0	177	117	0	9	126	308
Total	4	11	6	21	9	708	0	717	457	3	20	480	1218
05:00 PM	2	3	3	8	4	198	0	202	97	1	8	106	316
05:15 PM	0	4	1	5	4	171	0	175	109	1	2	112	292
05:30 PM	1	3	2	6	2	157	0	159	113	1	7	121	286
05:45 PM	1	3	0	4	3	160	0	163	94	2	2	98	265
Total	4	13	6	23	13	686	0	699	413	5	19	437	1159
Grand Total	12	35	21	68	36	2004	1	2041	1326	13	57	1396	3505
Apprch %	17.6	51.5	30.9		1.8	98.2	0		95	0.9	4.1		
Total %	0.3	1	0.6	1.9	1	57.2	0	58.2	37.8	0.4	1.6	39.8	
Automobiles	12	35	0	47	36	2004	0	2040	1325	13	0	1338	3425
% Automobiles	100	100	0	69.1	100	100	0	100	99.9	100	0	95.8	97.7
Bicycle and Pedestrian	0	0	21	21	0	0	1	1	1	0	57	58	80
% Bicycle and Pedestrian	0	0	100	30.9	0	0	100	0	0.1	0	100	4.2	2.3



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



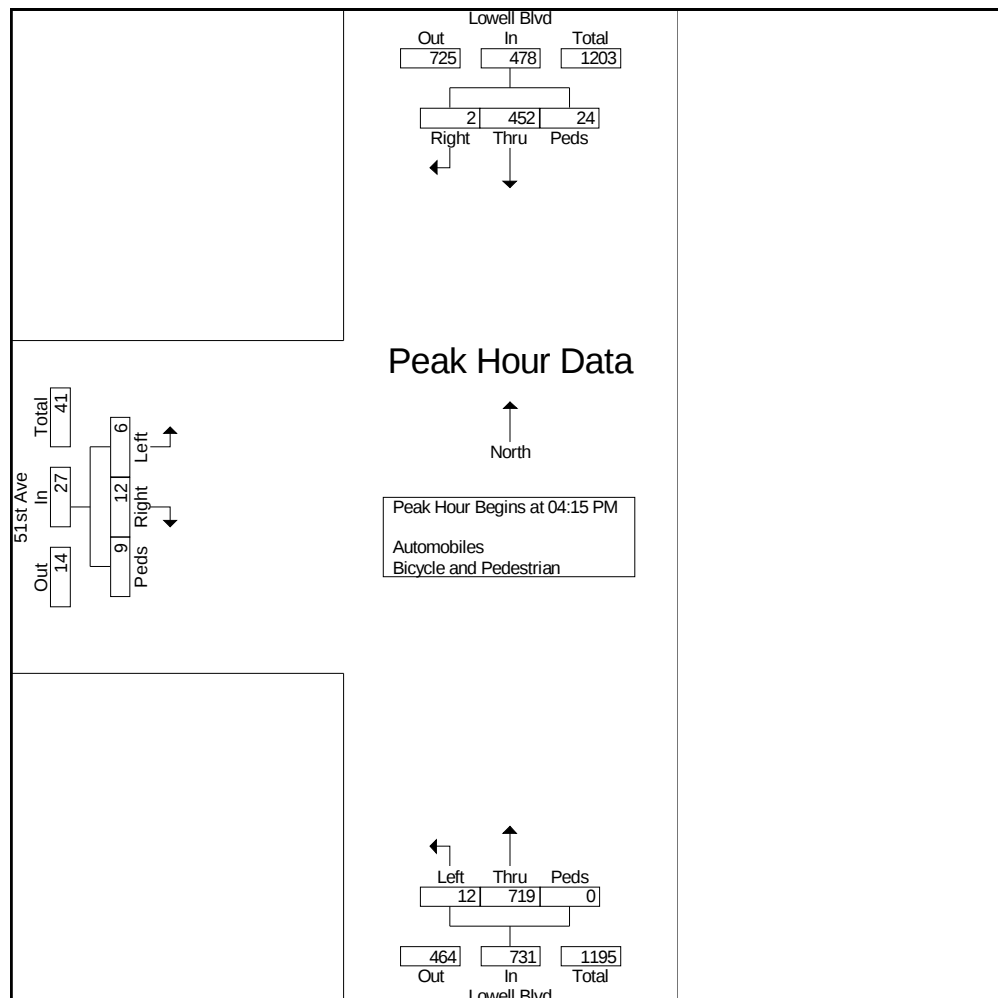


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	51st Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	2	6	3	11	2	177	0	179	106	0	1	107	297
04:30 PM	0	3	0	3	2	171	0	173	132	1	6	139	315
04:45 PM	2	0	3	5	4	173	0	177	117	0	9	126	308
05:00 PM	2	3	3	8	4	198	0	202	97	1	8	106	316
Total Volume	6	12	9	27	12	719	0	731	452	2	24	478	1236
% App. Total	22.2	44.4	33.3		1.6	98.4	0		94.6	0.4	5		
PHF	.750	.500	.750	.614	.750	.908	.000	.905	.856	.500	.667	.860	.978





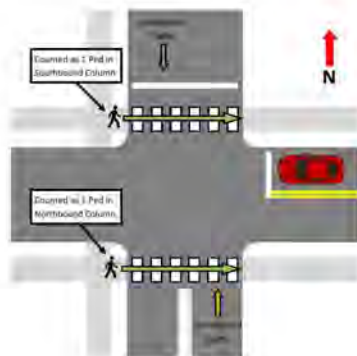
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
51st Ave & Lowell Blvd

File Name : 51st Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Denver, CO
 Regis University
 AM Peak
 52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd AM
 Site Code : IPO 660
 Start Date : 1/18/2024
 Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

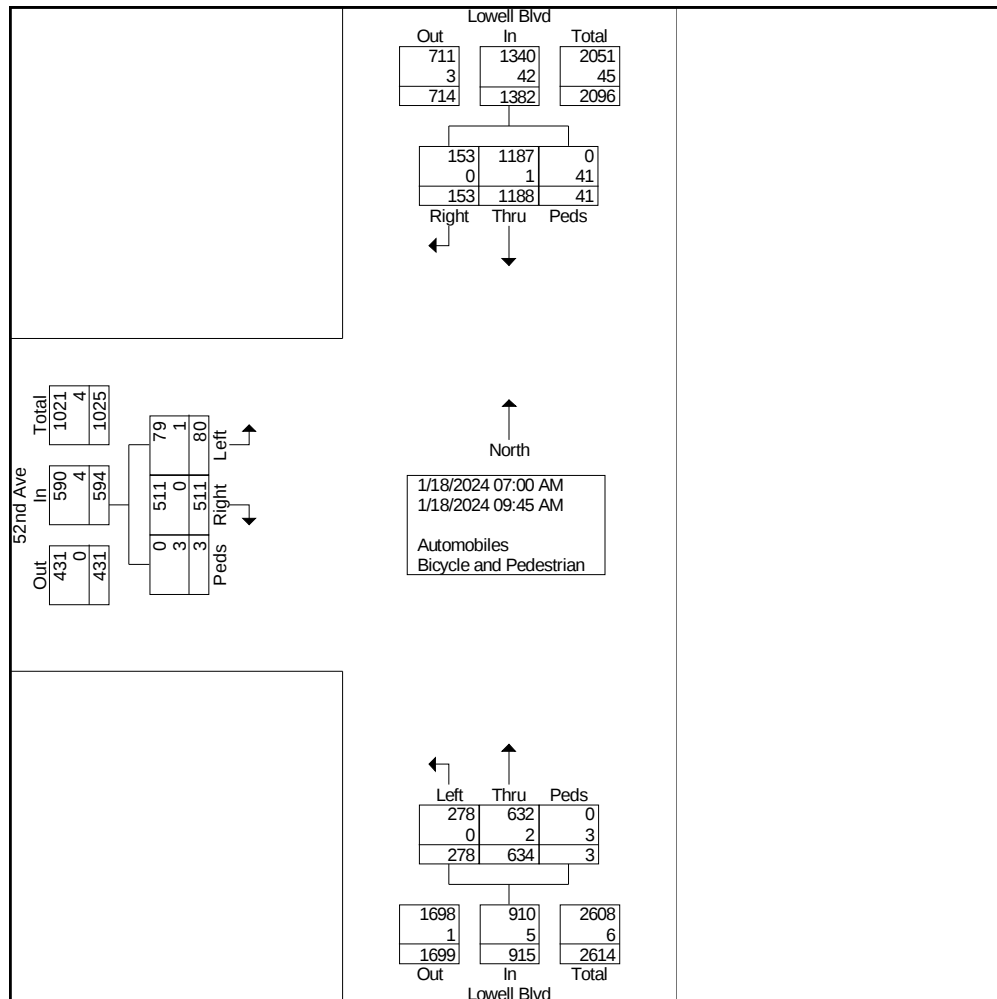
	52nd Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	7	31	0	38	20	19	0	39	99	5	0	104	181
07:15 AM	5	42	0	47	19	47	0	66	127	9	0	136	249
07:30 AM	5	65	1	71	30	67	0	97	104	19	4	127	295
07:45 AM	9	54	0	63	25	81	0	106	130	21	27	178	347
Total	26	192	1	219	94	214	0	308	460	54	31	545	1072
08:00 AM	6	40	0	46	17	70	0	87	125	11	0	136	269
08:15 AM	5	49	0	54	35	52	0	87	123	16	0	139	280
08:30 AM	6	58	1	65	21	61	0	82	129	19	1	149	296
08:45 AM	9	50	0	59	18	60	0	78	111	17	2	130	267
Total	26	197	1	224	91	243	0	334	488	63	3	554	1112
09:00 AM	7	26	1	34	25	52	0	77	70	5	0	75	186
09:15 AM	8	34	0	42	27	45	1	73	65	9	7	81	196
09:30 AM	6	33	0	39	23	39	2	64	48	11	0	59	162
09:45 AM	7	29	0	36	18	41	0	59	57	11	0	68	163
Total	28	122	1	151	93	177	3	273	240	36	7	283	707
Grand Total	80	511	3	594	278	634	3	915	1188	153	41	1382	2891
Apprch %	13.5	86	0.5		30.4	69.3	0.3		86	11.1	3		
Total %	2.8	17.7	0.1	20.5	9.6	21.9	0.1	31.6	41.1	5.3	1.4	47.8	
Automobiles	79	511	0	590	278	632	0	910	1187	153	0	1340	2840
% Automobiles	98.8	100	0	99.3	100	99.7	0	99.5	99.9	100	0	97	98.2
Bicycle and Pedestrian	1	0	3	4	0	2	3	5	1	0	41	42	51
% Bicycle and Pedestrian	1.2	0	100	0.7	0	0.3	100	0.5	0.1	0	100	3	1.8



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



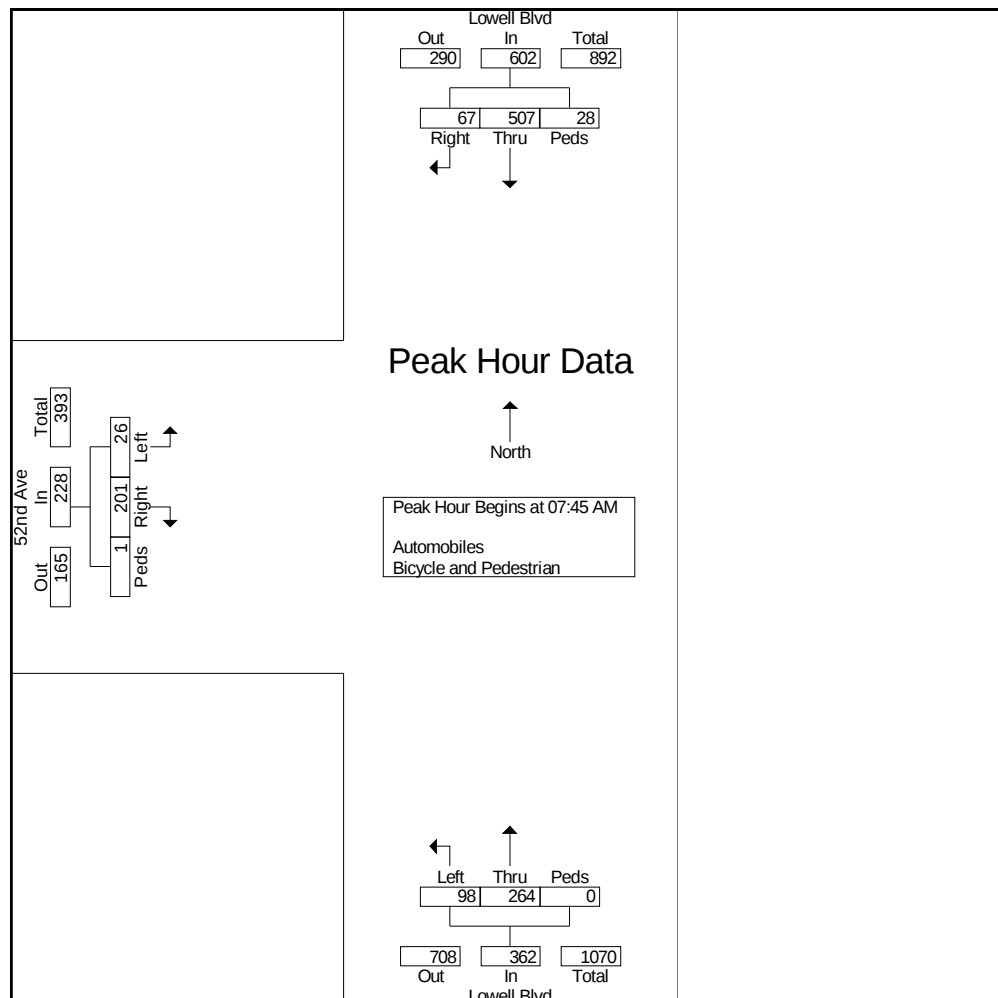


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	52nd Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	9	54	0	63	25	81	0	106	130	21	27	178	347
08:00 AM	6	40	0	46	17	70	0	87	125	11	0	136	269
08:15 AM	5	49	0	54	35	52	0	87	123	16	0	139	280
08:30 AM	6	58	1	65	21	61	0	82	129	19	1	149	296
Total Volume	26	201	1	228	98	264	0	362	507	67	28	602	1192
% App. Total	11.4	88.2	0.4		27.1	72.9	0		84.2	11.1	4.7		
PHF	.722	.866	.250	.877	.700	.815	.000	.854	.975	.798	.259	.846	.859





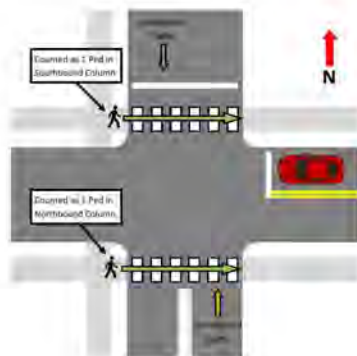
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

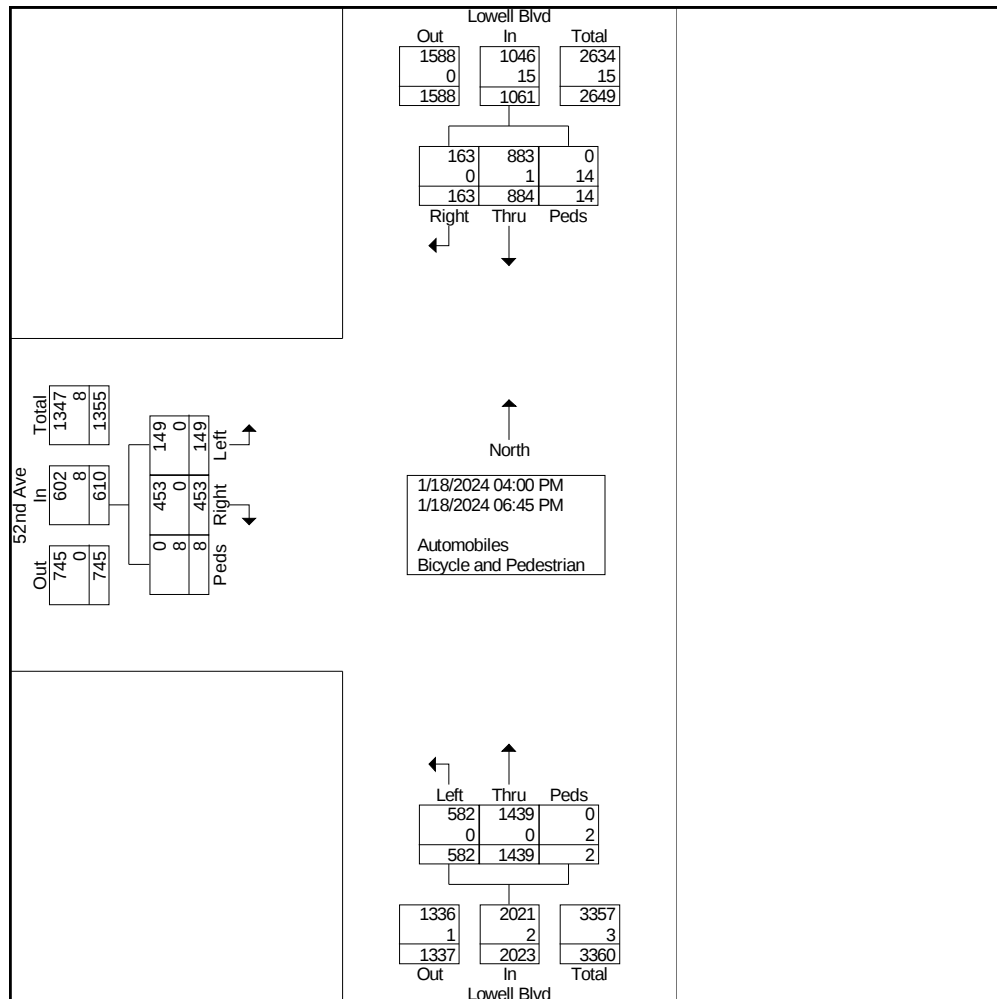
	52nd Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	15	33	0	48	39	80	1	120	60	14	2	76	244
04:15 PM	12	41	0	53	49	97	0	146	71	10	1	82	281
04:30 PM	7	43	0	50	68	120	0	188	85	15	0	100	338
04:45 PM	12	32	1	45	42	128	0	170	90	19	2	111	326
Total	46	149	1	196	198	425	1	624	306	58	5	369	1189
05:00 PM	14	40	1	55	47	133	0	180	66	14	3	83	318
05:15 PM	11	39	0	50	54	126	0	180	68	16	5	89	319
05:30 PM	14	46	1	61	36	134	0	170	86	9	0	95	326
05:45 PM	11	44	2	57	46	128	0	174	74	14	1	89	320
Total	50	169	4	223	183	521	0	704	294	53	9	356	1283
06:00 PM	9	32	3	44	59	147	1	207	67	15	0	82	333
06:15 PM	12	36	0	48	48	123	0	171	76	15	0	91	310
06:30 PM	18	32	0	50	41	116	0	157	82	17	0	99	306
06:45 PM	14	35	0	49	53	107	0	160	59	5	0	64	273
Total	53	135	3	191	201	493	1	695	284	52	0	336	1222
Grand Total	149	453	8	610	582	1439	2	2023	884	163	14	1061	3694
Apprch %	24.4	74.3	1.3		28.8	71.1	0.1		83.3	15.4	1.3		
Total %	4	12.3	0.2	16.5	15.8	39	0.1	54.8	23.9	4.4	0.4	28.7	
Automobiles	149	453	0	602	582	1439	0	2021	883	163	0	1046	3669
% Automobiles	100	100	0	98.7	100	100	0	99.9	99.9	100	0	98.6	99.3
Bicycle and Pedestrian	0	0	8	8	0	0	2	2	1	0	14	15	25
% Bicycle and Pedestrian	0	0	100	1.3	0	0	100	0.1	0.1	0	100	1.4	0.7



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



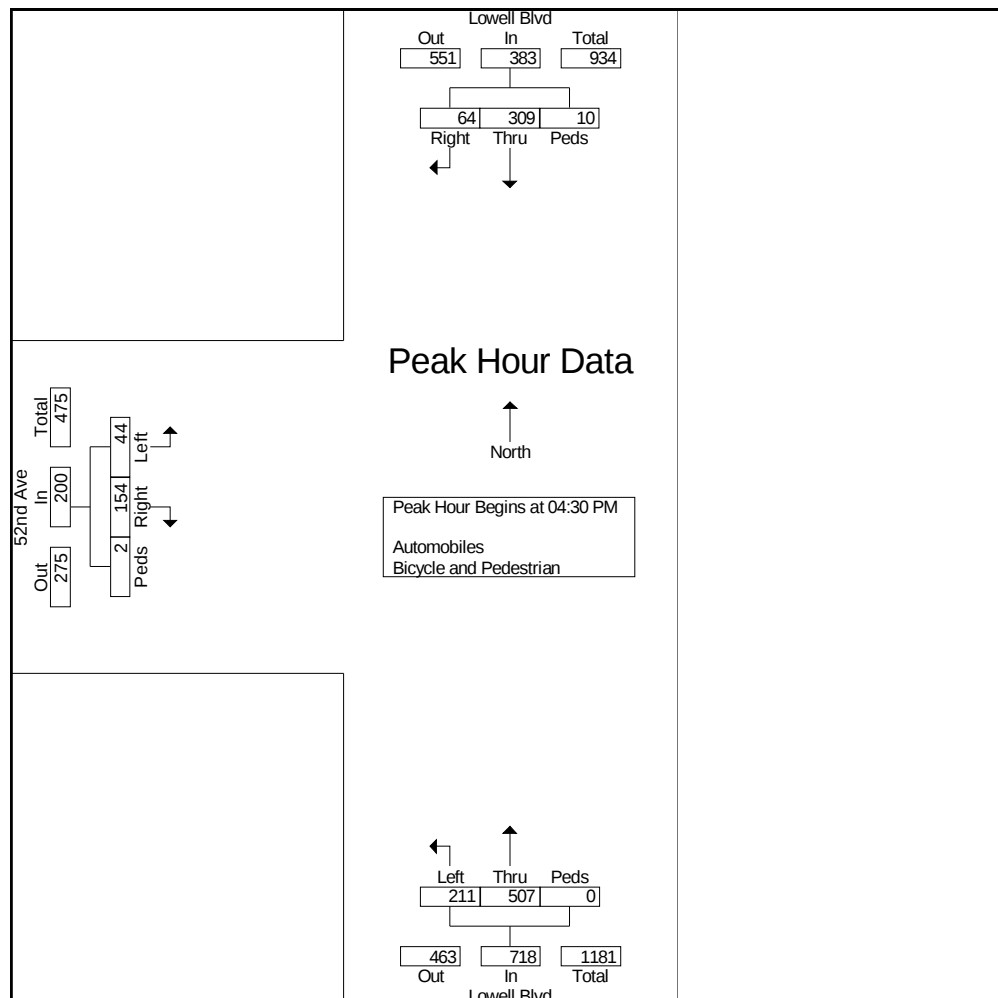


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	52nd Ave Eastbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	7	43	0	50	68	120	0	188	85	15	0	100	338
04:45 PM	12	32	1	45	42	128	0	170	90	19	2	111	326
05:00 PM	14	40	1	55	47	133	0	180	66	14	3	83	318
05:15 PM	11	39	0	50	54	126	0	180	68	16	5	89	319
Total Volume	44	154	2	200	211	507	0	718	309	64	10	383	1301
% App. Total	22	77	1		29.4	70.6	0		80.7	16.7	2.6		
PHF	.786	.895	.500	.909	.776	.953	.000	.955	.858	.842	.500	.863	.962





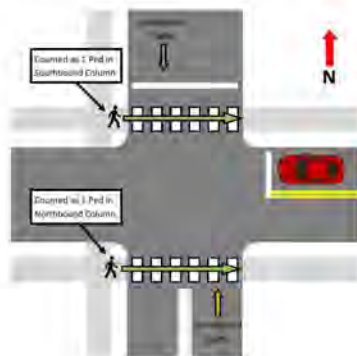
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
52nd Ave & Lowell Blvd

File Name : 52nd Ave & Lowell Blvd PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

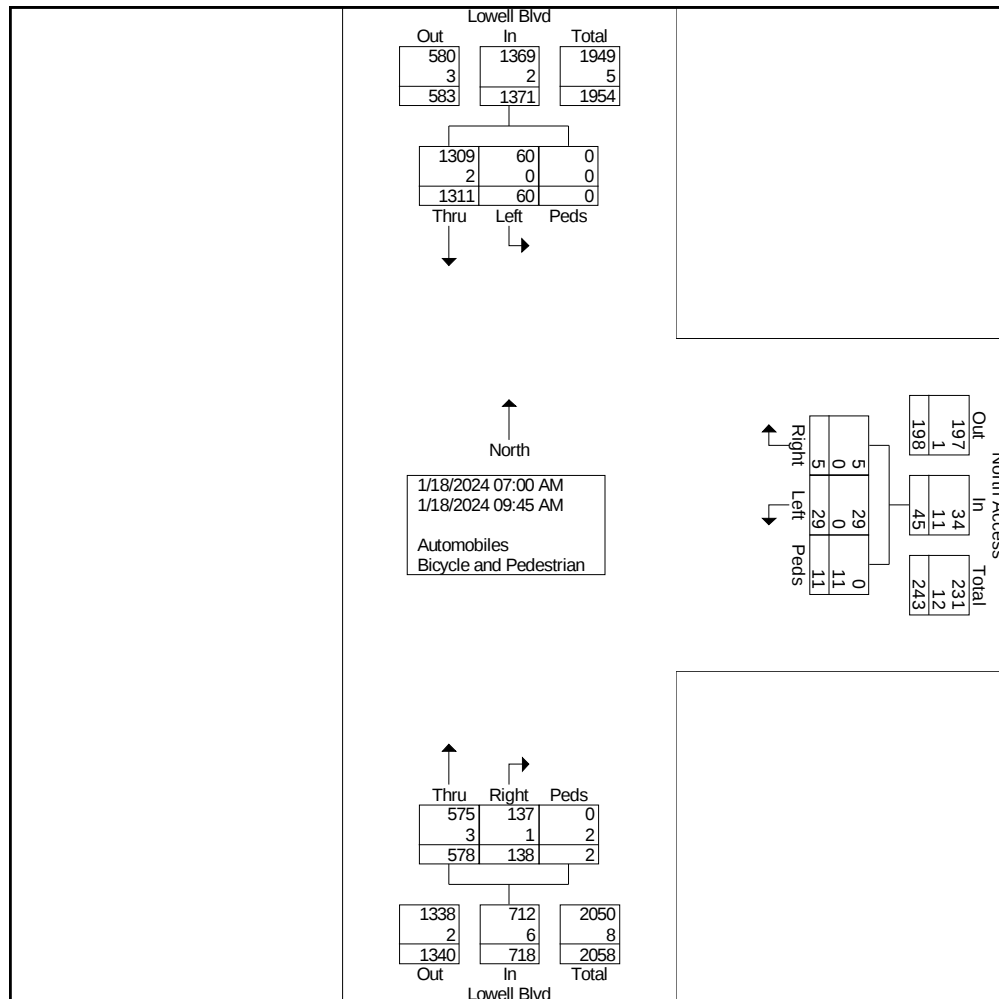
	North Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	24	3	1	28	2	106	0	108	136
07:15 AM	1	0	0	1	46	4	0	50	7	128	0	135	186
07:30 AM	1	0	0	1	55	18	0	73	7	127	0	134	208
07:45 AM	1	2	3	6	57	33	0	90	15	148	0	163	259
Total	3	2	3	8	182	58	1	241	31	509	0	540	789
08:00 AM	0	1	1	2	67	9	0	76	4	137	0	141	219
08:15 AM	0	0	0	0	53	5	0	58	0	140	0	140	198
08:30 AM	1	1	2	4	56	11	0	67	7	147	0	154	225
08:45 AM	2	1	1	4	55	14	0	69	8	125	0	133	206
Total	3	3	4	10	231	39	0	270	19	549	0	568	848
09:00 AM	5	0	0	5	45	14	0	59	4	71	0	75	139
09:15 AM	8	0	4	12	40	14	0	54	3	66	0	69	135
09:30 AM	6	0	0	6	38	7	0	45	2	52	0	54	105
09:45 AM	4	0	0	4	42	6	1	49	1	64	0	65	118
Total	23	0	4	27	165	41	1	207	10	253	0	263	497
Grand Total	29	5	11	45	578	138	2	718	60	1311	0	1371	2134
Apprch %	64.4	11.1	24.4		80.5	19.2	0.3		4.4	95.6	0		
Total %	1.4	0.2	0.5	2.1	27.1	6.5	0.1	33.6	2.8	61.4	0	64.2	
Automobiles	29	5	0	34	575	137	0	712	60	1309	0	1369	2115
% Automobiles	100	100	0	75.6	99.5	99.3	0	99.2	100	99.8	0	99.9	99.1
Bicycle and Pedestrian	0	0	11	11	3	1	2	6	0	2	0	2	19
% Bicycle and Pedestrian	0	0	100	24.4	0.5	0.7	100	0.8	0	0.2	0	0.1	0.9



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



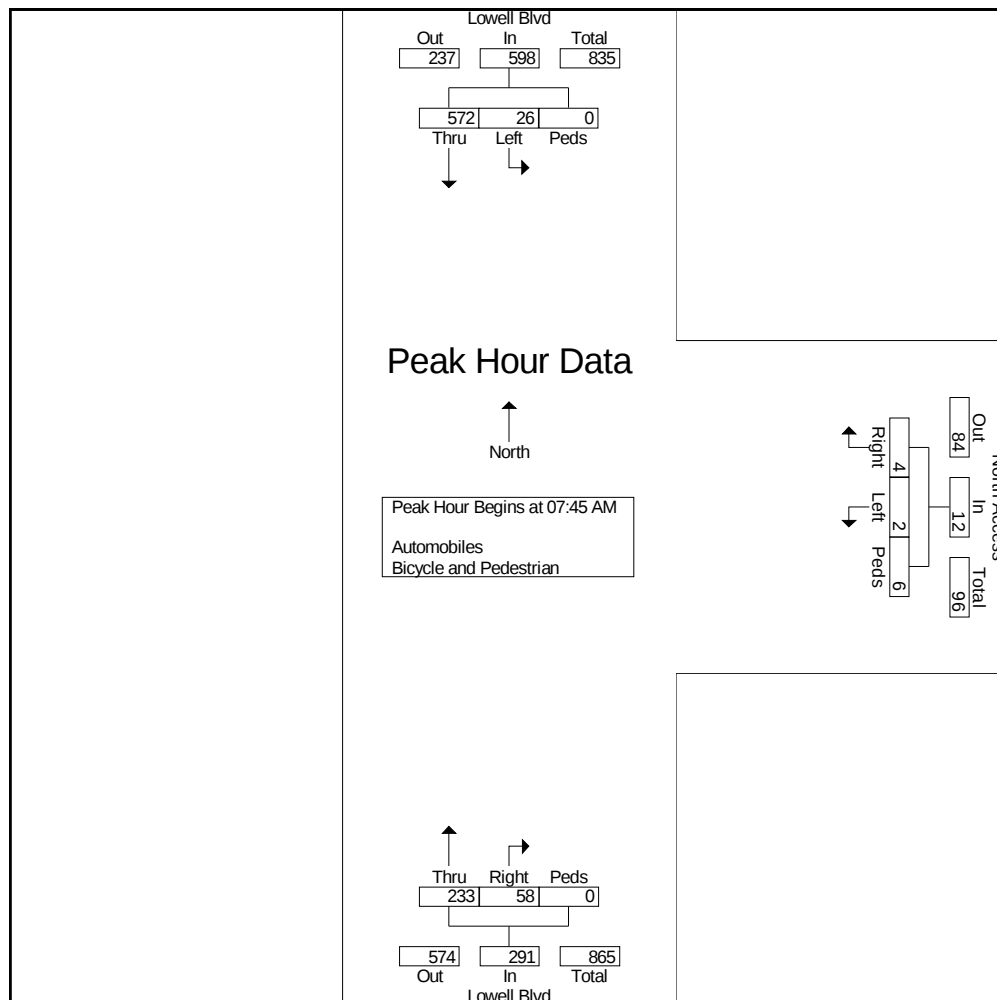


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	North Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	1	2	3	6	57	33	0	90	15	148	0	163	259
08:00 AM	0	1	1	2	67	9	0	76	4	137	0	141	219
08:15 AM	0	0	0	0	53	5	0	58	0	140	0	140	198
08:30 AM	1	1	2	4	56	11	0	67	7	147	0	154	225
Total Volume	2	4	6	12	233	58	0	291	26	572	0	598	901
% App. Total	16.7	33.3	50		80.1	19.9	0		4.3	95.7	0		
PHF	.500	.500	.500	.500	.869	.439	.000	.808	.433	.966	.000	.917	.870





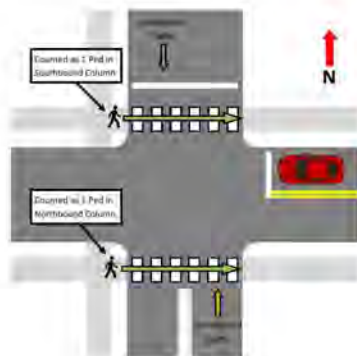
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

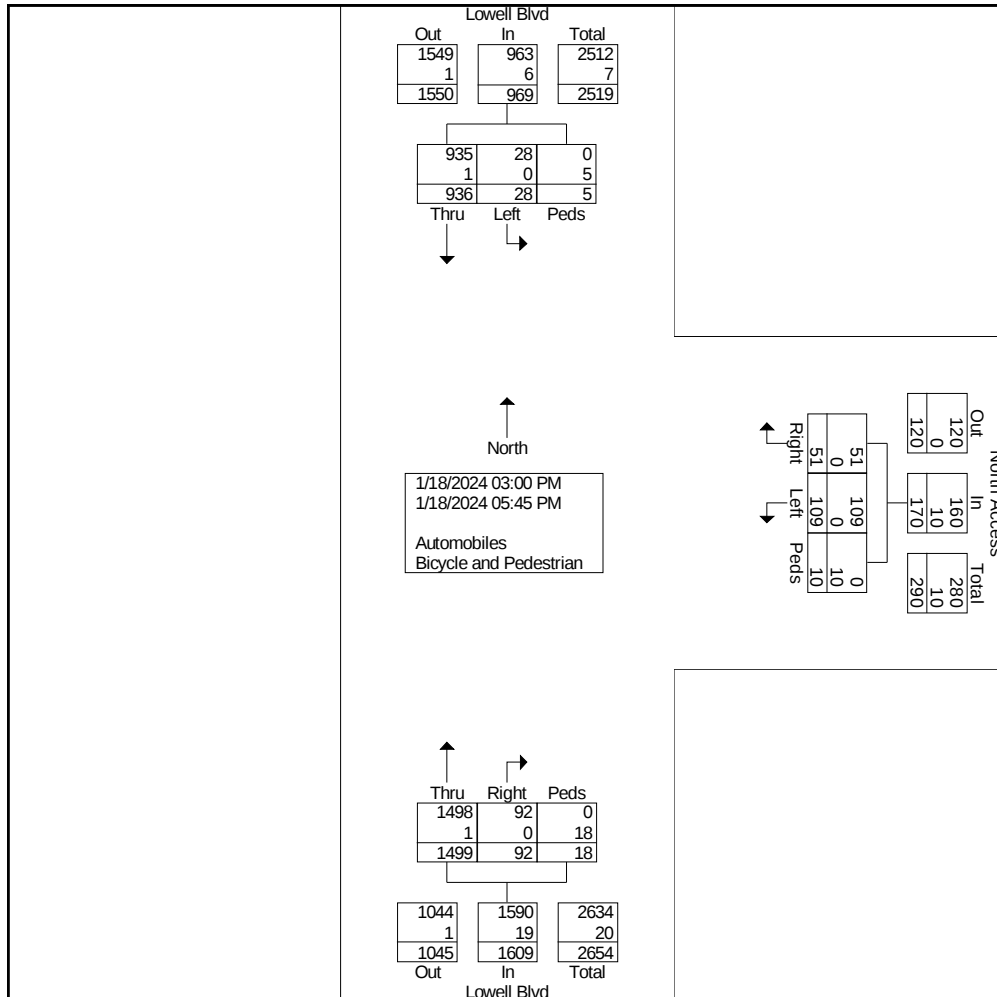
	North Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
03:00 PM	11	9	0	20	83	13	1	97	2	62	0	64	181
03:15 PM	11	11	1	23	103	5	5	113	1	69	1	71	207
03:30 PM	11	3	1	15	127	0	1	128	3	89	0	92	235
03:45 PM	17	4	2	23	137	5	6	148	1	92	0	93	264
Total	50	27	4	81	450	23	13	486	7	312	1	320	887
04:00 PM	7	6	1	14	139	7	1	147	5	74	0	79	240
04:15 PM	8	3	1	12	124	12	1	137	3	76	1	80	229
04:30 PM	7	5	2	14	133	16	2	151	6	88	1	95	260
04:45 PM	15	2	0	17	123	16	1	140	2	73	2	77	234
Total	37	16	4	57	519	51	5	575	16	311	4	331	963
05:00 PM	3	4	2	9	149	9	0	158	0	79	0	79	246
05:15 PM	7	3	0	10	131	4	0	135	2	83	0	85	230
05:30 PM	6	1	0	7	130	4	0	134	2	92	0	94	235
05:45 PM	6	0	0	6	120	1	0	121	1	59	0	60	187
Total	22	8	2	32	530	18	0	548	5	313	0	318	898
Grand Total	109	51	10	170	1499	92	18	1609	28	936	5	969	2748
Apprch %	64.1	30	5.9		93.2	5.7	1.1		2.9	96.6	0.5		
Total %	4	1.9	0.4	6.2	54.5	3.3	0.7	58.6	1	34.1	0.2	35.3	
Automobiles	109	51	0	160	1498	92	0	1590	28	935	0	963	2713
% Automobiles	100	100	0	94.1	99.9	100	0	98.8	100	99.9	0	99.4	98.7
Bicycle and Pedestrian	0	0	10	10	1	0	18	19	0	1	5	6	35
% Bicycle and Pedestrian	0	0	100	5.9	0.1	0	100	1.2	0	0.1	100	0.6	1.3



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



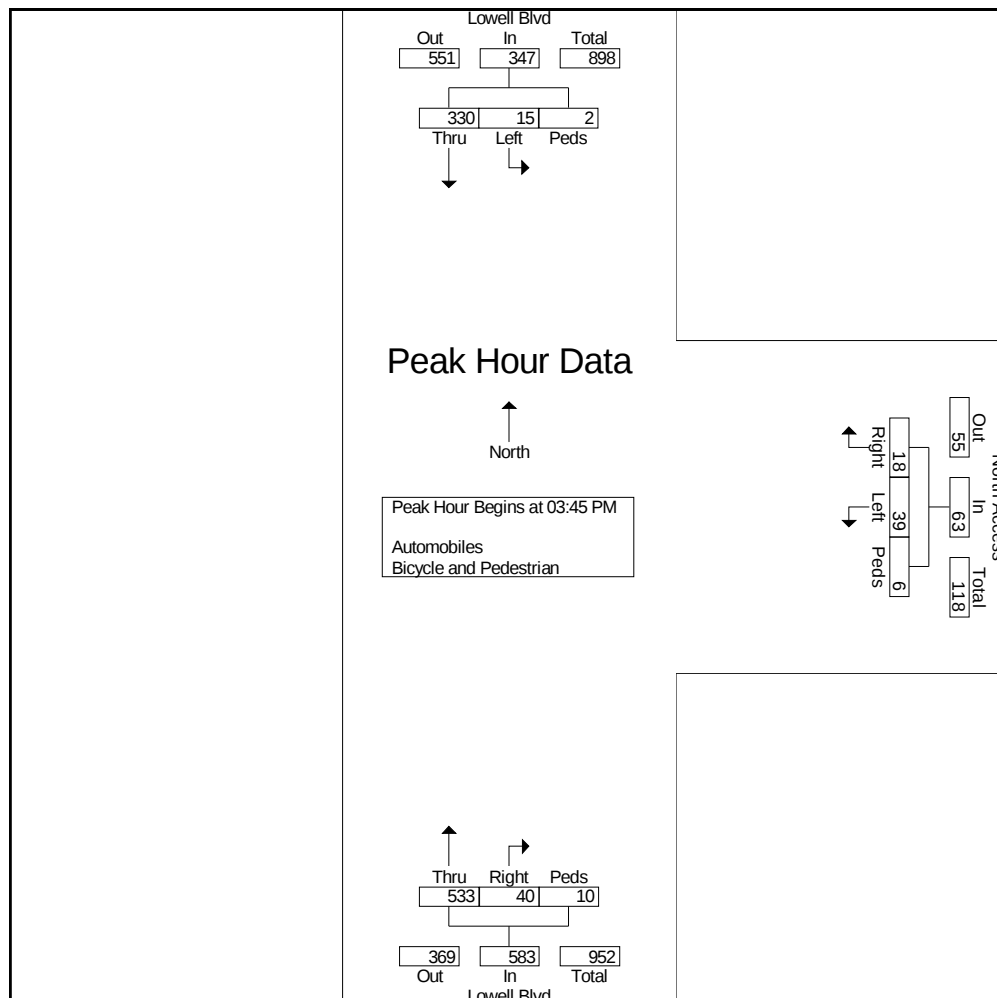


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	North Access Westbound				Lowell Blvd Northbound				Lowell Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:45 PM													
03:45 PM	17	4	2	23	137	5	6	148	1	92	0	93	264
04:00 PM	7	6	1	14	139	7	1	147	5	74	0	79	240
04:15 PM	8	3	1	12	124	12	1	137	3	76	1	80	229
04:30 PM	7	5	2	14	133	16	2	151	6	88	1	95	260
Total Volume	39	18	6	63	533	40	10	583	15	330	2	347	993
% App. Total	61.9	28.6	9.5		91.4	6.9	1.7		4.3	95.1	0.6		
PHF	.574	.750	.750	.685	.959	.625	.417	.965	.625	.897	.500	.913	.940





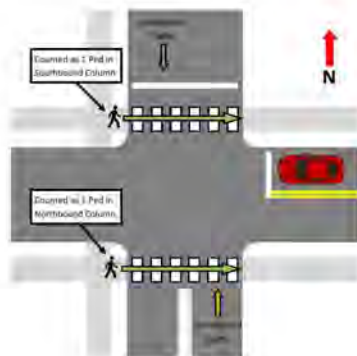
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Lowell Blvd & North Access

File Name : Lowell Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





File Name : Federal Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

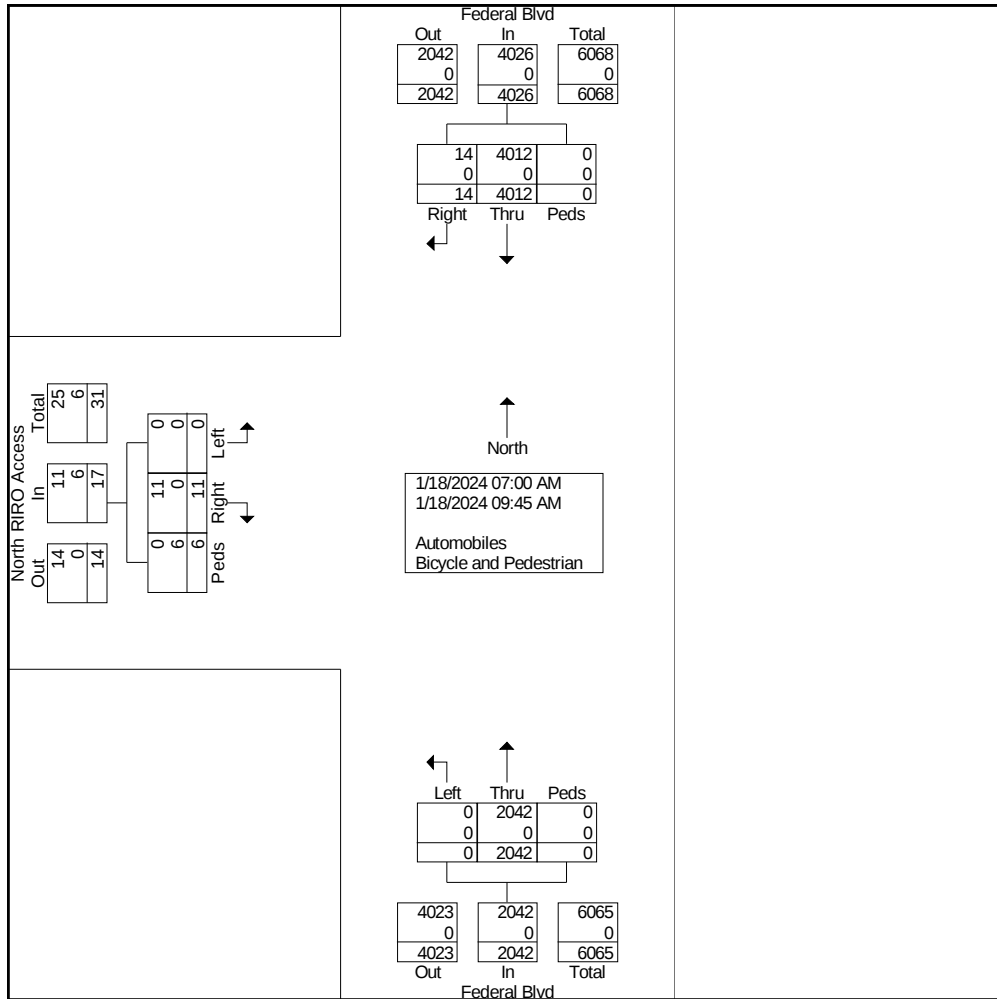
[illegible]



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & North RIRO Access

File Name : Federal Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



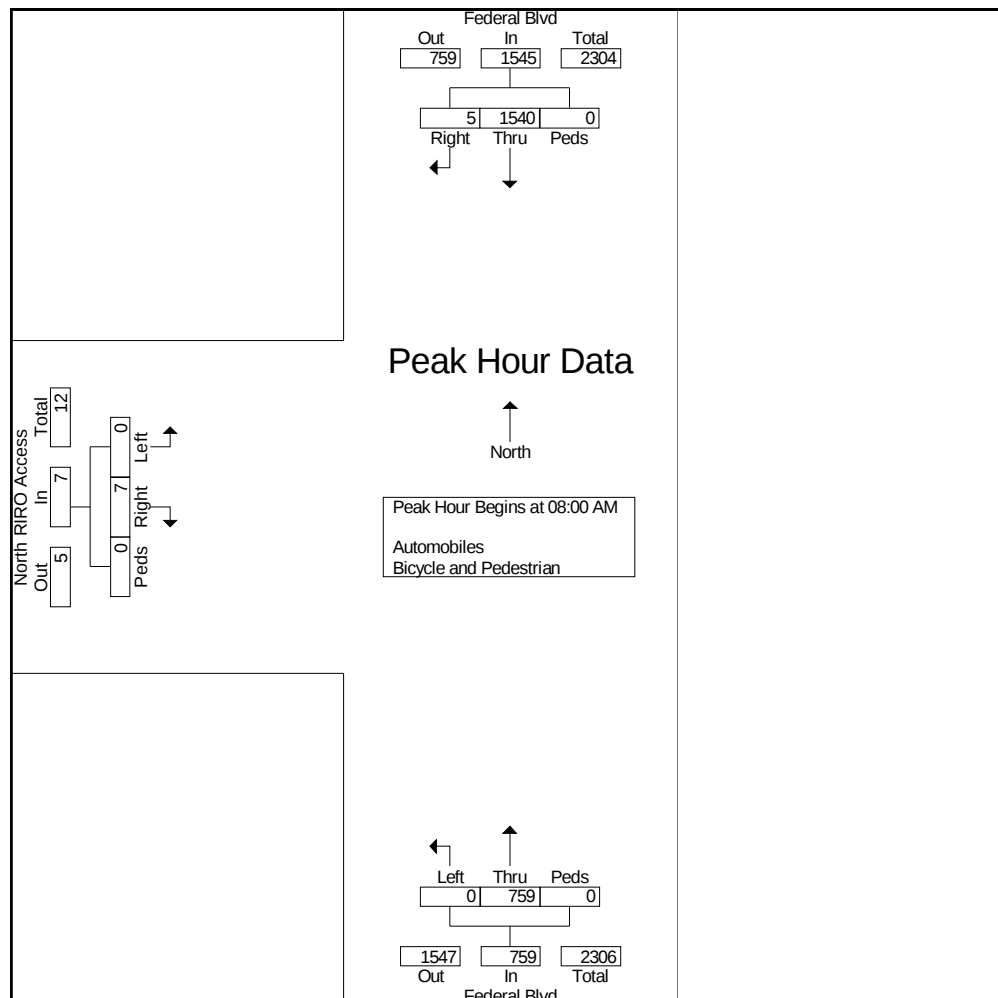


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & North RIRO Access

File Name : Federal Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	North RIRO Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	2	0	2	0	189	0	189	418	2	0	420	611
08:15 AM	0	2	0	2	0	174	0	174	368	2	0	370	546
08:30 AM	0	2	0	2	0	220	0	220	368	1	0	369	591
08:45 AM	0	1	0	1	0	176	0	176	386	0	0	386	563
Total Volume	0	7	0	7	0	759	0	759	1540	5	0	1545	2311
% App. Total	0	100	0		0	100	0		99.7	0.3	0		
PHF	.000	.875	.000	.875	.000	.863	.000	.863	.921	.625	.000	.920	.946





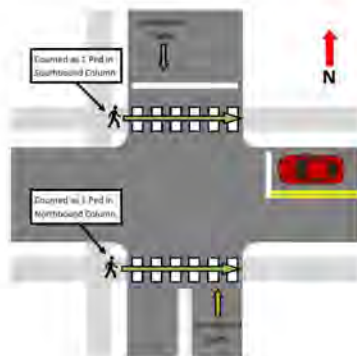
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & North RIRO Access

File Name : Federal Blvd & North Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





File Name : Federal Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

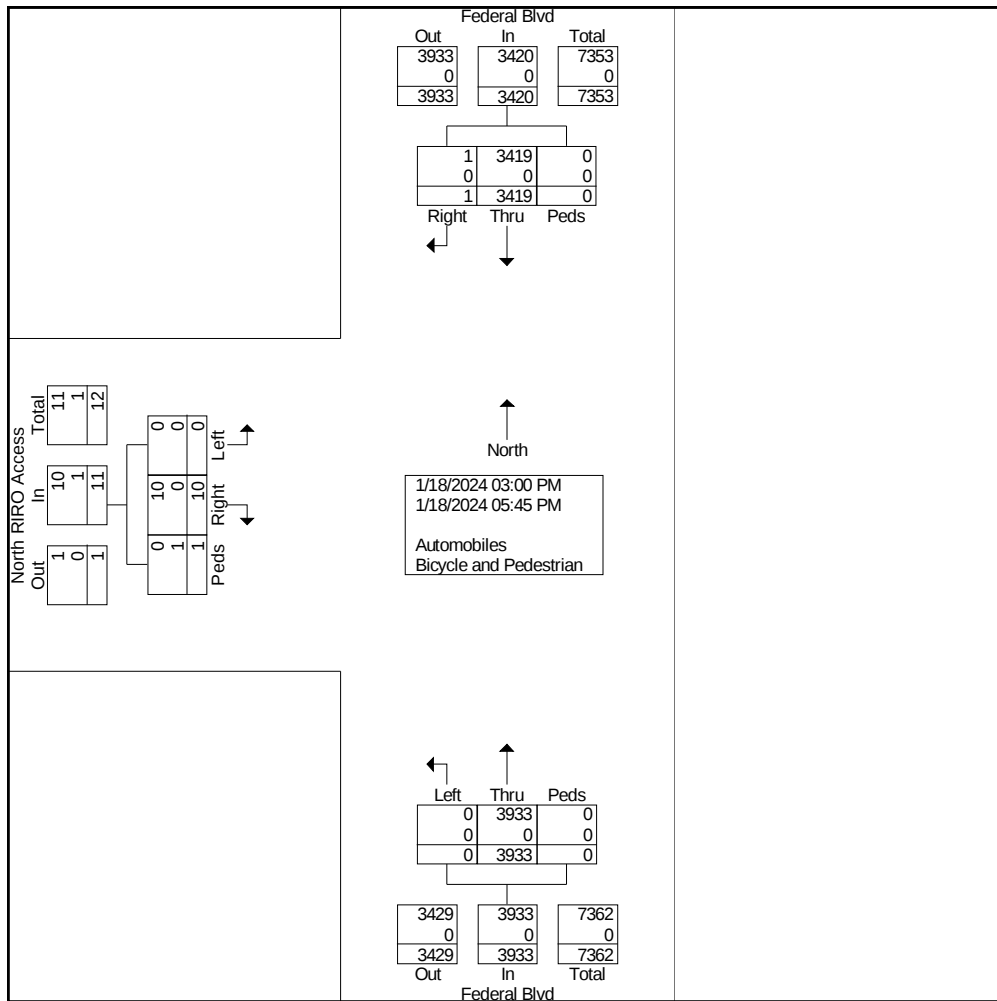
[illegible]



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & North RIRO Access

File Name : Federal Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



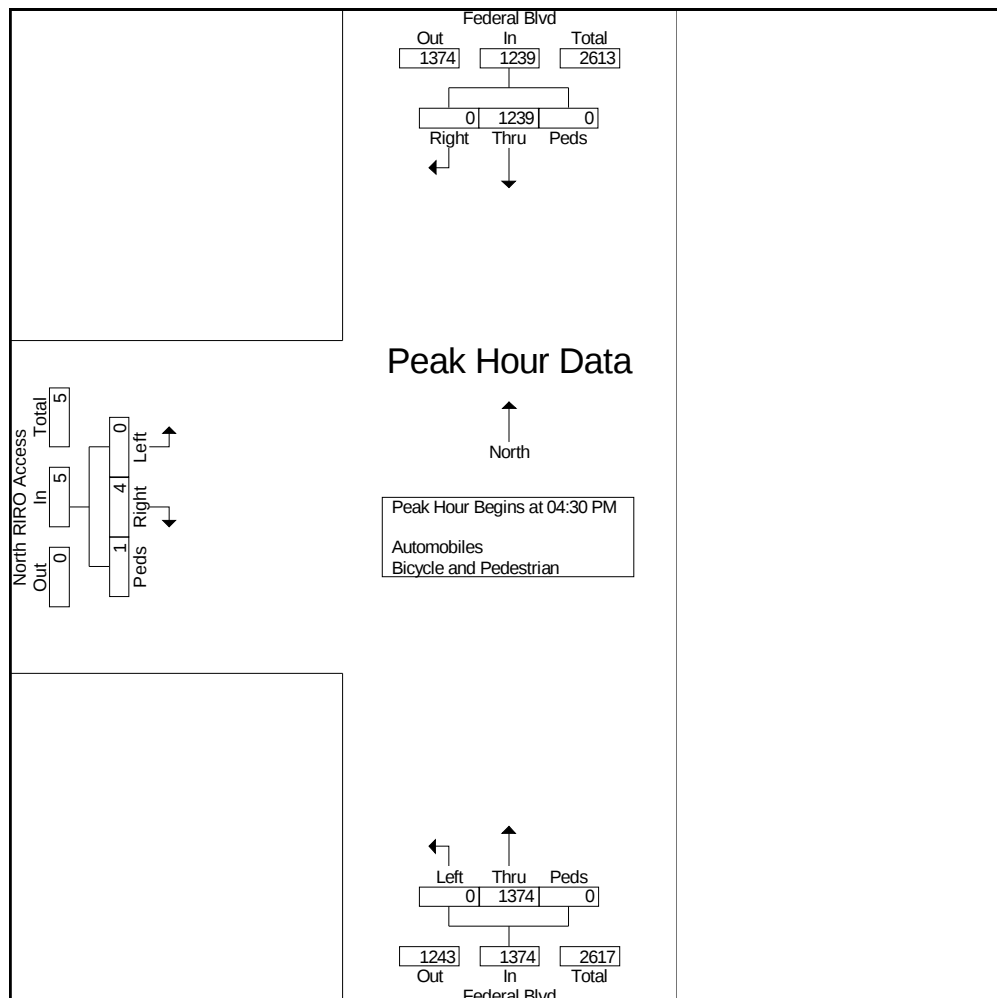


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & North RIRO Access

File Name : Federal Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	North RIRO Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	1	0	1	0	357	0	357	343	0	0	343	701
04:45 PM	0	1	1	2	0	332	0	332	310	0	0	310	644
05:00 PM	0	2	0	2	0	329	0	329	295	0	0	295	626
05:15 PM	0	0	0	0	0	356	0	356	291	0	0	291	647
Total Volume	0	4	1	5	0	1374	0	1374	1239	0	0	1239	2618
% App. Total	0	80	20		0	100	0		100	0	0		
PHF	.000	.500	.250	.625	.000	.962	.000	.962	.903	.000	.000	.903	.934





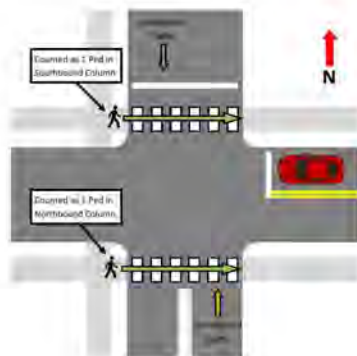
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & North RIRO Access

File Name : Federal Blvd & North Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

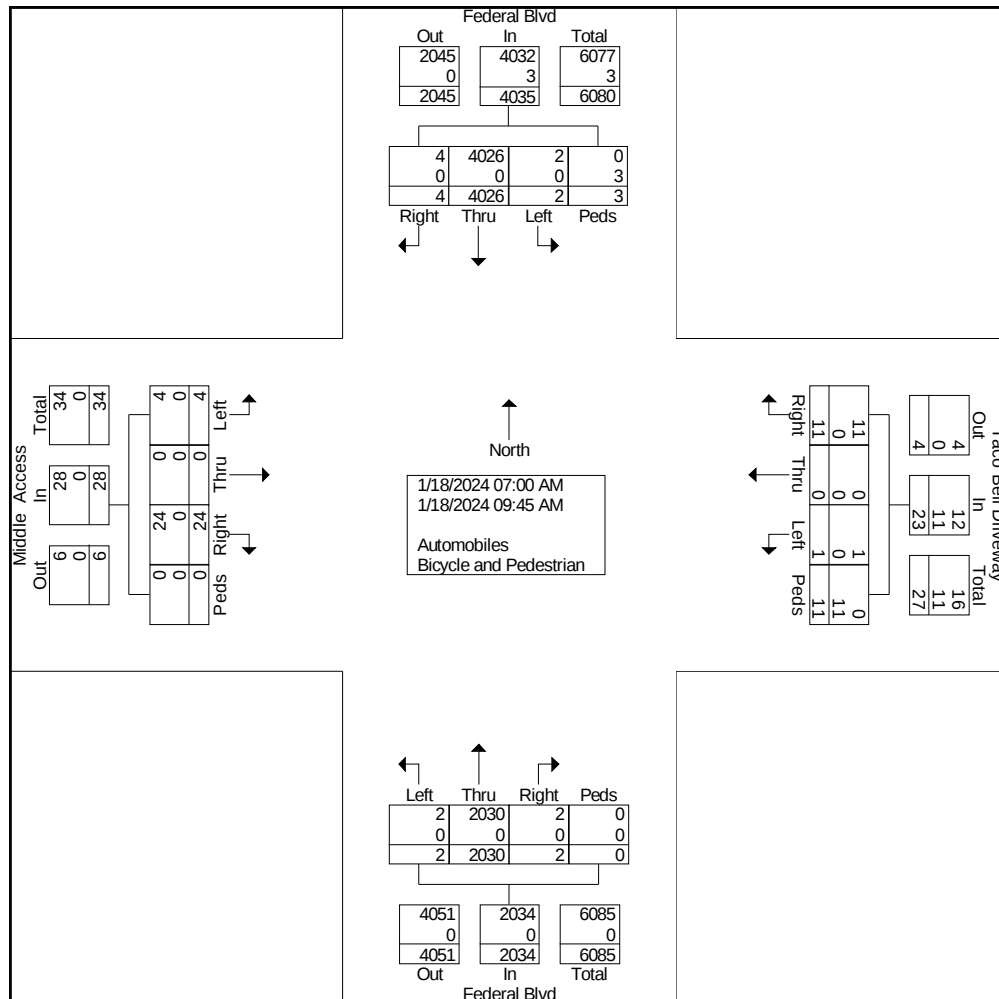
	Middle Access Eastbound					Taco Bell Driveway Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	2	0	2	0	0	0	1	1	0	133	0	0	133	0	344	0	0	344	480
07:15 AM	1	0	2	0	3	0	0	1	0	1	0	165	0	0	165	0	419	0	0	419	588
07:30 AM	0	0	2	0	2	0	0	0	0	0	0	184	1	0	185	0	408	0	0	408	595
07:45 AM	0	0	1	0	1	0	0	2	0	2	1	175	1	0	177	1	342	1	1	345	525
Total	1	0	7	0	8	0	0	3	1	4	1	657	2	0	660	1	1513	1	1	1516	2188
08:00 AM	1	0	5	0	6	0	0	0	1	1	0	181	0	0	181	0	422	0	0	422	610
08:15 AM	0	0	3	0	3	0	0	0	3	3	0	177	0	0	177	0	369	0	0	369	552
08:30 AM	0	0	4	0	4	0	0	0	1	1	0	212	0	0	212	0	366	0	0	366	583
08:45 AM	0	0	0	0	0	0	0	1	0	1	1	185	0	0	186	1	389	1	0	391	578
Total	1	0	12	0	13	0	0	1	5	6	1	755	0	0	756	1	1546	1	0	1548	2323
09:00 AM	2	0	0	0	2	0	0	3	3	6	0	170	0	0	170	0	296	2	1	299	477
09:15 AM	0	0	4	0	4	1	0	1	0	2	0	143	0	0	143	0	253	0	0	253	402
09:30 AM	0	0	0	0	0	0	0	3	0	3	0	160	0	0	160	0	210	0	1	211	374
09:45 AM	0	0	1	0	1	0	0	0	2	2	0	145	0	0	145	0	208	0	0	208	356
Total	2	0	5	0	7	1	0	7	5	13	0	618	0	0	618	0	967	2	2	971	1609
Grand Total	4	0	24	0	28	1	0	11	11	23	2	2030	2	0	2034	2	4026	4	3	4035	6120
Apprch %	14.3	0	85.7	0		4.3	0	47.8	47.8		0.1	99.8	0.1	0		0	99.8	0.1	0.1		
Total %	0.1	0	0.4	0	0.5	0	0	0.2	0.2	0.4	0	33.2	0	0	33.2	0	65.8	0.1	0	65.9	
Automobiles	4	0	24	0	28	1	0	11	0	12	2	2030	2	0	2034	2	4026	4	0	4032	6106
% Automobiles	100	0	100	0	100	100	0	100	0	52.2	100	100	100	0	100	100	100	100	0	99.9	99.8
Bicycle and Pedestrian	0	0	0	0	0	0	0	0	11	11	0	0	0	0	0	0	0	0	3	3	14
% Bicycle and Pedestrian	0	0	0	0	0	0	0	0	100	47.8	0	0	0	0	0	0	0	0	100	0.1	0.2



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



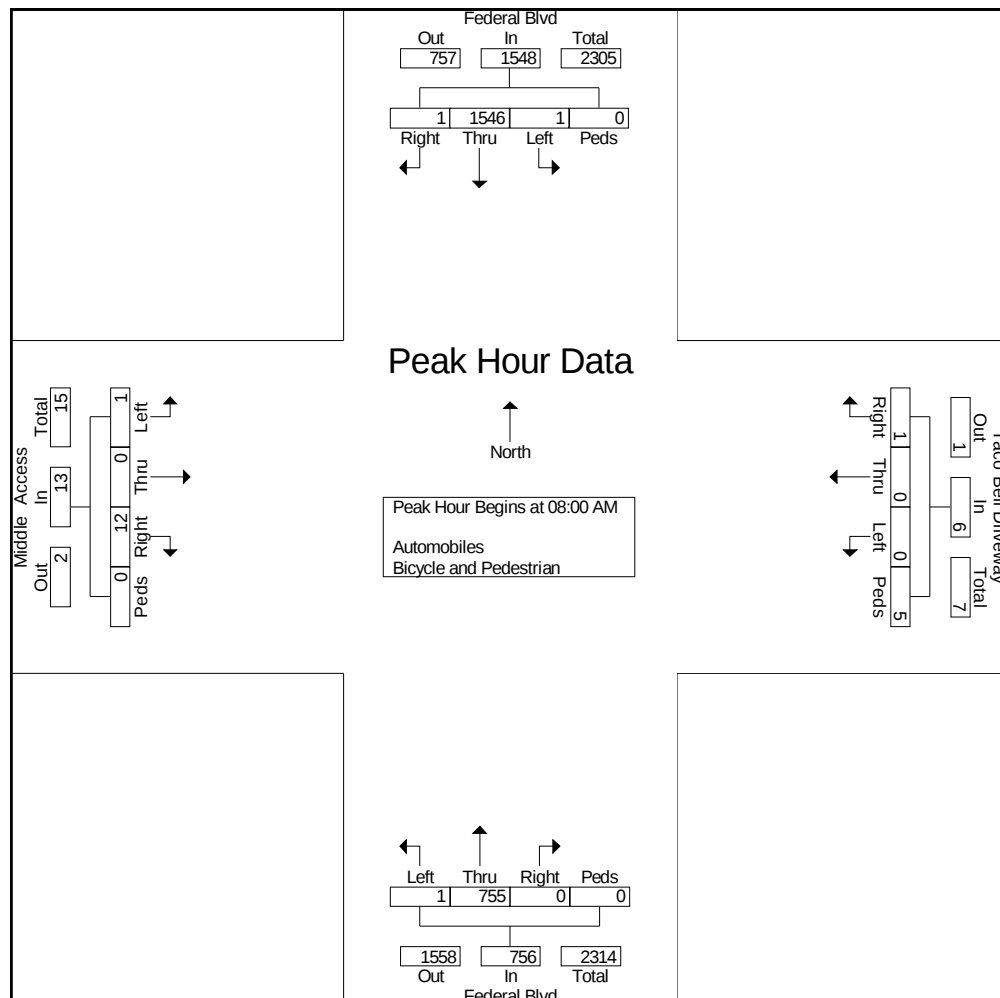


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Middle Access Eastbound					Taco Bell Driveway Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	5	0	6	0	0	0	1	1	0	181	0	0	181	0	422	0	0	422	610
08:15 AM	0	0	3	0	3	0	0	0	3	3	0	177	0	0	177	0	369	0	0	369	552
08:30 AM	0	0	4	0	4	0	0	0	1	1	0	212	0	0	212	0	366	0	0	366	583
08:45 AM	0	0	0	0	0	0	0	1	0	1	1	185	0	0	186	1	389	1	0	391	578
Total Volume	1	0	12	0	13	0	0	1	5	6	1	755	0	0	756	1	1546	1	0	1548	2323
% App. Total	7.7	0	92.3	0		0	0	16.7	83.3		0.1	99.9	0	0		0.1	99.9	0.1	0		
PHF	.250	.000	.600	.000	.542	.000	.000	.250	.417	.500	.250	.890	.000	.000	.892	.250	.916	.250	.000	.917	.952





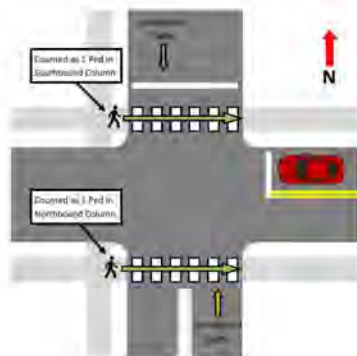
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

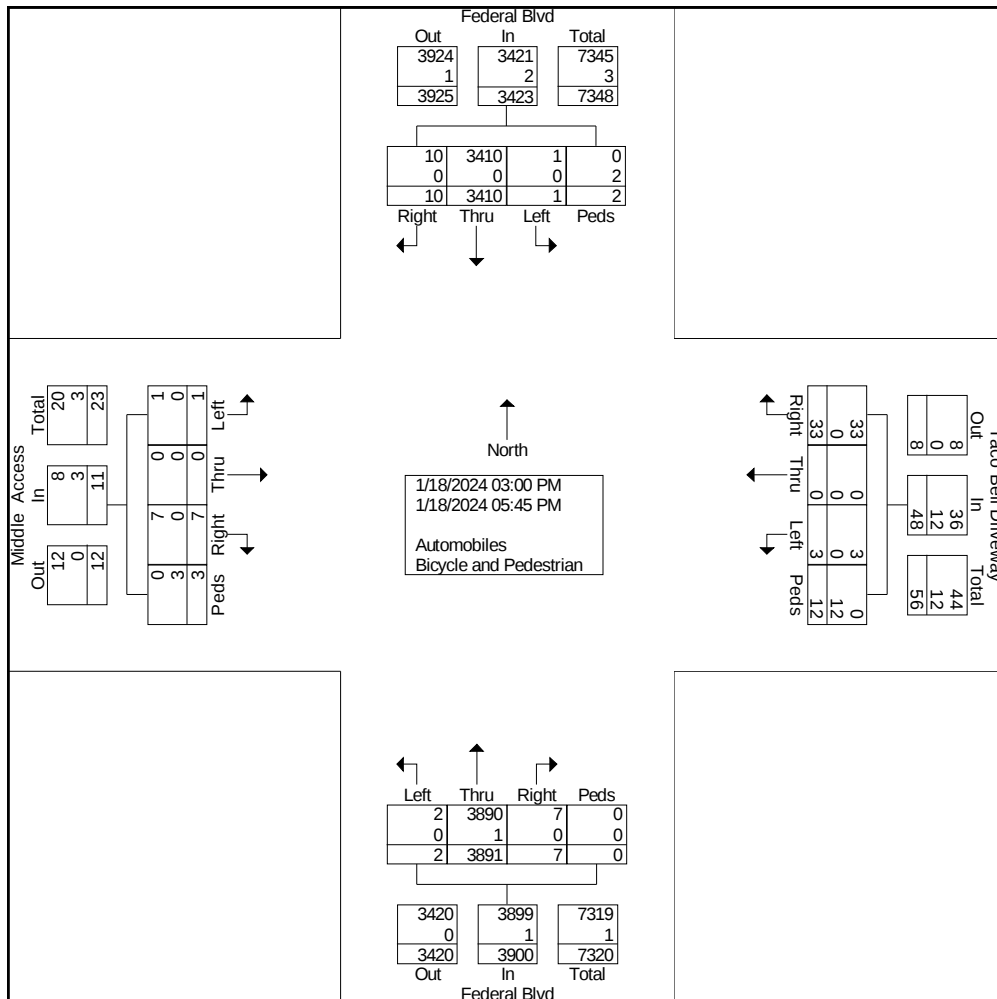
	Middle Access Eastbound					Taco Bell Driveway Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	1	0	1	0	0	1	0	1	0	234	3	0	237	0	222	1	0	223	462
03:15 PM	0	0	0	0	0	0	0	3	4	7	0	277	1	0	278	0	256	0	0	256	541
03:30 PM	0	0	1	0	1	0	0	3	3	6	0	335	1	0	336	1	289	0	1	291	634
03:45 PM	0	0	1	1	2	0	0	3	0	3	0	341	1	0	342	0	311	3	1	315	662
Total	0	0	3	1	4	0	0	10	7	17	0	1187	6	0	1193	1	1078	4	2	1085	2299
04:00 PM	0	0	0	0	0	0	0	1	0	1	1	330	0	0	331	0	285	0	0	285	617
04:15 PM	0	0	0	0	0	0	0	3	1	4	0	321	1	0	322	0	221	0	0	221	547
04:30 PM	0	0	0	0	0	1	0	2	1	4	0	359	0	0	359	0	334	1	0	335	698
04:45 PM	0	0	2	0	2	1	0	1	0	2	0	328	0	0	328	0	307	2	0	309	641
Total	0	0	2	0	2	2	0	7	2	11	1	1338	1	0	1340	0	1147	3	0	1150	2503
05:00 PM	1	0	2	0	3	0	0	4	2	6	0	316	0	0	316	0	292	0	0	292	617
05:15 PM	0	0	0	0	0	1	0	4	0	5	0	360	0	0	360	0	291	1	0	292	657
05:30 PM	0	0	0	0	0	0	0	2	0	2	1	360	0	0	361	0	293	2	0	295	658
05:45 PM	0	0	0	2	2	0	0	6	1	7	0	330	0	0	330	0	309	0	0	309	648
Total	1	0	2	2	5	1	0	16	3	20	1	1366	0	0	1367	0	1185	3	0	1188	2580
Grand Total	1	0	7	3	11	3	0	33	12	48	2	3891	7	0	3900	1	3410	10	2	3423	7382
Apprch %	9.1	0	63.6	27.3		6.2	0	68.8	25		0.1	99.8	0.2	0		0	99.6	0.3	0.1		
Total %	0	0	0.1	0	0.1	0	0	0.4	0.2	0.7	0	52.7	0.1	0	52.8	0	46.2	0.1	0	46.4	
Automobiles	1	0	7	0	8	3	0	33	0	36	2	3890	7	0	3899	1	3410	10	0	3421	7364
% Automobiles	100	0	100	0	72.7	100	0	100	0	75	100	100	100	0	100	100	100	100	0	99.9	99.8
Bicycle and Pedestrian	0	0	0	3	3	0	0	0	12	12	0	1	0	0	1	0	0	0	2	2	18
% Bicycle and Pedestrian	0	0	0	100	27.3	0	0	0	100	25	0	0	0	0	0	0	0	0	100	0.1	0.2



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



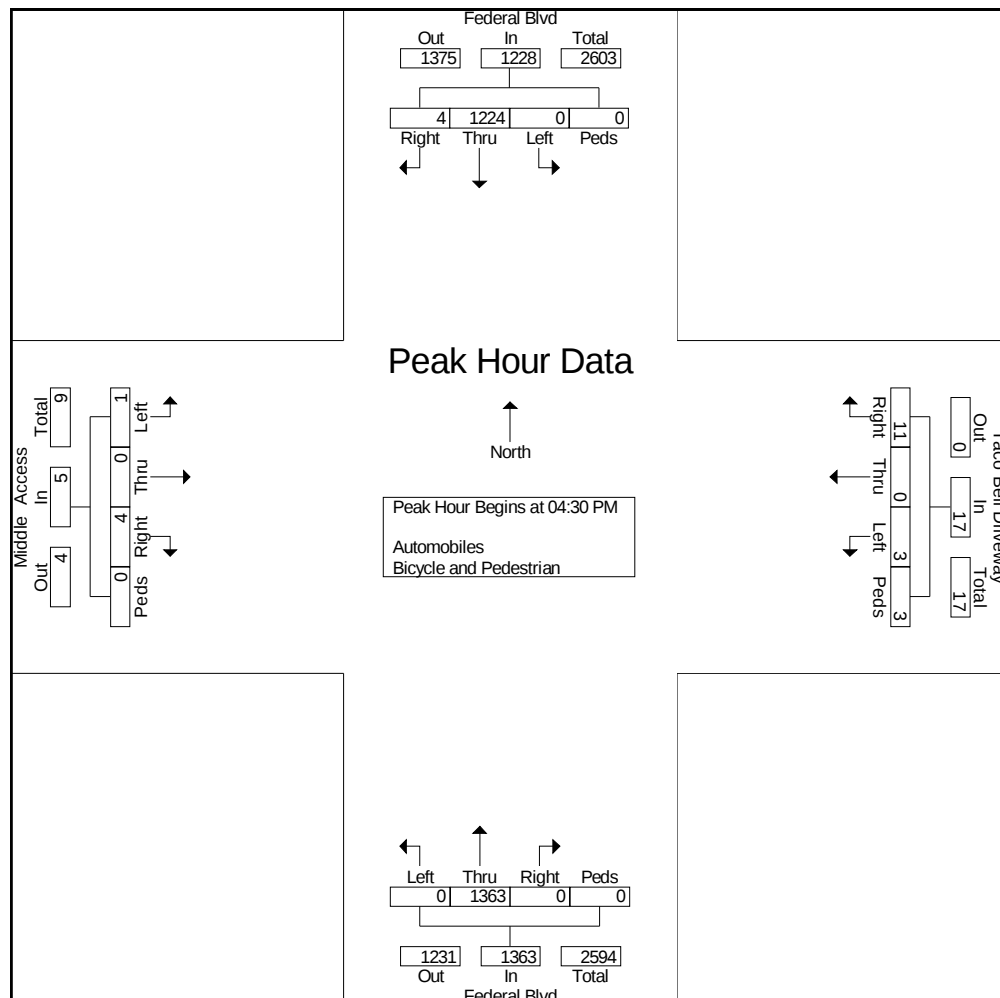


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Middle Access Eastbound					Taco Bell Driveway Westbound					Federal Blvd Northbound					Federal Blvd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	1	0	2	1	4	0	359	0	0	359	0	334	1	0	335	698
04:45 PM	0	0	2	0	2	1	0	1	0	2	0	328	0	0	328	0	307	2	0	309	641
05:00 PM	1	0	2	0	3	0	0	4	2	6	0	316	0	0	316	0	292	0	0	292	617
05:15 PM	0	0	0	0	0	1	0	4	0	5	0	360	0	0	360	0	291	1	0	292	657
Total Volume	1	0	4	0	5	3	0	11	3	17	0	1363	0	0	1363	0	1224	4	0	1228	2613
% App. Total	20	0	80	0		17.6	0	64.7	17.6		0	100	0	0		0	99.7	0.3	0		
PHF	.250	.000	.500	.000	.417	.750	.000	.688	.375	.708	.000	.947	.000	.000	.947	.000	.916	.500	.000	.916	.936





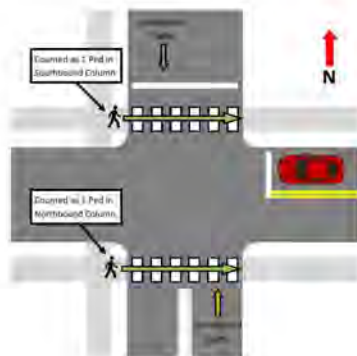
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & Middle Access

File Name : Federal Blvd & Middle Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





File Name : Federal Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

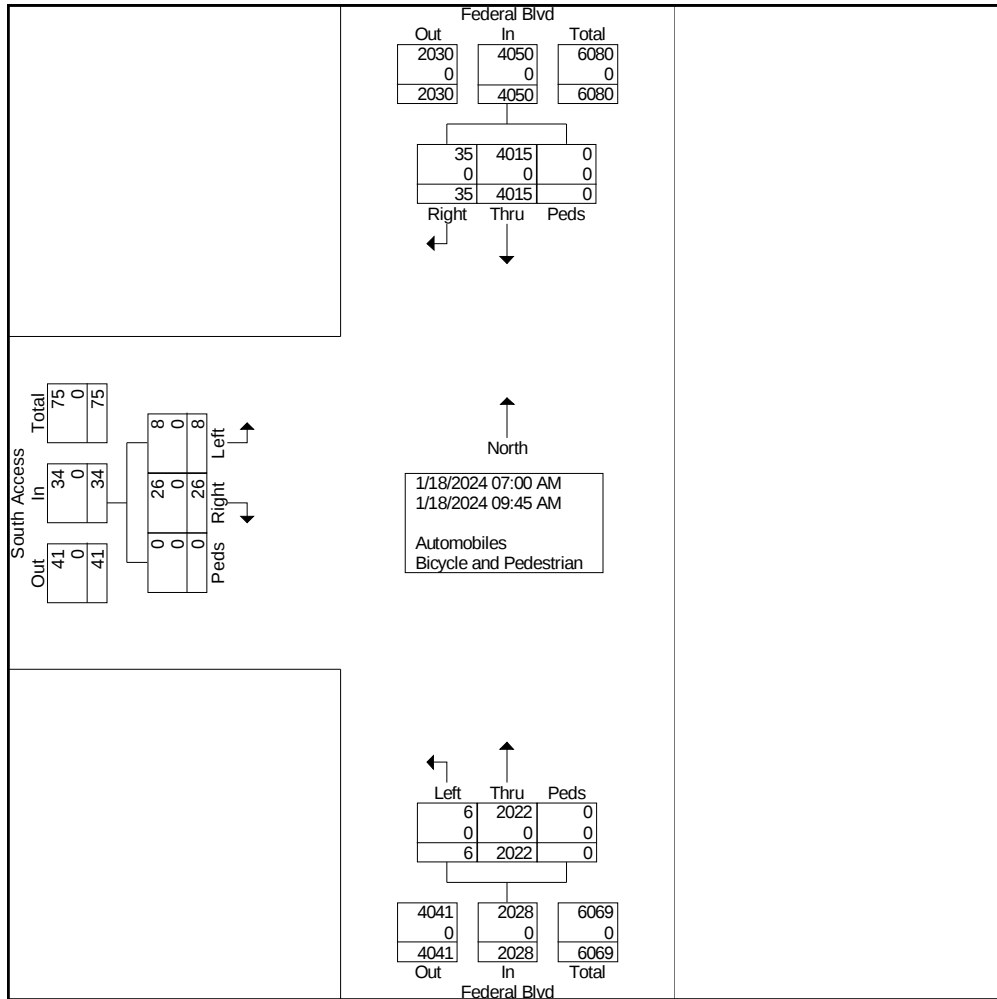
[illegible]



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & South Access

File Name : Federal Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



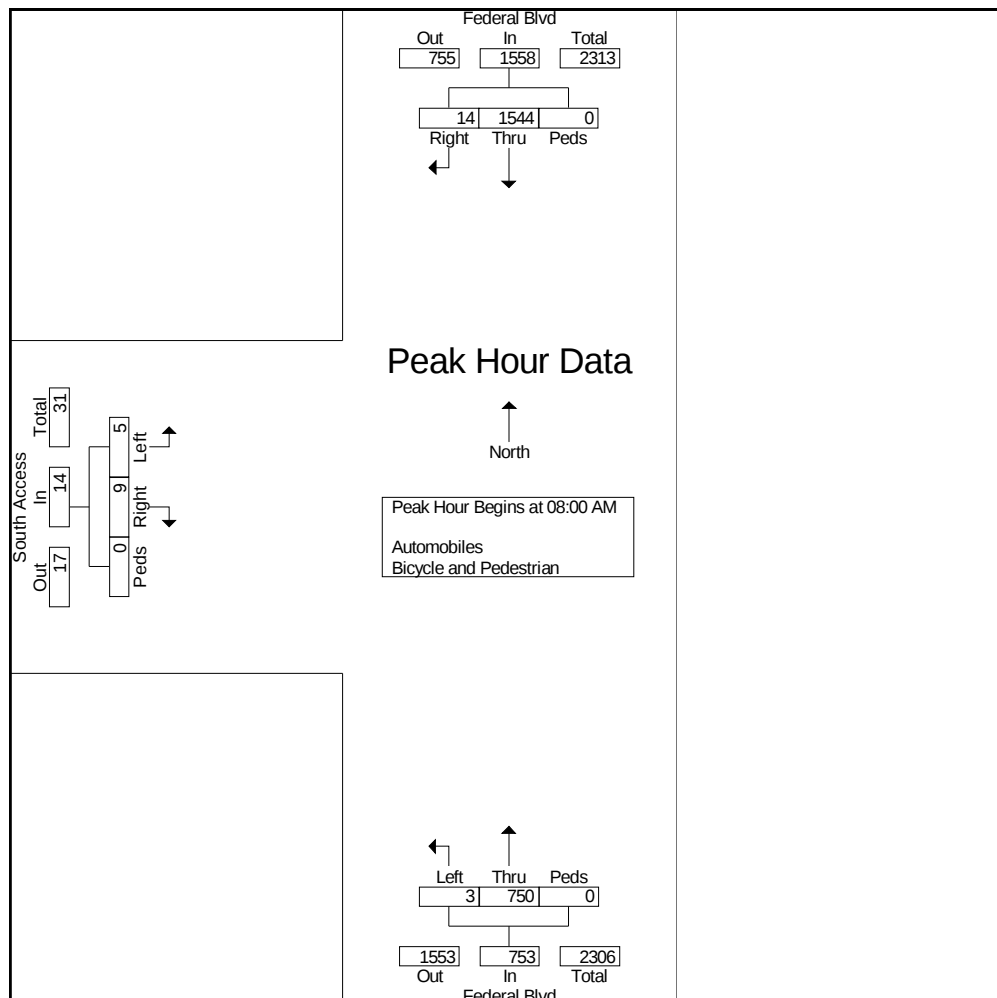


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & South Access

File Name : Federal Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	South Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	3	0	3	2	181	0	183	424	3	0	427	613
08:15 AM	2	3	0	5	1	175	0	176	370	2	0	372	553
08:30 AM	1	1	0	2	0	211	0	211	370	0	0	370	583
08:45 AM	2	2	0	4	0	183	0	183	380	9	0	389	576
Total Volume	5	9	0	14	3	750	0	753	1544	14	0	1558	2325
% App. Total	35.7	64.3	0		0.4	99.6	0		99.1	0.9	0		
PHF	.625	.750	.000	.700	.375	.889	.000	.892	.910	.389	.000	.912	.948





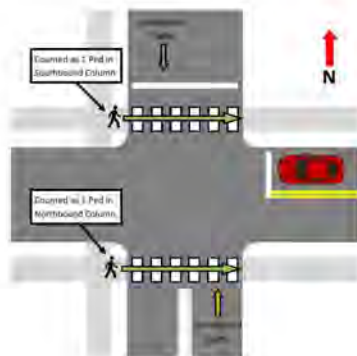
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & South Access

File Name : Federal Blvd & South Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.

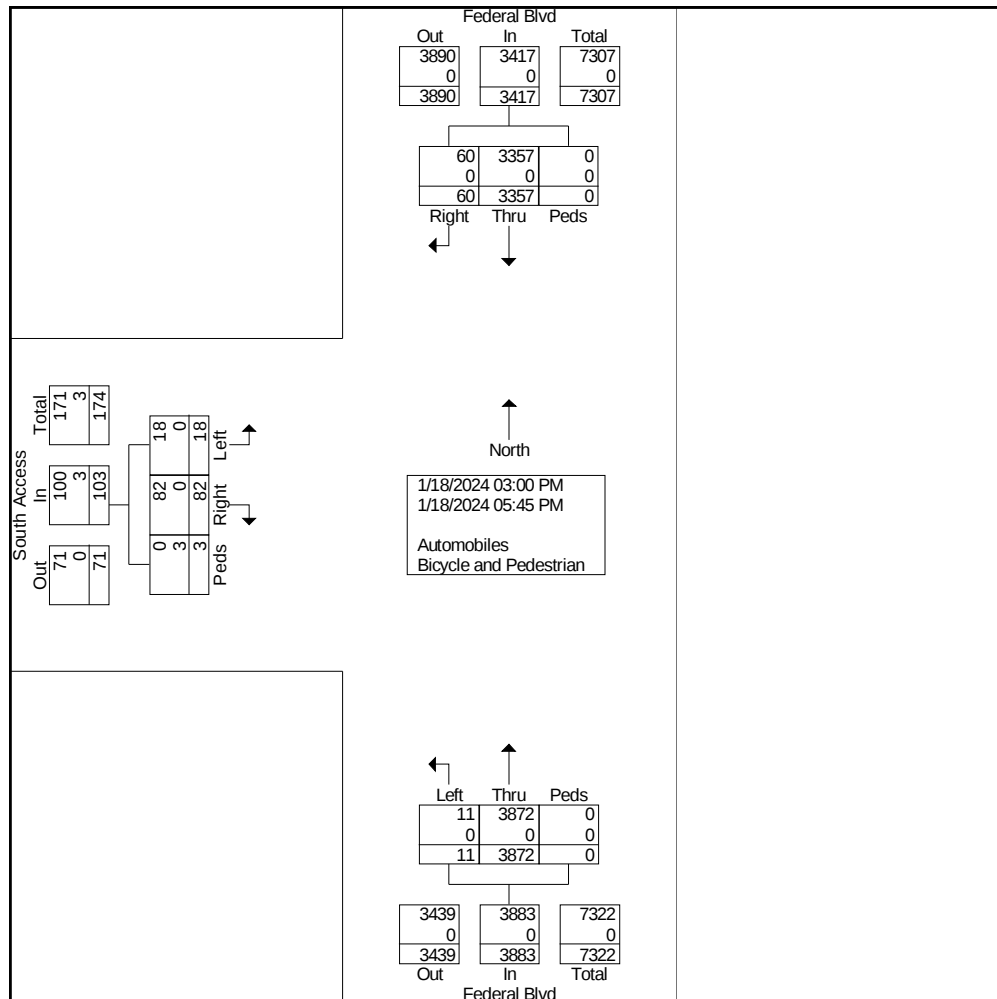




Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & South Access

File Name : Federal Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



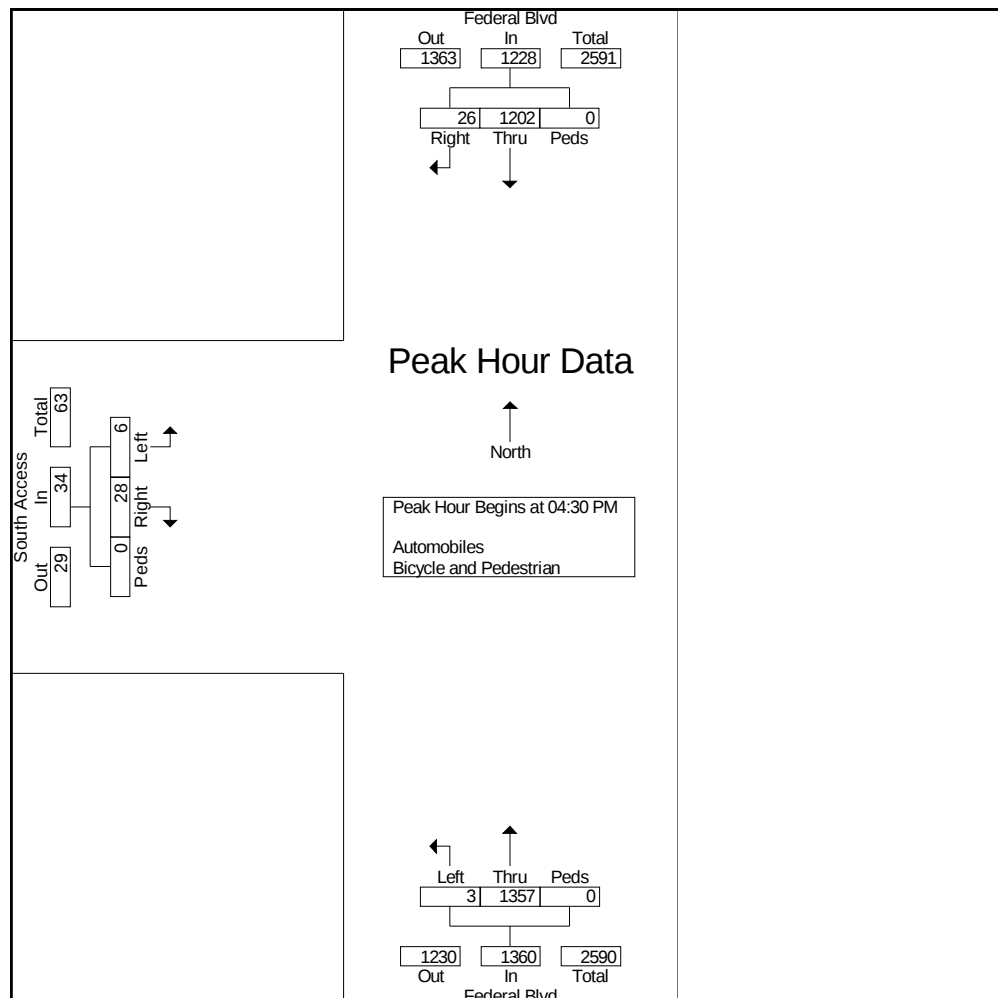


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & South Access

File Name : Federal Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	South Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	1	6	0	7	1	358	0	359	327	7	0	334	700
04:45 PM	3	7	0	10	1	325	0	326	302	7	0	309	645
05:00 PM	0	8	0	8	0	316	0	316	284	10	0	294	618
05:15 PM	2	7	0	9	1	358	0	359	289	2	0	291	659
Total Volume	6	28	0	34	3	1357	0	1360	1202	26	0	1228	2622
% App. Total	17.6	82.4	0		0.2	99.8	0		97.9	2.1	0		
PHF	.500	.875	.000	.850	.750	.948	.000	.947	.919	.650	.000	.919	.936





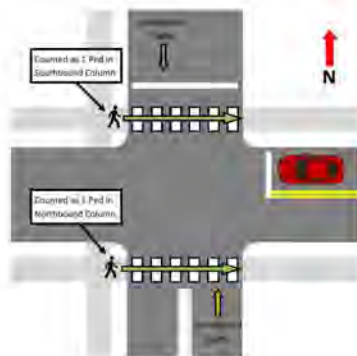
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & South Access

File Name : Federal Blvd & South Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

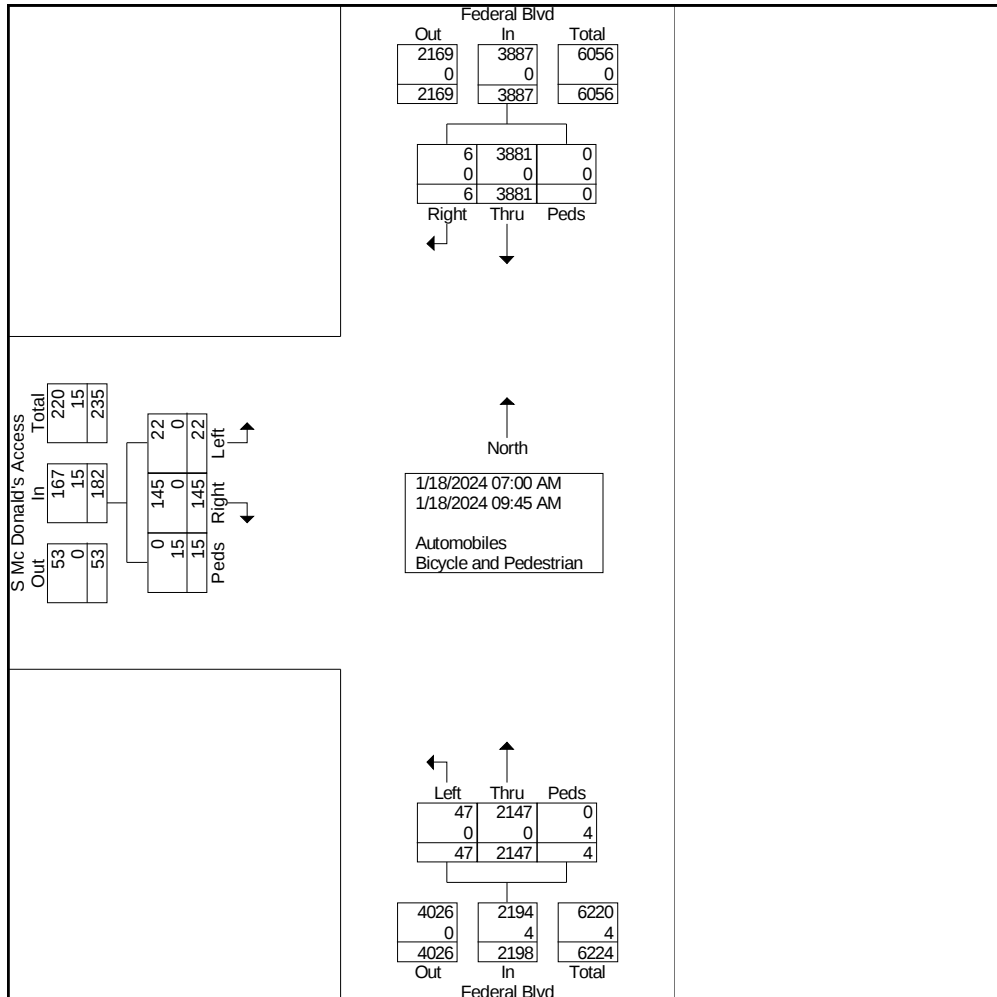
	S Mc Donald's Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	8	0	10	3	131	0	134	331	1	0	332	476
07:15 AM	0	13	0	13	5	178	0	183	403	0	0	403	599
07:30 AM	0	11	3	14	1	195	0	196	384	1	0	385	595
07:45 AM	1	13	2	16	2	195	0	197	347	0	0	347	560
Total	3	45	5	53	11	699	0	710	1465	2	0	1467	2230
08:00 AM	1	11	2	14	3	189	2	194	391	0	0	391	599
08:15 AM	1	18	1	20	4	198	0	202	368	0	0	368	590
08:30 AM	1	11	2	14	3	215	0	218	367	1	0	368	600
08:45 AM	3	17	2	22	5	194	0	199	377	0	0	377	598
Total	6	57	7	70	15	796	2	813	1503	1	0	1504	2387
09:00 AM	3	13	2	18	5	178	1	184	273	2	0	275	477
09:15 AM	0	14	0	14	3	157	1	161	241	0	0	241	416
09:30 AM	5	9	1	15	8	170	0	178	202	0	0	202	395
09:45 AM	5	7	0	12	5	147	0	152	197	1	0	198	362
Total	13	43	3	59	21	652	2	675	913	3	0	916	1650
Grand Total	22	145	15	182	47	2147	4	2198	3881	6	0	3887	6267
Apprch %	12.1	79.7	8.2		2.1	97.7	0.2		99.8	0.2	0		
Total %	0.4	2.3	0.2	2.9	0.7	34.3	0.1	35.1	61.9	0.1	0	62	
Automobiles	22	145	0	167	47	2147	0	2194	3881	6	0	3887	6248
% Automobiles	100	100	0	91.8	100	100	0	99.8	100	100	0	100	99.7
Bicycle and Pedestrian	0	0	15	15	0	0	4	4	0	0	0	0	19
% Bicycle and Pedestrian	0	0	100	8.2	0	0	100	0.2	0	0	0	0	0.3



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



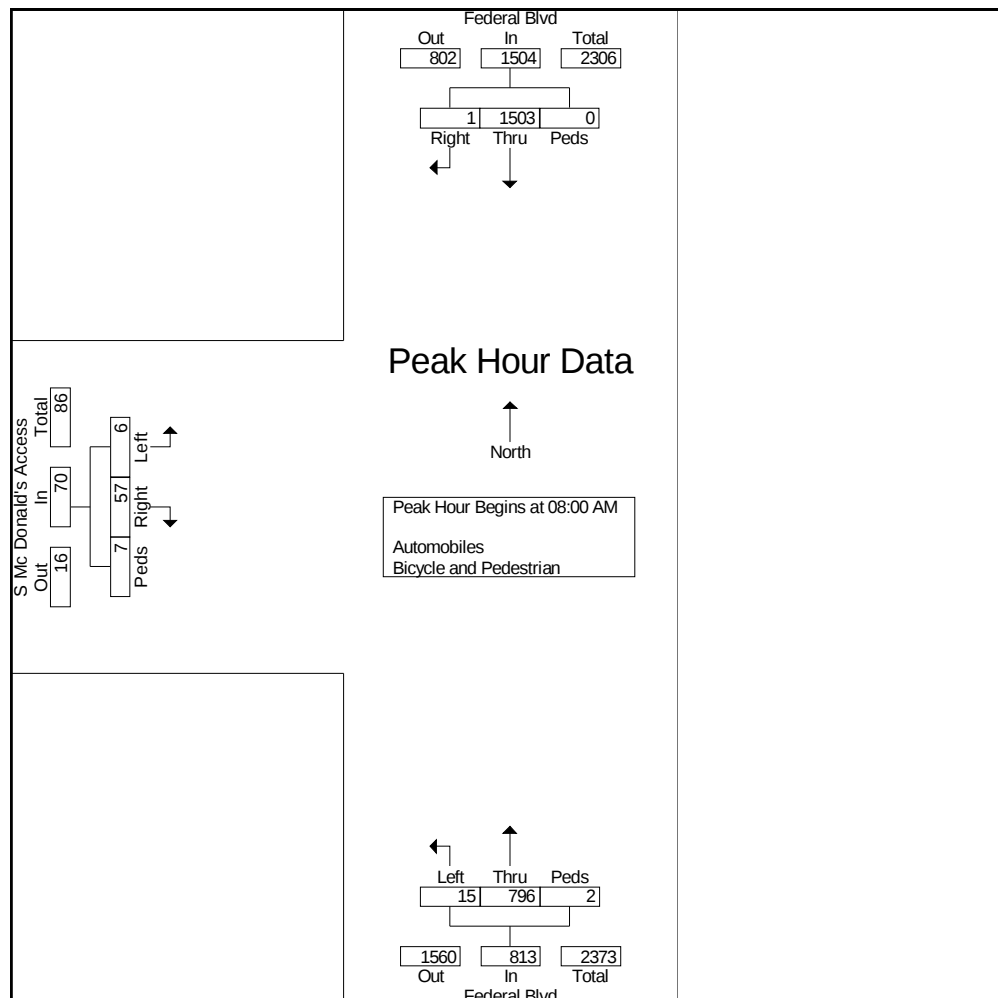


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	S Mc Donald's Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	1	11	2	14	3	189	2	194	391	0	0	391	599
08:15 AM	1	18	1	20	4	198	0	202	368	0	0	368	590
08:30 AM	1	11	2	14	3	215	0	218	367	1	0	368	600
08:45 AM	3	17	2	22	5	194	0	199	377	0	0	377	598
Total Volume	6	57	7	70	15	796	2	813	1503	1	0	1504	2387
% App. Total	8.6	81.4	10		1.8	97.9	0.2		99.9	0.1	0		
PHF	.500	.792	.875	.795	.750	.926	.250	.932	.961	.250	.000	.962	.995





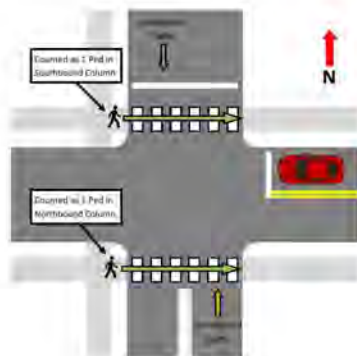
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

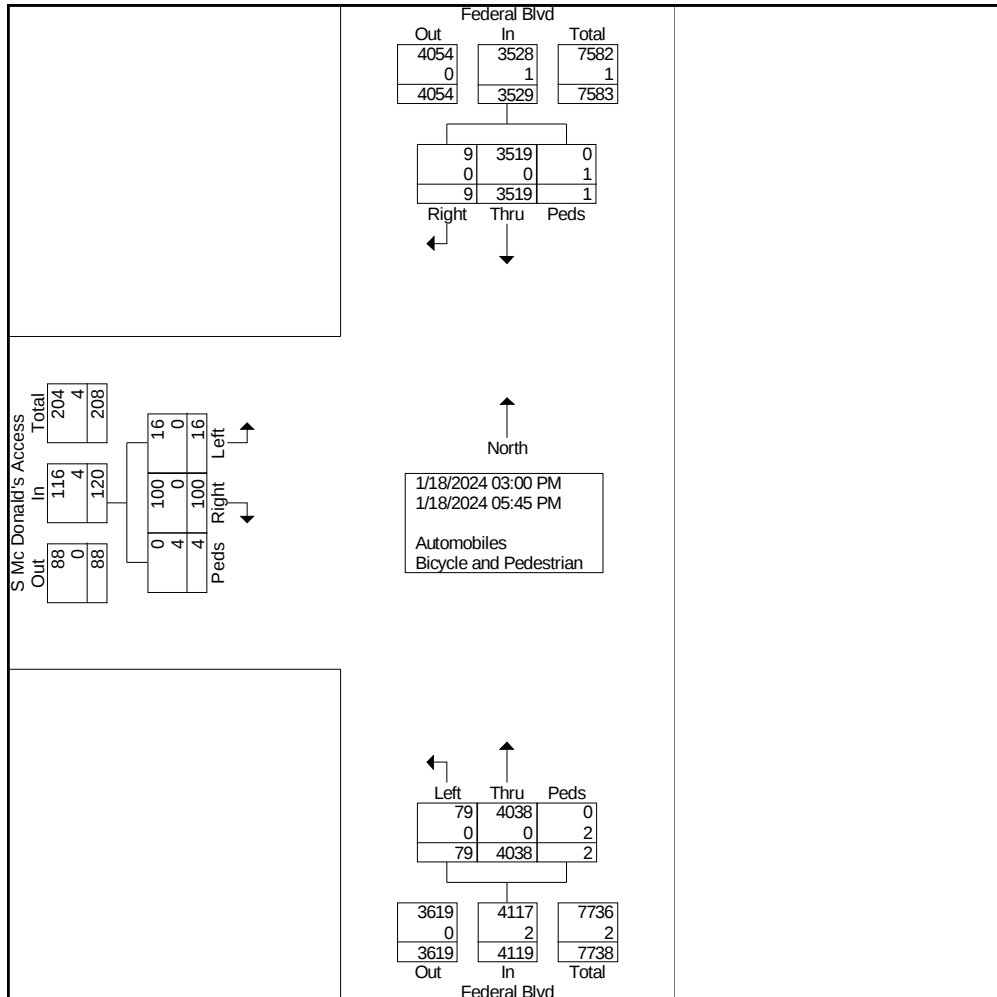
	S Mc Donald's Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	1	7	2	10	6	251	0	257	241	1	1	243	510
03:15 PM	1	5	0	6	2	288	0	290	263	0	0	263	559
03:30 PM	3	12	0	15	6	340	1	347	294	0	0	294	656
03:45 PM	1	8	0	9	13	334	0	347	304	1	0	305	661
Total	6	32	2	40	27	1213	1	1241	1102	2	1	1105	2386
04:00 PM	1	12	0	13	7	347	0	354	293	1	0	294	661
04:15 PM	0	7	0	7	6	338	0	344	244	1	0	245	596
04:30 PM	1	6	0	7	5	368	0	373	341	2	0	343	723
04:45 PM	1	5	0	6	8	348	0	356	321	2	0	323	685
Total	3	30	0	33	26	1401	0	1427	1199	6	0	1205	2665
05:00 PM	1	8	2	11	6	334	0	340	306	0	0	306	657
05:15 PM	2	12	0	14	8	374	0	382	300	0	0	300	696
05:30 PM	2	9	0	11	8	371	1	380	302	0	0	302	693
05:45 PM	2	9	0	11	4	345	0	349	310	1	0	311	671
Total	7	38	2	47	26	1424	1	1451	1218	1	0	1219	2717
Grand Total	16	100	4	120	79	4038	2	4119	3519	9	1	3529	7768
Apprch %	13.3	83.3	3.3		1.9	98	0		99.7	0.3	0		
Total %	0.2	1.3	0.1	1.5	1	52	0	53	45.3	0.1	0	45.4	
Automobiles	16	100	0	116	79	4038	0	4117	3519	9	0	3528	7761
% Automobiles	100	100	0	96.7	100	100	0	100	100	100	0	100	99.9
Bicycle and Pedestrian	0	0	4	4	0	0	2	2	0	0	1	1	7
% Bicycle and Pedestrian	0	0	100	3.3	0	0	100	0	0	0	100	0	0.1



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



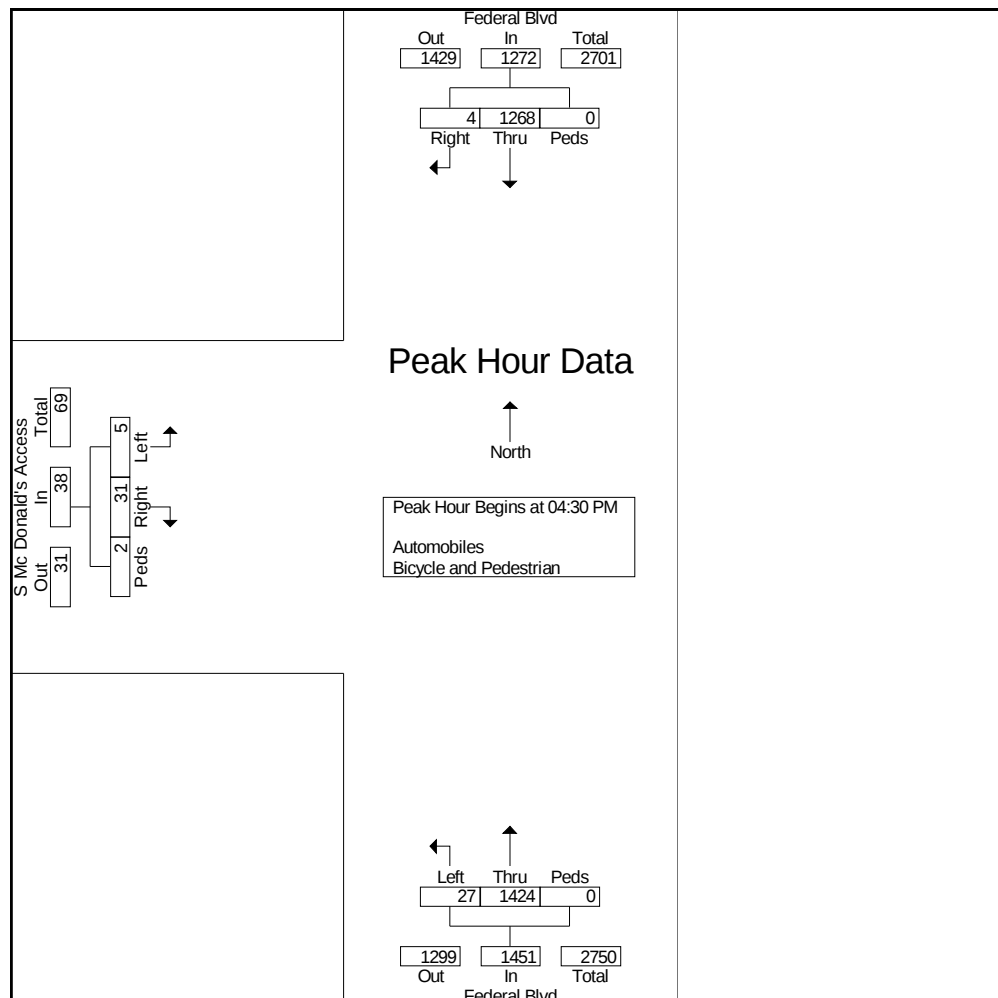


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	S Mc Donald's Access Eastbound				Federal Blvd Northbound				Federal Blvd Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	1	6	0	7	5	368	0	373	341	2	0	343	723
04:45 PM	1	5	0	6	8	348	0	356	321	2	0	323	685
05:00 PM	1	8	2	11	6	334	0	340	306	0	0	306	657
05:15 PM	2	12	0	14	8	374	0	382	300	0	0	300	696
Total Volume	5	31	2	38	27	1424	0	1451	1268	4	0	1272	2761
% App. Total	13.2	81.6	5.3		1.9	98.1	0		99.7	0.3	0		
PHF	.625	.646	.250	.679	.844	.952	.000	.950	.930	.500	.000	.927	.955





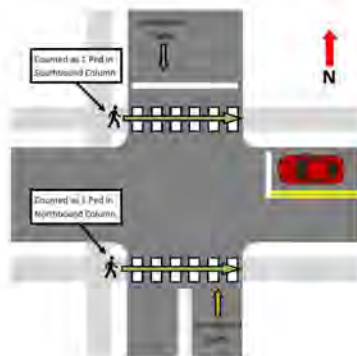
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Federal Blvd & S McDonald's Access

File Name : Federal Blvd & S McDonald's Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Denver, CO
 Regis University
 AM Peak
 Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access AM
 Site Code : IPO 660
 Start Date : 1/18/2024
 Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

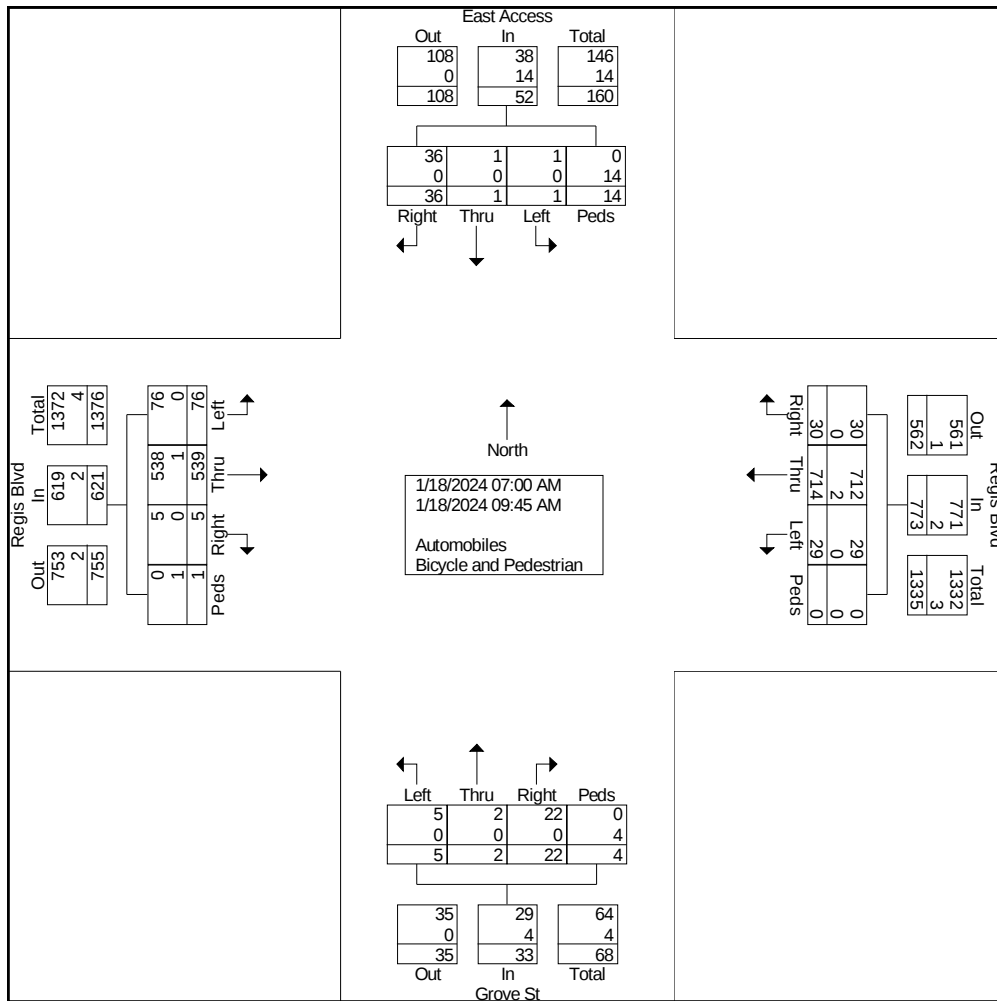
	Regis Blvd Eastbound					Regis Blvd Westbound					Grove St Northbound					East Access Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	38	0	0	39	2	39	0	0	41	0	0	0	0	0	0	0	0	0	0	80
07:15 AM	2	39	0	0	41	1	31	0	0	32	1	1	2	0	4	0	1	1	0	2	79
07:30 AM	5	52	1	0	58	2	72	0	0	74	3	0	1	0	4	0	0	6	2	8	144
07:45 AM	4	60	1	0	65	4	76	1	0	81	1	0	3	0	4	0	0	7	4	11	161
Total	12	189	2	0	203	9	218	1	0	228	5	1	6	0	12	0	1	14	6	21	464
08:00 AM	2	48	0	0	50	3	72	1	0	76	0	0	0	0	0	1	0	7	0	8	134
08:15 AM	2	67	0	0	69	2	80	0	0	82	0	0	4	1	5	0	0	2	4	6	162
08:30 AM	5	49	2	0	56	4	72	1	0	77	0	0	5	0	5	0	0	1	1	2	140
08:45 AM	7	40	0	0	47	2	68	3	0	73	0	0	2	0	2	0	0	2	0	2	124
Total	16	204	2	0	222	11	292	5	0	308	0	0	11	1	12	1	0	12	5	18	560
09:00 AM	19	36	0	1	56	2	74	7	0	83	0	0	2	0	2	0	0	2	2	4	145
09:15 AM	15	47	0	0	62	2	58	11	0	71	0	1	2	0	3	0	0	1	1	2	138
09:30 AM	10	38	0	0	48	3	35	4	0	42	0	0	0	1	1	0	0	5	0	5	96
09:45 AM	4	25	1	0	30	2	37	2	0	41	0	0	1	2	3	0	0	2	0	2	76
Total	48	146	1	1	196	9	204	24	0	237	0	1	5	3	9	0	0	10	3	13	455
Grand Total	76	539	5	1	621	29	714	30	0	773	5	2	22	4	33	1	1	36	14	52	1479
Apprch %	12.2	86.8	0.8	0.2		3.8	92.4	3.9	0		15.2	6.1	66.7	12.1		1.9	1.9	69.2	26.9		
Total %	5.1	36.4	0.3	0.1	42	2	48.3	2	0	52.3	0.3	0.1	1.5	0.3	2.2	0.1	0.1	2.4	0.9	3.5	
Automobiles	76	538	5	0	619	29	712	30	0	771	5	2	22	0	29	1	1	36	0	38	1457
% Automobiles	100	99.8	100	0	99.7	100	99.7	100	0	99.7	100	100	100	0	87.9	100	100	100	0	73.1	98.5
Bicycle and Pedestrian	0	1	0	1	2	0	2	0	0	2	0	0	0	4	4	0	0	0	14	14	22
% Bicycle and Pedestrian	0	0.2	0	100	0.3	0	0.3	0	0	0.3	0	0	0	100	12.1	0	0	0	100	26.9	1.5



Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



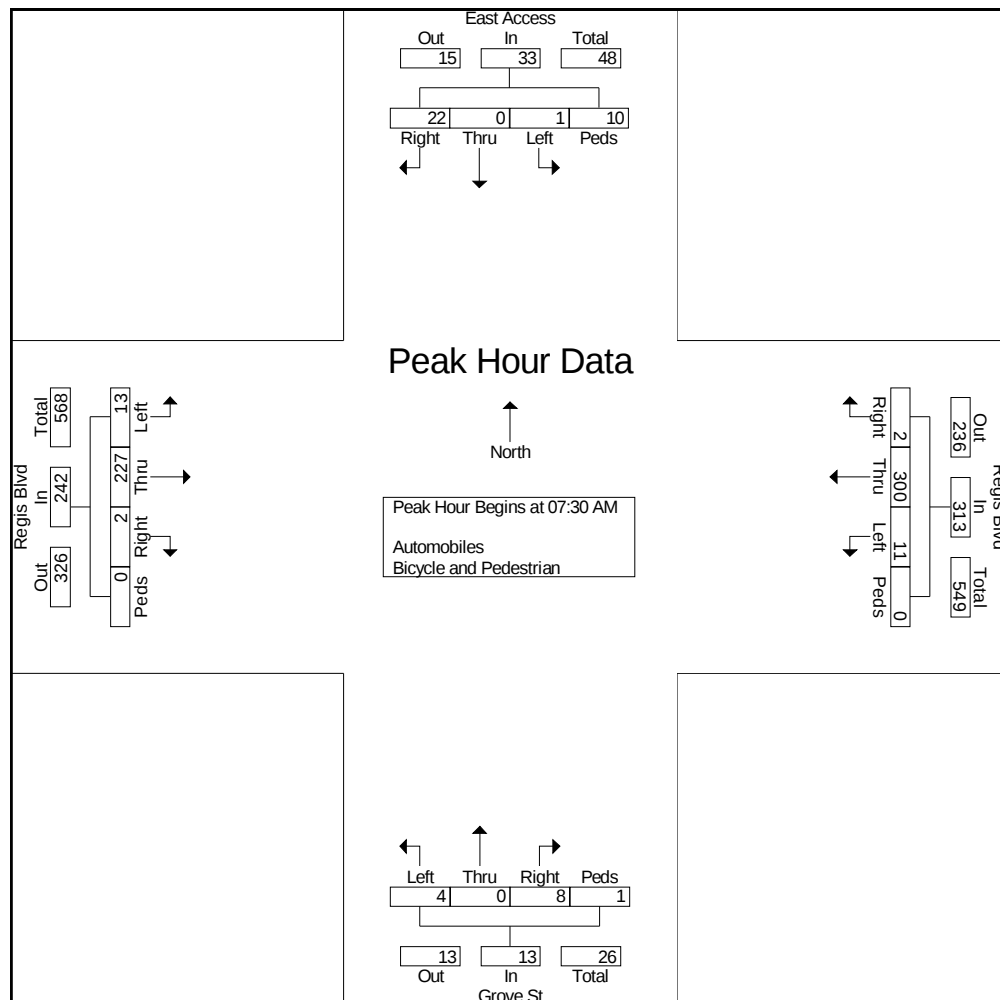


Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound					Regis Blvd Westbound					Grove St Northbound					East Access Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	52	1	0	58	2	72	0	0	74	3	0	1	0	4	0	0	6	2	8	144
07:45 AM	4	60	1	0	65	4	76	1	0	81	1	0	3	0	4	0	0	7	4	11	161
08:00 AM	2	48	0	0	50	3	72	1	0	76	0	0	0	0	0	1	0	7	0	8	134
08:15 AM	2	67	0	0	69	2	80	0	0	82	0	0	4	1	5	0	0	2	4	6	162
Total Volume	13	227	2	0	242	11	300	2	0	313	4	0	8	1	13	1	0	22	10	33	601
% App. Total	5.4	93.8	0.8	0		3.5	95.8	0.6	0		30.8	0	61.5	7.7		3	0	66.7	30.3		
PHF	.650	.847	.500	.000	.877	.688	.938	.500	.000	.954	.333	.000	.500	.250	.650	.250	.000	.786	.625	.750	.927





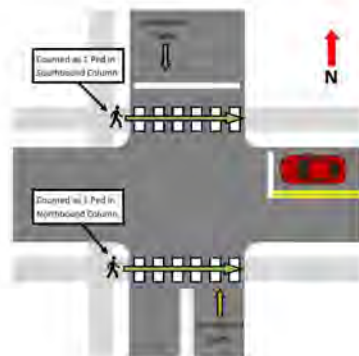
Ridgeview Data
Collection

Denver, CO
Regis University
AM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access AM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

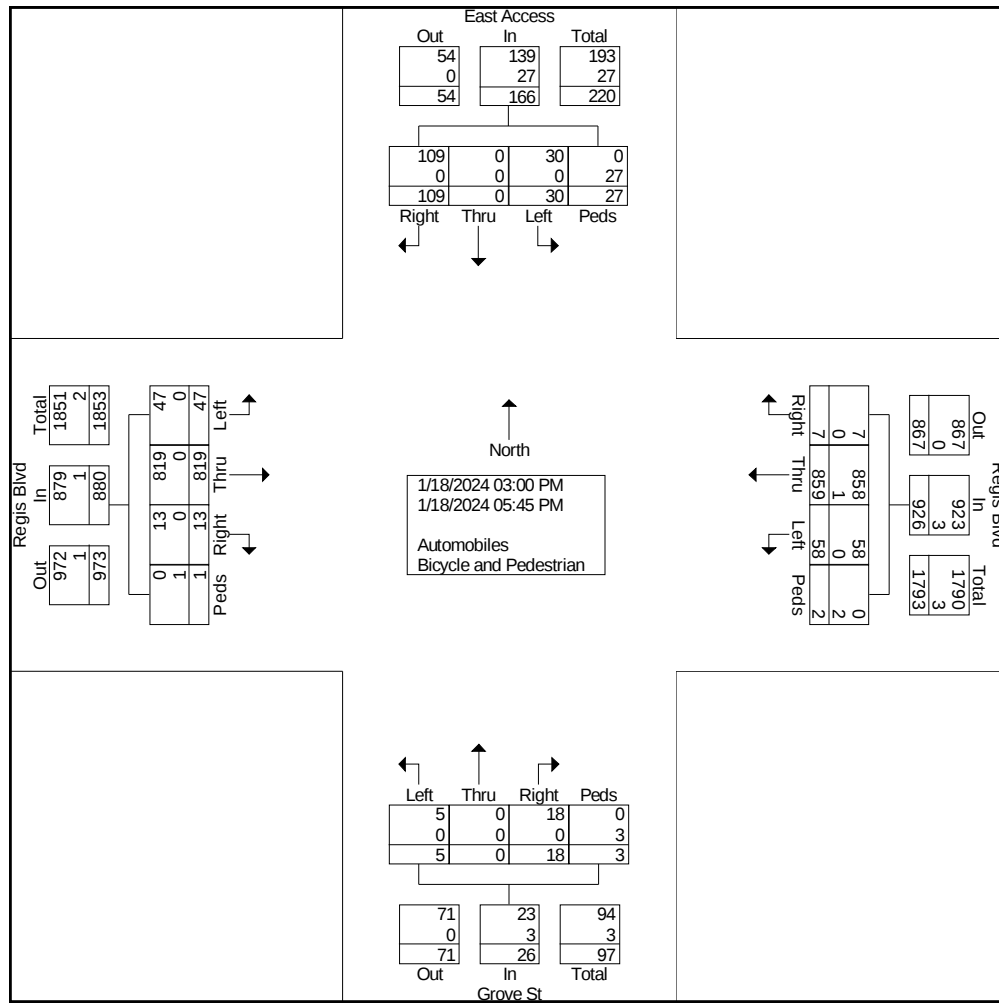
	Regis Blvd Eastbound					Regis Blvd Westbound					Grove St Northbound					East Access Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	8	53	1	1	63	1	45	3	0	49	0	0	0	0	0	3	0	6	1	10	122
03:15 PM	3	87	1	0	91	4	62	0	0	66	0	0	4	0	4	4	0	12	4	20	181
03:30 PM	2	72	0	0	74	7	69	2	0	78	1	0	1	0	2	4	0	13	5	22	176
03:45 PM	4	49	0	0	53	5	67	0	1	73	1	0	1	1	3	3	0	8	2	13	142
Total	17	261	2	1	281	17	243	5	1	266	2	0	6	1	9	14	0	39	12	65	621
04:00 PM	6	67	2	0	75	6	70	0	0	76	0	0	3	0	3	2	0	8	3	13	167
04:15 PM	4	69	2	0	75	5	68	0	0	73	2	0	3	0	5	4	0	10	3	17	170
04:30 PM	6	87	1	0	94	5	72	0	1	78	0	0	2	0	2	2	0	11	4	17	191
04:45 PM	6	64	0	0	70	4	88	0	0	92	0	0	2	0	2	2	0	12	2	16	180
Total	22	287	5	0	314	20	298	0	1	319	2	0	10	0	12	10	0	41	12	63	708
05:00 PM	3	70	3	0	76	5	94	0	0	99	0	0	1	0	1	3	0	7	0	10	186
05:15 PM	0	68	0	0	68	8	68	0	0	76	0	0	1	1	2	0	0	8	0	8	154
05:30 PM	3	60	2	0	65	4	67	1	0	72	1	0	0	0	1	2	0	6	2	10	148
05:45 PM	2	73	1	0	76	4	89	1	0	94	0	0	0	1	1	1	0	8	1	10	181
Total	8	271	6	0	285	21	318	2	0	341	1	0	2	2	5	6	0	29	3	38	669
Grand Total	47	819	13	1	880	58	859	7	2	926	5	0	18	3	26	30	0	109	27	166	1998
Apprch %	5.3	93.1	1.5	0.1		6.3	92.8	0.8	0.2		19.2	0	69.2	11.5		18.1	0	65.7	16.3		
Total %	2.4	41	0.7	0.1	44	2.9	43	0.4	0.1	46.3	0.3	0	0.9	0.2	1.3	1.5	0	5.5	1.4	8.3	
Automobiles	47	819	13	0	879	58	858	7	0	923	5	0	18	0	23	30	0	109	0	139	1964
% Automobiles	100	100	100	0	99.9	100	99.9	100	0	99.7	100	0	100	0	88.5	100	0	100	0	83.7	98.3
Bicycle and Pedestrian	0	0	0	1	1	0	1	0	2	3	0	0	0	3	3	0	0	0	27	27	34
% Bicycle and Pedestrian	0	0	0	100	0.1	0	0.1	0	100	0.3	0	0	0	100	11.5	0	0	0	100	16.3	1.7



Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 2



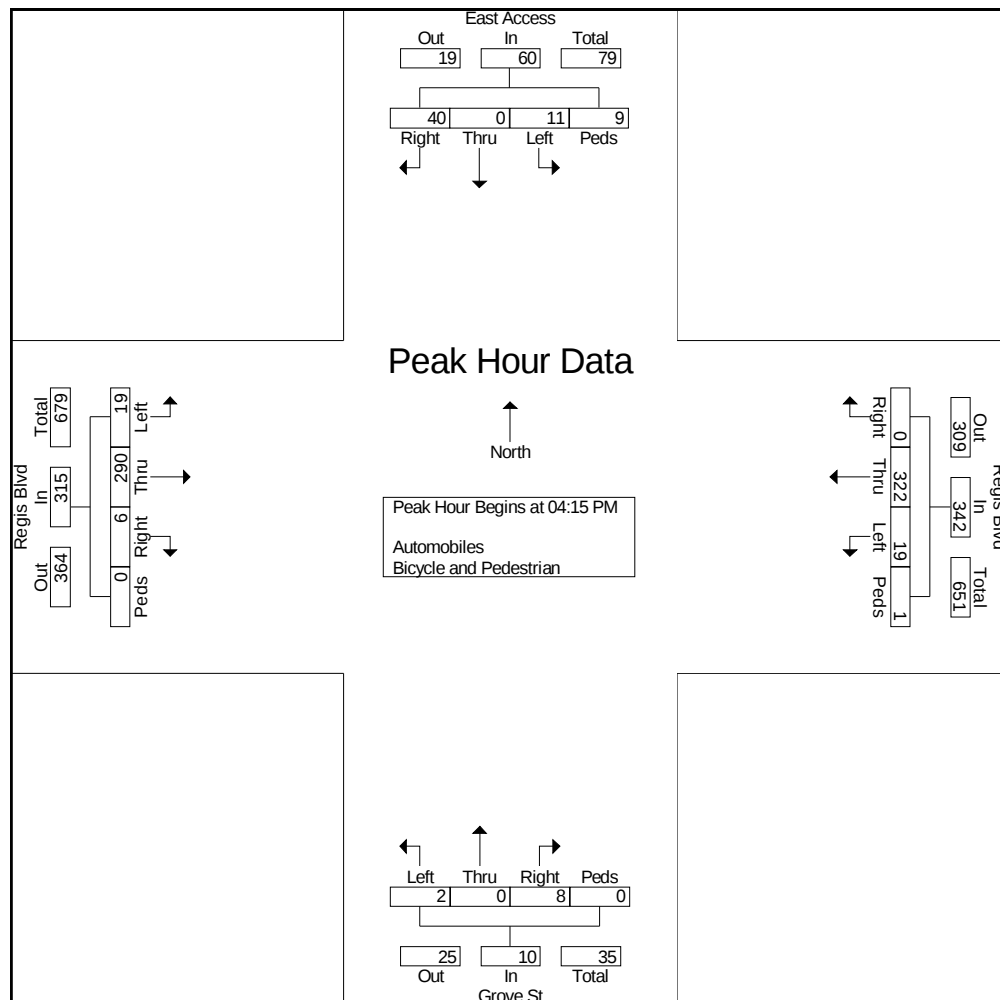


Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 3

	Regis Blvd Eastbound					Regis Blvd Westbound					Grove St Northbound					East Access Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	4	69	2	0	75	5	68	0	0	73	2	0	3	0	5	4	0	10	3	17	170
04:30 PM	6	87	1	0	94	5	72	0	1	78	0	0	2	0	2	2	0	11	4	17	191
04:45 PM	6	64	0	0	70	4	88	0	0	92	0	0	2	0	2	2	0	12	2	16	180
05:00 PM	3	70	3	0	76	5	94	0	0	99	0	0	1	0	1	3	0	7	0	10	186
Total Volume	19	290	6	0	315	19	322	0	1	342	2	0	8	0	10	11	0	40	9	60	727
% App. Total	6	92.1	1.9	0		5.6	94.2	0	0.3		20	0	80	0		18.3	0	66.7	15		
PHF	.792	.833	.500	.000	.838	.950	.856	.000	.250	.864	.250	.000	.667	.000	.500	.688	.000	.833	.563	.882	.952





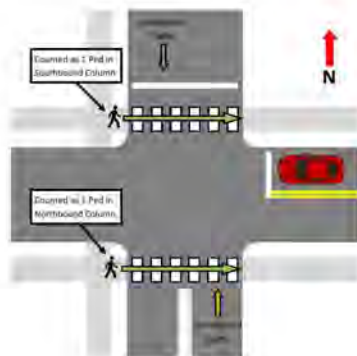
Ridgeview Data
Collection

Denver, CO
Regis University
PM Peak
Regis Blvd & East Access/Grove St

File Name : Regis Blvd & East Access PM
Site Code : IPO 660
Start Date : 1/18/2024
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.



APPENDIX C

Future Traffic Projections

DRCOG Traffic Projections: Regis Village

Location	2020	2050	Growth Factor	Annual Growth	Annual Growth
Regis Blvd E/O Lowell	4,000	5,000	1.25	0.75%	0.47%
Regis Blvd W/O Federal	16,000	17,000	1.06	0.20%	
Lowell Blvd N/O Regis Blvd	13,000	16,000	1.23	0.69%	0.95%
Lowell Blvd S/O 53rd Ave	7,000	10,000	1.43	1.20%	
Federal Blvd N/O Regis Blvd	44,000	52,000	1.18	0.56%	0.60%
Federal Blvd S/O 53rd Ave	42,000	51,000	1.21	0.65%	
Total	126,000	151,000	1.20	0.61%	

CDOT OTIS Growth Rate: Regis Village

LOCATION	ROUTE	REFPT	ENDREFPT	LENGTH	UPDATEYR	AADT	AADTYR	R20FACTO	ANNUAL GROWTH RATE	DHV	DD
ON SH 287 FEDERAL BLVD N/O I-70 DENVER	287C	285.752	285.992	0.217	2022	36000	2022	1.1	0.48%	9.5	54
ON SH 287 FEDERAL BLVD S/O I-76 DENVER	287C	285.992	286.913	0.916	2022	29000	2022	1.14	0.66%	10.5	55
									0.57%		

APPENDIX D

Trip Generation Worksheets

Project Regis University - Regis Village
 Subject Trip Generation for Single-Family Attached Housing
 Designed by MAG Date February 08, 2024 Job No. 196925000
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Single-Family Attached Housing (215)

Independent Variable - Dwelling Units (X)

$$X = 50$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

(Dense Multi-Use Urban and Center City Core 215 Series Page 3)

Average Weekday	Directional Distribution:	33% ent.	67% exit.
(T) = 0.39 (X)	T = 20	Average Vehicle Trip Ends	
(T) = 0.39 * (50.0)	6 entering	14	exiting
	6 + 14 = 20		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

(Dense Multi-Use Urban and Center City Core 215 Series Page 4)

Average Weekday	Directional Distribution:	63% ent.	37% exit.
(T) = 0.29 (X)	T = 15	Average Vehicle Trip Ends	
(T) = 0.29 * (50.0)	9 entering	6	exiting
	9 + 6 = 15		

Weekday (Dense Multi-Use Urban and Center City Core 215 Series Page 2)

Average Weekday	Directional Distribution:	50% ent.	50% exit.
(T) = 5.91 (X)	T = 296	Average Vehicle Trip Ends	
(T) = 5.91 * (50.0)	148 entering	148	exiting
	148 + 148 = 296		

Project Regis University - Regis Village
 Subject Trip Generation for Multifamily Housing (Low-Rise)
 Designed by MAG Date February 08, 2024 Job No. 196925000
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Multifamily Housing (Low-Rise) (220)

Independent Variable - Dwelling Units (X)

$$X = 350$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

(Dense Multi-Use Urban and Center City Core 220 Series Page 11)

Average Weekday	Directional Distribution:	10% ent.	90% exit.
(T) = 0.30 (X)	T = 105	Average Vehicle Trip Ends	
(T) = 0.30 * (350.0)	11 entering	94	exiting
	11 + 94 = 105		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

(Dense Multi-Use Urban and Center City Core 220 Series Page 12)

Average Weekday	Directional Distribution:	90% ent.	10% exit.
(T) = 0.25 (X)	T = 88	Average Vehicle Trip Ends	
(T) = 0.25 * (350.0)	79 entering	9	exiting
	79 + 9 = 88		

Weekday (10% K-Factor of PM Trips)

Average Weekday	Directional Distribution: 50% entering, 50% exiting
(T) = 10 * PM Peak	T = 880
(T) = 10 * (87.5)	440 entering 440 exiting
	440 + 440 = 880

Project Regis University - Regis Village
Subject Trip Generation for General Office Building - Dense Multi-Use Urban
Designed by MAG Date February 08, 2024 Job No. 196925000
Checked by Date Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)

SF = 110,000

X = 110.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

(Dense Multi-Use Urban and Center City Core 710 Series Page 641)

Directional Distribution: 87% ent. 13% exit.
(T) = 0.84 (X) T = 92 Average Vehicle Trip Ends
(T) = 0.84 * (110.0) 80 entering 12 exiting
80 + 12 = 92

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

(Dense Multi-Use Urban and Center City Core 710 Series Page 642)

Directional Distribution: 16% ent. 84% exit.
(T) = 0.87 (X) T = 96 Average Vehicle Trip Ends
(T) = 0.87 * (110.0) 15 entering 81 exiting
15 + 81 = 96

Weekday (10% K-Factor of PM Trips)

Directional Distribution: 50% ent. 50% exit.
(T) = 10 (PM Trips) T = 958 Average Vehicle Trip Ends
(T) = 10 * (95.7) 479 entering 479 exiting
479 + 479 = 958

Project Regis University - Regis Village
Subject Trip Generation for Shopping Plaza (40-150k) - Supermarket-No
Designed by MAG Date February 08, 2024 Job No. 196925000
Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Shopping Plaza (40-150k) - Supermarket-No (821)

Independent Variable - 1000 Square Feet Gross Leasable Area (X)

Gross Leasable Area = 110,000 Square Feet

X = 110.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 213)

Average Weekday	Directional Distribution:	62% ent.	38% exit.
T = 1.73 * (X)	T = 190	Average Vehicle Trip Ends	
T = 1.73 * 110	118 entering	72	exiting
	118 + 72 = 190		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 214)

Average Weekday	Directional Distribution:	49% ent.	51% exit.
T = 5.19 * (X)	T = 571	Average Vehicle Trip Ends	
T = 5.19 * 110	280 entering	291	exiting
	280 + 291 = 571		

Weekday (800 Series page 212)

Average Weekday	Directional Distribution:	50% entering, 50% exiting	
T = 67.52 * (X)	T = 7428	Average Vehicle Trip Ends	
T = 67.52 * 110	3714 entering	3714	exiting
	3714 + 3714 = 7428		

Regis Village: Comparison of General Urban/Suburban and Dense Multi-Use Urban

ITE Land Use Code	Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
General Urban/Suburban Only										
215	Single-Family Attached Housing	50	DUs	360	24	7	17	29	17	12
220	Multifamily Housing (Low-Rise)	350	DUs	2,360	140	34	106	179	113	66
710	General Office Building	110	KSF	1,194	167	147	20	158	27	131
821	Shopping Plaza (40-150k)	110	KSF	7,428	190	118	72	571	280	291
Total Project Trips				11,342	521	306	215	937	437	500
Dense Multi-Use Urban Only (Except Shoping Plaza Suburban)										
215	Single-Family Attached Housing	50	DUs	296	20	7	13	15	9	6
220	Multifamily Housing (Low-Rise)	350	DUs	880	105	11	94	88	79	9
710	General Office Building	110	KSF	960	92	80	12	96	15	81
821	Shopping Plaza (40-150k)	110	KSF	7,428	190	118	72	571	280	291
Total Project Trips				9,564	407	216	191	770	383	387

APPENDIX E

Intersection Analysis Worksheets

Timings

2024 Existing AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	32	12	16	14	18	717	2	25	1665	45
Future Volume (vph)	32	12	16	14	18	717	2	25	1665	45
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	11.0	85.0	85.0	11.0	85.0	85.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	9.2%	70.8%	70.8%	9.2%	70.8%	70.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 110.4

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

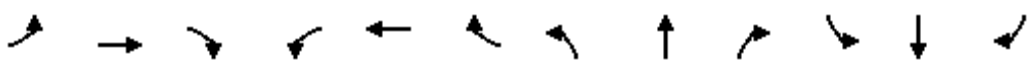
Ø1	Ø2	Ø4
11 s	85 s	24 s
Ø5	Ø6	Ø8
11 s	85 s	24 s

HCM 6th Signalized Intersection Summary

2024 Existing AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↕	↗	↗	↕	↗
Traffic Volume (veh/h)	32	12	22	16	14	18	18	717	2	25	1665	45
Future Volume (veh/h)	32	12	22	16	14	18	18	717	2	25	1665	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	13	23	17	15	19	19	755	2	26	1753	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	23	32	71	39	38	237	2651	1182	592	2669	1190
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.02	0.75	0.75	0.03	0.75	0.75
Sat Flow, veh/h	716	395	544	430	657	645	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	70	0	0	51	0	0	19	755	2	26	1753	47
Grp Sat Flow(s),veh/h/ln	1655	0	0	1732	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.3	0.0	0.0	0.0	0.0	0.0	0.3	7.3	0.0	0.4	25.7	0.8
Cycle Q Clear(g_c), s	4.2	0.0	0.0	2.9	0.0	0.0	0.3	7.3	0.0	0.4	25.7	0.8
Prop In Lane	0.49		0.33	0.33		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	0	0	147	0	0	237	2651	1182	592	2669	1190
V/C Ratio(X)	0.47	0.00	0.00	0.35	0.00	0.00	0.08	0.28	0.00	0.04	0.66	0.04
Avail Cap(c_a), veh/h	316	0	0	322	0	0	285	2651	1182	631	2669	1190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	0.0	48.3	0.0	0.0	6.1	4.3	3.4	3.1	6.5	3.4
Incr Delay (d2), s/veh	2.3	0.0	0.0	1.4	0.0	0.0	0.1	0.3	0.0	0.0	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	1.4	0.0	0.0	0.1	2.3	0.0	0.1	8.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	0.0	0.0	49.7	0.0	0.0	6.3	4.6	3.4	3.1	7.8	3.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	70			51			776			1826		
Approach Delay, s/veh	51.2			49.7			4.6			7.6		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	85.0		12.2	8.1	85.5		12.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	79.0		18.0	5.0	79.0		18.0				
Max Q Clear Time (g_c+l1), s	2.4	9.3		6.2	2.3	27.7		4.9				
Green Ext Time (p_c), s	0.0	6.4		0.2	0.0	24.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	8.7											
HCM 6th LOS	A											

Timings

2024 Existing PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	26	8	13	6	60	1327	15	41	1184	45
Future Volume (vph)	26	8	13	6	60	1327	15	41	1184	45
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	13.0	81.0	81.0	13.0	81.0	81.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	10.8%	67.5%	67.5%	10.8%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 105.9

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

Ø1	Ø2	Ø4
13 s	81 s	26 s
Ø5	Ø6	Ø8
13 s	81 s	26 s

HCM 6th Signalized Intersection Summary

2024 Existing PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	8	32	13	6	23	60	1327	15	41	1184	45
Future Volume (veh/h)	26	8	32	13	6	23	60	1327	15	41	1184	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	8	32	13	6	23	61	1340	15	41	1196	45
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	17	45	67	23	53	406	2611	1164	360	2587	1154
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.04	0.73	0.73	0.03	0.73	0.73
Sat Flow, veh/h	542	299	792	374	396	933	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	66	0	0	42	0	0	61	1340	15	41	1196	45
Grp Sat Flow(s),veh/h/ln	1634	0	0	1703	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.6	0.0	0.0	0.0	0.0	0.0	0.8	16.5	0.3	0.6	14.2	0.8
Cycle Q Clear(g_c), s	4.0	0.0	0.0	2.4	0.0	0.0	0.8	16.5	0.3	0.6	14.2	0.8
Prop In Lane	0.39		0.48	0.31		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	0	0	143	0	0	406	2611	1164	360	2587	1154
V/C Ratio(X)	0.46	0.00	0.00	0.29	0.00	0.00	0.15	0.51	0.01	0.11	0.46	0.04
Avail Cap(c_a), veh/h	351	0	0	354	0	0	456	2611	1164	422	2587	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	0.0	46.9	0.0	0.0	4.0	5.8	3.7	4.4	5.7	3.9
Incr Delay (d2), s/veh	2.4	0.0	0.0	1.1	0.0	0.0	0.2	0.7	0.0	0.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.1	0.0	0.0	0.3	5.3	0.1	0.2	4.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	0.0	0.0	48.1	0.0	0.0	4.2	6.5	3.7	4.5	6.3	4.0
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	66			42			1416			1282		
Approach Delay, s/veh	50.0			48.1			6.4			6.2		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	81.7		11.9	10.1	81.0		11.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		20.0	7.0	75.0		20.0				
Max Q Clear Time (g_c+l1), s	2.6	18.5		6.0	2.8	16.2		4.4				
Green Ext Time (p_c), s	0.0	15.4		0.2	0.0	12.9		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	8.0											
HCM 6th LOS	A											

Timings

2030 Background AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	33	13	17	15	19	750	2	26	1741	47
Future Volume (vph)	33	13	17	15	19	750	2	26	1741	47
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	11.0	85.0	85.0	11.0	85.0	85.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	9.2%	70.8%	70.8%	9.2%	70.8%	70.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 110.3

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

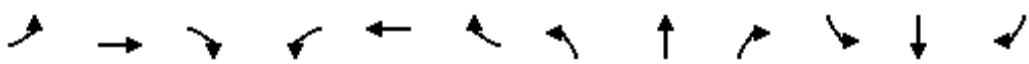
Ø1	Ø2	Ø4
11 s	85 s	24 s
Ø5	Ø6	Ø8
11 s	85 s	24 s

HCM 6th Signalized Intersection Summary

2030 Background AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↕	↕	↔	↕	↕
Traffic Volume (veh/h)	33	13	23	17	15	19	19	750	2	26	1741	47
Future Volume (veh/h)	33	13	23	17	15	19	19	750	2	26	1741	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	14	24	18	16	20	20	789	2	27	1833	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	25	33	71	40	39	221	2643	1179	574	2661	1187
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.02	0.74	0.74	0.03	0.75	0.75
Sat Flow, veh/h	706	408	545	431	661	642	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	73	0	0	54	0	0	20	789	2	27	1833	49
Grp Sat Flow(s),veh/h/ln	1659	0	0	1734	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.3	0.0	0.0	0.0	0.0	0.0	0.3	7.8	0.0	0.4	28.4	0.9
Cycle Q Clear(g_c), s	4.4	0.0	0.0	3.1	0.0	0.0	0.3	7.8	0.0	0.4	28.4	0.9
Prop In Lane	0.48		0.33	0.33		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	0	0	151	0	0	221	2643	1179	574	2661	1187
V/C Ratio(X)	0.48	0.00	0.00	0.36	0.00	0.00	0.09	0.30	0.00	0.05	0.69	0.04
Avail Cap(c_a), veh/h	316	0	0	322	0	0	268	2643	1179	611	2661	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	0.0	48.3	0.0	0.0	7.0	4.5	3.5	3.2	6.9	3.5
Incr Delay (d2), s/veh	2.4	0.0	0.0	1.4	0.0	0.0	0.2	0.3	0.0	0.0	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.4	0.0	0.0	0.1	2.5	0.0	0.1	9.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	0.0	0.0	49.7	0.0	0.0	7.1	4.8	3.5	3.2	8.4	3.5
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	73			54			811			1909		
Approach Delay, s/veh	51.2			49.7			4.8			8.2		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	85.0		12.5	8.2	85.5		12.5				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	79.0		18.0	5.0	79.0		18.0				
Max Q Clear Time (g_c+l1), s	2.4	9.8		6.4	2.3	30.4		5.1				
Green Ext Time (p_c), s	0.0	6.8		0.2	0.0	25.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	9.1											
HCM 6th LOS	A											

Timings

2030 Background PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	27	8	14	6	63	1388	16	43	1238	47
Future Volume (vph)	27	8	14	6	63	1388	16	43	1238	47
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	13.0	81.0	81.0	13.0	81.0	81.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	10.8%	67.5%	67.5%	10.8%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 106

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

Ø1	Ø2	Ø4
13 s	81 s	26 s
Ø5	Ø6	Ø8
13 s	81 s	26 s

HCM 6th Signalized Intersection Summary

2030 Background PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	27	8	33	14	6	24	63	1388	16	43	1238	47
Future Volume (veh/h)	27	8	33	14	6	24	63	1388	16	43	1238	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	8	33	14	6	24	64	1402	16	43	1251	47
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	17	46	69	23	54	388	2604	1162	342	2582	1151
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.04	0.73	0.73	0.03	0.73	0.73
Sat Flow, veh/h	547	294	793	388	387	929	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	68	0	0	44	0	0	64	1402	16	43	1251	47
Grp Sat Flow(s),veh/h/ln	1635	0	0	1704	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.6	0.0	0.0	0.0	0.0	0.0	0.9	18.0	0.3	0.6	15.3	0.9
Cycle Q Clear(g_c), s	4.1	0.0	0.0	2.5	0.0	0.0	0.9	18.0	0.3	0.6	15.3	0.9
Prop In Lane	0.40		0.49	0.32		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	0	0	146	0	0	388	2604	1162	342	2582	1151
V/C Ratio(X)	0.47	0.00	0.00	0.30	0.00	0.00	0.17	0.54	0.01	0.13	0.48	0.04
Avail Cap(c_a), veh/h	350	0	0	354	0	0	436	2604	1162	402	2582	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	0.0	47.0	0.0	0.0	4.2	6.1	3.7	4.7	6.0	4.0
Incr Delay (d2), s/veh	2.4	0.0	0.0	1.2	0.0	0.0	0.2	0.8	0.0	0.2	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	1.1	0.0	0.0	0.3	5.8	0.1	0.2	5.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	0.0	0.0	48.1	0.0	0.0	4.4	6.9	3.7	4.8	6.6	4.0
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	68			44			1482			1341		
Approach Delay, s/veh	50.0			48.1			6.7			6.5		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	81.7		12.0	10.2	81.0		12.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		20.0	7.0	75.0		20.0				
Max Q Clear Time (g_c+l1), s	2.6	20.0		6.1	2.9	17.3		4.5				
Green Ext Time (p_c), s	0.0	16.6		0.2	0.0	13.9		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	8.2											
HCM 6th LOS	A											

Timings

1: Federal Blvd (US-287) & 54th Ave

2030 Total AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	33	13	21	15	29	807	6	26	1806	47
Future Volume (vph)	33	13	21	15	29	807	6	26	1806	47
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	11.0	85.0	85.0	11.0	85.0	85.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	9.2%	70.8%	70.8%	9.2%	70.8%	70.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 109.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

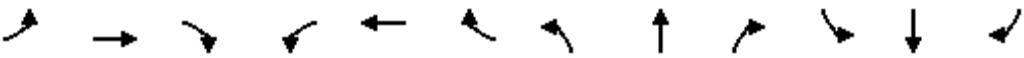
Ø1	Ø2	Ø4
11 s	85 s	24 s
Ø5	Ø6	Ø8
11 s	85 s	24 s

HCM 6th Signalized Intersection Summary

2030 Total AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↕	↗	↗	↕	↗
Traffic Volume (veh/h)	33	13	34	21	15	19	29	807	6	26	1806	47
Future Volume (veh/h)	33	13	34	21	15	19	29	807	6	26	1806	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	14	36	22	16	20	31	849	6	27	1901	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	26	48	80	44	41	215	2622	1169	536	2614	1166
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.03	0.74	0.74	0.03	0.74	0.74
Sat Flow, veh/h	578	374	699	493	643	598	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	85	0	0	58	0	0	31	849	6	27	1901	49
Grp Sat Flow(s),veh/h/ln	1651	0	0	1735	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.9	0.0	0.0	0.0	0.0	0.0	0.4	8.8	0.1	0.4	32.7	0.9
Cycle Q Clear(g_c), s	5.3	0.0	0.0	3.3	0.0	0.0	0.4	8.8	0.1	0.4	32.7	0.9
Prop In Lane	0.41		0.42	0.38		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	0	0	166	0	0	215	2622	1169	536	2614	1166
V/C Ratio(X)	0.53	0.00	0.00	0.35	0.00	0.00	0.14	0.32	0.01	0.05	0.73	0.04
Avail Cap(c_a), veh/h	312	0	0	319	0	0	247	2622	1169	573	2614	1166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	0.0	0.0	48.1	0.0	0.0	8.8	4.9	3.7	3.5	8.1	3.9
Incr Delay (d2), s/veh	2.7	0.0	0.0	1.3	0.0	0.0	0.3	0.3	0.0	0.0	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	1.6	0.0	0.0	0.2	2.9	0.0	0.1	10.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	0.0	0.0	49.4	0.0	0.0	9.1	5.2	3.7	3.5	9.9	3.9
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	85			58			886			1977		
Approach Delay, s/veh	51.6			49.4			5.3			9.7		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	85.3		13.4	9.0	85.0		13.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	79.0		18.0	5.0	79.0		18.0				
Max Q Clear Time (g_c+l1), s	2.4	10.8		7.3	2.4	34.7		5.3				
Green Ext Time (p_c), s	0.0	7.6		0.2	0.0	25.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	10.3											
HCM 6th LOS	B											

Timings

1: Federal Blvd (US-287) & 54th Ave

2030 Total PM

02/09/2024

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	27	8	22	6	82	1504	24	43	1353	47
Future Volume (vph)	27	8	22	6	82	1504	24	43	1353	47
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	13.0	81.0	81.0	13.0	81.0	81.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	10.8%	67.5%	67.5%	10.8%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 106.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

		
Ø1	Ø2	Ø4
13 s	81 s	26 s
		
Ø5	Ø6	Ø8
13 s	81 s	26 s

HCM 6th Signalized Intersection Summary

2030 Total PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	8	52	22	6	24	82	1504	24	43	1353	47
Future Volume (veh/h)	27	8	52	22	6	24	82	1504	24	43	1353	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	8	53	22	6	24	83	1519	24	43	1367	47
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	19	71	87	28	57	348	2567	1145	302	2534	1130
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.04	0.72	0.72	0.03	0.71	0.71
Sat Flow, veh/h	386	259	977	534	387	789	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	88	0	0	52	0	0	83	1519	24	43	1367	47
Grp Sat Flow(s),veh/h/ln	1622	0	0	1710	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.5	0.0	0.0	0.0	0.0	0.0	1.3	21.8	0.4	0.7	18.9	0.9
Cycle Q Clear(g_c), s	5.5	0.0	0.0	3.0	0.0	0.0	1.3	21.8	0.4	0.7	18.9	0.9
Prop In Lane	0.31		0.60	0.42		0.46	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	0	0	173	0	0	348	2567	1145	302	2534	1130
V/C Ratio(X)	0.54	0.00	0.00	0.30	0.00	0.00	0.24	0.59	0.02	0.14	0.54	0.04
Avail Cap(c_a), veh/h	343	0	0	349	0	0	390	2567	1145	360	2534	1130
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	0.0	46.6	0.0	0.0	5.4	7.1	4.1	5.8	7.0	4.5
Incr Delay (d2), s/veh	2.8	0.0	0.0	1.0	0.0	0.0	0.3	1.0	0.0	0.2	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	1.3	0.0	0.0	0.4	7.3	0.1	0.2	6.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	0.0	0.0	47.6	0.0	0.0	5.8	8.1	4.2	6.0	7.9	4.5
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	88			52			1626			1457		
Approach Delay, s/veh	50.5			47.6			7.9			7.7		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	82.0		13.6	10.6	81.0		13.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		20.0	7.0	75.0		20.0				
Max Q Clear Time (g_c+l1), s	2.7	23.8		7.5	3.3	20.9		5.0				
Green Ext Time (p_c), s	0.0	18.8		0.3	0.0	16.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	9.6											
HCM 6th LOS	A											

Timings

2045 Background AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	37	14	19	16	21	839	2	29	1948	53
Future Volume (vph)	37	14	19	16	21	839	2	29	1948	53
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	11.0	85.0	85.0	11.0	85.0	85.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	9.2%	70.8%	70.8%	9.2%	70.8%	70.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 110

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

Ø1	Ø2	Ø4
11 s	85 s	24 s
Ø5	Ø6	Ø8
11 s	85 s	24 s

HCM 6th Signalized Intersection Summary

2045 Background AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	14	26	19	16	21	21	839	2	29	1948	53
Future Volume (veh/h)	37	14	26	19	16	21	21	839	2	29	1948	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	15	27	20	17	22	22	883	2	31	2051	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	26	36	74	43	43	183	2622	1169	526	2642	1178
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.02	0.74	0.74	0.03	0.74	0.74
Sat Flow, veh/h	708	397	552	437	651	647	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	81	0	0	59	0	0	22	883	2	31	2051	56
Grp Sat Flow(s),veh/h/ln	1657	0	0	1736	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.0	0.0	0.3	9.3	0.0	0.4	37.5	1.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0	3.4	0.0	0.0	0.3	9.3	0.0	0.4	37.5	1.0
Prop In Lane	0.48		0.33	0.34		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	0	0	160	0	0	183	2622	1169	526	2642	1178
V/C Ratio(X)	0.51	0.00	0.00	0.37	0.00	0.00	0.12	0.34	0.00	0.06	0.78	0.05
Avail Cap(c_a), veh/h	314	0	0	320	0	0	227	2622	1169	559	2642	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	0.0	0.0	48.3	0.0	0.0	10.3	4.9	3.7	3.4	8.3	3.7
Incr Delay (d2), s/veh	2.5	0.0	0.0	1.4	0.0	0.0	0.3	0.3	0.0	0.0	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	1.6	0.0	0.0	0.2	3.0	0.0	0.1	12.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	0.0	0.0	49.7	0.0	0.0	10.6	5.2	3.7	3.5	10.6	3.7
LnGrp LOS	D	A	A	D	A	A	B	A	A	A	B	A
Approach Vol, veh/h	81			59			907			2138		
Approach Delay, s/veh	51.4			49.7			5.4			10.4		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	85.0		13.1	8.4	85.6		13.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	79.0		18.0	5.0	79.0		18.0				
Max Q Clear Time (g_c+l1), s	2.4	11.3		6.9	2.3	39.5		5.4				
Green Ext Time (p_c), s	0.0	8.0		0.2	0.0	26.7		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	10.7											
HCM 6th LOS	B											

Timings

2045 Background PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	30	9	15	7	70	1552	18	48	1385	53
Future Volume (vph)	30	9	15	7	70	1552	18	48	1385	53
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	13.0	81.0	81.0	13.0	81.0	81.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	10.8%	67.5%	67.5%	10.8%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 106.5

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

Ø1	Ø2	Ø4
13 s	81 s	26 s
Ø5	Ø6	Ø8
13 s	81 s	26 s

HCM 6th Signalized Intersection Summary

2045 Background PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	9	37	15	7	27	70	1552	18	48	1385	53
Future Volume (veh/h)	30	9	37	15	7	27	70	1552	18	48	1385	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	9	37	15	7	27	71	1568	18	48	1399	54
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	19	51	69	26	60	342	2583	1152	298	2563	1143
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.04	0.73	0.73	0.04	0.72	0.72
Sat Flow, veh/h	540	299	796	366	400	940	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	76	0	0	49	0	0	71	1568	18	48	1399	54
Grp Sat Flow(s),veh/h/ln	1636	0	0	1707	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.8	0.0	0.0	0.0	0.0	0.0	1.0	22.4	0.3	0.7	18.8	1.0
Cycle Q Clear(g_c), s	4.6	0.0	0.0	2.8	0.0	0.0	1.0	22.4	0.3	0.7	18.8	1.0
Prop In Lane	0.39		0.49	0.31		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	0	0	154	0	0	342	2583	1152	298	2563	1143
V/C Ratio(X)	0.50	0.00	0.00	0.32	0.00	0.00	0.21	0.61	0.02	0.16	0.55	0.05
Avail Cap(c_a), veh/h	348	0	0	352	0	0	387	2583	1152	354	2563	1143
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	0.0	46.9	0.0	0.0	5.2	6.9	3.9	5.8	6.7	4.2
Incr Delay (d2), s/veh	2.5	0.0	0.0	1.2	0.0	0.0	0.3	1.1	0.0	0.3	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.3	0.0	0.0	0.3	7.4	0.1	0.2	6.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	0.0	0.0	48.1	0.0	0.0	5.5	8.0	3.9	6.1	7.5	4.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	76			49			1657			1501		
Approach Delay, s/veh	50.1			48.1			7.9			7.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	81.6		12.7	10.4	81.0		12.7				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		20.0	7.0	75.0		20.0				
Max Q Clear Time (g_c+l1), s	2.7	24.4		6.6	3.0	20.8		4.8				
Green Ext Time (p_c), s	0.0	19.7		0.2	0.0	16.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	9.2											
HCM 6th LOS	A											

Timings

1: Federal Blvd (US-287) & 54th Ave

2045 Total AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	37	14	23	16	31	896	6	29	2013	53
Future Volume (vph)	37	14	23	16	31	896	6	29	2013	53
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	11.0	85.0	85.0	11.0	85.0	85.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	9.2%	70.8%	70.8%	9.2%	70.8%	70.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 112.1

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

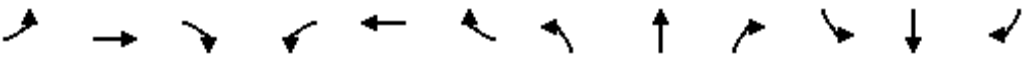
Ø1	Ø2	Ø4
11 s	85 s	24 s
Ø5	Ø6	Ø8
11 s	85 s	24 s

HCM 6th Signalized Intersection Summary

2045 Total AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑↑	↔	↔	↑↑	↔
Traffic Volume (veh/h)	37	14	37	23	16	21	31	896	6	29	2013	53
Future Volume (veh/h)	37	14	37	23	16	21	31	896	6	29	2013	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	15	39	24	17	22	33	943	6	31	2119	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	27	51	83	47	45	179	2600	1160	492	2596	1158
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.03	0.73	0.73	0.03	0.73	0.73
Sat Flow, veh/h	593	366	692	497	634	607	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	93	0	0	63	0	0	33	943	6	31	2119	56
Grp Sat Flow(s),veh/h/ln	1650	0	0	1737	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.0	0.0	0.5	10.5	0.1	0.5	43.0	1.1
Cycle Q Clear(g_c), s	5.8	0.0	0.0	3.6	0.0	0.0	0.5	10.5	0.1	0.5	43.0	1.1
Prop In Lane	0.42		0.42	0.38		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	0	0	174	0	0	179	2600	1160	492	2596	1158
V/C Ratio(X)	0.55	0.00	0.00	0.36	0.00	0.00	0.18	0.36	0.01	0.06	0.82	0.05
Avail Cap(c_a), veh/h	310	0	0	317	0	0	209	2600	1160	524	2596	1158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	0.0	0.0	48.1	0.0	0.0	13.6	5.3	3.9	3.7	9.7	4.1
Incr Delay (d2), s/veh	2.8	0.0	0.0	1.3	0.0	0.0	0.5	0.4	0.0	0.1	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	1.7	0.0	0.0	0.4	3.5	0.0	0.1	14.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	0.0	0.0	49.3	0.0	0.0	14.1	5.7	3.9	3.8	12.7	4.1
LnGrp LOS	D	A	A	D	A	A	B	A	A	A	B	A
Approach Vol, veh/h	93			63			982			2206		
Approach Delay, s/veh	51.7			49.3			6.0			12.4		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	85.1		14.0	9.1	85.0		14.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	79.0		18.0	5.0	79.0		18.0				
Max Q Clear Time (g_c+l1), s	2.5	12.5		7.8	2.5	45.0		5.6				
Green Ext Time (p_c), s	0.0	8.8		0.3	0.0	25.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	12.3											
HCM 6th LOS	B											

Timings

1: Federal Blvd (US-287) & 54th Ave

2045 Total PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	30	9	23	7	89	1668	26	48	1500	53
Future Volume (vph)	30	9	23	7	89	1668	26	48	1500	53
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	13.0	81.0	81.0	13.0	81.0	81.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	10.8%	67.5%	67.5%	10.8%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 111.6

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Federal Blvd (US-287) & 54th Ave

Ø1	Ø2	Ø4
13 s	81 s	26 s
Ø5	Ø6	Ø8
13 s	81 s	26 s

HCM 6th Signalized Intersection Summary

2045 Total PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	9	56	23	7	27	89	1668	26	48	1500	53
Future Volume (veh/h)	30	9	56	23	7	27	89	1668	26	48	1500	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	9	57	23	7	27	90	1685	26	48	1515	54
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	20	75	87	31	63	307	2546	1136	263	2517	1123
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.04	0.72	0.72	0.04	0.71	0.71
Sat Flow, veh/h	397	262	964	506	396	812	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	96	0	0	57	0	0	90	1685	26	48	1515	54
Grp Sat Flow(s),veh/h/ln	1624	0	0	1714	0	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.7	0.0	0.0	0.0	0.0	0.0	1.4	27.1	0.5	0.8	22.9	1.1
Cycle Q Clear(g_c), s	6.0	0.0	0.0	3.3	0.0	0.0	1.4	27.1	0.5	0.8	22.9	1.1
Prop In Lane	0.31		0.59	0.40		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	0	0	181	0	0	307	2546	1136	263	2517	1123
V/C Ratio(X)	0.56	0.00	0.00	0.32	0.00	0.00	0.29	0.66	0.02	0.18	0.60	0.05
Avail Cap(c_a), veh/h	341	0	0	348	0	0	347	2546	1136	317	2517	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	0.0	46.6	0.0	0.0	6.8	8.1	4.3	7.5	7.8	4.7
Incr Delay (d2), s/veh	2.9	0.0	0.0	1.0	0.0	0.0	0.5	1.4	0.0	0.3	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	1.5	0.0	0.0	0.5	9.2	0.2	0.3	7.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	0.0	47.5	0.0	0.0	7.4	9.5	4.4	7.8	8.9	4.7
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	96			57			1801			1617		
Approach Delay, s/veh	50.6			47.5			9.3			8.7		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	81.9		14.2	10.6	81.0		14.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		20.0	7.0	75.0		20.0				
Max Q Clear Time (g_c+l1), s	2.8	29.1		8.0	3.4	24.9		5.3				
Green Ext Time (p_c), s	0.0	21.6		0.3	0.1	18.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	10.8											
HCM 6th LOS	B											

Timings 2: Federal Blvd (US-287) & 52nd Ave

2024 Existing AM
02/09/2024

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	15	4	135	4	11	642	170	1410
Future Volume (vph)	15	4	135	4	11	642	170	1410
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	40.0	40.0	40.0	40.0	58.0	58.0	22.0	80.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	48.3%	48.3%	18.3%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 109.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

 Ø1	 Ø2	 Ø4
22 s	58 s	40 s
 Ø6		 Ø8
80 s		40 s

HCM 6th Signalized Intersection Summary

2: Federal Blvd (US-287) & 52nd Ave

2024 Existing AM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	4	0	135	4	91	11	642	106	170	1410	7
Future Volume (veh/h)	15	4	0	135	4	91	11	642	106	170	1410	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	4	0	150	4	101	12	713	118	189	1567	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	53	0	223	8	116	217	1752	290	472	2512	13
Arrive On Green	0.19	0.19	0.00	0.19	0.19	0.19	0.57	0.57	0.57	0.06	0.69	0.69
Sat Flow, veh/h	977	272	0	868	39	595	326	3052	505	1781	3625	19
Grp Volume(v), veh/h	21	0	0	255	0	0	12	415	416	189	768	807
Grp Sat Flow(s),veh/h/ln	1250	0	0	1501	0	0	326	1777	1780	1781	1777	1867
Q Serve(g_s), s	0.0	0.0	0.0	16.3	0.0	0.0	2.2	13.9	13.9	4.4	25.0	25.0
Cycle Q Clear(g_c), s	1.3	0.0	0.0	17.5	0.0	0.0	14.5	13.9	13.9	4.4	25.0	25.0
Prop In Lane	0.81		0.00	0.59		0.40	1.00		0.28	1.00		0.01
Lane Grp Cap(c), veh/h	304	0	0	346	0	0	217	1020	1022	472	1231	1294
V/C Ratio(X)	0.07	0.00	0.00	0.74	0.00	0.00	0.06	0.41	0.41	0.40	0.62	0.62
Avail Cap(c_a), veh/h	474	0	0	529	0	0	217	1020	1022	628	1231	1294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	0.0	41.6	0.0	0.0	16.2	12.6	12.6	8.7	8.9	8.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	3.1	0.0	0.0	0.5	1.2	1.2	0.5	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	6.7	0.0	0.0	0.2	5.6	5.6	1.6	9.3	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	0.0	0.0	44.6	0.0	0.0	16.7	13.8	13.8	9.3	11.3	11.2
LnGrp LOS	D	A	A	D	A	A	B	B	B	A	B	B
Approach Vol, veh/h	21			255			843			1764		
Approach Delay, s/veh	35.2			44.6			13.9			11.0		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2	4			6		8				
Phs Duration (G+Y+Rc), s	12.7	67.3	26.8			80.0		26.8				
Change Period (Y+Rc), s	6.0	6.0	6.0			6.0		6.0				
Max Green Setting (Gmax), s	16.0	52.0	34.0			74.0		34.0				
Max Q Clear Time (g_c+l1), s	6.4	16.5	3.3			27.0		19.5				
Green Ext Time (p_c), s	0.3	6.6	0.1			17.8		1.3				
Intersection Summary												
HCM 6th Ctrl Delay	15.0											
HCM 6th LOS	B											

Timings
2: Federal Blvd (US-287) & 52nd Ave

2024 Existing PM
02/09/2024

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	24	8	11	1	9	1271	97	1127
Future Volume (vph)	24	8	11	1	9	1271	97	1127
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	76.0	76.0	18.0	94.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	63.3%	63.3%	15.0%	78.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 110.7
Natural Cycle: 70
Control Type: Semi Act-Uncoord

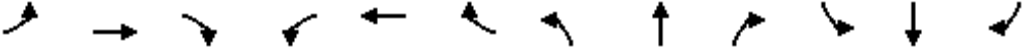
Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

 Ø1	 Ø2	 Ø4
18 s	76 s	26 s
 Ø6		 Ø8
94 s		26 s

HCM 6th Signalized Intersection Summary
2: Federal Blvd (US-287) & 52nd Ave

2024 Existing PM

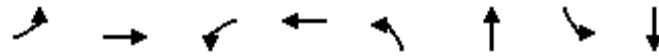
02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	24	8	1	11	1	100	9	1271	94	97	1127	5
Future Volume (veh/h)	24	8	1	11	1	100	9	1271	94	97	1127	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	8	1	12	1	105	9	1338	99	102	1186	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	36	3	44	8	132	394	2349	173	328	2896	12
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.70	0.70	0.70	0.04	0.80	0.80
Sat Flow, veh/h	810	385	36	90	85	1412	470	3355	248	1781	3629	15
Grp Volume(v), veh/h	34	0	0	118	0	0	9	707	730	102	581	610
Grp Sat Flow(s),veh/h/ln	1231	0	0	1587	0	0	470	1777	1826	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	3.5	0.0	0.0	0.6	21.8	22.0	1.6	10.8	10.8
Cycle Q Clear(g_c), s	2.6	0.0	0.0	8.0	0.0	0.0	0.7	21.8	22.0	1.6	10.8	10.8
Prop In Lane	0.74		0.03	0.10		0.89	1.00		0.14	1.00		0.01
Lane Grp Cap(c), veh/h	171	0	0	184	0	0	394	1244	1278	328	1418	1490
V/C Ratio(X)	0.20	0.00	0.00	0.64	0.00	0.00	0.02	0.57	0.57	0.31	0.41	0.41
Avail Cap(c_a), veh/h	295	0	0	322	0	0	394	1244	1278	445	1418	1490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	0.0	0.0	48.9	0.0	0.0	5.1	8.2	8.3	6.9	3.3	3.3
Incr Delay (d2), s/veh	0.6	0.0	0.0	3.7	0.0	0.0	0.1	1.9	1.9	0.5	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	3.4	0.0	0.0	0.1	8.0	8.3	0.6	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	0.0	0.0	52.6	0.0	0.0	5.2	10.1	10.1	7.5	4.2	4.2
LnGrp LOS	D	A	A	D	A	A	A	B	B	A	A	A
Approach Vol, veh/h	34			118			1446			1293		
Approach Delay, s/veh	47.0			52.6			10.1			4.5		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.8	83.2		16.3		94.0		16.3				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	12.0	70.0		20.0		88.0		20.0				
Max Q Clear Time (g_c+l1), s	3.6	24.0		4.6		12.8		10.0				
Green Ext Time (p_c), s	0.1	15.3		0.1		11.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				9.7								
HCM 6th LOS				A								

Timings 2: Federal Blvd (US-287) & 52nd Ave

2030 Background AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↔	↔	↔	↔
Traffic Volume (vph)	16	4	141	4	12	671	178	1475
Future Volume (vph)	16	4	141	4	12	671	178	1475
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	40.0	40.0	40.0	40.0	58.0	58.0	22.0	80.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	48.3%	48.3%	18.3%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 110

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

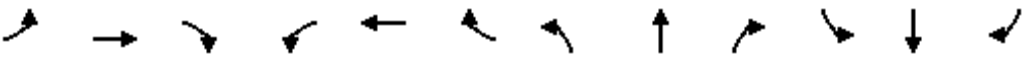
Ø1	Ø2	Ø4
22 s	58 s	40 s
Ø6	Ø8	
80 s		40 s

HCM 6th Signalized Intersection Summary

2: Federal Blvd (US-287) & 52nd Ave

2030 Background AM

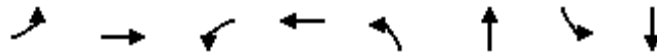
02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (veh/h)	16	4	0	141	4	95	12	671	111	178	1475	7
Future Volume (veh/h)	16	4	0	141	4	95	12	671	111	178	1475	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	4	0	157	4	106	13	746	123	198	1639	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	52	0	229	7	121	197	1725	284	454	2489	12
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.20	0.57	0.57	0.57	0.07	0.69	0.69
Sat Flow, veh/h	982	256	0	872	34	596	304	3053	503	1781	3626	18
Grp Volume(v), veh/h	22	0	0	267	0	0	13	434	435	198	803	844
Grp Sat Flow(s),veh/h/ln	1239	0	0	1502	0	0	304	1777	1780	1781	1777	1867
Q Serve(g_s), s	0.0	0.0	0.0	17.2	0.0	0.0	2.8	15.2	15.2	4.7	27.9	27.9
Cycle Q Clear(g_c), s	1.4	0.0	0.0	18.5	0.0	0.0	17.6	15.2	15.2	4.7	27.9	27.9
Prop In Lane	0.82		0.00	0.59		0.40	1.00		0.28	1.00		0.01
Lane Grp Cap(c), veh/h	311	0	0	357	0	0	197	1004	1006	454	1219	1281
V/C Ratio(X)	0.07	0.00	0.00	0.75	0.00	0.00	0.07	0.43	0.43	0.44	0.66	0.66
Avail Cap(c_a), veh/h	465	0	0	524	0	0	197	1004	1006	602	1219	1281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	0.0	41.6	0.0	0.0	18.5	13.5	13.5	9.4	9.7	9.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	3.3	0.0	0.0	0.6	1.4	1.4	0.7	2.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	7.1	0.0	0.0	0.2	6.2	6.2	1.8	10.5	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	0.0	0.0	44.9	0.0	0.0	19.1	14.9	14.9	10.1	12.5	12.3
LnGrp LOS	C	A	A	D	A	A	B	B	B	B	B	B
Approach Vol, veh/h	22			267			882			1845		
Approach Delay, s/veh	34.9			44.9			14.9			12.2		
Approach LOS	C			D			B			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.1	66.9		27.8		80.0		27.8				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	16.0	52.0		34.0		74.0		34.0				
Max Q Clear Time (g_c+l1), s	6.7	19.6		3.4		29.9		20.5				
Green Ext Time (p_c), s	0.4	6.9		0.1		18.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay	16.0											
HCM 6th LOS	B											

Timings 2: Federal Blvd (US-287) & 52nd Ave

2030 Background PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↔	↔	↔	↔
Traffic Volume (vph)	25	8	12	1	9	1329	101	1179
Future Volume (vph)	25	8	12	1	9	1329	101	1179
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	76.0	76.0	18.0	94.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	63.3%	63.3%	15.0%	78.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 110.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

 18 s	 76 s	 26 s
 94 s		 26 s

HCM 6th Signalized Intersection Summary

2: Federal Blvd (US-287) & 52nd Ave

2030 Background PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	8	1	12	1	105	9	1329	98	101	1179	5
Future Volume (veh/h)	25	8	1	12	1	105	9	1329	98	101	1179	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	8	1	13	1	111	9	1399	103	106	1241	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	35	3	45	8	138	371	2338	171	309	2882	12
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.70	0.70	0.70	0.04	0.79	0.79
Sat Flow, veh/h	786	357	34	92	85	1409	446	3357	246	1781	3630	15
Grp Volume(v), veh/h	35	0	0	125	0	0	9	738	764	106	607	639
Grp Sat Flow(s),veh/h/ln	1177	0	0	1586	0	0	446	1777	1826	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	0.0	0.7	23.9	24.2	1.7	11.9	11.9
Cycle Q Clear(g_c), s	2.9	0.0	0.0	8.5	0.0	0.0	1.8	23.9	24.2	1.7	11.9	11.9
Prop In Lane	0.74		0.03	0.10		0.89	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	172	0	0	191	0	0	371	1237	1272	309	1411	1483
V/C Ratio(X)	0.20	0.00	0.00	0.65	0.00	0.00	0.02	0.60	0.60	0.34	0.43	0.43
Avail Cap(c_a), veh/h	286	0	0	320	0	0	371	1237	1272	425	1411	1483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0	48.9	0.0	0.0	5.5	8.7	8.8	7.9	3.6	3.6
Incr Delay (d2), s/veh	0.6	0.0	0.0	3.8	0.0	0.0	0.1	2.1	2.1	0.7	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	3.6	0.0	0.0	0.1	8.9	9.2	0.7	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	0.0	52.7	0.0	0.0	5.7	10.9	10.9	8.6	4.5	4.5
LnGrp LOS	D	A	A	D	A	A	A	B	B	A	A	A
Approach Vol, veh/h	35			125			1511			1352		
Approach Delay, s/veh	46.8			52.7			10.8			4.8		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.8	83.2		16.8		94.0		16.8				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	12.0	70.0		20.0		88.0		20.0				
Max Q Clear Time (g_c+l1), s	3.7	26.2		4.9		13.9		10.5				
Green Ext Time (p_c), s	0.1	16.4		0.1		12.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	10.3											
HCM 6th LOS	B											

Timings
2: Federal Blvd (US-287) & 52nd Ave

2030 Total AM
02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	75	12	145	8	25	682	178	1533	29
Future Volume (vph)	75	12	145	8	25	682	178	1533	29
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	3	8	2	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	9.5	24.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	10.2	24.0	14.0	27.8	64.0	64.0	18.0	82.0	82.0
Total Split (%)	8.5%	20.0%	11.7%	23.2%	53.3%	53.3%	15.0%	68.3%	68.3%
Yellow Time (s)	3.5	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 104.6
Natural Cycle: 80
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

Ø1	Ø2	Ø3	Ø4
18 s	64 s	14 s	24 s
Ø6	Ø7	Ø8	
82 s	10.2 s	27.8 s	

HCM 6th Signalized Intersection Summary

2: Federal Blvd (US-287) & 52nd Ave

2030 Total AM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	12	8	145	8	95	25	682	111	178	1533	29
Future Volume (veh/h)	75	12	8	145	8	95	25	682	111	178	1533	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	13	9	161	9	106	28	758	123	198	1703	32
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	59	41	286	12	137	186	1789	290	460	2496	1113
Arrive On Green	0.05	0.06	0.06	0.09	0.09	0.09	0.58	0.58	0.58	0.06	0.70	0.70
Sat Flow, veh/h	1781	1029	713	1781	126	1479	279	3061	497	1781	3554	1585
Grp Volume(v), veh/h	83	0	22	161	0	115	28	440	441	198	1703	32
Grp Sat Flow(s),veh/h/ln	1781	0	1742	1781	0	1604	279	1777	1781	1781	1777	1585
Q Serve(g_s), s	4.7	0.0	1.3	9.1	0.0	7.6	6.9	14.8	14.8	4.5	29.6	0.7
Cycle Q Clear(g_c), s	4.7	0.0	1.3	9.1	0.0	7.6	23.8	14.8	14.8	4.5	29.6	0.7
Prop In Lane	1.00		0.41	1.00		0.92	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	189	0	100	286	0	148	186	1038	1041	460	2496	1113
V/C Ratio(X)	0.44	0.00	0.22	0.56	0.00	0.78	0.15	0.42	0.42	0.43	0.68	0.03
Avail Cap(c_a), veh/h	189	0	290	286	0	323	186	1038	1041	546	2496	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	0.0	48.7	42.3	0.0	48.0	19.6	12.4	12.4	8.7	9.2	4.9
Incr Delay (d2), s/veh	1.6	0.0	1.1	2.5	0.0	8.3	1.7	1.3	1.3	0.6	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.6	4.2	0.0	3.4	0.5	6.0	6.0	1.7	10.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	0.0	49.8	44.8	0.0	56.3	21.4	13.7	13.7	9.4	10.7	4.9
LnGrp LOS	D	A	D	D	A	E	C	B	B	A	B	A
Approach Vol, veh/h	105			276			909			1933		
Approach Delay, s/veh	47.3			49.6			13.9			10.5		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	12.8	69.2	14.0	12.2		82.0	10.2	16.0				
Change Period (Y+Rc), s	6.0	6.0	4.5	6.0		6.0	4.5	6.0				
Max Green Setting (Gmax), s	12.0	58.0	9.5	18.0		76.0	5.7	21.8				
Max Q Clear Time (g_c+l1), s	6.5	25.8	11.1	3.3		31.6	6.7	9.6				
Green Ext Time (p_c), s	0.3	7.6	0.0	0.0		21.6	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	16.0											
HCM 6th LOS	B											

Timings
2: Federal Blvd (US-287) & 52nd Ave

2030 Total PM
02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	145	23	20	9	32	1352	101	1282	43
Future Volume (vph)	145	23	20	9	32	1352	101	1282	43
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	3	8	2	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	9.5	24.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	10.2	24.6	9.6	24.0	71.8	71.8	14.0	85.8	85.8
Total Split (%)	8.5%	20.5%	8.0%	20.0%	59.8%	59.8%	11.7%	71.5%	71.5%
Yellow Time (s)	3.5	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 109.4
Natural Cycle: 90
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

Ø1	Ø2	Ø3	Ø4
14 s	71.8 s	9.6 s	24.6 s
Ø6	Ø7	Ø8	
85.8 s	10.2 s	24 s	

HCM 6th Signalized Intersection Summary

2030 Total PM

2: Federal Blvd (US-287) & 52nd Ave

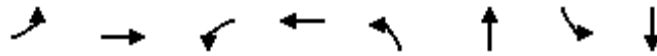
02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	23	16	20	9	105	32	1352	98	101	1282	43
Future Volume (veh/h)	145	23	16	20	9	105	32	1352	98	101	1282	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	24	17	21	9	111	34	1423	103	106	1349	45
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	125	89	230	11	139	270	2060	149	252	2520	1124
Arrive On Green	0.05	0.12	0.12	0.02	0.09	0.09	0.61	0.61	0.61	0.04	0.71	0.71
Sat Flow, veh/h	1781	1019	722	1781	120	1483	387	3361	242	1781	3554	1585
Grp Volume(v), veh/h	153	0	41	21	0	120	34	750	776	106	1349	45
Grp Sat Flow(s),veh/h/ln	1781	0	1740	1781	0	1603	387	1777	1827	1781	1777	1585
Q Serve(g_s), s	5.7	0.0	2.4	1.2	0.0	8.3	5.1	31.8	32.2	2.3	20.0	1.0
Cycle Q Clear(g_c), s	5.7	0.0	2.4	1.2	0.0	8.3	14.3	31.8	32.2	2.3	20.0	1.0
Prop In Lane	1.00		0.41	1.00		0.93	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	180	0	214	230	0	150	270	1089	1120	252	2520	1124
V/C Ratio(X)	0.85	0.00	0.19	0.09	0.00	0.80	0.13	0.69	0.69	0.42	0.54	0.04
Avail Cap(c_a), veh/h	180	0	288	273	0	256	270	1089	1120	302	2520	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	44.3	44.6	0.0	50.0	13.6	14.6	14.7	13.9	7.7	4.9
Incr Delay (d2), s/veh	29.9	0.0	0.4	0.2	0.0	9.3	1.0	3.6	3.5	1.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.1	0.5	0.0	3.7	0.5	13.0	13.5	1.1	7.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	0.0	44.8	44.8	0.0	59.3	14.5	18.1	18.2	15.0	8.5	5.0
LnGrp LOS	E	A	D	D	A	E	B	B	B	B	A	A
Approach Vol, veh/h	194			141			1560			1500		
Approach Delay, s/veh	70.7			57.1			18.1			8.9		
Approach LOS	E			E			B			A		
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	10.8	75.0	6.9	19.8		85.8	10.2	16.5				
Change Period (Y+Rc), s	6.0	6.0	4.5	6.0		6.0	4.5	6.0				
Max Green Setting (Gmax), s	8.0	65.8	5.1	18.6		79.8	5.7	18.0				
Max Q Clear Time (g_c+l1), s	4.3	34.2	3.2	4.4		22.0	7.7	10.3				
Green Ext Time (p_c), s	0.1	15.4	0.0	0.1		15.8	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	18.6											
HCM 6th LOS	B											

Timings 2: Federal Blvd (US-287) & 52nd Ave

2045 Background AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↔	↔	↔	↔
Traffic Volume (vph)	18	5	158	5	13	751	199	1650
Future Volume (vph)	18	5	158	5	13	751	199	1650
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	40.0	40.0	40.0	40.0	58.0	58.0	22.0	80.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	48.3%	48.3%	18.3%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 112.3

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

Ø1	Ø2	Ø4
22 s	58 s	40 s
Ø6		Ø8
80 s		40 s

HCM 6th Signalized Intersection Summary

2: Federal Blvd (US-287) & 52nd Ave

2045 Background AM

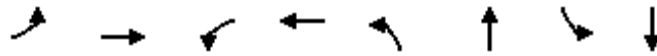
02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	5	0	158	5	106	13	751	124	199	1650	8
Future Volume (veh/h)	18	5	0	158	5	106	13	751	124	199	1650	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	6	0	176	6	118	14	834	138	221	1833	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	72	0	248	7	132	148	1650	273	409	2424	12
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.54	0.54	0.54	0.07	0.67	0.67
Sat Flow, veh/h	931	325	0	879	32	591	251	3051	505	1781	3626	18
Grp Volume(v), veh/h	26	0	0	300	0	0	14	486	486	221	898	944
Grp Sat Flow(s),veh/h/ln	1255	0	0	1502	0	0	251	1777	1779	1781	1777	1867
Q Serve(g_s), s	0.0	0.0	0.0	19.9	0.0	0.0	4.4	19.1	19.1	5.8	37.5	37.6
Cycle Q Clear(g_c), s	1.5	0.0	0.0	21.4	0.0	0.0	27.8	19.1	19.1	5.8	37.5	37.6
Prop In Lane	0.77		0.00	0.59		0.39	1.00		0.28	1.00		0.01
Lane Grp Cap(c), veh/h	338	0	0	387	0	0	148	961	962	409	1188	1248
V/C Ratio(X)	0.08	0.00	0.00	0.78	0.00	0.00	0.09	0.51	0.51	0.54	0.76	0.76
Avail Cap(c_a), veh/h	453	0	0	511	0	0	148	961	962	535	1188	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	0.0	41.6	0.0	0.0	26.4	16.1	16.1	11.8	12.3	12.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	5.4	0.0	0.0	1.3	1.9	1.9	1.1	4.5	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	8.4	0.0	0.0	0.3	8.0	8.0	2.2	14.8	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	0.0	46.9	0.0	0.0	27.7	18.0	18.0	12.9	16.8	16.6
LnGrp LOS	C	A	A	D	A	A	C	B	B	B	B	B
Approach Vol, veh/h		26			300			986			2063	
Approach Delay, s/veh		34.0			46.9			18.1			16.3	
Approach LOS		C			D			B			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.1	65.9		30.7		80.0		30.7				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	16.0	52.0		34.0		74.0		34.0				
Max Q Clear Time (g_c+l1), s	7.8	29.8		3.5		39.6		23.4				
Green Ext Time (p_c), s	0.4	7.2		0.1		20.3		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				19.7								
HCM 6th LOS				B								

Timings 2: Federal Blvd (US-287) & 52nd Ave

2045 Background PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↵	↕	↵	↕
Traffic Volume (vph)	28	9	13	1	11	1487	113	1318
Future Volume (vph)	28	9	13	1	11	1487	113	1318
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	26.0	26.0	26.0	26.0	76.0	76.0	18.0	94.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	63.3%	63.3%	15.0%	78.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max

Intersection Summary

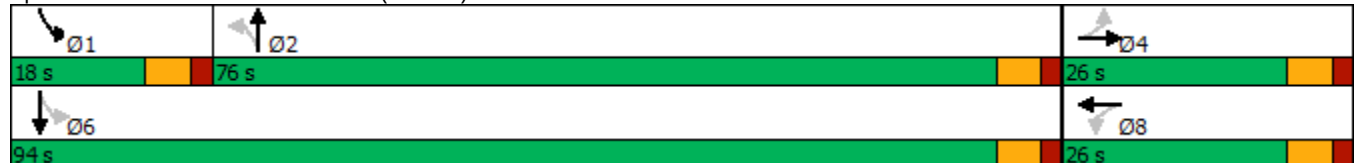
Cycle Length: 120

Actuated Cycle Length: 109.5

Natural Cycle: 80

Control Type: Semi Act-Uncoord

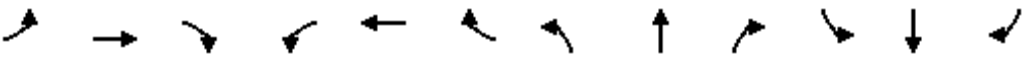
Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave



HCM 6th Signalized Intersection Summary 2: Federal Blvd (US-287) & 52nd Ave

2045 Background PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	28	9	1	13	1	117	11	1487	110	113	1318	6
Future Volume (veh/h)	28	9	1	13	1	117	11	1487	110	113	1318	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	9	1	14	1	123	12	1565	116	119	1387	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	35	3	45	9	150	318	2313	170	264	2854	12
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.69	0.69	0.69	0.04	0.79	0.79
Sat Flow, veh/h	735	334	28	90	82	1414	388	3356	247	1781	3629	16
Grp Volume(v), veh/h	39	0	0	138	0	0	12	824	857	119	679	714
Grp Sat Flow(s),veh/h/ln	1097	0	0	1586	0	0	388	1777	1826	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	4.4	0.0	0.0	1.2	30.0	30.8	2.0	14.8	14.8
Cycle Q Clear(g_c), s	3.6	0.0	0.0	9.5	0.0	0.0	5.1	30.0	30.8	2.0	14.8	14.8
Prop In Lane	0.74		0.03	0.10		0.89	1.00		0.14	1.00		0.01
Lane Grp Cap(c), veh/h	173	0	0	204	0	0	318	1225	1259	264	1398	1469
V/C Ratio(X)	0.23	0.00	0.00	0.68	0.00	0.00	0.04	0.67	0.68	0.45	0.49	0.49
Avail Cap(c_a), veh/h	273	0	0	318	0	0	318	1225	1259	377	1398	1469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	0.0	48.9	0.0	0.0	6.9	10.1	10.2	11.8	4.1	4.1
Incr Delay (d2), s/veh	0.7	0.0	0.0	3.9	0.0	0.0	0.2	3.0	3.0	1.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	4.0	0.0	0.0	0.1	11.4	12.0	1.3	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	0.0	0.0	52.8	0.0	0.0	7.1	13.0	13.2	13.0	5.3	5.3
LnGrp LOS	D	A	A	D	A	A	A	B	B	B	A	A
Approach Vol, veh/h	39			138			1693			1512		
Approach Delay, s/veh	46.7			52.8			13.1			5.9		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.9	83.1		17.9		94.0		17.9				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	12.0	70.0		20.0		88.0		20.0				
Max Q Clear Time (g_c+l1), s	4.0	32.8		5.6		16.8		11.5				
Green Ext Time (p_c), s	0.2	18.7		0.1		15.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	11.9											
HCM 6th LOS	B											

Timings
2: Federal Blvd (US-287) & 52nd Ave

2045 Total AM
02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	77	13	162	9	26	762	199	1708	30
Future Volume (vph)	77	13	162	9	26	762	199	1708	30
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	3	8	2	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	9.5	24.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	10.2	24.0	13.0	26.8	65.0	65.0	18.0	83.0	83.0
Total Split (%)	8.5%	20.0%	10.8%	22.3%	54.2%	54.2%	15.0%	69.2%	69.2%
Yellow Time (s)	3.5	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 105.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

Ø1	Ø2	Ø3	Ø4
18 s	65 s	13 s	24 s
Ø6	Ø7	Ø8	
83 s	10.2 s	26.8 s	

HCM 6th Signalized Intersection Summary

2045 Total AM

2: Federal Blvd (US-287) & 52nd Ave

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	13	8	162	9	106	26	762	124	199	1708	30
Future Volume (veh/h)	77	13	8	162	9	106	26	762	124	199	1708	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	14	9	180	10	118	29	847	138	221	1898	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	79	51	289	13	148	147	1761	287	423	2482	1107
Arrive On Green	0.05	0.07	0.07	0.08	0.10	0.10	0.58	0.58	0.58	0.07	0.70	0.70
Sat Flow, veh/h	1781	1064	684	1781	125	1479	230	3059	498	1781	3554	1585
Grp Volume(v), veh/h	86	0	23	180	0	128	29	492	493	221	1898	33
Grp Sat Flow(s),veh/h/ln	1781	0	1747	1781	0	1604	230	1777	1781	1781	1777	1585
Q Serve(g_s), s	4.9	0.0	1.4	8.5	0.0	8.6	10.3	17.9	17.9	5.3	38.1	0.7
Cycle Q Clear(g_c), s	4.9	0.0	1.4	8.5	0.0	8.6	34.9	17.9	17.9	5.3	38.1	0.7
Prop In Lane	1.00		0.39	1.00		0.92	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	185	0	131	289	0	161	147	1023	1025	423	2482	1107
V/C Ratio(X)	0.46	0.00	0.18	0.62	0.00	0.80	0.20	0.48	0.48	0.52	0.76	0.03
Avail Cap(c_a), veh/h	185	0	285	289	0	303	147	1023	1025	495	2482	1107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	0.0	47.8	44.2	0.0	48.5	26.4	13.7	13.7	10.1	10.8	5.1
Incr Delay (d2), s/veh	1.8	0.0	0.6	4.1	0.0	8.7	3.0	1.6	1.6	1.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.6	5.0	0.0	3.8	0.7	7.3	7.3	2.0	13.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	0.0	48.5	48.3	0.0	57.2	29.4	15.3	15.3	11.1	13.1	5.2
LnGrp LOS	D	A	D	D	A	E	C	B	B	B	B	A
Approach Vol, veh/h	109			308			1014			2152		
Approach Delay, s/veh	46.6			52.0			15.7			12.7		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	13.5	69.5	13.0	14.2		83.0	10.2	17.0				
Change Period (Y+Rc), s	6.0	6.0	4.5	6.0		6.0	4.5	6.0				
Max Green Setting (Gmax), s	12.0	59.0	8.5	18.0		77.0	5.7	20.8				
Max Q Clear Time (g_c+l1), s	7.3	36.9	10.5	3.4		40.1	6.9	10.6				
Green Ext Time (p_c), s	0.3	7.9	0.0	0.0		23.0	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	18.0											
HCM 6th LOS	B											

Timings 2: Federal Blvd (US-287) & 52nd Ave

2045 Total PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	148	24	21	9	34	1510	113	1421	44
Future Volume (vph)	148	24	21	9	34	1510	113	1421	44
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	7	4	3	8	2	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	9.5	24.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	10.0	24.4	9.6	24.0	72.0	72.0	14.0	86.0	86.0
Total Split (%)	8.3%	20.3%	8.0%	20.0%	60.0%	60.0%	11.7%	71.7%	71.7%
Yellow Time (s)	3.5	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	Max	Max	None	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 109.6

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 2: Federal Blvd (US-287) & 52nd Ave

Ø1	Ø2	Ø3	Ø4
14 s	72 s	9.6 s	24.4 s
Ø6		Ø7	Ø8
86 s		10 s	24 s

HCM 6th Signalized Intersection Summary

2: Federal Blvd (US-287) & 52nd Ave

2045 Total PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	24	16	21	9	117	34	1510	110	113	1421	44
Future Volume (veh/h)	148	24	16	21	9	117	34	1510	110	113	1421	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	25	17	22	9	123	36	1589	116	119	1496	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	132	90	241	11	151	228	2046	148	213	2505	1117
Arrive On Green	0.05	0.13	0.13	0.02	0.10	0.10	0.61	0.61	0.61	0.04	0.71	0.71
Sat Flow, veh/h	1781	1038	706	1781	109	1493	336	3360	244	1781	3554	1585
Grp Volume(v), veh/h	156	0	42	22	0	132	36	835	870	119	1496	46
Grp Sat Flow(s),veh/h/ln	1781	0	1743	1781	0	1602	336	1777	1827	1781	1777	1585
Q Serve(g_s), s	5.5	0.0	2.4	1.2	0.0	9.2	6.9	39.3	40.3	2.7	24.3	1.0
Cycle Q Clear(g_c), s	5.5	0.0	2.4	1.2	0.0	9.2	20.4	39.3	40.3	2.7	24.3	1.0
Prop In Lane	1.00		0.40	1.00		0.93	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	175	0	222	241	0	162	228	1082	1113	213	2505	1117
V/C Ratio(X)	0.89	0.00	0.19	0.09	0.00	0.81	0.16	0.77	0.78	0.56	0.60	0.04
Avail Cap(c_a), veh/h	175	0	283	282	0	254	228	1082	1113	262	2505	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	0.0	44.3	44.2	0.0	50.0	16.5	16.4	16.6	20.1	8.5	5.1
Incr Delay (d2), s/veh	38.4	0.0	0.4	0.2	0.0	10.7	1.5	5.3	5.5	2.3	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	1.1	0.6	0.0	4.1	0.6	16.5	17.4	1.9	8.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.8	0.0	44.7	44.3	0.0	60.7	18.0	21.7	22.0	22.4	9.6	5.2
LnGrp LOS	F	A	D	D	A	E	B	C	C	C	A	A
Approach Vol, veh/h	198			154			1741			1661		
Approach Delay, s/veh	77.9			58.3			21.8			10.4		
Approach LOS	E			E			C			B		
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	10.9	75.1	7.0	20.5		86.0	10.0	17.5				
Change Period (Y+Rc), s	6.0	6.0	4.5	6.0		6.0	4.5	6.0				
Max Green Setting (Gmax), s	8.0	66.0	5.1	18.4		80.0	5.5	18.0				
Max Q Clear Time (g_c+l1), s	4.7	42.3	3.2	4.4		26.3	7.5	11.2				
Green Ext Time (p_c), s	0.1	15.2	0.0	0.1		18.7	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	21.2											
HCM 6th LOS	C											

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	6	0	7	1	0	12	46	742	10	21	1484	60
Future Vol, veh/h	6	0	7	1	0	12	46	742	10	21	1484	60
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	-	-	-	-	-	-	125	-	-	225	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	7	1	0	13	48	781	11	22	1562	63
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2125	2526	813	1708	2552	396	1625	0	0	792	0	0
Stage 1	1638	1638	-	883	883	-	-	-	-	-	-	-
Stage 2	487	888	-	825	1669	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	28	27	322	59	26	603	396	-	-	824	-	-
Stage 1	105	157	-	307	362	-	-	-	-	-	-	-
Stage 2	531	360	-	333	151	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	24	23	322	51	22	603	396	-	-	824	-	-
Mov Cap-2 Maneuver	75	101	-	146	76	-	-	-	-	-	-	-
Stage 1	92	153	-	270	318	-	-	-	-	-	-	-
Stage 2	457	316	-	317	147	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	36.5		12.6		0.9		0.1					
HCM LOS	E		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	396	-	-	128	486	824	-	-				
HCM Lane V/C Ratio	0.122	-	-	0.107	0.028	0.027	-	-				
HCM Control Delay (s)	15.4	-	-	36.5	12.6	9.5	-	-				
HCM Lane LOS	C	-	-	E	B	A	-	-				
HCM 95th %tile Q(veh)	0.4	-	-	0.4	0.1	0.1	-	-				

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	2	44	10	2	21	34	1340	41	22	1206	27
Future Vol, veh/h	7	2	44	10	2	21	34	1340	41	22	1206	27
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	-	-	-	-	-	-	125	-	-	225	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	2	47	11	2	22	36	1426	44	23	1283	29
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2130	2886	656	2209	2878	735	1312	0	0	1470	0	0
Stage 1	1344	1344	-	1520	1520	-	-	-	-	-	-	-
Stage 2	786	1542	-	689	1358	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	28	16	408	24	16	362	523	-	-	455	-	-
Stage 1	160	219	-	124	179	-	-	-	-	-	-	-
Stage 2	351	175	-	402	215	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	23	14	408	19	14	362	523	-	-	455	-	-
Mov Cap-2 Maneuver	98	83	-	83	83	-	-	-	-	-	-	-
Stage 1	149	208	-	115	167	-	-	-	-	-	-	-
Stage 2	303	163	-	334	204	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	22.6		33		0.3		0.2					
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	523	-	-	261	163	455	-	-				
HCM Lane V/C Ratio	0.069	-	-	0.216	0.215	0.051	-	-				
HCM Control Delay (s)	12.4	-	-	22.6	33	13.3	-	-				
HCM Lane LOS	B	-	-	C	D	B	-	-				
HCM 95th %tile O(veh)	0.2	-	-	0.8	0.8	0.2	-	-				

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	6	0	7	1	0	12	46	776	10	21	1552	60
Future Vol, veh/h	6	0	7	1	0	12	46	776	10	21	1552	60
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	-	-	-	-	-	-	125	-	-	225	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	7	1	0	13	48	817	11	22	1634	63
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2215	2634	849	1780	2660	414	1697	0	0	828	0	0
Stage 1	1710	1710	-	919	919	-	-	-	-	-	-	-
Stage 2	505	924	-	861	1741	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	24	23	304	52	22	587	372	-	-	799	-	-
Stage 1	94	144	-	292	348	-	-	-	-	-	-	-
Stage 2	518	346	-	317	139	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	21	19	304	45	19	587	372	-	-	799	-	-
Mov Cap-2 Maneuver	67	93	-	136	67	-	-	-	-	-	-	-
Stage 1	82	140	-	254	303	-	-	-	-	-	-	-
Stage 2	441	301	-	301	135	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	40.5		12.9		0.9		0.1					
HCM LOS	E		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	372	-	-	115	468	799	-	-				
HCM Lane V/C Ratio	0.13	-	-	0.119	0.029	0.028	-	-				
HCM Control Delay (s)	16.1	-	-	40.5	12.9	9.6	-	-				
HCM Lane LOS	C	-	-	E	B	A	-	-				
HCM 95th %tile Q(veh)	0.4	-	-	0.4	0.1	0.1	-	-				

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	7	2	44	10	2	21	34	1401	41	22	1261	27
Future Vol, veh/h	7	2	44	10	2	21	34	1401	41	22	1261	27
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	-	-	-	-	-	-	125	-	-	225	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	2	47	11	2	22	36	1490	44	23	1341	29
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2220	3008	685	2302	3000	767	1370	0	0	1534	0	0
Stage 1	1402	1402	-	1584	1584	-	-	-	-	-	-	-
Stage 2	818	1606	-	718	1416	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	24	13	391	21	13	345	497	-	-	430	-	-
Stage 1	147	205	-	113	167	-	-	-	-	-	-	-
Stage 2	336	163	-	386	202	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	20	11	391	16	11	345	497	-	-	430	-	-
Mov Cap-2 Maneuver	90	75	-	75	76	-	-	-	-	-	-	-
Stage 1	136	194	-	105	155	-	-	-	-	-	-	-
Stage 2	287	151	-	318	191	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	24.1		36.2		0.3		0.2					
HCM LOS	C		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	497	-	-	244	150	430	-	-				
HCM Lane V/C Ratio	0.073	-	-	0.231	0.234	0.054	-	-				
HCM Control Delay (s)	12.8	-	-	24.1	36.2	13.9	-	-				
HCM Lane LOS	B	-	-	C	E	B	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.9	0.2	-	-				

HCM 6th TWSC
3: Federal Blvd (US-287) & 51st Ave

2030 Total AM
02/09/2024

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↗↘		↗	↗↗	↗
Traffic Vol, veh/h	0	0	23	0	0	12	26	800	10	21	1575	37
Future Vol, veh/h	0	0	23	0	0	12	26	800	10	21	1575	37
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	-	-	0	-	-	0	125	-	-	225	-	100
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	24	0	0	13	27	842	11	22	1658	39
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	829	-	-	427	1697	0	0	853	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	314	0	0	576	372	-	-	782	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	314	-	-	576	372	-	-	782	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.4		11.4		0.5		0.1					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	372	-	-	314	576	782	-	-				
HCM Lane V/C Ratio	0.074	-	-	0.077	0.022	0.028	-	-				
HCM Control Delay (s)	15.4	-	-	17.4	11.4	9.7	-	-				
HCM Lane LOS	C	-	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.1	0.1	-	-				

HCM 6th TWSC
3: Federal Blvd (US-287) & 51st Ave

2030 Total PM
02/09/2024

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↗↘		↗	↗↘	↗
Traffic Vol, veh/h	0	0	46	0	0	21	46	1447	41	22	1307	65
Future Vol, veh/h	0	0	46	0	0	21	46	1447	41	22	1307	65
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	-	-	0	-	-	0	125	-	-	225	-	100
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	49	0	0	22	49	1539	44	23	1390	69

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	695	-	-	792	1459	0	0	1583	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	385	0	0	332	459	-	-	411	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	385	-	-	332	459	-	-	411	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.7	16.6	0.4	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	459	-	-	385	332	411	-
HCM Lane V/C Ratio	0.107	-	-	0.127	0.067	0.057	-
HCM Control Delay (s)	13.8	-	-	15.7	16.6	14.3	-
HCM Lane LOS	B	-	-	C	C	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	0.2	0.2	-

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	6	0	7	1	0	12	46	868	10	21	1736	60
Future Vol, veh/h	6	0	7	1	0	12	46	868	10	21	1736	60
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	-	-	-	-	-	-	125	-	-	225	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	7	1	0	13	48	914	11	22	1827	63
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2456	2924	945	1974	2950	463	1890	0	0	925	0	0
Stage 1	1903	1903	-	1016	1016	-	-	-	-	-	-	-
Stage 2	553	1021	-	958	1934	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	16	15	263	37	14	546	312	-	-	734	-	-
Stage 1	71	116	-	255	314	-	-	-	-	-	-	-
Stage 2	485	312	-	276	111	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	12	263	31	11	546	312	-	-	734	-	-
Mov Cap-2 Maneuver	50	75	-	112	48	-	-	-	-	-	-	-
Stage 1	60	113	-	216	266	-	-	-	-	-	-	-
Stage 2	401	264	-	260	108	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	52.7		13.8		0.9		0.1					
HCM LOS	F		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	312	-	-	89	421	734	-	-				
HCM Lane V/C Ratio	0.155	-	-	0.154	0.033	0.03	-	-				
HCM Control Delay (s)	18.6	-	-	52.7	13.8	10.1	-	-				
HCM Lane LOS	C	-	-	F	B	B	-	-				
HCM 95th %tile Q(veh)	0.5	-	-	0.5	0.1	0.1	-	-				

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	7	2	44	10	2	21	34	1568	41	22	1411	27
Future Vol, veh/h	7	2	44	10	2	21	34	1568	41	22	1411	27
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	-	-	-	-	-	-	125	-	-	225	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	2	47	11	2	22	36	1668	44	23	1501	29
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2469	3346	765	2560	3338	856	1530	0	0	1712	0	0
Stage 1	1562	1562	-	1762	1762	-	-	-	-	-	-	-
Stage 2	907	1784	-	798	1576	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	15	8	346	13	8	301	431	-	-	367	-	-
Stage 1	117	171	-	87	136	-	-	-	-	-	-	-
Stage 2	297	133	-	346	168	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	12	7	346	~ 10	7	301	431	-	-	367	-	-
Mov Cap-2 Maneuver	71	59	-	58	59	-	-	-	-	-	-	-
Stage 1	107	160	-	80	125	-	-	-	-	-	-	-
Stage 2	248	122	-	277	157	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	29.3		47		0.3		0.2					
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	431	-	-	204	120	367	-	-				
HCM Lane V/C Ratio	0.084	-	-	0.276	0.293	0.064	-	-				
HCM Control Delay (s)	14.1	-	-	29.3	47	15.5	-	-				
HCM Lane LOS	B	-	-	D	E	C	-	-				
HCM 95th %tile Q(veh)	0.3	-	-	1.1	1.1	0.2	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↰			↰	↰	↰↱		↰	↱↱	↰
Traffic Vol, veh/h	0	0	23	0	0	12	26	892	10	21	1759	37
Future Vol, veh/h	0	0	23	0	0	12	26	892	10	21	1759	37
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	-	-	0	-	-	0	125	-	-	225	-	100
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	24	0	0	13	27	939	11	22	1852	39
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	926	-	-	475	1891	0	0	950	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	271	0	0	536	312	-	-	719	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	271	-	-	536	312	-	-	719	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	19.6		11.9		0.5		0.1					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	312	-	-	271	536	719	-	-				
HCM Lane V/C Ratio	0.088	-	-	0.089	0.024	0.031	-	-				
HCM Control Delay (s)	17.6	-	-	19.6	11.9	10.2	-	-				
HCM Lane LOS	C	-	-	C	B	B	-	-				
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.1	0.1	-	-				

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↱			↱	↱	↱↲		↱	↱↲	↱
Traffic Vol, veh/h	0	0	46	0	0	21	46	1614	41	22	1457	65
Future Vol, veh/h	0	0	46	0	0	21	46	1614	41	22	1457	65
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	-	-	0	-	-	0	125	-	-	225	-	100
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	49	0	0	22	49	1717	44	23	1550	69
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	775	-	-	881	1619	0	0	1761	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	341	0	0	290	398	-	-	351	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	341	-	-	290	398	-	-	351	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.3		18.4		0.4		0.2					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	398	-	-	341	290	351	-	-				
HCM Lane V/C Ratio	0.123	-	-	0.144	0.077	0.067	-	-				
HCM Control Delay (s)	15.3	-	-	17.3	18.4	16	-	-				
HCM Lane LOS	C	-	-	C	C	C	-	-				
HCM 95th %tile Q(veh)	0.4	-	-	0.5	0.2	0.2	-	-				

Timings

2024 Existing AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	88	62	83	74	45	131	692	33	24	1383	
Future Volume (vph)	88	62	83	74	45	131	692	33	24	1383	
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	
Protected Phases	4				8	5	2			6	
Permitted Phases	4	4		8	2			2	6		
Detector Phase	4	4	4	8	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	
Total Split (s)	24.0	24.0	24.0	24.0	24.0	19.0	96.0	96.0	77.0	77.0	
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	15.8%	80.0%	80.0%	64.2%	64.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lead				Lag	Lag
Lead-Lag Optimize?						Yes				Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 115

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave



HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2024 Existing AM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	62	83	74	45	20	131	692	33	24	1383	132
Future Volume (veh/h)	88	62	83	74	45	20	131	692	33	24	1383	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	64	86	76	46	21	135	713	34	25	1426	136
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	227	193	174	148	67	280	2755	1229	548	2234	212
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.04	0.78	0.78	0.68	0.68	0.68
Sat Flow, veh/h	1334	1870	1585	1237	1216	555	1781	3554	1585	714	3280	311
Grp Volume(v), veh/h	91	64	86	76	0	67	135	713	34	25	769	793
Grp Sat Flow(s),veh/h/ln	1334	1870	1585	1237	0	1770	1781	1777	1585	714	1777	1814
Q Serve(g_s), s	7.8	3.6	5.9	6.9	0.0	4.0	2.5	6.6	0.6	1.3	28.2	28.8
Cycle Q Clear(g_c), s	11.8	3.6	5.9	10.5	0.0	4.0	2.5	6.6	0.6	1.3	28.2	28.8
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	178	227	193	174	0	215	280	2755	1229	548	1210	1236
V/C Ratio(X)	0.51	0.28	0.45	0.44	0.00	0.31	0.48	0.26	0.03	0.05	0.64	0.64
Avail Cap(c_a), veh/h	223	290	246	215	0	274	404	2755	1229	548	1210	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	46.4	47.4	51.2	0.0	46.6	11.1	3.7	3.0	6.1	10.4	10.5
Incr Delay (d2), s/veh	2.3	0.7	1.6	1.7	0.0	0.8	1.3	0.2	0.0	0.2	2.5	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.7	0.1	2.2	0.0	1.8	1.4	2.0	0.2	0.2	10.9	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	47.1	49.0	52.9	0.0	47.4	12.4	3.9	3.0	6.3	13.0	13.1
LnGrp LOS	D	D	D	D	A	D	B	A	A	A	B	B
Approach Vol, veh/h	241				143				882			
Approach Delay, s/veh	50.5				50.3				5.2			
Approach LOS	D				D				A			
Timer - Assigned Phs	2			4		5		6		8		
Phs Duration (G+Y+Rc), s	96.0			20.1		10.9		85.1		20.1		
Change Period (Y+Rc), s	6.0			6.0		6.0		6.0		6.0		
Max Green Setting (Gmax), s	90.0			18.0		13.0		71.0		18.0		
Max Q Clear Time (g_c+l1), s	8.6			13.8		4.5		30.8		12.5		
Green Ext Time (p_c), s	6.1			0.3		0.2		17.2		0.2		
Intersection Summary												
HCM 6th Ctrl Delay	15.6											
HCM 6th LOS	B											

Timings

2024 Existing PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	132	74	127	69	68	156	1260	74	22	1128	
Future Volume (vph)	132	74	127	69	68	156	1260	74	22	1128	
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	
Protected Phases	4				8	5	2			6	
Permitted Phases	4	4		8	2		2		6		
Detector Phase	4	4	4	8	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	
Total Split (s)	31.0	31.0	31.0	31.0	31.0	20.0	89.0	89.0	69.0	69.0	
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	16.7%	74.2%	74.2%	57.5%	57.5%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lead				Lag	Lag
Lead-Lag Optimize?						Yes				Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 112.2

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave

			
89 s		31 s	
			
20 s	69 s	31 s	

HCM 6th Signalized Intersection Summary
4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2024 Existing PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	74	127	69	68	34	156	1260	74	22	1128	121
Future Volume (veh/h)	132	74	127	69	68	34	156	1260	74	22	1128	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	76	131	71	70	35	161	1299	76	23	1163	125
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	332	282	230	209	104	324	2553	1139	282	1994	214
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.72	0.72	0.62	0.62	0.62
Sat Flow, veh/h	1289	1870	1585	1175	1176	588	1781	3554	1585	395	3237	347
Grp Volume(v), veh/h	136	76	131	71	0	105	161	1299	76	23	637	651
Grp Sat Flow(s),veh/h/ln	1289	1870	1585	1175	0	1764	1781	1777	1585	395	1777	1808
Q Serve(g_s), s	11.9	4.0	8.6	6.4	0.0	6.0	3.6	18.7	1.6	3.2	24.8	25.0
Cycle Q Clear(g_c), s	17.9	4.0	8.6	10.4	0.0	6.0	3.6	18.7	1.6	10.1	24.8	25.0
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	224	332	282	230	0	313	324	2553	1139	282	1094	1113
V/C Ratio(X)	0.61	0.23	0.47	0.31	0.00	0.33	0.50	0.51	0.07	0.08	0.58	0.58
Avail Cap(c_a), veh/h	274	405	343	276	0	382	450	2553	1139	282	1094	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	40.7	42.6	45.2	0.0	41.5	11.4	7.2	4.8	12.1	13.3	13.3
Incr Delay (d2), s/veh	2.6	0.3	1.2	0.8	0.0	0.6	1.2	0.7	0.1	0.6	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.9	3.4	1.9	0.0	2.7	1.4	6.6	0.5	0.3	10.1	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	41.1	43.8	45.9	0.0	42.2	12.6	7.9	4.9	12.6	15.6	15.6
LnGrp LOS	D	D	D	D	A	D	B	A	A	B	B	B
Approach Vol, veh/h	343			176			1536			1311		
Approach Delay, s/veh	46.4			43.7			8.3			15.5		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	89.0			26.5		11.8	77.2	26.5				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	83.0			25.0		14.0	63.0	25.0				
Max Q Clear Time (g_c+l1), s	20.7			19.9		5.6	27.0	12.4				
Green Ext Time (p_c), s	15.2			0.6		0.3	12.4	0.6				
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											

Timings

2030 Background AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	92	65	87	77	47	137	724	35	25	1446	
Future Volume (vph)	92	65	87	77	47	137	724	35	25	1446	
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4			8	5	2			6	
Permitted Phases	4		4	8		2		2	6		
Detector Phase	4	4	4	8	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	
Total Split (s)	24.0	24.0	24.0	24.0	24.0	19.0	96.0	96.0	77.0	77.0	
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	15.8%	80.0%	80.0%	64.2%	64.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lead			Lag	Lag	
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 115.3

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave

 Ø2	 Ø4
96 s	24 s
 Ø5	 Ø8
19 s	24 s
 Ø6	
77 s	

HCM 6th Signalized Intersection Summary
4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2030 Background AM

02/09/2024

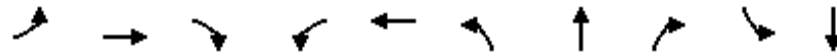
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	65	87	77	47	21	137	724	35	25	1446	138
Future Volume (veh/h)	92	65	87	77	47	21	137	724	35	25	1446	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	67	90	79	48	22	141	746	36	26	1491	142
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	235	199	176	153	70	262	2741	1223	530	2223	210
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.77	0.77	0.68	0.68	0.68
Sat Flow, veh/h	1331	1870	1585	1230	1214	556	1781	3554	1585	691	3281	310
Grp Volume(v), veh/h	95	67	90	79	0	70	141	746	36	26	802	831
Grp Sat Flow(s),veh/h/ln	1331	1870	1585	1230	0	1770	1781	1777	1585	691	1777	1815
Q Serve(g_s), s	8.2	3.8	6.1	7.3	0.0	4.2	2.6	7.1	0.6	1.5	31.0	31.8
Cycle Q Clear(g_c), s	12.4	3.8	6.1	11.1	0.0	4.2	2.6	7.1	0.6	1.5	31.0	31.8
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	181	235	199	176	0	223	262	2741	1223	530	1204	1229
V/C Ratio(X)	0.52	0.28	0.45	0.45	0.00	0.31	0.54	0.27	0.03	0.05	0.67	0.68
Avail Cap(c_a), veh/h	219	289	245	211	0	273	385	2741	1223	530	1204	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	46.2	47.3	51.3	0.0	46.4	13.4	3.9	3.1	6.3	11.1	11.2
Incr Delay (d2), s/veh	2.3	0.7	1.6	1.8	0.0	0.8	1.7	0.2	0.0	0.2	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.8	2.5	2.3	0.0	1.9	1.8	2.2	0.2	0.2	12.1	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	46.9	48.9	53.0	0.0	47.2	15.1	4.1	3.2	6.5	14.0	14.2
LnGrp LOS	D	D	D	D	A	D	B	A	A	A	B	B
Approach Vol, veh/h	252			149			923			1659		
Approach Delay, s/veh	50.4			50.3			5.7			14.0		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	2			4		5		6		8		
Phs Duration (G+Y+Rc), s	96.0			20.7		10.9		85.1		20.7		
Change Period (Y+Rc), s	6.0			6.0		6.0		6.0		6.0		
Max Green Setting (Gmax), s	90.0			18.0		13.0		71.0		18.0		
Max Q Clear Time (g_c+l1), s	9.1			14.4		4.6		33.8		13.1		
Green Ext Time (p_c), s	6.5			0.3		0.2		17.9		0.2		
Intersection Summary												
HCM 6th Ctrl Delay	16.3											
HCM 6th LOS	B											

Timings

2030 Background PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	138	77	133	72	71	163	1318	77	23	1180
Future Volume (vph)	138	77	133	72	71	163	1318	77	23	1180
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA
Protected Phases		4			8	5	2			6
Permitted Phases	4		4	8		2		2	6	
Detector Phase	4	4	4	8	8	5	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	20.0	89.0	89.0	69.0	69.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	16.7%	74.2%	74.2%	57.5%	57.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead			Lag	Lag
Lead-Lag Optimize?						Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 112.7

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave



HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2030 Background PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	77	133	72	71	36	163	1318	77	23	1180	127
Future Volume (veh/h)	138	77	133	72	71	36	163	1318	77	23	1180	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	79	137	74	73	37	168	1359	79	24	1216	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	345	292	235	216	109	306	2533	1130	260	1970	212
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.71	0.71	0.61	0.61	0.61
Sat Flow, veh/h	1283	1870	1585	1165	1170	593	1781	3554	1585	371	3237	348
Grp Volume(v), veh/h	142	79	137	74	0	110	168	1359	79	24	666	681
Grp Sat Flow(s),veh/h/ln	1283	1870	1585	1165	0	1764	1781	1777	1585	371	1777	1808
Q Serve(g_s), s	12.6	4.2	9.0	6.7	0.0	6.3	3.9	20.7	1.8	3.7	27.3	27.6
Cycle Q Clear(g_c), s	18.9	4.2	9.0	10.9	0.0	6.3	3.9	20.7	1.8	12.3	27.3	27.6
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	229	345	292	235	0	325	306	2533	1130	260	1081	1100
V/C Ratio(X)	0.62	0.23	0.47	0.32	0.00	0.34	0.55	0.54	0.07	0.09	0.62	0.62
Avail Cap(c_a), veh/h	268	401	340	270	0	379	427	2533	1130	260	1081	1100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	40.5	42.4	45.1	0.0	41.3	13.1	7.8	5.1	13.5	14.3	14.3
Incr Delay (d2), s/veh	3.3	0.3	1.2	0.8	0.0	0.6	1.5	0.8	0.1	0.7	2.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.0	3.6	2.0	0.0	2.8	1.7	7.3	0.6	0.4	11.2	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	40.8	43.6	45.9	0.0	41.9	14.6	8.6	5.2	14.2	16.9	16.9
LnGrp LOS	D	D	D	D	A	D	B	A	A	B	B	B
Approach Vol, veh/h	358			184			1606			1371		
Approach Delay, s/veh	46.7			43.5			9.1			16.9		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	89.0			27.5		12.1	76.9	27.5				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	83.0			25.0		14.0	63.0	25.0				
Max Q Clear Time (g_c+l1), s	22.7			20.9		5.9	29.6	12.9				
Green Ext Time (p_c), s	16.4			0.5		0.3	13.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay	17.7											
HCM 6th LOS	B											

Timings

2030 Total AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	103	71	104	77	53	169	763	35	25	1492	138
Future Volume (vph)	103	71	104	77	53	169	763	35	25	1492	138
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8	5	2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	19.0	96.0	96.0	77.0	77.0	77.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	15.8%	80.0%	80.0%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead			Lag	Lag	Lag
Lead-Lag Optimize?						Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 116

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave

 Ø2	 Ø4
96 s	24 s
 Ø5	 Ø8
19 s	24 s
 Ø6	
77 s	

HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2030 Total AM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	71	104	77	53	21	169	763	35	25	1492	138
Future Volume (veh/h)	103	71	104	77	53	21	169	763	35	25	1492	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	73	107	79	55	22	174	787	36	26	1538	142
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	255	216	183	174	69	266	2707	1208	502	2355	1050
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.76	0.76	0.66	0.66	0.66
Sat Flow, veh/h	1322	1870	1585	1204	1271	508	1781	3554	1585	665	3554	1585
Grp Volume(v), veh/h	106	73	107	79	0	77	174	787	36	26	1538	142
Grp Sat Flow(s),veh/h/ln	1322	1870	1585	1204	0	1779	1781	1777	1585	665	1777	1585
Q Serve(g_s), s	9.3	4.1	7.4	7.5	0.0	4.6	3.5	8.0	0.7	1.6	30.4	3.9
Cycle Q Clear(g_c), s	13.9	4.1	7.4	11.6	0.0	4.6	3.5	8.0	0.7	1.6	30.4	3.9
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	255	216	183	0	243	266	2707	1208	502	2355	1050
V/C Ratio(X)	0.56	0.29	0.49	0.43	0.00	0.32	0.65	0.29	0.03	0.05	0.65	0.14
Avail Cap(c_a), veh/h	211	285	242	202	0	271	376	2707	1208	502	2355	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	45.8	47.2	51.0	0.0	46.0	15.7	4.3	3.4	7.0	11.9	7.4
Incr Delay (d2), s/veh	2.6	0.6	1.7	1.6	0.0	0.7	2.7	0.3	0.0	0.2	1.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	2.0	3.0	2.3	0.0	2.1	2.8	2.6	0.2	0.2	11.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	46.4	49.0	52.6	0.0	46.8	18.4	4.6	3.5	7.2	13.3	7.7
LnGrp LOS	D	D	D	D	A	D	B	A	A	A	B	A
Approach Vol, veh/h	286				156				997			
Approach Delay, s/veh	50.5				49.7				7.0			
Approach LOS	D				D				A			
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	96.0			22.1		11.7	84.3	22.1				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	90.0			18.0		13.0	71.0	18.0				
Max Q Clear Time (g_c+l1), s	10.0			15.9		5.5	32.4	13.6				
Green Ext Time (p_c), s	7.0			0.2		0.3	18.5	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	16.2											
HCM 6th LOS	B											

Timings

2030 Total PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	161	89	168	72	82	220	1387	77	23	1273	127
Future Volume (vph)	161	89	168	72	82	220	1387	77	23	1273	127
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8	5	2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	20.0	89.0	89.0	69.0	69.0	69.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	16.7%	74.2%	74.2%	57.5%	57.5%	57.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead			Lag	Lag	Lag
Lead-Lag Optimize?						Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 115

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave



HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2030 Total PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	89	168	72	82	36	220	1387	77	23	1273	127
Future Volume (veh/h)	161	89	168	72	82	36	220	1387	77	23	1273	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	166	92	173	74	85	37	227	1430	79	24	1312	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	383	325	243	253	110	304	2468	1101	230	2045	912
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.07	0.69	0.69	0.58	0.58	0.58
Sat Flow, veh/h	1269	1870	1585	1114	1236	538	1781	3554	1585	347	3554	1585
Grp Volume(v), veh/h	166	92	173	74	0	122	227	1430	79	24	1312	131
Grp Sat Flow(s),veh/h/ln	1269	1870	1585	1114	0	1774	1781	1777	1585	347	1777	1585
Q Serve(g_s), s	15.3	4.9	11.6	7.1	0.0	7.0	5.9	24.6	1.9	4.5	29.7	4.6
Cycle Q Clear(g_c), s	22.4	4.9	11.6	12.0	0.0	7.0	5.9	24.6	1.9	14.9	29.7	4.6
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	383	325	243	0	364	304	2468	1101	230	2045	912
V/C Ratio(X)	0.68	0.24	0.53	0.30	0.00	0.34	0.75	0.58	0.07	0.10	0.64	0.14
Avail Cap(c_a), veh/h	251	391	332	248	0	371	390	2468	1101	230	2045	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	39.7	42.4	44.7	0.0	40.6	18.4	9.3	5.9	16.8	17.1	11.7
Incr Delay (d2), s/veh	6.8	0.3	1.6	0.7	0.0	0.5	5.7	1.0	0.1	0.9	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	2.3	4.7	2.0	0.0	3.1	4.0	9.0	0.6	0.4	12.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	40.0	44.0	45.4	0.0	41.1	24.2	10.3	6.0	17.7	18.6	12.1
LnGrp LOS	E	D	D	D	A	D	C	B	A	B	B	B
Approach Vol, veh/h	431			196			1736			1467		
Approach Delay, s/veh	48.1			42.7			11.9			18.0		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	89.0			30.5		14.2	74.8	30.5				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	83.0			25.0		14.0	63.0	25.0				
Max Q Clear Time (g_c+l1), s	26.6			24.4		7.9	31.7	14.0				
Green Ext Time (p_c), s	17.7			0.1		0.3	13.8	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	19.9											
HCM 6th LOS	B											

Timings

2045 Background AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	103	73	97	87	53	153	810	39	28	1618	
Future Volume (vph)	103	73	97	87	53	153	810	39	28	1618	
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4			8	5	2			6	
Permitted Phases	4		4	8		2		2	6		
Detector Phase	4	4	4	8	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	
Total Split (s)	24.0	24.0	24.0	24.0	24.0	19.0	96.0	96.0	77.0	77.0	
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	15.8%	80.0%	80.0%	64.2%	64.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lead			Lag	Lag	
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 116

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave

 Ø2	 Ø4
96 s	24 s
 Ø5	 Ø8
19 s	24 s
 Ø6	
77 s	

HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2045 Background AM

02/09/2024

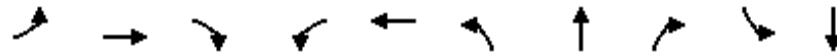
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	73	97	87	53	23	153	810	39	28	1618	154
Future Volume (veh/h)	103	73	97	87	53	23	153	810	39	28	1618	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	75	100	90	55	24	158	835	40	29	1668	159
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	258	218	184	170	74	220	2704	1206	482	2183	205
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.76	0.76	0.66	0.66	0.66
Sat Flow, veh/h	1320	1870	1585	1210	1235	539	1781	3554	1585	634	3283	309
Grp Volume(v), veh/h	106	75	100	90	0	79	158	835	40	29	893	934
Grp Sat Flow(s),veh/h/ln	1320	1870	1585	1210	0	1773	1781	1777	1585	634	1777	1815
Q Serve(g_s), s	9.3	4.3	6.9	8.5	0.0	4.8	3.1	8.7	0.7	1.9	40.1	42.0
Cycle Q Clear(g_c), s	14.1	4.3	6.9	12.8	0.0	4.8	3.1	8.7	0.7	1.9	40.1	42.0
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	190	258	218	184	0	244	220	2704	1206	482	1181	1207
V/C Ratio(X)	0.56	0.29	0.46	0.49	0.00	0.32	0.72	0.31	0.03	0.06	0.76	0.77
Avail Cap(c_a), veh/h	209	285	241	201	0	270	336	2704	1206	482	1181	1207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	45.8	46.9	51.6	0.0	46.0	23.2	4.4	3.5	7.0	13.4	13.7
Incr Delay (d2), s/veh	2.7	0.6	1.5	2.0	0.0	0.8	4.3	0.3	0.1	0.2	4.5	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	2.0	2.8	2.7	0.0	2.2	3.3	2.8	0.2	0.3	16.1	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	46.4	48.4	53.6	0.0	46.8	27.5	4.7	3.5	7.2	17.9	18.5
LnGrp LOS	E	D	D	D	A	D	C	A	A	A	B	B
Approach Vol, veh/h	281				169				1033			
Approach Delay, s/veh	50.4				50.4				8.2			
Approach LOS	D				D				A			
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	96.0			22.3		11.3	84.7	22.3				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	90.0			18.0		13.0	71.0	18.0				
Max Q Clear Time (g_c+l1), s	10.7			16.1		5.1	44.0	14.8				
Green Ext Time (p_c), s	7.6			0.2		0.2	17.7	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	19.4											
HCM 6th LOS	B											

Timings

2045 Background PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	154	87	149	81	80	183	1474	87	26	1320
Future Volume (vph)	154	87	149	81	80	183	1474	87	26	1320
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA
Protected Phases		4			8	5	2			6
Permitted Phases	4		4	8		2		2	6	
Detector Phase	4	4	4	8	8	5	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	20.0	89.0	89.0	69.0	69.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	16.7%	74.2%	74.2%	57.5%	57.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead			Lag	Lag
Lead-Lag Optimize?						Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 114.6

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave



HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2045 Background PM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	87	149	81	80	40	183	1474	87	26	1320	142
Future Volume (veh/h)	154	87	149	81	80	40	183	1474	87	26	1320	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	159	90	154	84	82	41	189	1520	90	27	1361	146
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	377	319	244	237	119	265	2479	1106	209	1905	203
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.06	0.70	0.70	0.59	0.59	0.59
Sat Flow, veh/h	1268	1870	1585	1136	1176	588	1781	3554	1585	315	3239	346
Grp Volume(v), veh/h	159	90	154	84	0	123	189	1520	90	27	743	764
Grp Sat Flow(s),veh/h/ln	1268	1870	1585	1136	0	1764	1781	1777	1585	315	1777	1808
Q Serve(g_s), s	14.6	4.8	10.2	8.0	0.0	7.1	4.7	26.9	2.2	5.9	35.2	35.8
Cycle Q Clear(g_c), s	21.8	4.8	10.2	12.8	0.0	7.1	4.7	26.9	2.2	19.8	35.2	35.8
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	240	377	319	244	0	356	265	2479	1106	209	1045	1063
V/C Ratio(X)	0.66	0.24	0.48	0.34	0.00	0.35	0.71	0.61	0.08	0.13	0.71	0.72
Avail Cap(c_a), veh/h	251	393	333	253	0	371	370	2479	1106	209	1045	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	39.8	42.0	45.2	0.0	40.8	20.3	9.5	5.8	18.2	17.3	17.5
Incr Delay (d2), s/veh	6.0	0.3	1.1	0.8	0.0	0.6	3.8	1.1	0.1	1.3	4.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	2.3	4.1	2.3	0.0	3.2	3.4	9.8	0.7	0.5	14.9	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	40.2	43.1	46.0	0.0	41.3	24.1	10.7	5.9	19.4	21.5	21.6
LnGrp LOS	E	D	D	D	A	D	C	B	A	B	C	C
Approach Vol, veh/h	403			207			1799			1534		
Approach Delay, s/veh	47.6			43.2			11.8			21.5		
Approach LOS	D			D			B			C		
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	89.0			30.0		13.0	76.0	30.0				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	83.0			25.0		14.0	63.0	25.0				
Max Q Clear Time (g_c+l1), s	28.9			23.8		6.7	37.8	14.8				
Green Ext Time (p_c), s	19.6			0.2		0.3	13.5	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				20.9								
HCM 6th LOS				C								

Timings

2045 Total AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	114	79	114	87	59	185	849	39	28	1664	154
Future Volume (vph)	114	79	114	87	59	185	849	39	28	1664	154
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8	5	2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	19.0	96.0	96.0	77.0	77.0	77.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	15.8%	80.0%	80.0%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead			Lag	Lag	Lag
Lead-Lag Optimize?						Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 116.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave

 Ø2	 Ø4
96 s	24 s
 Ø5	 Ø8
19 s	24 s
 Ø6	
77 s	

HCM 6th Signalized Intersection Summary
4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2045 Total AM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	79	114	87	59	23	185	849	39	28	1664	154
Future Volume (veh/h)	114	79	114	87	59	23	185	849	39	28	1664	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	81	118	90	61	24	191	875	40	29	1715	159
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	277	235	190	189	74	232	2671	1191	456	2305	1028
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.05	0.75	0.75	0.65	0.65	0.65
Sat Flow, veh/h	1313	1870	1585	1183	1277	503	1781	3554	1585	610	3554	1585
Grp Volume(v), veh/h	118	81	118	90	0	85	191	875	40	29	1715	159
Grp Sat Flow(s),veh/h/ln	1313	1870	1585	1183	0	1780	1781	1777	1585	610	1777	1585
Q Serve(g_s), s	10.6	4.6	8.2	8.8	0.0	5.1	4.1	9.7	0.8	2.1	39.2	4.7
Cycle Q Clear(g_c), s	15.7	4.6	8.2	13.4	0.0	5.1	4.1	9.7	0.8	2.1	39.2	4.7
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	277	235	190	0	264	232	2671	1191	456	2305	1028
V/C Ratio(X)	0.59	0.29	0.50	0.47	0.00	0.32	0.82	0.33	0.03	0.06	0.74	0.15
Avail Cap(c_a), veh/h	201	281	238	192	0	268	332	2671	1191	456	2305	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	45.4	46.9	51.4	0.0	45.6	24.0	4.9	3.8	7.8	14.3	8.2
Incr Delay (d2), s/veh	4.5	0.6	1.7	1.8	0.0	0.7	10.6	0.3	0.1	0.3	2.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.2	3.3	2.7	0.0	2.3	4.4	3.2	0.2	0.3	15.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	46.0	48.6	53.2	0.0	46.3	34.5	5.2	3.8	8.0	16.5	8.5
LnGrp LOS	E	D	D	D	A	D	C	A	A	A	B	A
Approach Vol, veh/h	317				175				1106			
Approach Delay, s/veh	51.1				49.9				10.2			
Approach LOS	D				D				B			
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	96.0			23.7		12.3	83.7	23.7				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	90.0			18.0		13.0	71.0	18.0				
Max Q Clear Time (g_c+l1), s	11.7			17.7		6.1	41.2	15.4				
Green Ext Time (p_c), s	8.1			0.0		0.3	18.6	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	18.9											
HCM 6th LOS	B											

Timings

2045 Total PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	177	99	184	81	91	240	1543	87	26	1413	142
Future Volume (vph)	177	99	184	81	91	240	1543	87	26	1413	142
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8	5	2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	20.0	89.0	89.0	69.0	69.0	69.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	16.7%	74.2%	74.2%	57.5%	57.5%	57.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead			Lag	Lag	Lag
Lead-Lag Optimize?						Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 116.9

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Federal Blvd (US-287) & Regis Blvd/50th Ave



HCM 6th Signalized Intersection Summary

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

2045 Total PM
02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	99	184	81	91	40	240	1543	87	26	1413	142
Future Volume (veh/h)	177	99	184	81	91	40	240	1543	87	26	1413	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	102	190	84	94	41	247	1591	90	27	1457	146
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	390	330	237	257	112	277	2458	1096	190	2016	899
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.07	0.69	0.69	0.57	0.57	0.57
Sat Flow, veh/h	1254	1870	1585	1087	1235	539	1781	3554	1585	294	3554	1585
Grp Volume(v), veh/h	182	102	190	84	0	135	247	1591	90	27	1457	146
Grp Sat Flow(s),veh/h/ln	1254	1870	1585	1087	0	1773	1781	1777	1585	294	1777	1585
Q Serve(g_s), s	17.2	5.5	12.9	8.4	0.0	7.8	6.6	30.0	2.2	6.8	36.1	5.3
Cycle Q Clear(g_c), s	25.0	5.5	12.9	13.9	0.0	7.8	6.6	30.0	2.2	21.8	36.1	5.3
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	390	330	237	0	369	277	2458	1096	190	2016	899
V/C Ratio(X)	0.76	0.26	0.58	0.35	0.00	0.37	0.89	0.65	0.08	0.14	0.72	0.16
Avail Cap(c_a), veh/h	240	390	330	237	0	369	352	2458	1096	190	2016	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	39.8	42.7	45.6	0.0	40.7	23.1	10.3	6.0	20.6	19.0	12.4
Incr Delay (d2), s/veh	13.2	0.4	2.4	0.9	0.0	0.6	20.1	1.3	0.1	1.6	2.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	2.6	5.3	2.3	0.0	3.5	5.6	11.1	0.7	0.5	14.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	40.1	45.2	46.5	0.0	41.3	43.2	11.7	6.2	22.2	21.3	12.8
LnGrp LOS	E	D	D	D	A	D	D	B	A	C	C	B
Approach Vol, veh/h	474			219			1928			1630		
Approach Delay, s/veh	51.6			43.3			15.4			20.6		
Approach LOS	D			D			B			C		
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	89.0			31.0		14.9	74.1	31.0				
Change Period (Y+Rc), s	6.0			6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	83.0			25.0		14.0	63.0	25.0				
Max Q Clear Time (g_c+l1), s	32.0			27.0		8.6	38.1	15.9				
Green Ext Time (p_c), s	20.9			0.0		0.3	14.2	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	22.9											
HCM 6th LOS	C											

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	223	265	56	15	26
Future Vol, veh/h	19	223	265	56	15	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	240	285	60	16	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	345	0	-	0	595	315
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	280	-
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	1214	-	-	-	467	725
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1214	-	-	-	460	725
Mov Cap-2 Maneuver	-	-	-	-	550	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	767	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		10.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1214	-	-	-	550	725
HCM Lane V/C Ratio	0.017	-	-	-	0.029	0.039
HCM Control Delay (s)	8	-	-	-	11.7	10.2
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	256	289	68	54	36
Future Vol, veh/h	25	256	289	68	54	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	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	267	301	71	56	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	372	0	-	0	656	337
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	319	-
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	1186	-	-	-	430	705
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	737	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1186	-	-	-	421	705
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	737	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.7	0		11.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1186	-	-	-	521	705
HCM Lane V/C Ratio	0.022	-	-	-	0.108	0.053
HCM Control Delay (s)	8.1	-	-	-	12.7	10.4
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.2

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	233	277	56	15	26
Future Vol, veh/h	19	233	277	56	15	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	251	298	60	16	28

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	358	0	0 619 328
Stage 1	-	-	- 328 -
Stage 2	-	-	- 291 -
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	1201	-	- 452 713
Stage 1	-	-	- 730 -
Stage 2	-	-	- 759 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1201	-	- 444 713
Mov Cap-2 Maneuver	-	-	- 539 -
Stage 1	-	-	- 718 -
Stage 2	-	-	- 759 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1201	-	-	-	539	713
HCM Lane V/C Ratio	0.017	-	-	-	0.03	0.039
HCM Control Delay (s)	8	-	-	-	11.9	10.3
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	268	302	68	54	36
Future Vol, veh/h	25	268	302	68	54	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	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	279	315	71	56	38

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	386	0	0 682 351
Stage 1	-	-	- 351 -
Stage 2	-	-	- 331 -
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	1172	-	- 415 692
Stage 1	-	-	- 713 -
Stage 2	-	-	- 728 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1172	-	- 406 692
Mov Cap-2 Maneuver	-	-	- 510 -
Stage 1	-	-	- 697 -
Stage 2	-	-	- 728 -

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1172	-	-	-	510	692
HCM Lane V/C Ratio	0.022	-	-	-	0.11	0.054
HCM Control Delay (s)	8.1	-	-	-	12.9	10.5
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.2

HCM 6th TWSC
5: Regis Blvd & East Access

2030 Total AM
02/09/2024

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	281	319	56	15	26
Future Vol, veh/h	19	281	319	56	15	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	302	343	60	16	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	403	0	-	0	715	373
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	342	-
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	1156	-	-	-	397	673
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1156	-	-	-	390	673
Mov Cap-2 Maneuver	-	-	-	-	498	-
Stage 1	-	-	-	-	684	-
Stage 2	-	-	-	-	719	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		11.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1156	-	-	-	498	673
HCM Lane V/C Ratio	0.018	-	-	-	0.032	0.042
HCM Control Delay (s)	8.2	-	-	-	12.5	10.6
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	352	387	68	54	36
Future Vol, veh/h	25	352	387	68	54	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	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	367	403	71	56	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	474	0	-	0	858	439
Stage 1	-	-	-	-	439	-
Stage 2	-	-	-	-	419	-
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	1088	-	-	-	327	618
Stage 1	-	-	-	-	650	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1088	-	-	-	319	618
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	664	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		13.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1088	-	-	-	441	618
HCM Lane V/C Ratio	0.024	-	-	-	0.128	0.061
HCM Control Delay (s)	8.4	-	-	-	14.4	11.2
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.2

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	261	310	56	15	26
Future Vol, veh/h	19	261	310	56	15	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	281	333	60	16	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	393	0	-	0	684	363
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	321	-
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	1166	-	-	-	414	682
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	735	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1166	-	-	-	407	682
Mov Cap-2 Maneuver	-	-	-	-	511	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	735	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		11.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1166	-	-	-	511	682
HCM Lane V/C Ratio	0.018	-	-	-	0.032	0.041
HCM Control Delay (s)	8.1	-	-	-	12.3	10.5
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	299	338	68	54	36
Future Vol, veh/h	25	299	338	68	54	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	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	311	352	71	56	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	423	0	-	0	751	388
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	363	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1136	-	-	-	378	660
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1136	-	-	-	369	660
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	704	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		12.4		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1136	-	-	-	482	660
HCM Lane V/C Ratio	0.023	-	-	-	0.117	0.057
HCM Control Delay (s)	8.2	-	-	-	13.5	10.8
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.2

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	309	352	56	15	26
Future Vol, veh/h	19	309	352	56	15	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	332	378	60	16	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	438	0	-	0	780	408
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	372	-
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	1122	-	-	-	364	643
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	697	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1122	-	-	-	357	643
Mov Cap-2 Maneuver	-	-	-	-	472	-
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	697	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		11.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1122	-	-	-	472	643
HCM Lane V/C Ratio	0.018	-	-	-	0.034	0.043
HCM Control Delay (s)	8.3	-	-	-	12.9	10.9
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	383	423	68	54	36
Future Vol, veh/h	25	383	423	68	54	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	75	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	399	441	71	56	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	512	0	-	0	928	477
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	451	-
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	1053	-	-	-	297	588
Stage 1	-	-	-	-	624	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1053	-	-	-	290	588
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	642	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		13.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1053	-	-	-	417	588
HCM Lane V/C Ratio	0.025	-	-	-	0.135	0.064
HCM Control Delay (s)	8.5	-	-	-	15	11.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5	0.2

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	222	202	88	12	3
Future Vol, veh/h	18	222	202	88	12	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	252	230	100	14	3
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	330	0	-	0	572	280
Stage 1	-	-	-	-	280	-
Stage 2	-	-	-	-	292	-
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	1229	-	-	-	482	759
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	758	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1229	-	-	-	474	759
Mov Cap-2 Maneuver	-	-	-	-	562	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	758	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		11.3		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1229	-	-	-	593	
HCM Lane V/C Ratio	0.017	-	-	-	0.029	
HCM Control Delay (s)	8	-	-	-	11.3	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	223	306	19	49	23
Future Vol, veh/h	6	223	306	19	49	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	237	326	20	52	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	346	0	0 585 336
Stage 1	-	-	- 336 -
Stage 2	-	-	- 249 -
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	1213	-	- 473 706
Stage 1	-	-	- 724 -
Stage 2	-	-	- 792 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1213	-	- 471 706
Mov Cap-2 Maneuver	-	-	- 558 -
Stage 1	-	-	- 720 -
Stage 2	-	-	- 792 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1213	-	-	-	598
HCM Lane V/C Ratio	0.005	-	-	-	0.128
HCM Control Delay (s)	8	-	-	-	11.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	232	211	88	12	3
Future Vol, veh/h	18	232	211	88	12	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	264	240	100	14	3
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	340	0	-	0	594	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	304	-
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	1219	-	-	-	468	749
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1219	-	-	-	461	749
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	748	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		11.4		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1219	-	-	-	583	
HCM Lane V/C Ratio	0.017	-	-	-	0.029	
HCM Control Delay (s)	8	-	-	-	11.4	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	233	320	19	49	23
Future Vol, veh/h	6	233	320	19	49	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	248	340	20	52	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	360	0	0 610 350
Stage 1	-	-	- 350 -
Stage 2	-	-	- 260 -
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	1199	-	- 458 693
Stage 1	-	-	- 713 -
Stage 2	-	-	- 783 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1199	-	- 456 693
Mov Cap-2 Maneuver	-	-	- 546 -
Stage 1	-	-	- 709 -
Stage 2	-	-	- 783 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1199	-	-	-	586
HCM Lane V/C Ratio	0.005	-	-	-	0.131
HCM Control Delay (s)	8	-	-	-	12.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	280	253	88	12	3
Future Vol, veh/h	18	280	253	88	12	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	318	288	100	14	3
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	388	0	-	0	696	338
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	358	-
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	1170	-	-	-	408	704
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	401	704
Mov Cap-2 Maneuver	-	-	-	-	506	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	707	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.5		0		11.9	
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1170	-	-	-	536	
HCM Lane V/C Ratio	0.017	-	-	-	0.032	
HCM Control Delay (s)	8.1	-	-	-	11.9	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	317	405	19	49	23
Future Vol, veh/h	6	317	405	19	49	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	337	431	20	52	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	451	0	0 790 441
Stage 1	-	-	- 441 -
Stage 2	-	-	- 349 -
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	1109	-	- 359 616
Stage 1	-	-	- 648 -
Stage 2	-	-	- 714 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1109	-	- 357 616
Mov Cap-2 Maneuver	-	-	- 471 -
Stage 1	-	-	- 645 -
Stage 2	-	-	- 714 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1109	-	-	-	509
HCM Lane V/C Ratio	0.006	-	-	-	0.15
HCM Control Delay (s)	8.3	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	260	236	88	12	3
Future Vol, veh/h	18	260	236	88	12	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	295	268	100	14	3
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	368	0	-	0	653	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	335	-
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	1191	-	-	-	432	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	725	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1191	-	-	-	425	723
Mov Cap-2 Maneuver	-	-	-	-	525	-
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	725	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		11.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1191	-	-	-	555	
HCM Lane V/C Ratio	0.017	-	-	-	0.031	
HCM Control Delay (s)	8.1	-	-	-	11.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	261	358	19	49	23
Future Vol, veh/h	6	261	358	19	49	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	278	381	20	52	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	401	0	0 681 391
Stage 1	-	-	- 391 -
Stage 2	-	-	- 290 -
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	1158	-	- 416 658
Stage 1	-	-	- 683 -
Stage 2	-	-	- 759 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1158	-	- 414 658
Mov Cap-2 Maneuver	-	-	- 515 -
Stage 1	-	-	- 680 -
Stage 2	-	-	- 759 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1158	-	-	-	553
HCM Lane V/C Ratio	0.006	-	-	-	0.139
HCM Control Delay (s)	8.1	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	308	278	88	12	3
Future Vol, veh/h	18	308	278	88	12	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	350	316	100	14	3
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	416	0	-	0	756	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	390	-
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	1143	-	-	-	376	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1143	-	-	-	370	679
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	684	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.5		0		12.3	
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1143	-	-	-	512	
HCM Lane V/C Ratio	0.018	-	-	-	0.033	
HCM Control Delay (s)	8.2	-	-	-	12.3	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	345	443	19	49	23
Future Vol, veh/h	6	345	443	19	49	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	367	471	20	52	24

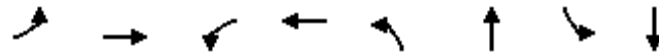
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	491	0	860
Stage 1	-	-	481
Stage 2	-	-	379
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1072	-	326
Stage 1	-	-	622
Stage 2	-	-	692
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1072	-	324
Mov Cap-2 Maneuver	-	-	445
Stage 1	-	-	618
Stage 2	-	-	692

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1072	-	-	-	482
HCM Lane V/C Ratio	0.006	-	-	-	0.159
HCM Control Delay (s)	8.4	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Timings 7: Lowell Blvd & Regis Blvd

2024 Existing AM
02/09/2024

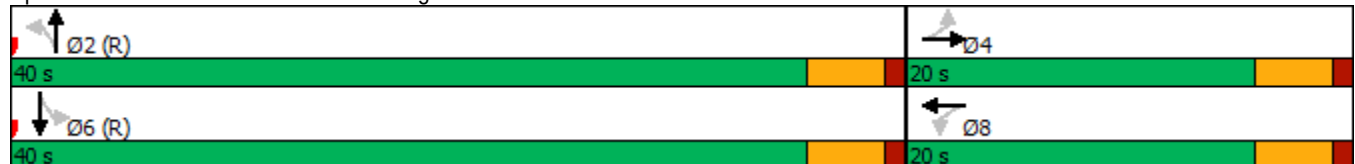


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	13	74	58	52	15	316	92	545
Future Volume (vph)	13	74	58	52	15	316	92	545
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 50
Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

7: Lowell Blvd & Regis Blvd

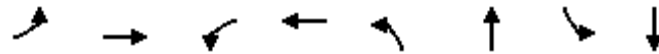
2024 Existing AM

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	74	60	58	52	96	15	316	67	92	545	5
Future Volume (veh/h)	13	74	60	58	52	96	15	316	67	92	545	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	79	64	62	55	102	16	336	71	98	580	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	427	247	200	157	139	190	457	886	187	583	1095	9
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1230	956	775	308	538	737	830	1497	316	978	1852	16
Grp Volume(v), veh/h	14	0	143	219	0	0	16	0	407	98	0	585
Grp Sat Flow(s),veh/h/ln	1230	0	1731	1583	0	0	830	0	1813	978	0	1867
Q Serve(g_s), s	0.0	0.0	4.0	2.3	0.0	0.0	0.7	0.0	7.1	3.5	0.0	11.2
Cycle Q Clear(g_c), s	0.6	0.0	4.0	6.8	0.0	0.0	11.9	0.0	7.1	10.6	0.0	11.2
Prop In Lane	1.00		0.45	0.28		0.47	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	427	0	447	486	0	0	457	0	1073	583	0	1105
V/C Ratio(X)	0.03	0.00	0.32	0.45	0.00	0.00	0.04	0.00	0.38	0.17	0.00	0.53
Avail Cap(c_a), veh/h	427	0	447	486	0	0	457	0	1073	583	0	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	18.0	18.9	0.0	0.0	10.8	0.0	6.4	9.2	0.0	7.3
Incr Delay (d2), s/veh	0.1	0.0	1.9	3.0	0.0	0.0	0.1	0.0	1.0	0.6	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.7	2.8	0.0	0.0	0.1	0.0	2.4	0.7	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	19.9	21.9	0.0	0.0	11.0	0.0	7.5	9.9	0.0	9.1
LnGrp LOS	B	A	B	C	A	A	B	A	A	A	A	A
Approach Vol, veh/h		157			219			423			683	
Approach Delay, s/veh		19.6			21.9			7.6			9.2	
Approach LOS		B			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		20.0		40.0		20.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		35.5		15.5		35.5		15.5				
Max Q Clear Time (g_c+l1), s		13.9		6.0		13.2		8.8				
Green Ext Time (p_c), s		2.7		0.5		4.6		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				11.7								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings
7: Lowell Blvd & Regis Blvd

2024 Existing PM
02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	21	90	104	84	30	535	80	368
Future Volume (vph)	21	90	104	84	30	535	80	368
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	25.0	25.0	25.0	35.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

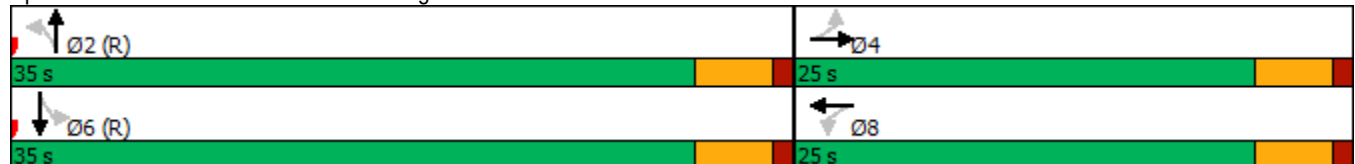
Actuated Cycle Length: 60

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

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2024 Existing PM

7: Lowell Blvd & Regis Blvd

02/09/2024

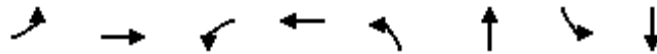
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	90	46	104	84	160	30	535	56	80	368	8
Future Volume (veh/h)	21	90	46	104	84	160	30	535	56	80	368	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	93	47	107	87	165	31	552	58	82	379	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	447	400	202	203	163	245	498	846	89	334	928	20
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1128	1172	592	366	477	717	997	1664	175	811	1825	39
Grp Volume(v), veh/h	22	0	140	359	0	0	31	0	610	82	0	387
Grp Sat Flow(s),veh/h/ln	1128	0	1764	1559	0	0	997	0	1839	811	0	1863
Q Serve(g_s), s	0.0	0.0	3.4	7.6	0.0	0.0	1.2	0.0	14.6	5.0	0.0	7.7
Cycle Q Clear(g_c), s	1.1	0.0	3.4	11.5	0.0	0.0	8.9	0.0	14.6	19.6	0.0	7.7
Prop In Lane	1.00		0.34	0.30		0.46	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	447	0	603	611	0	0	498	0	935	334	0	947
V/C Ratio(X)	0.05	0.00	0.23	0.59	0.00	0.00	0.06	0.00	0.65	0.25	0.00	0.41
Avail Cap(c_a), veh/h	447	0	603	611	0	0	498	0	935	334	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	14.1	16.6	0.0	0.0	11.9	0.0	10.9	18.1	0.0	9.2
Incr Delay (d2), s/veh	0.2	0.0	0.9	4.1	0.0	0.0	0.2	0.0	3.5	1.7	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.4	4.4	0.0	0.0	0.3	0.0	5.7	1.0	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	15.0	20.8	0.0	0.0	12.2	0.0	14.4	19.8	0.0	10.5
LnGrp LOS	B	A	B	C	A	A	B	A	B	B	A	B
Approach Vol, veh/h	162			359			641			469		
Approach Delay, s/veh	14.8			20.8			14.3			12.1		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	30.5			20.5			30.5			20.5		
Max Q Clear Time (g_c+l1), s	16.6			5.4			21.6			13.5		
Green Ext Time (p_c), s	3.7			0.7			1.9			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	15.1											
HCM 6th LOS	B											

Timings

7: Lowell Blvd & Regis Blvd

2030 Background AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	77	61	54	16	330	96	570
Future Volume (vph)	14	77	61	54	16	330	96	570
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

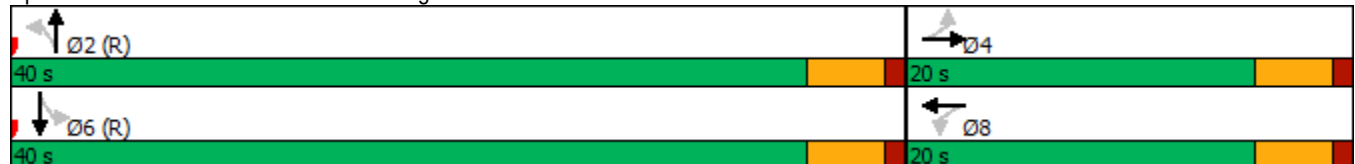
Actuated Cycle Length: 60

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

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2030 Background AM

7: Lowell Blvd & Regis Blvd

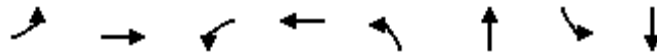
02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	77	63	61	54	100	16	330	70	96	570	5
Future Volume (veh/h)	14	77	63	61	54	100	16	330	70	96	570	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	82	67	65	57	106	17	351	74	102	606	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	246	201	158	137	190	439	886	187	569	1096	9
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1223	952	778	314	530	734	810	1498	316	962	1852	15
Grp Volume(v), veh/h	15	0	149	228	0	0	17	0	425	102	0	611
Grp Sat Flow(s),veh/h/ln	1223	0	1730	1578	0	0	810	0	1814	962	0	1868
Q Serve(g_s), s	0.0	0.0	4.2	2.9	0.0	0.0	0.8	0.0	7.5	3.8	0.0	11.9
Cycle Q Clear(g_c), s	0.6	0.0	4.2	7.2	0.0	0.0	12.7	0.0	7.5	11.3	0.0	11.9
Prop In Lane	1.00		0.45	0.29		0.46	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	421	0	447	485	0	0	439	0	1073	569	0	1105
V/C Ratio(X)	0.04	0.00	0.33	0.47	0.00	0.00	0.04	0.00	0.40	0.18	0.00	0.55
Avail Cap(c_a), veh/h	421	0	447	485	0	0	439	0	1073	569	0	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	18.1	19.1	0.0	0.0	11.3	0.0	6.5	9.5	0.0	7.4
Incr Delay (d2), s/veh	0.2	0.0	2.0	3.3	0.0	0.0	0.2	0.0	1.1	0.7	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.8	2.9	0.0	0.0	0.1	0.0	2.5	0.8	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	20.1	22.3	0.0	0.0	11.5	0.0	7.6	10.2	0.0	9.4
LnGrp LOS	B	A	C	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h	164			228			442			713		
Approach Delay, s/veh	19.8			22.3			7.8			9.5		
Approach LOS	B			C			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	40.0			20.0			40.0			20.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			15.5			35.5			15.5		
Max Q Clear Time (g_c+I1), s	14.7			6.2			13.9			9.2		
Green Ext Time (p_c), s	2.8			0.5			4.8			0.7		
Intersection Summary												
HCM 6th Ctrl Delay			12.0									
HCM 6th LOS			B									
Notes												

Timings
7: Lowell Blvd & Regis Blvd

2030 Background PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	22	94	109	88	31	560	84	385
Future Volume (vph)	22	94	109	88	31	560	84	385
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	25.0	25.0	25.0	35.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

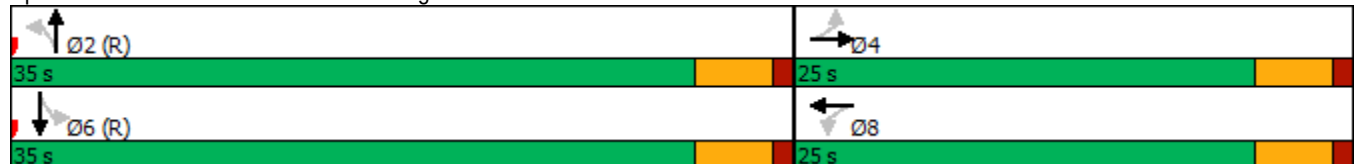
Actuated Cycle Length: 60

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

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2030 Background PM

7: Lowell Blvd & Regis Blvd

02/09/2024

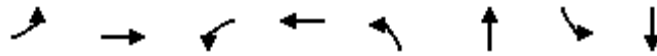
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	48	109	88	167	31	560	59	84	385	8
Future Volume (veh/h)	22	94	48	109	88	167	31	560	59	84	385	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	97	49	112	91	172	32	577	61	87	397	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	400	202	204	161	244	484	845	89	315	929	19
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1116	1172	592	370	471	713	980	1663	176	790	1827	37
Grp Volume(v), veh/h	23	0	146	375	0	0	32	0	638	87	0	405
Grp Sat Flow(s),veh/h/ln	1116	0	1764	1555	0	0	980	0	1839	790	0	1864
Q Serve(g_s), s	0.0	0.0	3.6	8.6	0.0	0.0	1.3	0.0	15.7	5.6	0.0	8.2
Cycle Q Clear(g_c), s	1.2	0.0	3.6	12.3	0.0	0.0	9.5	0.0	15.7	21.3	0.0	8.2
Prop In Lane	1.00		0.34	0.30		0.46	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	436	0	603	609	0	0	484	0	935	315	0	947
V/C Ratio(X)	0.05	0.00	0.24	0.62	0.00	0.00	0.07	0.00	0.68	0.28	0.00	0.43
Avail Cap(c_a), veh/h	436	0	603	609	0	0	484	0	935	315	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	14.2	16.9	0.0	0.0	12.2	0.0	11.1	19.1	0.0	9.3
Incr Delay (d2), s/veh	0.2	0.0	1.0	4.6	0.0	0.0	0.3	0.0	4.0	2.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.4	4.7	0.0	0.0	0.3	0.0	6.2	1.1	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	15.1	21.5	0.0	0.0	12.5	0.0	15.1	21.3	0.0	10.7
LnGrp LOS	B	A	B	C	A	A	B	A	B	C	A	B
Approach Vol, veh/h	169			375			670			492		
Approach Delay, s/veh	14.9			21.5			15.0			12.5		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	30.5			20.5			30.5			20.5		
Max Q Clear Time (g_c+l1), s	17.7			5.6			23.3			14.3		
Green Ext Time (p_c), s	3.7			0.7			1.8			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	15.7											
HCM 6th LOS	B											

Timings

7: Lowell Blvd & Regis Blvd

2030 Total AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	88	72	64	16	330	122	570
Future Volume (vph)	14	88	72	64	16	330	122	570
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

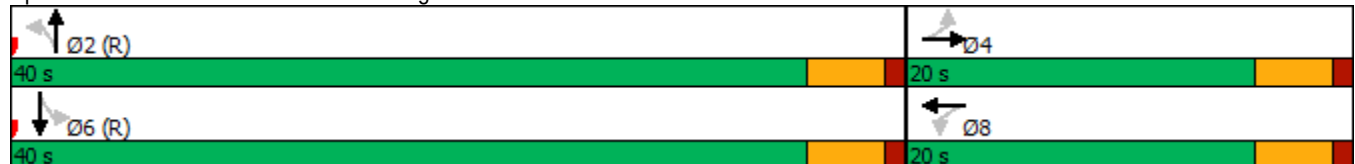
Actuated Cycle Length: 60

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

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2030 Total AM

7: Lowell Blvd & Regis Blvd

02/09/2024

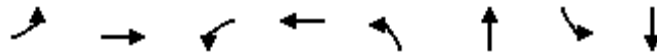
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	88	63	72	64	123	16	330	83	122	570	5
Future Volume (veh/h)	14	88	63	72	64	123	16	330	83	122	570	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	94	67	77	68	131	17	351	88	130	606	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	369	262	187	154	124	182	439	854	214	557	1096	9
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1183	1016	724	299	479	703	810	1443	362	950	1852	15
Grp Volume(v), veh/h	15	0	161	276	0	0	17	0	439	130	0	611
Grp Sat Flow(s),veh/h/ln	1183	0	1740	1481	0	0	810	0	1805	950	0	1868
Q Serve(g_s), s	0.0	0.0	4.5	5.8	0.0	0.0	0.8	0.0	7.9	5.1	0.0	11.9
Cycle Q Clear(g_c), s	0.8	0.0	4.5	10.3	0.0	0.0	12.7	0.0	7.9	13.0	0.0	11.9
Prop In Lane	1.00		0.42	0.28		0.47	1.00		0.20	1.00		0.01
Lane Grp Cap(c), veh/h	369	0	450	459	0	0	439	0	1068	557	0	1105
V/C Ratio(X)	0.04	0.00	0.36	0.60	0.00	0.00	0.04	0.00	0.41	0.23	0.00	0.55
Avail Cap(c_a), veh/h	369	0	450	459	0	0	439	0	1068	557	0	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	18.2	20.3	0.0	0.0	11.3	0.0	6.6	10.1	0.0	7.4
Incr Delay (d2), s/veh	0.2	0.0	2.2	5.7	0.0	0.0	0.2	0.0	1.2	1.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.0	4.0	0.0	0.0	0.1	0.0	2.6	1.1	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	20.4	26.0	0.0	0.0	11.5	0.0	7.8	11.1	0.0	9.4
LnGrp LOS	B	A	C	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h	176			276			456			741		
Approach Delay, s/veh	20.1			26.0			7.9			9.7		
Approach LOS	C			C			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	40.0			20.0			40.0			20.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			15.5			35.5			15.5		
Max Q Clear Time (g_c+l1), s	14.7			6.5			15.0			12.3		
Green Ext Time (p_c), s	2.9			0.6			4.9			0.5		
Intersection Summary												
HCM 6th Ctrl Delay	13.1											
HCM 6th LOS	B											
Notes												

Timings

7: Lowell Blvd & Regis Blvd

2030 Total PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	22	113	132	107	31	560	130	385
Future Volume (vph)	22	113	132	107	31	560	130	385
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	25.0	25.0	25.0	35.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2030 Total PM

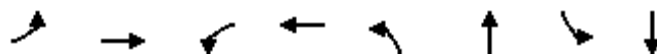
7: Lowell Blvd & Regis Blvd

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	113	48	132	107	213	31	560	82	130	385	8
Future Volume (veh/h)	22	113	48	132	107	213	31	560	82	130	385	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	116	49	136	110	220	32	577	85	134	397	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	426	180	198	141	234	484	810	119	297	929	19
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1050	1248	527	353	413	685	980	1593	235	773	1827	37
Grp Volume(v), veh/h	23	0	165	466	0	0	32	0	662	134	0	405
Grp Sat Flow(s),veh/h/ln	1050	0	1775	1451	0	0	980	0	1828	773	0	1864
Q Serve(g_s), s	0.0	0.0	4.0	14.7	0.0	0.0	1.3	0.0	16.7	9.7	0.0	8.2
Cycle Q Clear(g_c), s	1.4	0.0	4.0	18.8	0.0	0.0	9.5	0.0	16.7	26.4	0.0	8.2
Prop In Lane	1.00		0.30	0.29		0.47	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	355	0	607	573	0	0	484	0	929	297	0	947
V/C Ratio(X)	0.06	0.00	0.27	0.81	0.00	0.00	0.07	0.00	0.71	0.45	0.00	0.43
Avail Cap(c_a), veh/h	355	0	607	573	0	0	484	0	929	297	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	14.3	19.4	0.0	0.0	12.2	0.0	11.4	21.6	0.0	9.3
Incr Delay (d2), s/veh	0.4	0.0	1.1	11.9	0.0	0.0	0.3	0.0	4.6	4.9	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.7	7.5	0.0	0.0	0.3	0.0	6.7	2.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	0.0	15.4	31.3	0.0	0.0	12.5	0.0	16.0	26.4	0.0	10.7
LnGrp LOS	B	A	B	C	A	A	B	A	B	C	A	B
Approach Vol, veh/h	188			466			694			539		
Approach Delay, s/veh	15.2			31.3			15.8			14.6		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	30.5			20.5			30.5			20.5		
Max Q Clear Time (g_c+I1), s	18.7			6.0			28.4			20.8		
Green Ext Time (p_c), s	3.7			0.8			0.7			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	19.3											
HCM 6th LOS	B											

Timings 7: Lowell Blvd & Regis Blvd

2045 Background AM
02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	15	87	68	61	18	370	108	638
Future Volume (vph)	15	87	68	61	18	370	108	638
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 60

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2045 Background AM

7: Lowell Blvd & Regis Blvd

02/09/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	87	70	68	61	112	18	370	78	108	638	6
Future Volume (veh/h)	15	87	70	68	61	112	18	370	78	108	638	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	93	74	72	65	119	19	394	83	115	679	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	249	198	153	129	179	389	886	187	529	1095	10
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1200	965	768	296	500	691	757	1498	316	917	1851	16
Grp Volume(v), veh/h	16	0	167	256	0	0	19	0	477	115	0	685
Grp Sat Flow(s),veh/h/ln	1200	0	1732	1486	0	0	757	0	1814	917	0	1867
Q Serve(g_s), s	0.0	0.0	4.7	4.7	0.0	0.0	1.0	0.0	8.7	4.8	0.0	14.2
Cycle Q Clear(g_c), s	0.8	0.0	4.7	9.4	0.0	0.0	15.2	0.0	8.7	13.5	0.0	14.2
Prop In Lane	1.00		0.44	0.28		0.46	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	385	0	447	461	0	0	389	0	1073	529	0	1105
V/C Ratio(X)	0.04	0.00	0.37	0.56	0.00	0.00	0.05	0.00	0.44	0.22	0.00	0.62
Avail Cap(c_a), veh/h	385	0	447	461	0	0	389	0	1073	529	0	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	18.3	19.9	0.0	0.0	12.8	0.0	6.8	10.5	0.0	7.9
Incr Delay (d2), s/veh	0.2	0.0	2.4	4.8	0.0	0.0	0.2	0.0	1.3	0.9	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.0	3.5	0.0	0.0	0.2	0.0	2.9	1.0	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	20.6	24.6	0.0	0.0	13.0	0.0	8.1	11.5	0.0	10.5
LnGrp LOS	B	A	C	C	A	A	B	A	A	B	A	B
Approach Vol, veh/h	183			256			496			800		
Approach Delay, s/veh	20.3			24.6			8.3			10.7		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	40.0			20.0			40.0			20.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			15.5			35.5			15.5		
Max Q Clear Time (g_c+l1), s	17.2			6.7			16.2			11.4		
Green Ext Time (p_c), s	3.1			0.6			5.4			0.6		

Intersection Summary

HCM 6th Ctrl Delay 13.1

HCM 6th LOS B

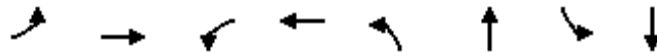
Notes

User approved pedestrian interval to be less than phase max green.

Timings
7: Lowell Blvd & Regis Blvd

2045 Background PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	105	122	98	35	626	94	431
Future Volume (vph)	25	105	122	98	35	626	94	431
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	25.0	25.0	25.0	35.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

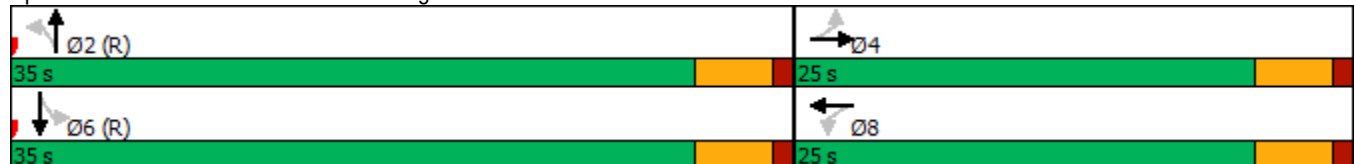
Actuated Cycle Length: 60

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

Natural Cycle: 55

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2045 Background PM

7: Lowell Blvd & Regis Blvd

02/09/2024

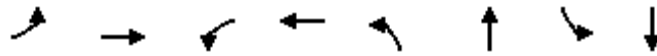
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	105	54	122	98	187	35	626	66	94	431	9
Future Volume (veh/h)	25	105	54	122	98	187	35	626	66	94	431	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	108	56	126	101	193	36	645	68	97	444	9
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	392	396	206	202	149	232	449	846	89	265	929	19
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1085	1160	602	362	436	679	938	1663	175	737	1827	37
Grp Volume(v), veh/h	26	0	164	420	0	0	36	0	713	97	0	453
Grp Sat Flow(s),veh/h/ln	1085	0	1762	1478	0	0	938	0	1839	737	0	1864
Q Serve(g_s), s	0.0	0.0	4.1	11.8	0.0	0.0	1.6	0.0	18.7	7.3	0.0	9.5
Cycle Q Clear(g_c), s	1.5	0.0	4.1	15.8	0.0	0.0	11.0	0.0	18.7	26.0	0.0	9.5
Prop In Lane	1.00		0.34	0.30		0.46	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	392	0	602	583	0	0	449	0	935	265	0	947
V/C Ratio(X)	0.07	0.00	0.27	0.72	0.00	0.00	0.08	0.00	0.76	0.37	0.00	0.48
Avail Cap(c_a), veh/h	392	0	602	583	0	0	449	0	935	265	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	14.3	18.2	0.0	0.0	13.2	0.0	11.8	22.3	0.0	9.6
Incr Delay (d2), s/veh	0.3	0.0	1.1	7.5	0.0	0.0	0.3	0.0	5.9	3.9	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.6	6.0	0.0	0.0	0.3	0.0	7.7	1.5	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	0.0	15.5	25.8	0.0	0.0	13.5	0.0	17.7	26.1	0.0	11.3
LnGrp LOS	B	A	B	C	A	A	B	A	B	C	A	B
Approach Vol, veh/h	190			420			749			550		
Approach Delay, s/veh	15.2			25.8			17.5			13.9		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	30.5			20.5			30.5			20.5		
Max Q Clear Time (g_c+I1), s	20.7			6.1			28.0			17.8		
Green Ext Time (p_c), s	3.7			0.8			0.9			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	18.1											
HCM 6th LOS	B											

Timings

7: Lowell Blvd & Regis Blvd

2045 Total AM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	15	98	79	71	18	370	134	638
Future Volume (vph)	15	98	79	71	18	370	134	638
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

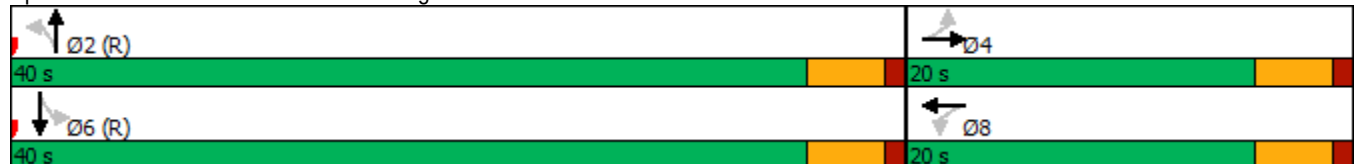
Actuated Cycle Length: 60

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

Natural Cycle: 60

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2045 Total AM

7: Lowell Blvd & Regis Blvd

02/09/2024

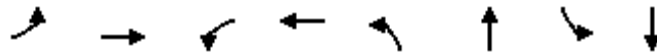
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	98	70	79	71	135	18	370	91	134	638	6
Future Volume (veh/h)	15	98	70	79	71	135	18	370	91	134	638	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	104	74	84	76	144	19	394	97	143	679	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	263	187	149	116	170	389	858	211	518	1095	10
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1161	1017	723	281	451	659	757	1449	357	906	1851	16
Grp Volume(v), veh/h	16	0	178	304	0	0	19	0	491	143	0	685
Grp Sat Flow(s),veh/h/ln	1161	0	1740	1390	0	0	757	0	1806	906	0	1867
Q Serve(g_s), s	0.0	0.0	5.1	7.7	0.0	0.0	1.0	0.0	9.1	6.3	0.0	14.2
Cycle Q Clear(g_c), s	1.0	0.0	5.1	12.8	0.0	0.0	15.2	0.0	9.1	15.5	0.0	14.2
Prop In Lane	1.00		0.42	0.28		0.47	1.00		0.20	1.00		0.01
Lane Grp Cap(c), veh/h	334	0	450	436	0	0	389	0	1069	518	0	1105
V/C Ratio(X)	0.05	0.00	0.40	0.70	0.00	0.00	0.05	0.00	0.46	0.28	0.00	0.62
Avail Cap(c_a), veh/h	334	0	450	436	0	0	389	0	1069	518	0	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.9	0.0	18.4	21.4	0.0	0.0	12.8	0.0	6.9	11.2	0.0	7.9
Incr Delay (d2), s/veh	0.3	0.0	2.6	8.9	0.0	0.0	0.2	0.0	1.4	1.3	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.2	4.8	0.0	0.0	0.2	0.0	3.1	1.3	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	0.0	21.0	30.3	0.0	0.0	13.0	0.0	8.3	12.5	0.0	10.5
LnGrp LOS	B	A	C	C	A	A	B	A	A	B	A	B
Approach Vol, veh/h	194			304			510			828		
Approach Delay, s/veh	20.7			30.3			8.5			10.9		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	40.0			20.0			40.0			20.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			15.5			35.5			15.5		
Max Q Clear Time (g_c+l1), s	17.2			7.1			17.5			14.8		
Green Ext Time (p_c), s	3.2			0.6			5.4			0.1		
Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									
Notes												

Timings

7: Lowell Blvd & Regis Blvd

2045 Total PM

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	124	145	117	35	626	140	431
Future Volume (vph)	25	124	145	117	35	626	140	431
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	25.0	25.0	25.0	35.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5	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	1.0	1.0
Lost Time Adjust (s)	0.0	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	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 60

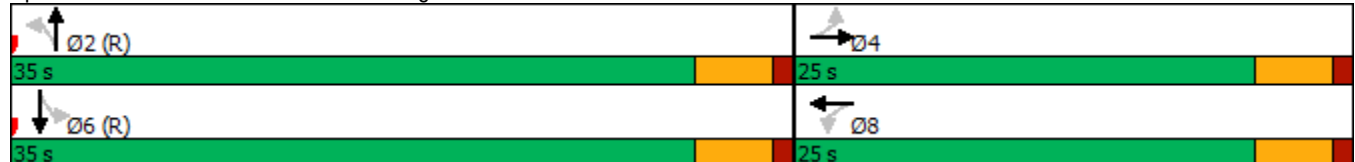
Actuated Cycle Length: 60

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

Natural Cycle: 60

Control Type: Pretimed

Splits and Phases: 7: Lowell Blvd & Regis Blvd



HCM 6th Signalized Intersection Summary

2045 Total PM

7: Lowell Blvd & Regis Blvd

02/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	124	54	145	117	233	35	626	89	140	431	9
Future Volume (veh/h)	25	124	54	145	117	233	35	626	89	140	431	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	128	56	149	121	240	36	645	92	144	444	9
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	421	184	194	132	221	449	814	116	247	929	19
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1021	1234	540	340	386	646	938	1601	228	721	1827	37
Grp Volume(v), veh/h	26	0	184	510	0	0	36	0	737	144	0	453
Grp Sat Flow(s),veh/h/ln	1021	0	1773	1372	0	0	938	0	1829	721	0	1864
Q Serve(g_s), s	0.0	0.0	4.6	15.9	0.0	0.0	1.6	0.0	19.9	10.6	0.0	9.5
Cycle Q Clear(g_c), s	1.7	0.0	4.6	20.5	0.0	0.0	11.0	0.0	19.9	30.5	0.0	9.5
Prop In Lane	1.00		0.30	0.29		0.47	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	337	0	606	546	0	0	449	0	930	247	0	947
V/C Ratio(X)	0.08	0.00	0.30	0.93	0.00	0.00	0.08	0.00	0.79	0.58	0.00	0.48
Avail Cap(c_a), veh/h	337	0	606	546	0	0	449	0	930	247	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	14.5	21.1	0.0	0.0	13.2	0.0	12.1	25.3	0.0	9.6
Incr Delay (d2), s/veh	0.4	0.0	1.3	25.2	0.0	0.0	0.3	0.0	6.9	9.7	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.9	10.4	0.0	0.0	0.3	0.0	8.3	2.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	15.8	46.3	0.0	0.0	13.5	0.0	19.0	35.0	0.0	11.3
LnGrp LOS	B	A	B	D	A	A	B	A	B	C	A	B
Approach Vol, veh/h	210			510			773			597		
Approach Delay, s/veh	15.6			46.3			18.8			17.0		
Approach LOS	B			D			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	30.5			20.5			30.5			20.5		
Max Q Clear Time (g_c+l1), s	21.9			6.6			32.5			22.5		
Green Ext Time (p_c), s	3.5			0.9			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	24.7											
HCM 6th LOS	C											

Intersection

Int Delay, s/veh 0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	383	35	53	639
Future Vol, veh/h	0	11	383	35	53	639
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	421	38	58	702

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	440	0 0 459 0
Stage 1	-	-	- - - -
Stage 2	-	-	- - - -
Critical Hdwy	-	6.22	- - 4.12 -
Critical Hdwy Stg 1	-	-	- - - -
Critical Hdwy Stg 2	-	-	- - - -
Follow-up Hdwy	-	3.318	- - 2.218 -
Pot Cap-1 Maneuver	0	617	- - 1102 -
Stage 1	0	-	- - - -
Stage 2	0	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	-	617	- - 1102 -
Mov Cap-2 Maneuver	-	-	- - - -
Stage 1	-	-	- - - -
Stage 2	-	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	617 1102	-
HCM Lane V/C Ratio	-	-	0.02 0.053	-
HCM Control Delay (s)	-	-	11 8.4	0
HCM Lane LOS	-	-	B A	A
HCM 95th %tile Q(veh)	-	-	0.1 0.2	-

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	695	9	8	457
Future Vol, veh/h	0	46	695	9	8	457
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	709	9	8	466
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	714	0	0	718	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	431	-	-	883	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	431	-	-	883	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.4	0		0.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	431	883	-	
HCM Lane V/C Ratio	-	-	0.109	0.009	-	
HCM Control Delay (s)	-	-	14.4	9.1	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	401	35	53	668
Future Vol, veh/h	0	11	401	35	53	668
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	441	38	58	734
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	460	0	0	479	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	601	-	-	1083	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	601	-	-	1083	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.1	0		0.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	601		1083	-	
HCM Lane V/C Ratio	-	0.02		0.054	-	
HCM Control Delay (s)	-	11.1		8.5	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	0.1		0.2	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	727	9	8	478
Future Vol, veh/h	0	46	727	9	8	478
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	742	9	8	488
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	747	0	0	751	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	413	-	-	858	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	413	-	-	858	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.8	0		0.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	413		858	-	
HCM Lane V/C Ratio	-	0.114		0.01	-	
HCM Control Delay (s)	-	14.8		9.2	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	0.4		0	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	424	35	53	694
Future Vol, veh/h	0	11	424	35	53	694
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	466	38	58	763
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	485	0	0	504	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	582	-	-	1061	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	582	-	-	1061	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.3	0		0.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	582		1061	-	
HCM Lane V/C Ratio	-	0.021		0.055	-	
HCM Control Delay (s)	-	11.3		8.6	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	0.1		0.2	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	773	9	8	524
Future Vol, veh/h	0	46	773	9	8	524
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	789	9	8	535
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	794	0	0	798	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	388	-	-	824	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	388	-	-	824	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.6	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	388		824	-	
HCM Lane V/C Ratio	-	0.121		0.01	-	
HCM Control Delay (s)	-	15.6		9.4	0	
HCM Lane LOS	-	C		A	A	
HCM 95th %tile Q(veh)	-	0.4		0	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	448	35	53	748
Future Vol, veh/h	0	11	448	35	53	748
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	492	38	58	822
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	511	0	0	530	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	563	-	-	1037	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	563	-	-	1037	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.5	0		0.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	563		1037	-	
HCM Lane V/C Ratio	-	0.021		0.056	-	
HCM Control Delay (s)	-	11.5		8.7	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	0.1		0.2	-	

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	813	9	8	535
Future Vol, veh/h	0	46	813	9	8	535
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	830	9	8	546

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	835	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	368	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	368	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	368	796
HCM Lane V/C Ratio	-	-	0.128	0.01
HCM Control Delay (s)	-	-	16.2	9.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	471	35	53	774
Future Vol, veh/h	0	11	471	35	53	774
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	518	38	58	851
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	537	0	0	556	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	0	544	-	-	1015	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	544	-	-	1015	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.8	0		0.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	544		1015	-	
HCM Lane V/C Ratio	-	0.022		0.057	-	
HCM Control Delay (s)	-	11.8		8.8	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	0.1		0.2	-	

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	859	9	8	581
Future Vol, veh/h	0	46	859	9	8	581
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	877	9	8	593

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	882	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	345	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	345	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	345	764
HCM Lane V/C Ratio	-	-	0.136	0.011
HCM Control Delay (s)	-	-	17.1	9.8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	18	382	686	7
Future Vol, veh/h	2	5	18	382	686	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	20	420	754	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1218	758	762	0	-	0
Stage 1	758	-	-	-	-	-
Stage 2	460	-	-	-	-	-
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	199	407	850	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	193	407	850	-	-	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	449	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.9	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	850	-	309	-	-	
HCM Lane V/C Ratio	0.023	-	0.025	-	-	
HCM Control Delay (s)	9.3	0	16.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	12	12	719	452	2
Future Vol, veh/h	6	12	12	719	452	2
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	12	12	734	461	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1220	462	463	0	-	0
Stage 1	462	-	-	-	-	-
Stage 2	758	-	-	-	-	-
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	199	600	1098	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	195	600	1098	-	-	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.7	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1098	-	355	-	-	
HCM Lane V/C Ratio	0.011	-	0.052	-	-	
HCM Control Delay (s)	8.3	0	15.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	19	400	717	7
Future Vol, veh/h	2	5	19	400	717	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	21	440	788	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1274	792	796	0	-	0
Stage 1	792	-	-	-	-	-
Stage 2	482	-	-	-	-	-
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	184	389	826	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	178	389	826	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.7	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	826	-	291	-	-	
HCM Lane V/C Ratio	0.025	-	0.026	-	-	
HCM Control Delay (s)	9.5	0	17.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	13	13	752	473	2
Future Vol, veh/h	6	13	13	752	473	2
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	13	13	767	483	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1277	484	485	0	-	0
Stage 1	484	-	-	-	-	-
Stage 2	793	-	-	-	-	-
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	184	583	1078	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	180	583	1078	-	-	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	607	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.2	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1078	-	342	-	-	
HCM Lane V/C Ratio	0.012	-	0.057	-	-	
HCM Control Delay (s)	8.4	0	16.2	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	7	21	421	741	7
Future Vol, veh/h	2	7	21	421	741	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	8	23	463	814	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1327	818	822	0	-	0
Stage 1	818	-	-	-	-	-
Stage 2	509	-	-	-	-	-
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	171	376	807	-	-	-
Stage 1	434	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	165	376	807	-	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.7	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	807	-	293	-	-	
HCM Lane V/C Ratio	0.029	-	0.034	-	-	
HCM Control Delay (s)	9.6	0	17.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	17	17	795	515	2
Future Vol, veh/h	6	17	17	795	515	2
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	17	17	811	526	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1372	527	528	0	-	0
Stage 1	527	-	-	-	-	-
Stage 2	845	-	-	-	-	-
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	161	551	1039	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	156	551	1039	-	-	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.7	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1039	-	332	-	-	
HCM Lane V/C Ratio	0.017	-	0.071	-	-	
HCM Control Delay (s)	8.5	0	16.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	21	447	803	8
Future Vol, veh/h	2	6	21	447	803	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	7	23	491	882	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1424	887	891	0	-	0
Stage 1	887	-	-	-	-	-
Stage 2	537	-	-	-	-	-
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	150	343	761	-	-	-
Stage 1	402	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	144	343	761	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	385	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.6	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	761	-	255	-	-	
HCM Lane V/C Ratio	0.03	-	0.034	-	-	
HCM Control Delay (s)	9.9	0	19.6	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	14	14	841	529	2
Future Vol, veh/h	7	14	14	841	529	2
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	14	14	858	540	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1427	541	542	0	-	0
Stage 1	541	-	-	-	-	-
Stage 2	886	-	-	-	-	-
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	149	541	1027	-	-	-
Stage 1	583	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	541	1027	-	-	-
Mov Cap-2 Maneuver	145	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.8	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1027	-	283	-	-	
HCM Lane V/C Ratio	0.014	-	0.076	-	-	
HCM Control Delay (s)	8.6	0	18.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	8	23	468	827	8
Future Vol, veh/h	2	8	23	468	827	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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	9	25	514	909	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1478	914	918	0	-	0
Stage 1	914	-	-	-	-	-
Stage 2	564	-	-	-	-	-
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	139	331	743	-	-	-
Stage 1	391	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	132	331	743	-	-	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	373	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.8	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	743	-	254	-	-	
HCM Lane V/C Ratio	0.034	-	0.043	-	-	
HCM Control Delay (s)	10	0	19.8	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	18	18	884	571	2
Future Vol, veh/h	7	18	18	884	571	2
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	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	18	18	902	583	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1522	584	585	0	-	0
Stage 1	584	-	-	-	-	-
Stage 2	938	-	-	-	-	-
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	130	512	990	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	512	990	-	-	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.5	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	990	-	274	-	-	
HCM Lane V/C Ratio	0.019	-	0.093	-	-	
HCM Control Delay (s)	8.7	0	19.5	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	

Intersection						
Int Delay, s/veh	6.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	201	98	264	507	67
Future Vol, veh/h	26	201	98	264	507	67
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	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	234	114	307	590	78
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1164	629	668	0	-	0
Stage 1	629	-	-	-	-	-
Stage 2	535	-	-	-	-	-
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	215	482	922	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	183	482	922	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	28.9	2.6		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	922	-	406	-	-	
HCM Lane V/C Ratio	0.124	-	0.65	-	-	
HCM Control Delay (s)	9.5	0	28.9	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.4	-	4.5	-	-	

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	154	211	507	309	64
Future Vol, veh/h	44	154	211	507	309	64
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	160	220	528	322	67
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1324	356	389	0	-	0
Stage 1	356	-	-	-	-	-
Stage 2	968	-	-	-	-	-
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	172	688	1170	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	126	688	1170	-	-	-
Mov Cap-2 Maneuver	126	-	-	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.6	2.6		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1170	-	346	-	-	
HCM Lane V/C Ratio	0.188	-	0.596	-	-	
HCM Control Delay (s)	8.8	0	29.6	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.7	-	3.7	-	-	

Intersection						
Int Delay, s/veh	7.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	210	102	276	530	70
Future Vol, veh/h	27	210	102	276	530	70
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	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	244	119	321	616	81
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1216	657	697	0	-	0
Stage 1	657	-	-	-	-	-
Stage 2	559	-	-	-	-	-
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	200	465	899	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	168	465	899	-	-	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	34.2	2.6		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	899	-	387	-	-	
HCM Lane V/C Ratio	0.132	-	0.712	-	-	
HCM Control Delay (s)	9.6	0	34.2	-	-	
HCM Lane LOS	A	A	D	-	-	
HCM 95th %tile Q(veh)	0.5	-	5.4	-	-	

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	161	221	530	323	67
Future Vol, veh/h	46	161	221	530	323	67
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	168	230	552	336	70
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1383	371	406	0	-	0
Stage 1	371	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
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	158	675	1153	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	351	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	112	675	1153	-	-	-
Mov Cap-2 Maneuver	112	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	351	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	36.9	2.6		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1153	-	319	-	-	
HCM Lane V/C Ratio	0.2	-	0.676	-	-	
HCM Control Delay (s)	8.9	0	36.9	-	-	
HCM Lane LOS	A	A	E	-	-	
HCM 95th %tile Q(veh)	0.7	-	4.6	-	-	

Intersection						
Int Delay, s/veh	9.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	227	117	282	536	70
Future Vol, veh/h	27	227	117	282	536	70
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	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	264	136	328	623	81
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1264	664	704	0	-	0
Stage 1	664	-	-	-	-	-
Stage 2	600	-	-	-	-	-
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	187	461	894	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	152	461	894	-	-	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	41	2.9		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	894	-	379	-	-	
HCM Lane V/C Ratio	0.152	-	0.779	-	-	
HCM Control Delay (s)	9.7	0	41	-	-	
HCM Lane LOS	A	A	E	-	-	
HCM 95th %tile Q(veh)	0.5	-	6.5	-	-	

Intersection						
Int Delay, s/veh	10.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	192	252	542	334	67
Future Vol, veh/h	46	192	252	542	334	67
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	200	263	565	348	70
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1474	383	418	0	-	0
Stage 1	383	-	-	-	-	-
Stage 2	1091	-	-	-	-	-
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	139	664	1141	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	664	1141	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	457	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	54.3	2.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1141	-	302	-	-	
HCM Lane V/C Ratio	0.23	-	0.821	-	-	
HCM Control Delay (s)	9.1	0	54.3	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.9	-	6.8	-	-	

Intersection			
Intersection Delay, s/veh	9.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	295	464	704
Demand Flow Rate, veh/h	301	474	718
Vehicles Circulating, veh/h	635	32	139
Vehicles Exiting, veh/h	222	904	367
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.8	6.0	10.5
Approach LOS	B	A	B
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	301	474	718
Cap Entry Lane, veh/h	722	1336	1197
Entry HV Adj Factor	0.980	0.980	0.980
Flow Entry, veh/h	295	464	704
Cap Entry, veh/h	708	1309	1173
V/C Ratio	0.417	0.355	0.600
Control Delay, s/veh	10.8	6.0	10.5
LOS	B	A	B
95th %tile Queue, veh	2	2	4

Intersection			
Intersection Delay, s/veh	9.3		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	248	827	418
Demand Flow Rate, veh/h	253	843	426
Vehicles Circulating, veh/h	355	49	267
Vehicles Exiting, veh/h	338	559	625
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.5	10.9	7.9
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	253	843	426
Cap Entry Lane, veh/h	961	1313	1051
Entry HV Adj Factor	0.980	0.981	0.981
Flow Entry, veh/h	248	827	418
Cap Entry, veh/h	942	1287	1031
V/C Ratio	0.263	0.642	0.405
Control Delay, s/veh	6.5	10.9	7.9
LOS	A	B	A
95th %tile Queue, veh	1	5	2

Intersection						
Int Delay, s/veh	13.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	235	115	309	593	78
Future Vol, veh/h	30	235	115	309	593	78
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	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	273	134	359	690	91
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1363	736	781	0	-	0
Stage 1	736	-	-	-	-	-
Stage 2	627	-	-	-	-	-
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	163	419	837	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	130	419	837	-	-	-
Mov Cap-2 Maneuver	130	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	66.8	2.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	837	-	335	-	-	
HCM Lane V/C Ratio	0.16	-	0.92	-	-	
HCM Control Delay (s)	10.1	0	66.8	-	-	
HCM Lane LOS	B	A	F	-	-	
HCM 95th %tile Q(veh)	0.6	-	9.2	-	-	

Intersection						
Int Delay, s/veh	14.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	51	180	247	593	361	75
Future Vol, veh/h	51	180	247	593	361	75
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	188	257	618	376	78
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1547	415	454	0	-	0
Stage 1	415	-	-	-	-	-
Stage 2	1132	-	-	-	-	-
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	126	637	1107	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	82	637	1107	-	-	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	84.9	2.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1107	-	255	-	-	
HCM Lane V/C Ratio	0.232	-	0.944	-	-	
HCM Control Delay (s)	9.2	0	84.9	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.9	-	8.6	-	-	

Intersection						
Int Delay, s/veh	18.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	252	130	315	599	78
Future Vol, veh/h	30	252	130	315	599	78
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	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	293	151	366	697	91
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1411	743	788	0	-	0
Stage 1	743	-	-	-	-	-
Stage 2	668	-	-	-	-	-
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	152	415	831	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	117	415	831	-	-	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	87.1	3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	831	-	327	-	-	
HCM Lane V/C Ratio	0.182	-	1.003	-	-	
HCM Control Delay (s)	10.3	0	87.1	-	-	
HCM Lane LOS	B	A	F	-	-	
HCM 95th %tile Q(veh)	0.7	-	11.1	-	-	

Intersection						
Int Delay, s/veh	26.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	51	211	278	605	372	75
Future Vol, veh/h	51	211	278	605	372	75
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	220	290	630	388	78
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1637	427	466	0	-	0
Stage 1	427	-	-	-	-	-
Stage 2	1210	-	-	-	-	-
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	111	628	1095	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	66	628	1095	-	-	-
Mov Cap-2 Maneuver	66	-	-	-	-	-
Stage 1	390	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	151.2	3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1095	-	236	-	-	
HCM Lane V/C Ratio	0.264	-	1.156	-	-	
HCM Control Delay (s)	9.5	0	151.2	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	1.1	-	12.7	-	-	

Intersection			
Intersection Delay, s/veh	11.0		
Intersection LOS	B		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	328	517	788
Demand Flow Rate, veh/h	335	527	804
Vehicles Circulating, veh/h	711	36	154
Vehicles Exiting, veh/h	247	1010	409
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	13.4	6.5	12.9
Approach LOS	B	A	B
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	335	527	804
Cap Entry Lane, veh/h	668	1330	1179
Entry HV Adj Factor	0.979	0.980	0.980
Flow Entry, veh/h	328	517	788
Cap Entry, veh/h	654	1304	1156
V/C Ratio	0.501	0.396	0.682
Control Delay, s/veh	13.4	6.5	12.9
LOS	B	A	B
95th %tile Queue, veh	3	2	6

Intersection			
Intersection Delay, s/veh	11.1		
Intersection LOS	B		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	273	920	466
Demand Flow Rate, veh/h	278	939	476
Vehicles Circulating, veh/h	396	54	296
Vehicles Exiting, veh/h	376	620	697
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.2	13.2	9.0
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	278	939	476
Cap Entry Lane, veh/h	921	1306	1020
Entry HV Adj Factor	0.982	0.980	0.979
Flow Entry, veh/h	273	920	466
Cap Entry, veh/h	905	1280	999
V/C Ratio	0.302	0.719	0.467
Control Delay, s/veh	7.2	13.2	9.0
LOS	A	B	A
95th %tile Queue, veh	1	7	3

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	233	58	26	572
Future Vol, veh/h	2	4	233	58	26	572
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	268	67	30	657
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1019	302	0	0	335	0
Stage 1	302	-	-	-	-	-
Stage 2	717	-	-	-	-	-
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	263	738	-	-	1224	-
Stage 1	750	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	738	-	-	1224	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 256 738 1224	-	-		
HCM Lane V/C Ratio	-	- 0.009 0.006 0.024	-	-		
HCM Control Delay (s)	-	- 19.2 9.9 8	-	-		
HCM Lane LOS	-	- C A A	-	-		
HCM 95th %tile Q(veh)	-	- 0 0 0.1	-	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	18	533	40	15	330
Future Vol, veh/h	39	18	533	40	15	330
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	19	567	43	16	351
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	972	589	0	0	610	0
Stage 1	589	-	-	-	-	-
Stage 2	383	-	-	-	-	-
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	280	508	-	-	969	-
Stage 1	554	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	275	508	-	-	969	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17.9	0	0.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 275 508	969	-		
HCM Lane V/C Ratio	-	- 0.151 0.038	0.016	-		
HCM Control Delay (s)	-	- 20.4 12.4	8.8	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.5 0.1	0.1	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	244	58	26	598
Future Vol, veh/h	2	4	244	58	26	598
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	280	67	30	687
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1061	314	0	0	347	0
Stage 1	314	-	-	-	-	-
Stage 2	747	-	-	-	-	-
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	248	726	-	-	1212	-
Stage 1	741	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	242	726	-	-	1212	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.3	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 242 726	1212	-		
HCM Lane V/C Ratio	-	- 0.009 0.006	0.025	-		
HCM Control Delay (s)	-	- 20 10	8	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0 0	0.1	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	18	557	40	15	345
Future Vol, veh/h	39	18	557	40	15	345
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	19	593	43	16	367
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1014	615	0	0	636	0
Stage 1	615	-	-	-	-	-
Stage 2	399	-	-	-	-	-
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	264	491	-	-	947	-
Stage 1	539	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	260	491	-	-	947	-
Mov Cap-2 Maneuver	260	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.7	0	0.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 260 491	947	-		
HCM Lane V/C Ratio	-	- 0.16 0.039	0.017	-		
HCM Control Delay (s)	-	- 21.5 12.6	8.9	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.6 0.1	0.1	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	250	58	26	604
Future Vol, veh/h	2	4	250	58	26	604
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	287	67	30	694
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1075	321	0	0	354	0
Stage 1	321	-	-	-	-	-
Stage 2	754	-	-	-	-	-
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	243	720	-	-	1205	-
Stage 1	735	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	237	720	-	-	1205	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.4	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 237 720 1205	-	-		
HCM Lane V/C Ratio	-	- 0.01 0.006 0.025	-	-		
HCM Control Delay (s)	-	- 20.3 10 8.1	-	-		
HCM Lane LOS	-	- C B A	-	-		
HCM 95th %tile Q(veh)	-	- 0 0 0.1	-	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	18	569	40	15	356
Future Vol, veh/h	39	18	569	40	15	356
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	19	605	43	16	379
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1038	627	0	0	648	0
Stage 1	627	-	-	-	-	-
Stage 2	411	-	-	-	-	-
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	256	484	-	-	938	-
Stage 1	532	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	252	484	-	-	938	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	19.1	0	0.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 252 484	938	-		
HCM Lane V/C Ratio	-	- 0.165 0.04	0.017	-		
HCM Control Delay (s)	-	- 22.1 12.7	8.9	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.6 0.1	0.1	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	273	58	26	669
Future Vol, veh/h	2	4	273	58	26	669
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	314	67	30	769
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1177	348	0	0	381	0
Stage 1	348	-	-	-	-	-
Stage 2	829	-	-	-	-	-
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	211	695	-	-	1177	-
Stage 1	715	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	206	695	-	-	1177	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.4	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 206 695	1177	-		
HCM Lane V/C Ratio	-	- 0.011 0.007	0.025	-		
HCM Control Delay (s)	-	- 22.7 10.2	8.1	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0 0	0.1	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	18	624	40	15	386
Future Vol, veh/h	39	18	624	40	15	386
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	19	664	43	16	411
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1129	686	0	0	707	0
Stage 1	686	-	-	-	-	-
Stage 2	443	-	-	-	-	-
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	226	447	-	-	891	-
Stage 1	500	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	222	447	-	-	891	-
Mov Cap-2 Maneuver	222	-	-	-	-	-
Stage 1	500	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	21.3	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 222 447	891	-		
HCM Lane V/C Ratio	-	- 0.187 0.043	0.018	-		
HCM Control Delay (s)	-	- 24.9 13.4	9.1	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.7 0.1	0.1	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	279	58	26	675
Future Vol, veh/h	2	4	279	58	26	675
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	321	67	30	776
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1191	355	0	0	388	0
Stage 1	355	-	-	-	-	-
Stage 2	836	-	-	-	-	-
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	207	689	-	-	1170	-
Stage 1	710	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	202	689	-	-	1170	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.5	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 202 689 1170	-	-		
HCM Lane V/C Ratio	-	- 0.011 0.007 0.026	-	-		
HCM Control Delay (s)	-	- 23 10.3 8.2	-	-		
HCM Lane LOS	-	- C B A	-	-		
HCM 95th %tile Q(veh)	-	- 0 0 0.1	-	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	18	636	40	15	397
Future Vol, veh/h	39	18	636	40	15	397
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	0	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	19	677	43	16	422
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1153	699	0	0	720	0
Stage 1	699	-	-	-	-	-
Stage 2	454	-	-	-	-	-
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	218	440	-	-	882	-
Stage 1	493	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	214	440	-	-	882	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.9	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2		SBL	SBT	
Capacity (veh/h)	-	-	214	440	882	-
HCM Lane V/C Ratio	-	-	0.194	0.044	0.018	-
HCM Control Delay (s)	-	-	25.8	13.6	9.2	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.1	0.1	-

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↗			↕↗	↗
Traffic Vol, veh/h	0	0	15	0	0	1	0	814	0	0	1662	27
Future Vol, veh/h	0	0	15	0	0	1	0	814	0	0	1662	27
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	-	-	0	-	-	0	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	95	92	92	92	95	95	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	0	0	1	0	857	0	0	1749	28
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	875	-	-	429	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	292	0	0	574	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	292	-	-	574	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18		11.3		0		0					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBT		NBR		EBLn1WBLn1		SBT		SBR			
Capacity (veh/h)	-		-		292 574		-		-			
HCM Lane V/C Ratio	-		-		0.054 0.002		-		-			
HCM Control Delay (s)	-		-		18 11.3		-		-			
HCM Lane LOS	-		-		C B		-		-			
HCM 95th %tile Q(veh)	-		-		0.2 0		-		-			

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↗			↕↗	↗
Traffic Vol, veh/h	0	0	31	3	0	11	0	1471	0	0	1360	50
Future Vol, veh/h	0	0	31	3	0	11	0	1471	0	0	1360	50
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	-	-	0	-	-	0	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	92	94	92	92	92	94	94	92	92	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	33	3	0	12	0	1565	0	0	1447	53
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	724	2289	-	783	-	0	0	-	-	0
Stage 1	-	-	-	1565	-	-	-	-	-	-	-	-
Stage 2	-	-	-	724	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	7.54	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	3.52	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	368	21	0	337	0	-	-	0	-	-
Stage 1	0	0	-	116	0	-	0	-	-	0	-	-
Stage 2	0	0	-	383	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	368	19	-	337	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	19	-	-	-	-	-	-	-	-
Stage 1	-	-	-	116	-	-	-	-	-	-	-	-
Stage 2	-	-	-	349	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	15.7		16.1		0		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBT		NBR		EBLn1WBLn1		SBT		SBR			
Capacity (veh/h)	-		-		368 337		-		-			
HCM Lane V/C Ratio	-		-		0.09 0.035		-		-			
HCM Control Delay (s)	-		-		15.7 16.1		-		-			
HCM Lane LOS	-		-		C C		-		-			
HCM 95th %tile Q(veh)	-		-		0.3 0.1		-		-			

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↗			↕↗	↗
Traffic Vol, veh/h	0	0	15	0	0	1	0	907	0	0	1854	27
Future Vol, veh/h	0	0	15	0	0	1	0	907	0	0	1854	27
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	-	-	0	-	-	0	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	95	92	92	92	95	95	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	0	0	1	0	955	0	0	1952	28
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	976	-	-	478	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	251	0	0	534	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	251	-	-	534	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.3		11.8		0		0					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBT		NBR		EBLn1WBLn1		SBT		SBR			
Capacity (veh/h)	-		-		251 534		-		-			
HCM Lane V/C Ratio	-		-		0.063 0.002		-		-			
HCM Control Delay (s)	-		-		20.3 11.8		-		-			
HCM Lane LOS	-		-		C B		-		-			
HCM 95th %tile Q(veh)	-		-		0.2 0		-		-			

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	↗
Traffic Vol, veh/h	0	0	31	3	0	11	0	1641	0	0	1512	50
Future Vol, veh/h	0	0	31	3	0	11	0	1641	0	0	1512	50
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	-	-	0	-	-	0	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	92	94	92	92	92	94	94	92	92	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	33	3	0	12	0	1746	0	0	1609	53
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	805	2551	-	873	-	0	0	-	-	0
Stage 1	-	-	-	1746	-	-	-	-	-	-	-	-
Stage 2	-	-	-	805	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	7.54	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	3.52	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	325	13	0	293	0	-	-	0	-	-
Stage 1	0	0	-	89	0	-	0	-	-	0	-	-
Stage 2	0	0	-	342	0	-	0	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	325	12	-	293	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	12	-	-	-	-	-	-	-	-
Stage 1	-	-	-	89	-	-	-	-	-	-	-	-
Stage 2	-	-	-	307	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.3		17.8		0		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBT		NBR		EBLn1WBLn1		SBT		SBR			
Capacity (veh/h)	-		-		325 293		-		-			
HCM Lane V/C Ratio	-		-		0.101 0.041		-		-			
HCM Control Delay (s)	-		-		17.3 17.8		-		-			
HCM Lane LOS	-		-		C C		-		-			
HCM 95th %tile Q(veh)	-		-		0.3 0.1		-		-			

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	237	2	11	333	26	4	0	8	34	0	23
Future Vol, veh/h	48	237	2	11	333	26	4	0	8	34	0	23
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	100	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	255	2	12	358	28	4	0	9	37	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	386	0	0	257	0	0	769	770	256	761	757	372
Stage 1	-	-	-	-	-	-	360	360	-	396	396	-
Stage 2	-	-	-	-	-	-	409	410	-	365	361	-
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	1172	-	-	1308	-	-	318	331	783	322	337	674
Stage 1	-	-	-	-	-	-	658	626	-	629	604	-
Stage 2	-	-	-	-	-	-	619	595	-	654	626	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1172	-	-	1308	-	-	294	313	783	306	319	674
Mov Cap-2 Maneuver	-	-	-	-	-	-	294	313	-	306	319	-
Stage 1	-	-	-	-	-	-	629	598	-	601	599	-
Stage 2	-	-	-	-	-	-	591	590	-	618	598	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.2			12.3			15.9		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	504	1172	-	-	1308	-	-	392
HCM Lane V/C Ratio	0.026	0.044	-	-	0.009	-	-	0.156
HCM Control Delay (s)	12.3	8.2	-	-	7.8	-	-	15.9
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	303	6	19	376	46	2	0	8	70	0	46
Future Vol, veh/h	84	303	6	19	376	46	2	0	8	70	0	46
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	100	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	319	6	20	396	48	2	0	8	74	0	48
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	444	0	0	325	0	0	982	982	322	962	961	420
Stage 1	-	-	-	-	-	-	498	498	-	460	460	-
Stage 2	-	-	-	-	-	-	484	484	-	502	501	-
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	1116	-	-	1235	-	-	228	249	719	235	256	633
Stage 1	-	-	-	-	-	-	554	544	-	581	566	-
Stage 2	-	-	-	-	-	-	564	552	-	552	543	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1116	-	-	1235	-	-	195	226	719	215	232	633
Mov Cap-2 Maneuver	-	-	-	-	-	-	195	226	-	215	232	-
Stage 1	-	-	-	-	-	-	510	501	-	535	557	-
Stage 2	-	-	-	-	-	-	512	543	-	503	500	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.3			12.9			26		
HCM LOS							B			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	468	1116	-	-	1235	-	-	291				
HCM Lane V/C Ratio	0.022	0.079	-	-	0.016	-	-	0.42				
HCM Control Delay (s)	12.9	8.5	-	-	8	-	-	26				
HCM Lane LOS	B	A	-	-	A	-	-	D				
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	2				

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	266	2	11	370	26	4	0	8	34	0	23
Future Vol, veh/h	48	266	2	11	370	26	4	0	8	34	0	23
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	100	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	286	2	12	398	28	4	0	9	37	0	25
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	426	0	0	288	0	0	840	841	287	832	828	412
Stage 1	-	-	-	-	-	-	391	391	-	436	436	-
Stage 2	-	-	-	-	-	-	449	450	-	396	392	-
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	1133	-	-	1274	-	-	285	301	752	288	306	640
Stage 1	-	-	-	-	-	-	633	607	-	599	580	-
Stage 2	-	-	-	-	-	-	589	572	-	629	606	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1133	-	-	1274	-	-	262	284	752	273	289	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	284	-	273	289	-
Stage 1	-	-	-	-	-	-	604	579	-	571	575	-
Stage 2	-	-	-	-	-	-	561	567	-	593	578	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.2			13			17.2		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	463	1133	-	-	1274	-	-	355				
HCM Lane V/C Ratio	0.028	0.046	-	-	0.009	-	-	0.173				
HCM Control Delay (s)	13	8.3	-	-	7.9	-	-	17.2				
HCM Lane LOS	B	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.6				

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	339	6	19	416	46	2	0	8	70	0	46
Future Vol, veh/h	84	339	6	19	416	46	2	0	8	70	0	46
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	100	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	357	6	20	438	48	2	0	8	74	0	48
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	486	0	0	363	0	0	1062	1062	360	1042	1041	462
Stage 1	-	-	-	-	-	-	536	536	-	502	502	-
Stage 2	-	-	-	-	-	-	526	526	-	540	539	-
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	1077	-	-	1196	-	-	201	223	684	208	230	600
Stage 1	-	-	-	-	-	-	529	523	-	552	542	-
Stage 2	-	-	-	-	-	-	535	529	-	526	522	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1077	-	-	1196	-	-	171	201	684	190	207	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	201	-	190	207	-
Stage 1	-	-	-	-	-	-	486	480	-	507	533	-
Stage 2	-	-	-	-	-	-	484	520	-	477	479	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			0.3			13.6			30.4		
HCM LOS							B			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	428	1077	-	-	1196	-	-	261				
HCM Lane V/C Ratio	0.025	0.082	-	-	0.017	-	-	0.468				
HCM Control Delay (s)	13.6	8.6	-	-	8.1	-	-	30.4				
HCM Lane LOS	B	A	-	-	A	-	-	D				
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0.1	-	-	2.3				

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻				↻			↻
Traffic Vol, veh/h	0	271	2	0	340	13	0	0	5	0	0	19
Future Vol, veh/h	0	271	2	0	340	13	0	0	5	0	0	19
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	-	-	-	-	-	-	-	-	0	-	-	0
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	295	2	0	370	14	0	0	5	0	0	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	296	-	-	377
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	743	0	0	670
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	743	-	-	670
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	0		0				9.9			10.5		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	743	-	-	-	-	670						
HCM Lane V/C Ratio	0.007	-	-	-	-	0.031						
HCM Control Delay (s)	9.9	-	-	-	-	10.5						
HCM Lane LOS	A	-	-	-	-	B						
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1						

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻				↻			↻
Traffic Vol, veh/h	0	373	5	0	383	23	0	0	2	0	0	39
Future Vol, veh/h	0	373	5	0	383	23	0	0	2	0	0	39
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	-	-	-	-	-	-	-	-	0	-	-	0
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	405	5	0	416	25	0	0	2	0	0	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	408	-	-	429
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	643	0	0	626
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	643	-	-	626
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	0		0				10.6			11.2		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	643	-	-	-	-	626						
HCM Lane V/C Ratio	0.003	-	-	-	-	0.068						
HCM Control Delay (s)	10.6	-	-	-	-	11.2						
HCM Lane LOS	B	-	-	-	-	B						
HCM 95th %tile Q(veh)	0	-	-	-	-	0.2						

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↰				↱			↱
Traffic Vol, veh/h	0	300	2	0	377	13	0	0	5	0	0	19
Future Vol, veh/h	0	300	2	0	377	13	0	0	5	0	0	19
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	-	-	-	-	-	-	-	-	0	-	-	0
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	326	2	0	410	14	0	0	5	0	0	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	327	-	-	417
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	714	0	0	636
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	714	-	-	636
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			10.1			10.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	714	-	-	-	-	636						
HCM Lane V/C Ratio	0.008	-	-	-	-	0.032						
HCM Control Delay (s)	10.1	-	-	-	-	10.9						
HCM Lane LOS	B	-	-	-	-	B						
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1						

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻				↻			↻
Traffic Vol, veh/h	0	409	5	0	423	23	0	0	2	0	0	39
Future Vol, veh/h	0	409	5	0	423	23	0	0	2	0	0	39
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	-	-	-	-	-	-	-	-	0	-	-	0
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	445	5	0	460	25	0	0	2	0	0	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	448	-	-	473
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	611	0	0	591
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	611	-	-	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	0		0				10.9			11.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1						
Capacity (veh/h)	611	-	-	-	-	591						
HCM Lane V/C Ratio	0.004	-	-	-	-	0.072						
HCM Control Delay (s)	10.9	-	-	-	-	11.6						
HCM Lane LOS	B	-	-	-	-	B						
HCM 95th %tile Q(veh)	0	-	-	-	-	0.2						

APPENDIX F

Queue Analysis Worksheets

Queues

2030 Total AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	58	31	849	6	27	1901	49
v/c Ratio	0.52	0.38	0.17	0.31	0.00	0.05	0.69	0.04
Control Delay	46.0	42.1	5.1	5.8	0.0	3.1	10.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	42.1	5.1	5.8	0.0	3.1	10.8	0.5
Queue Length 50th (ft)	41	27	4	109	0	3	402	0
Queue Length 95th (ft)	92	68	11	164	0	10	584	5
Internal Link Dist (ft)	145	332		1251			178	
Turn Bay Length (ft)			450		175	250		50
Base Capacity (vph)	277	260	180	2751	1249	522	2751	1249
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.22	0.17	0.31	0.00	0.05	0.69	0.04
Intersection Summary								

Queues

2030 Total PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	88	52	83	1519	24	43	1367	47
v/c Ratio	0.52	0.39	0.25	0.55	0.02	0.15	0.51	0.04
Control Delay	33.4	38.3	4.4	8.1	0.0	3.7	8.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	38.3	4.4	8.1	0.0	3.7	8.5	0.5
Queue Length 50th (ft)	23	19	8	251	0	4	215	0
Queue Length 95th (ft)	74	58	22	377	0	13	318	4
Internal Link Dist (ft)	145	332		1251			178	
Turn Bay Length (ft)			450		175	250		50
Base Capacity (vph)	336	284	336	2752	1249	303	2658	1209
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.18	0.25	0.55	0.02	0.14	0.51	0.04

Intersection Summary

Queues

2045 Total AM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	93	63	33	943	6	31	2119	56
v/c Ratio	0.56	0.41	0.23	0.36	0.01	0.07	0.81	0.05
Control Delay	48.4	42.9	7.2	6.6	0.0	3.3	14.6	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	42.9	7.2	6.6	0.0	3.3	14.6	0.7
Queue Length 50th (ft)	47	30	4	129	0	4	531	0
Queue Length 95th (ft)	102	74	12	192	0	12	776	7
Internal Link Dist (ft)	145	332		1251			178	
Turn Bay Length (ft)			450		175	250		50
Base Capacity (vph)	267	251	143	2625	1195	458	2625	1195
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.25	0.23	0.36	0.01	0.07	0.81	0.05
Intersection Summary								

Queues

2045 Total PM

1: Federal Blvd (US-287) & 54th Ave

02/09/2024



Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	96	57	90	1685	26	48	1515	54
v/c Ratio	0.55	0.42	0.34	0.66	0.02	0.21	0.61	0.05
Control Delay	35.9	37.8	6.2	11.0	0.0	4.9	10.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	37.8	6.2	11.0	0.0	4.9	10.7	0.7
Queue Length 50th (ft)	29	20	10	312	0	5	262	0
Queue Length 95th (ft)	82	61	24	471	0	15	388	7
Internal Link Dist (ft)	145	332		1251			178	
Turn Bay Length (ft)			450		175	250		50
Base Capacity (vph)	322	269	275	2554	1165	242	2472	1130
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.21	0.33	0.66	0.02	0.20	0.61	0.05
Intersection Summary								

Queues
2: Federal Blvd (US-287) & 52nd Ave

2030 Total AM
02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	83	22	161	115	28	881	198	1703	32
v/c Ratio	0.53	0.19	0.62	0.51	0.22	0.43	0.44	0.66	0.03
Control Delay	53.8	38.2	50.0	19.2	18.8	13.7	8.2	9.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	38.2	50.0	19.2	18.8	13.7	8.2	9.7	0.2
Queue Length 50th (ft)	56	8	99	6	8	156	35	267	0
Queue Length 95th (ft)	93	34	164	60	33	247	70	416	2
Internal Link Dist (ft)		171		1000		270		1251	
Turn Bay Length (ft)					250		525		225
Base Capacity (vph)	158	309	263	419	125	2028	482	2578	1171
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.07	0.61	0.27	0.22	0.43	0.41	0.66	0.03
Intersection Summary									

Queues

2030 Total PM

2: Federal Blvd (US-287) & 52nd Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	153	41	21	120	34	1526	106	1349	45
v/c Ratio	0.85	0.17	0.11	0.57	0.15	0.71	0.48	0.52	0.04
Control Delay	81.3	32.5	38.7	21.9	12.4	17.5	14.2	7.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	32.5	38.7	21.9	12.4	17.5	14.2	7.6	0.6
Queue Length 50th (ft)	98	15	12	6	9	348	17	177	0
Queue Length 95th (ft)	#207	50	34	62	29	502	53	272	6
Internal Link Dist (ft)		171		1000		270		1251	
Turn Bay Length (ft)					250		525		225
Base Capacity (vph)	179	311	193	356	222	2137	231	2581	1173
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.13	0.11	0.34	0.15	0.71	0.46	0.52	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2045 Total AM

2: Federal Blvd (US-287) & 52nd Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	86	23	180	128	29	985	221	1898	33
v/c Ratio	0.53	0.19	0.73	0.55	0.33	0.48	0.54	0.73	0.03
Control Delay	54.8	38.3	58.6	20.1	26.6	14.3	10.0	11.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	38.3	58.6	20.1	26.6	14.3	10.0	11.1	0.3
Queue Length 50th (ft)	59	9	113	7	9	185	39	334	0
Queue Length 95th (ft)	96	36	#202	64	42	284	78	516	2
Internal Link Dist (ft)		171		1000		270		1251	
Turn Bay Length (ft)					250		525		225
Base Capacity (vph)	161	308	248	412	89	2038	443	2595	1179
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.07	0.73	0.31	0.33	0.48	0.50	0.73	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2045 Total PM

2: Federal Blvd (US-287) & 52nd Ave

02/09/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	42	22	132	36	1705	119	1496	46
v/c Ratio	0.92	0.18	0.11	0.59	0.20	0.80	0.63	0.58	0.04
Control Delay	95.3	33.0	38.9	21.6	14.1	20.5	32.7	8.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.3	33.0	38.9	21.6	14.1	20.5	32.7	8.2	0.7
Queue Length 50th (ft)	100	15	13	6	10	435	29	209	0
Queue Length 95th (ft)	#223	52	36	64	33	621	#108	325	6
Internal Link Dist (ft)		171		1000		270		1251	
Turn Bay Length (ft)					250		525		225
Base Capacity (vph)	170	308	194	366	179	2131	196	2585	1174
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.14	0.11	0.36	0.20	0.80	0.61	0.58	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2030 Total AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	106	73	107	79	77	174	787	36	26	1538	142
v/c Ratio	0.68	0.33	0.38	0.50	0.34	0.64	0.29	0.03	0.06	0.68	0.14
Control Delay	69.8	50.3	12.6	58.7	42.0	21.4	4.3	1.3	10.2	16.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.8	50.3	12.6	58.7	42.0	21.4	4.3	1.3	10.2	16.2	4.8
Queue Length 50th (ft)	77	51	0	56	44	28	76	0	7	360	16
Queue Length 95th (ft)	138	97	51	107	91	105	111	8	22	515	47
Internal Link Dist (ft)		274			512		491			587	
Turn Bay Length (ft)	75		75	100		300		75	150		120
Base Capacity (vph)	204	289	336	204	288	317	2748	1237	422	2267	1043
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.25	0.32	0.39	0.27	0.55	0.29	0.03	0.06	0.68	0.14

Intersection Summary

Queues

2030 Total PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	166	92	173	74	122	227	1430	79	24	1312	131
v/c Ratio	0.80	0.29	0.42	0.33	0.38	0.72	0.56	0.07	0.12	0.65	0.14
Control Delay	72.7	43.2	9.1	45.4	39.5	25.6	9.0	3.2	16.0	19.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	43.2	9.1	45.4	39.5	25.6	9.0	3.2	16.0	19.9	6.1
Queue Length 50th (ft)	119	60	0	49	70	50	236	7	8	345	16
Queue Length 95th (ft)	#202	108	59	95	127	146	328	24	26	471	50
Internal Link Dist (ft)		274			512		491			587	
Turn Bay Length (ft)	75		75	100		300		75	150		120
Base Capacity (vph)	262	405	480	282	400	350	2559	1156	197	2025	941
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.23	0.36	0.26	0.30	0.65	0.56	0.07	0.12	0.65	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2045 Total AM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	118	81	118	90	85	191	875	40	29	1715	159
v/c Ratio	0.72	0.35	0.39	0.55	0.36	0.77	0.32	0.03	0.08	0.78	0.16
Control Delay	73.4	50.6	12.1	60.7	43.0	44.5	4.6	1.2	10.9	20.3	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	50.6	12.1	60.7	43.0	44.5	4.6	1.2	10.9	20.3	5.6
Queue Length 50th (ft)	87	56	0	64	49	79	93	0	9	496	23
Queue Length 95th (ft)	152	106	53	120	99	#184	127	8	24	630	55
Internal Link Dist (ft)		274			512		491			587	
Turn Bay Length (ft)	75		75	100		300		75	150		120
Base Capacity (vph)	201	287	343	202	287	272	2731	1230	376	2203	1016
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.28	0.34	0.45	0.30	0.70	0.32	0.03	0.08	0.78	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2045 Total PM

4: Federal Blvd (US-287) & Regis Blvd/50th Ave

02/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	182	102	190	84	135	247	1591	90	27	1457	146
v/c Ratio	0.85	0.29	0.42	0.35	0.39	0.86	0.63	0.08	0.18	0.75	0.16
Control Delay	79.1	42.9	8.7	45.4	39.5	52.6	10.8	3.6	18.8	24.4	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.1	42.9	8.7	45.4	39.5	52.6	10.8	3.6	18.8	24.4	7.2
Queue Length 50th (ft)	134	67	0	56	78	118	327	11	11	462	24
Queue Length 95th (ft)	#248	119	61	105	139	#261	394	27	31	557	58
Internal Link Dist (ft)		274			512		491			587	
Turn Bay Length (ft)	75		75	100		300		75	150		120
Base Capacity (vph)	246	399	488	275	393	299	2516	1137	150	1935	903
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.26	0.39	0.31	0.34	0.83	0.63	0.08	0.18	0.75	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2030 Total AM

7: Lowell Blvd & Regis Blvd

02/09/2024



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	161	276	17	439	130	611
v/c Ratio	0.06	0.33	0.62	0.05	0.40	0.26	0.55
Control Delay	17.7	14.0	21.5	5.6	7.3	7.6	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	14.0	21.5	5.6	7.3	7.6	9.9
Queue Length 50th (ft)	4	29	63	2	66	20	117
Queue Length 95th (ft)	17	72	134	9	117	45	194
Internal Link Dist (ft)		317	357		339		419
Turn Bay Length (ft)	50			25		25	
Base Capacity (vph)	244	494	442	369	1084	505	1101
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.33	0.62	0.05	0.40	0.26	0.55
Intersection Summary							

Queues

2030 Total PM

7: Lowell Blvd & Regis Blvd

02/09/2024



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	165	466	32	662	134	405
v/c Ratio	0.09	0.26	0.84	0.07	0.71	0.59	0.43
Control Delay	14.6	12.2	31.2	8.2	16.1	24.0	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	12.2	31.2	8.2	16.1	24.0	11.0
Queue Length 50th (ft)	6	32	126	5	164	31	84
Queue Length 95th (ft)	20	70	#283	17	278	#108	142
Internal Link Dist (ft)		317	357		339		419
Turn Bay Length (ft)	50			25		25	
Base Capacity (vph)	266	632	557	430	937	229	944
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.26	0.84	0.07	0.71	0.59	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2045 Total AM

7: Lowell Blvd & Regis Blvd

02/09/2024



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	178	304	19	491	143	685
v/c Ratio	0.07	0.36	0.69	0.06	0.45	0.31	0.62
Control Delay	17.9	14.8	25.4	5.9	7.9	8.4	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	14.8	25.4	5.9	7.9	8.4	11.1
Queue Length 50th (ft)	4	34	74	3	78	23	139
Queue Length 95th (ft)	17	80	#176	10	136	52	232
Internal Link Dist (ft)		317	357		339		419
Turn Bay Length (ft)	50			25		25	
Base Capacity (vph)	229	494	438	312	1083	462	1101
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.36	0.69	0.06	0.45	0.31	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2045 Total PM

7: Lowell Blvd & Regis Blvd

02/09/2024



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	184	510	36	737	144	453
v/c Ratio	0.10	0.29	0.93	0.09	0.79	0.83	0.48
Control Delay	14.9	12.7	43.2	8.5	19.8	54.6	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	12.7	43.2	8.5	19.8	54.6	11.7
Queue Length 50th (ft)	6	36	148	6	196	41	97
Queue Length 95th (ft)	22	78	#327	19	#392	#140	164
Internal Link Dist (ft)		317	357		339		419
Turn Bay Length (ft)	50			25		25	
Base Capacity (vph)	252	633	551	389	937	174	944
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.29	0.93	0.09	0.79	0.83	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.