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June 11, 2021

Mr. James Spehalski
Cottonwood Creek Investors
c/o Marathon Land Company
9750 W. Cambridge Place
Littleton, CO 80217

Re: Cottonwood Creek
Master TIA
Aurora, CO
LSC #210410

Dear Mr. Spehalski:

In response to your request, LSC Transportation Consultants, Inc. has prepared this master traffic impact analysis for the proposed Cottonwood Creek development. As shown on Figure 1, the site is located south and north of Jewell Avenue and west of Hudson Road in Aurora, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the site's traffic impacts. The site is expected to build out over a 20-year time period.

LAND USE AND ACCESS

The site is proposed to include about 3,774 single-family dwelling units, three oil & gas wells, about 41.9 acres of park space, a 5.7-acre parcel for a community center, two elementary school sites, and an 18.02-acre mixed use parcel which was assumed to be developed with about 160,000 square feet of commercial space. Access is proposed from several locations as shown in the conceptual site plan in Figure 2.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **E. Jewell Avenue** is an east-west, two-lane arterial roadway passing through the site. The intersections with E. Powhaton Road and S. Watkins Road are stop-sign controlled. The posted speed limit in the vicinity of the site is 45 mph. The NEATS study shows a four-lane major arterial adjacent to the site by 2040 and a six-lane major arterial west of Monaghan Road.
- **E. Powhaton Road** is a north-south, two-lane minor roadway west of the site. The intersection with E. Jewell Avenue is stop-sign controlled. The posted speed limit in the vicinity of the site is 45 mph. The NEATS study shows a four-lane major arterial by 2040 in the vicinity of the site.
- **S. Watkins Road** is a north-south, two-lane roadway east of the site. The intersection with E. Jewell Avenue is stop-sign controlled. The posted speed limit in the vicinity of the site is 45 mph. The NEATS study shows a six-lane major arterial by 2040 in the vicinity of the site.
- **E. Yale Avenue** is an east-west, two-lane arterial roadway south of the site. The SEATS study shows a four-lane minor arterial by 2030.

Existing Traffic Conditions

Figure 3 shows the existing traffic volumes, lane geometries and traffic controls in the site's vicinity on a typical weekday. The daily traffic volumes are based on the attached traffic counts conducted by Counter Measures in August, 2019 prior to the ongoing pandemic.

2041 Background Traffic

Figure 4a shows the estimated 2041 background traffic for the intersections along E. Jewell Avenue and E. Yale Avenue. Figure 4b shows the estimated 2041 background traffic for all other intersections. The background traffic is based on the Northeast Area Transportation Study (NEATS) Refresh Final Report by David Evans and Associates, Inc., dated October, 2018, the Aurora Southeast Area Transportation Study 2007 Update by Felsburg, Holt & Ullevig, and traffic studies completed for future developments in the vicinity of the site including Eastern Hills, Prosper, Harmony and Murphy Creek.

Figure 4c shows the estimated lane geometry and traffic control for the intersections along E. Jewell Avenue and E. Yale Avenue. Figure 4d shows the estimated 2041 lane geometry and traffic control for all other intersections.

Existing and 2041 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 4a through 4d were analyzed to determine the existing and 2041 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached.

1. **E. Mississippi Avenue/Lanewood Street:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2041.
2. **E. Mississippi Avenue/Hudson Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2041.
3. **Lanewood Street/Florida Avenue:** This intersection was analyzed only in the total scenario.
4. **Hudson Road/Florida Avenue:** This intersection was analyzed only in the total scenario.
5. **Lanewood Street/PA-15 Access:** This intersection was analyzed only in the total scenario.
6. **E. Jewell Avenue/E. Powhaton Road:** All movements at this stop-sign controlled intersection currently operate at LOS "A" during both morning and afternoon peak-hours. By 2041, this intersection is expected to be signalized and operate at an overall LOS "C" during both peak-hours.
7. **E. Jewell Avenue/Monaghan Road:** This future signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "C" during the afternoon peak-hour through 2041.
8. **E. Jewell Avenue/Street A:** All movements at this future intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
9. **E. Jewell Avenue/N. Hayesmount Road:** All movements at this future intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
10. **E. Jewell Avenue/Lanewood Street:** All movements at this future intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2041.
11. **E. Jewell Avenue/PA-15 Access:** This intersection was analyzed only in the total scenario.
12. **E. Jewell Avenue/Hudson Road:** All movements at this future intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
13. **E. Jewell Avenue/Watkins Road:** All movements at this stop-sign controlled intersection currently operate at LOS "B" or better during both morning and afternoon peak-hours and are expected to operate at LOS "D" or better through 2041 with the following exceptions:

The eastbound left-turn movement is expected to operate at LOS "F" during the morning peak-hour with stop-sign control.

- 14. Monaghan Road/PA-79 Access:** This intersection was analyzed only in the total scenario.
- 15. Monaghan Road/E. Iliff Avenue:** This intersection was analyzed only in the total scenario.
- 16. E. Iliff Avenue/Street A:** This intersection was analyzed only in the total scenario.
- 17. E. Iliff Avenue/Hayesmount Road:** This intersection was analyzed only in the total scenario.
- 18. E. Iliff Avenue/Lanewood Street:** This intersection was analyzed only in the total scenario.
- 19. E. Iliff Avenue/Hudson Road:** This intersection was analyzed only in the total scenario.
- 20. E. Monaghan Road/PA-4 Access:** This intersection was analyzed only in the total scenario.
- 21. Powhaton Road/E. Yale Avenue:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "A" through 2041.
- 22. E. Monaghan Road/E. Yale Avenue:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better through 2041.
- 23. E. Yale Avenue/Street A:** This intersection was analyzed only in the total scenario.
- 24. E. Yale Avenue/Hayesmount Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better through 2041.
- 25. E. Yale Avenue/Hudson Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "A" through 2041.
- 26. E. Yale Avenue/Watkins Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "D" through 2041 with the following exception: The eastbound left-turn movement is expected to operate at LOS "E" during the afternoon peak-hour with stop-sign control.

TRIP GENERATION

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed land use based on the rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE).

The site is expected to generate about 47,350 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 1,270 vehicles would enter

and about 2,528 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 2,870 vehicles would enter and about 1,940 vehicles would exit. These estimates are expected to be reduced due to internal and passby trips as shown in Table 2.

DIRECTIONAL DISTRIBUTION

Figure 5 shows the estimated directional distribution of the site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, and activity centers; and the site's proposed land use.

TRIP ASSIGNMENT

Figure 6a shows the estimated assignment of site-generated traffic volumes for the intersections along E. Jewell Avenue and E. Yale Avenue based on the trip generation estimate (from Table 2) and the directional distribution shown in Figure 5.

Figure 6b shows the estimated assignment of site-generated traffic volumes for all other intersections based on the trip generation estimate (from Table 2) and the directional distribution shown in Figure 5.

2041 TOTAL TRAFFIC

Figure 7a shows the estimated 2041 total traffic for the intersections along E. Jewell Avenue and E. Yale Avenue. Figure 7b shows the estimated 2041 total traffic for all other intersections.

Figure 7c shows the estimated 2041 total traffic lane geometry and traffic control for the intersections along E. Jewell Avenue and E. Yale Avenue. Figure 4d shows the estimated 2041 total traffic lane geometry and traffic control for all other intersections.

PROJECTED LEVELS OF SERVICE

The intersections in Figures 7a through 7d were analyzed to determine the 2041 total levels of service. Table 1 shows the level of service analysis results. The level of service reports are attached.

- 1. E. Mississippi Avenue/Lanewood Street:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
- 2. E. Mississippi Avenue/Hudson Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
- 3. Lanewood Street/Florida Avenue:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.

4. **Hudson Road/Florida Avenue:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
5. **Lanewood Street/PA-15 Access:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2041.
6. **E. Jewell Avenue/E. Powhaton Road:** This signalized intersection is expected to operate at an overall LOS "C" during both morning and afternoon peak-hours through 2041.
7. **E. Jewell Avenue/Monaghan Road:** This signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "C" during the afternoon peak-hour through 2041.
8. **E. Jewell Avenue/Street A:** Several movements at this stop-sign controlled intersection are expected to operate at LOS "E" or "F" during one or both peak-hours in 2041. As a signalized intersection, it is expected to operate at LOS "C" during the morning peak-hour and LOS "B" during the afternoon peak-hour.
9. **E. Jewell Avenue/N. Hayesmount Road:** Several movements at this stop-sign controlled intersection are expected to operate at LOS "E" or "F" during one or both peak-hours in 2041. As a signalized intersection, it is expected to operate at LOS "B" during both morning and afternoon peak-hours.
10. **E. Jewell Avenue/Lanewood Street:** Several movements at this stop-sign controlled intersection are expected to operate at LOS "E" or "F" during one or both peak-hours in 2041. As a signalized intersection, it is expected to operate at LOS "B" during both morning and afternoon peak-hours.
11. **E. Jewell Avenue/PA-15 Access:** All movements at this stop-sign controlled intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
12. **E. Jewell Avenue/Hudson Road:** All movements at this intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2041.
13. **E. Jewell Avenue/Watkins Road:** All movements at this stop-sign controlled intersection are expected to operate at LOS "D" or better through 2041 with the following exception: The eastbound left-turn movement is projected to operate at LOS "F" during both peak-hours. As a signalized intersection, it is expected to operate at LOS "C" during both morning and afternoon peak-hours.
14. **Monaghan Road/PA-79 Access:** The westbound left-turn movement at this stop-sign controlled intersection is expected to operate at LOS "F" during the afternoon peak-hour in 2041. As a signalized intersection, it is expected to operate at LOS "A" during both morning and afternoon peak-hours.

15. **Monaghan Road/E. Iliff Avenue:** All movements at this intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2041.
16. **E. Iliff Avenue/Street A:** All movements at this intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2041.
17. **E. Iliff Avenue/Hayesmount Road:** All movements at this intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
18. **E. Iliff Avenue/Lanewood Street:** All movements at this intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
19. **E. Iliff Avenue/Hudson Road:** All movements at this intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2041.
20. **E. Monaghan Road/PA-4 Access:** All movements at this intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2041.
21. **Powhaton Road/E. Yale Avenue:** All movements at this stop-sign controlled intersection are expected to operate at LOS "B" or better through 2041.
22. **E. Monaghan Road/E. Yale Avenue:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better through 2041 with the following exception: The westbound left-turn movement is expected to operate at LOS "E" in the afternoon peak-hour. As a signalized intersection it is expected to operate at LOS "B" during both peak-hours.
23. **E. Yale Avenue/Street A:** All movements at this stop-sign controlled intersection are expected to operate at LOS "C" or better through 2041.
24. **E. Yale Avenue/Hayesmount Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better through 2041.
25. **E. Yale Avenue/Hudson Road:** All movements at this future stop-sign controlled intersection are expected to operate at LOS "B" or better through 2041.
26. **E. Yale Avenue/Watkins Road:** Several movements at this stop-sign controlled intersection are expected to operate at LOS "E" or "F" during the afternoon peak-hour in 2041. As a signalized intersection, it is expected to operate at LOS "A" during both morning and afternoon peak-hours.

95TH PERCENTILE QUEUE LENGTHS

The estimated 2041 95th percentile queue lengths for the signalized intersections in the study area are shown in Table 3 along with the recommended turn lane lengths.

TRAFFIC SIGNAL WARRANT ANALYSIS

Tables 4 through 12 show the projected traffic volumes compared to the traffic volume thresholds for Traffic Signal Warrant 1 (Eight-Hour), Warrant 2 (Four-Hour), and Warrant 3 (Peak-Hour) at the intersections of E. Jewell Avenue/Powhaton Road (#6), E. Jewell Avenue/Monaghan Road (#7), E. Jewell Avenue/Street A (#8), E. Jewell Avenue/Hayesmount Road (#9), E. Jewell Avenue/Lanewood Street (#10), E. Jewell Avenue/Watkins Road (#13), Monaghan Road/PA-79 Access (#14), E. Yale Avenue/Monaghan Road(#22), and E. Yale Avenue/Watkins Road (#26). The findings of Tables 4 through 12 are summarized in Table 13. All intersections analyzed are expected to meet or marginally meet traffic signal warrants by 2041.

RECOMMENDED IMPROVEMENTS

Table 14 shows the recommended improvements by 2041.

CONCLUSIONS AND RECOMMENDATIONS**Trip Generation**

1. The site is expected to generate about 47,350 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 1,270 vehicles would enter and about 2,528 vehicles would exit the site. During the afternoon peak-hour, about 2,870 vehicles would enter and about 1,940 vehicles would exit. These estimates are expected to be reduced due to internal and passby trips as shown in Table 2.

Projected Levels of Service

2. All of the signalized intersections in the study area are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2041 with the recommended improvements.
3. All movements at the unsignalized intersections in the study area are expected to operate at LOS "D" or better during both morning and afternoon peak-hours through 2041 with the recommended improvements.

Conclusions

4. The impact of the site can be accommodated by the existing and planned roadway improvements with the following recommended improvements.

Recommendations

5. The recommended improvements for 2041 are shown in Figures 7c and 7d and detailed in Tables 3 and 14.

We trust our findings will assist you in gaining approval of the proposed Cottonwood Creek development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By _____

Christopher S. McGranahan, PE, PTOE
Principal

CSM/wc

6-11-21

Enclosures: Tables 1 - 14
Figures 1 - 7d
Traffic Counts
Level of Service Definitions
Level of Service Reports
Queuing Reports

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Table 1 (Page 1 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection No. & Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|---|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 1) <u>E. Mississippi Avenue/Lanewood Street</u> | TWSC | | | | | | |
| NB Approach | -- | -- | A | A | -- | -- | -- |
| NB Left | -- | -- | -- | -- | B | B | |
| NB Right | -- | -- | -- | -- | A | A | |
| WB Approach | -- | -- | A | A | -- | -- | |
| WB Left | -- | -- | -- | -- | A | A | |
| Critical Movement Delay | -- | -- | 8.6 | 8.6 | 10.7 | 10.1 | |
| 2) <u>E. Mississippi Avenue/Hudson Road</u> | TWSC | | | | | | |
| NB Approach | -- | -- | A | A | -- | -- | -- |
| NB Left | -- | -- | -- | -- | A | A | |
| EB Approach | -- | -- | A | A | -- | -- | |
| EB Left | -- | -- | -- | -- | B | B | |
| EB Right | -- | -- | -- | -- | A | A | |
| Critical Movement Delay | -- | -- | 9.1 | 9.3 | 10.9 | 10.1 | |
| 3) <u>Lanewood Street/Florida Avenue</u> | | | | | | | |
| WB Left | -- | -- | -- | -- | A | B | |
| WB Right | -- | -- | -- | -- | A | A | |
| SB Left | -- | -- | -- | -- | A | A | |
| Critical Movement Delay | -- | -- | -- | -- | 9.8 | 11.3 | |
| 4) <u>Hudson Road/Florida Avenue</u> | TWSC | | | | | | |
| NB Left | -- | -- | -- | -- | A | A | |
| EB Left | -- | -- | -- | -- | B | B | |
| EB Right | -- | -- | -- | -- | A | A | |
| Critical Movement Delay | -- | -- | -- | -- | 10.6 | 10.5 | |
| 5) <u>Lanewood Street/PA-15 Access</u> | TWSC | | | | | | |
| WB Approach | -- | -- | -- | -- | A | A | |
| SB Left | -- | -- | -- | -- | A | A | |
| Critical Movement Delay | -- | -- | -- | -- | 9.3 | 9.5 | |
| 6) <u>E. Jewell Avenue/E. Powhaton Road</u> | TWSC | | | | | | |
| EB Left/Through | A | A | -- | -- | -- | -- | |
| SB Approach | A | A | -- | -- | -- | -- | |
| Critical Movement Delay | 8.8 | 8.9 | -- | -- | -- | -- | |
| | Signalized | | | | | | |
| EB Left | -- | -- | B | B | D | C | |
| EB Through | -- | -- | B | B | B | C | |
| EB Right | -- | -- | A | A | A | A | |
| WB Left | -- | -- | A | B | A | C | |
| WB Through | -- | -- | B | B | C | C | |
| WB Right | -- | -- | A | A | A | A | |
| NB Left | -- | -- | C | C | C | C | |
| NB Through | -- | -- | D | D | D | D | |
| NB Right | -- | -- | A | A | A | A | |
| SB Left | -- | -- | C | C | C | D | |
| SB Through | -- | -- | D | D | D | D | |
| SB Right | -- | -- | A | A | A | A | |
| Entire Intersection LOS | -- | -- | 20.5 | 20.1 | 27.7 | 28.1 | |
| Entire Intersection Delay (sec /veh) | -- | -- | C | C | C | C | |

Table 1 (Page 2 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|--------------------------------------|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 7) E. Jewell Avenue/Monaghan Road | Signalized | | | | | | |
| EB Left | -- | -- | E | E | E | E | E |
| EB Through | -- | -- | A | A | A | B | |
| EB Right | -- | -- | A | A | A | A | |
| WB Left | -- | -- | A | A | A | B | |
| WB Through | -- | -- | A | B | B | C | |
| WB Right | -- | -- | A | A | A | A | |
| NB Left | -- | -- | E | D | D | D | D |
| NB Through | -- | -- | D | D | D | D | D |
| NB Right | -- | -- | A | A | A | A | A |
| SB Left | -- | -- | D | D | E | E | |
| SB Through | -- | -- | D | D | D | D | |
| SB Right | -- | -- | A | A | A | A | A |
| Entire Intersection LOS | -- | -- | 16.1 | 26.3 | 19.8 | 29.3 | |
| Entire Intersection Delay (sec /veh) | -- | -- | B | C | B | C | |
| 8) E. Jewell Avenue/Street A | TWSC | | | | | | |
| NB Left | -- | -- | -- | -- | F | F | |
| NB Through | -- | -- | -- | -- | E | F | |
| NB Right | -- | -- | -- | -- | A | A | |
| EB Left | -- | -- | A | A | A | A | |
| WB Left | -- | -- | -- | -- | A | C | |
| SB Left | -- | -- | B | B | E | F | |
| SB Through | -- | -- | -- | -- | E | F | |
| SB Right | -- | -- | A | A | A | A | |
| Critical Movement Delay | -- | -- | 10.7 | 11.9 | >240 | >240 | |
| | Signalized | | | | | | |
| EB Left | -- | -- | -- | -- | A | B | |
| EB Through | -- | -- | -- | -- | B | C | |
| EB Right | -- | -- | -- | -- | A | A | |
| WB Left | -- | -- | -- | -- | A | B | |
| WB Through/Right | -- | -- | -- | -- | A | B | |
| NB Left | -- | -- | -- | -- | E | D | |
| NB Through | -- | -- | -- | -- | D | C | |
| NB Right | -- | -- | -- | -- | A | A | |
| SB Left | -- | -- | -- | -- | D | C | |
| SB Through | -- | -- | -- | -- | D | D | |
| SB Right | -- | -- | -- | -- | A | A | |
| Entire Intersection LOS | -- | -- | -- | -- | 21.6 | 18.9 | |
| Entire Intersection Delay (sec /veh) | -- | -- | -- | -- | C | B | |

Table 1 (Page 3 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|--|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 9) E. Jewell Avenue/N. Hayesmount Road | TWSC | | | | | | |
| NB Left | -- | -- | | A | B | F | F |
| NB Through/Right | -- | -- | | B | B | -- | -- |
| NB Through | -- | -- | | -- | -- | F | F |
| NB Right | -- | -- | | -- | -- | A | A |
| EB Left | -- | -- | | A | A | A | A |
| WB Left | -- | -- | | A | A | A | B |
| SB Left | -- | -- | | B | B | F | F |
| SB Through | -- | -- | | B | B | E | F |
| SB Right | -- | -- | | A | A | A | A |
| Critical Movement Delay | -- | -- | | 11.3 | 12.9 | 232.6 | >240 |
| Signalized | | | | | | | |
| EB Left | -- | -- | | -- | -- | A | A |
| EB Through | -- | -- | | -- | -- | B | A |
| EB Right | -- | -- | | -- | -- | A | A |
| WB Left | -- | -- | | -- | -- | A | A |
| WB Through | -- | -- | | -- | -- | B | B |
| WB Right | -- | -- | | -- | -- | A | A |
| NB Left | -- | -- | | -- | -- | C | C |
| NB Through | -- | -- | | -- | -- | D | D |
| NB Right | -- | -- | | -- | -- | A | A |
| SB Left | -- | -- | | -- | -- | C | C |
| SB Through | -- | -- | | -- | -- | D | D |
| SB Right | -- | -- | | -- | -- | A | A |
| Entire Intersection LOS | -- | -- | | -- | -- | 15.2 | 14.0 |
| Entire Intersection Delay (sec /veh) | -- | -- | | -- | -- | B | B |
| 10) E. Jewell Avenue/Lanewood Street | TWSC | | | | | | |
| NB Left | -- | -- | | -- | -- | E | F |
| NB Through/Right | -- | -- | | -- | -- | B | B |
| EB Left | -- | -- | | A | A | A | A |
| WB Left | -- | -- | | -- | -- | A | A |
| SB Left | -- | -- | | A | A | C | D |
| SB Through | -- | -- | | -- | -- | C | E |
| SB Right | -- | -- | | A | A | A | A |
| Critical Movement Delay | -- | -- | | 9.9 | 9.9 | 37.7 | 122.9 |
| Signalized | | | | | | | |
| EB Left | -- | -- | | -- | -- | B | B |
| EB Through | -- | -- | | -- | -- | B | B |
| EB Right | -- | -- | | -- | -- | A | A |
| WB Left | -- | -- | | -- | -- | A | A |
| WB Through | -- | -- | | -- | -- | B | B |
| WB Right | -- | -- | | -- | -- | A | A |
| NB Left | -- | -- | | -- | -- | D | D |
| NB Through/Right | -- | -- | | -- | -- | B | B |
| SB Left | -- | -- | | -- | -- | C | C |
| SB Through | -- | -- | | -- | -- | D | D |
| SB Right | -- | -- | | -- | -- | A | A |
| Entire Intersection LOS | -- | -- | | -- | -- | 17.7 | 14.3 |
| Entire Intersection Delay (sec /veh) | -- | -- | | -- | -- | B | B |

Table 1 (Page 4 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|--|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 11) <u>E. Jewell Avenue/PA-15 Access</u> | TWSC | | | | | | |
| EB Left | | -- | -- | -- | -- | A | A |
| SB Approach | | -- | -- | -- | -- | B | B |
| Critical Movement Delay | | -- | -- | -- | -- | 10.5 | 10.5 |
| 12) <u>E. Jewell Avenue/Hudson Road</u> | TWSC | | | | | | |
| NB Left | | -- | -- | A | B | C | C |
| NB Through/Right | | -- | -- | B | B | B | C |
| EB Left | | -- | -- | A | A | A | A |
| WB Left | | -- | -- | A | A | A | A |
| SB Left | | -- | -- | B | B | C | C |
| SB Through | | -- | -- | B | B | C | C |
| SB Right | | | | A | A | A | A |
| Critical Movement Delay | | -- | -- | 10.6 | 11.4 | 16.8 | 20.9 |
| 13) <u>E. Jewell Avenue/Watkins Road</u> | TWSC | | | | | | |
| NB Left | | -- | -- | A | B | A | B |
| NB Left/Through | | A | A | -- | -- | -- | -- |
| EB Approach | | B | A | -- | -- | -- | -- |
| EB Left | | -- | -- | C | F | F | F |
| EB Through/Right | | -- | -- | B | C | B | C |
| WB Left | | -- | -- | C | C | C | D |
| WB Through/Right | | -- | -- | C | D | C | D |
| SB Left | | -- | -- | B | B | B | B |
| Critical Movement Delay | | 10.1 | 9.9 | 22.6 | 75.2 | 72.2 | >240 |
| Signalized | | | | | | | |
| EB Left | | -- | -- | -- | -- | B | C |
| EB Through/Right | | -- | -- | -- | -- | B | B |
| WB Left | | -- | -- | -- | -- | B | B |
| WB Through/Right | | -- | -- | -- | -- | B | B |
| NB Left | | -- | -- | -- | -- | C | C |
| NB Through | | -- | -- | -- | -- | D | C |
| NB Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | C | C |
| SB Through | | -- | -- | -- | -- | D | D |
| SB Right | | -- | -- | -- | -- | A | A |
| Entire Intersection LOS | | -- | -- | -- | -- | 31.2 | 29.3 |
| Entire Intersection Delay (sec /veh) | | -- | -- | -- | -- | C | C |

Table 1 (Page 5 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|--|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 14) <u>Monaghan Road/PA-79 Access</u> | TWSC | | | | | | |
| WB Left | | -- | -- | -- | -- | C | F |
| WB Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 15.5 | 52.2 |
| | Signalized | | | | | | |
| WB Left | | -- | -- | -- | -- | D | D |
| WB Right | | -- | -- | -- | -- | A | A |
| NB Through | | -- | -- | -- | -- | A | A |
| NB Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | A | A |
| SB Through | | -- | -- | -- | -- | A | A |
| Entire Intersection LOS | | -- | -- | -- | -- | 4.2 | 6.3 |
| Entire Intersection Delay (sec /veh) | | -- | -- | -- | -- | A | A |
| 15) <u>Monaghan Road/E. Iliff Avenue</u> | TWSC | | | | | | |
| NB Left | | -- | -- | -- | -- | A | A |
| EB Left | | -- | -- | -- | -- | B | C |
| EB Through/Right | | -- | -- | -- | -- | B | B |
| WB Left | | -- | -- | -- | -- | B | C |
| WB Through/Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 12.5 | 21.5 |
| 16) <u>E. Iliff Avenue/Street A</u> | TWSC | | | | | | |
| NB Left | | -- | -- | -- | -- | A | A |
| EB Left | | -- | -- | -- | -- | B | C |
| EB Through/Right | | -- | -- | -- | -- | B | C |
| WB Left | | -- | -- | -- | -- | B | C |
| WB Through/Right | | -- | -- | -- | -- | B | B |
| SB Left | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 14.2 | 19.3 |
| 17) <u>E. Iliff Avenue/Hayesmount Road</u> | TWSC | | | | | | |
| NB Left | | -- | -- | -- | -- | A | A |
| EB Left | | -- | -- | -- | -- | B | B |
| EB Through/Right | | -- | -- | -- | -- | B | B |
| WB Left | | -- | -- | -- | -- | B | B |
| WB Through/Right | | -- | -- | -- | -- | B | B |
| SB Left | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 12.2 | 14.4 |

Table 1 (Page 6 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|--|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 18) <u>E. Iliff Avenue/Lanewood Street</u> | TWSC | | | | | | |
| NB Left | | -- | -- | -- | -- | A | A |
| EB Left | | -- | -- | -- | -- | B | B |
| EB Through/Right | | -- | -- | -- | -- | A | B |
| WB Left | | -- | -- | -- | -- | A | B |
| WB Through/Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 10.5 | 11.8 |
| 19) <u>E. Iliff Avenue/Hudson Road</u> | TWSC | | | | | | |
| NB Left | | -- | -- | -- | -- | A | A |
| EB Left | | -- | -- | -- | -- | A | A |
| EB Right | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 9.3 | 9.4 |
| 20) <u>E. Monaghan Road/PA-4 Access</u> | TWSC | | | | | | |
| NB Left | | -- | -- | -- | -- | A | A |
| EB Approach | | -- | -- | -- | -- | A | B |
| Critical Movement Delay | | -- | -- | -- | -- | 9.8 | 10.9 |
| 21) <u>Powhaton Road/E. Yale Avenue</u> | TWSC | | | | | | |
| EB Left | | -- | -- | A | A | A | A |
| SB Left | | -- | -- | A | A | B | B |
| SB Right | | -- | -- | A | A | A | A |
| Critical Movement Delay | | -- | -- | 9.9 | 9.6 | 10.4 | 10.2 |
| 22) <u>Monaghan Road/E. Yale Avenue</u> | TWSC | | | | | | |
| NB Left | | -- | -- | A | A | A | A |
| EB Left | | -- | -- | A | B | B | C |
| EB Through | | -- | -- | B | B | B | C |
| EB Right | | -- | -- | A | A | B | C |
| WB Left | | -- | -- | B | B | C | E |
| WB Through | | -- | -- | B | B | B | C |
| WB Right | | -- | -- | -- | -- | B | B |
| SB Left | | -- | -- | A | A | A | A |
| Critical Movement Delay | | -- | -- | 11.1 | 12.6 | 17.5 | 35.3 |
| | Signalized | | | | | | |
| EB Left | | -- | -- | -- | -- | A | B |
| EB Through | | -- | -- | -- | -- | B | B |
| EB Right | | -- | -- | -- | -- | A | A |
| WB Left | | -- | -- | -- | -- | B | B |
| WB Through | | -- | -- | -- | -- | B | B |
| WB Right | | -- | -- | -- | -- | A | A |
| NB Left | | -- | -- | -- | -- | B | A |
| NB Through | | -- | -- | -- | -- | B | B |
| NB Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | B | A |
| SB Through | | -- | -- | -- | -- | B | B |
| SB Right | | -- | -- | -- | -- | A | A |
| Entire Intersection LOS | | -- | -- | -- | -- | 10.8 | 11.2 |
| Entire Intersection Delay (sec /veh) | | -- | -- | -- | -- | B | B |

Table 1 (Page 7 of 7)
Intersection Levels of Service Analysis
Cottonwood Creek Master TIA
Aurora, CO
LSC #210410; June, 2021

| Intersection Location | Traffic Control | Existing Traffic | | 2041 Background | | 2041 Total | |
|---|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM | Level of Service AM | Level of Service PM |
| 23) <u>E. Yale Avenue/Street A</u> | TWSC | | | | | | |
| EB Left | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | B | C |
| SB Right | | -- | -- | -- | -- | A | A |
| Critical Movement Delay | | -- | -- | -- | -- | 12.6 | 15.0 |
| 24) <u>E. Yale Avenue/Hayesmount Road</u> | TWSC | | | | | | |
| EB Left | | -- | -- | A | A | A | A |
| SB Left | | -- | -- | B | A | B | B |
| SB Right | | -- | -- | A | A | A | A |
| Critical Movement Delay | | -- | -- | 10.2 | 9.9 | 11.9 | 12.8 |
| 25) <u>E. Yale Avenue/Hudson Road</u> | TWSC | | | | | | |
| EB Left | | -- | -- | A | A | A | A |
| SB Left | | -- | -- | A | A | B | B |
| SB Right | | -- | -- | A | A | A | A |
| Critical Movement Delay | | -- | -- | 9.9 | 9.9 | 11.1 | 11.6 |
| 26) <u>E. Yale Avenue/Watkins Road</u> | TWSC | | | | | | |
| NB Left | | -- | -- | A | B | A | B |
| EB Left | | -- | -- | C | E | C | F |
| EB Through/Right | | | | B | C | -- | -- |
| EB Through | | -- | -- | -- | -- | D | E |
| EB Right | | -- | -- | -- | -- | A | B |
| WB Left | | -- | -- | C | C | C | D |
| WB Through/Right | | -- | -- | C | D | C | E |
| SB Left | | -- | -- | B | A | B | A |
| Critical Movement Delay | | -- | -- | 20.7 | 35.3 | 26.3 | 92.0 |
| | Signalized | | | | | | |
| EB Left | | -- | -- | -- | -- | D | D |
| EB Through | | -- | -- | -- | -- | D | D |
| EB Right | | -- | -- | -- | -- | A | A |
| WB Left | | -- | -- | -- | -- | C | C |
| WB Through/Right | | -- | -- | -- | -- | D | D |
| NB Left | | -- | -- | -- | -- | A | A |
| NB Through/Right | | -- | -- | -- | -- | A | A |
| SB Left | | -- | -- | -- | -- | A | A |
| SB Through | | -- | -- | -- | -- | A | A |
| SB Right | | -- | -- | -- | -- | A | A |
| Entire Intersection LOS | | -- | -- | -- | -- | 8.2 | 8.4 |
| Entire Intersection Delay (sec /veh) | | -- | -- | -- | -- | A | A |

Table 2
Trip Generation Estimate
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Planning Area | Land Use Description | Trip Generation Units | Trip Generation Rates ⁽¹⁾ | | | | | | Total Trips Generated | | | | | |
|---------------|--------------------------------------|-----------------------|--------------------------------------|----------------------|-----------------------|------------------------|-------------------------|---|-----------------------|-----------------------|------------------------|-------------------------|--------------|--|
| | | | Average Weekday Traffic | Morning Peak Hour In | Morning Peak Hour Out | Afternoon Peak Hour In | Afternoon Peak Hour Out | Average Weekday Traffic | Morning Peak Hour In | Morning Peak Hour Out | Afternoon Peak Hour In | Afternoon Peak Hour Out | | |
| PA-1 | Single Family Housing ⁽²⁾ | 149 DU ⁽³⁾ | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,407 | 28 | 83 | 93 | 55 | | |
| PA-2 | Single Family Housing | 468 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 4,418 | 87 | 260 | 292 | 171 | | |
| PA-3 | Single Family Housing | 326 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 3,077 | 60 | 181 | 203 | 119 | | |
| PA-4 | Single Family Housing | 125 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,180 | 23 | 69 | 78 | 46 | | |
| PA-5 | Single Family Housing | 223 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 2,105 | 41 | 124 | 139 | 82 | | |
| PA-6 | Single Family Housing | 274 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 2,587 | 51 | 152 | 171 | 100 | | |
| PA-9 | Single Family Housing | 254 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 2,398 | 47 | 141 | 158 | 93 | | |
| PA-10 | Single Family Housing | 155 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,463 | 29 | 86 | 97 | 57 | | |
| PA-11 | Single Family Housing | 132 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,246 | 24 | 73 | 82 | 48 | | |
| PA-12 | Single Family Housing | 86 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 812 | 16 | 48 | 54 | 32 | | |
| PA-13 | Single Family Housing | 149 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,407 | 28 | 83 | 93 | 55 | | |
| PA-16 | Single Family Housing | 341 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 3,219 | 63 | 189 | 213 | 125 | | |
| PA-17 | Single Family Housing | 327 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 3,087 | 60 | 181 | 204 | 120 | | |
| PA-7 | Single Family Housing | 195 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,841 | 36 | 108 | 122 | 71 | | |
| PA-8 | Single Family Housing | 317 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 2,992 | 59 | 176 | 198 | 116 | | |
| PA-14 | Single Family Housing | 154 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,454 | 28 | 85 | 96 | 56 | | |
| PA-15 | Single Family Housing | 99 DU | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 935 | 18 | 55 | 62 | 36 | | |
| | | 3,774 DU | | | | | | Total Residential Trips | 35,628 | 698 | 2,094 | 2,355 | 1,382 | |
| PA-85 | Oil and Gas ⁽⁴⁾ | 14.9 Acres | 1.00 | 0.10 | 0.10 | 0.10 | 0.10 | 15 | 1 | 1 | 1 | 1 | | |
| PA-84 | Oil and Gas | 21.3 Acres | 1.00 | 0.10 | 0.10 | 0.10 | 0.10 | 21 | 2 | 2 | 2 | 2 | | |
| PA-49 | Oil and Gas | 45.6 Acres | 1.00 | 0.10 | 0.10 | 0.10 | 0.10 | 46 | 5 | 5 | 5 | 5 | | |
| | | 81.8 Acres | | | | | | Total Oil and Gas Trips | 82 | 8 | 8 | 8 | 8 | |
| PA-46 | Pocket Park ⁽⁵⁾ | 1.6 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-47 | Pocket Park | 1.3 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-48 | Pocket Park | 1.2 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-49 | Pocket Park | 0.8 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-50 | Pocket Park | 1.2 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-51 | Pocket Park | 1.5 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-52 | Pocket Park | 1.0 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-53 | Pocket Park | 1.5 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-54 | Pocket Park | 0.7 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-55 | Pocket Park | 1.0 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 1 | 0 | 0 | 0 | 0 | | |
| PA-56 | Neighborhood Park ⁽⁵⁾ | 9.9 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 8 | 0 | 0 | 1 | 0 | | |
| PA-57 | Neighborhood Park | 10.8 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 8 | 0 | 0 | 1 | 1 | | |
| PA-58 | Neighborhood Park | 5.2 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 4 | 0 | 0 | 0 | 0 | | |
| PA-59 | Neighborhood Park | 4.2 Acres | 0.78 | 0.01 | 0.01 | 0.06 | 0.05 | 3 | 0 | 0 | 0 | 0 | | |
| | | 41.9 Acres | | | | | | Total Park Trips | 33 | 0 | 0 | 2 | 1 | |
| PA-76 | Community Center ⁽⁶⁾ | 50 KSF ⁽⁷⁾ | 28.82 | 1.16 | 0.60 | 1.09 | 1.22 | 1,441 | 58 | 30 | 54 | 61 | | |
| PA-77 | School ⁽⁸⁾ | 500 Students | 1.89 | 0.36 | 0.31 | 0.08 | 0.09 | 945 | 181 | 154 | 41 | 44 | | |
| PA-78 | School ⁽⁸⁾ | 500 Students | 1.89 | 0.36 | 0.31 | 0.08 | 0.09 | 945 | 181 | 154 | 41 | 44 | | |
| | | 1,000 Acres | | | | | | Total School Trips | 1,890 | 362 | 308 | 82 | 88 | |
| PA-79 | Commercial ⁽⁹⁾ | 160 KSF | 51.73 | 0.90 | 0.55 | 2.31 | 2.50 | 8,276 | 144 | 88 | 369 | 400 | | |
| | | | | | | | | Grand Total | 47,350 | 1,270 | 2,528 | 2,870 | 1,940 | |
| | | | | | | | | Internal Trips⁽¹⁰⁾ | 4,930 | 330 | 330 | 218 | 218 | |
| | | | | | | | | New External Trips (Total Trips - Internal Trips) | 42,420 | 940 | 2,198 | 2,652 | 1,722 | |
| | | | | | | | | Pass-By Trips⁽¹¹⁾ | 2,814 | 39 | 39 | 131 | 131 | |
| | | | | | | | | Primary Trips (New External Trips = Total Trips - Internal Trips - Passby Trips) | 39,606 | 901 | 2,159 | 2,521 | 1,591 | |

Notes:

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

(2) ITE Land Use No. 210 - Single-Family Detached Housing

(3) DU = dwelling unit

(4) Future Oil and Gas use rates were estimated by LSC

(5) ITE Land Use No. 411 -Public Park

(6) ITE Land Use No. 495 - Recreational Community Center - average rates used; assumes a FAR of 20%

(7) KSF = 1,000 square feet of floor space

(8) ITE Land Use No. 520 - Elementary School

(9) ITE Land Use No. 820 - Shopping Center - formula rates used; assumes a FAR of 20%

(10) Internal trips were estimated by LSC. See Appendix Table 1 for internal trip reduction assumptions by land use

(11) 34% of the external retail trips were assumed to be pass-by trips based on the percentages shown for Land Use No. 820 - Shopping Center in Table E.9 of the *Trip Generation Handbook - An ITE Proposed Recommended Practice, Third Edition 2017* by ITE

Source: LSC Transportation Consultants, Inc.

Table 3 (Page 1 of 3)
95th Percentile Queue Lengths
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Intersection No. & Location | Assumed Posted Speed Limit (mph) | Turn Lane Lengths Proposed ⁽¹⁾ (feet) | 2041 Total | |
|--------------------------------------|--|--|-------------------|-------------------|
| | | | AM Peak (feet) | PM Peak (feet) |
| 6) E. Jewell Avenue/E. Powhaton Road | | | | |
| EB Left | 45 | 525 | 199 | 190 |
| EB Through | 45 | --- | 177 | 769 |
| EB Right | 45 | 273 | 0 | 0 |
| WB Left | 45 | 370 | m40 | m48 |
| WB Through | 45 | --- | 769 | 228 |
| WB Right | 45 | 273 | 0 | m0 |
| NB Left | 45 | 310 | 46 | 32 |
| NB Through | 45 | --- | 200 | 131 |
| NB Right | 45 | 273 | 0 | 0 |
| SB Left | 45 | 515 | 84 | 249 |
| SB Through | 45 | --- | 72 | 209 |
| SB Right | 45 | 273 | 0 | 0 |
| 7) E. Jewell Avenue/Monaghan Road | | | | |
| EB Left | 45 | 1 @ 250; 1 @ 530 | 105 | m319 |
| EB Through | 45 | --- | 45 | 178 |
| EB Right | 45 | 273 | 0 | m0 |
| WB Left | 45 | 410 | m58 | 117 |
| WB Through | 45 | --- | m443 | 284 |
| WB Right | 45 | 273 | m0 | 0 |
| NB Left | 45 | 515 | 186 | 219 |
| NB Through | 45 | --- | 70 | 95 |
| NB Right | 45 | 273 | 0 | 0 |
| SB Left | 45 | 1 @ 165; 1 @ 435 | 75 | 183 |
| SB Through | 45 | --- | 56 | 132 |
| SB Right | 45 | 273 | 0 | 0 |
| 8) E. Jewell Avenue/Monaghan Road | | | | |
| EB Left | 45 | 355 | 20 | m60 |
| EB Through | 45 | --- | 69 | 257 |
| EB Right | 45 | 273 | 11 | 118 |
| WB Left | 45 | 390 | 63 | 86 |
| WB Through/Right | 45 | --- | 360 | 176 |
| NB Left | 35 | 1 @ 235; 1 @ 425 | 285 | 163 |
| NB Through | 35 | --- | 39 | 30 |
| NB Right | 35 | 190 | 0 | 0 |
| SB Left | 35 | 200 | 19 | 12 |
| SB Through | 35 | --- | 21 | 54 |
| SB Right | 35 | 190 | 0 | 0 |

Notes:

m = metered by adjacent signals

(1) Consistent with Recommended Improvements shown in Table 14

Table 3 (Page 2 of 3)
95th Percentile Queue Lengths
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Intersection No. & Location | Assumed Posted Speed Limit (mph) | Turn Lane Lengths Proposed ⁽¹⁾ (feet) | 2041 Total | |
|--|--|--|-------------------|-------------------|
| | | | AM Peak (feet) | PM Peak (feet) |
| 9) E. Jewell Avenue/N. Hayesmount Road | | | | |
| EB Left | 45 | 395 | 15 | 6 |
| EB Through | 45 | --- | 83 | 150 |
| EB Right | 45 | 273 | 0 | 8 |
| WB Left | 45 | 325 | m14 | 27 |
| WB Through | 45 | --- | 204 | 156 |
| WB Right | 45 | 273 | m3 | 2 |
| NB Left | 35 | 280 | 96 | 72 |
| NB Through | 35 | --- | 143 | 102 |
| NB Right | 35 | 190 | 0 | 0 |
| SB Left | 35 | 260 | 28 | 76 |
| SB Through | 35 | --- | 58 | 169 |
| SB Right | 35 | 190 | 0 | 0 |
| 10) E. Jewell Avenue/Lanewood Street | | | | |
| EB Left | 45 | 405 | 43 | 79 |
| EB Through | 45 | --- | 64 | 114 |
| EB Right | 45 | 273 | 13 | 64 |
| WB Left | 45 | 325 | 11 | 26 |
| WB Through | 45 | --- | 127 | 107 |
| WB Right | 45 | 273 | 0 | 0 |
| NB Left | 35 | 415 | 228 | 160 |
| NB Through/Right | 35 | --- | 45 | 26 |
| SB Left | 35 | 200 | 14 | 14 |
| SB Through | 35 | --- | 17 | 13 |
| SB Right | 35 | 190 | 0 | 0 |
| 13) E. Jewell Avenue/Watkins Road | | | | |
| EB Left | 45 | 535 | 165 | 170 |
| EB Through/Right | 45 | --- | 20 | 31 |
| WB Left | 45 | 280 | 6 | 5 |
| WB Through/Right | 45 | --- | 29 | 22 |
| NB Left | 55 | 425 | 43 | 41 |
| NB Through | 55 | --- | 145 | 104 |
| NB Right | 55 | 378 | m0 | m0 |
| SB Left | 55 | 395 | 12 | 22 |
| SB Through | 55 | --- | 84 | 245 |
| SB Right | 55 | 378 | 0 | 0 |

Notes:

m = metered by adjacent signals

(1) Consistent with Recommended Improvements shown in Table 14

Table 3 (Page 3 of 3)
95th Percentile Queue Lengths
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Intersection No. & Location | Assumed Posted Speed Limit (mph) | 2041 Turn Lane Lengths | | 2041 Total | |
|---|--|-----------------------------------|-------------------|-------------------|--|
| | | Proposed ⁽¹⁾ (feet) | AM Peak (feet) | PM Peak (feet) | |
| 14) <u>Monaghan Road/PA-79 Access</u> | | | | | |
| WB Left | 35 | 280 | 29 | 120 | |
| WB Right | 35 | --- | 0 | 0 | |
| NB Through | 45 | --- | 64 | 55 | |
| NB Right | 45 | 273 | 10 | 18 | |
| SB Left | 45 | 570 | 47 | 37 | |
| SB Through | 45 | --- | 27 | 20 | |
| 22) <u>Monaghan Road/E. Yale Avenue</u> | | | | | |
| EB Left | 45 | 305 | 19 | 18 | |
| EB Through | 45 | --- | 18 | 27 | |
| EB Right | 45 | 273 | 13 | 0 | |
| WB Left | 45 | 535 | 132 | 72 | |
| WB Through | 45 | --- | 26 | 21 | |
| WB Right | 45 | 273 | 4 | 1 | |
| NB Left | 45 | 340 | 13 | 29 | |
| NB Through | 45 | --- | 29 | 45 | |
| NB Right | 45 | 273 | 29 | 50 | |
| SB Left | 45 | 330 | 13 | 27 | |
| SB Through | 45 | --- | 34 | 42 | |
| SB Right | 45 | 273 | 0 | 2 | |
| 26) <u>E. Yale Avenue/Watkins Road</u> | | | | | |
| EB Left | 45 | 375 | 55 | 117 | |
| EB Through | 45 | --- | 47 | 53 | |
| EB Right | 45 | 273 | 1 | 39 | |
| WB Left | 45 | 280 | 10 | 8 | |
| WB Through/Right | 45 | --- | 50 | 61 | |
| NB Left | 55 | 455 | 36 | 38 | |
| NB Through/Right | 55 | --- | 121 | 67 | |
| SB Left | 55 | 395 | 1 | m1 | |
| SB Through | 55 | --- | 5 | 12 | |
| SB Right | 55 | 378 | 6 | 0 | |

Notes:

m = metered by adjacent signals

(1) Consistent with Recommended Improvements shown in Table 14.

Table 4
 Intersection #6 - E. Jewell Avenue/Powhaton Road
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | | |
|---------------------------------|------|-----|---|------------------------|------------------------|-------|------------------------|-------|-------|-----|------------------------|-------------------------------------|--|-------------|-------------------------------------|--|-------------|-----|-----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | |
| | | | Warrant Thresholds | | | | Warrant Threshold Met? | | | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | | |
| | | | Condition A (70%) | Condition B (70%) | Major | Minor | Major | Minor | A | B | | | Minor 1 Leg | Minor 2 Leg | | Minor 1 Leg | Minor 2 Leg | | |
| 2041 Background Traffic | | | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | A | B | Yes | Yes | Yes | Yes | Yes | |
| AM Peak | 1306 | 253 | 410 | 420 | 140 | 630 | 70 | 70 | Yes | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | 100 | |
| PM Peak | 1573 | 295 | 526 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | 100 | |
| 2041 Total Traffic | | | AM Peak | 2380 | 322 | 424 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | 100 |
| PM Peak | 2931 | 305 | 806 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | 100 | |

Notes:

(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph

(2) The major street traffic includes all movements (left, through, and right)

(3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 5
 Intersection #7 - E. Jewell Avenue/Monaghan Road
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | | |
|---------------------------------|------|-----|---|------------------------|------------------------|-------|------------------------|-------|-------|-----|--|-------------------------------------|------------------------|-----|--|------------------------|-----|-----|-----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | | |
| | | | Warrant Thresholds | | | | Warrant Threshold Met? | | | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | | |
| | | | Condition A (70%) | Condition B (70%) | Major | Minor | Major | Minor | A | B | | | No | Yes | No | Yes | No | | |
| 2041 Background Traffic | | | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | A | B | Yes | Yes | 230 | No | 370 | |
| AM Peak | 541 | 98 | 245 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | No | Yes | Yes | Yes | 80 | No | 145 | |
| PM Peak | 1008 | 68 | 171 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | No | Yes | Yes | Yes | 80 | No | Yes | |
| 2041 Total Traffic | | | AM Peak | 1898 | 372 | 424 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | Yes | Yes | Yes | 80 | Yes | 100 |
| PM Peak | 2662 | 475 | 704 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | |

Notes:

(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph

(2) The major street traffic includes all movements (left, through, and right)

(3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 6
 Intersection #8 - E. Jewell Avenue/Street A
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | | |
|---------------------------------|----------------------|------------------------|---|-------------------|-------|-------|------------------------|-------|----|----|------------------------|-------------------------------------|--|-----|-------------------------------------|--|-------------|----|-----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | |
| | | | Warrant Thresholds | | | | Warrant Threshold Met? | | | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | | |
| | | | Condition A (70%) | Condition B (70%) | Major | Minor | Major | Minor | A | B | | | No | No | No | Minor 1 Leg | Minor 2 Leg | | |
| 2041 Background Traffic | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | A | B | No | No | No | Low Vol | No | No | | |
| AM Peak | 306 | 0 | 48 | 420 | 140 | 630 | 70 | No | No | No | No | No | No | 285 | No | No | Low Vol | No | |
| PM Peak | 438 | 0 | 30 | 420 | 140 | 630 | 70 | No | No | No | No | No | No | No | No | No | No | No | |
| 2041 Total Traffic | AM Peak | 1348 | 56 | 484 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | 80 | No | Yes | 100 | No | Yes |
| | PM Peak | 2123 | 60 | 353 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | 80 | No | Yes | 100 | No | Yes |

Notes:

(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph

(2) The major street traffic includes all movements (left, through, and right)

(3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 7
 Intersection #9 - E. Jewell Avenue/Hayesmount Road
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | |
|---------------------------------|----------------------|------------------------|---|-------------------|-------|-------|------------------------|-------|-----|-----|--|-------------------------------------|------------------------|-----|--|------------------------|-------------|-----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | |
| | | | Warrant Thresholds | | | | Warrant Threshold Met? | | | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | |
| | | | Condition A (70%) | Condition B (70%) | Major | Minor | Major | Minor | A | B | | | No | No | No | Minor 1 Leg | Minor 2 Leg | |
| 2041 Background Traffic | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | A | B | No | No | No | Low Vol Low Vol | No | No | |
| AM Peak | 256 | 41 | 55 | 420 | 140 | 630 | 70 | No | No | No | No | No | No | No | Low Vol Low Vol | No | No | |
| PM Peak | 337 | 28 | 103 | 420 | 140 | 630 | 70 | No | No | No | No | No | No | No | Low Vol Low Vol | No | No | |
| 2041 Total Traffic | AM Peak | 1165 | 107 | 243 | 420 | 140 | 630 | 70 | No | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | 120 |
| | PM Peak | 1544 | 165 | 270 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | Yes | Yes | Yes | 80 | Yes | Yes | 100 |

Notes:

- (1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph
- (2) The major street traffic includes all movements (left, through, and right)
- (3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 8
 Intersection #10 - E. Jewell Avenue/Lanewood Street
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | |
|---------------------------------|----------------------|------------------------|---|-------------------|-------|-------|------------------------|-------|----|-----|--|-------------------------------------|------------------------|-----|--|------------------------|-------------|-----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | |
| | | | Warrant Thresholds | | | | Warrant Threshold Met? | | | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | |
| | | | Condition A (70%) | Condition B (70%) | Major | Minor | Major | Minor | A | B | | | No | No | No | Minor 1 Leg | Minor 2 Leg | |
| 2041 Background Traffic | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | A | B | No | No | No | Low Vol Low Vol | No | No | |
| AM Peak | 240 | 0 | 8 | 420 | 140 | 630 | 70 | No | No | No | No | No | No | No | Low Vol Low Vol | No | No | |
| PM Peak | 302 | 0 | 8 | 420 | 140 | 630 | 70 | No | No | No | No | No | No | No | Low Vol Low Vol | No | No | |
| 2041 Total Traffic | AM Peak | 804 | 77 | 254 | 420 | 140 | 630 | 70 | No | Yes | Yes | Yes | Yes | 110 | No | Yes | 220 | No |
| | PM Peak | 1226 | 54 | 169 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | 80 | No | Yes | 100 | Yes |

Notes:

- (1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph
- (2) The major street traffic includes all movements (left, through, and right)
- (3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 9
Intersection #13 - E. Jewell Avenue/Watkins Road
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | |
|---------------------------------|----------------------|------------------------|---|-------------------|-------|-------|------------------------|-------|----|----|--|-------------------------------------|------------------------|-----|--|------------------------|-------------|--|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | |
| | | | Warrant Thresholds | | | | Warrant Threshold Met? | | | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | |
| | | | Condition A (70%) | Condition B (70%) | Major | Minor | Major | Minor | A | B | | | No | Yes | | Minor 1 Leg | Minor 2 Leg | |
| 2041 Background Traffic | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | A | B | No | No | No | 80 | No | 145 | |
| AM Peak | 1019 | 28 | 55 | 420 | 140 | 630 | 70 | No | No | No | No | No | Yes | Yes | 80 | No | 100 | |
| PM Peak | 1246 | 17 | 170 | 420 | 140 | 630 | 70 | No | No | No | No | Yes | Yes | Yes | 80 | Yes | No | |
| 2041 Total Traffic | AM Peak | 1079 | 28 | 271 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | Yes | 80 | No | 145 | |
| | PM Peak | 1395 | 17 | 328 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | Yes | 80 | No | 100 | |

Notes:

- (1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph
- (2) The major street traffic includes all movements (left, through, and right)
- (3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 10
 Intersection #14 - PA-79 Access/Monaghan Road
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | |
|---------------------------------|----------------------|---|-------|------------------------|-------|------------------------|-----|-----------------------|-----------------------|---------------------------------------|-----------------------|---------------------------------------|--|
| Traffic Volume (vph) | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume | | Warrant 3: Peak Hour Vehicular Volume | |
| | | Warrant Thresholds | | Warrant Threshold Met? | | 56% Combined Condition | | 70% Warrant Threshold | 70% Warrant Threshold | 70% Warrant Threshold | 70% Warrant Threshold | 70% Warrant Threshold | |
| Major ⁽²⁾ | Minor ⁽³⁾ | Major | Minor | Major | Minor | A | B | Minor | Minor Leg | Minor | Minor Leg | Minor Leg | |
| 2041 Total Traffic | | | | | | | | | | | | | |
| AM Peak | 606 | 51 | 420 | 140 | 630 | 70 | No | No | No | 175 | No | 315 | |
| PM Peak | 968 | 244 | 420 | 140 | 630 | 70 | Yes | Yes | Yes | 80 | Yes | 180 | |

Notes:

(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph

(2) The major street traffic includes all movements (left, through, and right)

(3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 11
 Intersection #22 - E. Yale Avenue/Monaghan Road
 Cottonwood Creek
 Aurora, CO
 LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | |
|---------------------------------|-----|-----|---|------------------------|------------------------|-------|-------------------|-------|------------------------|-----|--|-------------------------------------|------------------------|--|-------------------------------------|------------------------|----|----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | | |
| | | | Warrant Thresholds | | Condition A (70%) | | Condition B (70%) | | Warrant Threshold Met? | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | |
| | | | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | | Minor 1 Leg | Minor 2 Leg | Minor 1 Leg | Minor 2 Leg | | |
| 2031 Background Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| PM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| 2031 Total Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| PM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| 2041 Background Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 238 | 50 | 85 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| PM Peak | 369 | 53 | 103 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| 2041 Total Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 463 | 108 | 152 | 420 | 140 | 630 | 70 | No | No | Yes | No | No | 285 | No | No | Low Vol | No | No |
| PM Peak | 753 | 120 | 234 | 420 | 140 | 630 | 70 | No | Yes | Yes | Yes | Yes | 140 | No | Yes | 265 | No | No |

Notes:

(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph

(2) The major street traffic includes all movements (left, through, and right)

(3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 12
Intersection #26 - E. Yale Avenue/Watkins Road
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Warrant Analysis ⁽¹⁾ | | | | | | | | | | | | | | | | | | |
|---------------------------------|------|----|---|------------------------|------------------------|-------|-------------------|-------|------------------------|-----|--|-------------------------------------|------------------------|--|-------------------------------------|------------------------|----|-----|
| Traffic Volume (vph) | | | Warrant 1: Eight Hour Vehicular Volume Evaluation | | | | | | | | Warrant 2: Four Hour Vehicular Volume Evaluation | | | Warrant 3: Peak Hour Vehicular Volume Evaluation | | | | |
| | | | Warrant Thresholds | | Condition A (70%) | | Condition B (70%) | | Warrant Threshold Met? | | 56% Combined Condition | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | 70% Warrant Threshold Minor Minimum | Warrant Threshold Met? | | |
| | | | Major ⁽²⁾ | Minor 1 ⁽³⁾ | Minor 2 ⁽³⁾ | Major | Minor | Major | Minor | A | B | | Minor 1 Leg | Minor 2 Leg | Minor 1 Leg | Minor 2 Leg | | |
| 2031 Background Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| PM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| 2031 Total Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| PM Peak | 0 | 0 | 0 | 420 | 140 | 630 | 70 | No | No | No | No | No | Low Vol | No | No | Low Vol | No | No |
| 2041 Background Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 1001 | 23 | 44 | 420 | 140 | 630 | 70 | No | No | No | No | No | 80 | No | No | 145 | No | No |
| PM Peak | 1189 | 15 | 143 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | 80 | No | Yes | 120 | No | Yes |
| 2041 Total Traffic | | | | | | | | | | | | | | | | | | |
| AM Peak | 1032 | 32 | 93 | 420 | 140 | 630 | 70 | No | No | No | Yes | No | 80 | No | Yes | 145 | No | No |
| PM Peak | 1549 | 15 | 303 | 420 | 140 | 630 | 70 | No | No | Yes | Yes | Yes | 80 | No | Yes | 100 | No | Yes |

Notes:

(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor applied for a posted speed limit above 40 mph

(2) The major street traffic includes all movements (left, through, and right)

(3) The minor street traffic includes left, through, and half of right-turn volumes from the minor street

Source: LSC Transportation Consultants, Inc.

Table 13
Traffic Signal Warrant Summary
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Intersection No. & Location | Scenario Where Traffic Signal Warrant(s) Are Projected To Be Met |
|--------------------------------------|--|
| 6) E. Jewell Avenue/Powhaton Road | 2041 Background |
| 7) E. Jewell Avenue/Monaghan Road | 2041 Background |
| 8) E. Jewell Avenue/"Street A" | 2041 Total |
| 9) E. Jewell Avenue/Hayesmount Road | 2041 Total |
| 10) E. Jewell Avenue/Lanewood Street | 2041 Total |
| 13) E. Jewell Avenue/Watkins Road | 2041 Background (Marginal) |
| 14) PA-79 Access/Monaghan Road | 2041 Total (Marginal) |
| 22) E. Yale Avenue/Monaghan Road | 2041 Total (Marginal) |
| 26) E. Yale Avenue/Watkins Road | 2041 Total |

Table 14 (Page 1 of 6)
Recommended Improvements to Public Street Network
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Intersection No. | Intersection Location | Classification | Recommended Improvements ⁽¹⁾ | Responsibility |
|---------------------|---|---|---|------------------|
| | | | | |
| #1 | E. Mississippi Avenue/ Lanewood Street | 3-Lane Collector/ 3-Lane Collector | EB RT Decel - construct lane - 1 @ 190 feet and a 120-foot transition taper | Applicant/Others |
| | | | WB LT Decel - construct lane - 1 @ 220 feet and a 120-foot transition taper | Applicant/Others |
| | | | NB LT Decel - construct lane - 1 @ 300 feet and a 120-foot transition taper | Applicant/Others |
| #2 | E. Mississippi Avenue/ Hudson Road | 3-Lane Collector/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 230 feet and a 120-foot transition taper | Applicant/Others |
| | | | NB LT Decel - construct lane - 1 @ 300 feet and a 120-foot transition taper | Applicant/Others |
| | | | SB RT Decel - construct lane - 1 @ 190 feet and a 120-foot transition taper | Others |
| #3 | Florida Avenue/ Lanewood Street | 3-Lane Collector/ 3-Lane Collector | WB LT Decel - construct lane - 1 @ 310 feet and a 120-foot transition taper | Applicant |
| | | | NB RT Decel - construct lane - 1 @ 190 feet and a 120-foot transition taper | Applicant |
| | | | SB LT Decel - construct lane - 1 @ 310 feet and a 120-foot transition taper | Applicant |
| #4 | Florida Avenue/ Hudson Road | 3-Lane Collector/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 200 feet and a 120-foot transition taper | Applicant |
| | | | NB LT Decel - construct lane - 1 @ 220 feet and a 120-foot transition taper | Applicant |
| #5 | PA-15 Access/ Lanewood Street | Local/3-Lane Collector | SB LT Decel - construct lane - 1 @ 205 feet and a 120-foot transition taper | Applicant |
| #6 | E. Jewell Avenue/ Powhaton Road | 4-Lane Major Arterial/ 4-Lane Major Arterial | EB LT Decel - construct lane - 1 @ 525 feet and a 162-foot transition taper | Others |
| | | | EB RT Decel - construct lane - 1 @ 273 feet and a 162-foot transition taper | Others |
| | | | WB LT Decel - construct lane - 1 @ 370 feet and a 162-foot transition taper | Others |
| | | | WB RT Decel - construct lane - 1 @ 273 feet and a 162-foot transition taper | Others |
| | | | WB To NB RT Accel - construct lane - 1 @ 388 feet and a 162-foot transition taper | Others |
| | | | NB LT Decel - construct lane - 1 @ 310 feet and a 162-foot transition taper | Others |
| | | | NB RT Decel - construct lane - 1 @ 273 feet and a 162-foot transition taper | Others |
| | | | NB to EB RT Accel - construct lane - 1 @ 388 feet and a 162-foot transition taper | Others |
| | | | SB LT Decel - construct lane - 1 @ 515 feet and a 162-foot transition taper | Others |
| | | | SB RT Decel - construct lane - 1 @ 273 feet and a 162-foot transition taper | Others |
| | | | SB to WB RT Accel - construct lane - 1 @ 388 feet and a 162-foot transition taper | Others |
| | | | Traffic signalization when warranted | Others |

- (1) A transition taper of 18.5:1 was used for Watkins Road based on a posted speed limit of 55 mph. An appropriate redirect taper for 55 mph is 55:1
A transition taper of 13.5:1 was used for E. Jewell Avenue, E Yale Avenue, Powhaton Road and Monaghan Road based on a posted speed limit of 45 mph.
An appropriate redirect taper for 45 mph is 45:1
A transition taper of 10:1 was used for all other roadways based on a posted speed of 35 mph. An appropriate redirect taper for 35 mph is 20:1
Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

Table 14 (Page 2 of 6)
Recommended Improvements to Public Street Network
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

| Inter-section No. | Intersection Location | Classification | Recommended Improvements ⁽¹⁾ | Responsibility |
|----------------------|------------------------------------|---|---|------------------|
| #7 | E. Jewell Avenue/ Monaghan Road | 4-Lane Major Arterial/ 4-Lane Major Arterial | EB LT Decel - construct dual lanes - 1 @ 250 feet; 1 @ 530 and a 162-foot transition taper for each | Others |
| | | | EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper | Applicant/Others |
| | | | EB to SB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Applicant/Others |
| | | | WB LT Decel - construct lane - 1 @ 410 feet and 162-foot transition taper | Applicant/Others |
| | | | WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper | Others |
| | | | WB to NB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Others |
| | | | NB LT Decel - construct lane - 1 @ 515 feet and 162-foot transition taper | Applicant/Others |
| | | | NB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper | Applicant/Others |
| | | | NB to EB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Applicant/Others |
| | | | SB LT Decel - construct dual lanes - 1 @ 165 feet; 1 @ 435 and a 162-foot transition taper for each | Others |
| | | | SB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper | Others |
| | | | SB to WB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Others |
| | | | Traffic signalization when warranted | Applicant/Others |
| | | | | |
| #8 | E. Jewell Avenue/ Street A | 4-Lane Major Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 355 feet and 162-foot transition taper | Others |
| | | | EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper | Applicant |
| | | | WB LT Decel - construct lane - 1 @ 390 feet and 162-foot transition taper | Applicant |
| | | | NB LT Decel - construct dual lanes - 1 @ 235 feet; 1 @ 425 and a 120-foot transition taper for each | Applicant |
| | | | NB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper | Applicant |
| | | | NB to EB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Applicant |
| | | | SB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper | Others |
| | | | SB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper | Others |
| | | | SB to WB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Others |
| | | | Traffic signalization when warranted | Applicant/Others |

(1) A transition taper of 18.5:1 was used for Watkins Road based on a posted speed limit of 55 mph. An appropriate redirect taper for 55 mph is 55:1
A transition taper of 13.5:1 was used for E. Jewell Avenue, E Yale Avenue, Powhaton Road and Monaghan Road based on a posted speed limit of 45 mph.
An appropriate redirect taper for 45 mph is 45:1
A transition taper of 10:1 was used for all other roadways based on a posted speed of 35 mph. An appropriate redirect taper for 35 mph is 20:1
Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

Table 14 (Page 3 of 6)
Recommended Improvements to Public Street Network
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

Inter-
section

| No. | Intersection Location | Classification | Recommended Improvements ⁽¹⁾ | Responsibility |
|-----|---------------------------------------|--|--|---|
| #9 | E. Jewell Avenue/ Hayesmount Drive | 4-Lane Major Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 395 feet and 162-foot transition taper EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper WB LT Decel - construct lane - 1 @ 325 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper NB LT Decel - construct lane - 1 @ 280 feet and 120-foot transition taper NB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper NB to EB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 260 feet and 120-foot transition taper SB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper SB to WB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper Traffic signalization when warranted | Others Applicant Applicant Others Applicant Applicant Applicant Applicant Others Others Others Others Applicant/Others |
| #10 | E. Jewell Avenue/ Lanewood Street | 4-Lane Major Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 405 feet and 162-foot transition taper EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper WB LT Decel - construct lane - 1 @ 325 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper NB LT Decel - construct lane - 1 @ 415 feet and 120-foot transition taper SB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper SB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper SB to WB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper Traffic signalization when warranted | Applicant/Others Applicant Applicant Applicant/Others Applicant Applicant/Others Applicant/Others Applicant/Others Applicant/Others |
| #11 | E. Jewell Avenue/ PA-15 Access | 4-Lane Major Arterial/ Local | EB LT Decel - construct lane - 1 @ 305 feet and 162-foot transition taper | Applicant |

(1) A transition taper of 18.5:1 was used for Watkins Road based on a posted speed limit of 55 mph. An appropriate redirect taper for 55 mph is 55:1
A transition taper of 13.5:1 was used for E. Jewell Avenue, E Yale Avenue, Powhaton Road and Monaghan Road based on a posted speed limit of 45 mph.
An appropriate redirect taper for 45 mph is 45:1
A transition taper of 10:1 was used for all other roadways based on a posted speed of 35 mph. An appropriate redirect taper for 35 mph is 20:1
Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

Table 14 (Page 4 of 6)
Recommended Improvements to Public Street Network
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

Inter-
section

| No. | Intersection Location | Classification | Recommended Improvements ⁽¹⁾ | Responsibility |
|-----|-----------------------------------|---|--|--|
| #12 | E. Jewell Avenue/ Hudson Road | 4-Lane Major Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 360 feet and 162-foot transition taper EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper WB LT Decel - construct lane - 1 @ 290 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper NB LT Decel - construct lane - 1 @ 260 feet and 120-foot transition taper SB LT Decel - construct lane - 1 @ 260 feet and 120-foot transition taper SB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper SB to WB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper | Applicant Applicant Applicant Applicant Applicant Applicant Applicant Applicant |
| #13 | E. Jewell Avenue/ Watkins Road | 4-Lane Major Arterial/ 6-Lane Major Arterial | EB LT Decel - construct lane - 1 @ 535 feet and 162-foot transition taper WB LT Decel - construct lane - 1 @ 280 feet and 162-foot transition taper NB LT Decel - construct lane - 1 @ 425 feet and 222-foot transition taper NB RT Decel - construct lane - 1 @ 378 feet and 222-foot transition taper SB LT Decel - construct lane - 1 @ 395 feet and 222-foot transition taper SB RT Decel - construct lane - 1 @ 378 feet and 222-foot transition taper SB to WB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper Traffic signalization when warranted | Applicant/Others Others Applicant/Others Others Others Applicant/Others Applicant/Others Applicant/Others |
| #14 | Monaghan Road/ PA-79 Access | 4-Lane Major Arterial/ Local | WB LT Decel - construct lane - 1 @ 280 feet and 120-foot transition taper WB to NB RT Accel - construct lane - 1 @ 388 feet and 162-foot transition taper NB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 570 feet and 162-foot transition taper Traffic signalization if/when warranted | Applicant Applicant Applicant Applicant Applicant |
| #15 | Monaghan Road/ E. Iliff Avenue | 4-Lane Major Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 230 feet and 120-foot transition taper WB LT Decel - construct lane - 1 @ 240 feet and 120-foot transition taper NB LT Decel - construct lane - 1 @ 280 feet and 162-foot transition taper NB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 450 feet and 162-foot transition taper SB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper | Applicant Applicant Applicant Applicant Applicant Applicant |

(1) A transition taper of 18.5:1 was used for Watkins Road based on a posted speed limit of 55 mph. An appropriate redirect taper for 55 mph is 55:1
A transition taper of 13.5:1 was used for E. Jewell Avenue, E Yale Avenue, Powhaton Road and Monaghan Road based on a posted speed limit of 45 mph.
An appropriate redirect taper for 45 mph is 45:1
A transition taper of 10:1 was used for all other roadways based on a posted speed of 35 mph. An appropriate redirect taper for 35 mph is 20:1
Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

Table 14 (Page 5 of 6)
Recommended Improvements to Public Street Network
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

Inter-
section

| No. | Intersection Location | Classification | Recommended Improvements ⁽¹⁾ | Responsibility |
|-----|-------------------------------------|---|--|--|
| #16 | Street A/ E. Iliff Avenue | 3-Lane Collecto/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 205 feet and 120-foot transition taper WB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper NB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper SB LT Decel - construct lane - 1 @ 320 feet and 120-foot transition taper | Applicant Applicant Applicant Applicant |
| #17 | Hayesmount Road/ E. Iliff Avenue | 3-Lane Collecto/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 275 feet and 120-foot transition taper WB LT Decel - construct lane - 1 @ 235 feet and 120-foot transition taper NB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper NB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper SB LT Decel - construct lane - 1 @ 260 feet and 120-foot transition taper SB RT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper | Applicant Applicant Applicant Applicant Applicant Applicant |
| #18 | Lanewood Street/ E. Iliff Avenue | 3-Lane Collecto/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 210 feet and 120-foot transition taper WB LT Decel - construct lane - 1 @ 190 feet and 120-foot transition taper NB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper SB LT Decel - construct lane - 1 @ 280 feet and 120-foot transition taper | Applicant Applicant Applicant Applicant |
| #19 | Hudson Road/ E. Iliff Avenue | 3-Lane Collecto/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 200 feet and 120-foot transition taper NB LT Decel - construct lane - 1 @ 210 feet and 120-foot transition taper | Applicant Applicant |
| #20 | Monaghan Road/ PA-4 Access | 4-Lane Major Arterial/ Local | NB LT Decel - construct lane - 1 @ 280 feet and 162-foot transition taper | Applicant |
| #21 | E. Yale Avenue/ Powhaton Road | 4-Lane Minor Arterial/ 4-Lane Major Arterial | EB LT Decel - construct lane - 1 @ 315 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 325 feet and 162-foot transition taper | Others Others Others |

(1) A transition taper of 18.5:1 was used for Watkins Road based on a posted speed limit of 55 mph. An appropriate redirect taper for 55 mph is 55:1
A transition taper of 13.5:1 was used for E. Jewell Avenue, E Yale Avenue, Powhaton Road and Monaghan Road based on a posted speed limit of 45 mph.
An appropriate redirect taper for 45 mph is 45:1
A transition taper of 10:1 was used for all other roadways based on a posted speed of 35 mph. An appropriate redirect taper for 35 mph is 20:1
Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

Table 14 (Page 6 of 6)
Recommended Improvements to Public Street Network
Cottonwood Creek
Aurora, CO
LSC #210410; June, 2021

Inter-
section

| No. | Intersection Location | Classification | Recommended Improvements ⁽¹⁾ | Responsibility |
|-----|-----------------------------------|---|---|--|
| #22 | E. Yale Avenue/ Monaghan Road | 4-Lane Minor Arterial/ 4-Lane Major Arterial | EB LT Decel - construct lane - 1 @ 305 feet and 162-foot transition taper EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper WB LT Decel - construct lane - 1 @ 535 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper NB LT Decel - construct lane - 1 @ 340 feet and 162-foot transition taper NB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 330 feet and 162-foot transition taper SB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper Traffic signalization if/when warranted | Applicant/Others Applicant/Others Applicant/Others Applicant/Others Applicant/Others Applicant/Others Applicant/Others Applicant/Others Applicant/Others |
| #23 | E. Yale Avenue/ Street A | 4-Lane Minor Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 400 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 235 feet and 120-foot transition taper | Applicant Applicant Applicant |
| #24 | E. Yale Avenue Hayesmount Road | 4-Lane Minor Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 355 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 230 feet and 120-foot transition taper | Applicant Applicant Applicant |
| #25 | E. Yale Avenue Hudson Road | 4-Lane Minor Arterial/ 3-Lane Collector | EB LT Decel - construct lane - 1 @ 330 feet and 162-foot transition taper WB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper SB LT Decel - construct lane - 1 @ 215 feet and 120-foot transition taper | Applicant/Others Applicant/Others Applicant/Others |
| #26 | E. Yale Avenue/ Watkins Road | 4-Lane Minor Arterial/ 6-Lane Major Arterial | EB LT Decel - construct lane - 1 @ 375 feet and 162-foot transition taper EB RT Decel - construct lane - 1 @ 273 feet and 162-foot transition taper WB LT Decel - construct lane - 1 @ 280 feet and 162-foot transition taper NB LT Decel - construct lane - 1 @ 455 feet and 222-foot transition taper SB LT Decel - construct lane - 1 @ 395 feet and 222-foot transition taper SB RT Decel - construct lane - 1 @ 378 feet and 222-foot transition taper Traffic signalization if/when warranted | Applicant/Others Applicant/Others Others Others Others Applicant Applicant/Others |

(1) A transition taper of 18.5:1 was used for Watkins Road based on a posted speed limit of 55 mph. An appropriate redirect taper for 55 mph is 55:1
A transition taper of 13.5:1 was used for E. Jewell Avenue, E Yale Avenue, Powhaton Road and Monaghan Road based on a posted speed limit of 45 mph.
An appropriate redirect taper for 45 mph is 45:1
A transition taper of 10:1 was used for all other roadways based on a posted speed of 35 mph. An appropriate redirect taper for 35 mph is 20:1
Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

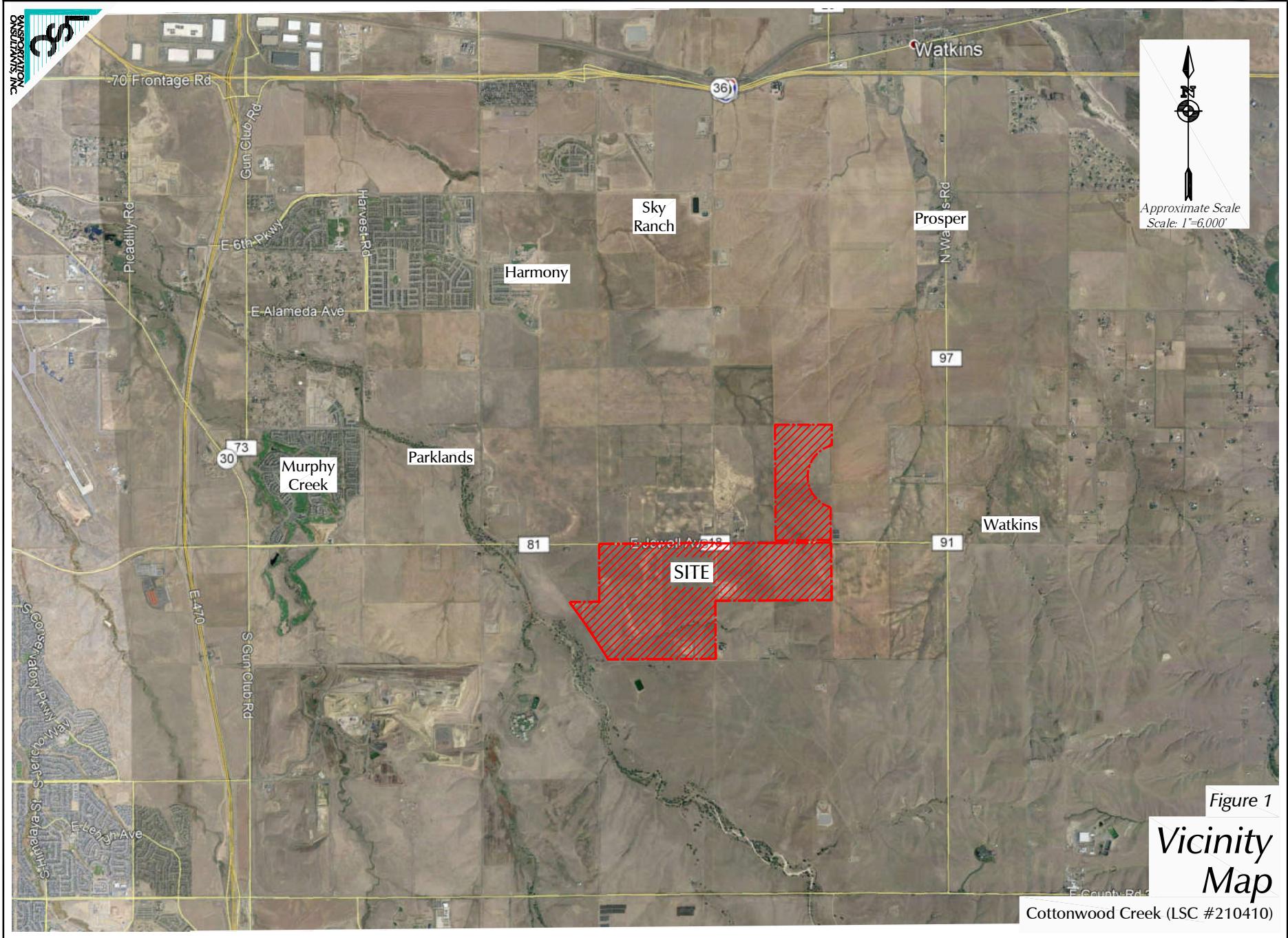
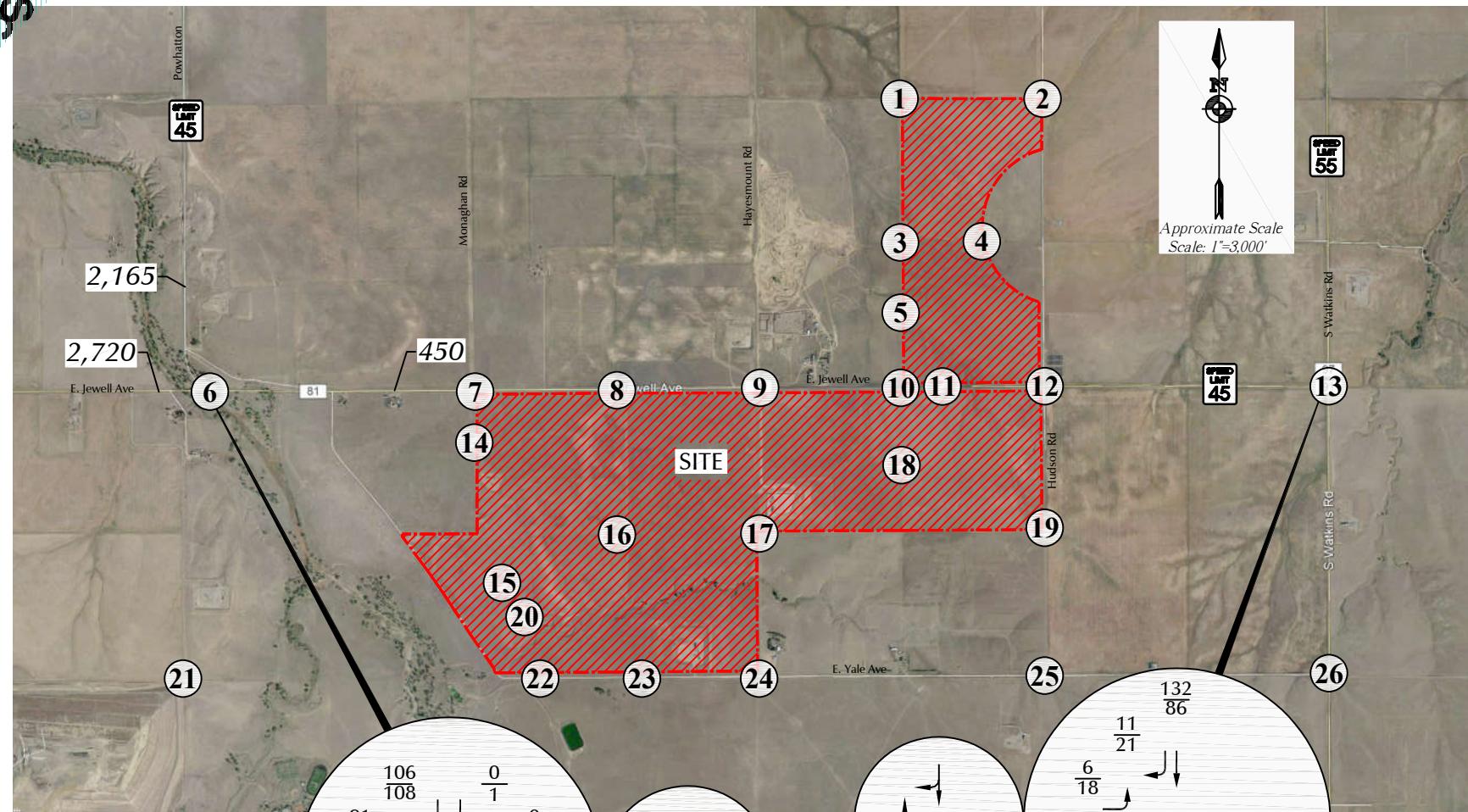




Figure 2

Site Plan

Cottonwood Creek (LSC #210410)



LEGEND:

- ↑ = Stop Sign
- = Speed Limit
- $\frac{26}{35}$ = AM Peak Hour Traffic
PM Peak Hour Traffic
- 1,000 = Average Daily Traffic

Figure 3

Existing Traffic, Lane Geometry and Traffic Control

Cottonwood Creek (LSC #210410)

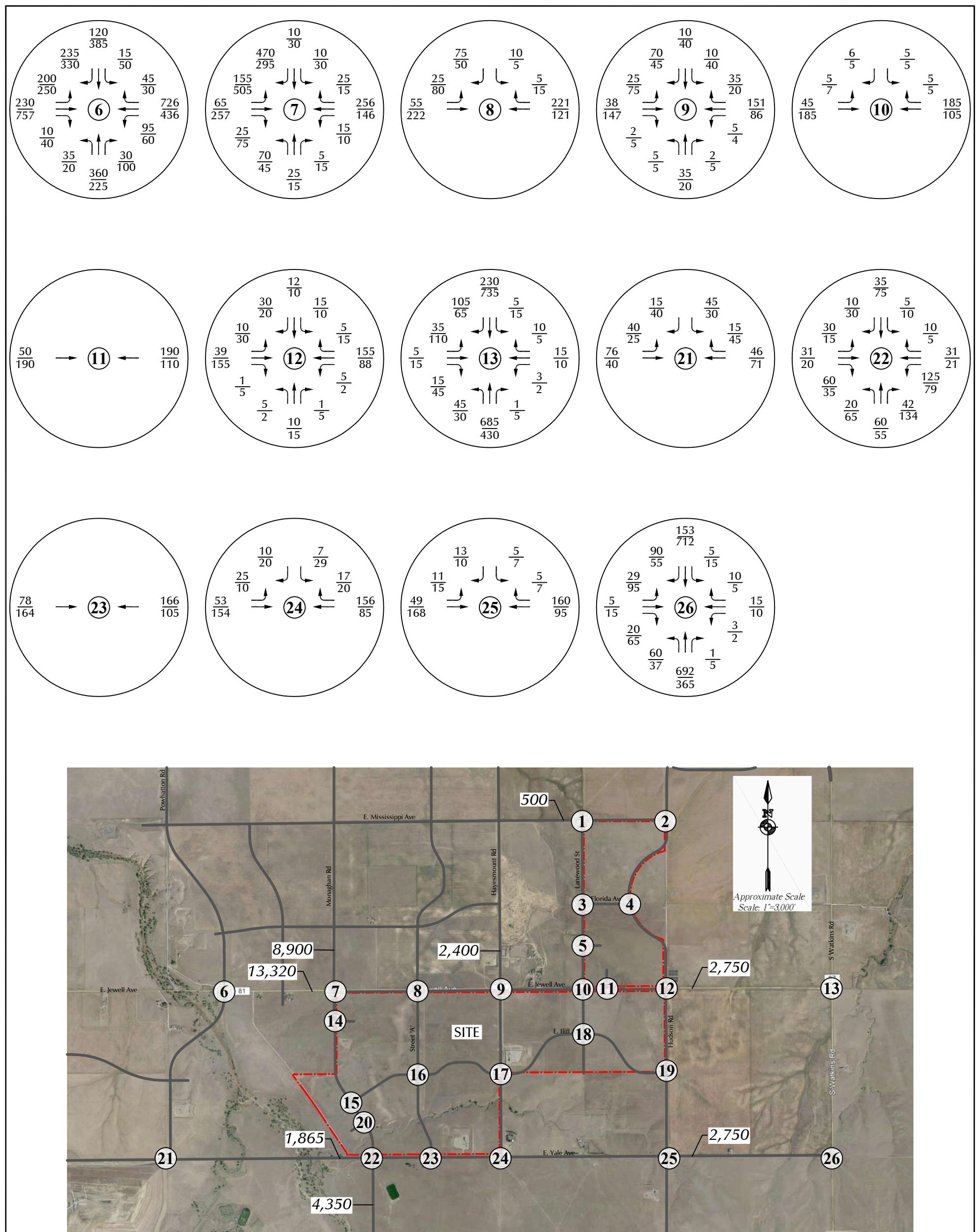


Figure 4a

Year 2041 Background Traffic Jewell Avenue and Yale Avenue Intersections

Cottonwood Creek (LSC #210410)

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{1,000}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic



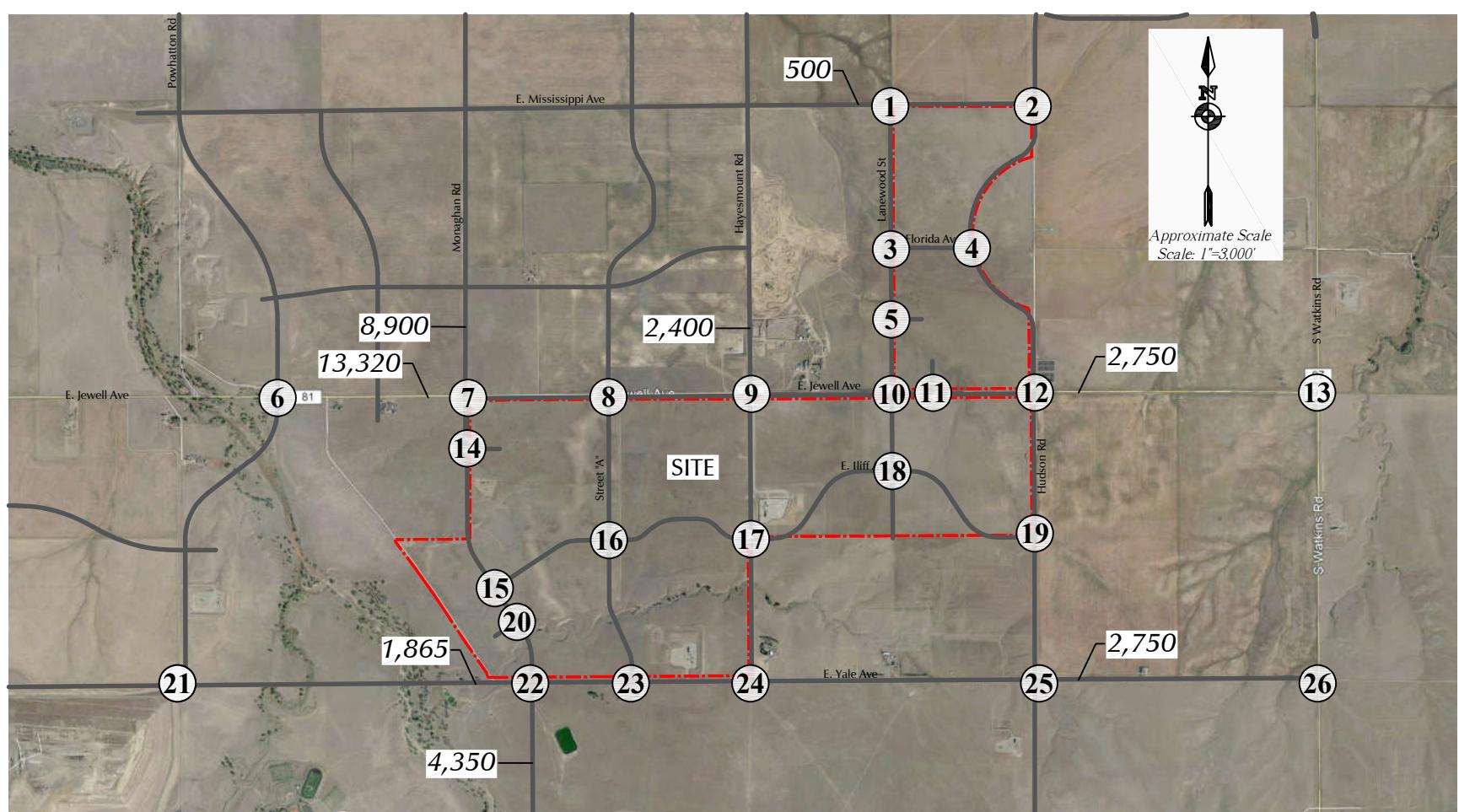
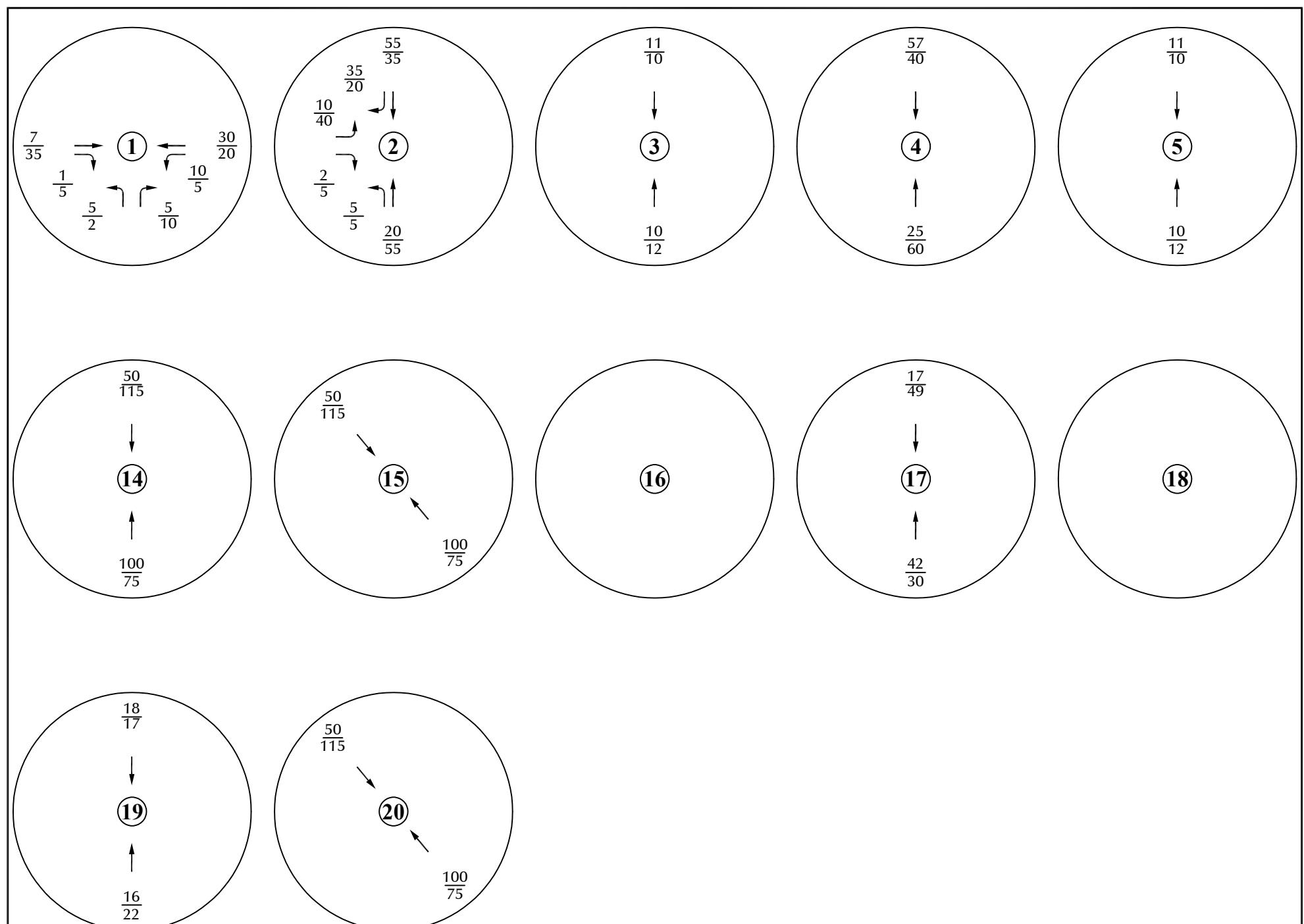


Figure 4b

Year 2041
Background Traffic
All Other Intersections

Cottonwood Creek (LSC #210410)

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{35}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic



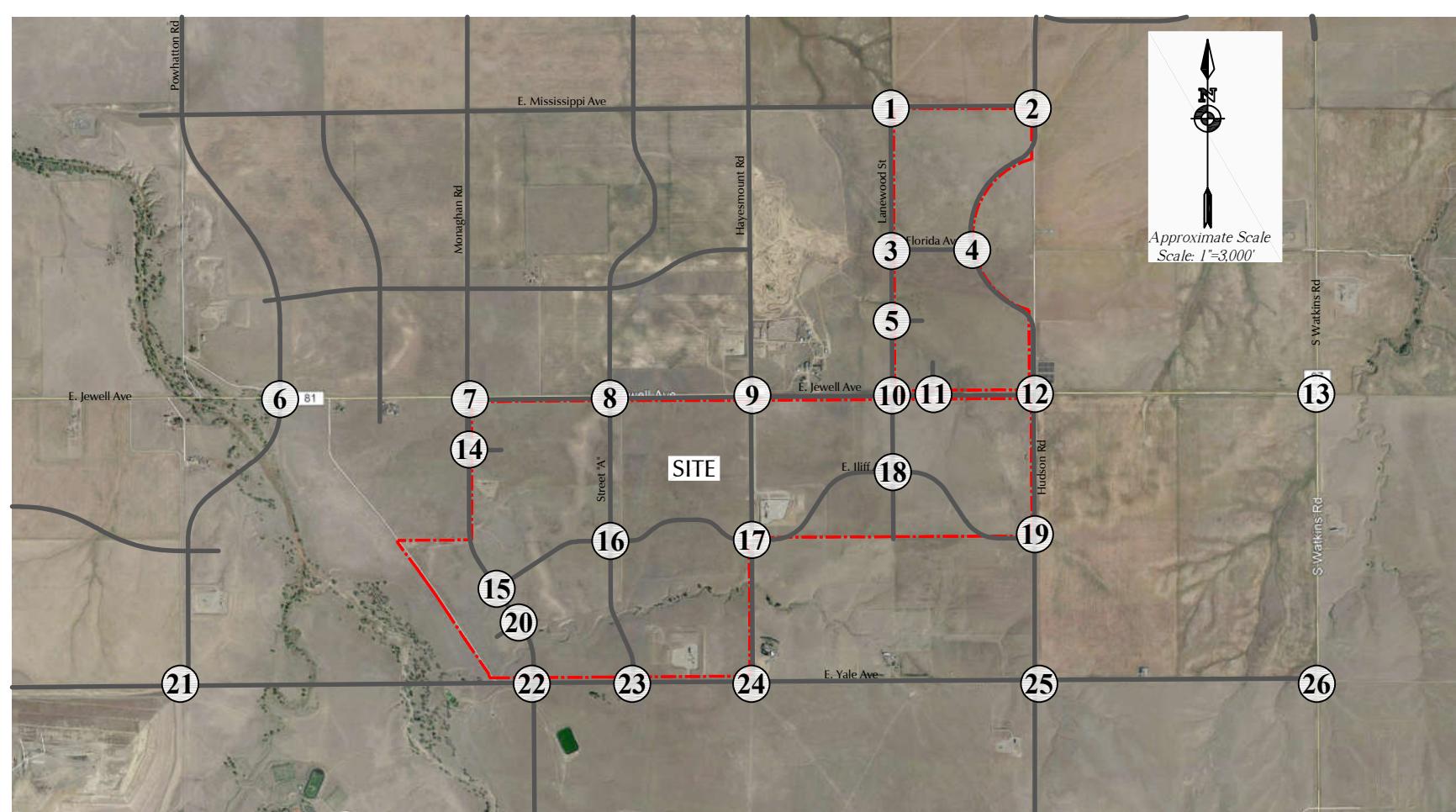
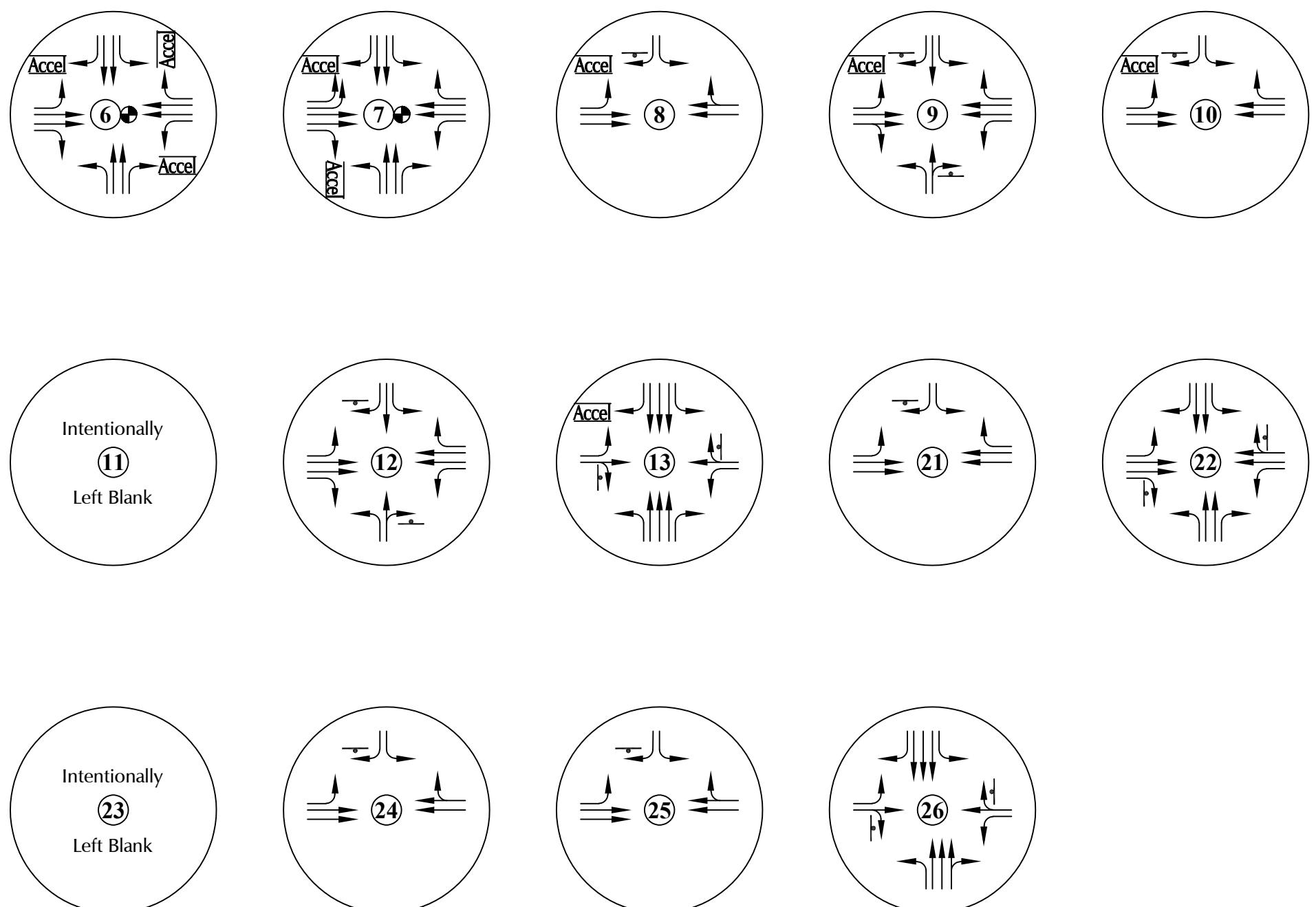


Figure 4c

Year 2041 Background Lane Geometry and Traffic Control Jewell Avenue and Yale Avenue Intersections

Cottonwood Creek (LSC #210410)



LEGEND:
 ☐ = Stop Sign
 ● = Traffic Signal

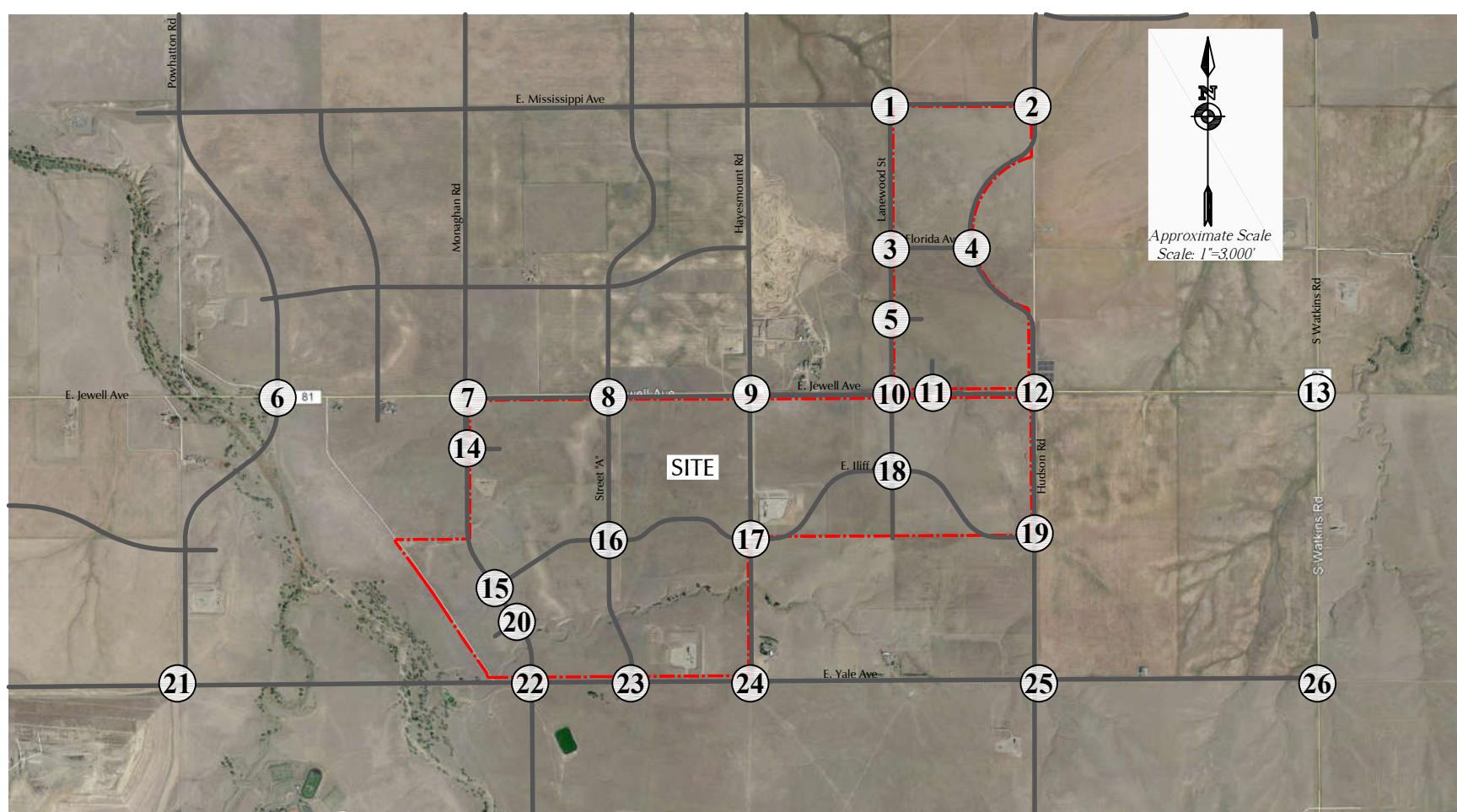
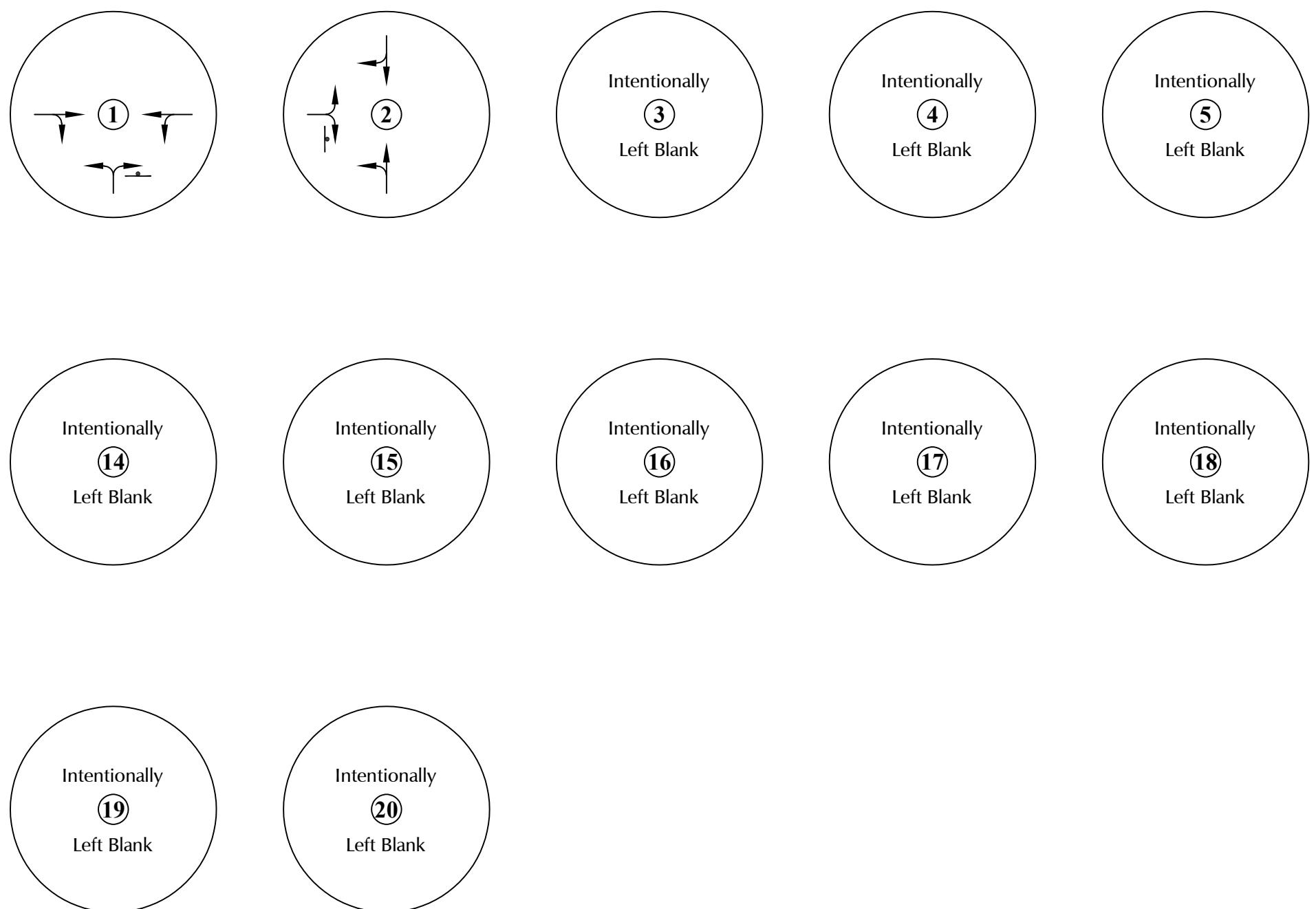


Figure 4d

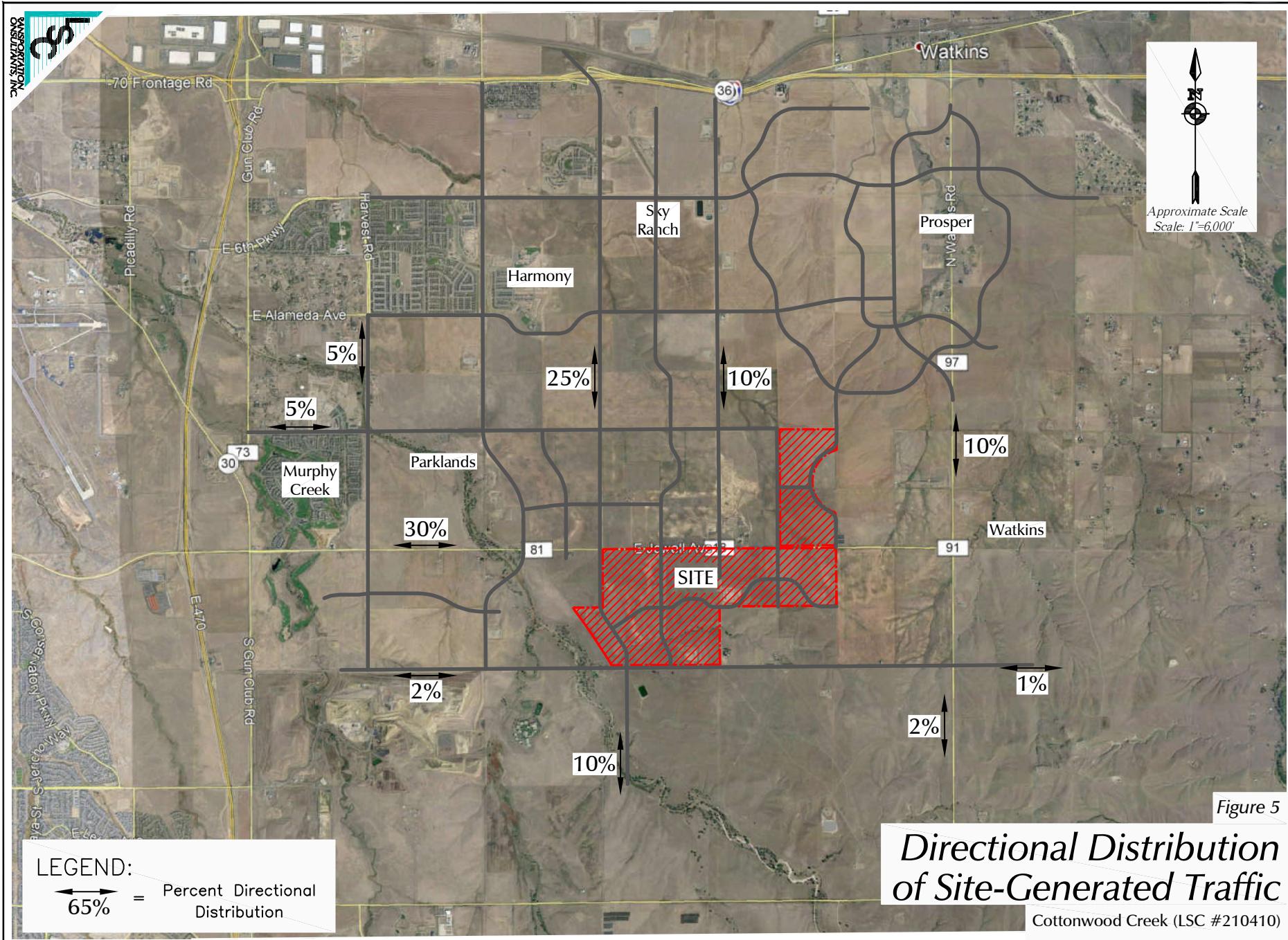
Year 2041 Background Lane Geometry and Traffic Control All Other Intersections

Cottonwood Creek (LSC #210410)



LEGEND:

- ↑ = Stop Sign
 - ◐ = Traffic Signal



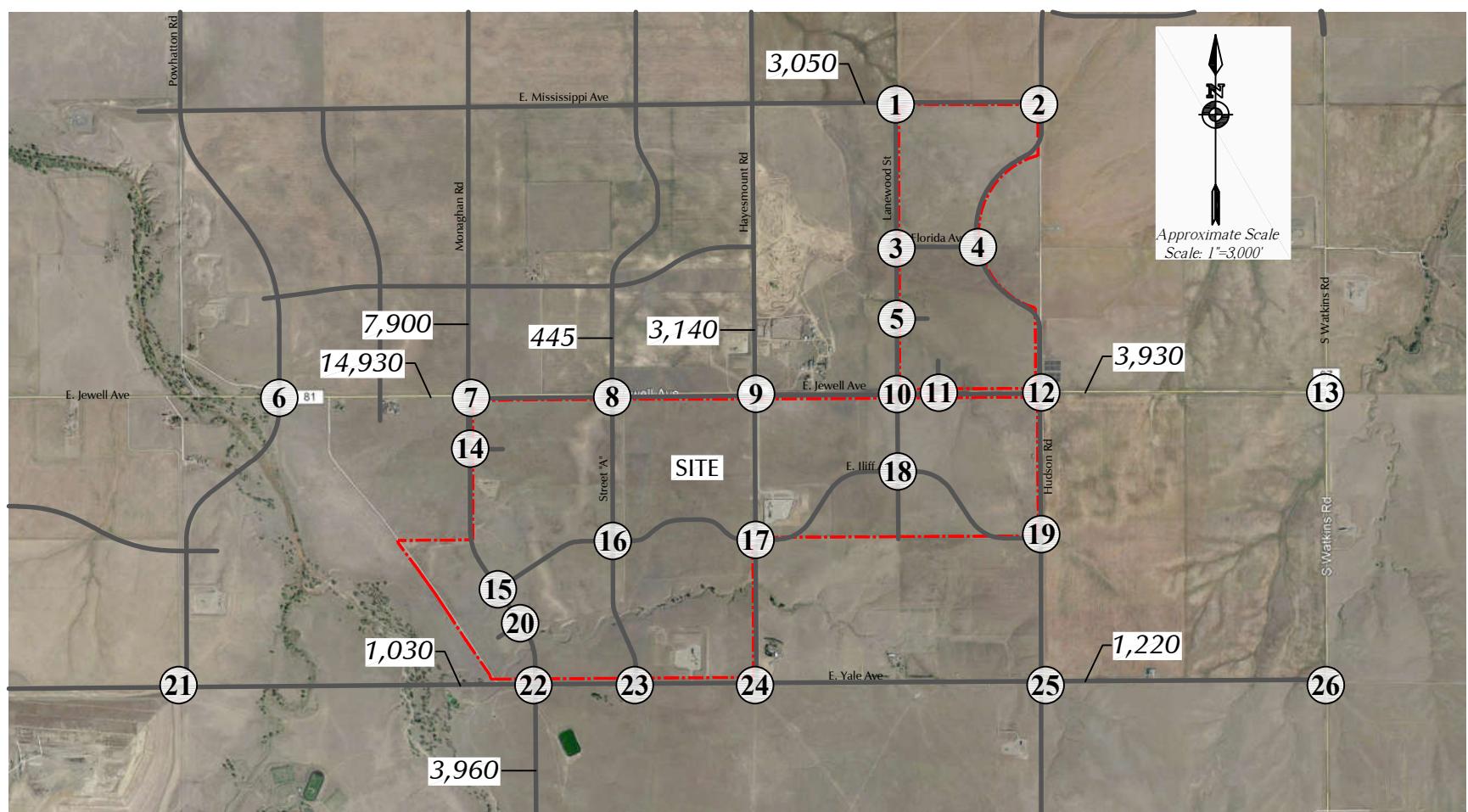
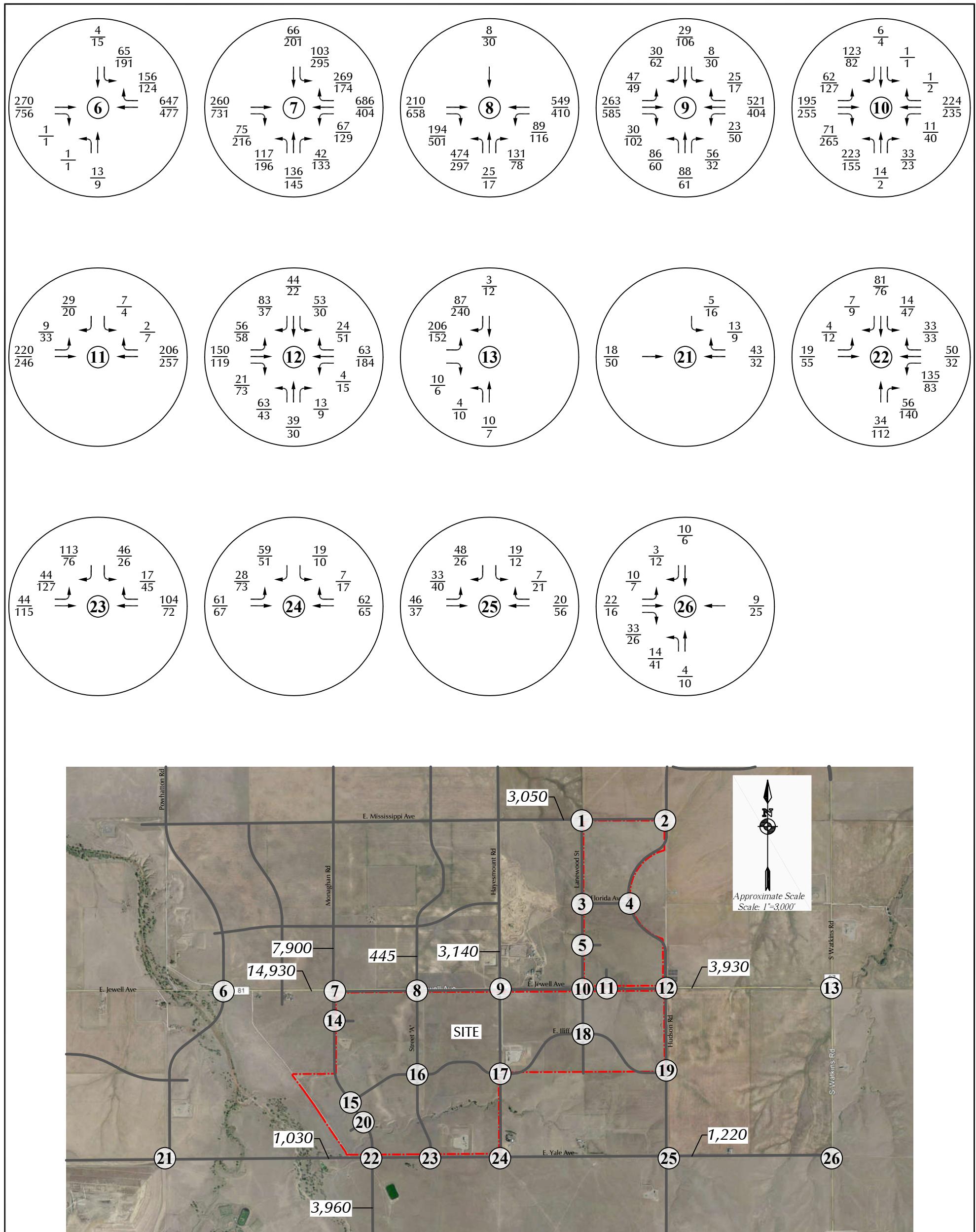


Figure 6a

Assignment of Site-Generated Traffic Jewell Avenue and Yale Avenue Intersections

Cottonwood Creek (LSC #210410)

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{26}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic



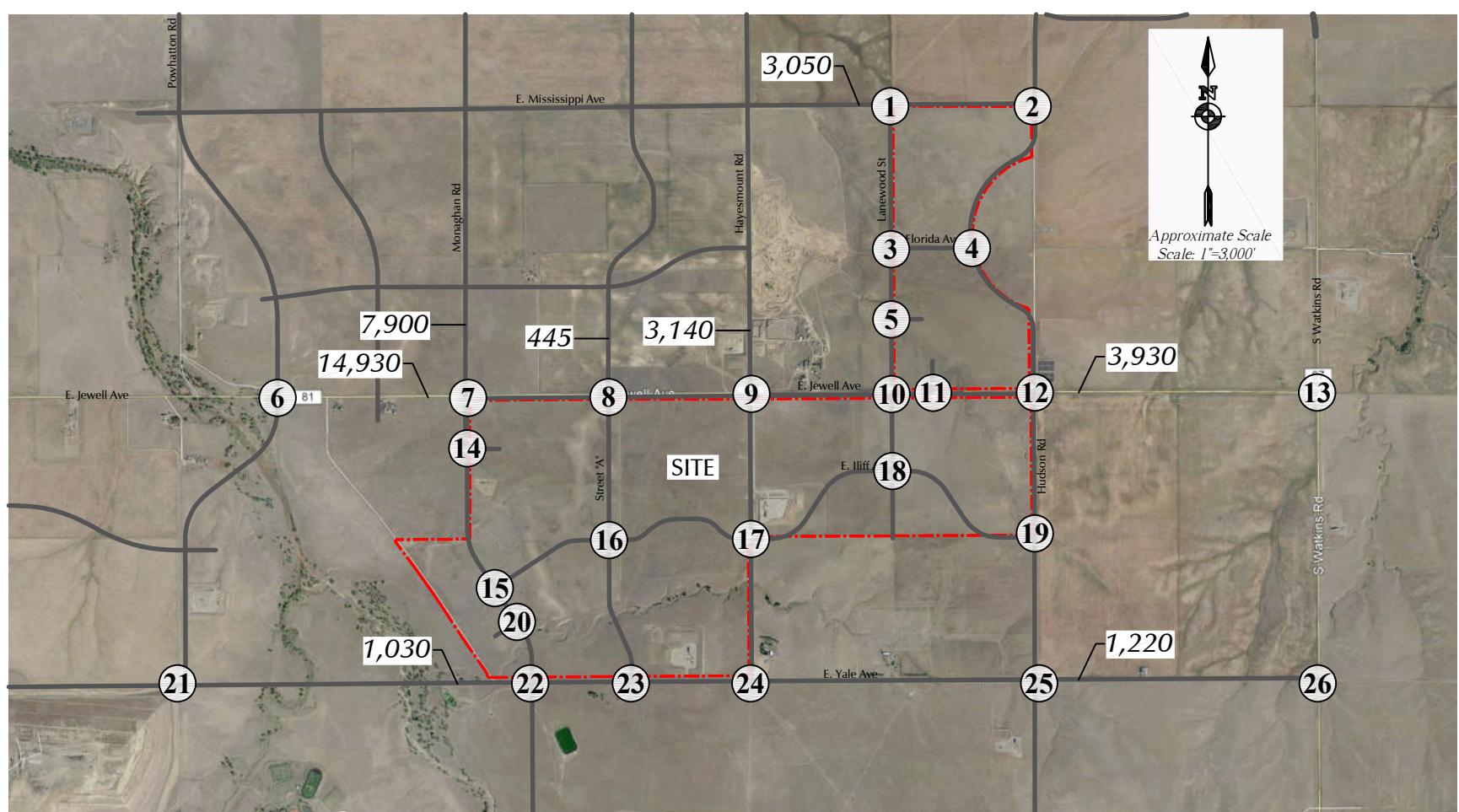
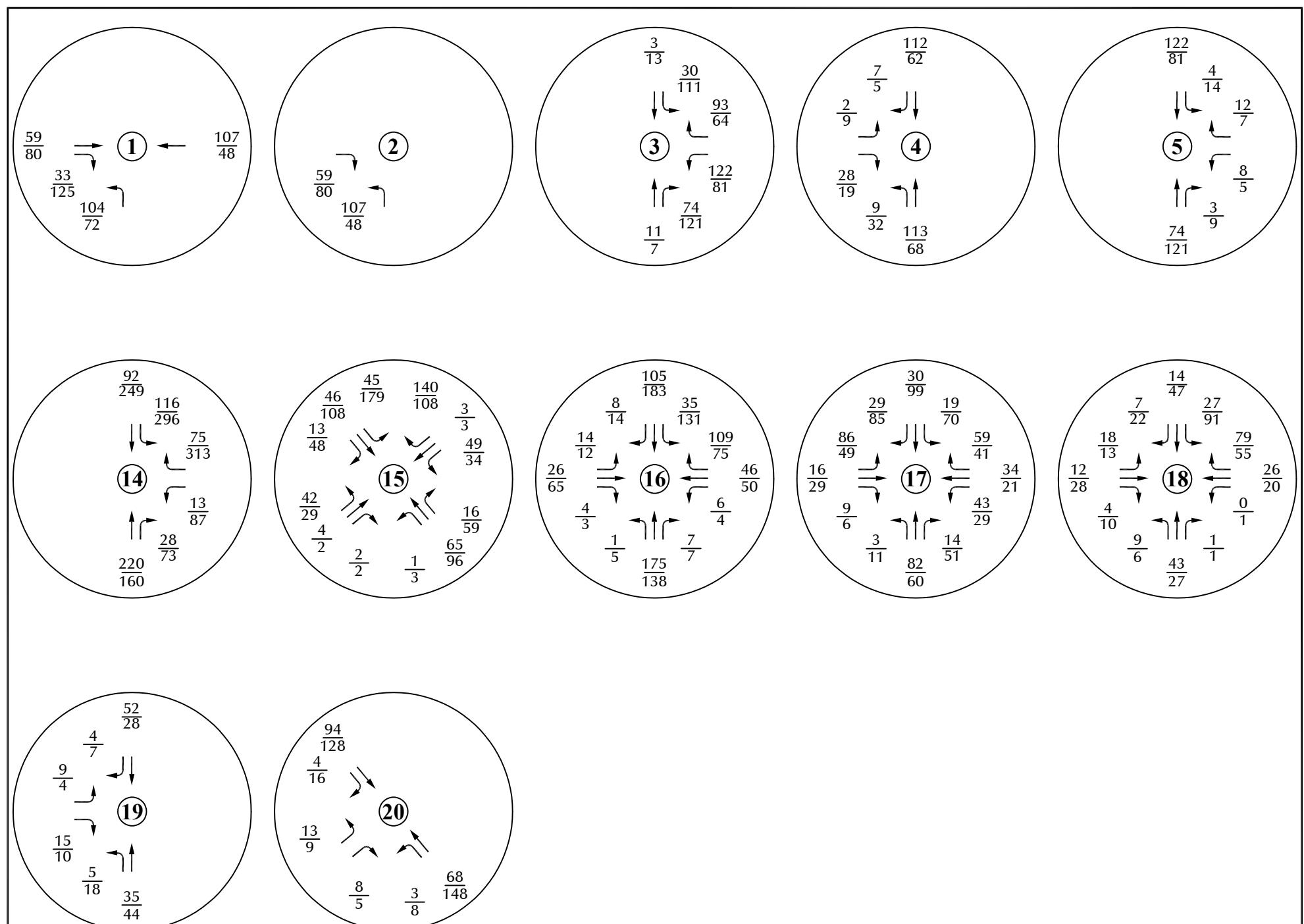


Figure 6b

Assignment of Site-Generated Traffic All Other Intersections

Cottonwood Creek (LSC #210410)

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{35}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic



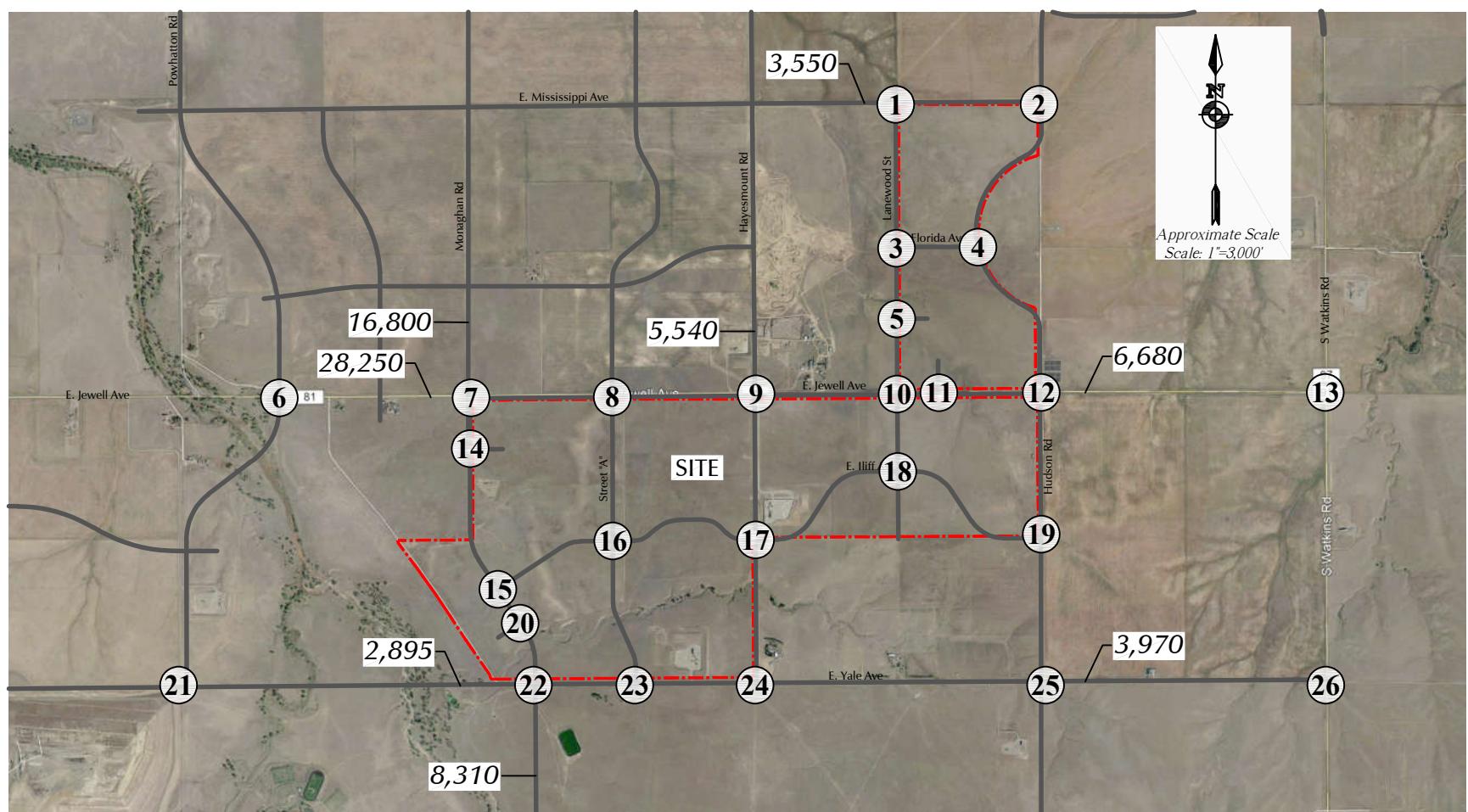
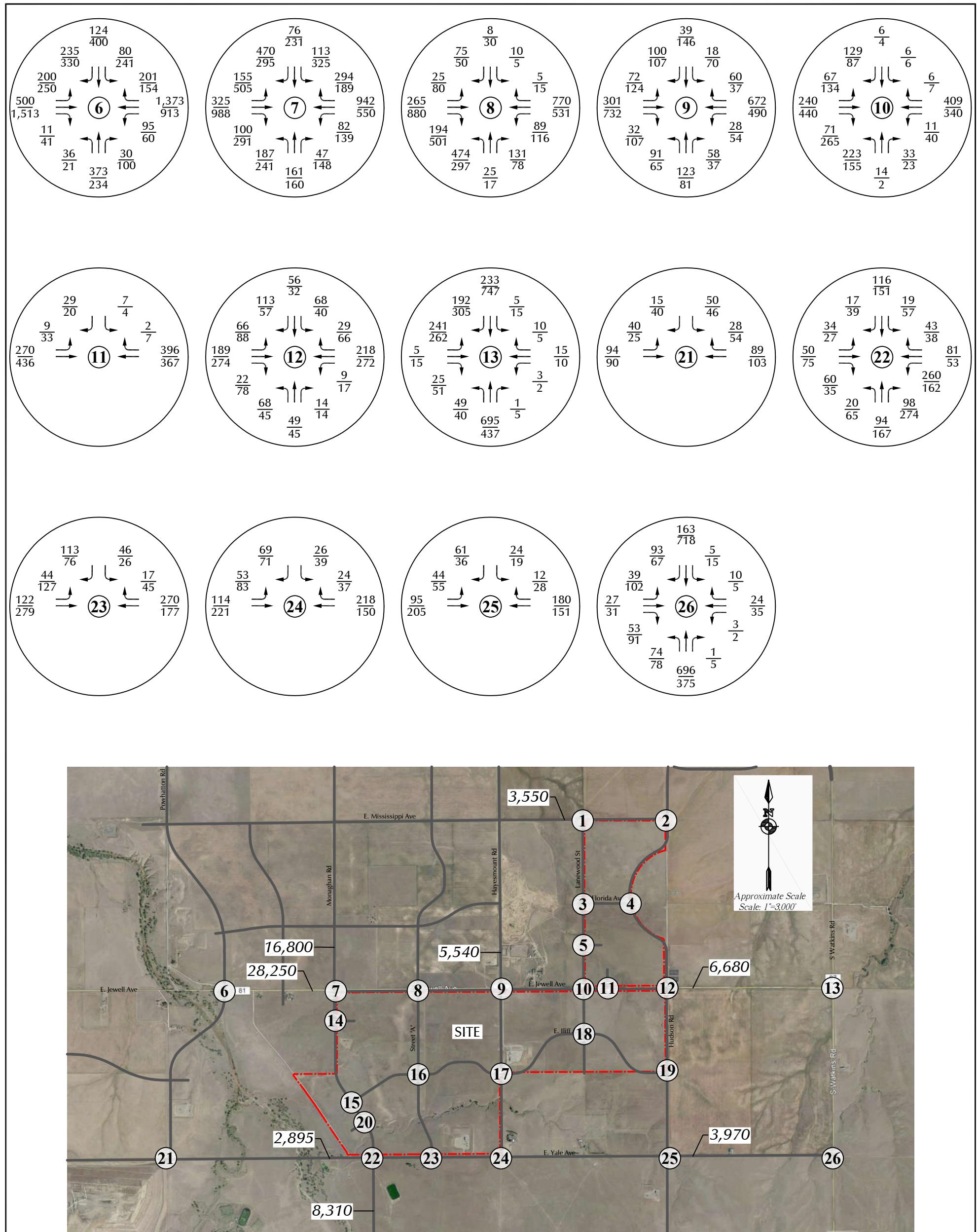


Figure 7a

Year 2041 Total Traffic Jewell Avenue and Yale Avenue Intersections

Cottonwood Creek (LSC #210410)

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{1,000}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic



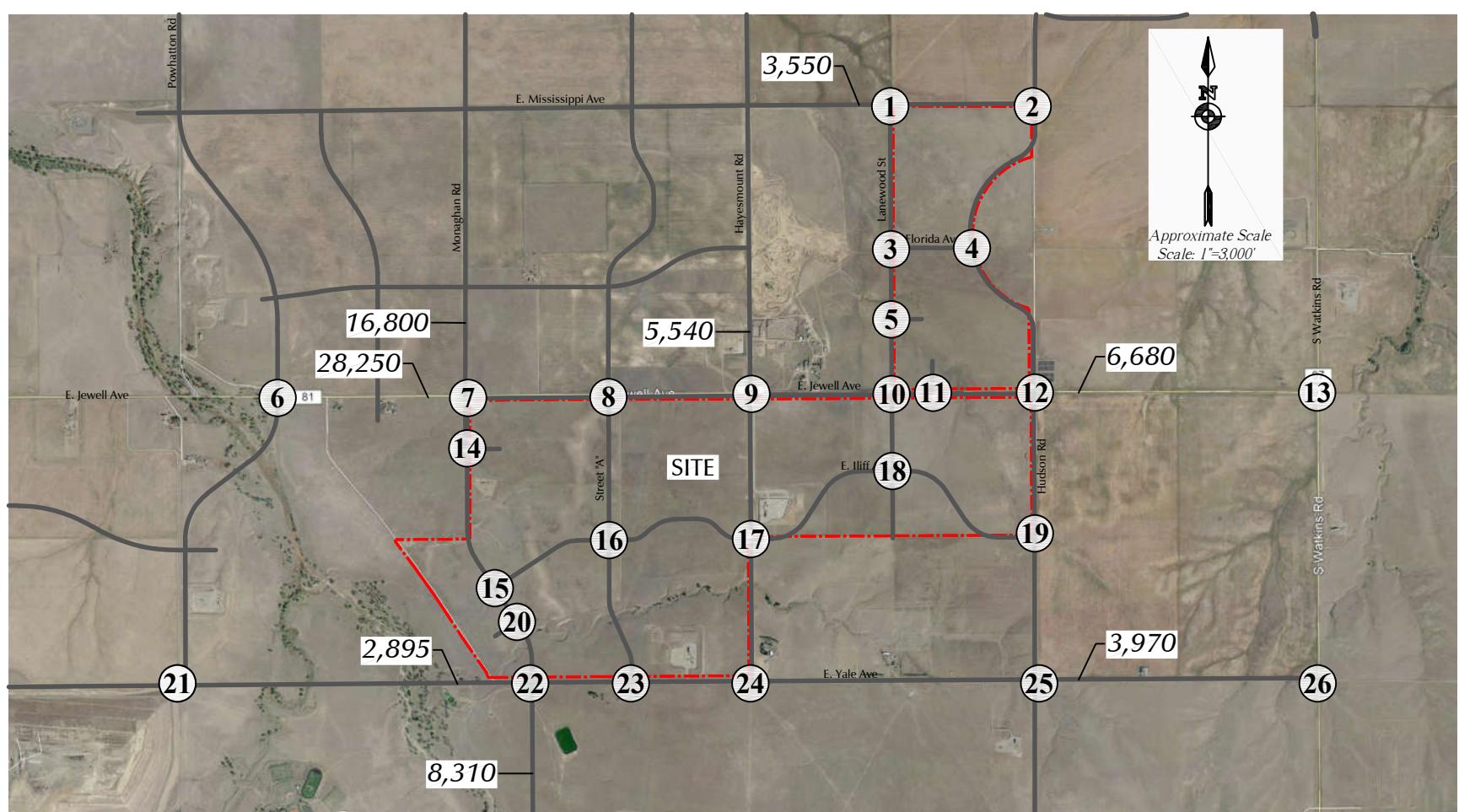
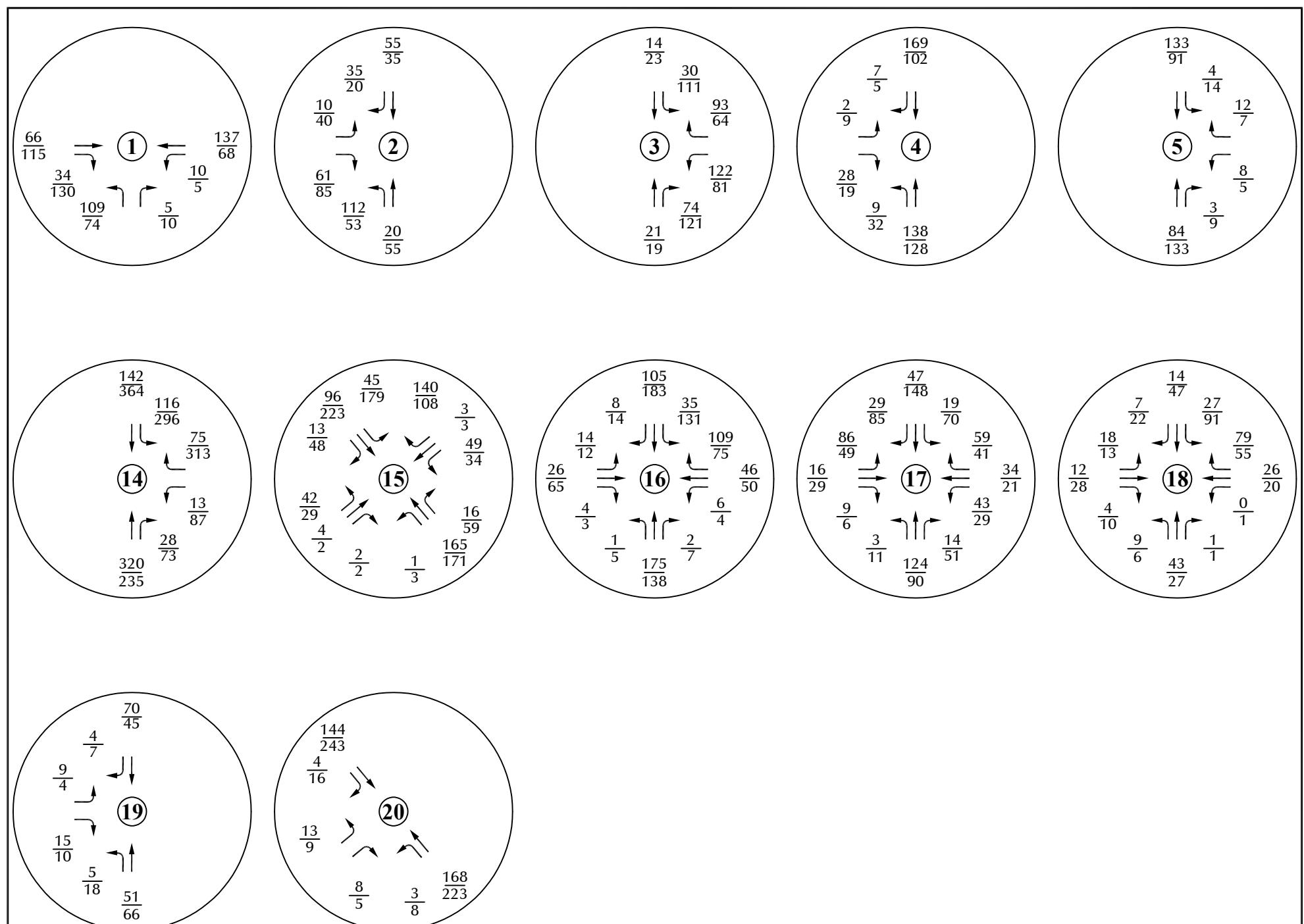


Figure 7b

**Year 2041
Total Traffic
All Other Intersections**

Cottonwood Creek (LSC #210410)

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{20}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic



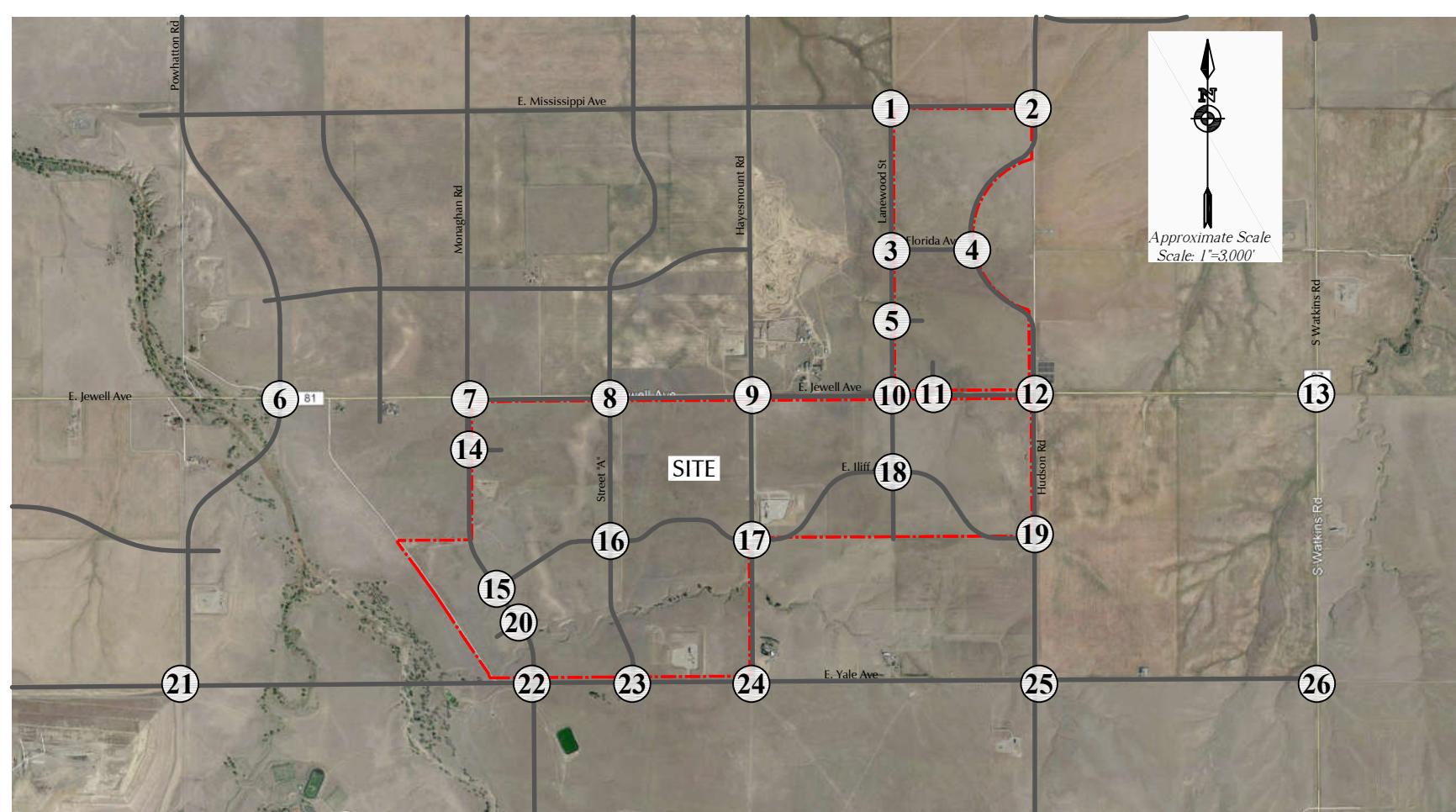
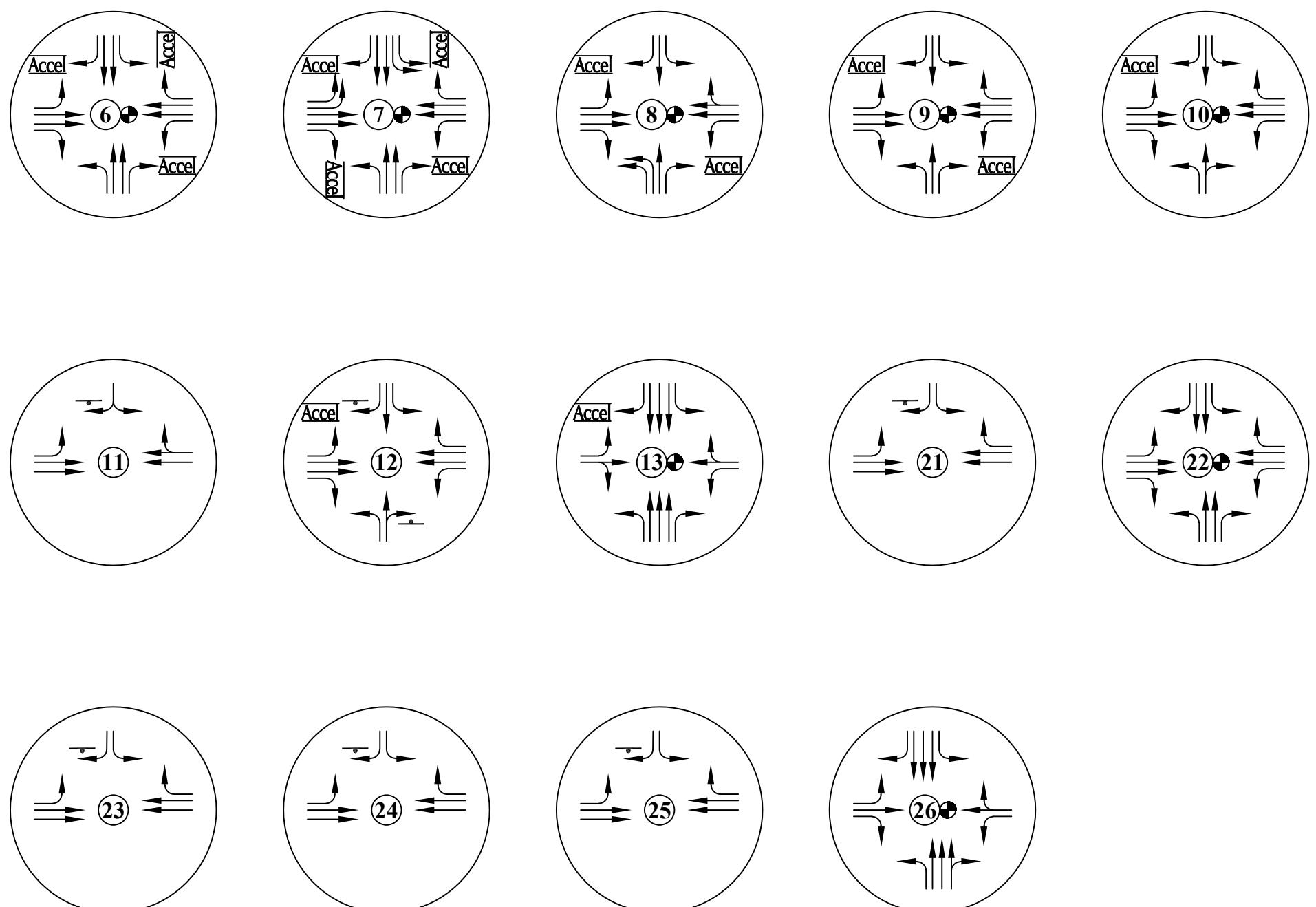


Figure 7c

Year 2041 Total Lane Geometry and Traffic Control Jewell Avenue and Yale Avenue Intersections

Cottonwood Creek (LSC #210410)



LEGEND:
 ☐ = Stop Sign
 ● = Traffic Signal

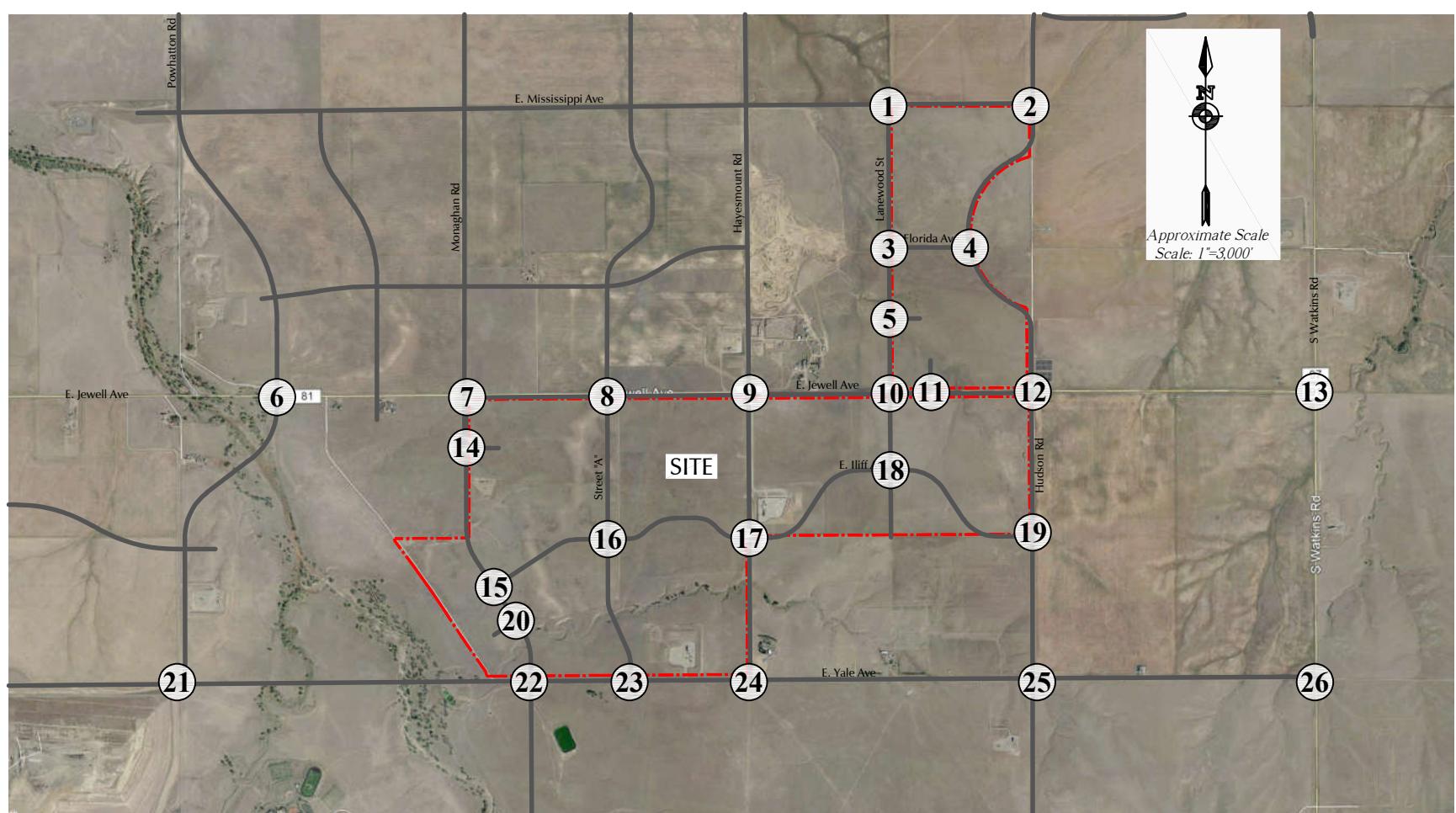
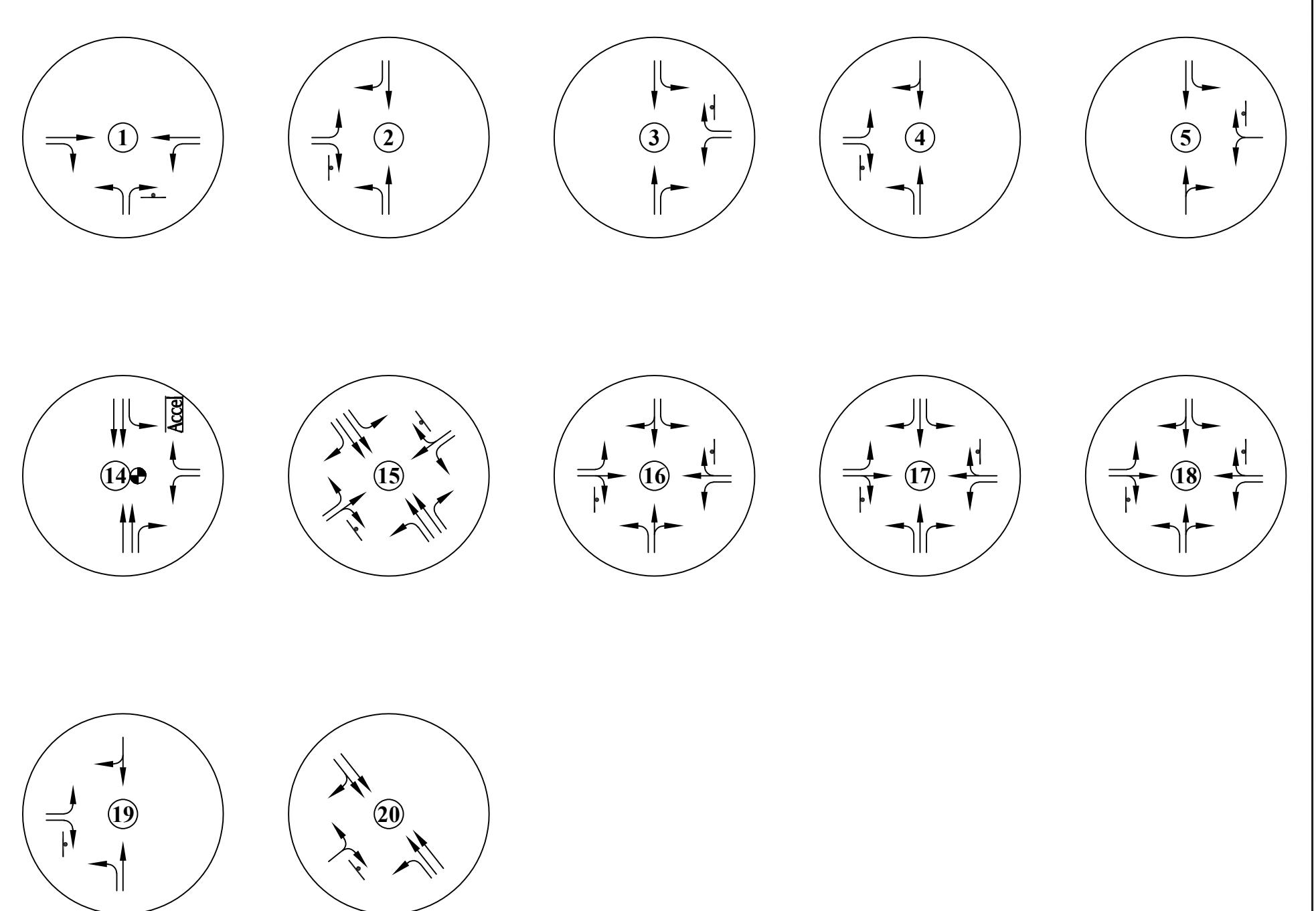


Figure 7d

Year 2041 Total Lane Geometry and Traffic Control All Other Intersections

Cottonwood Creek (LSC #210410)

LEGEND:

- ↑ = Stop Sign
- = Traffic Signal

COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: POWHATON RD
E/W STREET: JEWELL AVE
CITY: AURORA
COUNTY: ARAPAHOE

File Name : POWHJEWE
Site Code : 00000015
Start Date : 8/20/2019
Page No : 1

Groups Printed- VEHICLES

| Start Time | POWHATON RD Southbound | | | | JEWELL AVE Westbound | | | | Northbound | | | | JEWELL AVE Eastbound | | | | Int. Total |
|-------------|---------------------------|------|-------|------|-------------------------|------|-------|------|------------|------|-------|-------|-------------------------|------|-------|------|---------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | |
| Factor | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 06:30 AM | 0 | 0 | 23 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 2 | 0 | 0 | 55 |
| 06:45 AM | 0 | 0 | 25 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 27 | 1 | 0 | 1 | 60 |
| Total | 0 | 0 | 48 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 1 | 53 | 3 | 0 | 1 | 115 |
| 07:00 AM | 0 | 0 | 31 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 2 | 0 | 0 | 60 |
| 07:15 AM | 0 | 0 | 27 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 2 | 0 | 0 | 53 |
| 07:30 AM | 0 | 0 | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 1 | 0 | 0 | 39 |
| 07:45 AM | 0 | 0 | 19 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 15 | 5 | 0 | 0 | 43 |
| Total | 0 | 0 | 97 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 69 | 10 | 0 | 0 | 195 |
| 08:00 AM | 0 | 0 | 18 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 1 | 0 | 0 | 36 |
| 08:15 AM | 1 | 0 | 19 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 0 | 0 | 34 |
| Total | 1 | 0 | 37 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 24 | 3 | 0 | 0 | 70 |
| 04:00 PM | 0 | 0 | 18 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 2 | 0 | 0 | 45 |
| 04:15 PM | 2 | 0 | 25 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 3 | 0 | 0 | 53 |
| 04:30 PM | 0 | 0 | 27 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 5 | 0 | 0 | 48 |
| 04:45 PM | 1 | 0 | 27 | 0 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 20 | 7 | 0 | 0 | 65 |
| Total | 3 | 0 | 97 | 0 | 0 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 74 | 17 | 0 | 0 | 211 |
| 05:00 PM | 0 | 0 | 30 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 2 | 0 | 0 | 62 |
| 05:15 PM | 0 | 0 | 24 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 26 | 7 | 0 | 0 | 65 |
| 05:30 PM | 0 | 0 | 26 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 8 | 0 | 0 | 53 |
| 05:45 PM | 1 | 0 | 24 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 16 | 3 | 0 | 0 | 46 |
| Total | 1 | 0 | 104 | 0 | 0 | 20 | 3 | 0 | 0 | 0 | 0 | 0 | 78 | 20 | 0 | 0 | 226 |
| Grand Total | 5 | 0 | 383 | 0 | 0 | 68 | 8 | 0 | 0 | 0 | 0 | 1 | 298 | 53 | 0 | 1 | 817 |
| Apprch % | 1.3 | 0.0 | 98.7 | 0.0 | 0.0 | 89.5 | 10.5 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 84.7 | 15.1 | 0.0 | 0.3 | |
| Total % | 0.6 | 0.0 | 46.9 | 0.0 | 0.0 | 8.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 36.5 | 6.5 | 0.0 | 0.1 | |

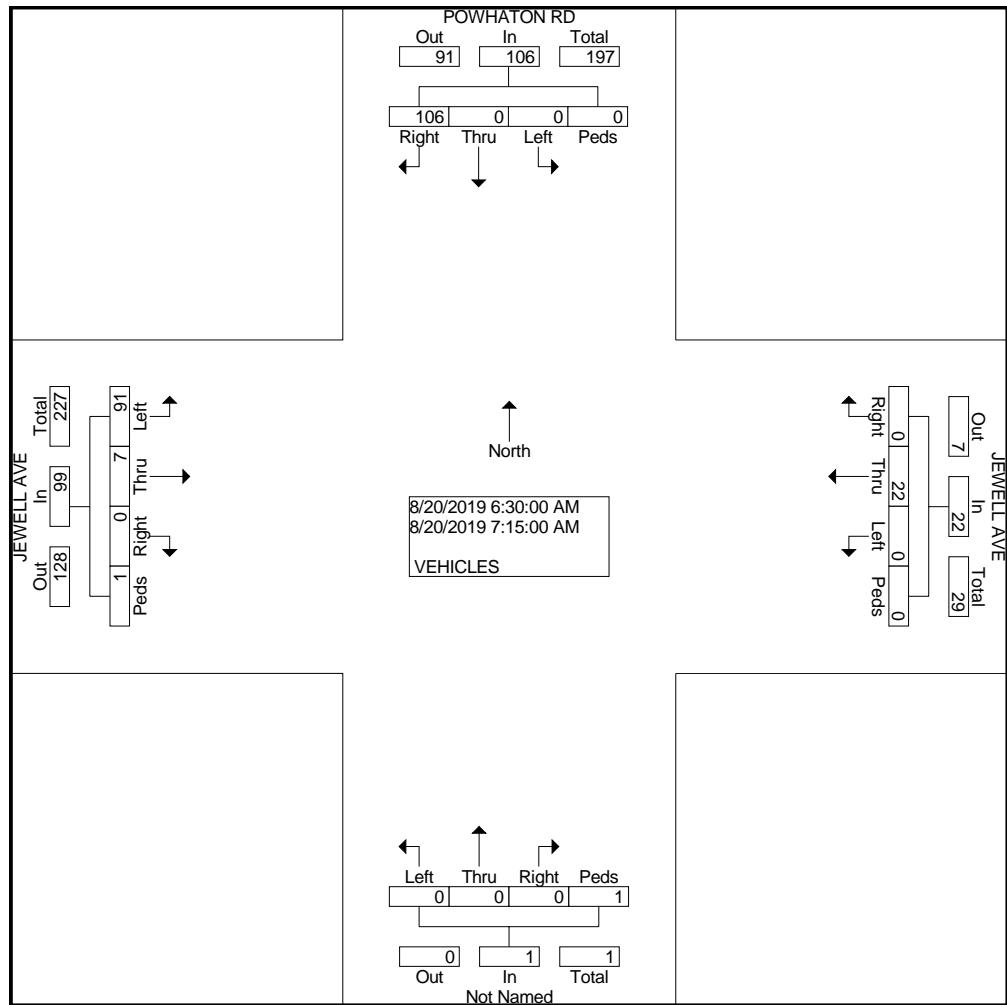
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: POWHATON RD
E/W STREET: JEWELL AVE
CITY: AURORA
COUNTY: ARAPAHOE

File Name : POWHJEWE
Site Code : 00000015
Start Date : 8/20/2019
Page No : 2

| Start Time | POWHATON RD Southbound | | | | | JEWELL AVE Westbound | | | | | Northbound | | | | | JEWELL AVE Eastbound | | | | | |
|---|------------------------|------|-------|------|------------|----------------------|------|-------|------|------------|------------|------|-------|------|------------|----------------------|------|-------|------|------------|------------|
| | 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 From 06:30 AM to 07:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Intersection 06:30 AM | | | | | | | | | | | | | | | | | | | | | |
| Volume | 0 | 0 | 106 | 0 | 106 | 0 | 22 | 0 | 0 | 22 | 0 | 0 | 0 | 1 | 1 | 91 | 7 | 0 | 1 | 99 | 228 |
| Percent | 0.0 | 0.0 | 100 | 0.0 | 0.0 | 0.0 | 100 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100 | 0.0 | 91.9 | 7.1 | 0.0 | 1.0 | | |
| 07:00 Volume Peak Factor | 0 | 0 | 31 | 0 | 31 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 21 | 2 | 0 | 0 | 23 | 60 |
| High Int. 07:00 AM | | | | | | 07:15 AM | | | | | 06:45 AM | | | | | 06:45 AM | | | | | 0.950 |
| Volume Peak Factor | 0 | 0 | 31 | 0 | 31 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 1 | 27 | 1 | 0 | 1 | 29 | 0.85 |
| | | | 0.85 | | 5 | | | | | 0.78 | | | | 0.25 | | | | | | | 3 |



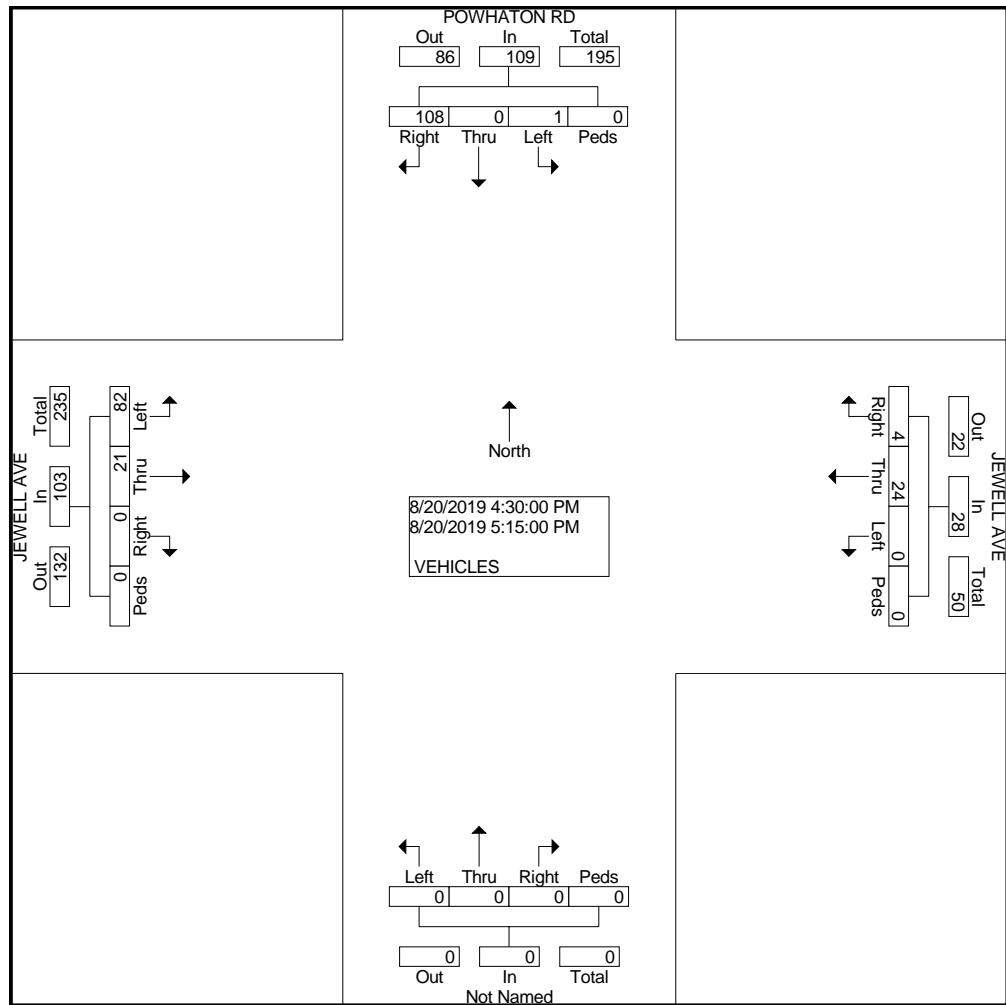
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: POWHATON RD
E/W STREET: JEWELL AVE
CITY: AURORA
COUNTY: ARAPAHOE

File Name : POWHJEWE
Site Code : 00000015
Start Date : 8/20/2019
Page No : 2

| Start Time | POWHATON RD Southbound | | | | | JEWELL AVE Westbound | | | | | Northbound | | | | | JEWELL AVE Eastbound | | | | | |
|---|------------------------|------|-------|------|------------|----------------------|------|-------|------|------------|------------|------|-------|------|------------|----------------------|------|-------|------|------------|------------|
| | 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 From 04:30 PM to 05:15 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Intersection | 04:30 PM | | | | | | | | | | | | | | | | | | | | |
| Volume | 1 | 0 | 108 | 0 | 109 | 0 | 24 | 4 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 82 | 21 | 0 | 0 | 103 | 240 |
| Percent | 0.9 | 0.0 | 99. | 1 | 0.0 | 0.0 | 85. | 14. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 79. | 20. | 0.0 | 0.0 | 0.0 | |
| 05:15 | 0 | 0 | 24 | 0 | 24 | 0 | 7 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 26 | 7 | 0 | 0 | 33 | 65 |
| Volume | Peak Factor | | | | | | | | | | | | | | | | | | | | 0.923 |
| High Int. | 05:00 PM | | | | | 04:45 PM | | | | | | | | | | 05:15 PM | | | | | |
| Volume | 0 | 0 | 30 | 0 | 30 | 0 | 8 | 2 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 26 | 7 | 0 | 0 | 33 | 0.78 |
| Peak Factor | | | | | | | | | | | | | | | | | | | | | 0 |



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: WATKINS RD
E/W STREET: JEWELL AVE
CITY: AURORA
COUNTY: ARAPAHOE

File Name : WATKJEWE
Site Code : 00000026
Start Date : 8/20/2019
Page No : 1

Groups Printed- VEHICLES

| Start Time | WATKINS RD Southbound | | | | Westbound | | | | WATKINS RD Northbound | | | | JEWELL AVE Eastbound | | | | Int. Total |
|-------------|-----------------------|------|-------|------|-----------|------|-------|------|-----------------------|------|-------|------|----------------------|------|-------|------|------------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | |
| Factor | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 06:30 AM | 0 | 36 | 7 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 0 | 0 | 2 | 0 | 0 | 1 | 64 |
| 06:45 AM | 0 | 41 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 35 | 0 | 0 | 1 | 0 | 1 | 0 | 80 |
| Total | 0 | 77 | 8 | 0 | 0 | 0 | 0 | 0 | 3 | 51 | 0 | 0 | 3 | 0 | 1 | 1 | 144 |
| 07:00 AM | 0 | 23 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 53 |
| 07:15 AM | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 13 | 0 | 0 | 1 | 0 | 2 | 0 | 53 |
| 07:30 AM | 0 | 27 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 18 | 0 | 0 | 1 | 0 | 0 | 0 | 53 |
| 07:45 AM | 0 | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 17 | 0 | 0 | 2 | 0 | 1 | 0 | 44 |
| Total | 0 | 104 | 8 | 0 | 0 | 0 | 0 | 0 | 14 | 68 | 0 | 0 | 6 | 0 | 3 | 0 | 203 |
| 08:00 AM | 0 | 19 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 2 | 0 | 1 | 0 | 45 |
| 08:15 AM | 0 | 24 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 1 | 0 | 39 |
| Total | 0 | 43 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 2 | 0 | 2 | 0 | 84 |
| 04:00 PM | 0 | 16 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 1 | 5 | 0 | 1 | 0 | 51 |
| 04:15 PM | 0 | 23 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 3 | 0 | 1 | 0 | 57 |
| 04:30 PM | 0 | 21 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 25 | 0 | 0 | 4 | 0 | 2 | 0 | 57 |
| 04:45 PM | 0 | 21 | 7 | 0 | 0 | 0 | 0 | 0 | 3 | 32 | 0 | 0 | 3 | 0 | 3 | 0 | 69 |
| Total | 0 | 81 | 13 | 0 | 0 | 0 | 0 | 0 | 5 | 112 | 0 | 1 | 15 | 0 | 7 | 0 | 234 |
| 05:00 PM | 0 | 17 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 8 | 0 | 1 | 0 | 62 |
| 05:15 PM | 0 | 27 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 40 | 0 | 0 | 3 | 0 | 4 | 0 | 82 |
| 05:30 PM | 0 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 30 | 0 | 0 | 6 | 0 | 2 | 0 | 52 |
| 05:45 PM | 0 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 3 | 0 | 0 | 0 | 49 |
| Total | 0 | 73 | 14 | 0 | 0 | 0 | 0 | 0 | 3 | 128 | 0 | 0 | 20 | 0 | 7 | 0 | 245 |
| Grand Total | 0 | 378 | 52 | 0 | 0 | 0 | 0 | 0 | 25 | 387 | 0 | 1 | 46 | 0 | 20 | 1 | 910 |
| Apprch % | 0.0 | 87.9 | 12.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.1 | 93.7 | 0.0 | 0.2 | 68.7 | 0.0 | 29.9 | 1.5 | |
| Total % | 0.0 | 41.5 | 5.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 42.5 | 0.0 | 0.1 | 5.1 | 0.0 | 2.2 | 0.1 | |

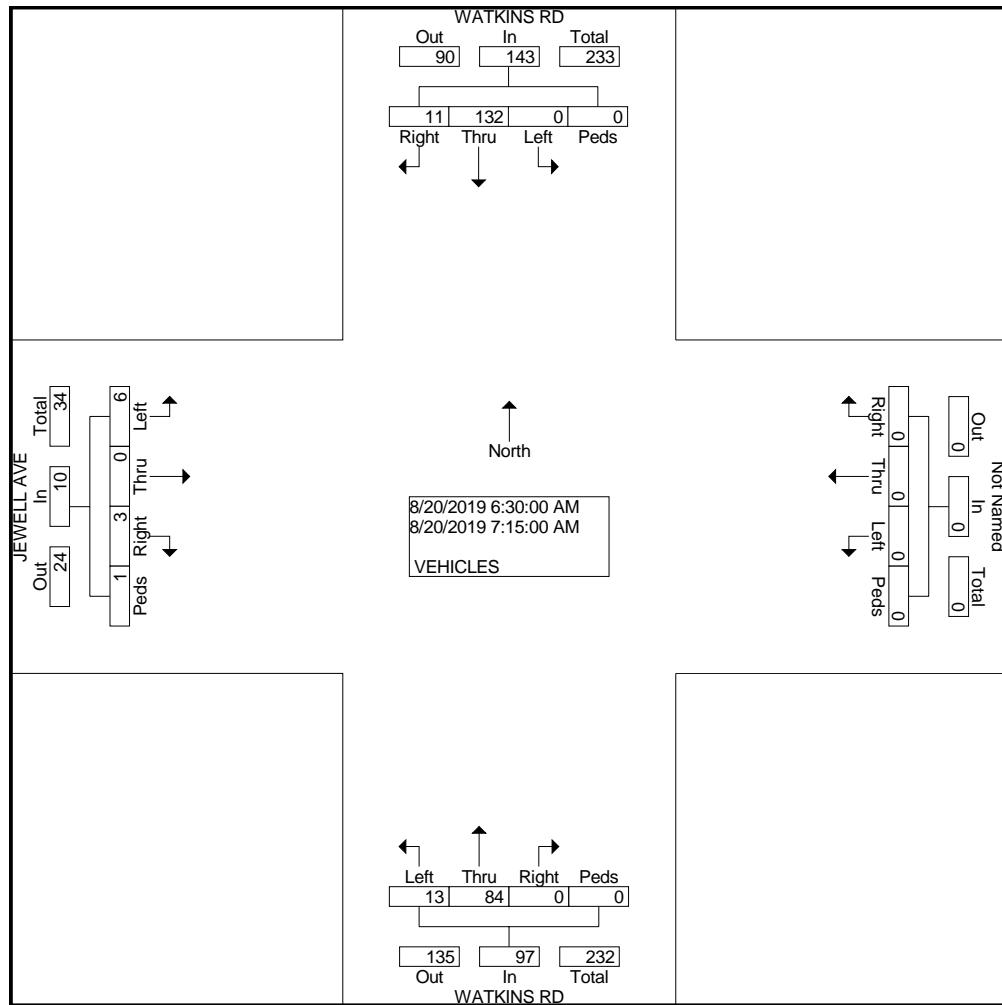
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: WATKINS RD
E/W STREET: JEWELL AVE
CITY: AURORA
COUNTY: ARAPAHOE

File Name : WATKJEWE
Site Code : 00000026
Start Date : 8/20/2019
Page No : 2

| Start Time | WATKINS RD Southbound | | | | | Westbound | | | | | WATKINS RD Northbound | | | | | JEWELL AVE Eastbound | | | | | |
|---|-----------------------|------|-------|------|------------|------------|------|-------|------|------------|-----------------------|------|-------|------|------------|----------------------|------|-------|------|------------|------------|
| | 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 From 06:30 AM to 08:30 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Intersection 06:30 AM | | | | | | | | | | | | | | | | | | | | | |
| Volume | 0 | 132 | 11 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 13 | 84 | 0 | 0 | 97 | 6 | 0 | 3 | 1 | 10 | 250 |
| Percent | 0.0 | 92.3 | 7.7 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 13.4 | 86.6 | 0.0 | 0.0 | | 60.0 | 0.0 | 30.0 | 10.0 | | |
| 06:45 Volume Peak Factor | 0 | 41 | 1 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 1 | 35 | 0 | 0 | 36 | 1 | 0 | 1 | 0 | 2 | 80 |
| High Int. 06:30 AM | | | | | | 6:15:00 AM | | | | | 06:45 AM | | | | | 06:30 AM | | | | | 0.781 |
| Volume Peak Factor | 0 | 36 | 7 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 1 | 35 | 0 | 0 | 36 | 2 | 0 | 0 | 1 | 3 | 0.83 |
| | | | | | 0.83 | | | | | | | | | | 0.67 | | | | | 3 | |
| | | | | | 1 | | | | | | | | | | | 4 | | | | | |



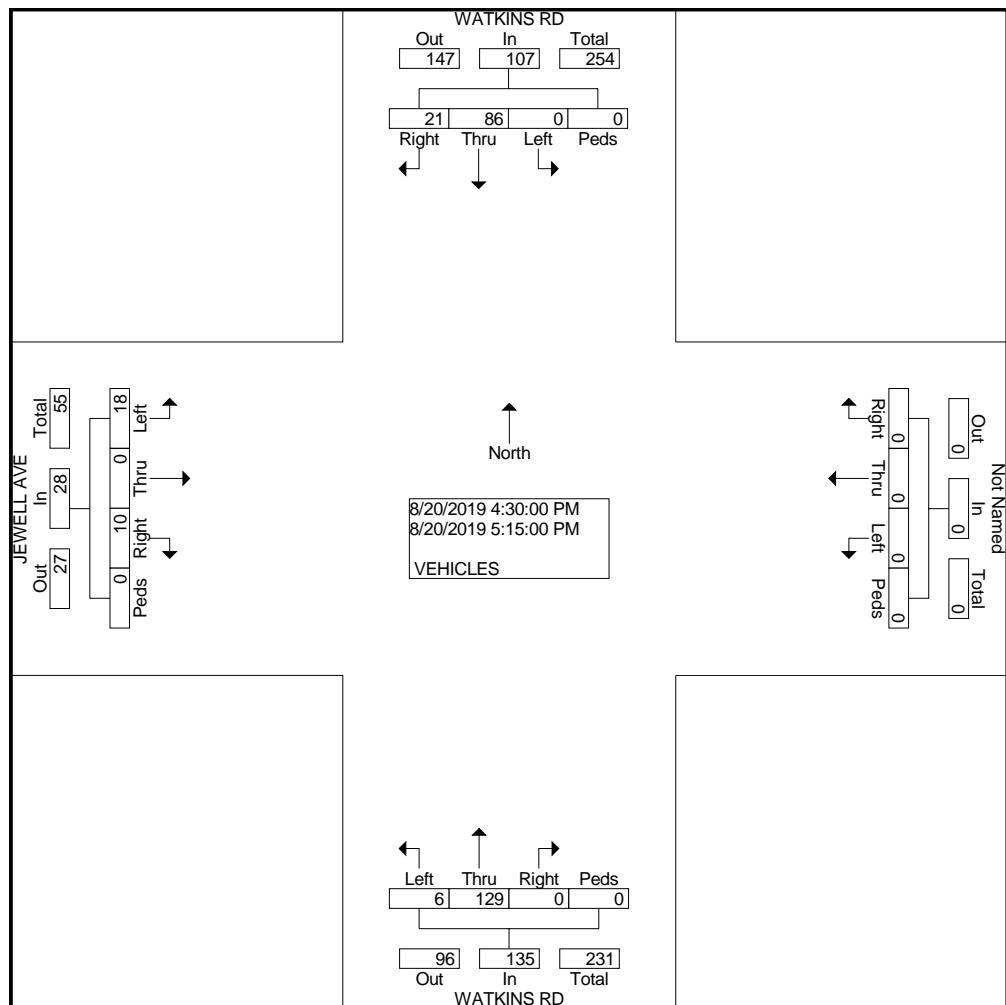
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: WATKINS RD
E/W STREET: JEWELL AVE
CITY: AURORA
COUNTY: ARAPAHOE

File Name : WATKJEWE
Site Code : 00000026
Start Date : 8/20/2019
Page No : 2

| Start Time | WATKINS RD Southbound | | | | | Westbound | | | | | WATKINS RD Northbound | | | | | JEWELL AVE Eastbound | | | | | |
|---|-----------------------|------|-------|------|------------|-----------|------|-------|------|------------|-----------------------|------|-------|------|------------|----------------------|------|-------|------|------------|------------|
| | 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 From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Intersection 04:30 PM | | | | | | | | | | | | | | | | | | | | | |
| Volume | 0 | 86 | 21 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 6 | 129 | 0 | 0 | 135 | 18 | 0 | 10 | 0 | 28 | 270 |
| Percent | 0.0 | 80.4 | 19.6 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 4.4 | 95.6 | 0.0 | 0.0 | | 64.3 | 0.0 | 35.7 | 0.0 | | |
| 05:15 Volume Peak Factor | 0 | 27 | 7 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 1 | 40 | 0 | 0 | 41 | 3 | 0 | 4 | 0 | 7 | 82 |
| High Int. 05:15 PM | | | | | | | | | | | 05:15 PM | | | | | 05:00 PM | | | | | 0.823 |
| Volume Peak Factor | 0 | 27 | 7 | 0 | 34 | 0.78 | 0 | 0 | 0 | 0 | 1 | 40 | 0 | 0 | 41 | 8 | 0 | 1 | 0 | 9 | 0.778 |
| | | | | | | | | | | | | | | | | | | | | | |



COUNTER MEASURES INC.
1889 YORK STREET
DENVER, COLORADO 80206
303-333-7409

Location: JEWELL AVE E/O POWHATON RD
City: AURORA
County: ARAPAHOE
Direction: EASTBOUND-WESTBOUND

Site Code: 191917
Station ID: 191917

| Start Time | 19-Aug-19 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|--------------|-----------|----|-------|-------|-----|----|-----|----|-----|----|-----|----|-----|----|--------------|-------|
| | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB |
| 12:00 AM | * | * | 4 | 3 | * | * | * | * | * | * | * | * | * | * | 4 | 3 |
| 01:00 | * | * | 1 | 2 | * | * | * | * | * | * | * | * | * | * | 1 | 2 |
| 02:00 | * | * | 0 | 0 | * | * | * | * | * | * | * | * | * | * | 0 | 0 |
| 03:00 | * | * | 2 | 2 | * | * | * | * | * | * | * | * | * | * | 2 | 2 |
| 04:00 | * | * | 0 | 1 | * | * | * | * | * | * | * | * | * | * | 0 | 1 |
| 05:00 | * | * | 6 | 3 | * | * | * | * | * | * | * | * | * | * | 6 | 3 |
| 06:00 | * | * | 10 | 17 | * | * | * | * | * | * | * | * | * | * | 10 | 17 |
| 07:00 | * | * | 7 | 18 | * | * | * | * | * | * | * | * | * | * | 7 | 18 |
| 08:00 | * | * | 11 | 12 | * | * | * | * | * | * | * | * | * | * | 11 | 12 |
| 09:00 | * | * | 10 | 12 | * | * | * | * | * | * | * | * | * | * | 10 | 12 |
| 10:00 | * | * | 15 | 16 | * | * | * | * | * | * | * | * | * | * | 15 | 16 |
| 11:00 | * | * | 9 | 16 | * | * | * | * | * | * | * | * | * | * | 9 | 16 |
| 12:00 PM | * | * | 13 | 11 | * | * | * | * | * | * | * | * | * | * | 13 | 11 |
| 01:00 | * | * | 12 | 7 | * | * | * | * | * | * | * | * | * | * | 12 | 7 |
| 02:00 | * | * | 15 | 10 | * | * | * | * | * | * | * | * | * | * | 15 | 10 |
| 03:00 | * | * | 24 | 11 | * | * | * | * | * | * | * | * | * | * | 24 | 11 |
| 04:00 | * | * | 19 | 9 | * | * | * | * | * | * | * | * | * | * | 19 | 9 |
| 05:00 | * | * | 23 | 29 | * | * | * | * | * | * | * | * | * | * | 23 | 29 |
| 06:00 | * | * | 25 | 8 | * | * | * | * | * | * | * | * | * | * | 25 | 8 |
| 07:00 | * | * | 15 | 6 | * | * | * | * | * | * | * | * | * | * | 15 | 6 |
| 08:00 | * | * | 6 | 8 | * | * | * | * | * | * | * | * | * | * | 6 | 8 |
| 09:00 | * | * | 10 | 4 | * | * | * | * | * | * | * | * | * | * | 10 | 4 |
| 10:00 | * | * | 4 | 2 | * | * | * | * | * | * | * | * | * | * | 4 | 2 |
| 11:00 | * | * | 1 | 0 | * | * | * | * | * | * | * | * | * | * | 1 | 0 |
| Lane Day | 0 | 0 | 242 | 207 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 207 |
| | 0 | 0 | 449 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 449 | |
| AM Peak Vol. | - | - | 10:00 | 07:00 | - | - | - | - | - | - | - | - | - | - | 10:00 | 07:00 |
| PM Peak Vol. | - | - | 18:00 | 17:00 | - | - | - | - | - | - | - | - | - | - | 18:00 | 17:00 |
| Comb. Total | 0 | | 449 | | 0 | | 0 | | 0 | | 0 | | 0 | | 449 | |

ADT

ADT 449

AADT 449

COUNTER MEASURES INC.
1889 YORK STREET
DENVER, COLORADO 80206
303-333-7409

Location: JEWELL AVE W/O POWHATON RD
City: AURORA
County: ARAPAHOE
Direction: EASTBOUND-WESTBOUND

Site Code: 192107
Station ID: 192107

| Start Time | 19-Aug-19 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|--------------|-----------|----|-----|----|-----|----|-------|-------|-----|----|-----|----|-----|----|--------------|-------|
| | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB |
| 12:00 AM | * | * | * | * | * | * | 9 | 25 | * | * | * | * | * | * | 9 | 25 |
| 01:00 | * | * | * | * | * | * | 7 | 14 | * | * | * | * | * | * | 7 | 14 |
| 02:00 | * | * | * | * | * | * | 5 | 4 | * | * | * | * | * | * | 5 | 4 |
| 03:00 | * | * | * | * | * | * | 12 | 6 | * | * | * | * | * | * | 12 | 6 |
| 04:00 | * | * | * | * | * | * | 22 | 6 | * | * | * | * | * | * | 22 | 6 |
| 05:00 | * | * | * | * | * | * | 66 | 20 | * | * | * | * | * | * | 66 | 20 |
| 06:00 | * | * | * | * | * | * | 85 | 74 | * | * | * | * | * | * | 85 | 74 |
| 07:00 | * | * | * | * | * | * | 92 | 118 | * | * | * | * | * | * | 92 | 118 |
| 08:00 | * | * | * | * | * | * | 58 | 83 | * | * | * | * | * | * | 58 | 83 |
| 09:00 | * | * | * | * | * | * | 58 | 69 | * | * | * | * | * | * | 58 | 69 |
| 10:00 | * | * | * | * | * | * | 59 | 59 | * | * | * | * | * | * | 59 | 59 |
| 11:00 | * | * | * | * | * | * | 78 | 67 | * | * | * | * | * | * | 78 | 67 |
| 12:00 PM | * | * | * | * | * | * | 78 | 94 | * | * | * | * | * | * | 78 | 94 |
| 01:00 | * | * | * | * | * | * | 103 | 73 | * | * | * | * | * | * | 103 | 73 |
| 02:00 | * | * | * | * | * | * | 73 | 82 | * | * | * | * | * | * | 73 | 82 |
| 03:00 | * | * | * | * | * | * | 85 | 139 | * | * | * | * | * | * | 85 | 139 |
| 04:00 | * | * | * | * | * | * | 92 | 112 | * | * | * | * | * | * | 92 | 112 |
| 05:00 | * | * | * | * | * | * | 107 | 110 | * | * | * | * | * | * | 107 | 110 |
| 06:00 | * | * | * | * | * | * | 92 | 64 | * | * | * | * | * | * | 92 | 64 |
| 07:00 | * | * | * | * | * | * | 56 | 48 | * | * | * | * | * | * | 56 | 48 |
| 08:00 | * | * | * | * | * | * | 38 | 28 | * | * | * | * | * | * | 38 | 28 |
| 09:00 | * | * | * | * | * | * | 29 | 35 | * | * | * | * | * | * | 29 | 35 |
| 10:00 | * | * | * | * | * | * | 18 | 26 | * | * | * | * | * | * | 18 | 26 |
| 11:00 | * | * | * | * | * | * | 11 | 31 | * | * | * | * | * | * | 11 | 31 |
| Lane Day | 0 | 0 | 0 | 0 | 0 | 0 | 1333 | 1387 | 0 | 0 | 0 | 0 | 0 | 0 | 1333 | 1387 |
| AM Peak Vol. | - | - | - | - | - | - | 07:00 | 07:00 | - | - | - | - | - | - | 07:00 | 07:00 |
| PM Peak Vol. | - | - | - | - | - | - | 17:00 | 15:00 | - | - | - | - | - | - | 17:00 | 15:00 |
| Comb. Total | 0 | 0 | 0 | 0 | 0 | 0 | 2720 | 2720 | 0 | 0 | 0 | 0 | 0 | 0 | 2720 | 2720 |

0

0

0

2720

0

0

0

2720

ADT

ADT 2,720

AADT 2,720

COUNTER MEASURES INC.
1889 YORK STREET
DENVER, COLORADO 80206
303-333-7409

Location: POWHATON RD N/O JEWELL AVE
City: AURORA
County: ARAPAHOE
Direction: NORTHBOUND-SOUTHBOUND

Site Code: 191910
Station ID: 191910

| Start Time | 19-Aug-19 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|--------------|-----------|------|-------|-------|-----|----|-----|----|-----|----|-----|----|-----|----|--------------|-------|
| | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | * | * | 1 | 7 | * | * | * | * | * | * | * | * | * | * | 1 | 7 |
| 01:00 | * | * | 2 | 6 | * | * | * | * | * | * | * | * | * | * | 2 | 6 |
| 02:00 | * | * | 3 | 3 | * | * | * | * | * | * | * | * | * | * | 3 | 3 |
| 03:00 | * | * | 7 | 7 | * | * | * | * | * | * | * | * | * | * | 7 | 7 |
| 04:00 | * | * | 26 | 3 | * | * | * | * | * | * | * | * | * | * | 26 | 3 |
| 05:00 | * | * | 75 | 19 | * | * | * | * | * | * | * | * | * | * | 75 | 19 |
| 06:00 | * | * | 80 | 62 | * | * | * | * | * | * | * | * | * | * | 80 | 62 |
| 07:00 | * | * | 67 | 96 | * | * | * | * | * | * | * | * | * | * | 67 | 96 |
| 08:00 | * | * | 63 | 65 | * | * | * | * | * | * | * | * | * | * | 63 | 65 |
| 09:00 | * | * | 39 | 46 | * | * | * | * | * | * | * | * | * | * | 39 | 46 |
| 10:00 | * | * | 57 | 35 | * | * | * | * | * | * | * | * | * | * | 57 | 35 |
| 11:00 | * | * | 50 | 46 | * | * | * | * | * | * | * | * | * | * | 50 | 46 |
| 12:00 PM | * | * | 48 | 54 | * | * | * | * | * | * | * | * | * | * | 48 | 54 |
| 01:00 | * | * | 59 | 41 | * | * | * | * | * | * | * | * | * | * | 59 | 41 |
| 02:00 | * | * | 46 | 72 | * | * | * | * | * | * | * | * | * | * | 46 | 72 |
| 03:00 | * | * | 75 | 142 | * | * | * | * | * | * | * | * | * | * | 75 | 142 |
| 04:00 | * | * | 74 | 102 | * | * | * | * | * | * | * | * | * | * | 74 | 102 |
| 05:00 | * | * | 89 | 95 | * | * | * | * | * | * | * | * | * | * | 89 | 95 |
| 06:00 | * | * | 72 | 57 | * | * | * | * | * | * | * | * | * | * | 72 | 57 |
| 07:00 | * | * | 48 | 47 | * | * | * | * | * | * | * | * | * | * | 48 | 47 |
| 08:00 | * | * | 36 | 35 | * | * | * | * | * | * | * | * | * | * | 36 | 35 |
| 09:00 | * | * | 26 | 23 | * | * | * | * | * | * | * | * | * | * | 26 | 23 |
| 10:00 | * | * | 9 | 18 | * | * | * | * | * | * | * | * | * | * | 9 | 18 |
| 11:00 | * | * | 8 | 25 | * | * | * | * | * | * | * | * | * | * | 8 | 25 |
| Lane Day | 0 | 0 | 1060 | 1106 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1060 | 1106 |
| AM Peak Vol. | - | - | 06:00 | 07:00 | - | - | - | - | - | - | - | - | - | - | 06:00 | 07:00 |
| PM Peak Vol. | - | - | 17:00 | 15:00 | - | - | - | - | - | - | - | - | - | - | 17:00 | 15:00 |
| Comb. Total | 0 | 2166 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2166 | |

ADT ADT 2,166

AADT 2,166

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual, Transportation Research Board, 2016, 6th Edition*

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

| <u>LOS</u> | <u>Average Vehicle Delay</u> sec/vehicle | <u>Operational Characteristics</u> |
|------------|---|--|
| A | <10 seconds | Describes operations with low control delay, up to 10 sec/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values. |
| B | 10 to 20 seconds | Describes operations with control delay greater than 10 seconds and up to 20 sec/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay. |
| C | 20 to 35 seconds | Describes operations with control delay greater than 20 and up to 35 sec/veh. These higher delays may result from only fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping. |
| D | 35 to 55 seconds | Describes operations with control delay greater than 35 and up to 55 sec/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. |
| E | 55 to 80 seconds | Describes operations with control delay greater than 55 and up to 80 sec/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent. |
| F | >80 seconds | Describes operations with control delay in excess of 80 sec/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels. |

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual, Transportation Research Board, 2016, 6th Edition*

UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

| LOS | Average Vehicle Control Delay | Operational Characteristics |
|-----|-------------------------------|--|
| A | <10 seconds | Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn. |
| B | 10 to 15 seconds | Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. The delay could be up to 15 seconds. Left-turning vehicles on the uncontrolled street may have to wait to make their turn. |
| C | 15 to 25 seconds | Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection. Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane. |
| D | 25 to 35 seconds | This is the point at which a traffic signal may be warranted for this intersection. The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points. |
| E | 35 to 50 seconds | The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. There is a high probability that this intersection will meet traffic signal warrants. The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach. |
| F | >50 seconds | The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. The only remedy for these long delays is installing a traffic signal or restricting the accesses. The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns. |

HCM 6th TWSC
6: E. Jewell Ave & Powhaton Rd

Existing Traffic
AM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 7.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 91 | 7 | 22 | 0 | 0 | 106 |
| Future Vol, veh/h | 91 | 7 | 22 | 0 | 0 | 106 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 97 | 7 | 23 | 0 | 0 | 113 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 23 | 0 | - | 0 | 224 | 23 |
| Stage 1 | - | - | - | - | 23 | - |
| Stage 2 | - | - | - | - | 201 | - |
| 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 | 1592 | - | - | - | 764 | 1054 |
| Stage 1 | - | - | - | - | 1000 | - |
| Stage 2 | - | - | - | - | 833 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1592 | - | - | - | 717 | 1054 |
| Mov Cap-2 Maneuver | - | - | - | - | 717 | - |
| Stage 1 | - | - | - | - | 939 | - |
| Stage 2 | - | - | - | - | 833 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 6.9 | 0 | 8.8 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 1592 | - | - | - | 1054 | |
| HCM Lane V/C Ratio | 0.061 | - | - | - | 0.107 | |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.8 | |
| HCM Lane LOS | A | A | - | - | A | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.4 | |

HCM 6th TWSC
13: Watkins Rd & E. Jewell Ave

Existing Traffic
AM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | A | B | | |
| Traffic Vol, veh/h | 6 | 3 | 13 | 84 | 132 | 11 |
| Future Vol, veh/h | 6 | 3 | 13 | 84 | 132 | 11 |
| 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 | 78 | 78 | 78 | 78 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 4 | 17 | 108 | 169 | 14 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 318 | 176 | 183 | 0 | - | 0 |
| Stage 1 | 176 | - | - | - | - | - |
| Stage 2 | 142 | - | - | - | - | - |
| 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 | 675 | 867 | 1392 | - | - | - |
| Stage 1 | 855 | - | - | - | - | - |
| Stage 2 | 885 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 666 | 867 | 1392 | - | - | - |
| Mov Cap-2 Maneuver | 666 | - | - | - | - | - |
| Stage 1 | 844 | - | - | - | - | - |
| Stage 2 | 885 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 10.1 | 1 | | 0 | | |
| HCM LOS | B | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1392 | - | 722 | - | - | |
| HCM Lane V/C Ratio | 0.012 | - | 0.016 | - | - | |
| HCM Control Delay (s) | 7.6 | 0 | 10.1 | - | - | |
| HCM Lane LOS | A | A | B | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0 | - | - | |

HCM 6th TWSC
6: E. Jewell Ave & Powhaton Rd

Existing Traffic
PM Peak Hour

Intersection

Int Delay, s/veh 6.6

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

| | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 82 | 21 | 24 | 4 | 1 | 108 |
| Future Vol, veh/h | 82 | 21 | 24 | 4 | 1 | 108 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 89 | 23 | 26 | 4 | 1 | 117 |

| Major/Minor | Major1 | Major2 | Minor2 | |
|----------------------|--------|--------|--------|-------------|
| Conflicting Flow All | 30 | 0 | - | 0 229 28 |
| Stage 1 | - | - | - | 28 - |
| Stage 2 | - | - | - | 201 - |
| 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 | 1583 | - | - | 759 1047 |
| Stage 1 | - | - | - | 995 - |
| Stage 2 | - | - | - | 833 - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | 1583 | - | - | 716 1047 |
| Mov Cap-2 Maneuver | - | - | - | 716 - |
| Stage 1 | - | - | - | 938 - |
| Stage 2 | - | - | - | 833 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 5.9 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1583 | - | - | - | 1043 |
| HCM Lane V/C Ratio | 0.056 | - | - | - | 0.114 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.4 |

HCM 6th TWSC
13: Watkins Rd & E. Jewell Ave

Existing Traffic
PM Peak Hour

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | A | B | | |
| Traffic Vol, veh/h | 18 | 10 | 6 | 129 | 86 | 21 |
| Future Vol, veh/h | 18 | 10 | 6 | 129 | 86 | 21 |
| 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 | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 22 | 12 | 7 | 157 | 105 | 26 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 289 | 118 | 131 | 0 | - | 0 |
| Stage 1 | 118 | - | - | - | - | - |
| Stage 2 | 171 | - | - | - | - | - |
| 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 | 702 | 934 | 1454 | - | - | - |
| Stage 1 | 907 | - | - | - | - | - |
| Stage 2 | 859 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 698 | 934 | 1454 | - | - | - |
| Mov Cap-2 Maneuver | 698 | - | - | - | - | - |
| Stage 1 | 902 | - | - | - | - | - |
| Stage 2 | 859 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.9 | 0.3 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1454 | - | 767 | - | - | |
| HCM Lane V/C Ratio | 0.005 | - | 0.045 | - | - | |
| HCM Control Delay (s) | 7.5 | 0 | 9.9 | - | - | |
| HCM Lane LOS | A | A | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | | ↔ | ↔ | | |
| Traffic Vol, veh/h | 7 | 1 | 10 | 30 | 5 | 5 |
| Future Vol, veh/h | 7 | 1 | 10 | 30 | 5 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 1 | 11 | 32 | 5 | 5 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 8 | 0 | 62 | 8 |
| Stage 1 | - | - | - | - | 8 | - |
| Stage 2 | - | - | - | - | 54 | - |
| 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 | - | - | 1612 | - | 944 | 1074 |
| Stage 1 | - | - | - | - | 1015 | - |
| Stage 2 | - | - | - | - | 969 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1612 | - | 937 | 1074 |
| Mov Cap-2 Maneuver | - | - | - | - | 937 | - |
| Stage 1 | - | - | - | - | 1015 | - |
| Stage 2 | - | - | - | - | 962 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 1.8 | 8.6 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 1001 | - | - | 1612 | - | |
| HCM Lane V/C Ratio | 0.011 | - | - | 0.007 | - | |
| HCM Control Delay (s) | 8.6 | - | - | 7.2 | 0 | |
| HCM Lane LOS | A | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | A | B | | |
| Traffic Vol, veh/h | 10 | 2 | 5 | 20 | 55 | 35 |
| Future Vol, veh/h | 10 | 2 | 5 | 20 | 55 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 2 | 5 | 21 | 58 | 37 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 108 | 77 | 95 | 0 | - | 0 |
| Stage 1 | 77 | - | - | - | - | - |
| Stage 2 | 31 | - | - | - | - | - |
| 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 | 889 | 984 | 1499 | - | - | - |
| Stage 1 | 946 | - | - | - | - | - |
| Stage 2 | 992 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 886 | 984 | 1499 | - | - | - |
| Mov Cap-2 Maneuver | 886 | - | - | - | - | - |
| Stage 1 | 943 | - | - | - | - | - |
| Stage 2 | 992 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.1 | 1.5 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1499 | - | 901 | - | - | |
| HCM Lane V/C Ratio | 0.004 | - | 0.014 | - | - | |
| HCM Control Delay (s) | 7.4 | 0 | 9.1 | - | - | |
| HCM Lane LOS | A | A | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0 | - | - | |

Timings
6: Powhaton Rd & E. Jewell Ave

2041 Background Traffic

AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 200 | 230 | 10 | 95 | 726 | 45 | 35 | 360 | 30 | 15 | 120 | 235 |
| Future Volume (vph) | 200 | 230 | 10 | 95 | 726 | 45 | 35 | 360 | 30 | 15 | 120 | 235 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | Free | 8 | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 20.0 | | 5.0 | 20.0 | |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 25.0 | | 10.0 | 25.0 | |
| Total Split (s) | 15.0 | 53.0 | 53.0 | 15.0 | 53.0 | | 17.0 | 35.0 | | 17.0 | 35.0 | |
| Total Split (%) | 12.5% | 44.2% | 44.2% | 12.5% | 44.2% | | 14.2% | 29.2% | | 14.2% | 29.2% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 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 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 79.9 | 68.9 | 68.9 | 73.8 | 65.8 | 120.0 | 26.8 | 23.3 | 120.0 | 24.3 | 20.2 | 120.0 |
| Actuated g/C Ratio | 0.67 | 0.57 | 0.57 | 0.62 | 0.55 | 1.00 | 0.22 | 0.19 | 1.00 | 0.20 | 0.17 | 1.00 |
| v/c Ratio | 0.46 | 0.12 | 0.01 | 0.14 | 0.39 | 0.03 | 0.13 | 0.55 | 0.02 | 0.08 | 0.21 | 0.16 |
| Control Delay | 11.2 | 13.3 | 0.0 | 8.4 | 17.8 | 0.0 | 33.9 | 47.1 | 0.0 | 32.7 | 44.1 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.2 | 13.3 | 0.0 | 8.4 | 17.8 | 0.0 | 33.9 | 47.1 | 0.0 | 32.7 | 44.1 | 0.2 |
| LOS | B | B | A | A | B | A | C | D | A | C | D | A |
| Approach Delay | | 12.1 | | | 15.9 | | | 42.6 | | | 15.7 | |
| Approach LOS | | B | | | B | | | D | | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 20.5

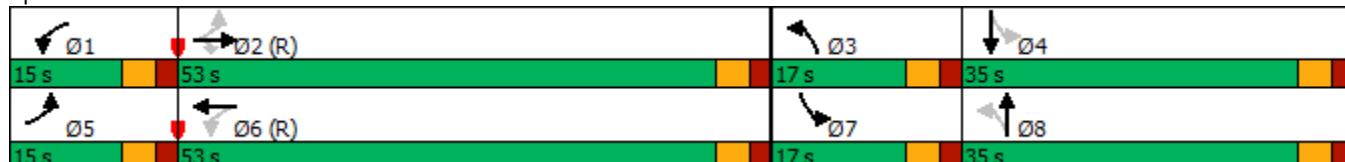
Intersection LOS: C

Intersection Capacity Utilization 60.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Powhaton Rd & E. Jewell Ave



Timings
7: Monaghan Rd & E. Jewell Ave

2041 Background Traffic

AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ |
| Traffic Volume (vph) | 155 | 65 | 25 | 15 | 256 | 25 | 70 | 25 | 5 | 10 | 10 | 470 |
| Future Volume (vph) | 155 | 65 | 25 | 15 | 256 | 25 | 70 | 25 | 5 | 10 | 10 | 470 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | | 6 | | 6 | 8 | | 8 | 4 | |
| Detector Phase | 5 | 2 | | 1 | 6 | | 6 | 3 | 8 | 8 | 7 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 10.0 | 20.0 | | 10.0 | 20.0 | | 10.0 | 20.0 | | 20.0 | 10.0 | 20.0 |
| Total Split (s) | 15.0 | 53.0 | | 15.0 | 53.0 | | 53.0 | 22.0 | 30.0 | 30.0 | 22.0 | 30.0 |
| Total Split (%) | 12.5% | 44.2% | | 12.5% | 44.2% | | 44.2% | 18.3% | 25.0% | 25.0% | 18.3% | 25.0% |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| 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 | -2.0 | | 0.0 | -2.0 | | 0.0 | 0.0 | -2.0 | 0.0 | 0.0 | -2.0 |
| Total Lost Time (s) | 5.0 | 3.0 | | 5.0 | 3.0 | | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 | 3.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | | None | C-Max | | C-Max | None | None | None | None | None |
| Act Effect Green (s) | 11.0 | 98.0 | 120.0 | 89.5 | 85.8 | 83.8 | 12.5 | 11.8 | 9.8 | 7.6 | 7.9 | 120.0 |
| Actuated g/C Ratio | 0.09 | 0.82 | 1.00 | 0.75 | 0.72 | 0.70 | 0.10 | 0.10 | 0.08 | 0.06 | 0.07 | 1.00 |
| v/c Ratio | 0.52 | 0.02 | 0.02 | 0.02 | 0.11 | 0.02 | 0.43 | 0.07 | 0.02 | 0.10 | 0.05 | 0.31 |
| Control Delay | 62.9 | 3.2 | 0.0 | 4.1 | 7.1 | 0.0 | 55.6 | 48.0 | 0.2 | 48.1 | 52.7 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.9 | 3.2 | 0.0 | 4.1 | 7.1 | 0.0 | 55.6 | 48.0 | 0.2 | 48.1 | 52.7 | 0.5 |
| LOS | E | A | A | A | A | A | E | D | A | D | D | A |
| Approach Delay | | 40.7 | | | 6.4 | | | 51.1 | | | 2.6 | |
| Approach LOS | | D | | | A | | | D | | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 63 (53%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 32.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Monaghan Rd & E. Jewell Ave



| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↓ | | ↑ | ↑ |
| Traffic Vol, veh/h | 25 | 55 | 221 | 5 | 10 | 75 |
| Future Vol, veh/h | 25 | 55 | 221 | 5 | 10 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Free |
| Storage Length | 350 | - | - | - | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 58 | 233 | 5 | 11 | 79 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 238 | 0 | - | 0 | 317 | - |
| Stage 1 | - | - | - | - | 236 | - |
| Stage 2 | - | - | - | - | 81 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | - |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | - |
| Pot Cap-1 Maneuver | 1326 | - | - | - | 651 | 0 |
| Stage 1 | - | - | - | - | 781 | 0 |
| Stage 2 | - | - | - | - | 933 | 0 |
| Platoon blocked, % | - | - | - | | | |
| Mov Cap-1 Maneuver | 1326 | - | - | - | 638 | - |
| Mov Cap-2 Maneuver | - | - | - | - | 638 | - |
| Stage 1 | - | - | - | - | 765 | - |
| Stage 2 | - | - | - | - | 933 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.4 | 0 | 10.7 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1326 | - | - | - | 638 | - |
| HCM Lane V/C Ratio | 0.02 | - | - | - | 0.016 | - |
| HCM Control Delay (s) | 7.8 | - | - | - | 10.7 | 0 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 | - |

Intersection

Int Delay, s/veh 2.9

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↑ ↗ | ↑ ↘ | | ↑ ↗ | ↑ ↘ | ↑ ↗ | ↑ ↗ | ↑ ↘ | | ↑ ↗ | ↑ ↗ | ↑ ↗ |
| Traffic Vol, veh/h | 25 | 38 | 2 | 5 | 151 | 35 | 5 | 35 | 2 | 10 | 10 | 70 |
| Future Vol, veh/h | 25 | 38 | 2 | 5 | 151 | 35 | 5 | 35 | 2 | 10 | 10 | 70 |
| 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 | - | - | Free |
| Storage Length | 350 | - | - | 350 | - | 273 | 250 | - | - | 250 | - | 190 |
| 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 | 26 | 40 | 2 | 5 | 159 | 37 | 5 | 37 | 2 | 11 | 11 | 74 |

| Major/Minor | Major1 | Major2 | | Minor1 | | Minor2 | | |
|----------------------|--------|--------|---|--------|---|--------|------|------|
| Conflicting Flow All | 196 | 0 | 0 | 42 | 0 | 0 | 188 | 299 |
| Stage 1 | - | - | - | - | - | - | 93 | 93 |
| Stage 2 | - | - | - | - | - | - | 95 | 206 |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.54 | 5.54 |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.54 | 5.54 |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 |
| Pot Cap-1 Maneuver | 1374 | - | - | 1565 | - | - | 755 | 612 |
| Stage 1 | - | - | - | - | - | - | 904 | 817 |
| Stage 2 | - | - | - | - | - | - | 901 | 730 |
| Platoon blocked, % | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1374 | - | - | 1565 | - | - | 733 | 599 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 733 | 599 |
| Stage 1 | - | - | - | - | - | - | 887 | 801 |
| Stage 2 | - | - | - | - | - | - | 886 | 728 |

| Approach | EB | WB | | NB | | SB | | |
|-----------------------|-------|-------|-------|------|-----|-------|-----|-----|
| HCM Control Delay, s | 3 | 0.2 | | 11.1 | | 10.8 | | |
| HCM LOS | | | | B | | B | | |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR |
| Capacity (veh/h) | 733 | 613 | 1374 | - | - | 1565 | - | - |
| HCM Lane V/C Ratio | 0.007 | 0.064 | 0.019 | - | - | 0.003 | - | - |
| HCM Control Delay (s) | 9.9 | 11.3 | 7.7 | - | - | 7.3 | - | - |
| HCM Lane LOS | A | B | A | - | - | A | - | - |
| HCM 95th %tile Q(veh) | 0 | 0.2 | 0.1 | - | - | 0 | - | - |
| | | | | | | | 0.1 | 0.1 |
| | | | | | | | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 0.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 5 | 45 | 185 | 5 | 5 | 6 |
| Future Vol, veh/h | 5 | 45 | 185 | 5 | 5 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Free |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 47 | 195 | 5 | 5 | 6 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 200 | 0 | - | 0 | 229 | - |
| Stage 1 | - | - | - | - | 195 | - |
| Stage 2 | - | - | - | - | 34 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | - |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | - |
| Pot Cap-1 Maneuver | 1370 | - | - | - | 739 | 0 |
| Stage 1 | - | - | - | - | 819 | 0 |
| Stage 2 | - | - | - | - | 984 | 0 |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1370 | - | - | - | 736 | - |
| Mov Cap-2 Maneuver | - | - | - | - | 736 | - |
| Stage 1 | - | - | - | - | 816 | - |
| Stage 2 | - | - | - | - | 984 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 0.8 | 0 | 9.9 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1370 | - | - | - | 736 | - |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.007 | - |
| HCM Control Delay (s) | 7.6 | - | - | - | 9.9 | 0 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|------|--------|------|-------|--------|------|-------|-------|-------|
| Int Delay, s/veh | 2.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↖ | ↖ | ↖ | ↑ | ↖ |
| Traffic Vol, veh/h | 10 | 39 | 1 | 5 | 155 | 5 | 5 | 10 | 1 | 15 | 12 | 30 |
| Future Vol, veh/h | 10 | 39 | 1 | 5 | 155 | 5 | 5 | 10 | 1 | 15 | 12 | 30 |
| 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 | 350 | - | 273 | 350 | - | 273 | 250 | - | - | 250 | - | 190 |
| 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 | 11 | 41 | 1 | 5 | 163 | 5 | 5 | 11 | 1 | 16 | 13 | 32 |
| Major/Minor | | | | | | | | | | | | |
| Major1 | | Major2 | | | Minor1 | | | Minor2 | | | | |
| Conflicting Flow All | 168 | 0 | 0 | 42 | 0 | 0 | 161 | 241 | 21 | 221 | 237 | 82 |
| Stage 1 | - | - | - | - | - | - | 63 | 63 | - | 173 | 173 | - |
| Stage 2 | - | - | - | - | - | - | 98 | 178 | - | 48 | 64 | - |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver | 1407 | - | - | 1565 | - | - | 789 | 659 | 1051 | 716 | 663 | 961 |
| Stage 1 | - | - | - | - | - | - | 941 | 842 | - | 812 | 755 | - |
| Stage 2 | - | - | - | - | - | - | 898 | 751 | - | 959 | 841 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1407 | - | - | 1565 | - | - | 746 | 652 | 1051 | 700 | 656 | 961 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 746 | 652 | - | 700 | 656 | - |
| Stage 1 | - | - | - | - | - | - | 933 | 835 | - | 806 | 753 | - |
| Stage 2 | - | - | - | - | - | - | 851 | 749 | - | 939 | 834 | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 1.5 | | 0.2 | | | 10.2 | | | 9.6 | | | |
| HCM LOS | B | | | | | | A | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 |
| Capacity (veh/h) | 746 | 675 | 1407 | - | - | - | 1565 | - | - | 700 | 656 | 961 |
| HCM Lane V/C Ratio | 0.007 | 0.017 | 0.007 | - | - | - | 0.003 | - | - | 0.023 | 0.019 | 0.033 |
| HCM Control Delay (s) | 9.9 | 10.4 | 7.6 | - | - | - | 7.3 | - | - | 10.3 | 10.6 | 8.9 |
| HCM Lane LOS | A | B | A | - | - | - | A | - | - | B | B | A |
| HCM 95th %tile Q(veh) | 0 | 0.1 | 0 | - | - | - | 0 | - | - | 0.1 | 0.1 | 0.1 |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|------|------|
| Int Delay, s/veh | 2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ ↗ | ↖ ↗ ↗ | ↖ ↗ | ↖ ↗ ↗ | ↖ ↗ | |
| Traffic Vol, veh/h | 35 | 5 | 15 | 3 | 15 | 10 | 45 | 685 | 1 | 5 | 230 | 105 |
| Future Vol, veh/h | 35 | 5 | 15 | 3 | 15 | 10 | 45 | 685 | 1 | 5 | 230 | 105 |
| 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 | - | - | Free |
| Storage Length | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 41 | 6 | 18 | 4 | 18 | 12 | 53 | 806 | 1 | 6 | 271 | 124 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 720 | 1196 | 136 | 1035 | 1195 | 403 | 271 | 0 | 0 | 807 | 0 | 0 |
| Stage 1 | 283 | 283 | - | 912 | 912 | - | - | - | - | - | - | - |
| Stage 2 | 437 | 913 | - | 123 | 283 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | 372 | 185 | 754 | 244 | 185 | 510 | 866 | - | - | 485 | - | 0 |
| Stage 1 | 613 | 676 | - | 229 | 351 | - | - | - | - | - | - | 0 |
| Stage 2 | 520 | 350 | - | 798 | 676 | - | - | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 317 | 172 | 754 | 219 | 172 | 510 | 866 | - | - | 485 | - | - |
| Mov Cap-2 Maneuver | 317 | 172 | - | 219 | 172 | - | - | - | - | - | - | - |
| Stage 1 | 576 | 668 | - | 215 | 330 | - | - | - | - | - | - | - |
| Stage 2 | 451 | 329 | - | 763 | 668 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 16.7 | | 22.5 | | | 0.6 | | | 0.3 | | | |
| HCM LOS | C | | C | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | | |
| Capacity (veh/h) | 866 | | - | - | 317 | 408 | 219 | 234 | 485 | - | | |
| HCM Lane V/C Ratio | 0.061 | | - | - | 0.13 | 0.058 | 0.016 | 0.126 | 0.012 | - | | |
| HCM Control Delay (s) | 9.4 | | - | - | 18 | 14.4 | 21.7 | 22.6 | 12.5 | - | | |
| HCM Lane LOS | A | | - | - | C | B | C | C | B | - | | |
| HCM 95th %tile Q(veh) | 0.2 | | - | - | 0.4 | 0.2 | 0 | 0.4 | 0 | - | | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 40 | 76 | 46 | 15 | 45 | 15 |
| Future Vol, veh/h | 40 | 76 | 46 | 15 | 45 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 350 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 80 | 48 | 16 | 47 | 16 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 64 | 0 | - | 0 | 172 | 24 |
| Stage 1 | - | - | - | - | 48 | - |
| Stage 2 | - | - | - | - | 124 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1536 | - | - | - | 801 | 1047 |
| Stage 1 | - | - | - | - | 968 | - |
| Stage 2 | - | - | - | - | 888 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1536 | - | - | - | 779 | 1047 |
| Mov Cap-2 Maneuver | - | - | - | - | 779 | - |
| Stage 1 | - | - | - | - | 942 | - |
| Stage 2 | - | - | - | - | 888 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.6 | 0 | 9.5 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1536 | - | - | - | 779 | 1047 |
| HCM Lane V/C Ratio | 0.027 | - | - | - | 0.061 | 0.015 |
| HCM Control Delay (s) | 7.4 | - | - | - | 9.9 | 8.5 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.2 | 0 |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|------|-----|
| Int Delay, s/veh | 6.8 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↖ | ↑↖ | | ↖ | ↑↖ | | ↖ | ↑↖ | | ↖ | ↑↖ | | |
| Traffic Vol, veh/h | 30 | 31 | 60 | 125 | 31 | 10 | 20 | 60 | 42 | 5 | 35 | 10 | |
| Future Vol, veh/h | 30 | 31 | 60 | 125 | 31 | 10 | 20 | 60 | 42 | 5 | 35 | 10 | |
| 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 | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 | |
| 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 | 32 | 33 | 63 | 132 | 33 | 11 | 21 | 63 | 44 | 5 | 37 | 11 | |
| Major/Minor | | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | | |
| Conflicting Flow All | 137 | 196 | 19 | 150 | 163 | 32 | 48 | 0 | 0 | 107 | 0 | 0 | |
| Stage 1 | 47 | 47 | - | 105 | 105 | - | - | - | - | - | - | - | |
| Stage 2 | 90 | 149 | - | 45 | 58 | - | - | - | - | - | - | - | |
| 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 | 820 | 698 | 1055 | 803 | 728 | 1035 | 1557 | - | - | 1482 | - | - | |
| Stage 1 | 961 | 855 | - | 889 | 807 | - | - | - | - | - | - | - | |
| Stage 2 | 907 | 773 | - | 963 | 846 | - | - | - | - | - | - | - | |
| Platoon blocked, % | | | | | | | | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 773 | 687 | 1055 | 718 | 716 | 1035 | 1557 | - | - | 1482 | - | - | |
| Mov Cap-2 Maneuver | 773 | 687 | - | 718 | 716 | - | - | - | - | - | - | - | |
| Stage 1 | 949 | 852 | - | 877 | 797 | - | - | - | - | - | - | - | |
| Stage 2 | 849 | 763 | - | 868 | 843 | - | - | - | - | - | - | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 9.5 | | 10.8 | | | 1.2 | | | 0.7 | | | | |
| HCM LOS | A | | B | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
| Capacity (veh/h) | 1557 | | - | - | 773 | 687 | 950 | 718 | 716 | 814 | 1482 | - | - |
| HCM Lane V/C Ratio | 0.014 | | - | - | 0.041 | 0.024 | 0.084 | 0.183 | 0.023 | 0.033 | 0.004 | - | - |
| HCM Control Delay (s) | 7.3 | | - | - | 9.9 | 10.4 | 9.1 | 11.1 | 10.1 | 9.6 | 7.4 | - | - |
| HCM Lane LOS | A | | - | - | A | B | A | B | B | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.1 | 0.1 | 0.3 | 0.7 | 0.1 | 0.1 | 0 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↓ | | ↑ | ↑ |
| Traffic Vol, veh/h | 25 | 53 | 156 | 17 | 7 | 10 |
| Future Vol, veh/h | 25 | 53 | 156 | 17 | 7 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | - | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 56 | 164 | 18 | 7 | 11 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 182 | 0 | - | 0 | 253 | 91 |
| Stage 1 | - | - | - | - | 173 | - |
| Stage 2 | - | - | - | - | 80 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1391 | - | - | - | 714 | 949 |
| Stage 1 | - | - | - | - | 840 | - |
| Stage 2 | - | - | - | - | 934 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1391 | - | - | - | 700 | 949 |
| Mov Cap-2 Maneuver | - | - | - | - | 700 | - |
| Stage 1 | - | - | - | - | 824 | - |
| Stage 2 | - | - | - | - | 934 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.4 | 0 | 9.4 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1391 | - | - | - | 700 | 949 |
| HCM Lane V/C Ratio | 0.019 | - | - | - | 0.011 | 0.011 |
| HCM Control Delay (s) | 7.6 | - | - | - | 10.2 | 8.8 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0 | 0 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↓ | | ↑ | ↑ |
| Traffic Vol, veh/h | 11 | 49 | 160 | 5 | 5 | 13 |
| Future Vol, veh/h | 11 | 49 | 160 | 5 | 5 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | - | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 52 | 168 | 5 | 5 | 14 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 173 | 0 | - | 0 | 221 | 87 |
| Stage 1 | - | - | - | - | 171 | - |
| Stage 2 | - | - | - | - | 50 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1401 | - | - | - | 747 | 954 |
| Stage 1 | - | - | - | - | 842 | - |
| Stage 2 | - | - | - | - | 966 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1401 | - | - | - | 740 | 954 |
| Mov Cap-2 Maneuver | - | - | - | - | 740 | - |
| Stage 1 | - | - | - | - | 834 | - |
| Stage 2 | - | - | - | - | 966 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 1.4 | 0 | 9.1 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1401 | - | - | - | 740 | 954 |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.007 | 0.014 |
| HCM Control Delay (s) | 7.6 | - | - | - | 9.9 | 8.8 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 | 0 |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------------------------|--------|------|------|--------|-------|-------|--------|------|------|------|------|
| Int Delay, s/veh | 1.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘ ↗ | | | | | | | | | | | |
| Traffic Vol, veh/h | 29 | 5 | 20 | 3 | 15 | 10 | 60 | 692 | 1 | 5 | 153 | 90 |
| Future Vol, veh/h | 29 | 5 | 20 | 3 | 15 | 10 | 60 | 692 | 1 | 5 | 153 | 90 |
| 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 | 350 | - | - | 350 | - | - | 350 | - | - | 350 | - | 273 |
| 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 | 31 | 5 | 21 | 3 | 16 | 11 | 63 | 728 | 1 | 5 | 161 | 95 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 596 | 1026 | 81 | 932 | 1121 | 365 | 256 | 0 | 0 | 729 | 0 | 0 |
| Stage 1 | 171 | 171 | - | 855 | 855 | - | - | - | - | - | - | - |
| Stage 2 | 425 | 855 | - | 77 | 266 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | 438 | 233 | 817 | 280 | 205 | 540 | 880 | - | - | 528 | - | - |
| Stage 1 | 727 | 756 | - | 251 | 373 | - | - | - | - | - | - | - |
| Stage 2 | 528 | 373 | - | 850 | 687 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 378 | 214 | 817 | 251 | 189 | 540 | 880 | - | - | 528 | - | - |
| Mov Cap-2 Maneuver | 378 | 214 | - | 251 | 189 | - | - | - | - | - | - | - |
| Stage 1 | 675 | 749 | - | 233 | 346 | - | - | - | - | - | - | - |
| Stage 2 | 459 | 346 | - | 814 | 681 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 13.9 | | 20.6 | | | 0.7 | | | 0.2 | | | |
| HCM LOS | B | | C | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | |
| Capacity (veh/h) | 880 | | - | - | 378 | 523 | 251 | 255 | 528 | - | - | |
| HCM Lane V/C Ratio | 0.072 | | - | - | 0.081 | 0.05 | 0.013 | 0.103 | 0.01 | - | - | |
| HCM Control Delay (s) | 9.4 | | - | - | 15.4 | 12.2 | 19.5 | 20.7 | 11.9 | - | - | |
| HCM Lane LOS | A | | - | - | C | B | C | C | B | - | - | |
| HCM 95th %tile Q(veh) | 0.2 | | - | - | 0.3 | 0.2 | 0 | 0.3 | 0 | - | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | | ↔ | ↔ | | |
| Traffic Vol, veh/h | 35 | 5 | 5 | 20 | 2 | 10 |
| Future Vol, veh/h | 35 | 5 | 5 | 20 | 2 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 37 | 5 | 5 | 21 | 2 | 11 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 42 | 0 | 71 | 40 |
| Stage 1 | - | - | - | - | 40 | - |
| Stage 2 | - | - | - | - | 31 | - |
| 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 | - | - | 1567 | - | 933 | 1031 |
| Stage 1 | - | - | - | - | 982 | - |
| Stage 2 | - | - | - | - | 992 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1567 | - | 930 | 1031 |
| Mov Cap-2 Maneuver | - | - | - | - | 930 | - |
| Stage 1 | - | - | - | - | 982 | - |
| Stage 2 | - | - | - | - | 989 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 1.5 | 8.6 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 1013 | - | - | 1567 | - | |
| HCM Lane V/C Ratio | 0.012 | - | - | 0.003 | - | |
| HCM Control Delay (s) | 8.6 | - | - | 7.3 | 0 | |
| HCM Lane LOS | A | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | A | B | | |
| Traffic Vol, veh/h | 40 | 5 | 5 | 55 | 35 | 20 |
| Future Vol, veh/h | 40 | 5 | 5 | 55 | 35 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 5 | 5 | 58 | 37 | 21 |
| Major/Minor | | | | | | |
| Major/Minor | Minor2 | Major1 | Major2 | | | |
| Conflicting Flow All | 116 | 48 | 58 | 0 | - | 0 |
| Stage 1 | 48 | - | - | - | - | - |
| Stage 2 | 68 | - | - | - | - | - |
| 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 | 880 | 1021 | 1546 | - | - | - |
| Stage 1 | 974 | - | - | - | - | - |
| Stage 2 | 955 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 877 | 1021 | 1546 | - | - | - |
| Mov Cap-2 Maneuver | 877 | - | - | - | - | - |
| Stage 1 | 971 | - | - | - | - | - |
| Stage 2 | 955 | - | - | - | - | - |
| Approach | | | | | | |
| Approach | EB | NB | SB | | | |
| HCM Control Delay, s | 9.3 | 0.6 | 0 | | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1546 | - | 891 | - | - | |
| HCM Lane V/C Ratio | 0.003 | - | 0.053 | - | - | |
| HCM Control Delay (s) | 7.3 | 0 | 9.3 | - | - | |
| HCM Lane LOS | A | A | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0.2 | - | - | |

Timings
6: Powhaton Rd & E. Jewell Ave

2041 Background Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 250 | 757 | 40 | 60 | 436 | 30 | 20 | 225 | 100 | 50 | 385 | 330 |
| Future Volume (vph) | 250 | 757 | 40 | 60 | 436 | 30 | 20 | 225 | 100 | 50 | 385 | 330 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | Free | 8 | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 20.0 | | 5.0 | 20.0 | |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 25.0 | | 10.0 | 25.0 | |
| Total Split (s) | 15.0 | 53.0 | 53.0 | 15.0 | 53.0 | | 17.0 | 35.0 | | 17.0 | 35.0 | |
| Total Split (%) | 12.5% | 44.2% | 44.2% | 12.5% | 44.2% | | 14.2% | 29.2% | | 14.2% | 29.2% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 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 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 78.6 | 68.6 | 68.6 | 67.6 | 60.5 | 120.0 | 25.8 | 20.2 | 120.0 | 30.3 | 26.3 | 120.0 |
| Actuated g/C Ratio | 0.66 | 0.57 | 0.57 | 0.56 | 0.50 | 1.00 | 0.22 | 0.17 | 1.00 | 0.25 | 0.22 | 1.00 |
| v/c Ratio | 0.43 | 0.39 | 0.04 | 0.15 | 0.26 | 0.02 | 0.09 | 0.40 | 0.07 | 0.19 | 0.52 | 0.22 |
| Control Delay | 11.6 | 16.6 | 0.1 | 10.1 | 17.8 | 0.0 | 32.5 | 47.0 | 0.1 | 33.1 | 44.3 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.6 | 16.6 | 0.1 | 10.1 | 17.8 | 0.0 | 32.5 | 47.0 | 0.1 | 33.1 | 44.3 | 0.3 |
| LOS | B | B | A | B | B | A | C | D | A | C | D | A |
| Approach Delay | | 14.7 | | | 15.9 | | | 32.6 | | | 24.6 | |
| Approach LOS | | B | | | B | | | C | | | C | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 20.1

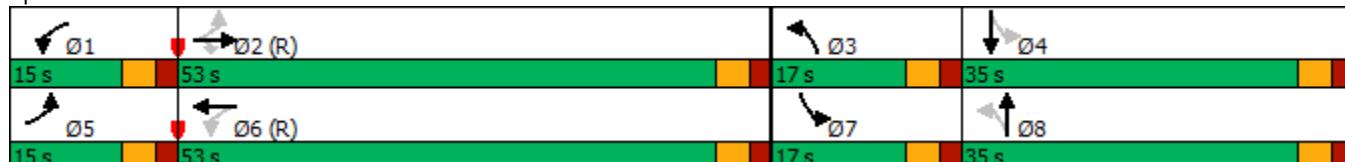
Intersection LOS: C

Intersection Capacity Utilization 63.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Powhaton Rd & E. Jewell Ave



Timings
7: Monaghan Rd & E. Jewell Ave

2041 Background Traffic

PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ |
| Traffic Volume (vph) | 505 | 257 | 75 | 10 | 146 | 15 | 45 | 15 | 15 | 30 | 30 | 295 |
| Future Volume (vph) | 505 | 257 | 75 | 10 | 146 | 15 | 45 | 15 | 15 | 30 | 30 | 295 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | | 1 | 6 | | 3 | 8 | | 7 | 4 |
| Permitted Phases | | | Free | | 6 | | 6 | 8 | | 8 | 4 | |
| Detector Phase | 5 | 2 | | | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |
| 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) | 10.0 | 20.0 | | | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 |
| Total Split (s) | 15.0 | 53.0 | | | 15.0 | 53.0 | 53.0 | 22.0 | 30.0 | 30.0 | 22.0 | 30.0 |
| Total Split (%) | 12.5% | 44.2% | | | 12.5% | 44.2% | 44.2% | 18.3% | 25.0% | 25.0% | 18.3% | 25.0% |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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 | -2.0 | | | 0.0 | -2.0 | 0.0 | 0.0 | -2.0 | 0.0 | 0.0 | -2.0 |
| Total Lost Time (s) | 5.0 | 3.0 | | | 5.0 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 | 3.0 |
| Lead/Lag | Lead | Lag | | | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | | | Yes |
| Recall Mode | None | C-Max | | | None | C-Max | C-Max | None | None | None | None | None |
| Act Effect Green (s) | 36.6 | 97.0 | 120.0 | 60.7 | 57.0 | 55.0 | 13.2 | 9.5 | 7.5 | 11.7 | 8.6 | 120.0 |
| Actuated g/C Ratio | 0.30 | 0.81 | 1.00 | 0.51 | 0.48 | 0.46 | 0.11 | 0.08 | 0.06 | 0.10 | 0.07 | 1.00 |
| v/c Ratio | 0.51 | 0.09 | 0.05 | 0.02 | 0.09 | 0.02 | 0.28 | 0.06 | 0.08 | 0.19 | 0.13 | 0.20 |
| Control Delay | 56.6 | 2.9 | 0.1 | 7.8 | 17.6 | 0.1 | 47.2 | 50.7 | 0.8 | 45.0 | 53.0 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 56.6 | 2.9 | 0.1 | 7.8 | 17.6 | 0.1 | 47.2 | 50.7 | 0.8 | 45.0 | 53.0 | 0.3 |
| LOS | E | A | A | A | B | A | D | D | A | D | D | A |
| Approach Delay | | 35.0 | | | | 15.5 | | | 38.5 | | | 8.6 |
| Approach LOS | | D | | | | B | | | D | | | A |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 63 (53%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 26.3

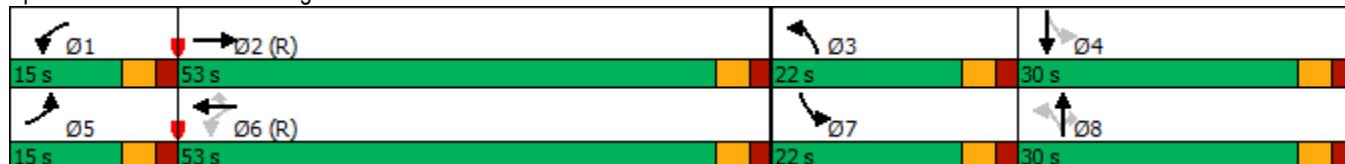
Intersection LOS: C

Intersection Capacity Utilization 37.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Monaghan Rd & E. Jewell Ave



| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↓ | | ↑ | ↑ |
| Traffic Vol, veh/h | 80 | 222 | 121 | 15 | 5 | 50 |
| Future Vol, veh/h | 80 | 222 | 121 | 15 | 5 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Free |
| Storage Length | 350 | - | - | - | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 84 | 234 | 127 | 16 | 5 | 53 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 143 | 0 | - | 0 | 420 | - |
| Stage 1 | - | - | - | - | 135 | - |
| Stage 2 | - | - | - | - | 285 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | - |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | - |
| Pot Cap-1 Maneuver | 1437 | - | - | - | 561 | 0 |
| Stage 1 | - | - | - | - | 877 | 0 |
| Stage 2 | - | - | - | - | 738 | 0 |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1437 | - | - | - | 528 | - |
| Mov Cap-2 Maneuver | - | - | - | - | 528 | - |
| Stage 1 | - | - | - | - | 826 | - |
| Stage 2 | - | - | - | - | 738 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2 | 0 | 11.9 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1437 | - | - | - | 528 | - |
| HCM Lane V/C Ratio | 0.059 | - | - | - | 0.01 | - |
| HCM Control Delay (s) | 7.7 | - | - | - | 11.9 | 0 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0 | - |

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 | 75 | 147 | 5 | 4 | 86 | 20 | 5 | 20 | 5 | 40 | 40 | 45 |
| Future Vol, veh/h | 75 | 147 | 5 | 4 | 86 | 20 | 5 | 20 | 5 | 40 | 40 | 45 |
| 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 | - | - | Free |
| Storage Length | 350 | - | - | 350 | - | 273 | 250 | - | - | 250 | - | 190 |
| 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 | 79 | 155 | 5 | 4 | 91 | 21 | 5 | 21 | 5 | 42 | 42 | 47 |

| Major/Minor | Major1 | Major2 | | Minor1 | | Minor2 | | | | | | |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|---|
| Conflicting Flow All | 112 | 0 | 0 | 160 | 0 | 0 | 391 | 436 | 80 | 345 | 417 | - |
| Stage 1 | - | - | - | - | - | - | 316 | 316 | - | 99 | 99 | - |
| Stage 2 | - | - | - | - | - | - | 75 | 120 | - | 246 | 318 | - |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | - |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | - |
| Pot Cap-1 Maneuver | 1475 | - | - | 1417 | - | - | 543 | 512 | 964 | 585 | 525 | 0 |
| Stage 1 | - | - | - | - | - | - | 670 | 654 | - | 896 | 812 | 0 |
| Stage 2 | - | - | - | - | - | - | 926 | 796 | - | 736 | 652 | 0 |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1475 | - | - | 1417 | - | - | 486 | 483 | 964 | 538 | 495 | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 486 | 483 | - | 538 | 495 | - |
| Stage 1 | - | - | - | - | - | - | 634 | 619 | - | 848 | 810 | - |
| Stage 2 | - | - | - | - | - | - | 875 | 794 | - | 669 | 617 | - |

| Approach | EB | WB | | NB | | SB | | | |
|----------------------|-----|-----|--|------|--|------|--|--|--|
| HCM Control Delay, s | 2.5 | 0.3 | | 12.1 | | 12.6 | | | |
| HCM LOS | | | | B | | B | | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|-------|
| Capacity (veh/h) | 486 | 537 | 1475 | - | - | 1417 | - | - | 538 | 495 | - |
| HCM Lane V/C Ratio | 0.011 | 0.049 | 0.054 | - | - | 0.003 | - | - | 0.078 | 0.085 | - |
| HCM Control Delay (s) | 12.5 | 12 | 7.6 | - | - | 7.5 | - | - | 12.3 | 12.9 | 0 |
| HCM Lane LOS | B | B | A | - | - | A | - | - | B | B | A |
| HCM 95th %tile Q(veh) | 0 | 0.2 | 0.2 | - | - | 0 | - | - | 0.3 | 0.3 | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 7 | 185 | 105 | 5 | 5 | 5 |
| Future Vol, veh/h | 7 | 185 | 105 | 5 | 5 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Free |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 195 | 111 | 5 | 5 | 5 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 116 | 0 | - | 0 | 223 | - |
| Stage 1 | - | - | - | - | 111 | - |
| Stage 2 | - | - | - | - | 112 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | - |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | - |
| Pot Cap-1 Maneuver | 1470 | - | - | - | 745 | 0 |
| Stage 1 | - | - | - | - | 901 | 0 |
| Stage 2 | - | - | - | - | 900 | 0 |
| Platoon blocked, % | - | - | - | | | |
| Mov Cap-1 Maneuver | 1470 | - | - | - | 741 | - |
| Mov Cap-2 Maneuver | - | - | - | - | 741 | - |
| Stage 1 | - | - | - | - | 896 | - |
| Stage 2 | - | - | - | - | 900 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 0.3 | 0 | 9.9 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1470 | - | - | - | 741 | - |
| HCM Lane V/C Ratio | 0.005 | - | - | - | 0.007 | - |
| HCM Control Delay (s) | 7.5 | - | - | - | 9.9 | 0 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 | - |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|--------|------|--------|------|------|------|-------|-------|-------|-------|
| Int Delay, s/veh | 2.4 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 30 | 155 | 5 | 2 | 88 | 15 | 2 | 15 | 5 | 10 | 10 | 20 | |
| Future Vol, veh/h | 30 | 155 | 5 | 2 | 88 | 15 | 2 | 15 | 5 | 10 | 10 | 20 | |
| 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 | 350 | - | 273 | 350 | - | 273 | 250 | - | - | 250 | - | 190 | |
| 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 | 32 | 163 | 5 | 2 | 93 | 16 | 2 | 16 | 5 | 11 | 11 | 21 | |
| Major/Minor | | | | | | | | | | | | | |
| Major1 | | Major2 | | Minor1 | | Minor2 | | | | | | | |
| Conflicting Flow All | 109 | 0 | 0 | 168 | 0 | 0 | 283 | 340 | 82 | 251 | 329 | 47 | |
| Stage 1 | - | - | - | - | - | - | 227 | 227 | - | 97 | 97 | - | |
| Stage 2 | - | - | - | - | - | - | 56 | 113 | - | 154 | 232 | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | |
| Pot Cap-1 Maneuver | 1479 | - | - | 1407 | - | - | 647 | 580 | 961 | 682 | 589 | 1012 | |
| Stage 1 | - | - | - | - | - | - | 755 | 715 | - | 899 | 814 | - | |
| Stage 2 | - | - | - | - | - | - | 949 | 801 | - | 833 | 711 | - | |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 1479 | - | - | 1407 | - | - | 614 | 567 | 961 | 652 | 575 | 1012 | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 614 | 567 | - | 652 | 575 | - | |
| Stage 1 | - | - | - | - | - | - | 738 | 699 | - | 879 | 813 | - | |
| Stage 2 | - | - | - | - | - | - | 916 | 800 | - | 792 | 695 | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 1.2 | | 0.1 | | 10.9 | | 9.8 | | | | | | |
| HCM LOS | | | | | B | | A | | | | | | |
| Minor Lane/Major Mvmt | | | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 |
| Capacity (veh/h) | 614 | 632 | 1479 | - | - | 1407 | - | - | - | 652 | 575 | 1012 | |
| HCM Lane V/C Ratio | 0.003 | 0.033 | 0.021 | - | - | 0.001 | - | - | - | 0.016 | 0.018 | 0.021 | |
| HCM Control Delay (s) | 10.9 | 10.9 | 7.5 | - | - | 7.6 | - | - | - | 10.6 | 11.4 | 8.6 | |
| HCM Lane LOS | B | B | A | - | - | A | - | - | - | B | B | A | |
| HCM 95th %tile Q(veh) | 0 | 0.1 | 0.1 | - | - | 0 | - | - | - | 0 | 0.1 | 0.1 | |

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|--------|------|-------|--------|-------|-------|--------|------|------|-------|------|
| Int Delay, s/veh | 7.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ ↗ | ↖ ↗ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ ↗ | ↖ ↗ |
| Traffic Vol, veh/h | 110 | 15 | 45 | 2 | 10 | 5 | 30 | 430 | 5 | 15 | 735 | 65 |
| Future Vol, veh/h | 110 | 15 | 45 | 2 | 10 | 5 | 30 | 430 | 5 | 15 | 735 | 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 | - | - | Free |
| Storage Length | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 129 | 18 | 53 | 2 | 12 | 6 | 35 | 506 | 6 | 18 | 865 | 76 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 1179 | 1483 | 433 | 967 | 1477 | 253 | 865 | 0 | 0 | 512 | 0 | 0 |
| Stage 1 | 901 | 901 | - | 576 | 576 | - | - | - | - | - | - | - |
| Stage 2 | 278 | 582 | - | 391 | 901 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | 200 | 124 | 488 | 267 | 125 | 636 | 455 | - | - | 669 | - | 0 |
| Stage 1 | 233 | 355 | - | 389 | 500 | - | - | - | - | - | - | 0 |
| Stage 2 | 647 | 497 | - | 554 | 355 | - | - | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 168 | 111 | 488 | 193 | 112 | 636 | 455 | - | - | 669 | - | - |
| Mov Cap-2 Maneuver | 168 | 111 | - | 193 | 112 | - | - | - | - | - | - | - |
| Stage 1 | 215 | 345 | - | 359 | 462 | - | - | - | - | - | - | - |
| Stage 2 | 577 | 459 | - | 456 | 345 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 57 | | | 30.5 | | | 0.9 | | | 0.2 | | |
| HCM LOS | F | | | D | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | | | |
| Capacity (veh/h) | 455 | - | - | 168 | 264 | 193 | 154 | 669 | - | | | |
| HCM Lane V/C Ratio | 0.078 | - | - | 0.77 | 0.267 | 0.012 | 0.115 | 0.026 | - | | | |
| HCM Control Delay (s) | 13.6 | - | - | 75.2 | 23.5 | 23.9 | 31.4 | 10.5 | - | | | |
| HCM Lane LOS | B | - | - | F | C | C | D | B | - | | | |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 5 | 1 | 0 | 0.4 | 0.1 | - | | | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 25 | 40 | 71 | 45 | 30 | 40 |
| Future Vol, veh/h | 25 | 40 | 71 | 45 | 30 | 40 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 350 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 42 | 75 | 47 | 32 | 42 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 122 | 0 | - | 0 | 148 | 38 |
| Stage 1 | - | - | - | - | 75 | - |
| Stage 2 | - | - | - | - | 73 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1463 | - | - | - | 829 | 1026 |
| Stage 1 | - | - | - | - | 939 | - |
| Stage 2 | - | - | - | - | 941 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1463 | - | - | - | 814 | 1026 |
| Mov Cap-2 Maneuver | - | - | - | - | 814 | - |
| Stage 1 | - | - | - | - | 922 | - |
| Stage 2 | - | - | - | - | 941 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.9 | 0 | 9.1 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1463 | - | - | - | 814 | 1026 |
| HCM Lane V/C Ratio | 0.018 | - | - | - | 0.039 | 0.041 |
| HCM Control Delay (s) | 7.5 | - | - | - | 9.6 | 8.7 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 | 0.1 |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|------|-----|
| Int Delay, s/veh | 4.7 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ ↗ | ↑ ↘ | | ↑ ↗ | ↑ ↘ | | ↑ ↗ | ↑ ↘ | ↑ ↗ | ↑ ↗ | ↑ ↘ | ↑ ↗ | |
| Traffic Vol, veh/h | 15 | 20 | 35 | 79 | 21 | 5 | 65 | 55 | 134 | 10 | 75 | 30 | |
| Future Vol, veh/h | 15 | 20 | 35 | 79 | 21 | 5 | 65 | 55 | 134 | 10 | 75 | 30 | |
| 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 | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 | |
| 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 | 16 | 21 | 37 | 83 | 22 | 5 | 68 | 58 | 141 | 11 | 79 | 32 | |
| Major/Minor | | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | | |
| Conflicting Flow All | 277 | 436 | 40 | 266 | 327 | 29 | 111 | 0 | 0 | 199 | 0 | 0 | |
| Stage 1 | 101 | 101 | - | 194 | 194 | - | - | - | - | - | - | - | |
| Stage 2 | 176 | 335 | - | 72 | 133 | - | - | - | - | - | - | - | |
| 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 | 654 | 512 | 1022 | 665 | 590 | 1039 | 1477 | - | - | 1371 | - | - | |
| Stage 1 | 894 | 811 | - | 789 | 739 | - | - | - | - | - | - | - | |
| Stage 2 | 809 | 641 | - | 929 | 785 | - | - | - | - | - | - | - | |
| Platoon blocked, % | | | | | | | | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 606 | 484 | 1022 | 595 | 558 | 1039 | 1477 | - | - | 1371 | - | - | |
| Mov Cap-2 Maneuver | 606 | 484 | - | 595 | 558 | - | - | - | - | - | - | - | |
| Stage 1 | 853 | 805 | - | 753 | 705 | - | - | - | - | - | - | - | |
| Stage 2 | 744 | 612 | - | 865 | 779 | - | - | - | - | - | - | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 10.4 | | 11.8 | | | 1.9 | | | 0.7 | | | | |
| HCM LOS | B | | B | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
| Capacity (veh/h) | 1477 | | - | - | 606 | 484 | 820 | 595 | 558 | 656 | 1371 | - | - |
| HCM Lane V/C Ratio | 0.046 | | - | - | 0.026 | 0.022 | 0.058 | 0.14 | 0.02 | 0.025 | 0.008 | - | - |
| HCM Control Delay (s) | 7.6 | | - | - | 11.1 | 12.6 | 9.7 | 12 | 11.6 | 10.6 | 7.6 | - | - |
| HCM Lane LOS | A | | - | - | B | B | A | B | B | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | | - | - | 0.1 | 0.1 | 0.2 | 0.5 | 0.1 | 0.1 | 0 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↓ | | ↑ | ↑ |
| Traffic Vol, veh/h | 10 | 154 | 85 | 20 | 29 | 20 |
| Future Vol, veh/h | 10 | 154 | 85 | 20 | 29 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | - | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 162 | 89 | 21 | 31 | 21 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 110 | 0 | - | 0 | 203 | 55 |
| Stage 1 | - | - | - | - | 100 | - |
| Stage 2 | - | - | - | - | 103 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1478 | - | - | - | 767 | 1000 |
| Stage 1 | - | - | - | - | 913 | - |
| Stage 2 | - | - | - | - | 910 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1478 | - | - | - | 762 | 1000 |
| Mov Cap-2 Maneuver | - | - | - | - | 762 | - |
| Stage 1 | - | - | - | - | 907 | - |
| Stage 2 | - | - | - | - | 910 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 0.5 | 0 | 9.4 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1478 | - | - | - | 762 | 1000 |
| HCM Lane V/C Ratio | 0.007 | - | - | - | 0.04 | 0.021 |
| HCM Control Delay (s) | 7.5 | - | - | - | 9.9 | 8.7 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 | 0.1 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↖ | ↑↑ | ↑↓ | | ↖ | ↗ |
| Traffic Vol, veh/h | 15 | 168 | 95 | 7 | 7 | 10 |
| Future Vol, veh/h | 15 | 168 | 95 | 7 | 7 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | - | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 16 | 177 | 100 | 7 | 7 | 11 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 107 | 0 | - | 0 | 225 | 54 |
| Stage 1 | - | - | - | - | 104 | - |
| Stage 2 | - | - | - | - | 121 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1482 | - | - | - | 743 | 1002 |
| Stage 1 | - | - | - | - | 909 | - |
| Stage 2 | - | - | - | - | 891 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1482 | - | - | - | 735 | 1002 |
| Mov Cap-2 Maneuver | - | - | - | - | 735 | - |
| Stage 1 | - | - | - | - | 899 | - |
| Stage 2 | - | - | - | - | 891 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 0.6 | 0 | 9.1 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1482 | - | - | - | 735 | 1002 |
| HCM Lane V/C Ratio | 0.011 | - | - | - | 0.01 | 0.011 |
| HCM Control Delay (s) | 7.5 | - | - | - | 9.9 | 8.6 |
| HCM Lane LOS | A | - | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 | 0 |

| 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 | 95 | 15 | 65 | 2 | 10 | 5 | 37 | 365 | 5 | 15 | 712 | 55 |
| Future Vol, veh/h | 95 | 15 | 65 | 2 | 10 | 5 | 37 | 365 | 5 | 15 | 712 | 55 |
| 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 | 350 | - | - | 350 | - | - | 350 | - | - | 350 | - | 273 |
| 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 | 100 | 16 | 68 | 2 | 11 | 5 | 39 | 384 | 5 | 16 | 749 | 58 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 1018 | 1248 | 375 | 805 | 1304 | 195 | 807 | 0 | 0 | 389 | 0 | 0 |
| Stage 1 | 781 | 781 | - | 465 | 465 | - | - | - | - | - | - | - |
| Stage 2 | 237 | 467 | - | 340 | 839 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | 249 | 172 | 532 | 332 | 159 | 692 | 485 | - | - | 763 | - | - |
| Stage 1 | 282 | 403 | - | 463 | 561 | - | - | - | - | - | - | - |
| Stage 2 | 684 | 560 | - | 594 | 379 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 216 | 155 | 532 | 247 | 143 | 692 | 485 | - | - | 763 | - | - |
| Mov Cap-2 Maneuver | 216 | 155 | - | 247 | 143 | - | - | - | - | - | - | - |
| Stage 1 | 259 | 395 | - | 426 | 516 | - | - | - | - | - | - | - |
| Stage 2 | 611 | 515 | - | 486 | 371 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 27.3 | | | 24.6 | | | 1.2 | | | 0.2 | | |
| HCM LOS | D | | | C | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | | |
| Capacity (veh/h) | 485 | - | - | 216 | 365 | 247 | 194 | 763 | - | - | | |
| HCM Lane V/C Ratio | 0.08 | - | - | 0.463 | 0.231 | 0.009 | 0.081 | 0.021 | - | - | | |
| HCM Control Delay (s) | 13.1 | - | - | 35.3 | 17.8 | 19.7 | 25.2 | 9.8 | - | - | | |
| HCM Lane LOS | B | - | - | E | C | C | D | A | - | - | | |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 2.2 | 0.9 | 0 | 0.3 | 0.1 | - | - | | |

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|-------|-------|
| Int Delay, s/veh | 3.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↖ | ↗ |
| Traffic Vol, veh/h | 66 | 34 | 10 | 137 | 109 | 5 |
| Future Vol, veh/h | 66 | 34 | 10 | 137 | 109 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 190 | 350 | - | 100 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 69 | 36 | 11 | 144 | 115 | 5 |
| Major/Minor | | | | | | |
| Conflicting Flow All | Major1 | Major2 | | Minor1 | | |
| | 0 | 0 | 105 | 0 | 235 | 69 |
| Stage 1 | - | - | - | - | 69 | - |
| Stage 2 | - | - | - | - | 166 | - |
| 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 | - | - | 1486 | - | 753 | 994 |
| Stage 1 | - | - | - | - | 954 | - |
| Stage 2 | - | - | - | - | 863 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1486 | - | 748 | 994 |
| Mov Cap-2 Maneuver | - | - | - | - | 748 | - |
| Stage 1 | - | - | - | - | 954 | - |
| Stage 2 | - | - | - | - | 857 | - |
| Approach | | | | | | |
| HCM Control Delay, s | EB | WB | | NB | | |
| | 0 | 0.5 | | 10.6 | | |
| HCM LOS | | | | B | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | EBT | EBR | WBL |
| Capacity (veh/h) | | 748 | 994 | - | - | 1486 |
| HCM Lane V/C Ratio | 0.153 | 0.005 | - | - | 0.007 | - |
| HCM Control Delay (s) | 10.7 | 8.6 | - | - | 7.4 | - |
| HCM Lane LOS | B | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.5 | 0 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh | 5.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 10 | 61 | 112 | 20 | 55 | 35 |
| Future Vol, veh/h | 10 | 61 | 112 | 20 | 55 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | 0 | 250 | - | - | 120 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 64 | 118 | 21 | 58 | 37 |
| Major/Minor | Minor2 | Major1 | Major2 | | | |
| Conflicting Flow All | 315 | 58 | 95 | 0 | - | 0 |
| Stage 1 | 58 | - | - | - | - | - |
| Stage 2 | 257 | - | - | - | - | - |
| 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 | 678 | 1008 | 1499 | - | - | - |
| Stage 1 | 965 | - | - | - | - | - |
| Stage 2 | 786 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 624 | 1008 | 1499 | - | - | - |
| Mov Cap-2 Maneuver | 624 | - | - | - | - | - |
| Stage 1 | 889 | - | - | - | - | - |
| Stage 2 | 786 | - | - | - | - | - |
| Approach | EB | NB | SB | | | |
| HCM Control Delay, s | 9.1 | 6.5 | 0 | | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
| Capacity (veh/h) | 1499 | - | 624 | 1008 | - | - |
| HCM Lane V/C Ratio | 0.079 | - | 0.017 | 0.064 | - | - |
| HCM Control Delay (s) | 7.6 | - | 10.9 | 8.8 | - | - |
| HCM Lane LOS | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | 0.1 | 0.2 | - | - |

| Intersection | | | | | | |
|--------------------------|-------------|--------|--------|-------|-------|------|
| Int Delay, s/veh | 6.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↖ ↗ ↘ ↗ ↘ ↗ | | | | | |
| Traffic Vol, veh/h | 122 | 93 | 21 | 74 | 30 | 14 |
| Future Vol, veh/h | 122 | 93 | 21 | 74 | 30 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | 0 | - | 190 | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 128 | 98 | 22 | 78 | 32 | 15 |
| Major/Minor | Minor1 | Major1 | Major2 | | | |
| Conflicting Flow All | 101 | 22 | 0 | 0 | 100 | 0 |
| Stage 1 | 22 | - | - | - | - | - |
| Stage 2 | 79 | - | - | - | - | - |
| 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 | 898 | 1055 | - | - | 1493 | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 944 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 879 | 1055 | - | - | 1493 | - |
| Mov Cap-2 Maneuver | 879 | - | - | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 924 | - | - | - | - | - |
| Approach | WB | NB | SB | | | |
| HCM Control Delay, s | 9.4 | 0 | 5.1 | | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
| Capacity (veh/h) | - | - | 879 | 1055 | 1493 | - |
| HCM Lane V/C Ratio | - | - | 0.146 | 0.093 | 0.021 | - |
| HCM Control Delay (s) | - | - | 9.8 | 8.8 | 7.5 | - |
| HCM Lane LOS | - | - | A | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.3 | 0.1 | - |

Intersection

Int Delay, s/veh 1

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 2 | 28 | 9 | 138 | 169 | 7 |
| Future Vol, veh/h | 2 | 28 | 9 | 138 | 169 | 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 | 250 | 0 | 250 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 29 | 9 | 145 | 178 | 7 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 345 | 182 | 185 | 0 | - | 0 |
| Stage 1 | 182 | - | - | - | - | - |
| Stage 2 | 163 | - | - | - | - | - |
| 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 | 652 | 861 | 1390 | - | - | - |
| Stage 1 | 849 | - | - | - | - | - |
| Stage 2 | 866 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 648 | 861 | 1390 | - | - | - |
| Mov Cap-2 Maneuver | 648 | - | - | - | - | - |
| Stage 1 | 844 | - | - | - | - | - |
| Stage 2 | 866 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.4 | 0.5 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1390 | - | 648 | 861 | - | - |
| HCM Lane V/C Ratio | 0.007 | - | 0.003 | 0.034 | - | - |
| HCM Control Delay (s) | 7.6 | - | 10.6 | 9.3 | - | - |
| HCM Lane LOS | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0 | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | B | T | R | U | ↑ |
| Traffic Vol, veh/h | 8 | 12 | 84 | 3 | 4 | 133 |
| Future Vol, veh/h | 8 | 12 | 84 | 3 | 4 | 133 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 13 | 88 | 3 | 4 | 140 |
| Major/Minor | Minor1 | Major1 | Major2 | | | |
| Conflicting Flow All | 238 | 90 | 0 | 0 | 91 | 0 |
| Stage 1 | 90 | - | - | - | - | - |
| Stage 2 | 148 | - | - | - | - | - |
| 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 | 750 | 968 | - | - | 1504 | - |
| Stage 1 | 934 | - | - | - | - | - |
| Stage 2 | 880 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 748 | 968 | - | - | 1504 | - |
| Mov Cap-2 Maneuver | 748 | - | - | - | - | - |
| Stage 1 | 934 | - | - | - | - | - |
| Stage 2 | 877 | - | - | - | - | - |
| Approach | WB | NB | SB | | | |
| HCM Control Delay, s | 9.3 | 0 | 0.2 | | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT | |
| Capacity (veh/h) | - | - | 866 | 1504 | - | |
| HCM Lane V/C Ratio | - | - | 0.024 | 0.003 | - | |
| HCM Control Delay (s) | - | - | 9.3 | 7.4 | - | |
| HCM Lane LOS | - | - | A | A | - | |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 | - | |

Timings
6: Powhaton Rd & E. Jewell Ave

2041 Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 200 | 500 | 11 | 95 | 1373 | 201 | 36 | 373 | 30 | 80 | 124 | 235 |
| Future Volume (vph) | 200 | 500 | 11 | 95 | 1373 | 201 | 36 | 373 | 30 | 80 | 124 | 235 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | Free | 8 | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 20.0 | | 5.0 | 20.0 | |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 25.0 | | 10.0 | 25.0 | |
| Total Split (s) | 15.0 | 53.0 | 53.0 | 15.0 | 53.0 | | 17.0 | 35.0 | | 17.0 | 35.0 | |
| Total Split (%) | 12.5% | 44.2% | 44.2% | 12.5% | 44.2% | | 14.2% | 29.2% | | 14.2% | 29.2% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 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 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 76.9 | 63.6 | 63.6 | 63.3 | 55.0 | 120.0 | 27.0 | 20.7 | 120.0 | 31.7 | 25.1 | 120.0 |
| Actuated g/C Ratio | 0.64 | 0.53 | 0.53 | 0.53 | 0.46 | 1.00 | 0.22 | 0.17 | 1.00 | 0.26 | 0.21 | 1.00 |
| v/c Ratio | 0.67 | 0.28 | 0.01 | 0.20 | 0.89 | 0.13 | 0.12 | 0.64 | 0.02 | 0.35 | 0.18 | 0.16 |
| Control Delay | 37.1 | 17.4 | 0.0 | 9.5 | 32.8 | 0.2 | 30.4 | 51.4 | 0.0 | 35.0 | 39.6 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.1 | 17.4 | 0.0 | 9.5 | 32.8 | 0.2 | 30.4 | 51.4 | 0.0 | 35.0 | 39.6 | 0.2 |
| LOS | D | B | A | A | C | A | C | D | A | C | D | A |
| Approach Delay | | 22.7 | | | 27.5 | | | 46.2 | | | 17.7 | |
| Approach LOS | | C | | | C | | | D | | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 27.7

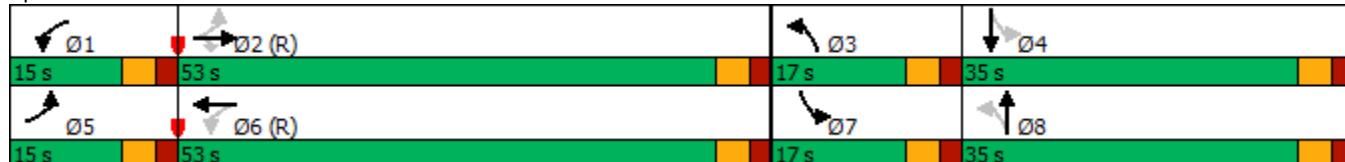
Intersection LOS: C

Intersection Capacity Utilization 86.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: Powhaton Rd & E. Jewell Ave



Timings
7: Monaghan Rd & E. Jewell Ave

2041 Total Traffic

AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ |
| Traffic Volume (vph) | 155 | 325 | 100 | 82 | 942 | 294 | 187 | 161 | 47 | 113 | 76 | 470 |
| Future Volume (vph) | 155 | 325 | 100 | 82 | 942 | 294 | 187 | 161 | 47 | 113 | 76 | 470 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | | 1 | 6 | | 3 | 8 | | 7 | 4 |
| Permitted Phases | | | Free | | 6 | | Free | 8 | | Free | | Free |
| Detector Phase | 5 | 2 | | | 1 | 6 | | 3 | 8 | | 7 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | | | 10.0 | 20.0 | | 10.0 | 20.0 | | 10.0 | 20.0 |
| Total Split (s) | 15.0 | 53.0 | | | 15.0 | 53.0 | | 22.0 | 30.0 | | 22.0 | 30.0 |
| Total Split (%) | 12.5% | 44.2% | | | 12.5% | 44.2% | | 18.3% | 25.0% | | 18.3% | 25.0% |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 |
| 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 | -2.0 | | | 0.0 | -2.0 | | 0.0 | -2.0 | | 0.0 | -2.0 |
| Total Lost Time (s) | 5.0 | 3.0 | | | 5.0 | 3.0 | | 5.0 | 3.0 | | 5.0 | 3.0 |
| Lead/Lag | Lead | Lag | | | Lead | Lag | | Lead | Lag | | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | | | Yes | Yes | | Yes | Yes | | Yes | Yes |
| Recall Mode | None | C-Max | | | None | C-Max | | None | None | | None | None |
| Act Effect Green (s) | 11.0 | 73.6 | 120.0 | 73.5 | 68.0 | 120.0 | 28.0 | 15.5 | 120.0 | 9.5 | 10.1 | 120.0 |
| Actuated g/C Ratio | 0.09 | 0.61 | 1.00 | 0.61 | 0.57 | 1.00 | 0.23 | 0.13 | 1.00 | 0.08 | 0.08 | 1.00 |
| v/c Ratio | 0.52 | 0.16 | 0.07 | 0.13 | 0.50 | 0.20 | 0.61 | 0.37 | 0.03 | 0.44 | 0.27 | 0.31 |
| Control Delay | 69.6 | 7.7 | 0.1 | 8.0 | 17.7 | 0.3 | 47.6 | 49.6 | 0.0 | 57.3 | 53.3 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 69.6 | 7.7 | 0.1 | 8.0 | 17.7 | 0.3 | 47.6 | 49.6 | 0.0 | 57.3 | 53.3 | 0.5 |
| LOS | E | A | A | A | B | A | D | D | A | E | D | A |
| Approach Delay | | 22.9 | | | 13.2 | | | 42.8 | | | 16.3 | |
| Approach LOS | | C | | | B | | | D | | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 63 (53%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 19.8

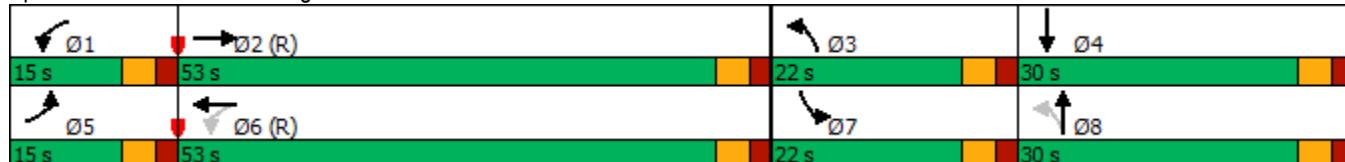
Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 7: Monaghan Rd & E. Jewell Ave



Intersection

Int Delay, s/veh 201

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↑ ↗ | ↑ ↗ | ↗ | ↖ ↗ | ↑ ↗ | ↗ | ↑ ↗ | ↑ ↗ | ↗ | ↖ ↗ | ↑ ↗ | ↗ |
| Traffic Vol, veh/h | 25 | 265 | 194 | 89 | 770 | 5 | 474 | 25 | 131 | 10 | 8 | 75 |
| Future Vol, veh/h | 25 | 265 | 194 | 89 | 770 | 5 | 474 | 25 | 131 | 10 | 8 | 75 |
| 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 | - | - | Free | - | - | Free |
| Storage Length | 350 | - | 273 | 350 | - | - | 250 | - | 190 | 250 | - | 190 |
| 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 | 26 | 279 | 204 | 94 | 811 | 5 | 499 | 26 | 138 | 11 | 8 | 79 |

| Major/Minor | Major1 | Major2 | | Minor1 | | Minor2 | | |
|----------------------|--------|--------|---|--------|---|--------|-------|------|
| Conflicting Flow All | 816 | 0 | 0 | 483 | 0 | 0 | 929 | 1335 |
| Stage 1 | - | - | - | - | - | - | 331 | 331 |
| Stage 2 | - | - | - | - | - | - | 598 | 1004 |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.54 | 5.54 |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.54 | 5.54 |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 |
| Pot Cap-1 Maneuver | 807 | - | - | 1076 | - | - | ~ 222 | 152 |
| Stage 1 | - | - | - | - | - | - | 656 | 644 |
| Stage 2 | - | - | - | - | - | - | ~ 456 | 318 |
| Platoon blocked, % | - | - | - | - | - | - | 0 | 260 |
| Mov Cap-1 Maneuver | 807 | - | - | 1076 | - | - | ~ 190 | 134 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | ~ 190 | 134 |
| Stage 1 | - | - | - | - | - | - | 635 | 623 |
| Stage 2 | - | - | - | - | - | - | ~ 404 | 290 |

| Approach | EB | WB | | NB | | SB | | |
|-----------------------|----------|-------|-------|----------|-----|------|-------|-----|
| HCM Control Delay, s | 0.5 | 0.9 | | \$ 747.7 | | 42.6 | | |
| HCM LOS | | | | F | | E | | |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | NBLn3 | EBL | EBT | EBR | WBL | WBT |
| Capacity (veh/h) | 190 | 134 | - | 807 | - | - | 1076 | - |
| HCM Lane V/C Ratio | 2.626 | 0.196 | - | 0.033 | - | - | 0.087 | - |
| HCM Control Delay (s) | \$ 785.1 | 38.3 | 0 | 9.6 | - | - | 8.7 | - |
| HCM Lane LOS | F | E | A | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 43 | 0.7 | - | 0.1 | - | - | 0.3 | - |

Notes

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

| Intersection | | | | | | | | | | | | | |
|--------------------------|------|--------|-------|-------|--------|------|-------|--------|------|-------|-------|-------|-------|
| Int Delay, s/veh | 17.5 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 72 | 301 | 32 | 28 | 672 | 60 | 91 | 123 | 58 | 18 | 39 | 100 | |
| Future Vol, veh/h | 72 | 301 | 32 | 28 | 672 | 60 | 91 | 123 | 58 | 18 | 39 | 100 | |
| 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 | - | - | Free | - | - | Free | |
| Storage Length | 350 | - | 273 | 350 | - | 273 | 250 | - | 190 | 250 | - | 190 | |
| 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 | 76 | 317 | 34 | 29 | 707 | 63 | 96 | 129 | 61 | 19 | 41 | 105 | |
| Major/Minor | | | | | | | | | | | | | |
| Major1 | | Major2 | | | Minor1 | | | Minor2 | | | | | |
| Conflicting Flow All | 770 | 0 | 0 | 351 | 0 | 0 | 901 | 1297 | - | 1140 | 1268 | - | |
| Stage 1 | - | - | - | - | - | - | 469 | 469 | - | 765 | 765 | - | |
| Stage 2 | - | - | - | - | - | - | 432 | 828 | - | 375 | 503 | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | - | 7.54 | 6.54 | - | |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | - | 3.52 | 4.02 | - | |
| Pot Cap-1 Maneuver | 840 | - | - | 1204 | - | - | 233 | 161 | 0 | 156 | 167 | 0 | |
| Stage 1 | - | - | - | - | - | - | 544 | 559 | 0 | 362 | 410 | 0 | |
| Stage 2 | - | - | - | - | - | - | 572 | 384 | 0 | 618 | 540 | 0 | |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 840 | - | - | 1204 | - | - | 168 | 143 | - | 31 | 148 | - | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 168 | 143 | - | 31 | 148 | - | |
| Stage 1 | - | - | - | - | - | - | 495 | 509 | - | 329 | 400 | - | |
| Stage 2 | - | - | - | - | - | - | 501 | 375 | - | 419 | 491 | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 1.7 | | 0.3 | | | 86.5 | | | 99.7 | | | | |
| HCM LOS | F | | | | | | F | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | NBLn3 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 |
| Capacity (veh/h) | 168 | 143 | - | 840 | - | - | 1204 | - | - | 31 | 148 | - | |
| HCM Lane V/C Ratio | 0.57 | 0.905 | - | 0.09 | - | - | 0.024 | - | - | 0.611 | 0.277 | - | |
| HCM Control Delay (s) | 51.6 | 112.4 | 0 | 9.7 | - | - | 8.1 | - | - | 232.6 | 38.4 | 0 | |
| HCM Lane LOS | F | F | A | A | - | - | A | - | - | F | E | A | |
| HCM 95th %tile Q(veh) | 3 | 6.2 | - | 0.3 | - | - | 0.1 | - | - | 2 | 1.1 | - | |

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|--------|------|--------|-------|--------|------|-------|-------|-------|------|
| Int Delay, s/veh | 9.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑ ↗ | ↑ ↗ | ↗ | ↖ | ↑ ↗ | ↗ | ↖ | ↖ | ↗ | ↖ | ↑ ↗ | ↗ |
| Traffic Vol, veh/h | 67 | 240 | 71 | 11 | 409 | 6 | 223 | 14 | 33 | 6 | 6 | 129 |
| Future Vol, veh/h | 67 | 240 | 71 | 11 | 409 | 6 | 223 | 14 | 33 | 6 | 6 | 129 |
| 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 | - | - | Free |
| Storage Length | 350 | - | 273 | 350 | - | 273 | 250 | - | - | 250 | - | 190 |
| 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 | 71 | 253 | 75 | 12 | 431 | 6 | 235 | 15 | 35 | 6 | 6 | 136 |
| Major/Minor | Major1 | | Major2 | | Minor1 | | Minor2 | | | | | |
| Conflicting Flow All | 437 | 0 | 0 | 328 | 0 | 0 | 638 | 856 | 127 | 731 | 925 | - |
| Stage 1 | - | - | - | - | - | - | 395 | 395 | - | 455 | 455 | - |
| Stage 2 | - | - | - | - | - | - | 243 | 461 | - | 276 | 470 | - |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | - |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | - |
| Pot Cap-1 Maneuver | 1119 | - | - | 1228 | - | - | 361 | 294 | 900 | 310 | 268 | 0 |
| Stage 1 | - | - | - | - | - | - | 602 | 603 | - | 554 | 567 | 0 |
| Stage 2 | - | - | - | - | - | - | 739 | 564 | - | 707 | 558 | 0 |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1119 | - | - | 1228 | - | - | 334 | 273 | 900 | 270 | 249 | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 334 | 273 | - | 270 | 249 | - |
| Stage 1 | - | - | - | - | - | - | 564 | 565 | - | 519 | 561 | - |
| Stage 2 | - | - | - | - | - | - | 724 | 558 | - | 620 | 523 | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 1.5 | | | 0.2 | | | 33.3 | | | 19.3 | | |
| HCM LOS | | | | | | | D | | | C | | |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 | |
| Capacity (veh/h) | 334 | 534 | 1119 | - | - | 1228 | - | - | 270 | 249 | - | |
| HCM Lane V/C Ratio | 0.703 | 0.093 | 0.063 | - | - | 0.009 | - | - | 0.023 | 0.025 | - | |
| HCM Control Delay (s) | 37.7 | 12.4 | 8.4 | - | - | 8 | - | - | 18.7 | 19.8 | 0 | |
| HCM Lane LOS | E | B | A | - | - | A | - | - | C | C | A | |
| HCM 95th %tile Q(veh) | 5 | 0.3 | 0.2 | - | - | 0 | - | - | 0.1 | 0.1 | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 270 | 396 | 2 | 7 | 29 |
| Future Vol, veh/h | 9 | 270 | 396 | 2 | 7 | 29 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 284 | 417 | 2 | 7 | 31 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 419 | 0 | - | 0 | 578 | 210 |
| Stage 1 | - | - | - | - | 418 | - |
| Stage 2 | - | - | - | - | 160 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1137 | - | - | - | 446 | 796 |
| Stage 1 | - | - | - | - | 632 | - |
| Stage 2 | - | - | - | - | 852 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1137 | - | - | - | 442 | 796 |
| Mov Cap-2 Maneuver | - | - | - | - | 442 | - |
| Stage 1 | - | - | - | - | 627 | - |
| Stage 2 | - | - | - | - | 852 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 0.3 | 0 | 10.5 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 1137 | - | - | - | 689 | |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.055 | |
| HCM Control Delay (s) | 8.2 | - | - | - | 10.5 | |
| HCM Lane LOS | A | - | - | - | B | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|--------|------|--------|-------|------|------|-------|-------|-------|--|
| Int Delay, s/veh | 6 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 66 | 189 | 22 | 9 | 218 | 29 | 68 | 49 | 14 | 68 | 56 | 113 | |
| Future Vol, veh/h | 66 | 189 | 22 | 9 | 218 | 29 | 68 | 49 | 14 | 68 | 56 | 113 | |
| 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 | - | - | Free | |
| Storage Length | 350 | - | 273 | 350 | - | 273 | 250 | - | - | 250 | - | 190 | |
| 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 | 69 | 199 | 23 | 9 | 229 | 31 | 72 | 52 | 15 | 72 | 59 | 119 | |
| Major/Minor | | | | | | | | | | | | | |
| Major1 | | Major2 | | Minor1 | | Minor2 | | | | | | | |
| Conflicting Flow All | 260 | 0 | 0 | 222 | 0 | 0 | 499 | 615 | 100 | 511 | 607 | - | |
| Stage 1 | - | - | - | - | - | - | 337 | 337 | - | 247 | 247 | - | |
| Stage 2 | - | - | - | - | - | - | 162 | 278 | - | 264 | 360 | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | - | |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | - | |
| Pot Cap-1 Maneuver | 1302 | - | - | 1344 | - | - | 454 | 405 | 936 | 446 | 409 | 0 | |
| Stage 1 | - | - | - | - | - | - | 651 | 640 | - | 735 | 701 | 0 | |
| Stage 2 | - | - | - | - | - | - | 824 | 679 | - | 718 | 625 | 0 | |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 1302 | - | - | 1344 | - | - | 383 | 381 | 936 | 376 | 384 | - | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 383 | 381 | - | 376 | 384 | - | |
| Stage 1 | - | - | - | - | - | - | 616 | 606 | - | 696 | 696 | - | |
| Stage 2 | - | - | - | - | - | - | 749 | 674 | - | 612 | 592 | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 1.9 | | 0.3 | | 15.6 | | 16.5 | | | | | | |
| HCM LOS | | | | | C | | C | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 | |
| Capacity (veh/h) | 383 | 439 | 1302 | - | - | - | 1344 | - | - | 376 | 384 | - | |
| HCM Lane V/C Ratio | 0.187 | 0.151 | 0.053 | - | - | - | 0.007 | - | - | 0.19 | 0.154 | - | |
| HCM Control Delay (s) | 16.5 | 14.7 | 7.9 | - | - | - | 7.7 | - | - | 16.8 | 16.1 | 0 | |
| HCM Lane LOS | C | B | A | - | - | - | A | - | - | C | C | A | |
| HCM 95th %tile Q(veh) | 0.7 | 0.5 | 0.2 | - | - | - | 0 | - | - | 0.7 | 0.5 | - | |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|---------|--------|-------|---------|------|------|
| Int Delay, s/veh | 14.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ ↗ ↗ | ↖ ↗ ↗ | ↖ ↗ | ↖ ↗ ↗ ↗ | ↖ ↗ | ↖ ↗ |
| Traffic Vol, veh/h | 241 | 5 | 25 | 3 | 15 | 10 | 49 | 695 | 1 | 5 | 233 | 192 |
| Future Vol, veh/h | 241 | 5 | 25 | 3 | 15 | 10 | 49 | 695 | 1 | 5 | 233 | 192 |
| 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 | - | - | Free |
| Storage Length | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 284 | 6 | 29 | 4 | 18 | 12 | 58 | 818 | 1 | 6 | 274 | 226 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 738 | 1221 | 137 | 1059 | 1220 | 409 | 274 | 0 | 0 | 819 | 0 | 0 |
| Stage 1 | 286 | 286 | - | 934 | 934 | - | - | - | - | - | - | - |
| Stage 2 | 452 | 935 | - | 125 | 286 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | 363 | 179 | 753 | 236 | 179 | 506 | 863 | - | - | 478 | - | 0 |
| Stage 1 | 610 | 674 | - | 221 | 343 | - | - | - | - | - | - | 0 |
| Stage 2 | 509 | 342 | - | 796 | 674 | - | - | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 306 | 165 | 753 | 207 | 165 | 506 | 863 | - | - | 478 | - | - |
| Mov Cap-2 Maneuver | 306 | 165 | - | 207 | 165 | - | - | - | - | - | - | - |
| Stage 1 | 569 | 665 | - | 206 | 320 | - | - | - | - | - | - | - |
| Stage 2 | 438 | 319 | - | 749 | 665 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 65.7 | | 23.2 | | | 0.6 | | | 0.3 | | | |
| HCM LOS | F | | C | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | | |
| Capacity (veh/h) | 863 | | - | - | 306 | 472 | 207 | 226 | 478 | - | | |
| HCM Lane V/C Ratio | 0.067 | | - | - | 0.927 | 0.075 | 0.017 | 0.13 | 0.012 | - | | |
| HCM Control Delay (s) | 9.5 | | - | - | 72.2 | 13.2 | 22.7 | 23.3 | 12.6 | - | | |
| HCM Lane LOS | A | | - | - | F | B | C | C | B | - | | |
| HCM 95th %tile Q(veh) | 0.2 | | - | - | 9 | 0.2 | 0.1 | 0.4 | 0 | - | | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↖ | ↗ | ↑↑ | ↖ | ↖ | ↑↑ |
| Traffic Vol, veh/h | 13 | 75 | 320 | 28 | 116 | 142 |
| Future Vol, veh/h | 13 | 75 | 320 | 28 | 116 | 142 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Free | - | None | - | None |
| Storage Length | 0 | 0 | - | 273 | 350 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 79 | 337 | 29 | 122 | 149 |
| Major/Minor | Minor1 | Major1 | Major2 | | | |
| Conflicting Flow All | 656 | - | 0 | 0 | 366 | 0 |
| Stage 1 | 337 | - | - | - | - | - |
| Stage 2 | 319 | - | - | - | - | - |
| Critical Hdwy | 6.84 | - | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 398 | 0 | - | - | 1189 | - |
| Stage 1 | 695 | 0 | - | - | - | - |
| Stage 2 | 710 | 0 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 357 | - | - | - | 1189 | - |
| Mov Cap-2 Maneuver | 357 | - | - | - | - | - |
| Stage 1 | 695 | - | - | - | - | - |
| Stage 2 | 637 | - | - | - | - | - |
| Approach | WB | NB | SB | | | |
| HCM Control Delay, s | 15.5 | 0 | 3.8 | | | |
| HCM LOS | C | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
| Capacity (veh/h) | - | - | 357 | - | 1189 | - |
| HCM Lane V/C Ratio | - | - | 0.038 | - | 0.103 | - |
| HCM Control Delay (s) | - | - | 15.5 | 0 | 8.4 | - |
| HCM Lane LOS | - | - | C | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0.1 | - | 0.3 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|------|------|------|
| Int Delay, s/veh | 5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 42 | 4 | 2 | 49 | 3 | 140 | 1 | 165 | 16 | 45 | 96 | 13 |
| Future Vol, veh/h | 42 | 4 | 2 | 49 | 3 | 140 | 1 | 165 | 16 | 45 | 96 | 13 |
| 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 | 250 | - | - | 250 | - | - | 350 | - | 273 | 350 | - | 273 |
| 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 | 44 | 4 | 2 | 52 | 3 | 147 | 1 | 174 | 17 | 47 | 101 | 14 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 286 | 388 | 51 | 323 | 385 | 87 | 115 | 0 | 0 | 191 | 0 | 0 |
| Stage 1 | 195 | 195 | - | 176 | 176 | - | - | - | - | - | - | - |
| Stage 2 | 91 | 193 | - | 147 | 209 | - | - | - | - | - | - | - |
| 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 | 644 | 545 | 1006 | 606 | 547 | 954 | 1472 | - | - | 1380 | - | - |
| Stage 1 | 788 | 738 | - | 809 | 752 | - | - | - | - | - | - | - |
| Stage 2 | 906 | 740 | - | 841 | 728 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 527 | 526 | 1006 | 585 | 528 | 954 | 1472 | - | - | 1380 | - | - |
| Mov Cap-2 Maneuver | 527 | 526 | - | 585 | 528 | - | - | - | - | - | - | - |
| Stage 1 | 787 | 713 | - | 808 | 751 | - | - | - | - | - | - | - |
| Stage 2 | 762 | 739 | - | 806 | 703 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 12.3 | | 10.1 | | | 0 | | | 2.3 | | | |
| HCM LOS | B | | B | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | |
| Capacity (veh/h) | 1472 | | - | - | 527 | 625 | 585 | 938 | 1380 | - | - | |
| HCM Lane V/C Ratio | 0.001 | | - | - | 0.084 | 0.01 | 0.088 | 0.16 | 0.034 | - | - | |
| HCM Control Delay (s) | 7.4 | | - | - | 12.5 | 10.8 | 11.7 | 9.6 | 7.7 | - | - | |
| HCM Lane LOS | A | | - | - | B | B | B | A | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.3 | 0 | 0.3 | 0.6 | 0.1 | - | - | |

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|--------|-------|--------|-------|--------|-------|-------|------|-------|------|------|
| Int Delay, s/veh | 5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | |
| Traffic Vol, veh/h | 14 | 26 | 4 | 6 | 46 | 109 | 1 | 175 | 2 | 35 | 105 | 8 |
| Future Vol, veh/h | 14 | 26 | 4 | 6 | 46 | 109 | 1 | 175 | 2 | 35 | 105 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 250 | - | - | 250 | - | - | 250 | - | - | 250 | - | - |
| 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 | 15 | 27 | 4 | 6 | 48 | 115 | 1 | 184 | 2 | 37 | 111 | 8 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | Minor1 | | Major1 | | Major2 | | | | | | |
| Conflicting Flow All | 458 | 377 | 115 | 392 | 380 | 185 | 119 | 0 | 0 | 186 | 0 | 0 |
| Stage 1 | 189 | 189 | - | 187 | 187 | - | - | - | - | - | - | - |
| Stage 2 | 269 | 188 | - | 205 | 193 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 513 | 555 | 937 | 567 | 552 | 857 | 1469 | - | - | 1388 | - | - |
| Stage 1 | 813 | 744 | - | 815 | 745 | - | - | - | - | - | - | - |
| Stage 2 | 737 | 745 | - | 797 | 741 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 405 | 539 | 937 | 531 | 537 | 857 | 1469 | - | - | 1388 | - | - |
| Mov Cap-2 Maneuver | 405 | 539 | - | 531 | 537 | - | - | - | - | - | - | - |
| Stage 1 | 812 | 724 | - | 814 | 744 | - | - | - | - | - | - | - |
| Stage 2 | 596 | 744 | - | 743 | 721 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | NB | | SB | | | | | |
| HCM Control Delay, s | 12.5 | | 11.4 | | 0 | | 1.8 | | | | | |
| HCM LOS | B | | B | | | | | | | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | | |
| Capacity (veh/h) | 1469 | - | - | 405 | 571 | 531 | 728 | 1388 | - | - | | |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.036 | 0.055 | 0.012 | 0.224 | 0.027 | - | - | | |
| HCM Control Delay (s) | 7.5 | - | - | 14.2 | 11.7 | 11.9 | 11.4 | 7.7 | - | - | | |
| HCM Lane LOS | A | - | - | B | B | B | B | A | - | - | | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0.2 | 0 | 0.9 | 0.1 | - | - | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|------|------|
| Int Delay, s/veh | 6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Vol, veh/h | 86 | 16 | 9 | 43 | 34 | 59 | 3 | 124 | 14 | 19 | 47 | 29 |
| Future Vol, veh/h | 86 | 16 | 9 | 43 | 34 | 59 | 3 | 124 | 14 | 19 | 47 | 29 |
| 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 | 250 | - | - | 250 | - | - | 250 | - | 120 | 250 | - | 120 |
| 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 | 91 | 17 | 9 | 45 | 36 | 62 | 3 | 131 | 15 | 20 | 49 | 31 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 283 | 241 | 49 | 255 | 257 | 131 | 80 | 0 | 0 | 146 | 0 | 0 |
| Stage 1 | 89 | 89 | - | 137 | 137 | - | - | - | - | - | - | - |
| Stage 2 | 194 | 152 | - | 118 | 120 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 669 | 660 | 1020 | 698 | 647 | 919 | 1518 | - | - | 1436 | - | - |
| Stage 1 | 918 | 821 | - | 866 | 783 | - | - | - | - | - | - | - |
| Stage 2 | 808 | 772 | - | 887 | 796 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 590 | 649 | 1020 | 669 | 637 | 919 | 1518 | - | - | 1436 | - | - |
| Mov Cap-2 Maneuver | 590 | 649 | - | 669 | 637 | - | - | - | - | - | - | - |
| Stage 1 | 916 | 810 | - | 864 | 781 | - | - | - | - | - | - | - |
| Stage 2 | 717 | 770 | - | 849 | 785 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 11.7 | | 10.4 | | | 0.2 | | | 1.5 | | | |
| HCM LOS | B | | B | | | | | | | | | |
| Minor Lane/Major Mvmt | | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
| Capacity (veh/h) | 1518 | | - | - | 590 | 747 | 669 | 791 | 1436 | - | - | - |
| HCM Lane V/C Ratio | 0.002 | | - | - | 0.153 | 0.035 | 0.068 | 0.124 | 0.014 | - | - | - |
| HCM Control Delay (s) | 7.4 | | - | - | 12.2 | 10 | 10.8 | 10.2 | 7.5 | - | - | - |
| HCM Lane LOS | A | | - | - | B | B | B | B | A | - | - | - |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.5 | 0.1 | 0.2 | 0.4 | 0 | - | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|------|------|
| Int Delay, s/veh | 6.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 18 | 12 | 4 | 0 | 26 | 79 | 9 | 43 | 1 | 27 | 14 | 7 |
| Future Vol, veh/h | 18 | 12 | 4 | 0 | 26 | 79 | 9 | 43 | 1 | 27 | 14 | 7 |
| 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 | 250 | - | - | 250 | - | - | 250 | - | - | 250 | - | - |
| 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 | 19 | 13 | 4 | 0 | 27 | 83 | 9 | 45 | 1 | 28 | 15 | 7 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 194 | 139 | 19 | 147 | 142 | 46 | 22 | 0 | 0 | 46 | 0 | 0 |
| Stage 1 | 75 | 75 | - | 64 | 64 | - | - | - | - | - | - | - |
| Stage 2 | 119 | 64 | - | 83 | 78 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 765 | 752 | 1059 | 821 | 749 | 1023 | 1593 | - | - | 1562 | - | - |
| Stage 1 | 934 | 833 | - | 947 | 842 | - | - | - | - | - | - | - |
| Stage 2 | 885 | 842 | - | 925 | 830 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 671 | 734 | 1059 | 792 | 731 | 1023 | 1593 | - | - | 1562 | - | - |
| Mov Cap-2 Maneuver | 671 | 734 | - | 792 | 731 | - | - | - | - | - | - | - |
| Stage 1 | 928 | 818 | - | 941 | 837 | - | - | - | - | - | - | - |
| Stage 2 | 782 | 837 | - | 891 | 815 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 10.1 | | 9.4 | | | 1.2 | | | 4.1 | | | |
| HCM LOS | B | | A | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | |
| Capacity (veh/h) | 1593 | | - | - | 671 | 795 | - | 931 | 1562 | - | - | |
| HCM Lane V/C Ratio | 0.006 | | - | - | 0.028 | 0.021 | - | 0.119 | 0.018 | - | - | |
| HCM Control Delay (s) | 7.3 | | - | - | 10.5 | 9.6 | 0 | 9.4 | 7.3 | - | - | |
| HCM Lane LOS | A | | - | - | B | A | A | A | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.1 | 0.1 | - | 0.4 | 0.1 | - | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh | 1.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 9 | 15 | 5 | 51 | 70 | 4 |
| Future Vol, veh/h | 9 | 15 | 5 | 51 | 70 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | 250 | - | - | 173 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 16 | 5 | 54 | 74 | 4 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 138 | 74 | 78 | 0 | - | 0 |
| Stage 1 | 74 | - | - | - | - | - |
| Stage 2 | 64 | - | - | - | - | - |
| 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 | 855 | 988 | 1520 | - | - | - |
| Stage 1 | 949 | - | - | - | - | - |
| Stage 2 | 959 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 852 | 988 | 1520 | - | - | - |
| Mov Cap-2 Maneuver | 852 | - | - | - | - | - |
| Stage 1 | 946 | - | - | - | - | - |
| Stage 2 | 959 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 8.9 | 0.7 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
| Capacity (veh/h) | 1520 | - | 852 | 988 | - | - |
| HCM Lane V/C Ratio | 0.003 | - | 0.011 | 0.016 | - | - |
| HCM Control Delay (s) | 7.4 | - | 9.3 | 8.7 | - | - |
| HCM Lane LOS | A | - | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0 | 0 | - | - |

Intersection

Int Delay, s/veh 0.7

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | T | ↑↑ | ↑↓ | |
| Traffic Vol, veh/h | 13 | 8 | 3 | 168 | 144 | 4 |
| Future Vol, veh/h | 13 | 8 | 3 | 168 | 144 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 350 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 15 | 9 | 4 | 198 | 169 | 5 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 279 | 87 | 174 | 0 | - |
| Stage 1 | 172 | - | - | - | - |
| Stage 2 | 107 | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - |
| Pot Cap-1 Maneuver | 688 | 954 | 1400 | - | - |
| Stage 1 | 841 | - | - | - | - |
| Stage 2 | 906 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 686 | 954 | 1400 | - | - |
| Mov Cap-2 Maneuver | 686 | - | - | - | - |
| Stage 1 | 838 | - | - | - | - |
| Stage 2 | 906 | - | - | - | - |

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

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1400 | - | 768 | - | - |
| HCM Lane V/C Ratio | 0.003 | - | 0.032 | - | - |
| HCM Control Delay (s) | 7.6 | - | 9.8 | - | - |
| HCM Lane LOS | A | - | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 40 | 94 | 89 | 28 | 50 | 15 |
| Future Vol, veh/h | 40 | 94 | 89 | 28 | 50 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 350 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 99 | 94 | 29 | 53 | 16 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 123 | 0 | - | 0 | 228 | 47 |
| Stage 1 | - | - | - | - | 94 | - |
| Stage 2 | - | - | - | - | 134 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1462 | - | - | - | 740 | 1012 |
| Stage 1 | - | - | - | - | 919 | - |
| Stage 2 | - | - | - | - | 878 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1462 | - | - | - | 719 | 1012 |
| Mov Cap-2 Maneuver | - | - | - | - | 719 | - |
| Stage 1 | - | - | - | - | 892 | - |
| Stage 2 | - | - | - | - | 878 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.2 | 0 | 10 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1462 | - | - | - | 719 | 1012 |
| HCM Lane V/C Ratio | 0.029 | - | - | - | 0.073 | 0.016 |
| HCM Control Delay (s) | 7.5 | - | - | - | 10.4 | 8.6 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.2 | 0 |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|------|-----|
| Int Delay, s/veh | 8.8 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ ↗ | ↑ ↘ | | ↑ ↗ | ↑ ↘ | | ↑ ↗ | ↑ ↘ | ↑ ↗ | ↑ ↗ | ↑ ↘ | ↑ ↗ | |
| Traffic Vol, veh/h | 34 | 50 | 60 | 260 | 81 | 43 | 20 | 94 | 98 | 19 | 116 | 17 | |
| Future Vol, veh/h | 34 | 50 | 60 | 260 | 81 | 43 | 20 | 94 | 98 | 19 | 116 | 17 | |
| 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 | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 | |
| 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 | 36 | 53 | 63 | 274 | 85 | 45 | 21 | 99 | 103 | 20 | 122 | 18 | |
| Major/Minor | | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | | |
| Conflicting Flow All | 296 | 406 | 61 | 269 | 321 | 50 | 140 | 0 | 0 | 202 | 0 | 0 | |
| Stage 1 | 162 | 162 | - | 141 | 141 | - | - | - | - | - | - | - | |
| Stage 2 | 134 | 244 | - | 128 | 180 | - | - | - | - | - | - | - | |
| 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 | 634 | 533 | 991 | 662 | 595 | 1008 | 1441 | - | - | 1367 | - | - | |
| Stage 1 | 824 | 763 | - | 847 | 779 | - | - | - | - | - | - | - | |
| Stage 2 | 855 | 703 | - | 862 | 749 | - | - | - | - | - | - | - | |
| Platoon blocked, % | | | | | | | | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 526 | 517 | 991 | 559 | 577 | 1008 | 1441 | - | - | 1367 | - | - | |
| Mov Cap-2 Maneuver | 526 | 517 | - | 559 | 577 | - | - | - | - | - | - | - | |
| Stage 1 | 812 | 752 | - | 834 | 767 | - | - | - | - | - | - | - | |
| Stage 2 | 715 | 692 | - | 740 | 738 | - | - | - | - | - | - | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 11.1 | | 15.4 | | | 0.7 | | | 1 | | | | |
| HCM LOS | B | | C | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
| Capacity (veh/h) | 1441 | | - | - | 526 | 517 | 781 | 559 | 577 | 740 | 1367 | - | - |
| HCM Lane V/C Ratio | 0.015 | | - | - | 0.068 | 0.051 | 0.115 | 0.49 | 0.074 | 0.119 | 0.015 | - | - |
| HCM Control Delay (s) | 7.5 | | - | - | 12.3 | 12.3 | 10.2 | 17.5 | 11.7 | 10.5 | 7.7 | - | - |
| HCM Lane LOS | A | | - | - | B | B | B | C | B | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.2 | 0.2 | 0.4 | 2.7 | 0.2 | 0.4 | 0 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 44 | 122 | 270 | 17 | 46 | 113 |
| Future Vol, veh/h | 44 | 122 | 270 | 17 | 46 | 113 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 46 | 128 | 284 | 18 | 48 | 119 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 302 | 0 | - | 0 | 440 | 142 |
| Stage 1 | - | - | - | - | 284 | - |
| Stage 2 | - | - | - | - | 156 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1256 | - | - | - | 545 | 880 |
| Stage 1 | - | - | - | - | 739 | - |
| Stage 2 | - | - | - | - | 856 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1256 | - | - | - | 525 | 880 |
| Mov Cap-2 Maneuver | - | - | - | - | 525 | - |
| Stage 1 | - | - | - | - | 712 | - |
| Stage 2 | - | - | - | - | 856 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.1 | 0 | 10.5 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1256 | - | - | - | 525 | 880 |
| HCM Lane V/C Ratio | 0.037 | - | - | - | 0.092 | 0.135 |
| HCM Control Delay (s) | 8 | - | - | - | 12.6 | 9.7 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.3 | 0.5 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 53 | 114 | 218 | 24 | 26 | 69 |
| Future Vol, veh/h | 53 | 114 | 218 | 24 | 26 | 69 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 56 | 120 | 229 | 25 | 27 | 73 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 254 | 0 | - | 0 | 401 | 115 |
| Stage 1 | - | - | - | - | 229 | - |
| Stage 2 | - | - | - | - | 172 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1308 | - | - | - | 577 | 916 |
| Stage 1 | - | - | - | - | 787 | - |
| Stage 2 | - | - | - | - | 841 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1308 | - | - | - | 552 | 916 |
| Mov Cap-2 Maneuver | - | - | - | - | 552 | - |
| Stage 1 | - | - | - | - | 753 | - |
| Stage 2 | - | - | - | - | 841 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.5 | 0 | 10 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1308 | - | - | - | 552 | 916 |
| HCM Lane V/C Ratio | 0.043 | - | - | - | 0.05 | 0.079 |
| HCM Control Delay (s) | 7.9 | - | - | - | 11.9 | 9.3 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.2 | 0.3 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 44 | 95 | 180 | 12 | 24 | 61 |
| Future Vol, veh/h | 44 | 95 | 180 | 12 | 24 | 61 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 46 | 100 | 189 | 13 | 25 | 64 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 202 | 0 | - | 0 | 331 | 95 |
| Stage 1 | - | - | - | - | 189 | - |
| Stage 2 | - | - | - | - | 142 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1367 | - | - | - | 638 | 943 |
| Stage 1 | - | - | - | - | 824 | - |
| Stage 2 | - | - | - | - | 870 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1367 | - | - | - | 616 | 943 |
| Mov Cap-2 Maneuver | - | - | - | - | 616 | - |
| Stage 1 | - | - | - | - | 796 | - |
| Stage 2 | - | - | - | - | 870 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.4 | 0 | 9.7 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1367 | - | - | - | 616 | 943 |
| HCM Lane V/C Ratio | 0.034 | - | - | - | 0.041 | 0.068 |
| HCM Control Delay (s) | 7.7 | - | - | - | 11.1 | 9.1 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 | 0.2 |

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|--------|------|-------|--------|-------|-------|--------|------|------|------|------|
| Int Delay, s/veh | 3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↗ | ↑ | ↖ | ↑↑↑ | ↖ | ↑ | ↑↑↑ | ↗ |
| Traffic Vol, veh/h | 39 | 27 | 53 | 3 | 24 | 10 | 74 | 696 | 1 | 5 | 163 | 93 |
| Future Vol, veh/h | 39 | 27 | 53 | 3 | 24 | 10 | 74 | 696 | 1 | 5 | 163 | 93 |
| 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 | 350 | - | 273 | 350 | - | - | 350 | - | - | 350 | - | 273 |
| 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 | 41 | 28 | 56 | 3 | 25 | 11 | 78 | 733 | 1 | 5 | 172 | 98 |
| | | | | | | | | | | | | |
| Major/Minor | Minor2 | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 644 | 1072 | 86 | 983 | 1170 | 367 | 270 | 0 | 0 | 734 | 0 | 0 |
| Stage 1 | 182 | 182 | - | 890 | 890 | - | - | - | - | - | - | - |
| Stage 2 | 462 | 890 | - | 93 | 280 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | 411 | 219 | 811 | 262 | 192 | 538 | 867 | - | - | 525 | - | - |
| Stage 1 | 715 | 748 | - | 237 | 359 | - | - | - | - | - | - | - |
| Stage 2 | 502 | 359 | - | 832 | 678 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 331 | 197 | 811 | 201 | 173 | 538 | 867 | - | - | 525 | - | - |
| Mov Cap-2 Maneuver | 331 | 197 | - | 201 | 173 | - | - | - | - | - | - | - |
| Stage 1 | 651 | 741 | - | 216 | 327 | - | - | - | - | - | - | - |
| Stage 2 | 413 | 327 | - | 738 | 671 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 16 | | | 24.8 | | | 0.9 | | | 0.2 | | |
| HCM LOS | C | | | C | | | C | | | C | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | SBL | SBT | SBR | |
| Capacity (veh/h) | 867 | - | - | 331 | 197 | 811 | 201 | 216 | 525 | - | - | |
| HCM Lane V/C Ratio | 0.09 | - | - | 0.124 | 0.144 | 0.069 | 0.016 | 0.166 | 0.01 | - | - | |
| HCM Control Delay (s) | 9.6 | - | - | 17.4 | 26.3 | 9.8 | 23.2 | 24.9 | 11.9 | - | - | |
| HCM Lane LOS | A | - | - | C | D | A | C | C | B | - | - | |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0.4 | 0.5 | 0.2 | 0 | 0.6 | 0 | - | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.2 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↖ | ↗ |
| Traffic Vol, veh/h | 115 | 130 | 5 | 68 | 74 | 10 |
| Future Vol, veh/h | 115 | 130 | 5 | 68 | 74 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 190 | 350 | - | 100 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 121 | 137 | 5 | 72 | 78 | 11 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 258 | 0 | 203 | 121 |
| Stage 1 | - | - | - | - | 121 | - |
| Stage 2 | - | - | - | - | 82 | - |
| 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 | - | - | 1307 | - | 786 | 930 |
| Stage 1 | - | - | - | - | 904 | - |
| Stage 2 | - | - | - | - | 941 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1307 | - | 783 | 930 |
| Mov Cap-2 Maneuver | - | - | - | - | 783 | - |
| Stage 1 | - | - | - | - | 904 | - |
| Stage 2 | - | - | - | - | 937 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0.5 | 10 | | | |
| HCM LOS | B | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
| Capacity (veh/h) | 783 | 930 | - | - | 1307 | - |
| HCM Lane V/C Ratio | 0.099 | 0.011 | - | - | 0.004 | - |
| HCM Control Delay (s) | 10.1 | 8.9 | - | - | 7.8 | - |
| HCM Lane LOS | B | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | 0 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh | 5.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 40 | 85 | 53 | 55 | 35 | 20 |
| Future Vol, veh/h | 40 | 85 | 53 | 55 | 35 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | 0 | 250 | - | - | 120 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 89 | 56 | 58 | 37 | 21 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 207 | 37 | 58 | 0 | - | 0 |
| Stage 1 | 37 | - | - | - | - | - |
| Stage 2 | 170 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 781 | 1035 | 1546 | - | - | - |
| Stage 1 | 985 | - | - | - | - | - |
| Stage 2 | 860 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 753 | 1035 | 1546 | - | - | - |
| Mov Cap-2 Maneuver | 753 | - | - | - | - | - |
| Stage 1 | 950 | - | - | - | - | - |
| Stage 2 | 860 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.2 | 3.6 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
| Capacity (veh/h) | 1546 | - | 753 | 1035 | - | - |
| HCM Lane V/C Ratio | 0.036 | - | 0.056 | 0.086 | - | - |
| HCM Control Delay (s) | 7.4 | - | 10.1 | 8.8 | - | - |
| HCM Lane LOS | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.2 | 0.3 | - | - |

| Intersection | | | | | | |
|--------------------------|-------------|--------|-------|--------|-------|------|
| Int Delay, s/veh | 5.5 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↖ ↗ ↘ ↗ ↘ ↗ | | | | | |
| Traffic Vol, veh/h | 81 | 64 | 19 | 121 | 111 | 23 |
| Future Vol, veh/h | 81 | 64 | 19 | 121 | 111 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | 0 | - | 190 | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 85 | 67 | 20 | 127 | 117 | 24 |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | 278 | 20 | 0 | 0 | 147 | 0 |
| Stage 1 | 20 | - | - | - | - | - |
| Stage 2 | 258 | - | - | - | - | - |
| 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 | 712 | 1058 | - | - | 1435 | - |
| Stage 1 | 1003 | - | - | - | - | - |
| Stage 2 | 785 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 654 | 1058 | - | - | 1435 | - |
| Mov Cap-2 Maneuver | 654 | - | - | - | - | - |
| Stage 1 | 1003 | - | - | - | - | - |
| Stage 2 | 721 | - | - | - | - | - |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s | 10.1 | 0 | | 6.4 | | |
| HCM LOS | B | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
| Capacity (veh/h) | - | - | 654 | 1058 | 1435 | - |
| HCM Lane V/C Ratio | - | - | 0.13 | 0.064 | 0.081 | - |
| HCM Control Delay (s) | - | - | 11.3 | 8.6 | 7.7 | - |
| HCM Lane LOS | - | - | B | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0.2 | 0.3 | - |

Intersection

Int Delay, s/veh 1.7

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 9 | 19 | 32 | 128 | 102 | 5 |
| Future Vol, veh/h | 9 | 19 | 32 | 128 | 102 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | 0 | 250 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 20 | 34 | 135 | 107 | 5 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 313 | 110 | 112 | 0 | - | 0 |
| Stage 1 | 110 | - | - | - | - | - |
| Stage 2 | 203 | - | - | - | - | - |
| 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 | 680 | 943 | 1478 | - | - | - |
| Stage 1 | 915 | - | - | - | - | - |
| Stage 2 | 831 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 664 | 943 | 1478 | - | - | - |
| Mov Cap-2 Maneuver | 664 | - | - | - | - | - |
| Stage 1 | 894 | - | - | - | - | - |
| Stage 2 | 831 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.4 | 1.5 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1478 | - | 664 | 943 | - | - |
| HCM Lane V/C Ratio | 0.023 | - | 0.014 | 0.021 | - | - |
| HCM Control Delay (s) | 7.5 | - | 10.5 | 8.9 | - | - |
| HCM Lane LOS | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0 | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | B | T | R | T | U |
| Traffic Vol, veh/h | 5 | 7 | 133 | 9 | 14 | 91 |
| Future Vol, veh/h | 5 | 7 | 133 | 9 | 14 | 91 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 7 | 140 | 9 | 15 | 96 |
| Major/Minor | Minor1 | Major1 | Major2 | | | |
| Conflicting Flow All | 271 | 145 | 0 | 0 | 149 | 0 |
| Stage 1 | 145 | - | - | - | - | - |
| Stage 2 | 126 | - | - | - | - | - |
| 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 | 718 | 902 | - | - | 1432 | - |
| Stage 1 | 882 | - | - | - | - | - |
| Stage 2 | 900 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 711 | 902 | - | - | 1432 | - |
| Mov Cap-2 Maneuver | 711 | - | - | - | - | - |
| Stage 1 | 882 | - | - | - | - | - |
| Stage 2 | 891 | - | - | - | - | - |
| Approach | WB | NB | SB | | | |
| HCM Control Delay, s | 9.5 | 0 | 1 | | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT | |
| Capacity (veh/h) | - | - | 811 | 1432 | - | |
| HCM Lane V/C Ratio | - | - | 0.016 | 0.01 | - | |
| HCM Control Delay (s) | - | - | 9.5 | 7.5 | - | |
| HCM Lane LOS | - | - | A | A | - | |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - | |

Timings
6: Powhaton Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 250 | 1513 | 41 | 60 | 913 | 154 | 21 | 234 | 100 | 241 | 400 | 330 |
| Future Volume (vph) | 250 | 1513 | 41 | 60 | 913 | 154 | 21 | 234 | 100 | 241 | 400 | 330 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | Free | 8 | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 20.0 | | 5.0 | 20.0 | |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 25.0 | | 10.0 | 25.0 | |
| Total Split (s) | 15.0 | 53.0 | 53.0 | 15.0 | 53.0 | | 17.0 | 35.0 | | 17.0 | 35.0 | |
| Total Split (%) | 12.5% | 44.2% | 44.2% | 12.5% | 44.2% | | 14.2% | 29.2% | | 14.2% | 29.2% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 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 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 72.8 | 62.6 | 62.6 | 56.6 | 49.3 | 120.0 | 26.9 | 20.2 | 120.0 | 37.0 | 29.9 | 120.0 |
| Actuated g/C Ratio | 0.61 | 0.52 | 0.52 | 0.47 | 0.41 | 1.00 | 0.22 | 0.17 | 1.00 | 0.31 | 0.25 | 1.00 |
| v/c Ratio | 0.68 | 0.86 | 0.05 | 0.37 | 0.66 | 0.10 | 0.09 | 0.41 | 0.07 | 0.74 | 0.48 | 0.22 |
| Control Delay | 26.2 | 32.0 | 0.1 | 21.0 | 25.5 | 0.1 | 30.4 | 47.2 | 0.1 | 48.3 | 41.8 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.2 | 32.0 | 0.1 | 21.0 | 25.5 | 0.1 | 30.4 | 47.2 | 0.1 | 48.3 | 41.8 | 0.3 |
| LOS | C | C | A | C | C | A | C | D | A | D | D | A |
| Approach Delay | | 30.5 | | | 21.8 | | | 32.9 | | | 29.3 | |
| Approach LOS | | C | | | C | | | C | | | C | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 28.1

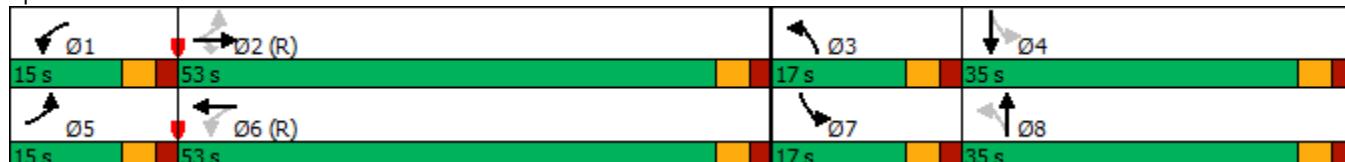
Intersection LOS: C

Intersection Capacity Utilization 92.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Powhaton Rd & E. Jewell Ave



Timings
7: Monaghan Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ |
| Traffic Volume (vph) | 505 | 988 | 291 | 139 | 550 | 189 | 241 | 160 | 148 | 325 | 231 | 295 |
| Future Volume (vph) | 505 | 988 | 291 | 139 | 550 | 189 | 241 | 160 | 148 | 325 | 231 | 295 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | | 6 | | Free | 8 | | Free | | Free |
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 10.0 | 20.0 | | 10.0 | 20.0 | | 10.0 | 20.0 | | 10.0 | 20.0 | |
| Total Split (s) | 15.0 | 53.0 | | 15.0 | 53.0 | | 22.0 | 30.0 | | 22.0 | 30.0 | |
| Total Split (%) | 12.5% | 44.2% | | 12.5% | 44.2% | | 18.3% | 25.0% | | 18.3% | 25.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| 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 | -2.0 | | 0.0 | -2.0 | | 0.0 | -2.0 | | 0.0 | -2.0 | |
| Total Lost Time (s) | 5.0 | 3.0 | | 5.0 | 3.0 | | 5.0 | 3.0 | | 5.0 | 3.0 | |
| Lead/Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 22.1 | 61.9 | 120.0 | 58.2 | 50.0 | 120.0 | 30.4 | 16.1 | 120.0 | 15.8 | 15.6 | 120.0 |
| Actuated g/C Ratio | 0.18 | 0.52 | 1.00 | 0.48 | 0.42 | 1.00 | 0.25 | 0.13 | 1.00 | 0.13 | 0.13 | 1.00 |
| v/c Ratio | 0.84 | 0.57 | 0.19 | 0.47 | 0.39 | 0.13 | 0.79 | 0.35 | 0.10 | 0.76 | 0.53 | 0.20 |
| Control Delay | 72.0 | 13.3 | 0.2 | 16.6 | 25.4 | 0.2 | 53.7 | 48.9 | 0.1 | 61.5 | 52.7 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 72.0 | 13.3 | 0.2 | 16.6 | 25.4 | 0.2 | 53.7 | 48.9 | 0.1 | 61.5 | 52.7 | 0.3 |
| LOS | E | B | A | B | C | A | D | D | A | E | D | A |
| Approach Delay | | 27.8 | | | 18.6 | | | 37.9 | | | 37.9 | |
| Approach LOS | | C | | | B | | | D | | | D | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 63 (53%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 29.3

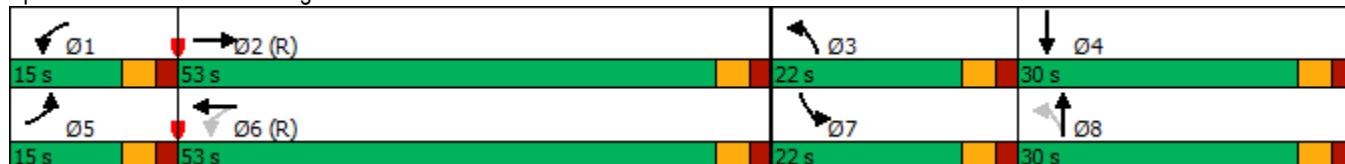
Intersection LOS: C

Intersection Capacity Utilization 69.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Monaghan Rd & E. Jewell Ave



Intersection

Int Delay, s/veh 9.1

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↑ ↗ | ↑ ↗ | ↗ ↗ | ↖ ↗ | ↑ ↗ | ↗ ↗ | ↖ ↗ | ↑ ↗ | ↗ ↗ | ↖ ↗ | ↑ ↗ | ↗ ↗ |
| Traffic Vol, veh/h | 80 | 880 | 501 | 116 | 531 | 15 | 297 | 17 | 78 | 5 | 30 | 50 |
| Future Vol, veh/h | 80 | 880 | 501 | 116 | 531 | 15 | 297 | 17 | 78 | 5 | 30 | 50 |
| 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 | - | - | Free | - | - | Free |
| Storage Length | 350 | - | 273 | 350 | - | - | 250 | - | 190 | 250 | - | 190 |
| 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 | 84 | 926 | 527 | 122 | 559 | 16 | 313 | 18 | 82 | 5 | 32 | 53 |

| Major/Minor | Major1 | Major2 | | | Minor1 | | | Minor2 | | | |
|----------------------|--------|--------|---|------|--------|---|------|--------|---|------|------|
| Conflicting Flow All | 575 | 0 | 0 | 1453 | 0 | 0 | 1634 | 1913 | - | 1451 | 2432 |
| Stage 1 | - | - | - | - | - | - | 1094 | 1094 | - | 811 | 811 |
| Stage 2 | - | - | - | - | - | - | 540 | 819 | - | 640 | 1621 |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | - | 7.54 | 6.54 |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | - | 3.52 | 4.02 |
| Pot Cap-1 Maneuver | 994 | - | - | 462 | - | - | ~67 | 67 | 0 | 92 | ~31 |
| Stage 1 | - | - | - | - | - | - | ~228 | 288 | 0 | 339 | 391 |
| Stage 2 | - | - | - | - | - | - | 494 | 388 | 0 | 430 | 160 |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 994 | - | - | 462 | - | - | - | 45 | - | 48 | ~21 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | 45 | - | 48 | ~21 |
| Stage 1 | - | - | - | - | - | - | ~209 | 264 | - | 310 | 288 |
| Stage 2 | - | - | - | - | - | - | 324 | 286 | - | 367 | 146 |

| Approach | EB | WB | | | NB | | | SB | | | | | |
|-----------------------|-----|-------|-------|-------|----------|-----|-----|-------|-----|-----|-------|-------|-------|
| HCM Control Delay, s | 0.5 | 2.7 | | | \$ 568.7 | | | | | | | | |
| HCM LOS | | | | | - | | | F | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | NBLn3 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 |
| Capacity (veh/h) | - | 45 | - | 994 | - | - | - | 462 | - | - | 48 | 21 | - |
| HCM Lane V/C Ratio | - | 0.398 | - | 0.085 | - | - | - | 0.264 | - | - | 0.11 | 1.504 | - |
| HCM Control Delay (s) | - | 130.3 | 0 | 9 | - | - | - | 15.6 | - | - | 89 | 648.7 | 0 |
| HCM Lane LOS | - | F | A | A | - | - | - | C | - | - | F | F | A |
| HCM 95th %tile Q(veh) | - | 1.4 | - | 0.3 | - | - | - | 1.1 | - | - | 0.3 | 4.2 | - |

Notes

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

| Intersection | | | | | | | | | | | | | |
|----------------------------|------|--------|------------------------|-------|--------|----------------------------|------|--------|--------------------------------|------|---------|-------|-------|
| Int Delay, s/veh | 0.9 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 124 | 732 | 107 | 54 | 490 | 37 | 65 | 81 | 37 | 70 | 146 | 107 | |
| Future Vol, veh/h | 124 | 732 | 107 | 54 | 490 | 37 | 65 | 81 | 37 | 70 | 146 | 107 | |
| 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 | - | - | Free | - | - | Free | |
| Storage Length | 350 | - | 273 | 350 | - | 273 | 250 | - | 190 | 250 | - | 190 | |
| 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 | 131 | 771 | 113 | 57 | 516 | 39 | 68 | 85 | 39 | 74 | 154 | 113 | |
| Major/Minor | | | | | | | | | | | | | |
| Major1 | | Major2 | | | Minor1 | | | Minor2 | | | | | |
| Conflicting Flow All | 555 | 0 | 0 | 884 | 0 | 0 | 1482 | 1702 | - | 1320 | 1776 | - | |
| Stage 1 | - | - | - | - | - | - | 1033 | 1033 | - | 630 | 630 | - | |
| Stage 2 | - | - | - | - | - | - | 449 | 669 | - | 690 | 1146 | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | - | 7.54 | 6.54 | - | |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | - | 3.52 | 4.02 | - | |
| Pot Cap-1 Maneuver | 1011 | - | - | 761 | - | - | 87 | 91 | 0 | 115 | ~82 | 0 | |
| Stage 1 | - | - | - | - | - | - | 249 | 308 | 0 | 436 | 473 | 0 | |
| Stage 2 | - | - | - | - | - | - | 559 | 454 | 0 | 401 | 272 | 0 | |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 1011 | - | - | 761 | - | - | ~73 | - | - | ~66 | - | - | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | ~73 | - | - | ~66 | - | |
| Stage 1 | - | - | - | - | - | - | 217 | 268 | - | 379 | 438 | - | |
| Stage 2 | - | - | - | - | - | - | 336 | 420 | - | 238 | 237 | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 1.2 | | 0.9 | | | | | | | | | | |
| HCM LOS | - | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | NBLn3 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 |
| Capacity (veh/h) | - | 73 | - | 1011 | - | - | - | 761 | - | - | - | 66 | - |
| HCM Lane V/C Ratio | - | 1.168 | - | 0.129 | - | - | - | 0.075 | - | - | - | 2.329 | - |
| HCM Control Delay (s) | - | 257.5 | 0 | 9.1 | - | - | - | 10.1 | - | - | \$741.2 | 0 | |
| HCM Lane LOS | - | F | A | A | - | - | - | B | - | - | - | F | A |
| HCM 95th %tile Q(veh) | - | 6.5 | - | 0.4 | - | - | - | 0.2 | - | - | - | 14.8 | - |
| Notes | | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | | \$: Delay exceeds 300s | | | +: Computation Not Defined | | | *: All major volume in platoon | | | | |

| Intersection | | | | | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|------|--------|------|-------|--------|------|-------|-------|-------|--|--|--|--|
| Int Delay, s/veh | 14.9 | | | | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | | | |
| Lane Configurations | ↑ ↗ | ↑ ↗ | ↗ | ↖ ↗ | ↑ ↗ | ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↑ ↗ | ↗ | | | | |
| Traffic Vol, veh/h | 134 | 440 | 265 | 40 | 340 | 7 | 155 | 2 | 23 | 6 | 4 | 87 | | | | |
| Future Vol, veh/h | 134 | 440 | 265 | 40 | 340 | 7 | 155 | 2 | 23 | 6 | 4 | 87 | | | | |
| 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 | - | - | Free | | | | |
| Storage Length | 350 | - | 273 | 350 | - | 273 | 250 | - | - | 250 | - | 190 | | | | |
| 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 | 141 | 463 | 279 | 42 | 358 | 7 | 163 | 2 | 24 | 6 | 4 | 92 | | | | |
| Major/Minor | | | | | | | | | | | | | | | | |
| Major1 | | Major2 | | | Minor1 | | | Minor2 | | | | | | | | |
| Conflicting Flow All | 365 | 0 | 0 | 742 | 0 | 0 | 1010 | 1194 | 232 | 957 | 1466 | - | | | | |
| Stage 1 | - | - | - | - | - | - | 745 | 745 | - | 442 | 442 | - | | | | |
| Stage 2 | - | - | - | - | - | - | 265 | 449 | - | 515 | 1024 | - | | | | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | - | | | | |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | - | | | | |
| Pot Cap-1 Maneuver | 1190 | - | - | 861 | - | - | 194 | 185 | 770 | 212 | 127 | 0 | | | | |
| Stage 1 | - | - | - | - | - | - | 372 | 419 | - | 564 | 575 | 0 | | | | |
| Stage 2 | - | - | - | - | - | - | 717 | 571 | - | 511 | 311 | 0 | | | | |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| Mov Cap-1 Maneuver | 1190 | - | - | 861 | - | - | 165 | 155 | 770 | 178 | 107 | - | | | | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 165 | 155 | - | 178 | 107 | - | | | | |
| Stage 1 | - | - | - | - | - | - | 328 | 370 | - | 497 | 547 | - | | | | |
| Stage 2 | - | - | - | - | - | - | 677 | 543 | - | 434 | 274 | - | | | | |
| Approach | | | | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | | | | |
| HCM Control Delay, s | 1.3 | | 1 | | 107.4 | | | 31.6 | | | | | | | | |
| HCM LOS | F | | | | | | D | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 | | | | |
| Capacity (veh/h) | 165 | 584 | 1190 | - | - | - | 861 | - | - | 178 | 107 | - | | | | |
| HCM Lane V/C Ratio | 0.989 | 0.045 | 0.119 | - | - | - | 0.049 | - | - | 0.035 | 0.039 | - | | | | |
| HCM Control Delay (s) | 122.9 | 11.5 | 8.4 | - | - | - | 9.4 | - | - | 26 | 40 | 0 | | | | |
| HCM Lane LOS | F | B | A | - | - | - | A | - | - | D | E | A | | | | |
| HCM 95th %tile Q(veh) | 7.7 | 0.1 | 0.4 | - | - | - | 0.2 | - | - | 0.1 | 0.1 | - | | | | |

Intersection

Int Delay, s/veh 0.6

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↑↑ | ↑↓ | | Y | |
| Traffic Vol, veh/h | 33 | 436 | 367 | 7 | 4 | 20 |
| Future Vol, veh/h | 33 | 436 | 367 | 7 | 4 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 35 | 459 | 386 | 7 | 4 | 21 |

| Major/Minor | Major1 | Major2 | Minor2 | | | |
|----------------------|--------|--------|--------|---|------|------|
| Conflicting Flow All | 393 | 0 | - | 0 | 690 | 197 |
| Stage 1 | - | - | - | - | 390 | - |
| Stage 2 | - | - | - | - | 300 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1162 | - | - | - | 379 | 811 |
| Stage 1 | - | - | - | - | 653 | - |
| Stage 2 | - | - | - | - | 725 | - |
| Platoon blocked, % | - | - | - | | | |
| Mov Cap-1 Maneuver | 1162 | - | - | - | 368 | 811 |
| Mov Cap-2 Maneuver | - | - | - | - | 368 | - |
| Stage 1 | - | - | - | - | 633 | - |
| Stage 2 | - | - | - | - | 725 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 10.5 |
| HCM LOS | | B | |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1162 | - | - | - | 675 |
| HCM Lane V/C Ratio | 0.03 | - | - | - | 0.037 |
| HCM Control Delay (s) | 8.2 | - | - | - | 10.5 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|--------|------|--------|-------|------|------|-------|-------|-------|--|
| Int Delay, s/veh | 4.6 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ ↗ | ↑ ↗ | ↗ | ↖ ↗ | ↑ ↗ | ↗ | ↖ | ↖ ↗ | ↖ | ↖ ↗ | ↑ ↗ | ↗ | |
| Traffic Vol, veh/h | 88 | 274 | 78 | 17 | 272 | 66 | 45 | 45 | 14 | 40 | 32 | 57 | |
| Future Vol, veh/h | 88 | 274 | 78 | 17 | 272 | 66 | 45 | 45 | 14 | 40 | 32 | 57 | |
| 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 | - | - | Free | |
| Storage Length | 350 | - | 273 | 350 | - | 273 | 250 | - | - | 250 | - | 190 | |
| 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 | 93 | 288 | 82 | 18 | 286 | 69 | 47 | 47 | 15 | 42 | 34 | 60 | |
| Major/Minor | | | | | | | | | | | | | |
| Major1 | | Major2 | | Minor1 | | Minor2 | | | | | | | |
| Conflicting Flow All | 355 | 0 | 0 | 370 | 0 | 0 | 670 | 865 | 144 | 676 | 878 | - | |
| Stage 1 | - | - | - | - | - | - | 474 | 474 | - | 322 | 322 | - | |
| Stage 2 | - | - | - | - | - | - | 196 | 391 | - | 354 | 556 | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | - | |
| 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 | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | - | |
| Pot Cap-1 Maneuver | 1200 | - | - | 1185 | - | - | 343 | 290 | 877 | 339 | 285 | 0 | |
| Stage 1 | - | - | - | - | - | - | 540 | 556 | - | 664 | 650 | 0 | |
| Stage 2 | - | - | - | - | - | - | 787 | 606 | - | 636 | 511 | 0 | |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 1200 | - | - | 1185 | - | - | 288 | 264 | 877 | 268 | 259 | - | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 288 | 264 | - | 268 | 259 | - | |
| Stage 1 | - | - | - | - | - | - | 498 | 513 | - | 613 | 640 | - | |
| Stage 2 | - | - | - | - | - | - | 734 | 597 | - | 524 | 472 | - | |
| Approach | | | | | | | | | | | | | |
| EB | | WB | | NB | | SB | | | | | | | |
| HCM Control Delay, s | 1.7 | | 0.4 | | 19.5 | | 20.9 | | | | | | |
| HCM LOS | | | | | C | | C | | | | | | |
| Minor Lane/Major Mvmt | | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | SBLn3 | |
| Capacity (veh/h) | 288 | 316 | 1200 | - | - | - | 1185 | - | - | 268 | 259 | - | |
| HCM Lane V/C Ratio | 0.164 | 0.197 | 0.077 | - | - | - | 0.015 | - | - | 0.157 | 0.13 | - | |
| HCM Control Delay (s) | 19.9 | 19.2 | 8.3 | - | - | - | 8.1 | - | - | 20.9 | 21 | 0 | |
| HCM Lane LOS | C | C | A | - | - | - | A | - | - | C | C | A | |
| HCM 95th %tile Q(veh) | 0.6 | 0.7 | 0.2 | - | - | - | 0 | - | - | 0.5 | 0.4 | - | |

| Intersection | | | | | | | | | | | | |
|----------------------------|-------|--------|------------------------|----------|--------|----------------------------|---------|---------|--------------------------------|---------|---------|------|
| Int Delay, s/veh | 87.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ ↗ ↗ | ↖ ↗ ↗ ↗ | ↖ ↗ | ↖ ↗ ↗ ↗ | ↖ ↗ ↗ ↗ | ↖ ↗ |
| Traffic Vol, veh/h | 262 | 15 | 51 | 2 | 10 | 5 | 40 | 437 | 5 | 15 | 747 | 305 |
| Future Vol, veh/h | 262 | 15 | 51 | 2 | 10 | 5 | 40 | 437 | 5 | 15 | 747 | 305 |
| 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 | - | - | Free |
| Storage Length | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 308 | 18 | 60 | 2 | 12 | 6 | 47 | 514 | 6 | 18 | 879 | 359 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 1221 | 1529 | 440 | 1005 | 1523 | 257 | 879 | 0 | 0 | 520 | 0 | 0 |
| Stage 1 | 915 | 915 | - | 608 | 608 | - | - | - | - | - | - | - |
| Stage 2 | 306 | 614 | - | 397 | 915 | - | - | - | - | - | - | - |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - |
| Pot Cap-1 Maneuver | ~ 189 | 116 | 483 | 254 | 117 | 632 | 448 | - | - | 663 | - | 0 |
| Stage 1 | ~ 228 | 350 | - | 370 | 484 | - | - | - | - | - | - | 0 |
| Stage 2 | 622 | 481 | - | 549 | 350 | - | - | - | - | - | - | 0 |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 154 | 101 | 483 | 174 | 102 | 632 | 448 | - | - | 663 | - | - |
| Mov Cap-2 Maneuver | ~ 154 | 101 | - | 174 | 102 | - | - | - | - | - | - | - |
| Stage 1 | ~ 204 | 341 | - | 331 | 433 | - | - | - | - | - | - | - |
| Stage 2 | 537 | 430 | - | 444 | 341 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, \$ | 421.7 | | 33 | | | 1.2 | | | 0.2 | | | |
| HCM LOS | F | | D | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | | |
| Capacity (veh/h) | | 448 | - | - | 154 | 260 | 174 | 142 | 663 | - | | |
| HCM Lane V/C Ratio | | 0.105 | - | - | 2.002 | 0.299 | 0.014 | 0.124 | 0.027 | - | | |
| HCM Control Delay (s) | | 14 | - | \$ 521.7 | 24.6 | 26 | 33.9 | 10.6 | - | | | |
| HCM Lane LOS | | B | - | - | F | C | D | D | B | - | | |
| HCM 95th %tile Q(veh) | | 0.3 | - | - | 24.1 | 1.2 | 0 | 0.4 | 0.1 | - | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | | \$: Delay exceeds 300s | | | +: Computation Not Defined | | | *: All major volume in platoon | | | |

Intersection

Int Delay, s/veh 6.8

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↑↑ | ↖ | ↖ | ↑↑ |
| Traffic Vol, veh/h | 87 | 313 | 235 | 73 | 296 | 364 |
| Future Vol, veh/h | 87 | 313 | 235 | 73 | 296 | 364 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Free | - | None | - | None |
| Storage Length | 0 | 0 | - | 273 | 350 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 92 | 329 | 247 | 77 | 312 | 383 |

| Major/Minor | Minor1 | Major1 | Major2 | |
|----------------------|--------|--------|--------|------|
| Conflicting Flow All | 1063 | - | 0 | 324 |
| Stage 1 | 247 | - | - | - |
| Stage 2 | 816 | - | - | - |
| Critical Hdwy | 6.84 | - | - | 4.14 |
| Critical Hdwy Stg 1 | 5.84 | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - |
| Follow-up Hdwy | 3.52 | - | - | 2.22 |
| Pot Cap-1 Maneuver | 218 | 0 | - | 1233 |
| Stage 1 | 771 | 0 | - | - |
| Stage 2 | 395 | 0 | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | 163 | - | - | 1233 |
| Mov Cap-2 Maneuver | 163 | - | - | - |
| Stage 1 | 771 | - | - | - |
| Stage 2 | 295 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 52.2 | 0 | 4 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 163 | - | 1233 | - |
| HCM Lane V/C Ratio | - | - | 0.562 | - | 0.253 | - |
| HCM Control Delay (s) | - | - | 52.2 | 0 | 8.9 | - |
| HCM Lane LOS | - | - | F | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 2.9 | - | 1 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|------|------|------|
| Int Delay, s/veh | 4.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 29 | 2 | 2 | 34 | 3 | 108 | 3 | 171 | 59 | 179 | 223 | 48 |
| Future Vol, veh/h | 29 | 2 | 2 | 34 | 3 | 108 | 3 | 171 | 59 | 179 | 223 | 48 |
| 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 | 250 | - | - | 250 | - | - | 350 | - | 273 | 350 | - | 273 |
| 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 | 31 | 2 | 2 | 36 | 3 | 114 | 3 | 180 | 62 | 188 | 235 | 51 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 709 | 859 | 118 | 681 | 848 | 90 | 286 | 0 | 0 | 242 | 0 | 0 |
| Stage 1 | 611 | 611 | - | 186 | 186 | - | - | - | - | - | - | - |
| Stage 2 | 98 | 248 | - | 495 | 662 | - | - | - | - | - | - | - |
| 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 | 321 | 292 | 912 | 336 | 297 | 950 | 1273 | - | - | 1322 | - | - |
| Stage 1 | 448 | 482 | - | 798 | 745 | - | - | - | - | - | - | - |
| Stage 2 | 898 | 700 | - | 525 | 457 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 249 | 250 | 912 | 296 | 254 | 950 | 1273 | - | - | 1322 | - | - |
| Mov Cap-2 Maneuver | 249 | 250 | - | 296 | 254 | - | - | - | - | - | - | - |
| Stage 1 | 447 | 414 | - | 796 | 744 | - | - | - | - | - | - | - |
| Stage 2 | 785 | 699 | - | 447 | 392 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 20.6 | | 11.8 | | | 0.1 | | | 3.3 | | | |
| HCM LOS | C | | B | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | |
| Capacity (veh/h) | 1273 | | - | - | 249 | 392 | 296 | 884 | 1322 | - | - | |
| HCM Lane V/C Ratio | 0.002 | | - | - | 0.123 | 0.011 | 0.121 | 0.132 | 0.143 | - | - | |
| HCM Control Delay (s) | 7.8 | | - | - | 21.5 | 14.3 | 18.8 | 9.7 | 8.2 | - | - | |
| HCM Lane LOS | A | | - | - | C | B | C | A | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.4 | 0 | 0.4 | 0.5 | 0.5 | - | - | |

Intersection

Int Delay, s/veh 6.1

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ | ↖ ↗ |
| Traffic Vol, veh/h | 12 | 65 | 3 | 4 | 50 | 75 | 5 | 138 | 7 | 131 | 183 | 14 |
| Future Vol, veh/h | 12 | 65 | 3 | 4 | 50 | 75 | 5 | 138 | 7 | 131 | 183 | 14 |
| 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 |
| Storage Length | 250 | - | - | 250 | - | - | 250 | - | - | 250 | - | - |
| 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 | 13 | 68 | 3 | 4 | 53 | 79 | 5 | 145 | 7 | 138 | 193 | 15 |

| Major/Minor | Minor2 | Minor1 | | | Major1 | | | Major2 | | | | |
|----------------------|--------|--------|-------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 702 | 639 | 201 | 671 | 643 | 149 | 208 | 0 | 0 | 152 | 0 | 0 |
| Stage 1 | 477 | 477 | - | 159 | 159 | - | - | - | - | - | - | - |
| Stage 2 | 225 | 162 | - | 512 | 484 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 353 | 394 | 840 | 370 | 392 | 898 | 1363 | - | - | 1429 | - | - |
| Stage 1 | 569 | 556 | - | 843 | 766 | - | - | - | - | - | - | - |
| Stage 2 | 778 | 764 | - | 545 | 552 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 264 | 354 | 840 | 290 | 352 | 898 | 1363 | - | - | 1429 | - | - |
| Mov Cap-2 Maneuver | 264 | 354 | - | 290 | 352 | - | - | - | - | - | - | - |
| Stage 1 | 567 | 502 | - | 840 | 763 | - | - | - | - | - | - | - |
| Stage 2 | 658 | 761 | - | 424 | 498 | - | - | - | - | - | - | - |

| Approach | EB | WB | | | NB | | | SB | | |
|-----------------------|-------|------|-----|-------|-------|-------|-------|-------|-----|-----|
| HCM Control Delay, s | 17.6 | 13.6 | | | 0.3 | | | 3.1 | | |
| HCM LOS | C | B | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
| Capacity (veh/h) | 1363 | - | - | 264 | 363 | 290 | 554 | 1429 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.048 | 0.197 | 0.015 | 0.238 | 0.096 | - | - |
| HCM Control Delay (s) | 7.7 | - | - | 19.3 | 17.3 | 17.6 | 13.5 | 7.8 | - | - |
| HCM Lane LOS | A | - | - | C | C | C | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0.7 | 0 | 0.9 | 0.3 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|------|------|
| Int Delay, s/veh | 4.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Vol, veh/h | 49 | 29 | 6 | 29 | 21 | 41 | 11 | 90 | 51 | 70 | 148 | 85 |
| Future Vol, veh/h | 49 | 29 | 6 | 29 | 21 | 41 | 11 | 90 | 51 | 70 | 148 | 85 |
| 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 | 250 | - | - | 250 | - | - | 250 | - | 120 | 250 | - | 120 |
| 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 | 52 | 31 | 6 | 31 | 22 | 43 | 12 | 95 | 54 | 74 | 156 | 89 |
| Major/Minor | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | |
| Conflicting Flow All | 483 | 477 | 156 | 486 | 512 | 95 | 245 | 0 | 0 | 149 | 0 | 0 |
| Stage 1 | 304 | 304 | - | 119 | 119 | - | - | - | - | - | - | - |
| Stage 2 | 179 | 173 | - | 367 | 393 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 494 | 487 | 890 | 492 | 465 | 962 | 1321 | - | - | 1432 | - | - |
| Stage 1 | 705 | 663 | - | 885 | 797 | - | - | - | - | - | - | - |
| Stage 2 | 823 | 756 | - | 653 | 606 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 433 | 457 | 890 | 442 | 437 | 962 | 1321 | - | - | 1432 | - | - |
| Mov Cap-2 Maneuver | 433 | 457 | - | 442 | 437 | - | - | - | - | - | - | - |
| Stage 1 | 699 | 629 | - | 877 | 790 | - | - | - | - | - | - | - |
| Stage 2 | 757 | 749 | - | 585 | 574 | - | - | - | - | - | - | - |
| Approach | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 13.7 | | 11.7 | | | 0.6 | | | 1.8 | | | |
| HCM LOS | B | | B | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | |
| Capacity (veh/h) | 1321 | | - | - | 433 | 499 | 442 | 684 | 1432 | - | - | |
| HCM Lane V/C Ratio | 0.009 | | - | - | 0.119 | 0.074 | 0.069 | 0.095 | 0.051 | - | - | |
| HCM Control Delay (s) | 7.7 | | - | - | 14.4 | 12.8 | 13.7 | 10.8 | 7.7 | - | - | |
| HCM Lane LOS | A | | - | - | B | B | B | B | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | | - | - | 0.4 | 0.2 | 0.2 | 0.3 | 0.2 | - | - | |

Intersection

Int Delay, s/veh 6.3

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ ↗ | ↖ ↗ | | ↖ ↗ | ↖ ↗ | | ↖ ↗ | ↖ ↗ | | ↖ ↗ | ↖ ↗ | |
| Traffic Vol, veh/h | 13 | 28 | 10 | 1 | 20 | 55 | 6 | 27 | 1 | 91 | 47 | 22 |
| Future Vol, veh/h | 13 | 28 | 10 | 1 | 20 | 55 | 6 | 27 | 1 | 91 | 47 | 22 |
| 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 |
| Storage Length | 250 | - | - | 250 | - | - | 250 | - | - | 250 | - | - |
| 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 | 14 | 29 | 11 | 1 | 21 | 58 | 6 | 28 | 1 | 96 | 49 | 23 |

| Major/Minor | Minor2 | Minor1 | | | Major1 | | | Major2 | | | | |
|----------------------|--------|--------|-------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 333 | 294 | 61 | 314 | 305 | 29 | 72 | 0 | 0 | 29 | 0 | 0 |
| Stage 1 | 253 | 253 | - | 41 | 41 | - | - | - | - | - | - | - |
| Stage 2 | 80 | 41 | - | 273 | 264 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 620 | 617 | 1004 | 639 | 608 | 1046 | 1528 | - | - | 1584 | - | - |
| Stage 1 | 751 | 698 | - | 974 | 861 | - | - | - | - | - | - | - |
| Stage 2 | 929 | 861 | - | 733 | 690 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 541 | 577 | 1004 | 578 | 568 | 1046 | 1528 | - | - | 1584 | - | - |
| Mov Cap-2 Maneuver | 541 | 577 | - | 578 | 568 | - | - | - | - | - | - | - |
| Stage 1 | 748 | 655 | - | 970 | 858 | - | - | - | - | - | - | - |
| Stage 2 | 853 | 858 | - | 651 | 648 | - | - | - | - | - | - | - |

| Approach | EB | WB | | | NB | | | SB | | | | |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|------|-----|-----|--|--|
| HCM Control Delay, s | 11.1 | 9.6 | | | 1.3 | | | 4.2 | | | | |
| HCM LOS | B | A | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR | | |
| Capacity (veh/h) | 1528 | - | - | 541 | 650 | 578 | 854 | 1584 | - | - | | |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.025 | 0.062 | 0.002 | 0.092 | 0.06 | - | - | | |
| HCM Control Delay (s) | 7.4 | - | - | 11.8 | 10.9 | 11.2 | 9.6 | 7.4 | - | - | | |
| HCM Lane LOS | A | - | - | B | B | B | A | A | - | - | | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0.2 | 0 | 0.3 | 0.2 | - | - | | |

Intersection

Int Delay, s/veh 1.7

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 4 | 10 | 18 | 66 | 45 | 7 |
| Future Vol, veh/h | 4 | 10 | 18 | 66 | 45 | 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 | 250 | - | 250 | - | - | 173 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 11 | 19 | 69 | 47 | 7 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 154 | 47 | 54 | 0 | - |
| Stage 1 | 47 | - | - | - | - |
| Stage 2 | 107 | - | - | - | - |
| 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 | 838 | 1022 | 1551 | - | - |
| Stage 1 | 975 | - | - | - | - |
| Stage 2 | 917 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 828 | 1022 | 1551 | - | - |
| Mov Cap-2 Maneuver | 828 | - | - | - | - |
| Stage 1 | 963 | - | - | - | - |
| Stage 2 | 917 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 8.8 | 1.6 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1551 | - | 828 | 1022 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.005 | 0.01 | - | - |
| HCM Control Delay (s) | 7.3 | - | 9.4 | 8.6 | - | - |
| HCM Lane LOS | A | - | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0 | 0 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh | 0.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | T | ↑↑ | ↑↓ | |
| Traffic Vol, veh/h | 9 | 5 | 8 | 223 | 243 | 16 |
| Future Vol, veh/h | 9 | 5 | 8 | 223 | 243 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 350 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 6 | 9 | 262 | 286 | 19 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 445 | 153 | 305 | 0 | - | 0 |
| Stage 1 | 296 | - | - | - | - | - |
| Stage 2 | 149 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 542 | 866 | 1253 | - | - | - |
| Stage 1 | 729 | - | - | - | - | - |
| Stage 2 | 863 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 538 | 866 | 1253 | - | - | - |
| Mov Cap-2 Maneuver | 538 | - | - | - | - | - |
| Stage 1 | 724 | - | - | - | - | - |
| Stage 2 | 863 | - | - | - | - | - |
| Approach | EB | NB | SB | | | |
| HCM Control Delay, s | 10.9 | 0.3 | 0 | | | |
| HCM LOS | B | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1253 | - | 622 | - | - | |
| HCM Lane V/C Ratio | 0.008 | - | 0.026 | - | - | |
| HCM Control Delay (s) | 7.9 | - | 10.9 | - | - | |
| HCM Lane LOS | A | - | B | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - | |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 25 | 90 | 103 | 54 | 46 | 40 |
| Future Vol, veh/h | 25 | 90 | 103 | 54 | 46 | 40 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 350 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 95 | 108 | 57 | 48 | 42 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 165 | 0 | - | 0 | 208 | 54 |
| Stage 1 | - | - | - | - | 108 | - |
| Stage 2 | - | - | - | - | 100 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1411 | - | - | - | 761 | 1002 |
| Stage 1 | - | - | - | - | 904 | - |
| Stage 2 | - | - | - | - | 913 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1411 | - | - | - | 747 | 1002 |
| Mov Cap-2 Maneuver | - | - | - | - | 747 | - |
| Stage 1 | - | - | - | - | 888 | - |
| Stage 2 | - | - | - | - | 913 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 1.7 | 0 | 9.5 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1411 | - | - | - | 747 | 1002 |
| HCM Lane V/C Ratio | 0.019 | - | - | - | 0.065 | 0.042 |
| HCM Control Delay (s) | 7.6 | - | - | - | 10.2 | 8.8 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.2 | 0.1 |

| Intersection | | | | | | | | | | | | | |
|--------------------------|------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|------|-----|
| Int Delay, s/veh | 9.1 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↑ | ↑↑ | | ↑ | ↑↑ | | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | |
| Traffic Vol, veh/h | 27 | 75 | 35 | 162 | 53 | 38 | 65 | 167 | 274 | 57 | 151 | 39 | |
| Future Vol, veh/h | 27 | 75 | 35 | 162 | 53 | 38 | 65 | 167 | 274 | 57 | 151 | 39 | |
| 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 | 350 | - | - | 350 | - | - | 350 | - | 273 | 350 | - | 273 | |
| 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 | 28 | 79 | 37 | 171 | 56 | 40 | 68 | 176 | 288 | 60 | 159 | 41 | |
| Major/Minor | | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | | |
| Conflicting Flow All | 531 | 879 | 80 | 551 | 632 | 88 | 200 | 0 | 0 | 464 | 0 | 0 | |
| Stage 1 | 279 | 279 | - | 312 | 312 | - | - | - | - | - | - | - | |
| Stage 2 | 252 | 600 | - | 239 | 320 | - | - | - | - | - | - | - | |
| 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 | 431 | 285 | 964 | 417 | 396 | 953 | 1370 | - | - | 1094 | - | - | |
| Stage 1 | 704 | 678 | - | 673 | 656 | - | - | - | - | - | - | - | |
| Stage 2 | 730 | 488 | - | 743 | 651 | - | - | - | - | - | - | - | |
| Platoon blocked, % | | | | | | | | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 336 | 256 | 964 | 283 | 356 | 953 | 1370 | - | - | 1094 | - | - | |
| Mov Cap-2 Maneuver | 336 | 256 | - | 283 | 356 | - | - | - | - | - | - | - | |
| Stage 1 | 669 | 641 | - | 639 | 623 | - | - | - | - | - | - | - | |
| Stage 2 | 605 | 464 | - | 592 | 615 | - | - | - | - | - | - | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 17.8 | | 27.4 | | | 1 | | | 2 | | | | |
| HCM LOS | C | | D | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
| Capacity (veh/h) | 1370 | | - | - | 336 | 256 | 397 | 283 | 356 | 564 | 1094 | - | - |
| HCM Lane V/C Ratio | 0.05 | | - | - | 0.085 | 0.154 | 0.192 | 0.603 | 0.078 | 0.12 | 0.055 | - | - |
| HCM Control Delay (s) | 7.8 | | - | - | 16.7 | 21.6 | 16.2 | 35.3 | 16 | 12.3 | 8.5 | - | - |
| HCM Lane LOS | A | | - | - | C | C | C | E | C | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.2 | | - | - | 0.3 | 0.5 | 0.7 | 3.6 | 0.3 | 0.4 | 0.2 | - | - |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 127 | 279 | 177 | 45 | 26 | 76 |
| Future Vol, veh/h | 127 | 279 | 177 | 45 | 26 | 76 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 134 | 294 | 186 | 47 | 27 | 80 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 233 | 0 | - | 0 | 601 | 93 |
| Stage 1 | - | - | - | - | 186 | - |
| Stage 2 | - | - | - | - | 415 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1332 | - | - | - | 432 | 946 |
| Stage 1 | - | - | - | - | 827 | - |
| Stage 2 | - | - | - | - | 635 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1332 | - | - | - | 388 | 946 |
| Mov Cap-2 Maneuver | - | - | - | - | 388 | - |
| Stage 1 | - | - | - | - | 743 | - |
| Stage 2 | - | - | - | - | 635 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.5 | 0 | 10.7 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1332 | - | - | - | 388 | 946 |
| HCM Lane V/C Ratio | 0.1 | - | - | - | 0.071 | 0.085 |
| HCM Control Delay (s) | 8 | - | - | - | 15 | 9.2 |
| HCM Lane LOS | A | - | - | - | C | A |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 0.2 | 0.3 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 83 | 221 | 150 | 37 | 39 | 71 |
| Future Vol, veh/h | 83 | 221 | 150 | 37 | 39 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 87 | 233 | 158 | 39 | 41 | 75 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 197 | 0 | - | 0 | 449 | 79 |
| Stage 1 | - | - | - | - | 158 | - |
| Stage 2 | - | - | - | - | 291 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1373 | - | - | - | 538 | 965 |
| Stage 1 | - | - | - | - | 854 | - |
| Stage 2 | - | - | - | - | 733 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1373 | - | - | - | 504 | 965 |
| Mov Cap-2 Maneuver | - | - | - | - | 504 | - |
| Stage 1 | - | - | - | - | 800 | - |
| Stage 2 | - | - | - | - | 733 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 2.1 | 0 | 10.3 | | | |
| HCM LOS | | | B | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1373 | - | - | - | 504 | 965 |
| HCM Lane V/C Ratio | 0.064 | - | - | - | 0.081 | 0.077 |
| HCM Control Delay (s) | 7.8 | - | - | - | 12.8 | 9 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.3 | 0.3 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 55 | 205 | 151 | 28 | 19 | 36 |
| Future Vol, veh/h | 55 | 205 | 151 | 28 | 19 | 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 | 350 | - | - | 273 | 250 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 58 | 216 | 159 | 29 | 20 | 38 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 188 | 0 | - | 0 | 383 | 80 |
| Stage 1 | - | - | - | - | 159 | - |
| Stage 2 | - | - | - | - | 224 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.84 | - |
| Follow-up Hdwy | 2.22 | - | - | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | 1384 | - | - | - | 592 | 964 |
| Stage 1 | - | - | - | - | 853 | - |
| Stage 2 | - | - | - | - | 792 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1384 | - | - | - | 567 | 964 |
| Mov Cap-2 Maneuver | - | - | - | - | 567 | - |
| Stage 1 | - | - | - | - | 817 | - |
| Stage 2 | - | - | - | - | 792 | - |
| Approach | EB | WB | SB | | | |
| HCM Control Delay, s | 1.6 | 0 | 9.8 | | | |
| HCM LOS | | | A | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 1384 | - | - | - | 567 | 964 |
| HCM Lane V/C Ratio | 0.042 | - | - | - | 0.035 | 0.039 |
| HCM Control Delay (s) | 7.7 | - | - | - | 11.6 | 8.9 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 | 0.1 |

| Intersection | | | | | | | | | | | | | |
|--------------------------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|------|------|-----|
| Int Delay, s/veh | 10 | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↗ | ↑ | ↖ | ↑↑↑ | ↖ | ↑↑↑ | ↖ | ↗ | |
| Traffic Vol, veh/h | 102 | 31 | 91 | 2 | 35 | 5 | 78 | 375 | 5 | 15 | 718 | 67 | |
| Future Vol, veh/h | 102 | 31 | 91 | 2 | 35 | 5 | 78 | 375 | 5 | 15 | 718 | 67 | |
| 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 | 350 | - | 273 | 350 | - | - | 350 | - | - | 350 | - | 273 | |
| 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 | 107 | 33 | 96 | 2 | 37 | 5 | 82 | 395 | 5 | 16 | 756 | 71 | |
| Major/Minor | | | | | | | | | | | | | |
| Minor2 | | Minor1 | | | Major1 | | | Major2 | | | | | |
| Conflicting Flow All | 1129 | 1352 | 378 | 913 | 1421 | 200 | 827 | 0 | 0 | 400 | 0 | 0 | |
| Stage 1 | 788 | 788 | - | 562 | 562 | - | - | - | - | - | - | - | |
| Stage 2 | 341 | 564 | - | 351 | 859 | - | - | - | - | - | - | - | |
| Critical Hdwy | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 | 5.34 | - | - | 5.34 | - | - | |
| Critical Hdwy Stg 1 | 7.34 | 5.54 | - | 7.34 | 5.54 | - | - | - | - | - | - | - | |
| Critical Hdwy Stg 2 | 6.74 | 5.54 | - | 6.74 | 5.54 | - | - | - | - | - | - | - | |
| Follow-up Hdwy | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 | 3.12 | - | - | 3.12 | - | - | |
| Pot Cap-1 Maneuver | 215 | 149 | 529 | 287 | 135 | 687 | 474 | - | - | 754 | - | - | |
| Stage 1 | 279 | 400 | - | 398 | 508 | - | - | - | - | - | - | - | |
| Stage 2 | 593 | 507 | - | 585 | 371 | - | - | - | - | - | - | - | |
| Platoon blocked, % | | | | | | | | - | - | - | - | - | |
| Mov Cap-1 Maneuver | 136 | 121 | 529 | 160 | 109 | 687 | 474 | - | - | 754 | - | - | |
| Mov Cap-2 Maneuver | 136 | 121 | - | 160 | 109 | - | - | - | - | - | - | - | |
| Stage 1 | 231 | 392 | - | 329 | 420 | - | - | - | - | - | - | - | |
| Stage 2 | 444 | 419 | - | 430 | 363 | - | - | - | - | - | - | - | |
| Approach | | | | | | | | | | | | | |
| EB | | | WB | | | NB | | | SB | | | | |
| HCM Control Delay, s | 53.6 | | 48.3 | | | 2.4 | | | 0.2 | | | | |
| HCM LOS | F | | E | | | | | | | | | | |
| Minor Lane/Major Mvmt | | | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | SBL | SBT | SBR |
| Capacity (veh/h) | 474 | | - | - | 136 | 121 | 529 | 160 | 122 | 754 | - | - | - |
| HCM Lane V/C Ratio | 0.173 | | - | - | 0.789 | 0.27 | 0.181 | 0.013 | 0.345 | 0.021 | - | - | - |
| HCM Control Delay (s) | 14.2 | | - | - | 92 | 45.4 | 13.3 | 27.8 | 49.3 | 9.9 | - | - | - |
| HCM Lane LOS | B | | - | - | F | E | B | D | E | A | - | - | - |
| HCM 95th %tile Q(veh) | 0.6 | | - | - | 4.8 | 1 | 0.7 | 0 | 1.4 | 0.1 | - | - | - |

Timings
8: Street A & E. Jewell Ave

2041 Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Volume (vph) | 25 | 265 | 194 | 89 | 770 | 474 | 25 | 131 | 10 | 8 | 75 |
| Future Volume (vph) | 25 | 265 | 194 | 89 | 770 | 474 | 25 | 131 | 10 | 8 | 75 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Prot | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 20.0 | |
| Total Split (s) | 10.0 | 60.0 | 60.0 | 10.0 | 60.0 | 25.0 | 40.0 | | 10.0 | 25.0 | |
| Total Split (%) | 8.3% | 50.0% | 50.0% | 8.3% | 50.0% | 20.8% | 33.3% | | 8.3% | 20.8% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 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 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | None | None | | None | None | |
| Act Effect Green (s) | 80.0 | 73.9 | 73.9 | 84.5 | 79.5 | 19.6 | 21.6 | 120.0 | 8.0 | 15.0 | 120.0 |
| Actuated g/C Ratio | 0.67 | 0.62 | 0.62 | 0.70 | 0.66 | 0.16 | 0.18 | 1.00 | 0.07 | 0.12 | 1.00 |
| v/c Ratio | 0.06 | 0.13 | 0.19 | 0.12 | 0.35 | 0.89 | 0.08 | 0.09 | 0.09 | 0.03 | 0.05 |
| Control Delay | 5.9 | 10.1 | 3.1 | 3.4 | 8.9 | 68.3 | 39.5 | 0.1 | 43.5 | 46.8 | 0.1 |
| 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 | 5.9 | 10.1 | 3.1 | 3.4 | 8.9 | 68.3 | 39.5 | 0.1 | 43.5 | 46.8 | 0.1 |
| LOS | A | B | A | A | A | E | D | A | D | D | A |
| Approach Delay | | | | | 7.1 | | 8.3 | | 52.9 | | 8.7 |
| Approach LOS | | | | | A | | D | | | | A |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 71 (59%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 21.6

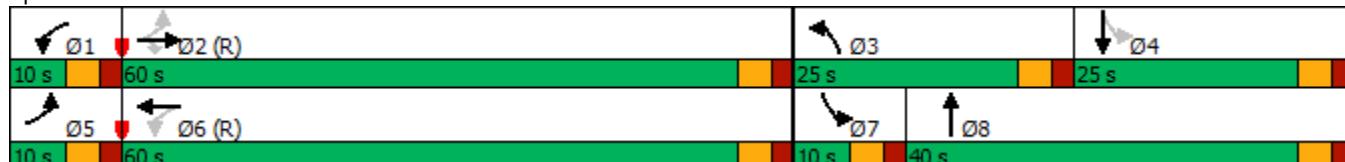
Intersection LOS: C

Intersection Capacity Utilization 58.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Street A & E. Jewell Ave



Timings

9: Hayesmouth Rd & E. Jewell Ave

2041 Total Traffic

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Volume (vph) | 72 | 301 | 32 | 28 | 672 | 60 | 91 | 123 | 58 | 18 | 39 | 100 |
| Future Volume (vph) | 72 | 301 | 32 | 28 | 672 | 60 | 91 | 123 | 58 | 18 | 39 | 100 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | 8 | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | | 7 | 4 | |
| 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) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 20.0 | |
| Total Split (s) | 15.0 | 60.0 | 60.0 | 15.0 | 60.0 | 60.0 | 15.0 | 30.0 | | 15.0 | 30.0 | |
| Total Split (%) | 12.5% | 50.0% | 50.0% | 12.5% | 50.0% | 50.0% | 12.5% | 25.0% | | 12.5% | 25.0% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | Max | | None | Max | |
| Act Effect Green (s) | 68.1 | 62.9 | 62.9 | 64.7 | 59.5 | 59.5 | 39.1 | 35.1 | 120.0 | 32.4 | 25.9 | 120.0 |
| Actuated g/C Ratio | 0.57 | 0.52 | 0.52 | 0.54 | 0.50 | 0.50 | 0.33 | 0.29 | 1.00 | 0.27 | 0.22 | 1.00 |
| v/c Ratio | 0.20 | 0.17 | 0.04 | 0.05 | 0.40 | 0.08 | 0.23 | 0.24 | 0.04 | 0.05 | 0.10 | 0.07 |
| Control Delay | 7.6 | 10.7 | 1.2 | 8.0 | 16.5 | 0.7 | 29.8 | 35.8 | 0.1 | 27.7 | 39.3 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.6 | 10.7 | 1.2 | 8.0 | 16.5 | 0.7 | 29.8 | 35.8 | 0.1 | 27.7 | 39.3 | 0.1 |
| LOS | A | B | A | A | B | A | C | D | A | C | D | A |
| Approach Delay | | 9.4 | | | 14.9 | | | | 26.2 | | | 13.0 |
| Approach LOS | | A | | | B | | | C | | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 15.2

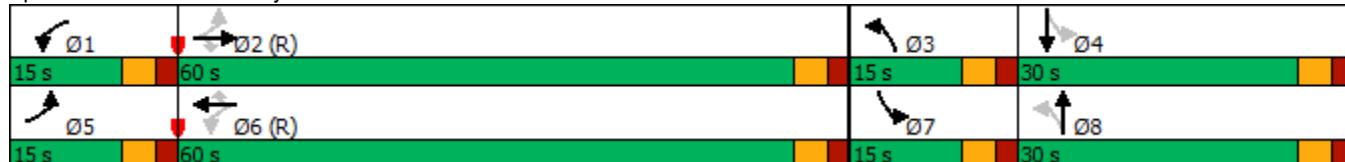
Intersection LOS: B

Intersection Capacity Utilization 50.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: Hayesmouth Rd & E. Jewell Ave



Timings
10: Lanewood St & E. Jewell Ave

2041 Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ |
| Traffic Volume (vph) | 67 | 240 | 71 | 11 | 409 | 6 | 223 | 14 | 6 | 6 | 129 |
| Future Volume (vph) | 67 | 240 | 71 | 11 | 409 | 6 | 223 | 14 | 6 | 6 | 129 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | 8 | | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 7 | 4 | |
| 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) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 20.0 |
| Total Split (s) | 15.0 | 65.0 | 65.0 | 15.0 | 65.0 | 65.0 | 15.0 | 25.0 | 15.0 | 25.0 | |
| Total Split (%) | 12.5% | 54.2% | 54.2% | 12.5% | 54.2% | 54.2% | 12.5% | 20.8% | 12.5% | 20.8% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | Max | None | Max | |
| Act Effect Green (s) | 73.9 | 70.5 | 70.5 | 69.5 | 64.8 | 64.8 | 34.7 | 32.7 | 25.9 | 20.0 | 120.0 |
| Actuated g/C Ratio | 0.62 | 0.59 | 0.59 | 0.58 | 0.54 | 0.54 | 0.29 | 0.27 | 0.22 | 0.17 | 1.00 |
| v/c Ratio | 0.13 | 0.12 | 0.08 | 0.02 | 0.23 | 0.01 | 0.61 | 0.10 | 0.02 | 0.02 | 0.09 |
| Control Delay | 11.6 | 13.6 | 2.9 | 9.3 | 15.3 | 0.0 | 43.1 | 17.1 | 30.8 | 42.2 | 0.1 |
| 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 | 11.6 | 13.6 | 2.9 | 9.3 | 15.3 | 0.0 | 43.1 | 17.1 | 30.8 | 42.2 | 0.1 |
| LOS | B | B | A | A | B | A | D | B | C | D | A |
| Approach Delay | | 11.2 | | | 15.0 | | | 38.5 | | 3.1 | |
| Approach LOS | | B | | | B | | | D | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 17.7

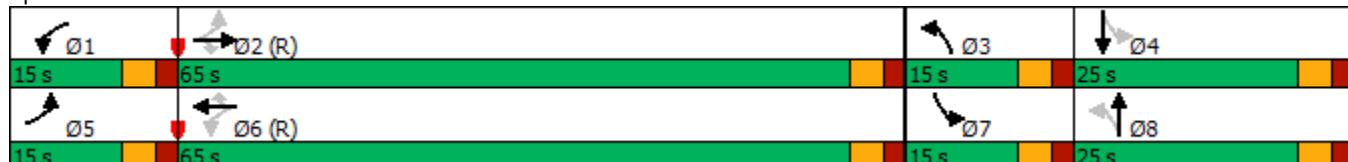
Intersection LOS: B

Intersection Capacity Utilization 47.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 10: Lanewood St & E. Jewell Ave



Timings
13: Watkins Rd & E. Jewell Ave

2041 Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 241 | 5 | 3 | 15 | 49 | 695 | 1 | 5 | 233 | 192 |
| Future Volume (vph) | 241 | 5 | 3 | 15 | 49 | 695 | 1 | 5 | 233 | 192 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | 1 | 6 | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | 4 | | Free |
| Detector Phase | 5 | 2 | 1 | 6 | 3 | 8 | 8 | 7 | 4 | |
| 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) | 10.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | |
| Total Split (s) | 15.0 | 45.0 | 15.0 | 45.0 | 15.0 | 45.0 | 45.0 | 15.0 | 45.0 | |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 12.5% | 37.5% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | C-Max | None | C-Max | None | None | None | None | None | None |
| Act Effect Green (s) | 81.4 | 79.2 | 68.6 | 63.0 | 28.3 | 26.3 | 26.3 | 22.2 | 17.4 | 120.0 |
| Actuated g/C Ratio | 0.68 | 0.66 | 0.57 | 0.52 | 0.24 | 0.22 | 0.22 | 0.18 | 0.14 | 1.00 |
| v/c Ratio | 0.31 | 0.03 | 0.01 | 0.03 | 0.22 | 0.74 | 0.00 | 0.04 | 0.37 | 0.14 |
| Control Delay | 13.8 | 10.4 | 10.7 | 14.3 | 31.9 | 42.0 | 0.0 | 30.6 | 47.5 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 13.8 | 10.4 | 10.7 | 14.3 | 31.9 | 42.0 | 0.0 | 30.6 | 47.5 | 0.2 |
| LOS | B | B | B | B | C | D | A | C | D | A |
| Approach Delay | | 13.4 | | 13.9 | | 41.3 | | | 26.2 | |
| Approach LOS | | B | | B | | D | | | C | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 31.2

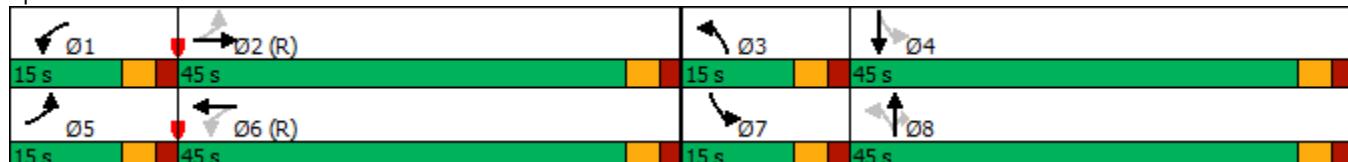
Intersection LOS: C

Intersection Capacity Utilization 50.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 13: Watkins Rd & E. Jewell Ave



Timings
14: Monaghan Rd & PA-79 Access

2041 Total Traffic
AM Peak Hour



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ |
| Traffic Volume (vph) | 13 | 75 | 320 | 28 | 116 | 142 |
| Future Volume (vph) | 13 | 75 | 320 | 28 | 116 | 142 |
| Turn Type | Prot | Free | NA | Perm | pm+pt | NA |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | Free | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 1 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 20.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 25.0 | | 20.0 | 20.0 | 10.0 | 20.0 |
| Total Split (s) | 25.0 | | 85.0 | 85.0 | 10.0 | 95.0 |
| Total Split (%) | 20.8% | | 70.8% | 70.8% | 8.3% | 79.2% |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | Yes | Yes | Yes | | |
| Recall Mode | None | | C-Max | C-Max | None | C-Max |
| Act Effect Green (s) | 20.0 | 120.0 | 94.6 | 94.6 | 105.0 | 108.0 |
| Actuated g/C Ratio | 0.17 | 1.00 | 0.79 | 0.79 | 0.88 | 0.90 |
| v/c Ratio | 0.05 | 0.05 | 0.12 | 0.02 | 0.14 | 0.05 |
| Control Delay | 42.7 | 0.1 | 4.5 | 2.4 | 3.8 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 42.7 | 0.1 | 4.5 | 2.4 | 3.8 | 2.9 |
| LOS | D | A | A | A | A | A |
| Approach Delay | 6.5 | | 4.3 | | 3.3 | |
| Approach LOS | A | | A | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.14

Intersection Signal Delay: 4.2

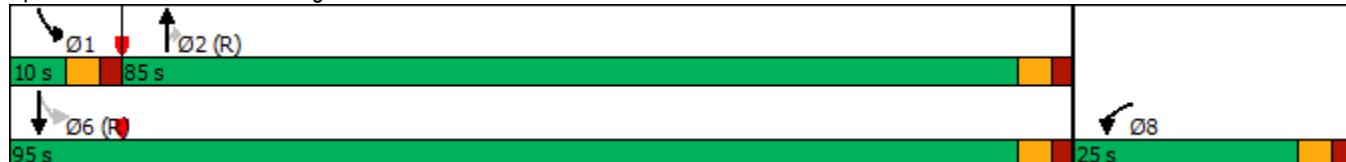
Intersection LOS: A

Intersection Capacity Utilization 44.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 14: Monaghan Rd & PA-79 Access



Timings
22: Monaghan Rd & E Yale Ave

2041 Total Traffic

AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 34 | 50 | 60 | 260 | 81 | 43 | 20 | 94 | 98 | 19 | 116 | 17 |
| Future Volume (vph) | 34 | 50 | 60 | 260 | 81 | 43 | 20 | 94 | 98 | 19 | 116 | 17 |
| Turn Type | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 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 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 |
| Total Split (s) | 12.0 | 30.0 | 30.0 | 12.0 | 30.0 | 30.0 | 12.0 | 66.0 | 66.0 | 12.0 | 66.0 | 66.0 |
| Total Split (%) | 10.0% | 25.0% | 25.0% | 10.0% | 25.0% | 25.0% | 10.0% | 55.0% | 55.0% | 10.0% | 55.0% | 55.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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 | 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 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None |
| Act Effect Green (s) | 10.1 | 6.9 | 6.9 | 12.8 | 11.9 | 11.9 | 8.4 | 7.6 | 7.6 | 8.3 | 7.6 | 7.6 |
| Actuated g/C Ratio | 0.32 | 0.22 | 0.22 | 0.40 | 0.38 | 0.38 | 0.26 | 0.24 | 0.24 | 0.26 | 0.24 | 0.24 |
| v/c Ratio | 0.07 | 0.07 | 0.15 | 0.50 | 0.06 | 0.07 | 0.05 | 0.12 | 0.22 | 0.04 | 0.14 | 0.04 |
| Control Delay | 7.5 | 14.9 | 2.9 | 14.0 | 10.6 | 0.9 | 10.6 | 14.1 | 5.8 | 10.6 | 14.1 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.5 | 14.9 | 2.9 | 14.0 | 10.6 | 0.9 | 10.6 | 14.1 | 5.8 | 10.6 | 14.1 | 0.2 |
| LOS | A | B | A | B | B | A | B | B | A | B | B | A |
| Approach Delay | | 8.2 | | | 11.8 | | | | 9.9 | | 12.1 | |
| Approach LOS | | A | | | B | | | | A | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 31.7

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 10.8

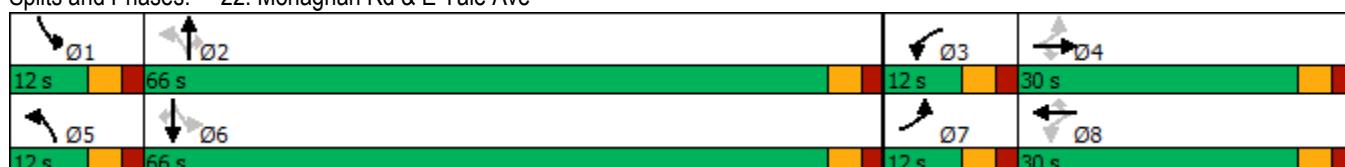
Intersection LOS: B

Intersection Capacity Utilization 37.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 22: Monaghan Rd & E Yale Ave



Timings
26: Watkins Rd & E Yale Ave

2041 Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑↑↑ | ↑ | ↑↑↑ | ↑ |
| Traffic Volume (vph) | 39 | 27 | 53 | 3 | 24 | 74 | 696 | 5 | 163 | 93 |
| Future Volume (vph) | 39 | 27 | 53 | 3 | 24 | 74 | 696 | 5 | 163 | 93 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 5 | 2 | 1 | 6 | |
| Permitted Phases | | | 4 | 8 | | 2 | | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 5 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 20.0 |
| Total Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 12.0 | 68.0 | 12.0 | 68.0 | 68.0 |
| Total Split (%) | 12.5% | 20.8% | 20.8% | 12.5% | 20.8% | 10.0% | 56.7% | 10.0% | 56.7% | 56.7% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 21.3 | 21.2 | 21.2 | 16.6 | 15.0 | 90.2 | 89.4 | 85.1 | 81.6 | 81.6 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.18 | 0.14 | 0.12 | 0.75 | 0.74 | 0.71 | 0.68 | 0.68 |
| v/c Ratio | 0.18 | 0.09 | 0.15 | 0.01 | 0.16 | 0.09 | 0.19 | 0.01 | 0.05 | 0.09 |
| Control Delay | 38.5 | 40.7 | 0.9 | 34.7 | 37.5 | 6.2 | 7.0 | 1.4 | 1.7 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 38.5 | 40.7 | 0.9 | 34.7 | 37.5 | 6.2 | 7.0 | 1.4 | 1.7 | 0.5 |
| LOS | D | D | A | C | D | A | A | A | A | A |
| Approach Delay | | 22.1 | | | 37.3 | | 7.0 | | 1.3 | |
| Approach LOS | | C | | | D | | A | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.19

Intersection Signal Delay: 8.2

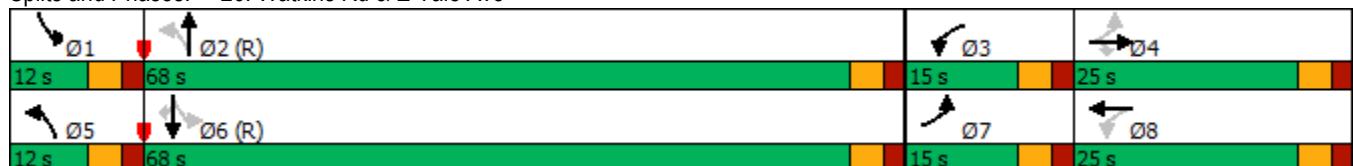
Intersection LOS: A

Intersection Capacity Utilization 42.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 26: Watkins Rd & E Yale Ave



Timings
8: Street A & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Volume (vph) | 80 | 880 | 501 | 116 | 531 | 297 | 17 | 78 | 5 | 30 | 50 |
| Future Volume (vph) | 80 | 880 | 501 | 116 | 531 | 297 | 17 | 78 | 5 | 30 | 50 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Prot | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 20.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 25.0 | 20.0 | | 10.0 | 20.0 | |
| Total Split (s) | 10.0 | 60.0 | 60.0 | 10.0 | 60.0 | 25.0 | 40.0 | | 10.0 | 25.0 | |
| Total Split (%) | 8.3% | 50.0% | 50.0% | 8.3% | 50.0% | 20.8% | 33.3% | | 8.3% | 20.8% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 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 | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | None | None | | None | None | |
| Act Effect Green (s) | 72.3 | 64.5 | 64.5 | 74.6 | 67.4 | 20.0 | 30.0 | 120.0 | 14.0 | 15.0 | 120.0 |
| Actuated g/C Ratio | 0.60 | 0.54 | 0.54 | 0.62 | 0.56 | 0.17 | 0.25 | 1.00 | 0.12 | 0.12 | 1.00 |
| v/c Ratio | 0.16 | 0.49 | 0.48 | 0.35 | 0.29 | 0.55 | 0.04 | 0.05 | 0.03 | 0.14 | 0.03 |
| Control Delay | 13.2 | 21.9 | 5.9 | 10.1 | 13.9 | 50.5 | 32.6 | 0.1 | 28.8 | 48.5 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 13.2 | 21.9 | 5.9 | 10.1 | 13.9 | 50.5 | 32.6 | 0.1 | 28.8 | 48.5 | 0.0 |
| LOS | B | C | A | B | B | D | C | A | C | D | A |
| Approach Delay | | 16.0 | | | 13.3 | | 39.7 | | | 18.9 | |
| Approach LOS | | B | | | B | | D | | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 71 (59%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 18.9

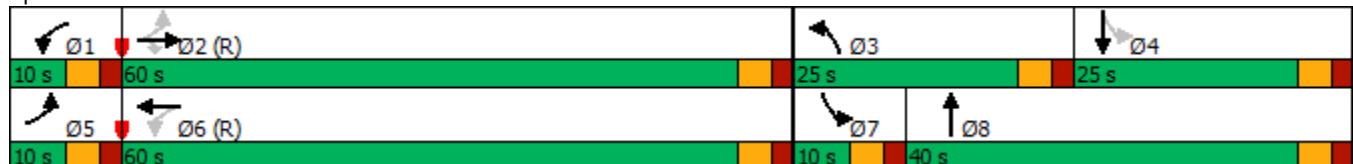
Intersection LOS: B

Intersection Capacity Utilization 62.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Street A & E. Jewell Ave



Timings
9: Hayesmouth Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Volume (vph) | 124 | 732 | 107 | 54 | 490 | 37 | 65 | 81 | 37 | 70 | 146 | 107 |
| Future Volume (vph) | 124 | 732 | 107 | 54 | 490 | 37 | 65 | 81 | 37 | 70 | 146 | 107 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | 8 | | Free | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | | 7 | 4 | |
| 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) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | | 10.0 | 20.0 | |
| Total Split (s) | 15.0 | 60.0 | 60.0 | 15.0 | 60.0 | 60.0 | 15.0 | 30.0 | | 15.0 | 30.0 | |
| Total Split (%) | 12.5% | 50.0% | 50.0% | 12.5% | 50.0% | 50.0% | 12.5% | 25.0% | | 12.5% | 25.0% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | Max | | None | Max | |
| Act Effect Green (s) | 67.5 | 60.0 | 60.0 | 63.2 | 56.1 | 56.1 | 35.9 | 28.7 | 120.0 | 36.1 | 28.8 | 120.0 |
| Actuated g/C Ratio | 0.56 | 0.50 | 0.50 | 0.53 | 0.47 | 0.47 | 0.30 | 0.24 | 1.00 | 0.30 | 0.24 | 1.00 |
| v/c Ratio | 0.27 | 0.44 | 0.13 | 0.16 | 0.31 | 0.05 | 0.18 | 0.19 | 0.02 | 0.17 | 0.34 | 0.07 |
| Control Delay | 3.9 | 7.7 | 1.8 | 9.1 | 17.1 | 0.5 | 29.9 | 40.7 | 0.0 | 29.2 | 42.1 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 3.9 | 7.7 | 1.8 | 9.1 | 17.1 | 0.5 | 29.9 | 40.7 | 0.0 | 29.2 | 42.1 | 0.1 |
| LOS | A | A | A | A | B | A | C | D | A | C | D | A |
| Approach Delay | | 6.6 | | | 15.3 | | | | 28.6 | | 25.4 | |
| Approach LOS | | A | | | B | | | C | | C | | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 14.0

Intersection LOS: B

Intersection Capacity Utilization 52.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: Hayesmouth Rd & E. Jewell Ave



Timings
10: Lanewood St & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| Traffic Volume (vph) | 134 | 440 | 265 | 40 | 340 | 7 | 155 | 2 | 6 | 4 | 87 |
| Future Volume (vph) | 134 | 440 | 265 | 40 | 340 | 7 | 155 | 2 | 6 | 4 | 87 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | 8 | | 4 | | Free |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 7 | 4 | |
| 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) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 20.0 |
| Total Split (s) | 15.0 | 65.0 | 65.0 | 15.0 | 65.0 | 65.0 | 15.0 | 25.0 | 15.0 | 25.0 | |
| Total Split (%) | 12.5% | 54.2% | 54.2% | 12.5% | 54.2% | 54.2% | 12.5% | 20.8% | 12.5% | 20.8% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | Max | None | Max | |
| Act Effect Green (s) | 73.0 | 65.5 | 65.5 | 67.7 | 61.1 | 61.1 | 34.7 | 32.7 | 26.1 | 20.2 | 120.0 |
| Actuated g/C Ratio | 0.61 | 0.55 | 0.55 | 0.56 | 0.51 | 0.51 | 0.29 | 0.27 | 0.22 | 0.17 | 1.00 |
| v/c Ratio | 0.23 | 0.24 | 0.28 | 0.08 | 0.20 | 0.01 | 0.42 | 0.06 | 0.02 | 0.01 | 0.06 |
| Control Delay | 11.4 | 14.9 | 3.7 | 9.4 | 16.5 | 0.0 | 37.3 | 15.2 | 30.8 | 42.0 | 0.1 |
| 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 | 11.4 | 14.9 | 3.7 | 9.4 | 16.5 | 0.0 | 37.3 | 15.2 | 30.8 | 42.0 | 0.1 |
| LOS | B | B | A | A | B | A | D | B | C | D | A |
| Approach Delay | | 10.8 | | | 15.5 | | | 34.2 | | 3.5 | |
| Approach LOS | | B | | | B | | | C | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 14.3

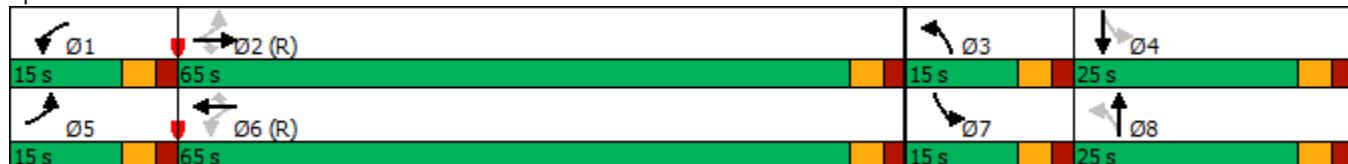
Intersection LOS: B

Intersection Capacity Utilization 44.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 10: Lanewood St & E. Jewell Ave



Timings
13: Watkins Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑↑↑ | ↑ | ↑ | ↑↑↑ | ↑ |
| Traffic Volume (vph) | 262 | 15 | 2 | 10 | 40 | 437 | 5 | 15 | 747 | 305 |
| Future Volume (vph) | 262 | 15 | 2 | 10 | 40 | 437 | 5 | 15 | 747 | 305 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Free |
| Protected Phases | 5 | 2 | 1 | 6 | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | 8 | | 8 | 4 | Free |
| Detector Phase | 5 | 2 | 1 | 6 | 3 | 8 | 8 | 7 | 4 | |
| 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) | 10.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | |
| Total Split (s) | 15.0 | 45.0 | 15.0 | 45.0 | 15.0 | 45.0 | 45.0 | 15.0 | 45.0 | |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 12.5% | 37.5% | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | C-Max | None | C-Max | None | None | None | None | None | None |
| Act Effect Green (s) | 71.3 | 69.1 | 57.0 | 51.4 | 37.5 | 33.8 | 33.8 | 33.4 | 28.1 | 120.0 |
| Actuated g/C Ratio | 0.59 | 0.58 | 0.48 | 0.43 | 0.31 | 0.28 | 0.28 | 0.28 | 0.23 | 1.00 |
| v/c Ratio | 0.38 | 0.08 | 0.00 | 0.02 | 0.26 | 0.36 | 0.01 | 0.07 | 0.74 | 0.23 |
| Control Delay | 21.4 | 12.3 | 14.5 | 19.9 | 25.6 | 29.0 | 0.0 | 24.4 | 46.2 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.4 | 12.3 | 14.5 | 19.9 | 25.6 | 29.0 | 0.0 | 24.4 | 46.2 | 0.3 |
| LOS | C | B | B | B | C | C | A | C | D | A |
| Approach Delay | | 19.6 | | 19.4 | | 28.4 | | | 32.8 | |
| Approach LOS | | B | | B | | C | | | C | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 29.3

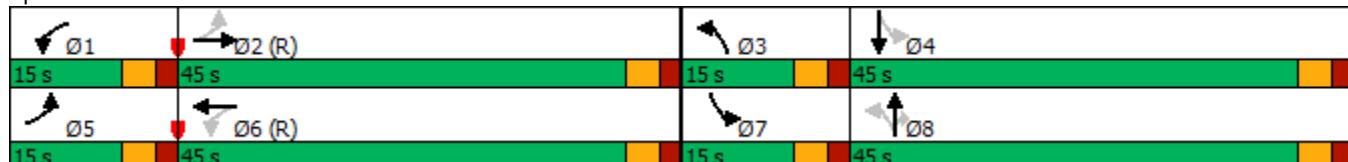
Intersection LOS: C

Intersection Capacity Utilization 52.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 13: Watkins Rd & E. Jewell Ave



Timings
14: Monaghan Rd & PA-79 Access

2041 Total Traffic
PM Peak Hour



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ ↗ | ↗ ↘ | ↑↑ ↗ | ↗ ↘ | ↑ ↗ | ↑↑ ↗ |
| Traffic Volume (vph) | 87 | 313 | 235 | 73 | 296 | 364 |
| Future Volume (vph) | 87 | 313 | 235 | 73 | 296 | 364 |
| Turn Type | Prot | Free | NA | Perm | pm+pt | NA |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | Free | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 1 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 15.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 20.0 | | 20.0 | 20.0 | 10.0 | 20.0 |
| Total Split (s) | 30.0 | | 75.0 | 75.0 | 15.0 | 90.0 |
| Total Split (%) | 25.0% | | 62.5% | 62.5% | 12.5% | 75.0% |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | Yes | Yes | Yes | | |
| Recall Mode | None | | C-Max | C-Max | None | C-Max |
| Act Effect Green (s) | 15.2 | 120.0 | 78.8 | 78.8 | 94.8 | 94.8 |
| Actuated g/C Ratio | 0.13 | 1.00 | 0.66 | 0.66 | 0.79 | 0.79 |
| v/c Ratio | 0.41 | 0.21 | 0.11 | 0.07 | 0.35 | 0.14 |
| Control Delay | 54.3 | 0.3 | 8.0 | 2.0 | 3.7 | 1.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 54.3 | 0.3 | 8.0 | 2.0 | 3.7 | 1.7 |
| LOS | D | A | A | A | A | A |
| Approach Delay | 12.1 | | 6.6 | | 2.6 | |
| Approach LOS | B | | A | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 6.3

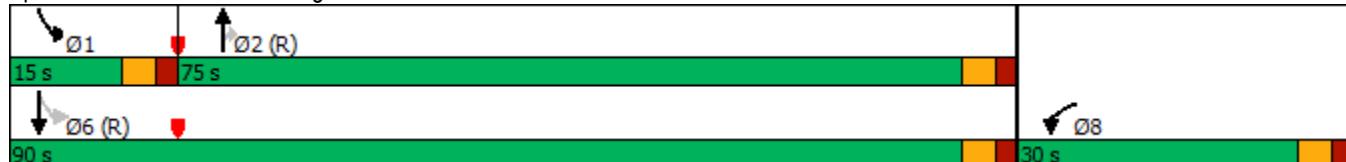
Intersection LOS: A

Intersection Capacity Utilization 47.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 14: Monaghan Rd & PA-79 Access



Timings
22: Monaghan Rd & E Yale Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 27 | 75 | 35 | 162 | 53 | 38 | 65 | 167 | 274 | 57 | 151 | 39 |
| Future Volume (vph) | 27 | 75 | 35 | 162 | 53 | 38 | 65 | 167 | 274 | 57 | 151 | 39 |
| Turn Type | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 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 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 20.0 |
| Total Split (s) | 12.0 | 30.0 | 30.0 | 12.0 | 30.0 | 30.0 | 12.0 | 66.0 | 66.0 | 12.0 | 66.0 | 66.0 |
| Total Split (%) | 10.0% | 25.0% | 25.0% | 10.0% | 25.0% | 25.0% | 10.0% | 55.0% | 55.0% | 10.0% | 55.0% | 55.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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 | 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 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None |
| Act Effect Green (s) | 12.5 | 8.2 | 8.2 | 16.3 | 14.8 | 14.8 | 13.0 | 9.7 | 9.7 | 12.9 | 9.7 | 9.7 |
| Actuated g/C Ratio | 0.32 | 0.21 | 0.21 | 0.41 | 0.38 | 0.38 | 0.33 | 0.25 | 0.25 | 0.33 | 0.25 | 0.25 |
| v/c Ratio | 0.05 | 0.11 | 0.09 | 0.30 | 0.04 | 0.06 | 0.13 | 0.20 | 0.47 | 0.12 | 0.18 | 0.09 |
| Control Delay | 10.6 | 19.0 | 0.4 | 11.8 | 13.8 | 0.2 | 9.9 | 17.3 | 6.0 | 9.8 | 17.4 | 0.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 10.6 | 19.0 | 0.4 | 11.8 | 13.8 | 0.2 | 9.9 | 17.3 | 6.0 | 9.8 | 17.4 | 0.4 |
| LOS | B | B | A | B | B | A | A | B | A | A | B | A |
| Approach Delay | | 12.6 | | | 10.5 | | | 10.3 | | | 13.0 | |
| Approach LOS | | B | | | B | | | B | | | B | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 39.3

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 11.2

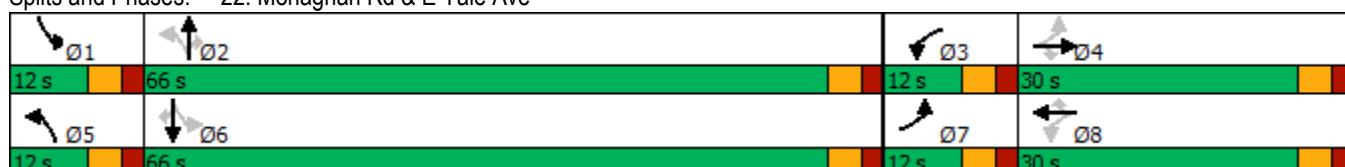
Intersection LOS: B

Intersection Capacity Utilization 37.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 22: Monaghan Rd & E Yale Ave



Timings
26: Watkins Rd & E Yale Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑↑ | ↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 102 | 31 | 91 | 2 | 35 | 78 | 375 | 15 | 718 | 67 |
| Future Volume (vph) | 102 | 31 | 91 | 2 | 35 | 78 | 375 | 15 | 718 | 67 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 5 | 2 | 1 | 6 | |
| Permitted Phases | | | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 5 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 10.0 | 20.0 | 20.0 |
| Total Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 12.0 | 68.0 | 12.0 | 68.0 | 68.0 |
| Total Split (%) | 12.5% | 20.8% | 20.8% | 12.5% | 20.8% | 10.0% | 56.7% | 10.0% | 56.7% | 56.7% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 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) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 23.8 | 21.8 | 21.8 | 14.7 | 15.0 | 84.9 | 81.5 | 80.6 | 75.9 | 75.9 |
| Actuated g/C Ratio | 0.20 | 0.18 | 0.18 | 0.12 | 0.12 | 0.71 | 0.68 | 0.67 | 0.63 | 0.63 |
| v/c Ratio | 0.40 | 0.10 | 0.26 | 0.01 | 0.18 | 0.17 | 0.12 | 0.02 | 0.24 | 0.07 |
| Control Delay | 43.5 | 40.4 | 7.9 | 34.5 | 44.8 | 7.1 | 8.4 | 0.9 | 1.0 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 43.5 | 40.4 | 7.9 | 34.5 | 44.8 | 7.1 | 8.4 | 0.9 | 1.0 | 0.1 |
| LOS | D | D | A | C | D | A | A | A | A | A |
| Approach Delay | | 28.5 | | | 44.3 | | 8.2 | | 1.0 | |
| Approach LOS | | C | | | D | | A | | A | |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 8.4

Intersection LOS: A

Intersection Capacity Utilization 43.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 26: Watkins Rd & E Yale Ave



Queues
6: Powhaton Rd & E. Jewell Ave

2041 Total Traffic
AM Peak Hour



| Lane Group | EBL | EBT | EBC | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 211 | 526 | 12 | 100 | 1445 | 212 | 38 | 393 | 32 | 84 | 131 | 247 |
| v/c Ratio | 0.67 | 0.28 | 0.01 | 0.20 | 0.89 | 0.13 | 0.12 | 0.64 | 0.02 | 0.35 | 0.18 | 0.16 |
| Control Delay | 37.1 | 17.4 | 0.0 | 9.1 | 31.5 | 0.2 | 30.4 | 51.4 | 0.0 | 35.0 | 39.6 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.1 | 17.4 | 0.0 | 9.1 | 31.5 | 0.2 | 30.4 | 51.4 | 0.0 | 35.0 | 39.6 | 0.2 |
| Queue Length 50th (ft) | 102 | 117 | 0 | 28 | 561 | 0 | 21 | 152 | 0 | 49 | 45 | 0 |
| Queue Length 95th (ft) | #199 | 177 | 0 | m40 | #769 | 0 | 46 | 200 | 0 | 84 | 72 | 0 |
| Internal Link Dist (ft) | | | 572 | | | 487 | | | 5293 | | | 453 |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 313 | 1876 | 890 | 539 | 1622 | 1583 | 367 | 884 | 1583 | 267 | 906 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.67 | 0.28 | 0.01 | 0.19 | 0.89 | 0.13 | 0.10 | 0.44 | 0.02 | 0.31 | 0.14 | 0.16 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
7: Monaghan Rd & E. Jewell Ave

2041 Total Traffic

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 163 | 342 | 105 | 86 | 992 | 309 | 197 | 169 | 49 | 119 | 80 | 495 |
| v/c Ratio | 0.52 | 0.16 | 0.07 | 0.13 | 0.50 | 0.20 | 0.61 | 0.37 | 0.03 | 0.44 | 0.27 | 0.31 |
| Control Delay | 69.6 | 7.7 | 0.1 | 9.6 | 17.3 | 0.2 | 53.1 | 46.4 | 0.0 | 57.3 | 53.3 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 69.6 | 7.7 | 0.1 | 9.6 | 17.3 | 0.2 | 53.1 | 46.4 | 0.0 | 57.3 | 53.3 | 0.5 |
| Queue Length 50th (ft) | 69 | 33 | 0 | 17 | 128 | 0 | 129 | 62 | 0 | 45 | 31 | 0 |
| Queue Length 95th (ft) | 105 | 45 | 0 | m58 | m443 | m0 | 186 | 70 | 0 | 75 | 56 | 0 |
| Internal Link Dist (ft) | | 525 | | | 515 | | | 561 | | | 499 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 328 | 2171 | 1583 | 706 | 2004 | 1583 | 325 | 796 | 1583 | 486 | 796 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.50 | 0.16 | 0.07 | 0.12 | 0.50 | 0.20 | 0.61 | 0.21 | 0.03 | 0.24 | 0.10 | 0.31 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
8: Street A & E. Jewell Ave

2041 Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 26 | 279 | 204 | 94 | 816 | 499 | 26 | 138 | 11 | 8 | 79 |
| V/c Ratio | 0.06 | 0.13 | 0.19 | 0.12 | 0.35 | 0.89 | 0.08 | 0.09 | 0.09 | 0.03 | 0.05 |
| Control Delay | 5.9 | 10.1 | 3.1 | 3.4 | 8.9 | 68.3 | 39.5 | 0.1 | 43.5 | 46.8 | 0.1 |
| 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 | 5.9 | 10.1 | 3.1 | 3.4 | 8.9 | 68.3 | 39.5 | 0.1 | 43.5 | 46.8 | 0.1 |
| Queue Length 50th (ft) | 3 | 47 | 0 | 3 | 192 | 196 | 17 | 0 | 8 | 6 | 0 |
| Queue Length 95th (ft) | 20 | 69 | 11 | 63 | 360 | #285 | 39 | 0 | 19 | 21 | 0 |
| Internal Link Dist (ft) | | 449 | | | 551 | | 416 | | 1159 | | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 250 | | 190 | 250 | | 190 |
| Base Capacity (vph) | 451 | 2180 | 1053 | 769 | 2343 | 572 | 543 | 1583 | 120 | 310 | 1583 |
| 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 | 0.06 | 0.13 | 0.19 | 0.12 | 0.35 | 0.87 | 0.05 | 0.09 | 0.09 | 0.03 | 0.05 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2041 Total Traffic

AM Peak Hour

9: Hayesmouth Rd & E. Jewell Ave



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 76 | 317 | 34 | 29 | 707 | 63 | 96 | 129 | 61 | 19 | 41 | 105 |
| v/c Ratio | 0.20 | 0.17 | 0.04 | 0.05 | 0.40 | 0.08 | 0.23 | 0.24 | 0.04 | 0.05 | 0.10 | 0.07 |
| Control Delay | 7.6 | 10.7 | 1.2 | 8.0 | 16.5 | 0.7 | 29.8 | 35.8 | 0.1 | 27.7 | 39.3 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.6 | 10.7 | 1.2 | 8.0 | 16.5 | 0.7 | 29.8 | 35.8 | 0.1 | 27.7 | 39.3 | 0.1 |
| Queue Length 50th (ft) | 25 | 60 | 0 | 7 | 177 | 1 | 53 | 73 | 0 | 10 | 26 | 0 |
| Queue Length 95th (ft) | 15 | 83 | 0 | m14 | 204 | m3 | 96 | 143 | 0 | 28 | 58 | 0 |
| Internal Link Dist (ft) | | 543 | | | 467 | | | 2598 | | | 1148 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 250 | | 190 | 250 | | 190 |
| Base Capacity (vph) | 411 | 1855 | 881 | 647 | 1753 | 839 | 428 | 544 | 1583 | 418 | 402 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.18 | 0.17 | 0.04 | 0.04 | 0.40 | 0.08 | 0.22 | 0.24 | 0.04 | 0.05 | 0.10 | 0.07 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
10: Lanewood St & E. Jewell Ave

2041 Total Traffic

AM Peak Hour



| Lane Group | EBL | EBT | EBC | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 71 | 253 | 75 | 12 | 431 | 6 | 235 | 50 | 6 | 6 | 136 |
| v/c Ratio | 0.13 | 0.12 | 0.08 | 0.02 | 0.23 | 0.01 | 0.61 | 0.10 | 0.02 | 0.02 | 0.09 |
| Control Delay | 11.6 | 13.6 | 2.9 | 9.3 | 15.3 | 0.0 | 43.1 | 17.1 | 30.8 | 42.2 | 0.1 |
| 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 | 11.6 | 13.6 | 2.9 | 9.3 | 15.3 | 0.0 | 43.1 | 17.1 | 30.8 | 42.2 | 0.1 |
| Queue Length 50th (ft) | 24 | 44 | 2 | 3 | 90 | 0 | 149 | 8 | 3 | 4 | 0 |
| Queue Length 95th (ft) | 43 | 64 | 13 | 11 | 127 | 0 | 228 | 45 | 14 | 17 | 0 |
| Internal Link Dist (ft) | | 470 | | | 843 | | | 1330 | | 1300 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 250 | | 250 | | 190 |
| Base Capacity (vph) | 591 | 2079 | 975 | 727 | 1910 | 905 | 386 | 479 | 372 | 310 | 1583 |
| 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 | 0.12 | 0.12 | 0.08 | 0.02 | 0.23 | 0.01 | 0.61 | 0.10 | 0.02 | 0.02 | 0.09 |

Intersection Summary

Queues
13: Watkins Rd & E. Jewell Ave

2041 Total Traffic
AM Peak Hour



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 284 | 35 | 4 | 30 | 58 | 818 | 1 | 6 | 274 | 226 |
| v/c Ratio | 0.31 | 0.03 | 0.01 | 0.03 | 0.22 | 0.74 | 0.00 | 0.04 | 0.37 | 0.14 |
| Control Delay | 13.8 | 10.4 | 10.7 | 14.3 | 31.9 | 42.0 | 0.0 | 30.6 | 47.5 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 13.8 | 10.4 | 10.7 | 14.3 | 31.9 | 42.0 | 0.0 | 30.6 | 47.5 | 0.2 |
| Queue Length 50th (ft) | 85 | 3 | 1 | 6 | 30 | 161 | 0 | 4 | 74 | 0 |
| Queue Length 95th (ft) | 165 | 20 | 6 | 29 | 43 | 145 | m0 | 12 | 84 | 0 |
| Internal Link Dist (ft) | | 536 | | 980 | | 5193 | | | 1193 | |
| Turn Bay Length (ft) | 350 | | 350 | | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 916 | 1087 | 865 | 924 | 273 | 1695 | 600 | 196 | 1695 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.31 | 0.03 | 0.00 | 0.03 | 0.21 | 0.48 | 0.00 | 0.03 | 0.16 | 0.14 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
14: Monaghan Rd & PA-79 Access

2041 Total Traffic

AM Peak Hour



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 14 | 79 | 337 | 29 | 122 | 149 |
| v/c Ratio | 0.05 | 0.05 | 0.12 | 0.02 | 0.14 | 0.05 |
| Control Delay | 42.7 | 0.1 | 4.5 | 2.4 | 3.8 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 42.7 | 0.1 | 4.5 | 2.4 | 3.8 | 2.9 |
| Queue Length 50th (ft) | 9 | 0 | 13 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 29 | 0 | 64 | 10 | 47 | 27 |
| Internal Link Dist (ft) | 435 | | 1234 | | | 491 |
| Turn Bay Length (ft) | | | | 273 | 350 | |
| Base Capacity (vph) | 295 | 1583 | 2789 | 1253 | 884 | 3185 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.05 | 0.05 | 0.12 | 0.02 | 0.14 | 0.05 |

Intersection Summary

Queues
22: Monaghan Rd & E Yale Ave

2041 Total Traffic

AM Peak Hour



| Lane Group | EBL | EBT | EBC | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 36 | 53 | 63 | 274 | 85 | 45 | 21 | 99 | 103 | 20 | 122 | 18 |
| V/c Ratio | 0.07 | 0.07 | 0.15 | 0.50 | 0.06 | 0.07 | 0.05 | 0.12 | 0.22 | 0.04 | 0.14 | 0.04 |
| Control Delay | 7.5 | 14.9 | 2.9 | 14.0 | 10.6 | 0.9 | 10.6 | 14.1 | 5.8 | 10.6 | 14.1 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.5 | 14.9 | 2.9 | 14.0 | 10.6 | 0.9 | 10.6 | 14.1 | 5.8 | 10.6 | 14.1 | 0.2 |
| Queue Length 50th (ft) | 3 | 4 | 0 | 24 | 3 | 0 | 3 | 8 | 0 | 3 | 10 | 0 |
| Queue Length 95th (ft) | 19 | 18 | 13 | #132 | 26 | 4 | 13 | 29 | 29 | 13 | 34 | 0 |
| Internal Link Dist (ft) | 6123 | | | 1765 | | | 1063 | | | 1192 | | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 604 | 2782 | 1268 | 571 | 2782 | 1268 | 505 | 3539 | 1583 | 504 | 3539 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.06 | 0.02 | 0.05 | 0.48 | 0.03 | 0.04 | 0.04 | 0.03 | 0.07 | 0.04 | 0.03 | 0.01 |

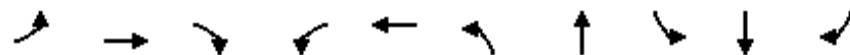
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues
26: Watkins Rd & E Yale Ave

2041 Total Traffic
AM Peak Hour



| Lane Group | EBL | EBT | EBC | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 41 | 28 | 56 | 3 | 36 | 78 | 734 | 5 | 172 | 98 |
| V/c Ratio | 0.18 | 0.09 | 0.15 | 0.01 | 0.16 | 0.09 | 0.19 | 0.01 | 0.05 | 0.09 |
| Control Delay | 38.5 | 40.7 | 0.9 | 34.7 | 37.5 | 6.2 | 7.0 | 1.4 | 1.7 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 38.5 | 40.7 | 0.9 | 34.7 | 37.5 | 6.2 | 7.0 | 1.4 | 1.7 | 0.5 |
| Queue Length 50th (ft) | 25 | 17 | 0 | 2 | 17 | 18 | 69 | 0 | 2 | 0 |
| Queue Length 95th (ft) | 55 | 47 | 1 | 10 | 50 | 36 | 121 | 1 | 5 | 6 |
| Internal Link Dist (ft) | 5189 | | | 853 | | | 852 | | | 5193 |
| Turn Bay Length (ft) | 350 | 273 | | | 350 | 350 | | | 350 | 273 |
| Base Capacity (vph) | 254 | 363 | 396 | 262 | 305 | 881 | 3789 | 546 | 3456 | 1110 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.08 | 0.14 | 0.01 | 0.12 | 0.09 | 0.19 | 0.01 | 0.05 | 0.09 |

Intersection Summary

Queues
6: Powhaton Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour



| Lane Group | EBL | EBT | EBC | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 263 | 1593 | 43 | 63 | 961 | 162 | 22 | 246 | 105 | 254 | 421 | 347 |
| V/c Ratio | 0.68 | 0.86 | 0.05 | 0.37 | 0.66 | 0.10 | 0.09 | 0.41 | 0.07 | 0.74 | 0.48 | 0.22 |
| Control Delay | 26.2 | 32.0 | 0.1 | 21.1 | 23.0 | 0.1 | 30.0 | 46.9 | 0.1 | 48.3 | 41.8 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.2 | 32.0 | 0.1 | 21.1 | 23.0 | 0.1 | 30.0 | 46.9 | 0.1 | 48.3 | 41.8 | 0.3 |
| Queue Length 50th (ft) | 93 | 563 | 0 | 20 | 211 | 0 | 12 | 91 | 0 | 159 | 154 | 0 |
| Queue Length 95th (ft) | 190 | #769 | 0 | m48 | 228 | m0 | 32 | 131 | 0 | #249 | 209 | 0 |
| Internal Link Dist (ft) | | 572 | | | 487 | | | 5293 | | | 453 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 386 | 1846 | 878 | 212 | 1453 | 1583 | 336 | 884 | 1583 | 344 | 967 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.68 | 0.86 | 0.05 | 0.30 | 0.66 | 0.10 | 0.07 | 0.28 | 0.07 | 0.74 | 0.44 | 0.22 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
7: Monaghan Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 532 | 1040 | 306 | 146 | 579 | 199 | 254 | 168 | 156 | 342 | 243 | 311 |
| v/c Ratio | 0.84 | 0.57 | 0.19 | 0.47 | 0.39 | 0.13 | 0.79 | 0.35 | 0.10 | 0.76 | 0.53 | 0.20 |
| Control Delay | 72.0 | 13.3 | 0.2 | 28.6 | 35.0 | 0.2 | 52.7 | 45.7 | 0.1 | 61.5 | 52.7 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 72.0 | 13.3 | 0.2 | 28.6 | 35.0 | 0.2 | 52.7 | 45.7 | 0.1 | 61.5 | 52.7 | 0.3 |
| Queue Length 50th (ft) | 227 | 107 | 0 | 66 | 206 | 0 | 133 | 63 | 0 | 131 | 93 | 0 |
| Queue Length 95th (ft) | m#319 | 178 | m0 | 117 | 284 | 0 | #219 | 95 | 0 | 183 | 132 | 0 |
| Internal Link Dist (ft) | | 525 | | | 515 | | | 561 | | | 499 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 632 | 1826 | 1583 | 325 | 1474 | 1583 | 330 | 796 | 1583 | 486 | 796 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.84 | 0.57 | 0.19 | 0.45 | 0.39 | 0.13 | 0.77 | 0.21 | 0.10 | 0.70 | 0.31 | 0.20 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
8: Street A & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 84 | 926 | 527 | 122 | 575 | 313 | 18 | 82 | 5 | 32 | 53 |
| v/c Ratio | 0.16 | 0.49 | 0.48 | 0.35 | 0.29 | 0.55 | 0.04 | 0.05 | 0.03 | 0.14 | 0.03 |
| Control Delay | 13.2 | 21.9 | 5.9 | 10.1 | 13.9 | 50.5 | 32.6 | 0.1 | 28.8 | 48.5 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 13.2 | 21.9 | 5.9 | 10.1 | 13.9 | 50.5 | 32.6 | 0.1 | 28.8 | 48.5 | 0.0 |
| Queue Length 50th (ft) | 37 | 224 | 73 | 51 | 140 | 116 | 9 | 0 | 3 | 22 | 0 |
| Queue Length 95th (ft) | m60 | 257 | 118 | 86 | 176 | 163 | 30 | 0 | 12 | 54 | 0 |
| Internal Link Dist (ft) | | 449 | | | 551 | | 416 | | | 1159 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 250 | | 190 | 250 | | 190 |
| Base Capacity (vph) | 516 | 1902 | 1094 | 345 | 1979 | 572 | 574 | 1583 | 177 | 310 | 1583 |
| 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 | 0.16 | 0.49 | 0.48 | 0.35 | 0.29 | 0.55 | 0.03 | 0.05 | 0.03 | 0.10 | 0.03 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2041 Total Traffic

9: Hayesmouth Rd & E. Jewell Ave

PM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 131 | 771 | 113 | 57 | 516 | 39 | 68 | 85 | 39 | 74 | 154 | 113 |
| v/c Ratio | 0.27 | 0.44 | 0.13 | 0.16 | 0.31 | 0.05 | 0.18 | 0.19 | 0.02 | 0.17 | 0.34 | 0.07 |
| Control Delay | 3.9 | 7.7 | 1.8 | 9.1 | 17.1 | 0.5 | 29.9 | 40.7 | 0.0 | 29.2 | 42.1 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 3.9 | 7.7 | 1.8 | 9.1 | 17.1 | 0.5 | 29.9 | 40.7 | 0.0 | 29.2 | 42.1 | 0.1 |
| Queue Length 50th (ft) | 3 | 113 | 3 | 14 | 122 | 1 | 37 | 56 | 0 | 40 | 102 | 0 |
| Queue Length 95th (ft) | 6 | 150 | 8 | 27 | 156 | 2 | 72 | 102 | 0 | 76 | 169 | 0 |
| Internal Link Dist (ft) | | 543 | | | 467 | | | 2598 | | | 1148 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 250 | | 190 | 250 | | 190 |
| Base Capacity (vph) | 495 | 1768 | 847 | 402 | 1653 | 797 | 387 | 445 | 1583 | 438 | 447 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.26 | 0.44 | 0.13 | 0.14 | 0.31 | 0.05 | 0.18 | 0.19 | 0.02 | 0.17 | 0.34 | 0.07 |

Intersection Summary

Queues
10: Lanewood St & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 141 | 463 | 279 | 42 | 358 | 7 | 163 | 26 | 6 | 4 | 92 |
| v/c Ratio | 0.23 | 0.24 | 0.28 | 0.08 | 0.20 | 0.01 | 0.42 | 0.06 | 0.02 | 0.01 | 0.06 |
| Control Delay | 11.4 | 14.9 | 3.7 | 9.4 | 16.5 | 0.0 | 37.3 | 15.2 | 30.8 | 42.0 | 0.1 |
| 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 | 11.4 | 14.9 | 3.7 | 9.4 | 16.5 | 0.0 | 37.3 | 15.2 | 30.8 | 42.0 | 0.1 |
| Queue Length 50th (ft) | 34 | 66 | 7 | 12 | 76 | 0 | 99 | 1 | 3 | 3 | 0 |
| Queue Length 95th (ft) | 79 | 114 | 64 | 26 | 107 | 0 | 160 | 26 | 14 | 13 | 0 |
| Internal Link Dist (ft) | | 470 | | | 843 | | | 1330 | | 1300 | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 250 | | 250 | | 190 |
| Base Capacity (vph) | 627 | 1932 | 991 | 600 | 1801 | 859 | 387 | 454 | 379 | 313 | 1583 |
| 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 | 0.22 | 0.24 | 0.28 | 0.07 | 0.20 | 0.01 | 0.42 | 0.06 | 0.02 | 0.01 | 0.06 |

Intersection Summary

Queues
13: Watkins Rd & E. Jewell Ave

2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 308 | 78 | 2 | 18 | 47 | 514 | 6 | 18 | 879 | 359 |
| V/c Ratio | 0.38 | 0.08 | 0.00 | 0.02 | 0.26 | 0.36 | 0.01 | 0.07 | 0.74 | 0.23 |
| Control Delay | 21.4 | 12.3 | 14.5 | 19.9 | 25.6 | 29.0 | 0.0 | 24.4 | 46.2 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.4 | 12.3 | 14.5 | 19.9 | 25.6 | 29.0 | 0.0 | 24.4 | 46.2 | 0.3 |
| Queue Length 50th (ft) | 120 | 14 | 1 | 6 | 22 | 91 | 0 | 9 | 232 | 0 |
| Queue Length 95th (ft) | 170 | 31 | 5 | 22 | 41 | 104 | m0 | 22 | 245 | 0 |
| Internal Link Dist (ft) | | 536 | | 980 | | 5193 | | | 1193 | |
| Turn Bay Length (ft) | 350 | | 350 | | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 812 | 975 | 711 | 762 | 209 | 1700 | 601 | 322 | 1695 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.38 | 0.08 | 0.00 | 0.02 | 0.22 | 0.30 | 0.01 | 0.06 | 0.52 | 0.23 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
14: Monaghan Rd & PA-79 Access

2041 Total Traffic
PM Peak Hour



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 92 | 329 | 247 | 77 | 312 | 383 |
| v/c Ratio | 0.41 | 0.21 | 0.11 | 0.07 | 0.35 | 0.14 |
| Control Delay | 54.3 | 0.3 | 8.0 | 2.0 | 3.7 | 1.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 54.3 | 0.3 | 8.0 | 2.0 | 3.7 | 1.7 |
| Queue Length 50th (ft) | 67 | 0 | 33 | 0 | 30 | 17 |
| Queue Length 95th (ft) | 120 | 0 | 55 | 18 | 37 | 20 |
| Internal Link Dist (ft) | 435 | | 1234 | | | 491 |
| Turn Bay Length (ft) | | | | 273 | 350 | |
| Base Capacity (vph) | 368 | 1583 | 2323 | 1065 | 896 | 2795 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.25 | 0.21 | 0.11 | 0.07 | 0.35 | 0.14 |

Intersection Summary

Queues
22: Monaghan Rd & E Yale Ave

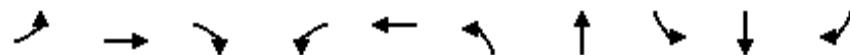
2041 Total Traffic
PM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 28 | 79 | 37 | 171 | 56 | 40 | 68 | 176 | 288 | 60 | 159 | 41 |
| v/c Ratio | 0.05 | 0.11 | 0.09 | 0.30 | 0.04 | 0.06 | 0.13 | 0.20 | 0.47 | 0.12 | 0.18 | 0.09 |
| Control Delay | 10.6 | 19.0 | 0.4 | 11.8 | 13.8 | 0.2 | 9.9 | 17.3 | 6.0 | 9.8 | 17.4 | 0.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 10.6 | 19.0 | 0.4 | 11.8 | 13.8 | 0.2 | 9.9 | 17.3 | 6.0 | 9.8 | 17.4 | 0.4 |
| Queue Length 50th (ft) | 5 | 10 | 0 | 31 | 4 | 0 | 11 | 23 | 0 | 10 | 20 | 0 |
| Queue Length 95th (ft) | 18 | 27 | 0 | 72 | 21 | 1 | 29 | 45 | 50 | 27 | 42 | 2 |
| Internal Link Dist (ft) | 6123 | | | 1765 | | | 1063 | | | 1192 | | |
| Turn Bay Length (ft) | 350 | | 273 | 350 | | 273 | 350 | | 273 | 350 | | 273 |
| Base Capacity (vph) | 583 | 2278 | 1058 | 587 | 2278 | 1058 | 556 | 3539 | 1583 | 554 | 3539 | 1583 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.05 | 0.03 | 0.03 | 0.29 | 0.02 | 0.04 | 0.12 | 0.05 | 0.18 | 0.11 | 0.04 | 0.03 |

Intersection Summary

Queues
26: Watkins Rd & E Yale Ave

2041 Total Traffic
PM Peak Hour



| Lane Group | EBL | EBT | EBC | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 107 | 33 | 96 | 2 | 42 | 82 | 400 | 16 | 756 | 71 |
| v/c Ratio | 0.40 | 0.10 | 0.26 | 0.01 | 0.18 | 0.17 | 0.12 | 0.02 | 0.24 | 0.07 |
| Control Delay | 43.5 | 40.4 | 7.9 | 34.5 | 44.8 | 7.1 | 8.4 | 0.9 | 1.0 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 43.5 | 40.4 | 7.9 | 34.5 | 44.8 | 7.1 | 8.4 | 0.9 | 1.0 | 0.1 |
| Queue Length 50th (ft) | 66 | 20 | 0 | 1 | 26 | 20 | 37 | 0 | 5 | 0 |
| Queue Length 95th (ft) | 117 | 53 | 39 | 8 | 61 | 38 | 67 | m1 | 12 | 0 |
| Internal Link Dist (ft) | 5189 | | | 853 | | | 852 | | | 5193 |
| Turn Bay Length (ft) | 350 | 273 | | | 350 | 350 | | | 350 | 273 |
| Base Capacity (vph) | 268 | 372 | 403 | 250 | 309 | 492 | 3446 | 690 | 3214 | 1040 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.40 | 0.09 | 0.24 | 0.01 | 0.14 | 0.17 | 0.12 | 0.02 | 0.24 | 0.07 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.