

Crossroads-Meadowbrook Road Impact Fees

| Use | Units | Per 1,000 SF or DU | Fee / Unit | Per Use Fee |
|--|---------|--------------------|------------|-----------------------|
| Crossroads North | | | | |
| Public Park (ITE 411) | 50,000 | 50 | 3,372.00 | \$168,600.00 |
| Movie Theatre (ITE 444) | 52,000 | 52 | 4,958.00 | \$257,816.00 |
| Tire Superstore (ITE 849) | 7,000 | 7 | 4,958.00 | \$34,706.00 |
| Home Improvement Superstore (ITE 862) | 127,000 | 127 | 4,958.00 | \$629,666.00 |
| Furniture Store (ITE 890) | 114,000 | 114 | 4,958.00 | \$565,212.00 |
| Sit Down Restaurant (ITE 932) | 11,000 | 11 | 4,958.00 | \$54,538.00 |
| Fast-Food Restaurant (ITE 934) | 5,000 | 5 | 8,800.00 | \$44,000.00 |
| Gas Station Super Convenience (ITE 960) | 6,000 | 6 | 8,800.00 | \$52,800.00 |
| Crossroads North Road Impact Fee | | | | \$1,807,338.00 |
| Meadowbrook Park | | | | |
| Single Family Housing (ITE 210) | 67 | 67 | 3,830.00 | \$256,610.00 |
| Meadowbrook Park Road Impact Fee | | | | \$256,610.00 |
| Crossroads Mix Use | | | | |
| Mid-Rise Multifamily Housing (ITE 221) | 300 | 300 | 2,407.00 | \$722,100.00 |
| Shopping Center (ITE 820) | 10,000 | 10 | 4,958.00 | \$49,580.00 |
| Pharmacy (ITE 881) | 14,000 | 14 | 4,958.00 | \$69,412.00 |
| Sit Down Restaurant (ITE 932) | 8,000 | 8 | 4,958.00 | \$39,664.00 |
| Fast Food Restaurant (ITE 934) | 11,000 | 11 | 8,800.00 | \$96,800.00 |
| Coffee Shop (ITE 937) | 2,500 | 3 | 8,800.00 | \$22,000.00 |
| Crossroads Mix Use Road Impact Fee | | | | \$999,556.00 |
| Overall Development Road Impact Fee | | | | \$3,063,504.00 |



Traffic Impact Study

Crossroads-Meadowbrook &
Reagan Ranch
Colorado Springs, Colorado

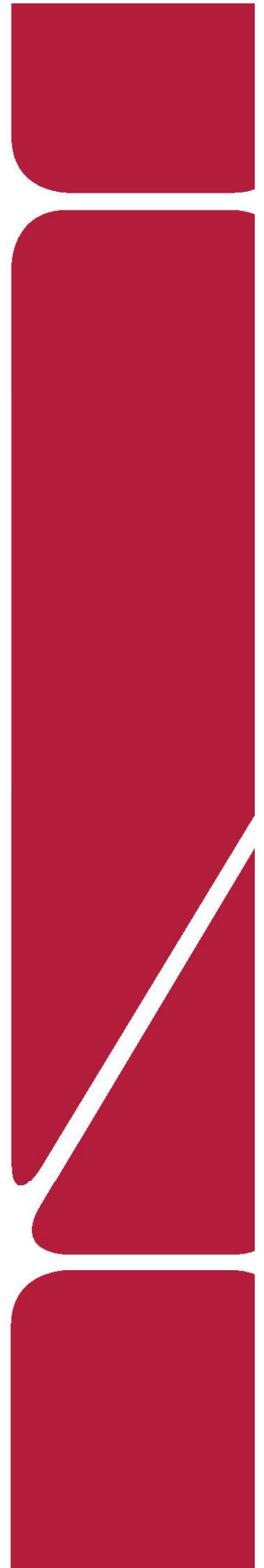
PCD File No. CR201 & SP207

Prepared for:

Pikes Peak Investments LLC

c/o The Equity Group

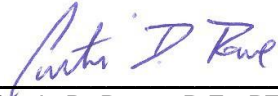
Kimley»»Horn



T R A F F I C I M P A C T S T U D Y

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Curtis D. Rowe, P.E., PTOE, PE #36355

February 19, 2021

Date

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Ms. Kelly Nelson
Pikes Peak Investments LLC
c/o The Equity Group
90 South Cascade Avenue, Suite 1500
Colorado Springs, Colorado 80903

Date

Crossroads-Meadowbrook-Reagan Ranch

PCD File No. CR201 & SP207

Colorado Springs, Colorado
El Paso County, Colorado

Prepared for
Pikes Peak Investments LLC
c/o The Equity Group
90 South Cascade Avenue
Suite 1500
Colorado Springs, Colorado 80903

Prepared by
Kimley-Horn and Associates, Inc.
Curtis D. Rowe, P.E., PTOE
4582 South Ulster Street
Suite 1500
Denver, Colorado 80237
(303) 228-2300



February 2021

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

TABLE OF CONTENTS

| | |
|--|-----|
| TABLE OF CONTENTS | i |
| LIST OF TABLES | ii |
| LIST OF FIGURES | iii |
| 1.0 EXECUTIVE SUMMARY | 1 |
| 2.0 INTRODUCTION | 9 |
| 3.0 EXISTING AND FUTURE CONDITIONS | 12 |
| 3.1 Existing and Future Study Area | 12 |
| 3.2 Existing and Future Roadway Network | 12 |
| 3.3 Existing Traffic Volumes | 16 |
| 3.4 Unspecified Development Traffic Growth | 17 |
| 4.0 PROJECT TRAFFIC CHARACTERISTICS | 23 |
| 4.1 Trip Generation | 23 |
| 4.2 Trip Distribution | 26 |
| 4.3 Traffic Assignment and Total (Background Plus Project) Traffic | 26 |
| 5.0 TRAFFIC OPERATIONS ANALYSIS | 32 |
| 5.1 Analysis Methodology | 32 |
| 5.2 Key Intersection Operational Analysis | 33 |
| 5.3 Project Access Operational Analysis | 41 |
| 5.4 Sight Distance Evaluation | 48 |
| 5.5 Bicycle and Pedestrian Access | 49 |
| 5.6 CDOT Turn Lane Evaluation | 50 |
| 5.7 Queuing Analysis | 56 |
| 5.8 Crossroads North: North Access Sensitivity Analysis | 60 |
| 5.9 Improvement Summary | 64 |
| 6.0 CONCLUSIONS AND RECOMMENDATIONS | 69 |

APPENDICES

- Appendix A – Intersection Count Sheets / COVID Adjustment Calculations
- Appendix B – CDOT Annual Traffic Data / 2040 PPACOG Model
- Appendix C – Trip Generation Worksheets
- Appendix D – Intersection Analysis Worksheets
- Appendix E – Signal Warrant Analysis / Signal Clearance Intervals
- Appendix F – Queueing Analysis Worksheets
- Appendix G – Time-Space Diagrams
- Appendix H – Conceptual Site Plans

LIST OF TABLES

| | |
|--|----|
| Table 1 – Phase 1 Project Traffic Generation..... | 24 |
| Table 2 – Full Buildout Project Traffic Generation | 25 |
| Table 3 – Level of Service Definitions | 32 |
| Table 4 – Meadowbrook Parkway and Marksheffel Road (#1) LOS Results..... | 33 |
| Table 5 – US-24 and Marksheffel Road (#2) LOS Results | 34 |
| Table 6 – Newt Drive and Meadowbrook Parkway (#3) LOS Results | 35 |
| Table 7 – SH-94/Newt Drive and US-24 (#4) LOS Results..... | 37 |
| Table 8 – SH-94 and Marksheffel Road (#5) LOS Results | 38 |
| Table 9 – SH-94 and Space Village Avenue (#6) LOS Results | 39 |
| Table 10 – Space Village Avenue and Marksheffel Road (#7) LOS Results..... | 40 |
| Table 11 – Project Access LOS Results..... | 45 |
| Table 12 – Turn Lane Storage Length Analysis Results..... | 56 |
| Table 13 – Crossroads North Access Scenarios LOS Results | 60 |
| Table 14 – Crossroads North Access Scenarios Vehicle Queueing Results..... | 61 |
| Table 15 – Signal Progression Comparison | 63 |
| Table 16 – Crossroads-Meadowbrook-Reagan Ranch Improvement Summary | 67 |

LIST OF FIGURES

Figure 1 – Vicinity Map.....10

Figure 2 – Site Area13

Figure 3 – Existing Lane Configurations.....17

Figure 4 – 2020 Existing Traffic Volumes18

Figure 5 – 2020 Adjusted Existing Traffic Volumes19

Figure 6 – 2026 Background Traffic Volumes.....21

Figure 7 – 2040 Background Traffic Volumes.....22

Figure 8 – Project Trip Distribution27

Figure 9 – Phase 1 Project Traffic Assignment.....28

Figure 10 – Full Buildout Project Traffic Assignment29

Figure 11 – 2026 Background Plus Project Traffic Volumes.....30

Figure 12 – 2040 Background Plus Project Traffic Volumes.....31

Figure 13 – Crossroads North Street Classification Map47

Figure 14 – 2026 Recommended Lane Configurations65

Figure 15 – 2040 Recommended Lane Configurations66

1.0 EXECUTIVE SUMMARY

The proposed development areas of Crossroads North, Crossroads Mix Use, Meadowbrook Park, and Reagan Ranch are combined in this study to represent one Master Traffic Impact Study for all project areas. These development areas are located in the City of Colorado Springs and El Paso County, Colorado. Crossroads North is proposed to be located on the northwest corner of the SH-94 and Marksheffel Road intersection while Crossroads Mix Use and Meadowbrook Park are proposed to be located on the southwest and northwest corners of the SH-94/Newt Dr and US-24 intersection, respectively. Reagan Ranch is evaluated with three distinct project areas; one area is located on the southwest corner of the SH-94 and Marksheffel Road intersection, a second area is located on the southeast corner of the SH-94 and Marksheffel Road intersection, while a third development area is located on the southeast corner of the intersection of Space Village Avenue and Marksheffel Road. Crossroads-Meadowbrook is expected to be a 10-year build while Reagan Ranch is anticipated to be a 15 to 20-year build. As such, an initial phase of development was evaluated in a 2026 horizon while full buildout was evaluated in the long-term 2040 horizon.

Crossroads North proposes to contain retail uses and a park/sports complex while Crossroads Mix Use will contain multifamily housing and retail uses. Meadowbrook Park will include single family residences. The northwest area of Reagan Ranch will contain industrial uses while the northeast area will include retail uses and single-family residences. The southeast region of Reagan Ranch proposes retail, office, multifamily housing, and single-family residences.

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

- Meadowbrook Parkway and Marksheffel Road (Intersection #1)
- US-24 and Marksheffel Road (#2)
- Newt Drive and Meadowbrook Parkway (#3)
- SH-94/Newt Drive and US-24 (#4)
- SH-94 and Marksheffel Road (#5)

- SH-94 and Space Village Avenue (#6)
- Space Village Avenue and Marksheffel Road (#7)

In addition, 14 project accesses (Intersections #8-21) proposed along Meadowbrook Parkway, Marksheffel Road, and Space Village Avenue were included for evaluation. Further, and as requested by El Paso County, four (4) internal intersections (#22-25) along public roadways proposed within Crossroads North were also included for evaluation.

Regional access to the project is provided by Interstate 25 (I-25) and US-24. Primary access to the project will be provided by SH-94, Marksheffel Road, and Space Village Avenue. Direct access to the proposed project is to be provided by 14 project accesses located along Meadowbrook Parkway, Marksheffel Road, and Space Village Avenue.

Phase 1 development of the projects in 2026 is expected to generate approximately 34,458 daily weekday external vehicle trips with 2,748 of these trips occurring during the morning peak hour and 2,806 trips occurring during the afternoon peak hour. With full buildout of the developments by 2040, the projects are expected to generate approximately 58,582 daily weekday external vehicle trips with 3,481 of these trips occurring during the morning peak hour and 5,121 trips occurring during the afternoon peak hour.

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns and volumes, anticipated surrounding development areas, expected roadway improvements, and the proposed access system for the project. Separate distributions were prepared for each development area to accurately identify the amount of traffic to be assigned to each project. Assignment of project traffic was based upon the trip generation described previously and the distributions developed for each project area. Assigned traffic was added to future traffic volumes projected at the study area intersections to conduct a traffic analysis for the determination of possible improvements needed.

Based on the analysis presented in this report, Kimley-Horn believes the Crossroads-Meadowbrook-Reagan Ranch developments will be successfully incorporated into the existing and future roadway network. The proposed background traffic volume growth, project

development, and expected future traffic volumes in each of the 2026 Phase 1 and 2040 full buildout horizons resulted in the following recommendations/conclusions:

Phase 1 2026 Recommendations:

- CDOT will likely require Access Permits for the intersections of SH-94/US-24 (#4) SH-94/Marksheffel Road (#5), and SH-94/Space Village Avenue (#6) in association with the project.
- Southwestbound dual left turn lanes are recommended to be designated along US-24 at the Marksheffel Road intersection (#2). Presently there is a single left turn lane with a striped-out area to shadow the dual left turn lanes on northeastbound US-24. These new southwestbound dual left turn lanes should be designated with a length of 1,100 feet plus 600-foot taper (25 to 1).
- It is recommended that a single lane roundabout be constructed at the Meadowbrook Parkway and Newt Drive intersection (#3) with development of the Crossroads Mix Use project. The roundabout should have single lane approaches on the eastbound Newt Drive, northbound Meadowbrook Parkway, and southbound Meadowbrook Parkway approaches and a two-lane approach on westbound Newt Drive with a shared left turn/through lane into the roundabout and a separate right turn lane.
- The intersection of SH-94/US-24 (#4) currently operates poorly during the peak hours in the existing condition. As a regional capacity improvement, it was found that US-24 may need to provide three through lanes in each direction from the Peterson Road interchange through this intersection with SH-94 in the near-term horizon. The additional through lanes should be considered by CDOT and El Paso County in the near future. If and when US-24 is improved to provide three through lanes in each direction, it is recommended that a separate 600-foot plus 225-foot taper right turn deceleration lane be constructed to maintain free right turn movements to eastbound SH-94. For southwestbound US-24 at SH-94 (#4), the existing acceleration lane along US-24 will need to be reconstructed with 960 feet of length plus a 225-foot taper if and when US-24 is improved to provide three through lanes along westbound US-24. For northeastbound US-24 at SH-94, it is recommended that this acceleration lane be

converted to the third northbound through lane as the acceleration lane is not warranted. Further, the northeastbound US-24 third through lane needs to continue for 1,200 feet plus provide a 660-foot taper based on MUTCD standards. In addition to these regional improvements, it is recommended that the existing single 900-foot left turn lane be changed to 850-feet plus 225-foot taper with dual left turn lanes on the northeastbound US-24 approach for the left turn to Newt Drive. The area for these dual lefts is presently available (mostly); however, the lane is striped out which will require restriping with a slight extension that may also need to be constructed. Also at the intersection of US-24 and SH-94 (#4), it is recommended that the existing dual westbound left turn lanes on SH-94 be converted to triple left turn lanes by restriping the inside westbound through lane to a left turn lane. The inside two westbound left turn lanes should be extended to a length of 760 feet plus a 225-foot taper per CDOT SHAC requirements. With the expansion of US-24 to three westbound lanes to the Peterson Road interchange off-ramp, these triple left turn lanes will be able to be received. A traffic signal modification will be required at the intersection to incorporate all of these improvements.

- At SH-94 and Marksheffel Road (#5), it is recommended that the eastbound and westbound right turns operate with overlap phasing, while the northbound and southbound right turns operate with free movements with acceleration lanes constructed in accordance with the CDOT State Highway Access Code (SHAC). The acceleration lane along westbound SH-94 is recommended to tie into the outside through lane on the approach to US-24. The eastbound left turn lane shall be extended to a length of 750 feet with a 225-foot taper while the westbound left turn lane should be extended to a length of 650 feet with a 225-foot taper. The eastbound and westbound right turn lanes should be extended to 600 feet. The eastbound acceleration lane from the Marksheffel Road northbound right turn should be constructed to 1,380 feet with a 300-foot taper. These improvements at this intersection may already be identified with the SH-94 improvements already being planned by CDOT.
- In order to comply with the CDOT State Highway Access Code, it was found that the existing 150-foot westbound left turn lane at the intersection of SH-94 and Space Village Avenue (#6) does not meet current CDOT standards with a length need of 900 feet and a 300-foot taper. An eastbound acceleration lane along SH-94 from the Space Village Avenue northbound right

turn is also warranted based on existing traffic. This existing 300-foot with 200-foot taper acceleration lane would need to be extended to a length of 1,380 feet with a 300-foot taper to meet current CDOT standards. Extension of these lanes may not be feasible due to the bridge along SH-94 to the east, which is likely why CDOT constructed to lengths shorter than standard.

- Currently the intersection of Space Village Avenue and Marksheffel Road (#7) is unsignalized. By 2026, this intersection is anticipated to meet the Four-Hour Vehicle Volume signal warrant with development of Reagan Ranch; therefore, it is recommended that a traffic signal be installed at this intersection.
- With completion of the Crossroads Mix Use project, the site proposes three accesses along the southeast side of Meadowbrook Parkway. The northeastern access along Meadowbrook Parkway for Crossroads Mix Use may be right-in/right-out while the two southern most access will provide full movements with stop control on the minor legs. All three project access driveways to Crossroads Mix Use are recommended to have R1-1 “STOP” signs installed for the exiting approaches.
- The Meadowbrook Park development area has one proposed driveway access (#8) along the east side of Meadowbrook Parkway that will align with Preble Drive. Left turn movements for entering this project access will be provided from an existing two-way left turn lane along Meadowbrook Parkway. The westbound exiting approach of this driveway should provide stop control with installation of a R1-1 “STOP” sign.
- Traffic signals are anticipated to be needed and warranted at both full movement access intersections (#9 and #10) along Marksheffel Road for Crossroads North. Therefore, traffic signals are recommended for installation at these two access intersections with development of Crossroads North. It is recommended that a 235-foot with 200-foot taper (based on El Paso County standards for 50 mph) southbound right turn lane be constructed at both access intersections along Marksheffel Road due to the volume of traffic entering Crossroads North at this access. Likewise, northbound left turn lanes with 235 feet of length plus 200-foot tapers should also be constructed at both full movement access intersections along Marksheffel

Road for Crossroads North. Lastly, separate eastbound left turn and right turn lanes are recommended to serve exiting traffic out of Crossroads North. As requested by El Paso County, a sensitivity analysis has been prepared later in Section 5.8 comparing the north access along Marksheffel Road as a full movement signalized intersection and a three-quarter movement unsignalized intersection due to these accesses not meeting El Paso County standards for intersection spacing.

- For the northwest development area of Reagan Ranch, a right-in/right access is proposed along Marksheffel Road (#11) between SH-94 and Space Village Avenue (to also serve the northeast development area of Reagan Ranch) and a full movement access is proposed along Space Village Avenue (#12). It is likely that rights to an easement for a proposed new access along Space Village Avenue will be acquired and was evaluated as such in this traffic study. It is recommended that the access along Space Village Avenue (#12) to the northwest region of Reagan Ranch have a 200-foot plus 180-foot taper eastbound left turn lane to accommodate volumes entering the northwest region of Reagan Ranch.
- Three accesses are proposed to serve the northeast development area of Reagan Ranch. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue (to align with the previously mentioned access intersection #11) and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94 (#13 and #14). It is recommended that the roundabouts have single lane approaches on all entering legs.
- For the southeast development area of Reagan Ranch, access will be gained at these same two roundabouts along Space Village Avenue (#13 and #14) as well as seven (7) accesses (#15-21) planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile spacing (#18) is expected to require signalization by 2040 while the access in alignment with Peterson Air Force Base (#21) is expected to need signalization by the short-term 2026 horizon. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses (#16 and #20) while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses (#15 and #17 and #19).

- It is recommended that the two three-quarter movement accesses along Marksheffel Road (#16 and #20) as well as the northern full movement access (#18) along Marksheffel Road provide 235-foot plus 200-foot taper southbound left turn lanes to accommodate volumes entering the southeast region of Reagan Ranch.
- The southern full movement access intersection (#21) for Reagan Ranch is proposed to align with the existing Peterson Air Force Base High-T intersection (Intersection #21). With this access alignment, it is recommended that the intersection be signalized. This intersection will need to be reconfigured so that a southbound left turn lane and dual eastbound left turn lanes can be provided. The southbound left turn lane is recommended to include a length of 235 feet plus 200-foot taper and the dual eastbound left turn lanes are recommended to provide a length of 400 feet.
- As requested by El Paso County, an internal street evaluation was conducted for the Crossroads North development area. The south access to Crossroads North along Marksheffel Road is proposed to be named Air Lane and is expected to be classified as an El Paso County Urban Non-Residential Collector roadway with a 60-foot right-of-way (ROW). Air Lane extends east-west and is proposed to connect with a north-south extending Non-Residential Collector street (#24) and a north-south extending Urban Local street (#25). Intersection #25 (collector to collector) is proposed to be located approximately 660 feet west of Marksheffel Road while Intersection #24 (collector to local street) is located approximately 380 feet west of Marksheffel Road. These distances meet the El Paso County Urban Non-Residential Collector spacing standards of 660 feet to other collectors and 330 feet to intersections with a local street. The north-south extending Non-Residential Collector street also connects with an east-west collector street (#22) that extends from the north access to Marksheffel Road as well as with an Urban Local street on site (#23). The north access street connecting with Marksheffel Road is proposed to be classified as an El Paso County Urban Non-Residential Collector roadway. The recommended left-turn lanes internal to Crossroads North should provide 115 feet of length plus 120-foot tapers to meet El Paso County standards.

2040 Recommendations:

- If future traffic volume projections are realized, US-24 may need to provide three through lanes in each direction through the Marksheffel Road intersection. Likewise, Marksheffel Road between US-24 and Peterson Air Force Base East Gate may need to provide three through lanes in each direction. It is recommended that traffic volumes continue to be monitored by CDOT, the City of Colorado Springs, and El Paso County, as applicable, to determine if and when these regional improvements will be needed.
- A traffic signal is anticipated to be needed at the northern full movement access intersection for Reagan Ranch (#18) along Marksheffel Road by 2040.
- A westbound right turn lane may be needed at the southern full movement access intersection for Reagan Ranch (#21) proposed to align with the existing Peterson Air Force Base Access by 2040.
- Several extensions of auxiliary turn lanes may be needed by 2040 and should be monitored by CDOT, the City of Colorado Springs, and El Paso County, as applicable, to determine if and when the recommended turn lane lengths will be needed.

General Recommendations:

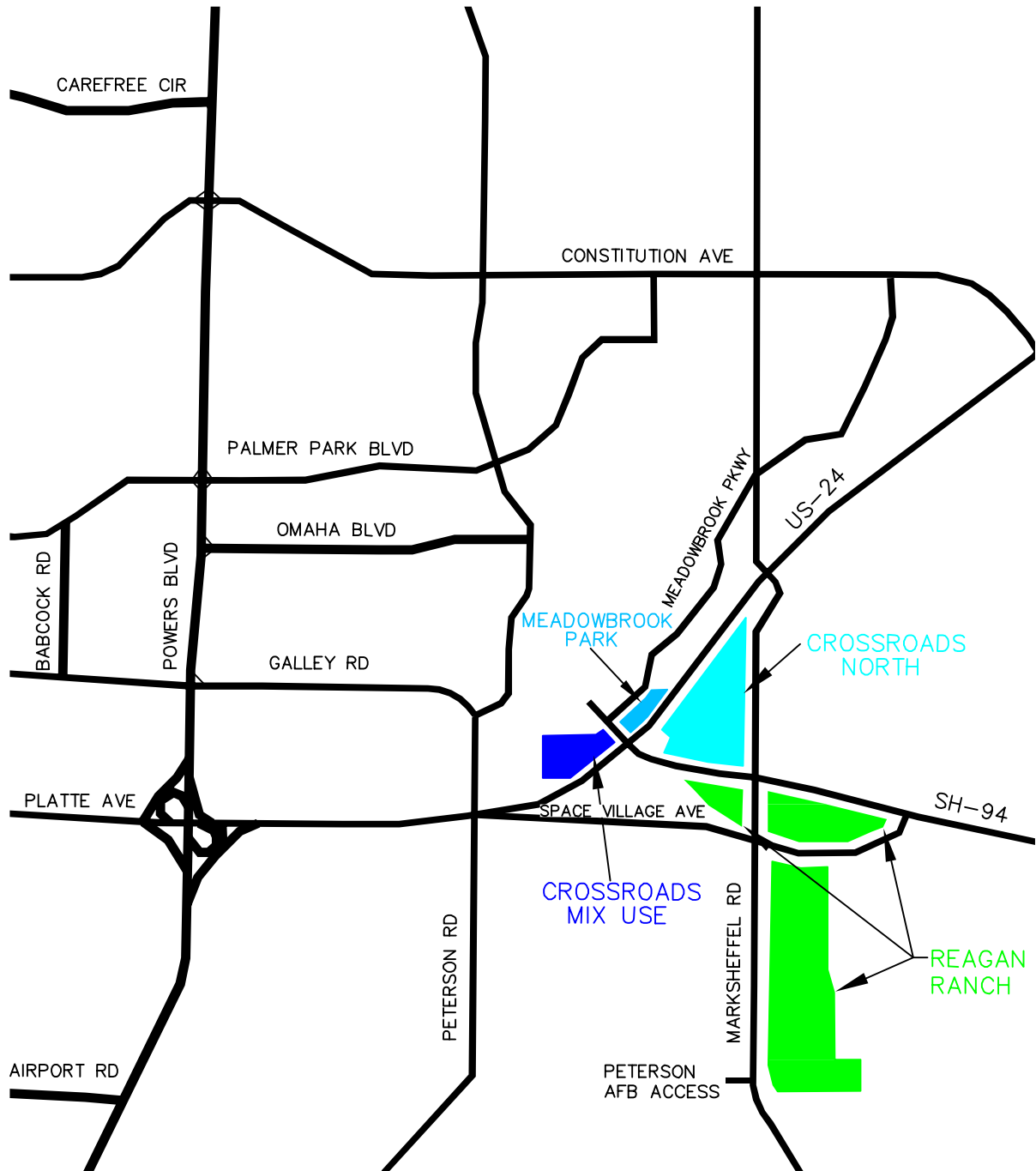
- Any on-site and off-site roadway, signing, striping, and signal improvements should be incorporated into the Civil Drawings, and conform to City of Colorado Springs, El Paso County, and/or CDOT standards as applicable, as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) has prepared this report to document the results of a Master Traffic Impact Study of future traffic conditions associated with Crossroads North, Crossroads Mix Use, Meadowbrook Park, and Reagan Ranch development areas to be located in the City of Colorado Springs and El Paso County, Colorado. A vicinity map illustrating the location of each development area is shown in **Figure 1**.

Crossroads North is proposed to be located on the northwest corner of the SH-94 and Marksheffel Road intersection while Crossroads Mix Use and Meadowbrook Park are proposed to be located on the southwest and northwest corners of the SH-94/Newt Dr and US-24 intersection, respectively. Reagan Ranch is evaluated with three distinct project areas; one area is located on the southwest corner of the SH-94 and Marksheffel Road intersection, a second area is located on the southeast corner of the SH-94 and Marksheffel Road intersection, while a third development area is located on the southeast corner of the intersection of Space Village Avenue and Marksheffel Road. Trip generation, trip distribution, and traffic assignment were calculated separately for these areas to accurately identify the amount of entering and exiting traffic into each development area. Crossroads-Meadowbrook is expected to be a 10-year build while Regan Ranch is anticipated to be a 15 to 20-year build. As such, an initial phase of development was evaluated in a five-year 2026 horizon while full buildout was evaluated in the long-term twenty-year 2040 horizon.

Crossroads North proposes to contain retail uses and a park/sports complex while Crossroads Mix Use will contain multifamily housing and retail uses. Meadowbrook Park will include single family residences. The northwest area of Reagan Ranch will contain industrial uses while the northeast area will include retail uses and single-family residences. The southeast region of Reagan Ranch proposes retail, office, multifamily housing, and single-family residences. Conceptual site plans for each development area is attached in **Appendix H**.



CROSSROADS-MEADOWBROOK & REAGAN RANCH
COLORADO SPRINGS, CO
VICINITY MAP

FIGURE 1

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

- Meadowbrook Parkway and Marksheffel Road (Intersection #1)
- US-24 and Marksheffel Road (#2)
- Newt Drive and Meadowbrook Parkway (#3)
- SH-94/Newt Drive and US-24 (#4)
- SH-94 and Marksheffel Road (#5)
- SH-94 and Space Village Avenue (#6)
- Space Village Avenue and Marksheffel Road (#7)

In addition, 14 project accesses (Intersections #8-21) proposed along Meadowbrook Parkway, Marksheffel Road, and Space Village Avenue were included for evaluation. Further, and as requested by El Paso County, four (4) internal intersections (#22-25) along public roadways proposed within Crossroads North were also included for evaluation.

Regional access to the project is provided by Interstate 25 (I-25) and US-24. Primary access to the project will be provided by SH-94, Marksheffel Road, and Space Village Avenue. Direct access to the proposed project is to be provided by 14 project accesses located along Meadowbrook Parkway, Marksheffel Road, and Space Village Avenue.

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing and Future Study Area

The existing site areas are comprised of vacant land. The surrounding area contains a mix of uses. Directly east of Crossroads North and north of Regan Ranch is an existing water treatment plant. The surrounding area to the east and south is vacant land. Directly to the west is mainly residential neighborhoods. Other industrial uses are proposed north of Meadowbrook Park. Outside of these uses, Peterson Air Force Base and the Colorado Springs Airport exists to the south and southwest. The site area is shown in the aerial of **Figure 2**.

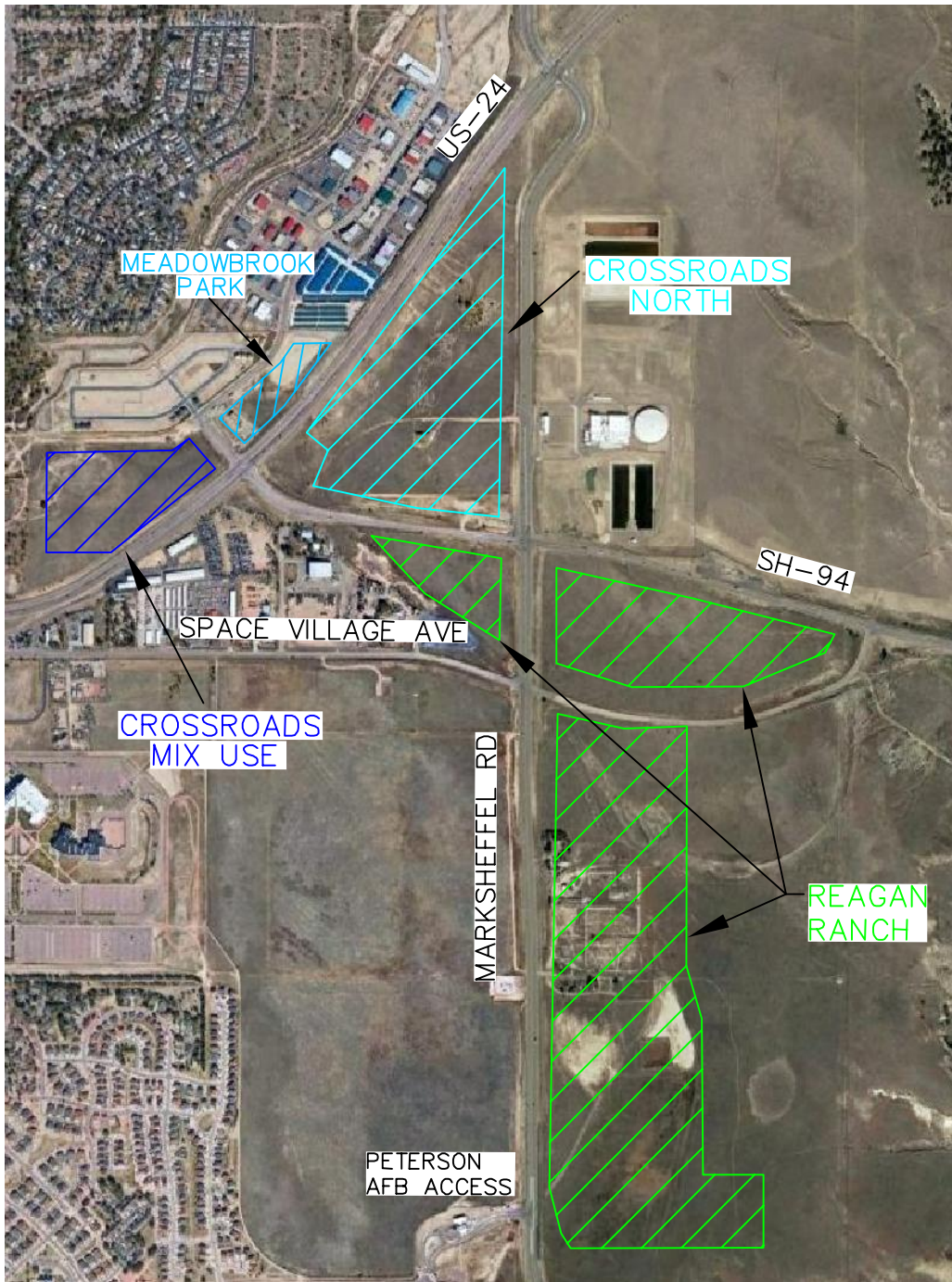
3.2 Existing and Future Roadway Network

Regional access to the project is provided by Interstate 25 (I-25) and US-24. Primary access to the project will be provided by SH-94, Marksheffel Road, and Space Village Avenue. Direct access to the proposed project is to be provided by 14 project accesses located along Meadowbrook Parkway, Marksheffel Road, and Space Village Avenue.

Direct access to Meadowbrook Park is proposed at one full movement access along Meadowbrook Parkway to align with the existing Preble Drive (#8). Direct access to Crossroads North is proposed from two full movement accesses (#9 and #10) along Marksheffel Road approximately 2,000 feet and 1,000 feet north of SH-94. Access to Crossroad Mix Use will be provided by a future south leg to the intersection of Newt Drive and Meadowbrook Parkway (#3) while direct access is proposed along the future extension of Meadowbrook Parkway at two full movement accesses and an eastern right-in/right-out access.

For the Reagan Ranch northwest development area, a right-in/right access is proposed along Marksheffel Road (#11) between SH-94 and Space Village Avenue and a full movement access is proposed along Space Village Avenue (#12).

Three accesses are proposed to serve the northeast development area of Reagan Ranch. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue (previously mentioned #11) and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94 (#13 and #14).



CROSSROADS—MEADOWBROOK & REAGAN RANCH
COLORADO SPRINGS, CO
SITE AREA
FIGURE 2

For the southeast development area of Reagan Ranch, access will be gained at these same two roundabouts along Space Village Avenue (#13 and #14) as well as seven (7) accesses (#15-21) planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile spacing (#18) as well as the access in alignment with Peterson Air Force Base (#21) will be full movement signalized intersections. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses (#16 and #20) while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses (#15 and #17 and #19).

SH-94 is a CDOT Highway, categorized E-X: Expressway, Major Bypass that provides one through lane of travel both eastbound and westbound in the vicinity of the site. SH-94 has a 40 mile per hour speed limit at US-24, a 55-mph speed limit through the Marksheffel Road intersection and a 65-mph speed limit east of Marksheffel Road. US-24 is a CDOT Highway, categorized E-X: Expressway, Major Bypass that provides two through lanes of travel with a 55 mile per hour speed limit through the study area. Marksheffel Road is classified as an El Paso County 4-Lane Urban Principal Arterial north of SH-94. Marksheffel Road provides two through lanes of travel in each direction, northbound and southbound, with a 55 mile per hour speed limit through the study area. It should be noted that this study determines that Marksheffel Road may need to provide three through lanes in each direction by 2040 which would categorize as an El Paso County 6-Lane Urban Principal Arterial. Likewise, the El Paso County Major Transportation Corridors Plan identifies Marksheffel within the preservation plan to be a 6-lane roadway in the long term future. Space Village Avenue provides one lane of travel in each direction, eastbound and westbound, with a 45 mile per hour speed limit through the study area. Meadowbrook Parkway is an El Paso County Non-Residential Collector roadway that provides one lane of travel in each direction, with a 35 mile per hour speed limit through the study area.

The Meadowbrook Parkway and Marksheffel Road (#1) intersection is a four-leg signalized intersection. The eastbound Meadowbrook Parkway approach consists of dual left turn lanes, one through lane, and a right turn lane. The westbound approach consists of a left turn lane, a through lane, and one right turn lane. The northbound and southbound approaches of Marksheffel Road consist of one left turn lane, two through lanes, and a right turn lane.

The US-24 and Marksheffel Road (#2) intersection is a four-leg signalized intersection. The traffic software for this intersection assigned Marksheffel Road as east-west and US-24 as north-south based on roadway alignment. The southbound US-24 and the eastbound and westbound Marksheffel Road approaches consist of a left turn lane, two through lanes, and separate right turn lanes operating with free right turn movements. The northbound US-24 approach consists of dual left turn lanes, two through lanes, and a right turn lane with free movements.

The Newt Drive and Meadowbrook Parkway (#3) intersection is a T-intersection with stop control on the eastbound and westbound approaches of Newt Drive. The westbound approach consists of one through lane and a right turn lane. The eastbound approach consists of one left turn lane and one through lane. The southbound approach consists of a two-way left turn lane and a right turn lane. With the construction of the Crossroads Mix Use project, a southwest leg will be constructed at this intersection by extension of Meadowbrook Parkway adjacent to the development area.

The intersection of SH-94 and US-24 (#4) is signalized with four-legs. Both state highways run east-west, however the traffic software for this intersection assigned SH-94 as east-west and US-24 as north-south. The eastbound Newt Drive approach consists of dual left turn lanes, one through lane, and a free right turn lane. The westbound SH-94 approach consists of dual left turn lanes, two through lanes, and a free right turn lane. The US-24 approaches each consist of a left turn lane, two through lanes, and a right turn lane.

The SH-94 and Marksheffel Road (#5) intersection is a four-leg signalized intersection. The eastbound and westbound approaches consist of a left turn lane, one through lane, and one right turn lane. The northbound and southbound approaches consist of a left turn lane, two through lanes, and a right turn lane.

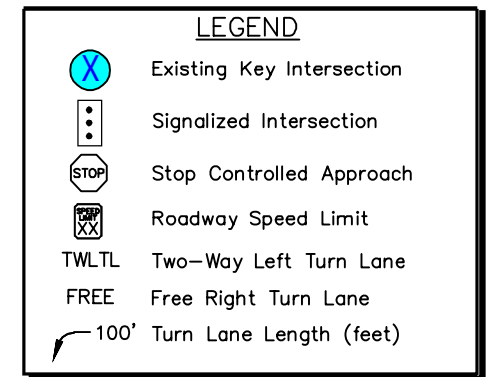
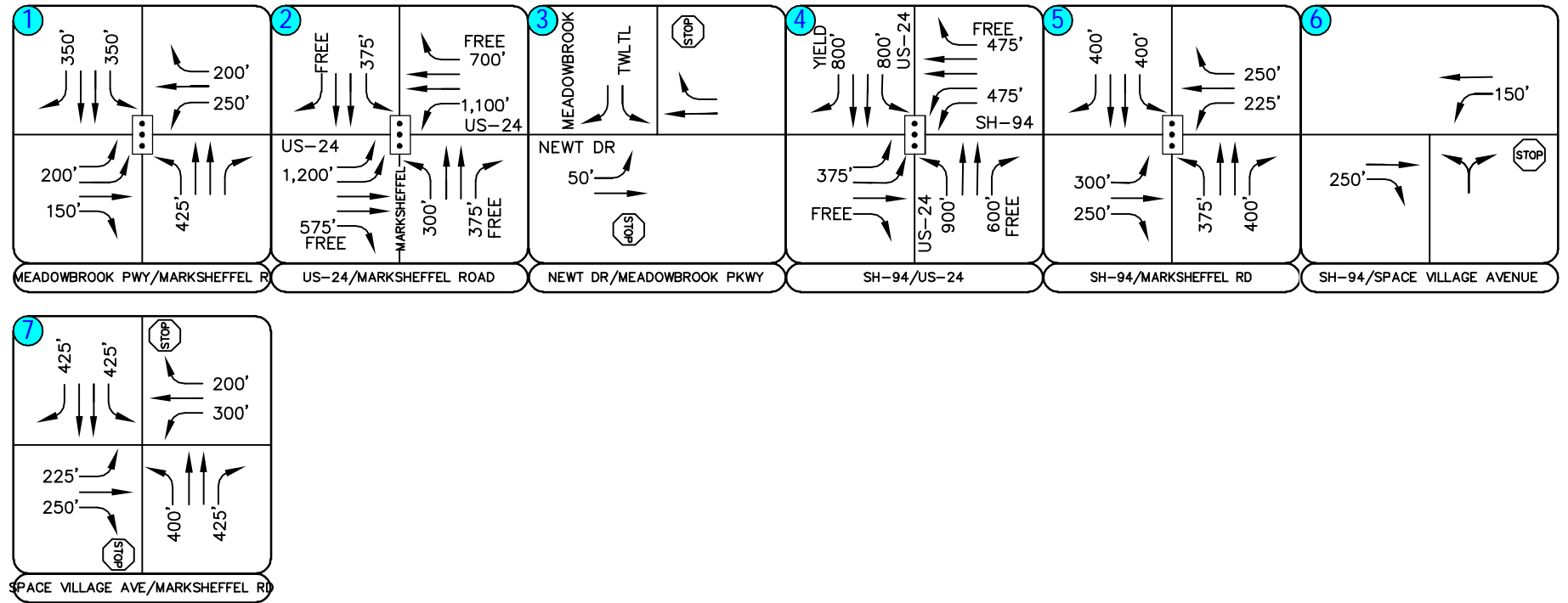
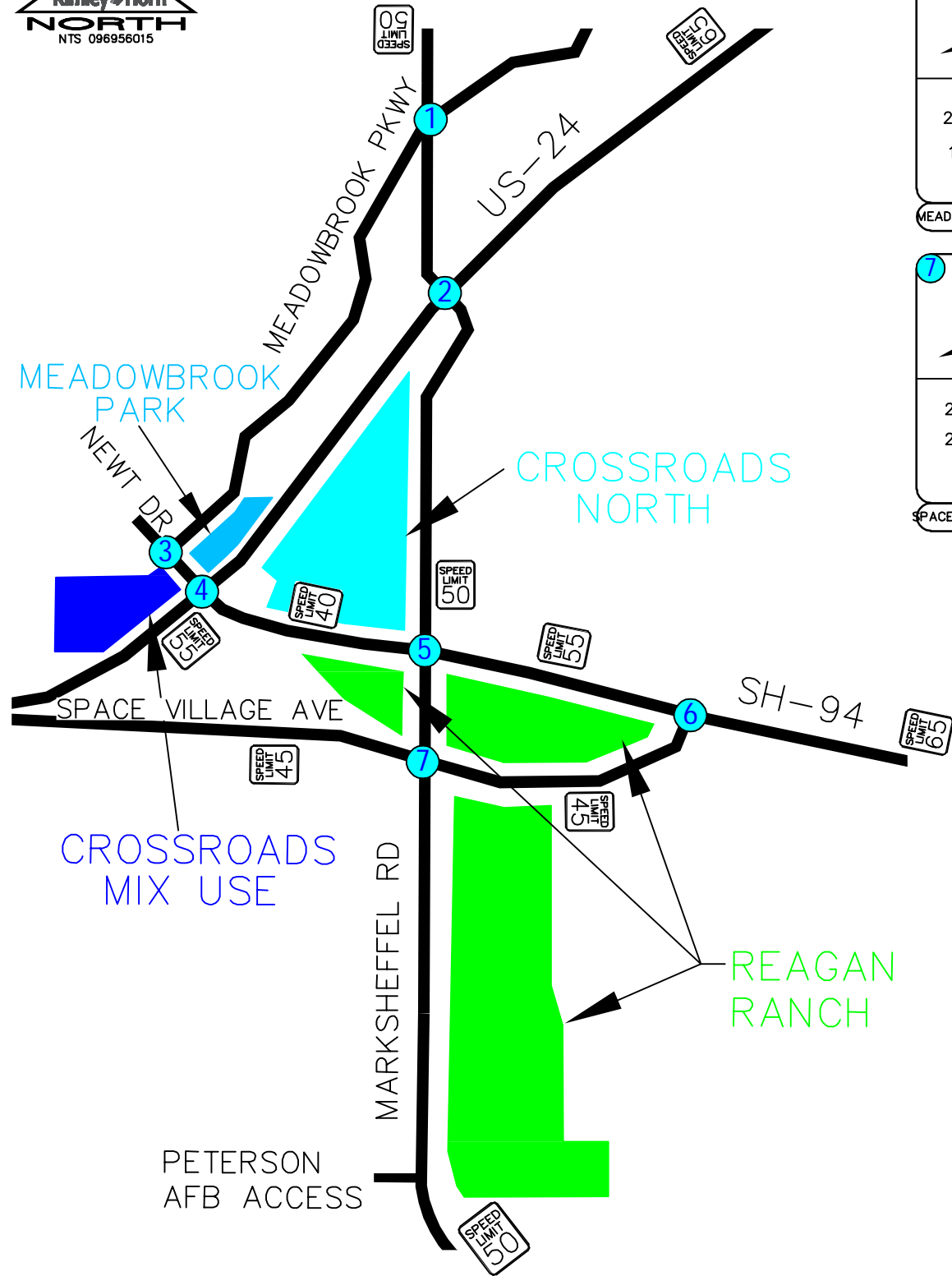
The SH-94 and Space Village Avenue (#6) intersection is a T-intersection with stop control on the northbound approach. The eastbound approach consists of one through lane and a right turn lane. The westbound approach consists of one left turn lane and one through lane. The northbound approach consists of a single lane for shared left turn and right turn movements.

The Space Village Avenue and Marksheffel Road (#7) intersection is a four-leg intersection that operates with stop-control on the eastbound and westbound approaches. The eastbound and westbound approaches consist of a left turn lane, one through lane, and one right turn lane. The northbound and southbound approaches each consist of one left turn lane, two through lanes, and one right turn lane. Existing intersection lane configurations and control for the study area are shown in **Figure 3**.

3.3 Existing Traffic Volumes

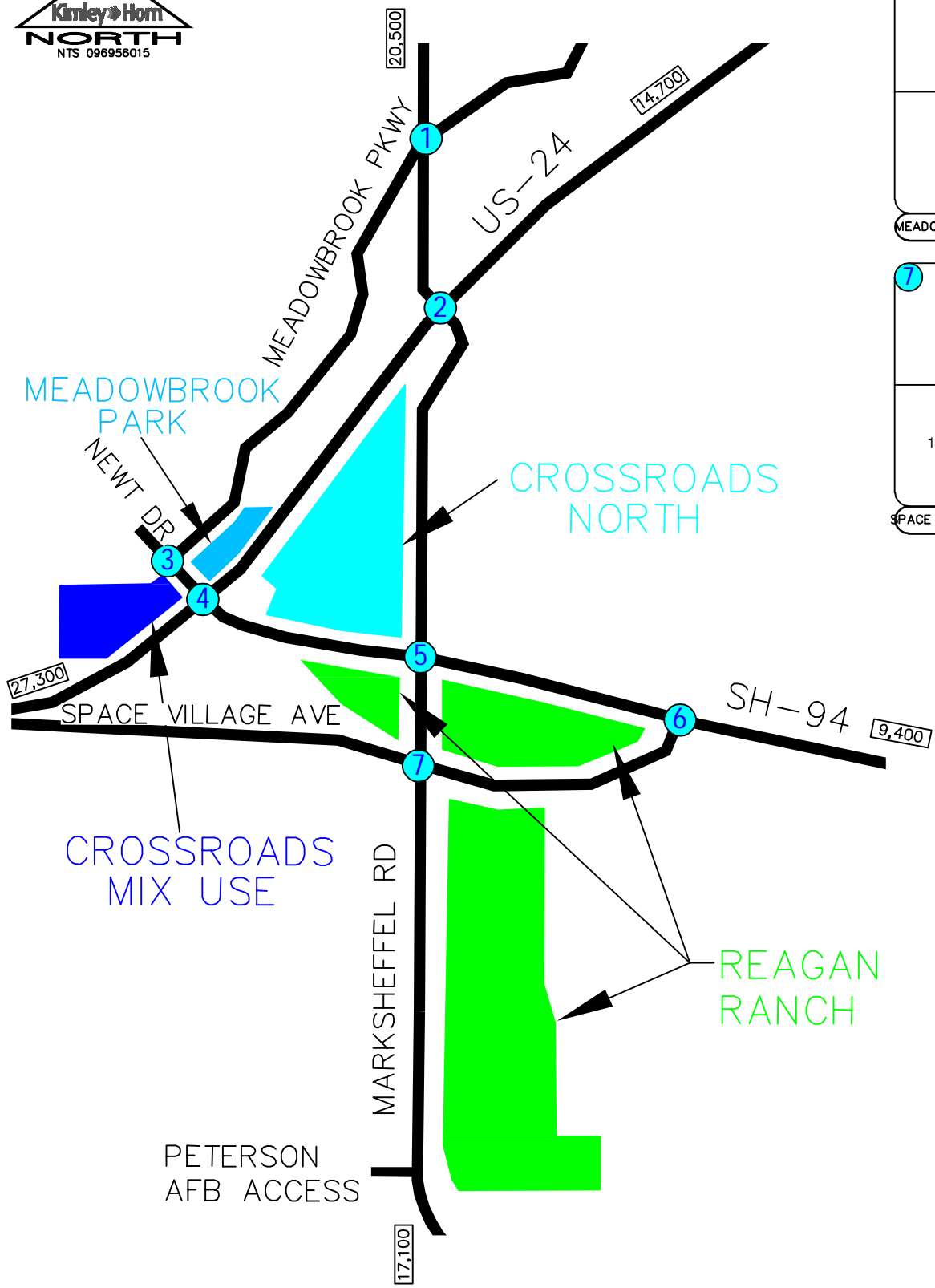
Due to the effects on traffic from COVID-19, traffic counts at each intersection were derived by different methodologies. Existing peak hour turning movement counts, pedestrian counts, heavy vehicle percentages, and bicycle counts were conducted at the intersections of Meadowbrook Parkway/Marksheffel Road (#1) and US-24/Marksheffel Road (#2) on Thursday, June 4, 2020, and at the intersections of Newt Drive/Meadowbrook Parkway (#3), SH-94/US-24 (#4), SH-94/Marksheffel Road (#5) and SH-94/Space Village Avenue (#6) on Tuesday, June 2, 2020. The weekday counts were conducted in 15-minute intervals during the AM and PM peak hours of adjacent street traffic from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The turning movement counts were grown based on data obtained from hourly counts from the CDOT OTIS database and additional historical CDOT traffic information provided to Kimley-Horn to account for a COVID-19 adjustment for this area. Based on this information and through coordination with CDOT, the morning and afternoon peak hour counts were adjusted by 35 percent except for the counts at the intersection of SH-94 and Marksheffel Road which were not adjusted in the morning peak hour but were adjusted by 44 percent for the afternoon peak hour.

The existing peak hour turning movements for the intersection of Marksheffel Road and Space Village Avenue (#7) were obtained from a signal warrant study and were conducted on Thursday, March 12, 2020. The counts at the intersection of Marksheffel Road and Space Village Avenue were used without adjustment since the counts were conducted before the COVID-19 pandemic. Existing turning movement counts are shown in **Figure 4** while the adjusted turning movement counts are shown in **Figure 5** with count sheets and COVID-19 count adjustment data provided in **Appendix A**. It should be noted that heavy vehicle percentages are documented in the count sheets and these percentages were used in the intersection operational analysis.



CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 EXISTING LANE CONFIGURATIONS AND CONTROL

FIGURE 3

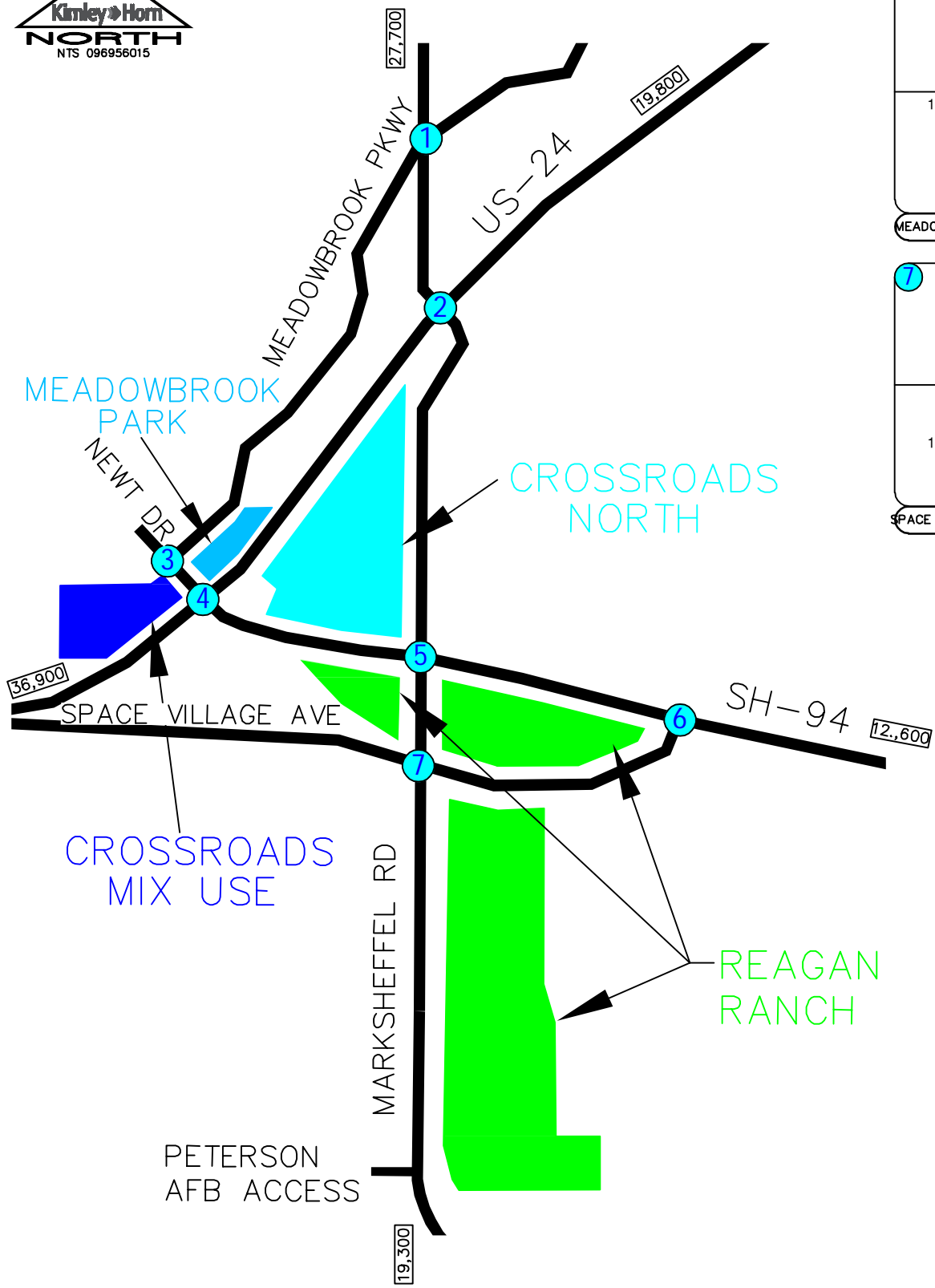


| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------------|------------------------|---------------|--------------------------|---------------|-------------|--------------|----------------------|-------------|----------------------------|----------------|---------------|---|----------------------------------|---------------|------------|-------------|---------------|---------------|---------------|---------------|-----------|-----------|---------------|--------------|--|-----------|---------------|-------------|------------|--|--|-----------|-------------|--|--|--|--|---|-------------|----------------|-----------|-----------|-------------|---------------|-------------|-------------|---------------|---------------|----------------|---------------|--|-----------|---------------|---------------|--------------|---------------|-------------|---------------|-------------|-------------|---------------|-------------|--|---|--|--|--|--|---------------|-------------|--|--|--|--|---------------|-------------|
| 1 <table border="1"> <tr> <td>126(97) ←</td> <td>1029(703) ←</td> <td>6(30) ←</td> <td>19(25) ↑</td> <td>14(9) ←</td> <td>27(14) ←</td> </tr> <tr> <td>78(131) ↓</td> <td>4(8) ↓</td> <td>26(37) ↓</td> <td>20(31) ↑</td> <td>569(1061) ↑</td> <td>12(54) ↑</td> </tr> </table> | 126(97) ← | 1029(703) ← | 6(30) ← | 19(25) ↑ | 14(9) ← | 27(14) ← | 78(131) ↓ | 4(8) ↓ | 26(37) ↓ | 20(31) ↑ | 569(1061) ↑ | 12(54) ↑ | 2 <table border="1"> <tr> <td>522(350) ←</td> <td>524(410) ←</td> <td>7(12) ←</td> <td>13(11) ↑</td> <td>820(389) ↑</td> <td>209(104) ↑</td> </tr> <tr> <td>248(461) ↓</td> <td>360(815) ↓</td> <td>0(5) ↓</td> <td>1(9) ↑</td> <td>336(615) ↑</td> <td>40(132) ↑</td> </tr> </table> | 522(350) ← | 524(410) ← | 7(12) ← | 13(11) ↑ | 820(389) ↑ | 209(104) ↑ | 248(461) ↓ | 360(815) ↓ | 0(5) ↓ | 1(9) ↑ | 336(615) ↑ | 40(132) ↑ | 3 <table border="1"> <tr> <td>1(7) ←</td> <td>149(195) ←</td> <td>90(70) ↑</td> <td>7(26) ↑</td> <td></td> <td></td> </tr> <tr> <td>4(8) ↓</td> <td>20(24) ↓</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | 1(7) ← | 149(195) ← | 90(70) ↑ | 7(26) ↑ | | | 4(8) ↓ | 20(24) ↓ | | | | | 4 <table border="1"> <tr> <td>27(27) ←</td> <td>1285(691) ←</td> <td>3(3) ←</td> <td>1(5) ↑</td> <td>29(17) ↑</td> <td>326(259) ↑</td> </tr> <tr> <td>12(21) ↓</td> <td>21(29) ↓</td> <td>145(176) ↓</td> <td>107(117) ↑</td> <td>591(1250) ↑</td> <td>281(237) ↑</td> </tr> </table> | 27(27) ← | 1285(691) ← | 3(3) ← | 1(5) ↑ | 29(17) ↑ | 326(259) ↑ | 12(21) ↓ | 21(29) ↓ | 145(176) ↓ | 107(117) ↑ | 591(1250) ↑ | 281(237) ↑ | 5 <table border="1"> <tr> <td>3(5) ←</td> <td>501(398) ←</td> <td>256(110) ←</td> <td>77(238) ↑</td> <td>297(247) ↑</td> <td>28(27) ↑</td> </tr> <tr> <td>254(204) ↓</td> <td>54(65) ↓</td> <td>54(53) ↓</td> <td>270(569) ↑</td> <td>18(16) ↑</td> <td></td> </tr> </table> | 3(5) ← | 501(398) ← | 256(110) ← | 77(238) ↑ | 297(247) ↑ | 28(27) ↑ | 254(204) ↓ | 54(65) ↓ | 54(53) ↓ | 270(569) ↑ | 18(16) ↑ | | 6 <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td>402(512) ←</td> <td>21(41) ←</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>528(330) ↓</td> <td>62(49) ↓</td> </tr> </table> | | | | | 402(512) ← | 21(41) ← | | | | | 528(330) ↓ | 62(49) ↓ |
| 126(97) ← | 1029(703) ← | 6(30) ← | 19(25) ↑ | 14(9) ← | 27(14) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 78(131) ↓ | 4(8) ↓ | 26(37) ↓ | 20(31) ↑ | 569(1061) ↑ | 12(54) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 522(350) ← | 524(410) ← | 7(12) ← | 13(11) ↑ | 820(389) ↑ | 209(104) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 248(461) ↓ | 360(815) ↓ | 0(5) ↓ | 1(9) ↑ | 336(615) ↑ | 40(132) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1(7) ← | 149(195) ← | 90(70) ↑ | 7(26) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4(8) ↓ | 20(24) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(27) ← | 1285(691) ← | 3(3) ← | 1(5) ↑ | 29(17) ↑ | 326(259) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12(21) ↓ | 21(29) ↓ | 145(176) ↓ | 107(117) ↑ | 591(1250) ↑ | 281(237) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3(5) ← | 501(398) ← | 256(110) ← | 77(238) ↑ | 297(247) ↑ | 28(27) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 254(204) ↓ | 54(65) ↓ | 54(53) ↓ | 270(569) ↑ | 18(16) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 402(512) ← | 21(41) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 528(330) ↓ | 62(49) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK PKWY/MARKSHEFFEL RD | | US-24/MARKSHEFFEL ROAD | | NEWT DR/MEADOWBROOK PKWY | | SH-94/US-24 | | SH-94/MARKSHEFFEL RD | | SH-94/SPACE VILLAGE AVENUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 <table border="1"> <tr> <td>119(23) ←</td> <td>859(530) ←</td> <td>8(1) ←</td> <td>2(1) ↑</td> <td>11(10) ↑</td> <td>8(30) ↑</td> </tr> <tr> <td>7(8) ↓</td> <td>42(31) ↓</td> <td>114(225) ↓</td> <td>273(203) ↑</td> <td>472(917) ↑</td> <td>12(17) ↑</td> </tr> </table> | | 119(23) ← | 859(530) ← | 8(1) ← | 2(1) ↑ | 11(10) ↑ | 8(30) ↑ | 7(8) ↓ | 42(31) ↓ | 114(225) ↓ | 273(203) ↑ | 472(917) ↑ | 12(17) ↑ | SPACE VILLAGE AVE/MARKSHEFFEL RD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 119(23) ← | 859(530) ← | 8(1) ← | 2(1) ↑ | 11(10) ↑ | 8(30) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7(8) ↓ | 42(31) ↓ | 114(225) ↓ | 273(203) ↑ | 472(917) ↑ | 12(17) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2020 EXISTING TRAFFIC VOLUMES

LEGEND

- Existing Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- Estimated Daily Traffic Volume



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------------|----------------------------|-----------------------------|-------------------------------|--|--|---------------------------------|-------------------------------|--------------------------------|--|---------------------------------|------------------|-----------------|--|--|--------------------------------------|----------------------------|------------------------------|-----------------------------------|---|---------------------------------------|-------------------------------|--------------------|------------------------------|--|--|--------------------|----------|--------|
| <p>1</p> <table border="1"> <tr> <td>170(131) 1389(949) 8(41)</td> <td>26(34) 19(12) 36(19)</td> </tr> <tr> <td>105(177) 5(11) 35(50)</td> <td>27(42) 768(1432) 16(73)</td> </tr> </table> <p>MEADOWBROOK PKWY/MARKSHEFFEL RD</p> | 170(131) 1389(949) 8(41) | 26(34) 19(12) 36(19) | 105(177) 5(11) 35(50) | 27(42) 768(1432) 16(73) | <p>2</p> <table border="1"> <tr> <td>MARKSHEFFEL 705(473) 707(554) 9(16)</td> <td>18(15) 1107(525) 282(140)</td> </tr> <tr> <td>335(622) 486(1100) 0(7)</td> <td>1(12) 454(830) 54(178)</td> </tr> </table> <p>US-24/MARKSHEFFEL ROAD</p> | MARKSHEFFEL 705(473) 707(554) 9(16) | 18(15) 1107(525) 282(140) | 335(622) 486(1100) 0(7) | 1(12) 454(830) 54(178) | <p>3</p> <table border="1"> <tr> <td>MEADOWBROOK 1(9) 201(263)</td> <td>122(95) 9(35)</td> </tr> <tr> <td>5(11) 27(32)</td> <td></td> </tr> </table> <p>NEWT DR</p> | MEADOWBROOK 1(9) 201(263) | 122(95) 9(35) | 5(11) 27(32) | | <p>4</p> <table border="1"> <tr> <td>US-24 36(36) 1735(933) 4(4)</td> <td>1(7) 39(23) 440(350)</td> </tr> <tr> <td>16(28) 28(39) 196(238)</td> <td>144(158) 798(1688) 379(320)</td> </tr> </table> <p>SH-94/US-24</p> | US-24 36(36) 1735(933) 4(4) | 1(7) 39(23) 440(350) | 16(28) 28(39) 196(238) | 144(158) 798(1688) 379(320) | <p>5</p> <table border="1"> <tr> <td>SH-94 3(7) 501(573) 256(158)</td> <td>77(343) 297(356) 28(39)</td> </tr> <tr> <td>254(294) 54(94)</td> <td>54(76) 270(819) 18(23)</td> </tr> </table> <p>SH-94/MARKSHEFFEL RD</p> | SH-94 3(7) 501(573) 256(158) | 77(343) 297(356) 28(39) | 254(294) 54(94) | 54(76) 270(819) 18(23) | <p>6</p> <table border="1"> <tr> <td></td> <td>543(691) 28(55)</td> </tr> <tr> <td>713(446)</td> <td>84(66)</td> </tr> </table> <p>SH-94/SPACE VILLAGE AVENUE</p> | | 543(691) 28(55) | 713(446) | 84(66) |
| 170(131) 1389(949) 8(41) | 26(34) 19(12) 36(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 105(177) 5(11) 35(50) | 27(42) 768(1432) 16(73) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL 705(473) 707(554) 9(16) | 18(15) 1107(525) 282(140) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335(622) 486(1100) 0(7) | 1(12) 454(830) 54(178) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK 1(9) 201(263) | 122(95) 9(35) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5(11) 27(32) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US-24 36(36) 1735(933) 4(4) | 1(7) 39(23) 440(350) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16(28) 28(39) 196(238) | 144(158) 798(1688) 379(320) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SH-94 3(7) 501(573) 256(158) | 77(343) 297(356) 28(39) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 254(294) 54(94) | 54(76) 270(819) 18(23) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 543(691) 28(55) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 713(446) | 84(66) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>7</p> <table border="1"> <tr> <td>119(23) 859(530) 8(1)</td> <td>2(1) 11(10) 8(30)</td> </tr> <tr> <td>7(8) 42(31) 114(225)</td> <td>273(203) 472(917) 12(17)</td> </tr> </table> <p>SPACE VILLAGE AVE/MARKSHEFFEL RD</p> | | | | | | 119(23) 859(530) 8(1) | 2(1) 11(10) 8(30) | 7(8) 42(31) 114(225) | 273(203) 472(917) 12(17) | | | | | | | | | | | | | | | | | | | | |
| 119(23) 859(530) 8(1) | 2(1) 11(10) 8(30) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7(8) 42(31) 114(225) | 273(203) 472(917) 12(17) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2020 ADJUSTED EXISTING TRAFFIC VOLUMES

LEGEND

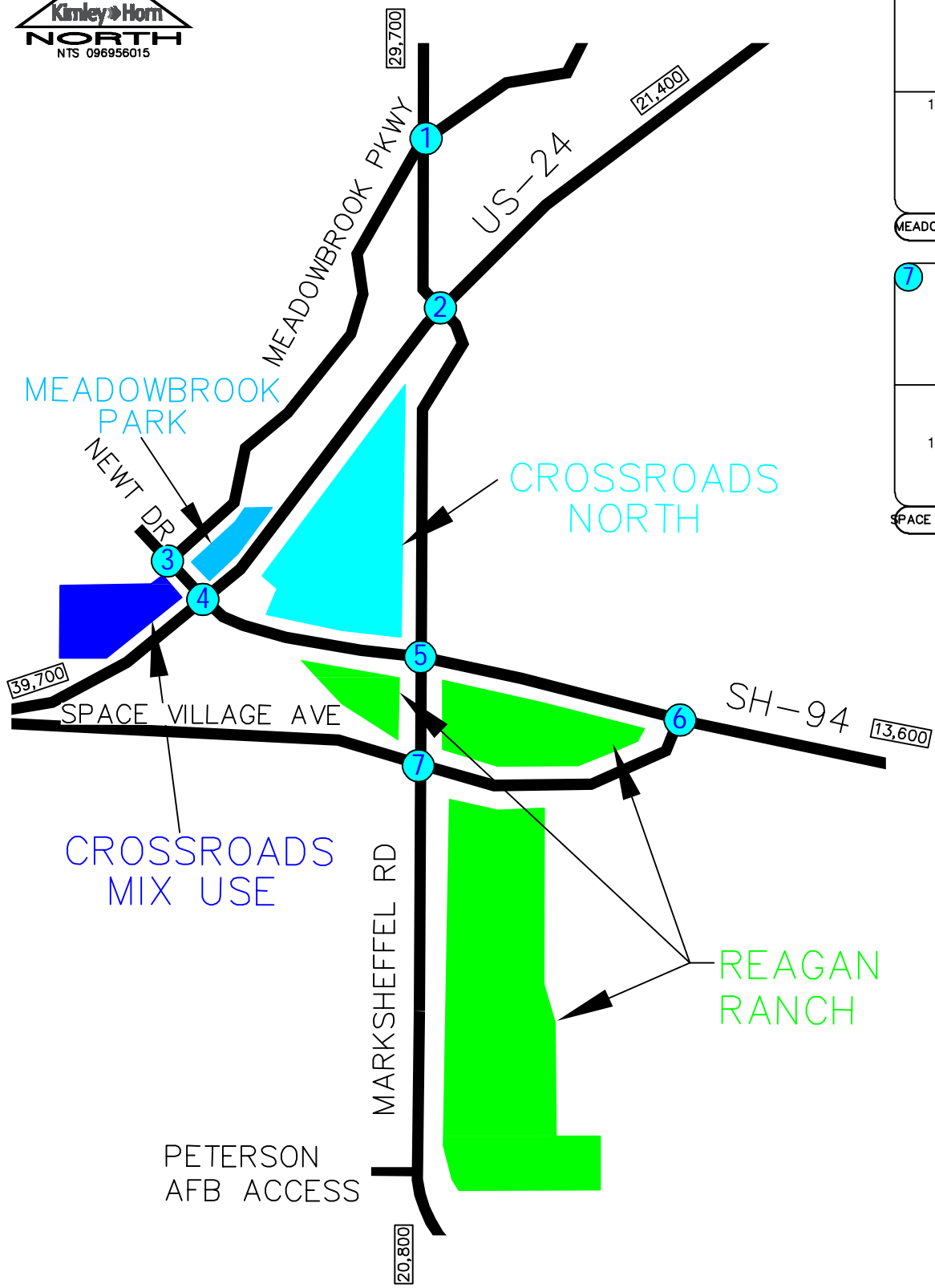
- Existing Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 5

3.4 Unspecified Development Traffic Growth

According to information provided on the website for the Colorado Department of Transportation (CDOT), the average 20-year growth factor along SH-94 in the vicinity of the site is 1.29. This value equates to an annual growth rate of 1.16 percent. SH-94 traffic information from the CDOT Online Transportation Information System (OTIS) website is included in **Appendix B**. Based on this, an annual growth rate of 1.16 percent was used to calculate future traffic volumes within the project study area. This annual growth rate was used to estimate near term 2026 and long term 2040 traffic volume projections at the key intersections.

Along with the annual growth, calculated trips from an additional 1,123 single family detached housing units, located in the parcels east of the southeast area of Reagan Ranch, were added to the 2040 background volumes. Further, project traffic from the single-family housing development to the west at Newt Drive were estimated based on the number of homes yet to be occupied and added to the background traffic volumes. The Pikes Peak Area Council of Governments (PPACOG) 2040 traffic volume projections were used as a comparison to future traffic volume projections with this study. All future average daily traffic volume projections in this study exceed the PPACOG projections; therefore, the annual growth rate of 1.16 percent should be conservative. As requested by El Paso County, it should be noted that all known development traffic studies have been included in this study and this includes the Kimley-Horn traffic studies completed in the immediate area in the last five years. Background traffic volumes for 2026 and 2040 are shown in **Figures 6** and **7**, respectively.

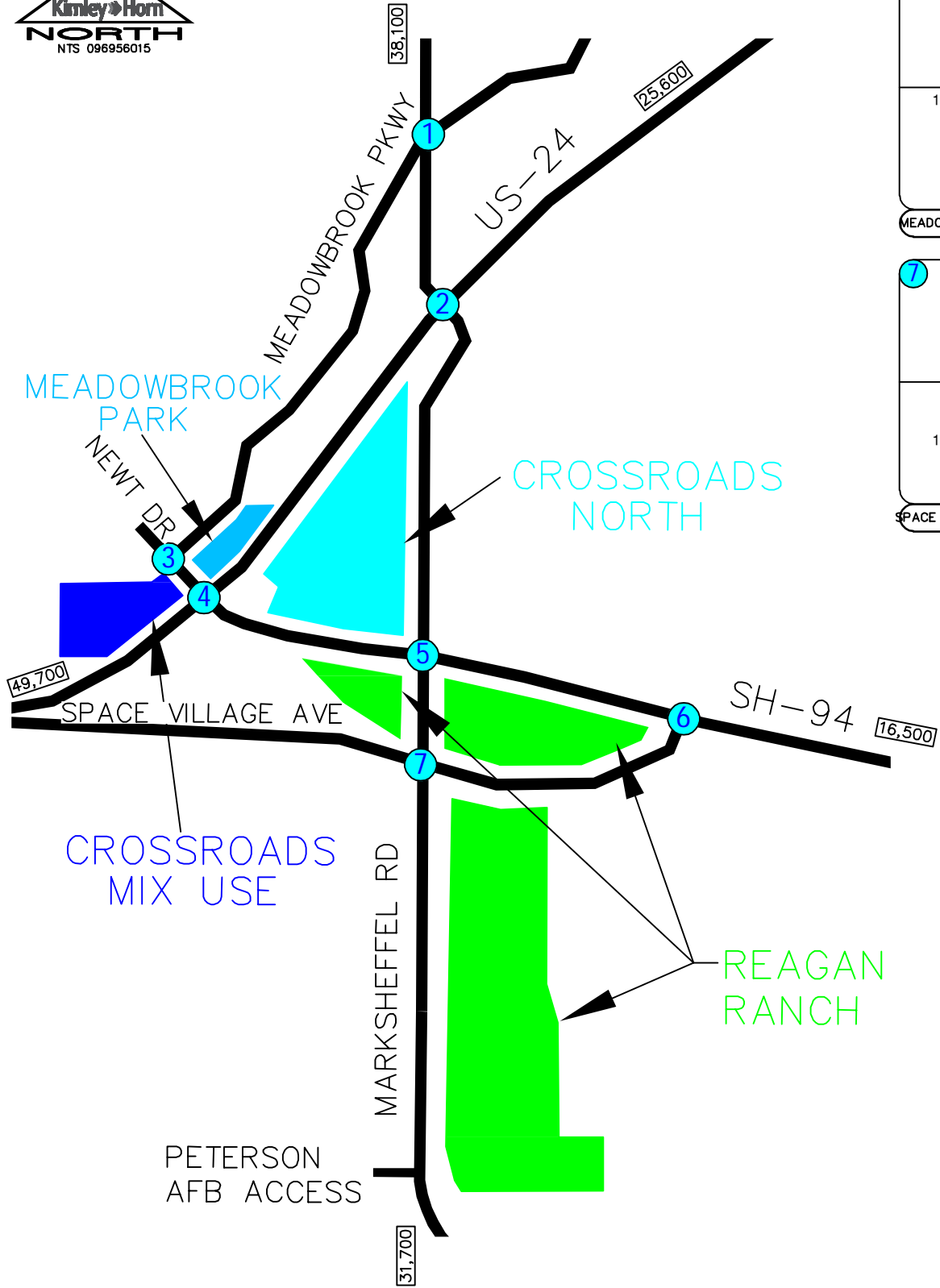


| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------------------|----------------------------|------------------------------|-------------------------------|--|---|---------------------------------|--------------------------------|--------------------------------|--|----------------------------------|--------------------|------------------|--|--|---------------------------------------|-----------------------------|------------------------------|-----------------------------------|---|--|-------------------------------|---------------------|------------------------------|--|--|--------------------|----------|--------|
| <p>1</p> <table border="1"> <tr> <td>185(145) 1490(1020) 10(45)</td> <td>30(40) 25(15) 40(25)</td> </tr> <tr> <td>115(190) 10(15) 40(55)</td> <td>30(50) 825(1535) 20(80)</td> </tr> </table> <p>MEADOWBROOK PKWY/MARKSHEFFEL RD</p> | 185(145) 1490(1020) 10(45) | 30(40) 25(15) 40(25) | 115(190) 10(15) 40(55) | 30(50) 825(1535) 20(80) | <p>2</p> <table border="1"> <tr> <td>MARKSHEFFEL 760(510) 760(595) 10(20)</td> <td>20(20) 1190(565) 305(155)</td> </tr> <tr> <td>360(670) 525(1180) 0(10)</td> <td>5(15) 490(890) 60(195)</td> </tr> </table> <p>US-24/MARKSHEFFEL ROAD</p> | MARKSHEFFEL 760(510) 760(595) 10(20) | 20(20) 1190(565) 305(155) | 360(670) 525(1180) 0(10) | 5(15) 490(890) 60(195) | <p>3</p> <table border="1"> <tr> <td>MEADOWBROOK 5(10) 220(285)</td> <td>135(105) 10(40)</td> </tr> <tr> <td>10(15) 30(35)</td> <td></td> </tr> </table> <p>NEWT DR</p> | MEADOWBROOK 5(10) 220(285) | 135(105) 10(40) | 10(15) 30(35) | | <p>4</p> <table border="1"> <tr> <td>US-24 40(40) 1860(1000) 5(5)</td> <td>5(10) 45(25) 475(380)</td> </tr> <tr> <td>20(35) 35(45) 215(260)</td> <td>155(170) 860(1810) 410(345)</td> </tr> </table> <p>SH-94/US-24</p> | US-24 40(40) 1860(1000) 5(5) | 5(10) 45(25) 475(380) | 20(35) 35(45) 215(260) | 155(170) 860(1810) 410(345) | <p>5</p> <table border="1"> <tr> <td>SH-94 5(10) 540(615) 275(170)</td> <td>85(370) 320(385) 35(45)</td> </tr> <tr> <td>275(320) 60(105)</td> <td>60(85) 290(880) 20(25)</td> </tr> </table> <p>SH-94/MARKSHEFFEL RD</p> | SH-94 5(10) 540(615) 275(170) | 85(370) 320(385) 35(45) | 275(320) 60(105) | 60(85) 290(880) 20(25) | <p>6</p> <table border="1"> <tr> <td></td> <td>585(745) 35(60)</td> </tr> <tr> <td>765(480)</td> <td>95(75)</td> </tr> </table> <p>SH-94/SPACE VILLAGE AVENUE</p> | | 585(745) 35(60) | 765(480) | 95(75) |
| 185(145) 1490(1020) 10(45) | 30(40) 25(15) 40(25) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115(190) 10(15) 40(55) | 30(50) 825(1535) 20(80) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL 760(510) 760(595) 10(20) | 20(20) 1190(565) 305(155) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 360(670) 525(1180) 0(10) | 5(15) 490(890) 60(195) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK 5(10) 220(285) | 135(105) 10(40) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10(15) 30(35) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US-24 40(40) 1860(1000) 5(5) | 5(10) 45(25) 475(380) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20(35) 35(45) 215(260) | 155(170) 860(1810) 410(345) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SH-94 5(10) 540(615) 275(170) | 85(370) 320(385) 35(45) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 275(320) 60(105) | 60(85) 290(880) 20(25) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 585(745) 35(60) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 765(480) | 95(75) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>7</p> <table border="1"> <tr> <td>130(25) 925(570) 10(5)</td> <td>5(5) 15(15) 10(35)</td> </tr> <tr> <td>10(10) 50(35) 125(245)</td> <td>295(220) 510(985) 15(20)</td> </tr> </table> <p>SPACE VILLAGE AVE/MARKSHEFFEL RD</p> | | | | | | 130(25) 925(570) 10(5) | 5(5) 15(15) 10(35) | 10(10) 50(35) 125(245) | 295(220) 510(985) 15(20) | | | | | | | | | | | | | | | | | | | | |
| 130(25) 925(570) 10(5) | 5(5) 15(15) 10(35) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10(10) 50(35) 125(245) | 295(220) 510(985) 15(20) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2026 BACKGROUND TRAFFIC VOLUMES

LEGEND

- Existing Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------------------------|----------------------------|------------------------------|--------------------------------|---|----------------------------------|---------------------------------|--------------------------------|---------------------------------|---|-------------------|--------------------|------------------|--|---|--------------------------------|-----------------------------|------------------------------|------------------------------------|--|-------------------------------|--------------------------------|----------------------|---------------------------------|---|--|---------------------|----------|----------|
| <p>1</p> <table border="1"> <tr> <td>215(165) 1810(1395) 1.5(55)</td> <td>35(45) 25(20) 50(25)</td> </tr> <tr> <td>135(225) 10(15) 45(65)</td> <td>35(55) 1150(1920) 25(95)</td> </tr> </table> <p>MEADOWBROOK PKWY/MARKSHEFFEL RD</p> | 215(165) 1810(1395) 1.5(55) | 35(45) 25(20) 50(25) | 135(225) 10(15) 45(65) | 35(55) 1150(1920) 25(95) | <p>2</p> <table border="1"> <tr> <td>890(600) 955(895) 1.5(25)</td> <td>25(20) 1395(665) 370(210)</td> </tr> <tr> <td>425(785) 615(1390) 0(10)</td> <td>5(20) 755(1165) 100(245)</td> </tr> </table> <p>US-24/MARKSHEFFEL ROAD</p> | 890(600) 955(895) 1.5(25) | 25(20) 1395(665) 370(210) | 425(785) 615(1390) 0(10) | 5(20) 755(1165) 100(245) | <p>3</p> <table border="1"> <tr> <td>5(15) 255(335)</td> <td>155(120) 15(45)</td> </tr> <tr> <td>10(15) 35(45)</td> <td></td> </tr> </table> <p>NEWT DR/MEADOWBROOK PKWY</p> | 5(15) 255(335) | 155(120) 15(45) | 10(15) 35(45) | | <p>4</p> <table border="1"> <tr> <td>50(50) 2190(1180) 10(10)</td> <td>5(10) 50(30) 735(560)</td> </tr> <tr> <td>25(40) 40(50) 250(300)</td> <td>185(200) 1010(2130) 540(600)</td> </tr> </table> <p>SH-94/US-24</p> | 50(50) 2190(1180) 10(10) | 5(10) 50(30) 735(560) | 25(40) 40(50) 250(300) | 185(200) 1010(2130) 540(600) | <p>5</p> <table border="1"> <tr> <td>5(10) 705(955) 325(200)</td> <td>100(435) 375(450) 40(50)</td> </tr> <tr> <td>320(375) 130(315)</td> <td>250(215) 555(1170) 25(30)</td> </tr> </table> <p>SH-94/MARKSHEFFEL RD</p> | 5(10) 705(955) 325(200) | 100(435) 375(450) 40(50) | 320(375) 130(315) | 250(215) 555(1170) 25(30) | <p>6</p> <table border="1"> <tr> <td></td> <td>685(875) 50(105)</td> </tr> <tr> <td>900(565)</td> <td>140(105)</td> </tr> </table> <p>SH-94/SPACE VILLAGE AVENUE</p> | | 685(875) 50(105) | 900(565) | 140(105) |
| 215(165) 1810(1395) 1.5(55) | 35(45) 25(20) 50(25) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 135(225) 10(15) 45(65) | 35(55) 1150(1920) 25(95) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 890(600) 955(895) 1.5(25) | 25(20) 1395(665) 370(210) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 425(785) 615(1390) 0(10) | 5(20) 755(1165) 100(245) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5(15) 255(335) | 155(120) 15(45) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10(15) 35(45) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50(50) 2190(1180) 10(10) | 5(10) 50(30) 735(560) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25(40) 40(50) 250(300) | 185(200) 1010(2130) 540(600) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5(10) 705(955) 325(200) | 100(435) 375(450) 40(50) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 320(375) 130(315) | 250(215) 555(1170) 25(30) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 685(875) 50(105) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 900(565) | 140(105) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>7</p> <table border="1"> <tr> <td>150(30) 1210(1080) 1.5(15)</td> <td>15(10) 45(35) 20(60)</td> </tr> <tr> <td>10(15) 65(75) 155(320)</td> <td>375(275) 975(1400) 35(35)</td> </tr> </table> <p>SPACE VILLAGE AVE/MARKSHEFFEL RD</p> | | | | | | 150(30) 1210(1080) 1.5(15) | 15(10) 45(35) 20(60) | 10(15) 65(75) 155(320) | 375(275) 975(1400) 35(35) | | | | | | | | | | | | | | | | | | | | |
| 150(30) 1210(1080) 1.5(15) | 15(10) 45(35) 20(60) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10(15) 65(75) 155(320) | 375(275) 975(1400) 35(35) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2040 BACKGROUND TRAFFIC VOLUMES

LEGEND



-  Existing Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
-  Estimated Daily Traffic Volume

FIGURE 7

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses.

As mentioned previously, the projects were evaluated with a Phase 1 2026 horizon and a full buildout 2040 horizon. For this study, Kimley-Horn used the ITE Trip Generation Manual average rates and fitted curve equations that apply to Industrial Park (ITE Code 130), Single-Family Detached House (ITE 210), Mid-Rise Multifamily Housing (ITE 221), Public Park (ITE 411), Movie Theater (ITE 444), General Office Building (ITE 710), Shopping Center (ITE 820), Tire Superstore (ITE 849), Home Improvement Superstore (ITE 862), Pharmacy (ITE 881), Furniture Store (ITE 890), Sit-Down Restaurant (ITE 932), Fast-Food Restaurant with Drive Through (ITE 934), Coffee/Donut Shop with Drive Through (ITE 937), and Gasoline Station with Convenience Market (ITE 960) for traffic associated with all development areas of the project.

Since the project is proposed to contain a mix of uses, internal capture trips are expected to occur on site as well. These internal capture trips are shared trips from vehicles already within the internal street network. These shared trips reduce the number of total external trips and were calculated directly per the ITE procedure but were capped based on thresholds set forth by CDOT. Based on the CDOT access code, internal trip reductions cannot not exceed two percent for the AM peak or eight percent for PM peaks unless clearly justified and documented by actual studies. As such, an internal capture rate of two (2) percent was used during the morning peak hour and a rate of eight (8) percent during the afternoon peak for areas that apply. Phase 1 development of the projects in 2026 is expected to generate approximately 34,458 daily weekday external vehicle trips with 2,748 of these trips occurring during the morning peak hour and 2,806 trips occurring during the afternoon peak hour. Calculations were based on the procedure and

¹ Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.

information provided in the ITE *Trip Generation Manual, 10th Edition – Volume 1: User’s Guide and Handbook*, 2017. **Table 1** provides the estimated trip generation for Phase 1 of the project. The trip generation calculations are included in **Appendix C**.

Table 1 – Phase 1 Project Traffic Generation

| Use | Quantity | Daily | Weekday Vehicle Trips | | | | | |
|--|------------|---------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| | | | AM Peak Hour | | | PM Peak Hour | | |
| | | | In | Out | Total | In | Out | Total |
| Crossroads North | | | | | | | | |
| Public Park (ITE 411) | 20 Acres | 16 | 0 | 0 | 0 | 1 | 1 | 2 |
| Tire Superstore (ITE 849) | 7,000 SF | 144 | 6 | 3 | 9 | 7 | 8 | 15 |
| Home Improvement Superstore (ITE 862) | 127,000 SF | 3,904 | 113 | 86 | 199 | 145 | 151 | 296 |
| Furniture Store (ITE 890) | 114,000 SF | 720 | 21 | 9 | 30 | 28 | 31 | 59 |
| Sit Down Restaurant (ITE 932) | 11,000 SF | 1,234 | 60 | 49 | 109 | 66 | 41 | 107 |
| Fast-Food Restaurant (ITE 934) | 2,500 SF | 1,178 | 51 | 49 | 100 | 43 | 39 | 82 |
| Gas Station Super Convenience (ITE 960) | 6,000 SF | 5,026 | 249 | 250 | 499 | 208 | 208 | 416 |
| Total Crossroads North Trips | | 12,222 | 500 | 446 | 946 | 498 | 479 | 977 |
| Crossroads North Trips after Internal Capture | | 11,246 | 490 | 437 | 927 | 458 | 441 | 899 |
| Meadowbrook Park | | | | | | | | |
| Single Family Housing (ITE 210) | 67 Units | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Meadowbrook Park Total Trips | | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Crossroads Mix Use | | | | | | | | |
| Mid-Rise Multifamily Housing (ITE 221) | 300 Units | 1,634 | 26 | 74 | 100 | 77 | 50 | 127 |
| Shopping Center (ITE 820) | 10,000 SF | 1,256 | 97 | 60 | 157 | 48 | 51 | 99 |
| Sit Down Restaurant (ITE 932) | 4,000 SF | 450 | 22 | 18 | 40 | 24 | 15 | 39 |
| Fast Food Restaurant (ITE 934) | 11,000 SF | 5,182 | 225 | 217 | 442 | 187 | 172 | 359 |
| Coffee Shop (ITE 937) | 2,500 SF | 2,050 | 113 | 109 | 222 | 55 | 55 | 110 |
| Total Crossroads Mix Use Trips | | 10,572 | 483 | 478 | 961 | 391 | 343 | 734 |
| Crossroads Mix Use Trips after Internal Capture | | 9,726 | 474 | 468 | 942 | 359 | 316 | 675 |
| Reagan Ranch Northwest Area | | | | | | | | |
| Industrial Park (ITE 130) | 220,000 SF | 742 | 71 | 17 | 88 | 18 | 70 | 88 |
| Reagan Ranch Northwest Area Total Trips | | 742 | 71 | 17 | 88 | 18 | 70 | 88 |
| Reagan Ranch Northeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 125 Units | 1,276 | 22 | 72 | 94 | 79 | 47 | 126 |
| Shopping Center (ITE 820) | 30,000 SF | 2,652 | 104 | 63 | 167 | 107 | 116 | 223 |
| Total Reagan Ranch Northeast Area Trips | | 3,928 | 126 | 135 | 261 | 186 | 163 | 349 |
| Reagan Ranch NE Area Trips after Internal Capture | | 3,614 | 124 | 132 | 256 | 171 | 150 | 321 |
| Reagan Ranch Southeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 255 Units | 2,460 | 45 | 141 | 186 | 156 | 94 | 250 |
| Mid-Rise Multifamily Housing (ITE 221) | 360 Units | 1,962 | 31 | 89 | 120 | 93 | 59 | 152 |
| Shopping Center (ITE 820) | 70,000 SF | 4,718 | 116 | 71 | 187 | 200 | 217 | 417 |
| Total Reagan Ranch Southeast Area Trips | | 9,140 | 192 | 301 | 493 | 449 | 370 | 819 |
| Reagan Ranch SE Area Trips after Internal Capture | | 8,410 | 188 | 295 | 483 | 413 | 340 | 753 |
| Total Site Generated Trips | | 37,324 | 1,385 | 1,416 | 2,801 | 1,585 | 1,451 | 3,036 |
| Total Site External Trips after Internal Capture | | 34,458 | 1,360 | 1,389 | 2,748 | 1,462 | 1,343 | 2,806 |

With full project buildout by 2040, the three development areas are expected to generate approximately 58,582 daily weekday external vehicle trips with 3,481 of these trips occurring during the morning peak hour and 5,121 trips occurring during the afternoon peak hour. **Table 2** provides the estimated trip generation for full buildout of the project.

Table 2 – Full Buildout Project Traffic Generation

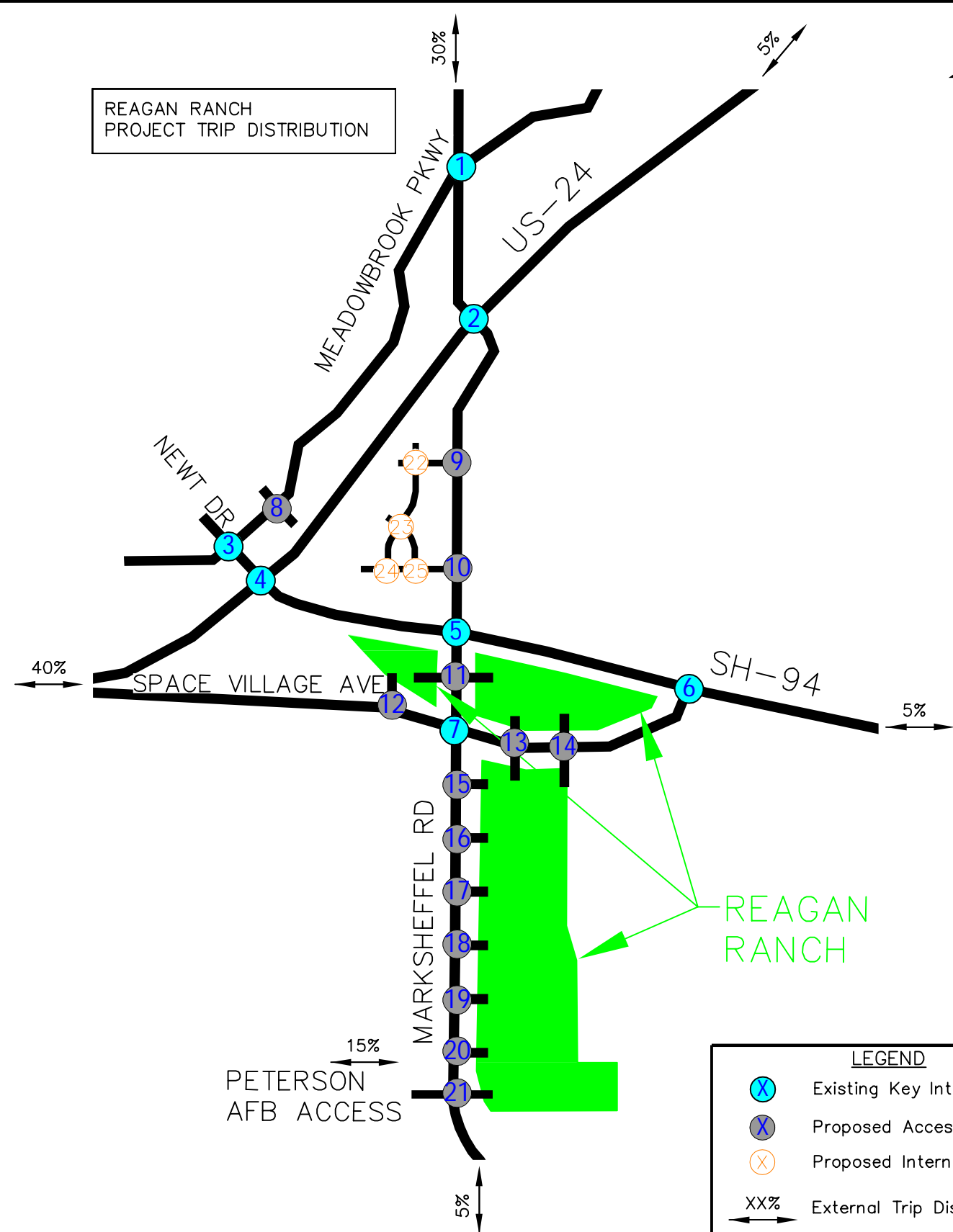
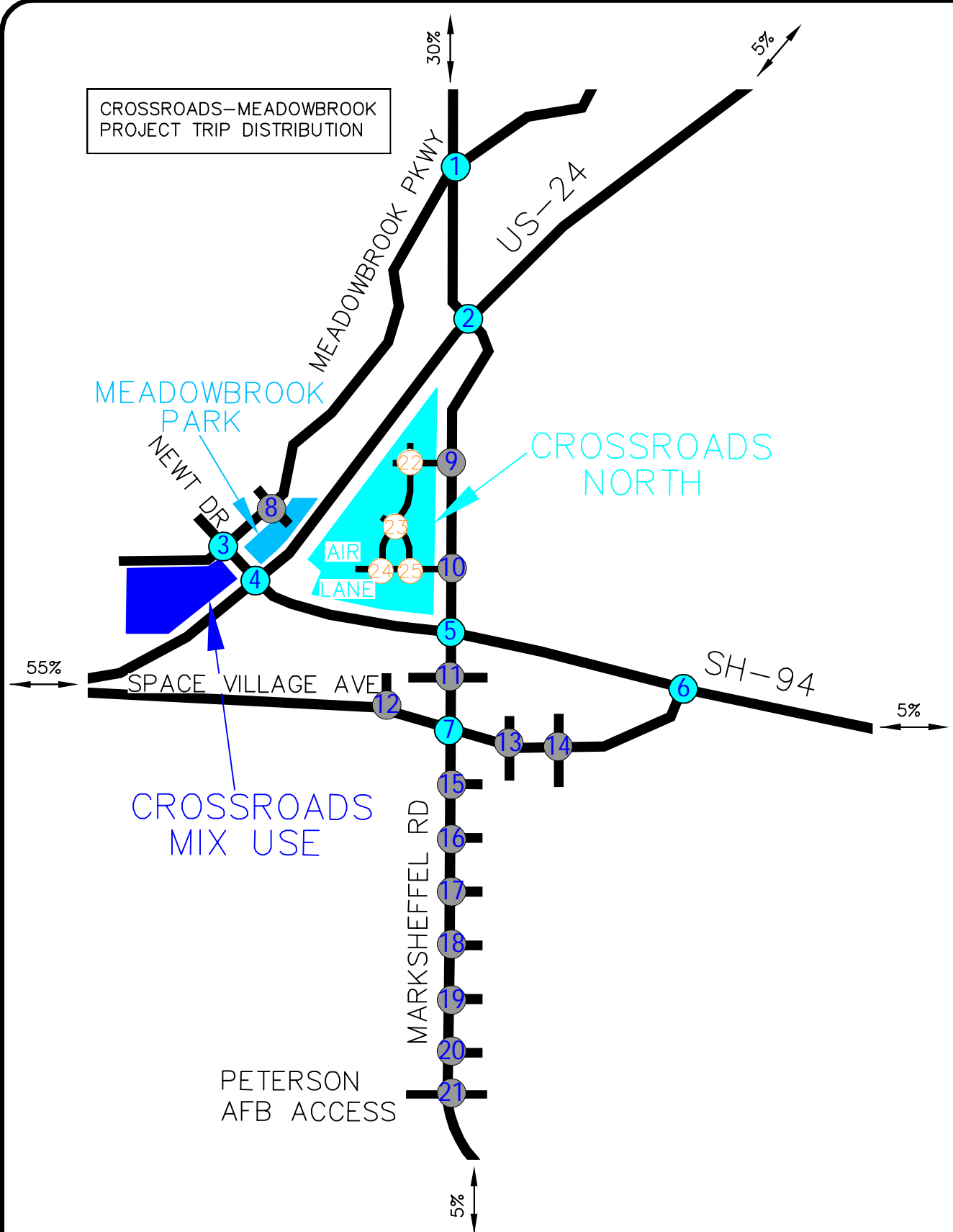
| Use | Quantity | Daily | Weekday Vehicle Trips | | | | | |
|--|------------|---------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| | | | AM Peak Hour | | | PM Peak Hour | | |
| | | | In | Out | Total | In | Out | Total |
| Crossroads North | | | | | | | | |
| Public Park (ITE 411) | 20 Acres | 16 | 0 | 0 | 0 | 1 | 1 | 2 |
| Movie Theatre (ITE 444) | 52,000 SF | 4,062 | 5 | 6 | 11 | 302 | 19 | 321 |
| Tire Superstore (ITE 849) | 7,000 SF | 144 | 6 | 3 | 9 | 7 | 8 | 15 |
| Home Improvement Superstore (ITE 862) | 127,000 SF | 3,904 | 113 | 86 | 199 | 145 | 151 | 296 |
| Furniture Store (ITE 890) | 114,000 SF | 720 | 21 | 9 | 30 | 28 | 31 | 59 |
| Sit Down Restaurant (ITE 932) | 11,000 SF | 1,234 | 60 | 49 | 109 | 66 | 41 | 107 |
| Fast-Food Restaurant (ITE 934) | 5,000 SF | 2,356 | 103 | 98 | 201 | 85 | 78 | 163 |
| Gas Station Super Convenience (ITE 960) | 6,000 SF | 5,026 | 249 | 250 | 499 | 208 | 208 | 416 |
| Total Crossroads North Trips | | 17,462 | 557 | 501 | 1,058 | 842 | 537 | 1,379 |
| Crossroads North Trips after Internal Capture | | 16,066 | 546 | 491 | 1,037 | 775 | 494 | 1,269 |
| Meadowbrook Park | | | | | | | | |
| Single Family Housing (ITE 210) | 67 Units | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Meadowbrook Park Total Trips | | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Crossroads Mix Use | | | | | | | | |
| Mid-Rise Multifamily Housing (ITE 221) | 300 Units | 1,634 | 26 | 74 | 100 | 77 | 50 | 127 |
| Shopping Center (ITE 820) | 10,000 SF | 1,256 | 97 | 60 | 157 | 48 | 51 | 99 |
| Pharmacy (ITE 881) | 14,000 SF | 1,528 | 29 | 25 | 54 | 72 | 72 | 144 |
| Sit Down Restaurant (ITE 932) | 8,000 SF | 898 | 44 | 36 | 80 | 48 | 30 | 78 |
| Fast Food Restaurant (ITE 934) | 11,000 SF | 5,182 | 225 | 217 | 442 | 187 | 172 | 359 |
| Coffee Shop (ITE 937) | 2,500 SF | 2,050 | 113 | 109 | 222 | 55 | 55 | 110 |
| Total Crossroads Mix Use Trips | | 12,548 | 534 | 521 | 1,055 | 487 | 430 | 917 |
| Crossroads Mix Use Trips after Internal Capture | | 11,544 | 523 | 511 | 1,034 | 448 | 396 | 844 |
| Reagan Ranch Northwest Area | | | | | | | | |
| Industrial Park (ITE 130) | 365,000 SF | 1,232 | 118 | 28 | 146 | 31 | 115 | 146 |
| Reagan Ranch Northwest Area Total Trips | | 1,232 | 118 | 28 | 146 | 31 | 115 | 146 |
| Reagan Ranch Northeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 200 Units | 1,968 | 37 | 110 | 147 | 125 | 73 | 198 |
| Shopping Center (ITE 820) | 175,000 SF | 8,796 | 148 | 91 | 239 | 395 | 427 | 822 |
| Total Reagan Ranch Northeast Area Trips | | 10,764 | 185 | 201 | 386 | 520 | 500 | 1,020 |
| Reagan Ranch NE Area Trips after Internal Capture | | 9,904 | 181 | 197 | 378 | 478 | 460 | 938 |
| Reagan Ranch Southeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 393 Units | 3,662 | 71 | 213 | 284 | 238 | 140 | 378 |
| Mid-Rise Multifamily Housing (ITE 221) | 360 Units | 1,962 | 31 | 89 | 120 | 93 | 59 | 152 |
| Office (ITE 710) | 100,000 SF | 1,062 | 103 | 17 | 120 | 18 | 96 | 114 |
| Shopping Center (ITE 820) | 350,000 SF | 14,092 | 203 | 124 | 327 | 659 | 714 | 1,373 |
| Total Reagan Ranch Southeast Area Trips | | 20,778 | 408 | 443 | 851 | 1,008 | 1,009 | 2,017 |
| Reagan Ranch SE Area Trips after Internal Capture | | 19,116 | 400 | 434 | 834 | 928 | 928 | 1,856 |
| Total Site Generated Trips | | 63,504 | 1,815 | 1,733 | 3,548 | 2,931 | 2,617 | 5,548 |
| Total Site External Trips after Internal Capture | | 58,582 | 1,781 | 1,700 | 3,481 | 2,703 | 2,419 | 5,121 |

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, expected roadway improvements, and the proposed access system for the project. Separate distributions were prepared for each development area to accurately identify the amount of traffic to be assigned to each project. Assignment of project traffic was based upon the trip generation described previously and the distributions developed for each project area. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution is illustrated in **Figure 8**.

4.3 Traffic Assignment and Total (Background Plus Project) Traffic

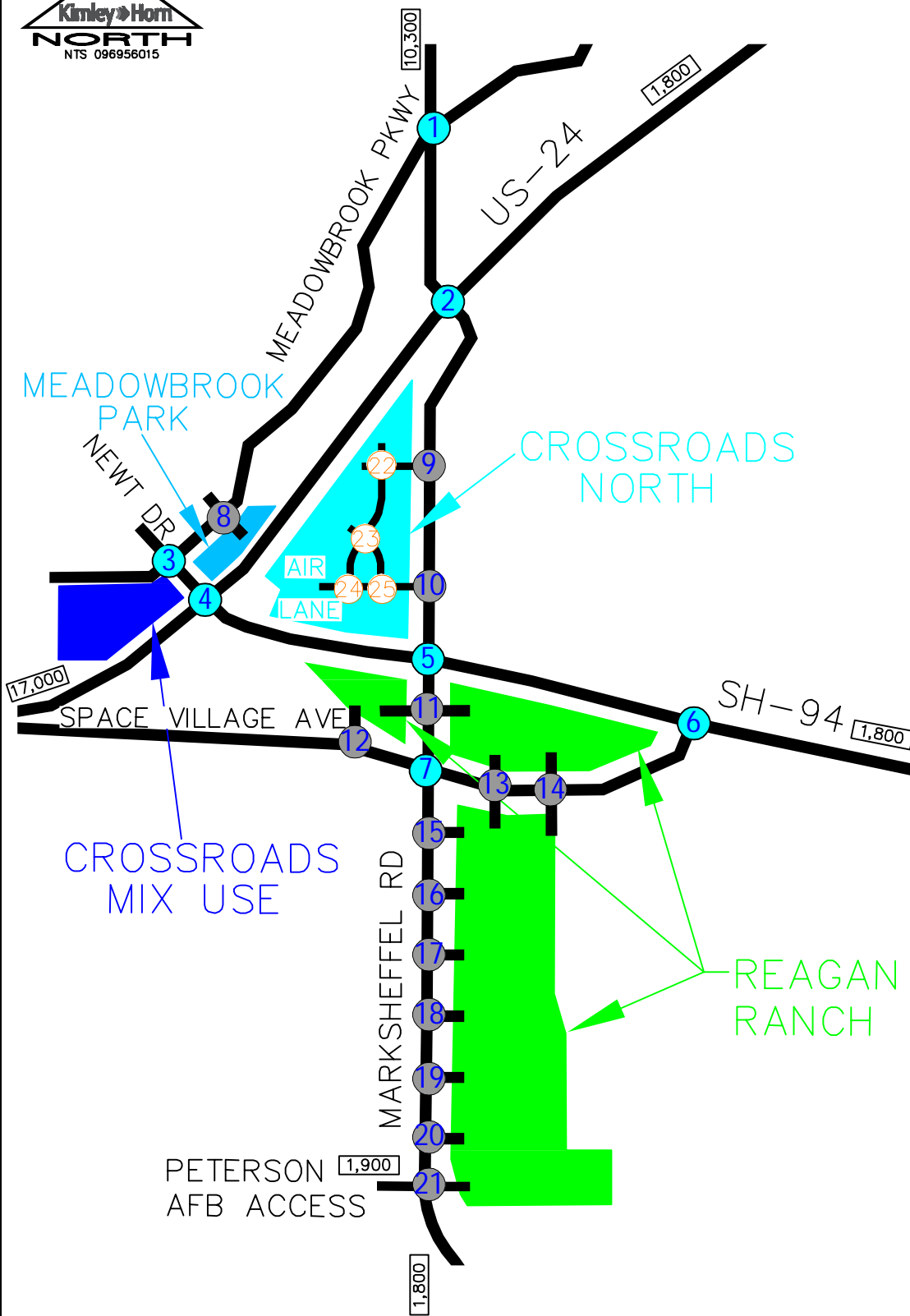
Traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1** and **Table 2**. Phase 1 project traffic assignment for all development areas is shown in **Figure 9** while full buildout traffic assignment is shown in **Figure 10**. Project traffic volumes were added to the background volumes to represent estimated traffic conditions for the short term 2026 horizon and long term 2040 horizon. These background plus project (total) traffic volumes for the project are illustrated for the 2026 and 2040 horizon years in **Figures 11** and **12**, respectively.



LEGEND

- ⊗ Existing Key Intersection
- ⊗ Proposed Access Intersection
- ⊗ Proposed Internal Intersection
- XX% External Trip Distribution

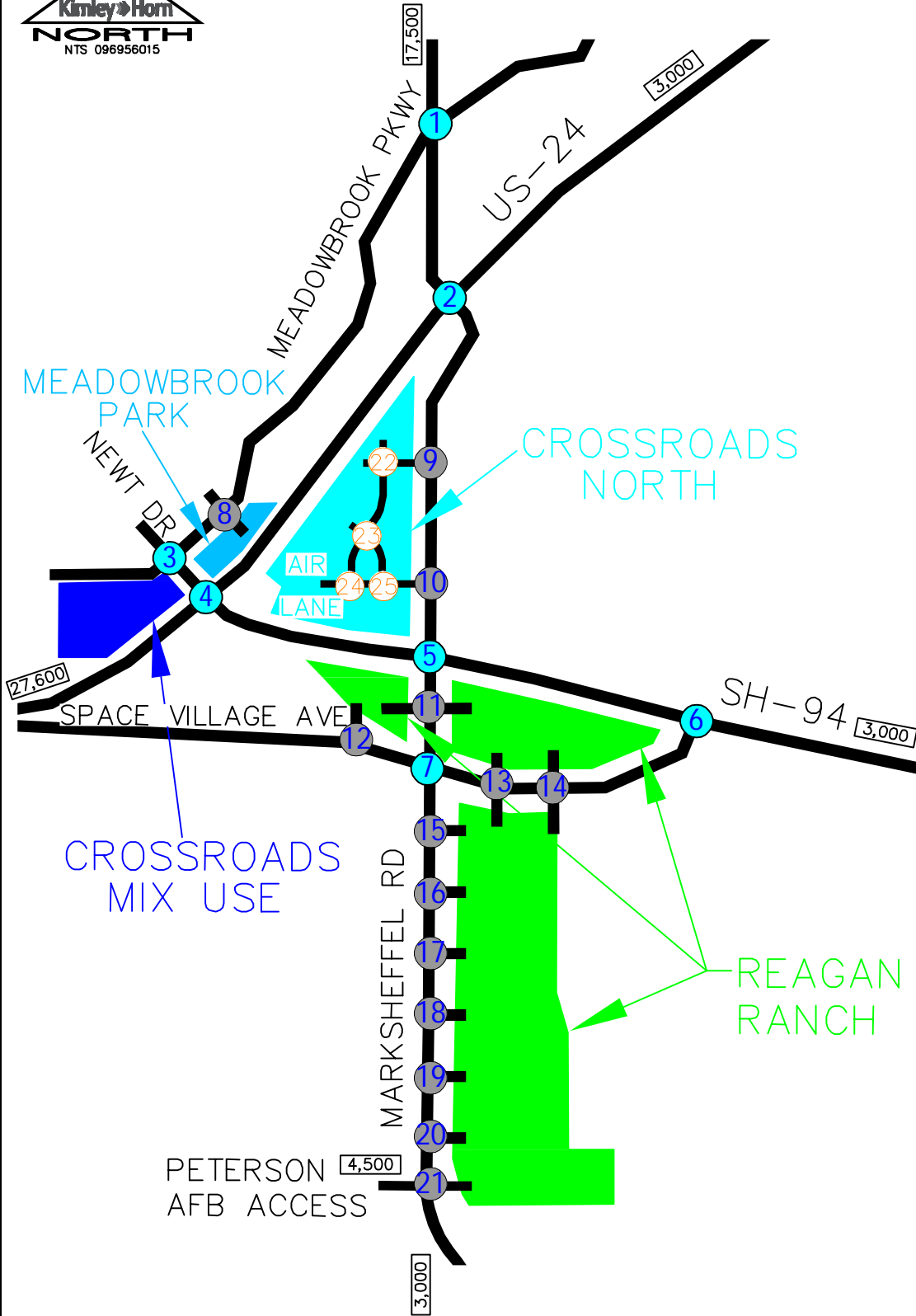
CROSSROADS-MEADOWBROOK & REAGAN RANCH
COLORADO SPRINGS, CO
PROJECT TRIP DISTRIBUTION



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|---------------|---------------|---------------|---|------------------|-------------|---------------|---|------------------|--|--------------------|--|---|------------------|---------------|---------------|---|------------------|-------------|-------------|--|---|-------------|---------------|---------------|---------------|----------|--|-----------------|--|------------------|-------------|---|---------------|-------------|---------------|-------------|---------------|---|------------------|-------------|---------------|---------------|-------------|------------|---|------------|--|--------------------|-------------|---------------|--|---------------|-------------|-----------|---------------|----------|----------|
| <p>1</p> <table border="1"> <tr> <td>146(121) ←</td> <td>261(318) ←</td> </tr> <tr> <td>152(103) →</td> <td>264(300) →</td> </tr> </table> <p>MEADOWBROOK PKWY/MARKSHEFFEL RD</p> | 146(121) ← | 261(318) ← | 152(103) → | 264(300) → | <p>2</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>25(20) ←</td> </tr> <tr> <td>261(318) ←</td> <td>44(54) ←</td> </tr> <tr> <td>25(17) →</td> <td>264(300) →</td> </tr> <tr> <td>123(115) ↓</td> <td>45(50) ↓</td> </tr> </table> <p>US-24/MARKSHEFFEL ROAD</p> | MARKSHEFFEL ← | 25(20) ← | 261(318) ← | 44(54) ← | 25(17) → | 264(300) → | 123(115) ↓ | 45(50) ↓ | <p>3</p> <table border="1"> <tr> <td>MEADOWBROOK ←</td> <td>9(30) ↑</td> </tr> <tr> <td>142(108) ←</td> <td>332(251) ↑</td> </tr> <tr> <td>140(95) →</td> <td>328(221) →</td> </tr> <tr> <td>140(95) ↓</td> <td>140(95) ↓</td> </tr> </table> <p>NEWT DR/MEADOWBROOK PKWY</p> | MEADOWBROOK ← | 9(30) ↑ | 142(108) ← | 332(251) ↑ | 140(95) → | 328(221) → | 140(95) ↓ | 140(95) ↓ | <p>4</p> <table border="1"> <tr> <td>US-24 ←</td> <td>48(40) ←</td> </tr> <tr> <td>25(20) ←</td> <td>342(360) ←</td> </tr> <tr> <td>25(17) →</td> <td>268(221) →</td> </tr> <tr> <td>51(35) ↓</td> <td>123(115) ↓</td> </tr> <tr> <td>278(188) ↓</td> <td>222(280) ↓</td> </tr> </table> <p>SH-94/US-24</p> | US-24 ← | 48(40) ← | 25(20) ← | 342(360) ← | 25(17) → | 268(221) → | 51(35) ↓ | 123(115) ↓ | 278(188) ↓ | 222(280) ↓ | <p>5</p> <table border="1"> <tr> <td>SH-94 ←</td> <td>29(25) ←</td> </tr> <tr> <td>240(243) ←</td> <td>25(20) ←</td> </tr> <tr> <td>155(230) ←</td> <td>23(26) ←</td> </tr> <tr> <td>147(137) →</td> <td>127(137) →</td> </tr> <tr> <td>25(17) ↓</td> <td>176(217) ↓</td> </tr> <tr> <td>100(160) ↓</td> <td>3(5) ↓</td> </tr> </table> <p>SH-94/MARKSHEFFEL RD</p> | SH-94 ← | 29(25) ← | 240(243) ← | 25(20) ← | 155(230) ← | 23(26) ← | 147(137) → | 127(137) → | 25(17) ↓ | 176(217) ↓ | 100(160) ↓ | 3(5) ↓ | <p>6</p> <table border="1"> <tr> <td>SH-94 ←</td> <td>50(43) ←</td> </tr> <tr> <td>50(44) →</td> <td>19(31) ←</td> </tr> <tr> <td>1(4) ↓</td> <td>4(2) ↓</td> </tr> <tr> <td>50(44) ↓</td> <td>20(23) ↓</td> </tr> </table> <p>SH-94/SPACE VILLAGE AVENUE</p> | SH-94 ← | 50(43) ← | 50(44) → | 19(31) ← | 1(4) ↓ | 4(2) ↓ | 50(44) ↓ | 20(23) ↓ | | | | |
| 146(121) ← | 261(318) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 152(103) → | 264(300) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 25(20) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 261(318) ← | 44(54) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25(17) → | 264(300) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 123(115) ↓ | 45(50) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK ← | 9(30) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 142(108) ← | 332(251) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 140(95) → | 328(221) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 140(95) ↓ | 140(95) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US-24 ← | 48(40) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25(20) ← | 342(360) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25(17) → | 268(221) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 51(35) ↓ | 123(115) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 278(188) ↓ | 222(280) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SH-94 ← | 29(25) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 240(243) ← | 25(20) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 155(230) ← | 23(26) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 147(137) → | 127(137) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25(17) ↓ | 176(217) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100(160) ↓ | 3(5) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SH-94 ← | 50(43) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50(44) → | 19(31) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1(4) ↓ | 4(2) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50(44) ↓ | 20(23) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>7</p> <table border="1"> <tr> <td>168(312) ←</td> <td>34(23) ↑</td> </tr> <tr> <td>58(83) ←</td> <td>58(63) ←</td> </tr> <tr> <td>27(45) →</td> <td>32(42) ←</td> </tr> <tr> <td>26(55) →</td> <td>29(21) →</td> </tr> <tr> <td>9(22) ↓</td> <td>257(277) ↓</td> </tr> <tr> <td></td> <td>13(24) ↓</td> </tr> </table> <p>SPACE VILLAGE AVE/MARKSHEFFEL RD</p> | 168(312) ← | 34(23) ↑ | 58(83) ← | 58(63) ← | 27(45) → | 32(42) ← | 26(55) → | 29(21) → | 9(22) ↓ | 257(277) ↓ | | 13(24) ↓ | <p>8</p> <table border="1"> <tr> <td>MEADOWBROOK ←</td> <td>12(8) ↑</td> </tr> <tr> <td>208(259) ←</td> <td>27(18) ↑</td> </tr> <tr> <td>243(214) →</td> <td>9(30) →</td> </tr> <tr> <td>243(214) ↓</td> <td>9(30) ↓</td> </tr> </table> <p>MEADOWBROOK PARKWAY ACCESS</p> | MEADOWBROOK ← | 12(8) ↑ | 208(259) ← | 27(18) ↑ | 243(214) → | 9(30) → | 243(214) ↓ | 9(30) ↓ | <p>9</p> <table border="1"> <tr> <td>MEADOWBROOK ←</td> <td>87(88) ↑</td> </tr> <tr> <td>196(183) ←</td> <td>232(303) ↑</td> </tr> <tr> <td>87(88) →</td> <td>49(46) →</td> </tr> <tr> <td>87(88) ↓</td> <td>221(262) ↓</td> </tr> </table> <p>MARKSHEFFEL RD NORTH ACCESS</p> | MEADOWBROOK ← | 87(88) ↑ | 196(183) ← | 232(303) ↑ | 87(88) → | 49(46) → | 87(88) ↓ | 221(262) ↓ | <p>10</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>66(66) ↑</td> </tr> <tr> <td>98(92) ←</td> <td>221(299) ↑</td> </tr> <tr> <td>197(198) →</td> <td>147(137) →</td> </tr> <tr> <td></td> <td>204(242) →</td> </tr> </table> <p>MARKSHEFFEL RD/AIR LANE ACCESS</p> | MARKSHEFFEL ← | 66(66) ↑ | 98(92) ← | 221(299) ↑ | 197(198) → | 147(137) → | | 204(242) → | <p>11</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>31(55) ↑</td> </tr> <tr> <td>32(8) ←</td> <td>223(381) ↑</td> </tr> <tr> <td>3(14) ↓</td> <td>276(305) ↓</td> </tr> <tr> <td></td> <td>41(40) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ← | 31(55) ↑ | 32(8) ← | 223(381) ↑ | 3(14) ↓ | 276(305) ↓ | | 41(40) ↓ | <p>12</p> <table border="1"> <tr> <td>SPACE VILLAGE ←</td> <td>7(28) ↑</td> </tr> <tr> <td>7(28) ←</td> <td>18(5) ↑</td> </tr> <tr> <td>21(5) →</td> <td>7(28) →</td> </tr> <tr> <td>56(93) →</td> <td>69(79) →</td> </tr> </table> <p>SPACE VILLAGE AVE FULL ACCESS</p> | SPACE VILLAGE ← | 7(28) ↑ | 7(28) ← | 18(5) ↑ | 21(5) → | 7(28) → | 56(93) → | 69(79) → | | |
| 168(312) ← | 34(23) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 58(83) ← | 58(63) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(45) → | 32(42) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26(55) → | 29(21) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9(22) ↓ | 257(277) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13(24) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK ← | 12(8) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 208(259) ← | 27(18) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 243(214) → | 9(30) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 243(214) ↓ | 9(30) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK ← | 87(88) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 196(183) ← | 232(303) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 87(88) → | 49(46) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 87(88) ↓ | 221(262) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 66(66) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 98(92) ← | 221(299) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 197(198) → | 147(137) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 204(242) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 31(55) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32(8) ← | 223(381) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3(14) ↓ | 276(305) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 41(40) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPACE VILLAGE ← | 7(28) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7(28) ← | 18(5) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21(5) → | 7(28) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56(93) → | 69(79) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>13</p> <table border="1"> <tr> <td>SPACE VILLAGE ←</td> <td>5(5) ↑</td> </tr> <tr> <td>31(55) ←</td> <td>80(57) ←</td> </tr> <tr> <td>57(54) →</td> <td>2(4) ←</td> </tr> <tr> <td>33(87) →</td> <td>15(17) →</td> </tr> <tr> <td>9(21) ↓</td> <td>3(3) ↓</td> </tr> </table> <p>SPACE VILLAGE AVE W FULL ACCESS</p> | SPACE VILLAGE ← | 5(5) ↑ | 31(55) ← | 80(57) ← | 57(54) → | 2(4) ← | 33(87) → | 15(17) → | 9(21) ↓ | 3(3) ↓ | <p>14</p> <table border="1"> <tr> <td>SPACE VILLAGE ←</td> <td>2(7) ↑</td> </tr> <tr> <td>64(37) ←</td> <td>17(23) ←</td> </tr> <tr> <td>19(65) →</td> <td>2(4) ←</td> </tr> <tr> <td>13(18) →</td> <td>6(7) →</td> </tr> <tr> <td>4(8) ↓</td> <td>3(3) ↓</td> </tr> </table> <p>SPACE VILLAGE AVE E FULL ACCESS</p> | SPACE VILLAGE ← | 2(7) ↑ | 64(37) ← | 17(23) ← | 19(65) → | 2(4) ← | 13(18) → | 6(7) → | 4(8) ↓ | 3(3) ↓ | <p>15</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>18(20) ↑</td> </tr> <tr> <td>209(376) ←</td> <td></td> </tr> <tr> <td>281(302) →</td> <td>2(4) →</td> </tr> <tr> <td></td> <td>2(4) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ← | 18(20) ↑ | 209(376) ← | | 281(302) → | 2(4) → | | 2(4) ↓ | <p>16</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>30(34) ↑</td> </tr> <tr> <td>178(306) ←</td> <td>32(70) ↑</td> </tr> <tr> <td>253(272) →</td> <td>6(7) →</td> </tr> <tr> <td></td> <td>6(7) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD 3/4 ACCESS</p> | MARKSHEFFEL ← | 30(34) ↑ | 178(306) ← | 32(70) ↑ | 253(272) → | 6(7) → | | 6(7) ↓ | <p>17</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>38(44) ↑</td> </tr> <tr> <td>178(306) ←</td> <td></td> </tr> <tr> <td>219(236) →</td> <td>6(12) →</td> </tr> <tr> <td></td> <td>6(12) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ← | 38(44) ↑ | 178(306) ← | | 219(236) → | 6(12) → | | 6(12) ↓ | <p>18</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>27(31) ↑</td> </tr> <tr> <td>142(228) ←</td> <td>36(78) ↑</td> </tr> <tr> <td>197(218) →</td> <td>6(12) →</td> </tr> <tr> <td></td> <td>6(12) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD FULL ACCESS</p> | MARKSHEFFEL ← | 27(31) ↑ | 142(228) ← | 36(78) ↑ | 197(218) → | 6(12) → | | 6(12) ↓ | | |
| SPACE VILLAGE ← | 5(5) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31(55) ← | 80(57) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57(54) → | 2(4) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33(87) → | 15(17) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9(21) ↓ | 3(3) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPACE VILLAGE ← | 2(7) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64(37) ← | 17(23) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19(65) → | 2(4) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13(18) → | 6(7) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4(8) ↓ | 3(3) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 18(20) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 209(376) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 281(302) → | 2(4) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2(4) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 30(34) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 178(306) ← | 32(70) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 253(272) → | 6(7) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6(7) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 38(44) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 178(306) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 219(236) → | 6(12) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6(12) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 27(31) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 142(228) ← | 36(78) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 197(218) → | 6(12) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6(12) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>19</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>18(20) ↑</td> </tr> <tr> <td>169(259) ←</td> <td></td> </tr> <tr> <td>186(210) →</td> <td>6(12) →</td> </tr> <tr> <td></td> <td>6(12) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ← | 18(20) ↑ | 169(259) ← | | 186(210) → | 6(12) → | | 6(12) ↓ | <p>20</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>35(41) ↑</td> </tr> <tr> <td>133(180) ←</td> <td>36(78) ↑</td> </tr> <tr> <td>156(182) →</td> <td>4(8) →</td> </tr> <tr> <td></td> <td>4(8) ↓</td> </tr> </table> <p>MARKSHEFFEL ROAD 3/4 ACCESS</p> | MARKSHEFFEL ← | 35(41) ↑ | 133(180) ← | 36(78) ↑ | 156(182) → | 4(8) → | | 4(8) ↓ | <p>21</p> <table border="1"> <tr> <td>MARKSHEFFEL ←</td> <td>44(51) ↑</td> </tr> <tr> <td>44(57) ←</td> <td>24(27) ←</td> </tr> <tr> <td>48(70) →</td> <td>9(10) →</td> </tr> <tr> <td>9(21) ↓</td> <td>68(70) ↓</td> </tr> <tr> <td></td> <td>2(4) ↓</td> </tr> </table> <p>MARKSHEFFEL RD FULL ACCESS</p> | MARKSHEFFEL ← | 44(51) ↑ | 44(57) ← | 24(27) ← | 48(70) → | 9(10) → | 9(21) ↓ | 68(70) ↓ | | 2(4) ↓ | <p>22</p> <table border="1"> <tr> <td>CROSSROADS ←</td> <td>49(46) ↑</td> </tr> <tr> <td>2(2) ←</td> <td>44(44) ↑</td> </tr> <tr> <td>2(2) →</td> <td>147(137) →</td> </tr> <tr> <td>44(44) →</td> <td>2(2) →</td> </tr> <tr> <td>2(2) ↓</td> <td>87(88) ↓</td> </tr> </table> <p>CROSSROADS NORTH INT #22</p> | CROSSROADS ← | 49(46) ↑ | 2(2) ← | 44(44) ↑ | 2(2) → | 147(137) → | 44(44) → | 2(2) → | 2(2) ↓ | 87(88) ↓ | <p>23</p> <table border="1"> <tr> <td>CROSSROADS ←</td> <td>22(22) ↑</td> </tr> <tr> <td>49(46) ←</td> <td>5(5) ↑</td> </tr> <tr> <td>69(67) ←</td> <td>2(2) ↑</td> </tr> <tr> <td>22(22) →</td> <td>25(23) →</td> </tr> <tr> <td>4(4) ↓</td> <td>47(45) ↓</td> </tr> <tr> <td>44(44) ↓</td> <td>2(2) ↓</td> </tr> </table> <p>CROSSROADS NORTH INT #23</p> | CROSSROADS ← | 22(22) ↑ | 49(46) ← | 5(5) ↑ | 69(67) ← | 2(2) ↑ | 22(22) → | 25(23) → | 4(4) ↓ | 47(45) ↓ | 44(44) ↓ | 2(2) ↓ | <p>24</p> <table border="1"> <tr> <td>AIR LANE ←</td> <td>98(92) ↑</td> </tr> <tr> <td>2(2) ←</td> <td>109(110) ↑</td> </tr> <tr> <td>44(44) →</td> <td>49(46) →</td> </tr> </table> <p>AIR LANE WEST INTERSECTION</p> | AIR LANE ← | 98(92) ↑ | 2(2) ← | 109(110) ↑ | 44(44) → | 49(46) → |
| MARKSHEFFEL ← | 18(20) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 169(259) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 186(210) → | 6(12) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6(12) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 35(41) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133(180) ← | 36(78) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 156(182) → | 4(8) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4(8) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ← | 44(51) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44(57) ← | 24(27) ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48(70) → | 9(10) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9(21) ↓ | 68(70) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2(4) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CROSSROADS ← | 49(46) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) ← | 44(44) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) → | 147(137) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44(44) → | 2(2) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) ↓ | 87(88) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CROSSROADS ← | 22(22) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49(46) ← | 5(5) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 69(67) ← | 2(2) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22(22) → | 25(23) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4(4) ↓ | 47(45) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44(44) ↓ | 2(2) ↓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AIR LANE ← | 98(92) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) ← | 109(110) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44(44) → | 49(46) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>25</p> <table border="1"> <tr> <td>AIR LANE ←</td> <td>98(92) ↑</td> </tr> <tr> <td>2(2) ←</td> <td>109(110) ↑</td> </tr> <tr> <td>2(2) →</td> <td>147(137) →</td> </tr> <tr> <td>153(154) →</td> <td></td> </tr> </table> <p>AIR LANE EAST INTERSECTION</p> | AIR LANE ← | 98(92) ↑ | 2(2) ← | 109(110) ↑ | 2(2) → | 147(137) → | 153(154) → | | <p>LEGEND</p> <ul style="list-style-type: none"> Existing Key Intersection Proposed Access Intersection Proposed Internal Intersection Weekday AM(PM) Peak Hour Traffic Volumes Estimated Daily Traffic Volume | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AIR LANE ← | 98(92) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) ← | 109(110) ↑ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) → | 147(137) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 153(154) → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2026 PROJECT TRAFFIC ASSIGNMENT

FIGURE 9



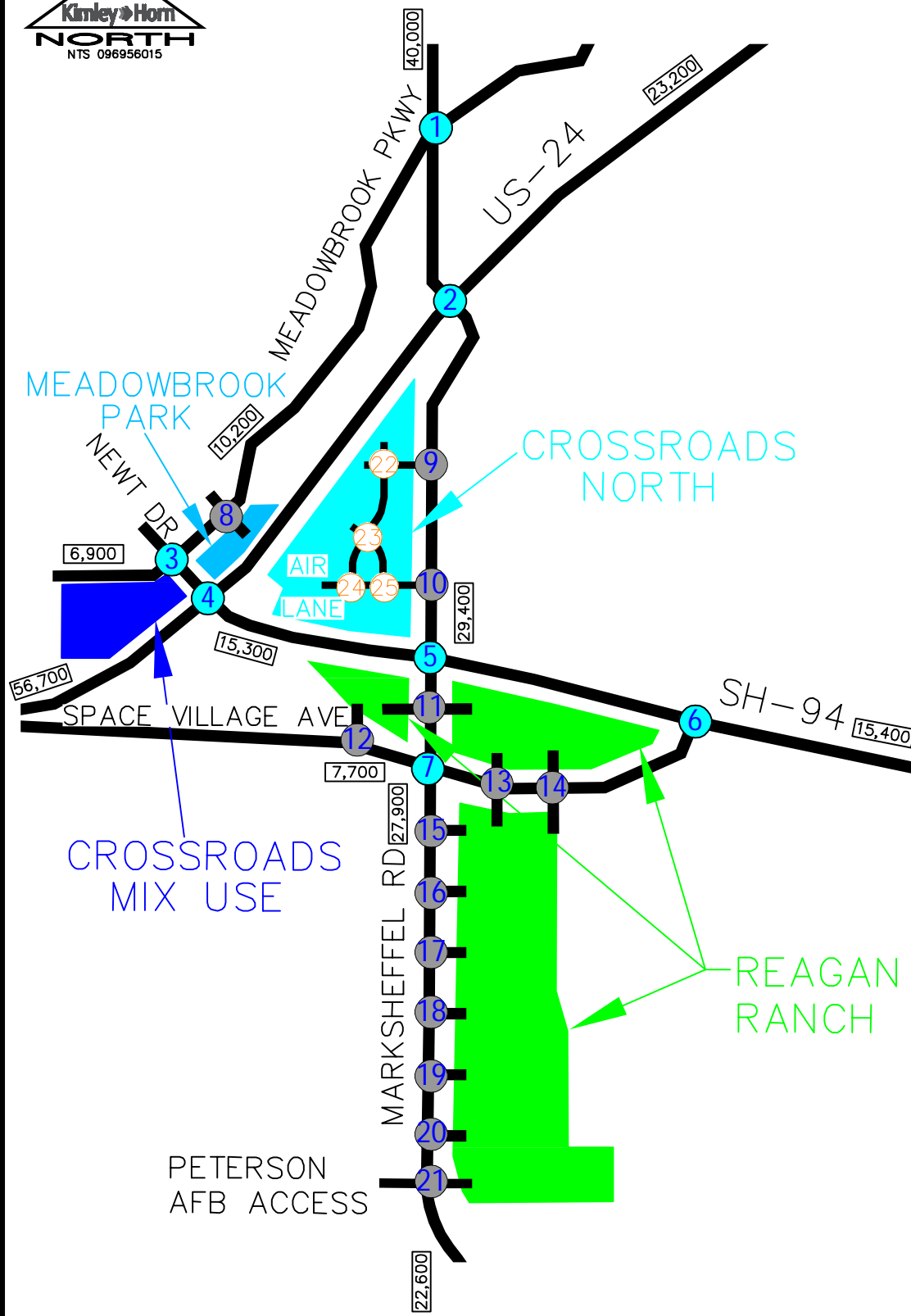
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|--------|----------|----------|----------|----------|--|-------------|--|------------------|--------|----------|---|-------------------|----------|----------|---------|--|-------------|---|----------------|--------|---------|--|-------------|---|------------------|--------|--|---------|----------|--------|----------|----------|---|------------------|---|------------------|----------|----------|----------|--|----------|----------|----------|--|------------------|--------|----------|---------|----------|---|------------------|----------|----------|---------|--|-------------------|--------|----------|--------|---------|----------|----------|--------|---------|--|---------------|--|------|----------|------|--------|--------|--|
| <p>1</p> <table border="1"> <tr><td>161(147)</td><td></td></tr> <tr><td>374(664)</td><td></td></tr> <tr><td>165(127)</td><td>344(599)</td></tr> </table> <p>MEADOWBROOK PWY/MARKSHEFFEL R</p> | 161(147) | | 374(664) | | 165(127) | 344(599) | <p>2</p> <table border="1"> <tr><td>MARKSHEFFEL</td><td></td></tr> <tr><td>374(664)</td><td>27(24)</td></tr> <tr><td>62(111)</td><td>62(111)</td></tr> <tr><td>28(21)</td><td>344(599)</td></tr> <tr><td>137(194)</td><td>57(100)</td></tr> </table> <p>US-24/MARKSHEFFEL ROAD</p> | MARKSHEFFEL | | 374(664) | 27(24) | 62(111) | 62(111) | 28(21) | 344(599) | 137(194) | 57(100) | <p>3</p> <table border="1"> <tr><td>MEADOWBROOK</td><td></td></tr> <tr><td>157(134)</td><td>9(30)</td></tr> <tr><td>27(18)</td><td>366(314)</td></tr> <tr><td>153(119)</td><td>358(277)</td></tr> <tr><td>358(277)</td><td></td></tr> </table> <p>NEWT DR/MEADOWBROOK PKWY</p> | MEADOWBROOK | | 157(134) | 9(30) | 27(18) | 366(314) | 153(119) | 358(277) | 358(277) | | <p>4</p> <table border="1"> <tr><td>US-24</td><td></td></tr> <tr><td>27(24)</td><td>53(49)</td></tr> <tr><td>27(24)</td><td>420(596)</td></tr> <tr><td>28(21)</td><td>295(270)</td></tr> <tr><td>55(43)</td><td>137(194)</td></tr> <tr><td>302(232)</td><td>315(562)</td></tr> </table> <p>SH-94/US-24</p> | US-24 | | 27(24) | 53(49) | 27(24) | 420(596) | 28(21) | 295(270) | 55(43) | 137(194) | 302(232) | 315(562) | <p>5</p> <table border="1"> <tr><td>SH-94</td><td></td></tr> <tr><td>270(272)</td><td>32(42)</td></tr> <tr><td>268(524)</td><td>27(24)</td></tr> <tr><td>27(30)</td><td>27(30)</td></tr> <tr><td>164(233)</td><td>177(348)</td></tr> <tr><td>28(21)</td><td>252(562)</td></tr> <tr><td>179(350)</td><td>4(20)</td></tr> </table> <p>SH-94/MARKSHEFFEL RD</p> | SH-94 | | 270(272) | 32(42) | 268(524) | 27(24) | 27(30) | 27(30) | 164(233) | 177(348) | 28(21) | 252(562) | 179(350) | 4(20) | <p>6</p> <table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td>54(63)</td></tr> <tr><td></td><td>35(72)</td></tr> <tr><td>57(66)</td><td>5(3)</td></tr> <tr><td>2(5)</td><td>28(55)</td></tr> </table> <p>SH-94/SPACE VILLAGE AVENUE</p> | | | | 54(63) | | 35(72) | 57(66) | 5(3) | 2(5) | 28(55) | | | | | | | | |
| 161(147) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 374(664) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 165(127) | 344(599) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 374(664) | 27(24) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62(111) | 62(111) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28(21) | 344(599) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 137(194) | 57(100) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 157(134) | 9(30) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(18) | 366(314) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 153(119) | 358(277) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 358(277) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US-24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(24) | 53(49) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(24) | 420(596) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28(21) | 295(270) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55(43) | 137(194) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 302(232) | 315(562) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SH-94 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 270(272) | 32(42) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 268(524) | 27(24) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(30) | 27(30) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 164(233) | 177(348) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28(21) | 252(562) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 179(350) | 4(20) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 54(63) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 35(72) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57(66) | 5(3) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(5) | 28(55) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>7</p> <table border="1"> <tr><td>310(652)</td><td>52(40)</td></tr> <tr><td>89(231)</td><td>87(186)</td></tr> <tr><td>39(115)</td><td>52(120)</td></tr> <tr><td>47(118)</td><td>46(52)</td></tr> <tr><td>21(48)</td><td>356(723)</td></tr> <tr><td></td><td>20(49)</td></tr> </table> <p>SPACE VILLAGE AVE/MARKSHEFFEL R</p> | 310(652) | 52(40) | 89(231) | 87(186) | 39(115) | 52(120) | 47(118) | 46(52) | 21(48) | 356(723) | | 20(49) | <p>8</p> <table border="1"> <tr><td>MEADOWBROOK</td><td></td></tr> <tr><td>297(459)</td><td>12(8)</td></tr> <tr><td>4(13)</td><td>27(18)</td></tr> <tr><td>305(444)</td><td>9(30)</td></tr> <tr><td>9(30)</td><td></td></tr> </table> <p>MEADOWBROOK PARKWAY ACCESS</p> | MEADOWBROOK | | 297(459) | 12(8) | 4(13) | 27(18) | 305(444) | 9(30) | 9(30) | | <p>9</p> <table border="1"> <tr><td>MEADOWBROOK</td><td></td></tr> <tr><td>218(310)</td><td>98(99)</td></tr> <tr><td>353(659)</td><td>98(99)</td></tr> <tr><td>55(78)</td><td>55(78)</td></tr> <tr><td>305(600)</td><td>305(600)</td></tr> </table> <p>MARKSHEFFEL RD NORTH ACCESS</p> | MEADOWBROOK | | 218(310) | 98(99) | 353(659) | 98(99) | 55(78) | 55(78) | 305(600) | 305(600) | <p>10</p> <table border="1"> <tr><td>MARKSHEFFEL RD</td><td></td></tr> <tr><td>109(155)</td><td>74(74)</td></tr> <tr><td>342(603)</td><td>221(222)</td></tr> <tr><td>164(233)</td><td>164(233)</td></tr> <tr><td>286(604)</td><td>286(604)</td></tr> </table> <p>MARKSHEFFEL RD/AIR LANE ACCESS</p> | MARKSHEFFEL RD | | 109(155) | 74(74) | 342(603) | 221(222) | 164(233) | 164(233) | 286(604) | 286(604) | <p>11</p> <table border="1"> <tr><td>MARKSHEFFEL RD</td><td></td></tr> <tr><td>53(14)</td><td>45(203)</td></tr> <tr><td>393(859)</td><td></td></tr> <tr><td>6(23)</td><td>389(727)</td></tr> <tr><td></td><td>58(150)</td></tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL RD | | 53(14) | 45(203) | 393(859) | | 6(23) | 389(727) | | 58(150) | <p>12</p> <table border="1"> <tr><td>SPACE VILLAGE AVE</td><td></td></tr> <tr><td>11(46)</td><td>30(8)</td></tr> <tr><td>11(46)</td><td>102(231)</td></tr> <tr><td>35(9)</td><td></td></tr> <tr><td>95(237)</td><td></td></tr> </table> <p>SPACE VILLAGE AVE FULL ACCESS</p> | SPACE VILLAGE AVE | | 11(46) | 30(8) | 11(46) | 102(231) | 35(9) | | 95(237) | | | | | | | | | |
| 310(652) | 52(40) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89(231) | 87(186) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39(115) | 52(120) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47(118) | 46(52) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21(48) | 356(723) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20(49) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 297(459) | 12(8) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4(13) | 27(18) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 305(444) | 9(30) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9(30) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEADOWBROOK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 218(310) | 98(99) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 353(659) | 98(99) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55(78) | 55(78) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 305(600) | 305(600) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL RD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 109(155) | 74(74) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 342(603) | 221(222) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 164(233) | 164(233) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 286(604) | 286(604) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL RD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53(14) | 45(203) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 393(859) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6(23) | 389(727) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 58(150) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPACE VILLAGE AVE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11(46) | 30(8) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11(46) | 102(231) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 95(237) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>13</p> <table border="1"> <tr><td>SPACE VILLAGE AVE</td><td></td></tr> <tr><td>45(203)</td><td>7(19)</td></tr> <tr><td>2(2)</td><td>124(97)</td></tr> <tr><td>80(206)</td><td>4(9)</td></tr> <tr><td>54(148)</td><td>22(46)</td></tr> <tr><td>20(46)</td><td>4(9)</td></tr> </table> <p>SPACE VILLAGE AVE W FULL ACCESS</p> | SPACE VILLAGE AVE | | 45(203) | 7(19) | 2(2) | 124(97) | 80(206) | 4(9) | 54(148) | 22(46) | 20(46) | 4(9) | <p>14</p> <table border="1"> <tr><td>SPACE VILLAGE AVE</td><td></td></tr> <tr><td>97(48)</td><td>4(11)</td></tr> <tr><td>11(5)</td><td>29(58)</td></tr> <tr><td>32(95)</td><td>4(9)</td></tr> <tr><td>18(43)</td><td>9(19)</td></tr> <tr><td>8(19)</td><td>4(9)</td></tr> </table> <p>SPACE VILLAGE AVE E FULL ACCESS</p> | SPACE VILLAGE AVE | | 97(48) | 4(11) | 11(5) | 29(58) | 32(95) | 4(9) | 18(43) | 9(19) | 8(19) | 4(9) | <p>15</p> <table border="1"> <tr><td>MARKSHEFFEL ROAD</td><td></td></tr> <tr><td>383(820)</td><td>26(56)</td></tr> <tr><td>396(768)</td><td>4(9)</td></tr> <tr><td>4(9)</td><td></td></tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ROAD | | 383(820) | 26(56) | 396(768) | 4(9) | 4(9) | | <p>16</p> <table border="1"> <tr><td>MARKSHEFFEL ROAD</td><td></td></tr> <tr><td>315(662)</td><td>43(93)</td></tr> <tr><td>68(158)</td><td></td></tr> <tr><td>357(684)</td><td>9(19)</td></tr> <tr><td>9(19)</td><td></td></tr> </table> <p>MARKSHEFFEL ROAD 3/4 ACCESS</p> | MARKSHEFFEL ROAD | | 315(662) | 43(93) | 68(158) | | 357(684) | 9(19) | 9(19) | | <p>17</p> <table border="1"> <tr><td>MARKSHEFFEL ROAD</td><td></td></tr> <tr><td>315(662)</td><td>56(121)</td></tr> <tr><td></td><td></td></tr> <tr><td>308(563)</td><td>12(28)</td></tr> <tr><td>12(28)</td><td></td></tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ROAD | | 315(662) | 56(121) | | | 308(563) | 12(28) | 12(28) | | <p>18</p> <table border="1"> <tr><td>MARKSHEFFEL ROAD</td><td></td></tr> <tr><td>239(486)</td><td>39(84)</td></tr> <tr><td>76(176)</td><td>39(84)</td></tr> <tr><td>281(527)</td><td>12(28)</td></tr> <tr><td>12(28)</td><td></td></tr> </table> <p>MARKSHEFFEL ROAD FULL ACCESS</p> | MARKSHEFFEL ROAD | | 239(486) | 39(84) | 76(176) | 39(84) | 281(527) | 12(28) | 12(28) | | | | | | | | | |
| SPACE VILLAGE AVE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45(203) | 7(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 124(97) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80(206) | 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 54(148) | 22(46) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20(46) | 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPACE VILLAGE AVE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 97(48) | 4(11) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11(5) | 29(58) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32(95) | 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18(43) | 9(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8(19) | 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 383(820) | 26(56) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 396(768) | 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 315(662) | 43(93) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 68(158) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 357(684) | 9(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 315(662) | 56(121) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 308(563) | 12(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 239(486) | 39(84) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76(176) | 39(84) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 281(527) | 12(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>19</p> <table border="1"> <tr><td>MARKSHEFFEL ROAD</td><td></td></tr> <tr><td>278(570)</td><td>26(56)</td></tr> <tr><td>267(500)</td><td>12(28)</td></tr> <tr><td>12(28)</td><td></td></tr> </table> <p>MARKSHEFFEL ROAD RIRO ACCESS</p> | MARKSHEFFEL ROAD | | 278(570) | 26(56) | 267(500) | 12(28) | 12(28) | | <p>20</p> <table border="1"> <tr><td>MARKSHEFFEL ROAD</td><td></td></tr> <tr><td>202(393)</td><td>52(111)</td></tr> <tr><td>76(176)</td><td></td></tr> <tr><td>227(415)</td><td>8(19)</td></tr> <tr><td>8(19)</td><td></td></tr> </table> <p>MARKSHEFFEL ROAD 3/4 ACCESS</p> | MARKSHEFFEL ROAD | | 202(393) | 52(111) | 76(176) | | 227(415) | 8(19) | 8(19) | | <p>21</p> <table border="1"> <tr><td>MARKSHEFFEL RD</td><td></td></tr> <tr><td>63(151)</td><td>65(139)</td></tr> <tr><td>72(94)</td><td>35(74)</td></tr> <tr><td>64(148)</td><td>13(28)</td></tr> <tr><td>85(170)</td><td>85(170)</td></tr> <tr><td>20(46)</td><td>20(46)</td></tr> <tr><td>85(126)</td><td>4(9)</td></tr> <tr><td>4(9)</td><td></td></tr> </table> <p>MARKSHEFFEL RD FULL ACCESS</p> | MARKSHEFFEL RD | | 63(151) | 65(139) | 72(94) | 35(74) | 64(148) | 13(28) | 85(170) | 85(170) | 20(46) | 20(46) | 85(126) | 4(9) | 4(9) | | <p>22</p> <table border="1"> <tr><td>CROSSROADS NORTH</td><td></td></tr> <tr><td>2(2)</td><td>55(78)</td></tr> <tr><td>2(2)</td><td>55(78)</td></tr> <tr><td>49(49)</td><td>164(233)</td></tr> <tr><td>2(2)</td><td>2(2)</td></tr> <tr><td>2(2)</td><td>98(99)</td></tr> <tr><td>2(2)</td><td></td></tr> </table> <p>CROSSROADS NORTH INT #22</p> | CROSSROADS NORTH | | 2(2) | 55(78) | 2(2) | 55(78) | 49(49) | 164(233) | 2(2) | 2(2) | 2(2) | 98(99) | 2(2) | | <p>23</p> <table border="1"> <tr><td>CROSSROADS NORTH</td><td></td></tr> <tr><td>55(78)</td><td>25(25)</td></tr> <tr><td>76(88)</td><td>5(8)</td></tr> <tr><td>27(39)</td><td>2(2)</td></tr> <tr><td>25(25)</td><td>27(39)</td></tr> <tr><td>5(5)</td><td>52(64)</td></tr> <tr><td>49(49)</td><td>2(2)</td></tr> </table> <p>CROSSROADS NORTH INT #23</p> | CROSSROADS NORTH | | 55(78) | 25(25) | 76(88) | 5(8) | 27(39) | 2(2) | 25(25) | 27(39) | 5(5) | 52(64) | 49(49) | 2(2) | <p>24</p> <table border="1"> <tr><td>AIR LANE WEST</td><td></td></tr> <tr><td>2(2)</td><td>109(155)</td></tr> <tr><td>2(2)</td><td>55(78)</td></tr> <tr><td>49(49)</td><td></td></tr> </table> <p>AIR LANE WEST INTERSECTION</p> | AIR LANE WEST | | 2(2) | 109(155) | 2(2) | 55(78) | 49(49) | |
| MARKSHEFFEL ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 278(570) | 26(56) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 267(500) | 12(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 202(393) | 52(111) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76(176) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 227(415) | 8(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8(19) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKSHEFFEL RD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 63(151) | 65(139) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 72(94) | 35(74) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64(148) | 13(28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85(170) | 85(170) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20(46) | 20(46) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85(126) | 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4(9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CROSSROADS NORTH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 55(78) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 55(78) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49(49) | 164(233) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 2(2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 98(99) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CROSSROADS NORTH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55(78) | 25(25) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76(88) | 5(8) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27(39) | 2(2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25(25) | 27(39) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5(5) | 52(64) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49(49) | 2(2) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AIR LANE WEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 109(155) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 55(78) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49(49) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>25</p> <table border="1"> <tr><td>AIR LANE EAST</td><td></td></tr> <tr><td>2(2)</td><td>123(124)</td></tr> <tr><td>2(2)</td><td>109(155)</td></tr> <tr><td>172(173)</td><td>164(233)</td></tr> </table> <p>AIR LANE EAST INTERSECTION</p> | AIR LANE EAST | | 2(2) | 123(124) | 2(2) | 109(155) | 172(173) | 164(233) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AIR LANE EAST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 123(124) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2(2) | 109(155) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 172(173) | 164(233) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2040 PROJECT TRAFFIC ASSIGNMENT

LEGEND

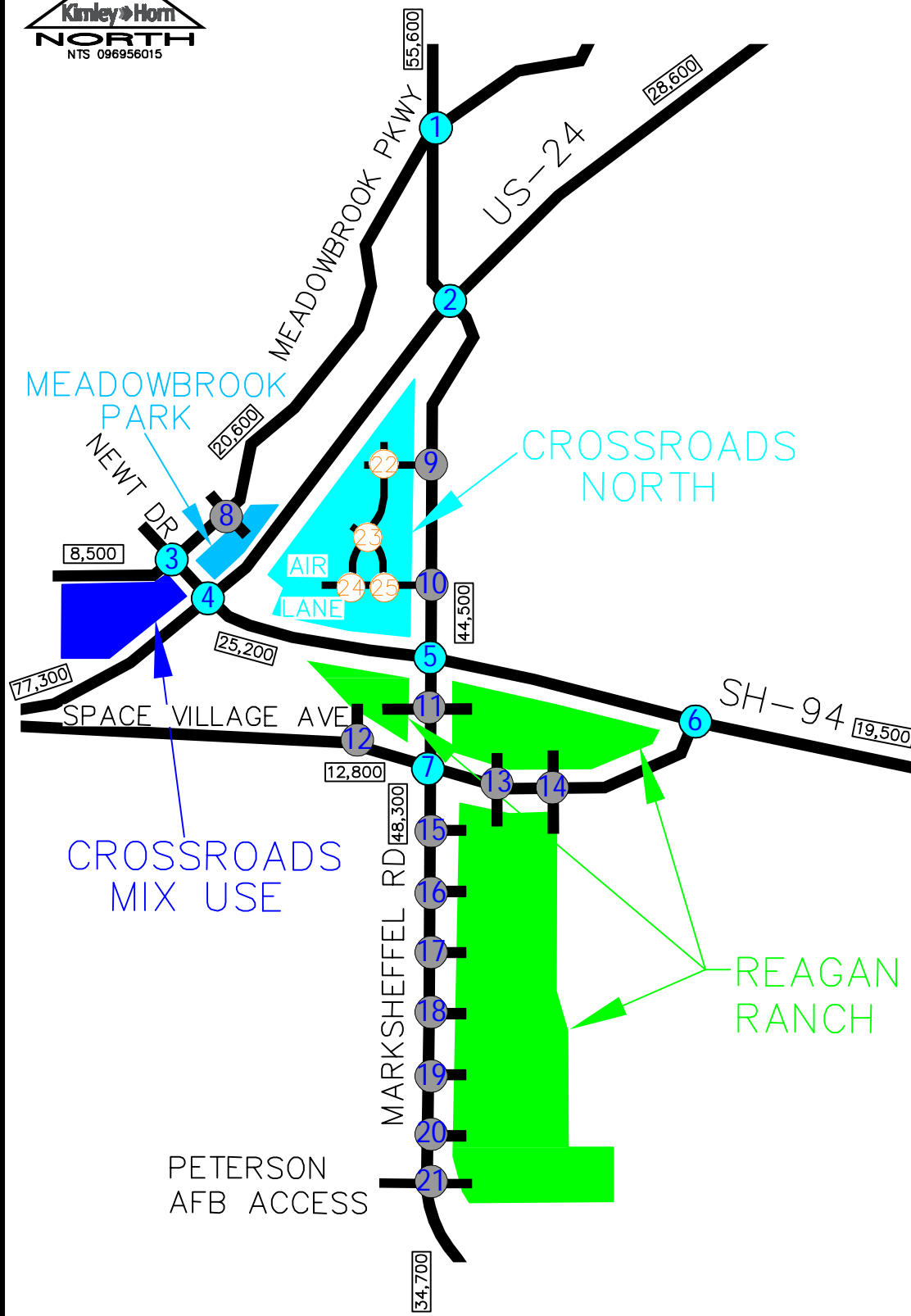
- Existing Key Intersection
- Proposed Access Intersection
- Proposed Internal Intersection
- XXX(XXX) Weekday AM(PM)
Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 10



| | | | | | |
|--|---|---|--|--|---|
| 1 335(270) → 1755(1340) → 10(45) → 30(40) ← 25(15) ← 40(25) ← 270(295) → 10(15) → 40(55) → 30(50) → 1090(1835) → 20(80) → | 2 MARKSHEFFEL 760(510) → 1025(915) → 10(20) → 20(20) ← 1215(585) ← 350(210) ← 5(15) → 755(1190) → 105(245) → 360(670) → 550(1200) → 125(125) → 5(15) → 5(15) → 10(10) → | 3 MEADOWBROOK 5(10) → 145(110) → 250(305) → 145(135) → 10(40) → 335(255) → 10(15) → 30(35) → 140(95) → 330(225) → | 4 US-24 65(60) → 1860(1000) → 5(5) → 5(10) → 95(65) → 820(740) → 45(55) → 90(80) → 495(450) → 425(395) → 985(1925) → 635(625) → 150(140) → 300(340) → 160(265) → 190(225) → 470(1100) → 25(30) → | 5 SH-94 245(255) → 695(845) → 300(200) → 115(395) → 345(405) → 35(45) → 150(140) → 300(340) → 160(265) → 190(225) → 470(1100) → 25(30) → 815(525) → 5(5) → 5(5) → 115(100) → 635(790) → 55(95) → | 6 SH-94/SPACE VILLAGE AVENUE 815(525) → 5(5) → 5(5) → 115(100) → |
| 7 130(25) → 1095(885) → 70(90) → 40(30) → 75(80) → 45(80) → 40(55) → 80(90) → 135(270) → 325(245) → 770(1265) → 30(45) → | 8 MEADOWBROOK 5(5) → 430(550) → 5(15) → 15(10) → 30(20) → 5(5) → 5(10) → 385(330) → 10(30) → 10(10) → 5(10) → 15(10) → 30(20) → 90(90) → 90(90) → 50(50) → 775(1365) → | 9 MEADOWBROOK 200(185) → 1300(1045) → 90(90) → 90(90) → 50(50) → 775(1365) → | 10 100(95) → 1290(1040) → 70(70) → 200(200) → 150(140) → 755(1345) → | 11 35(10) → 1285(980) → 35(55) → 800(1300) → 45(40) → 5(15) → | 12 10(30) → 10(30) → 20(5) → 505(335) → 25(5) → 235(380) → |
| 13 35(55) → 5(5) → 5(5) → 105(105) → 5(5) → 60(55) → 105(145) → 10(25) → 15(20) → 5(5) → | 14 65(40) → 10(5) → 5(10) → 45(70) → 5(5) → 20(65) → 85(75) → 5(10) → 10(10) → 5(5) → | 15 1265(1225) → 20(20) → 1100(1525) → 5(5) → | 16 1235(1155) → 35(70) → 30(35) → 1070(1495) → 10(10) → | 17 1235(1155) → 40(45) → 1035(1460) → 10(15) → | 18 1200(1075) → 40(80) → 30(35) → 30(35) → 1015(1440) → 10(15) → |
| 19 1225(1105) → 20(20) → 1005(1430) → 10(15) → | 20 1190(1025) → 40(80) → 35(45) → 975(1405) → 5(10) → | 21 680(565) → 490(400) → 30(70) → 45(55) → 25(30) → 10(10) → 540(805) → 10(25) → 125(185) → 160(130) → 395(560) → 5(5) → | 22 2(2) → 2(2) → 45(45) → 50(50) → 50(50) → 150(140) → 2(2) → 2(2) → 90(90) → 45(45) → 2(2) → 2(2) → | 23 50(50) → 70(70) → 25(25) → 25(25) → 5(5) → 45(45) → 25(25) → 50(45) → 2(2) → | 24 2(2) → 110(110) → 100(95) → 50(50) → 45(45) → |
| 25 5(5) → 110(110) → 100(95) → 150(140) → 5(5) → 155(155) → | LEGEND (X) Existing Key Intersection (X) Proposed Access Intersection (X) Proposed Internal Intersection XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes [XX,X00] Estimated Daily Traffic Volume | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2026 TOTAL TRAFFIC VOLUMES



CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2040 TOTAL TRAFFIC VOLUMES

| | | | | | |
|---|--|---|--|---|---|
| 1 380(315) ← 2185(2060) ← 1.5(55) ← 35(45) → 25(20) → 50(25) → 300(355) → 10(15) → 45(65) → 35(55) → 1495(2520) → 25(95) → | 2 MARKSHEFFEL 890(600) ← 1330(1560) ← 1.5(25) ← 25(20) → 1425(690) → 435(325) → 425(785) → 645(1415) → 140(205) → 5(20) → 1100(1765) → 160(345) → | 3 MEADOWBROOK 5(15) ← 160(135) ← 285(355) ← 165(150) → 15(45) → 370(315) → 10(15) → 35(45) → 155(120) → 360(280) → | 4 US-24 80(75) ← 2190(1180) ← 10(10) ← 5(10) → 105(80) → 1155(1160) → 55(65) → 95(95) → 555(535) → 480(470) → 1150(2325) → 855(1165) → | 5 SH-94 275(285) ← 975(1480) ← 355(230) ← 135(480) → 405(475) → 40(50) → 165(235) → 350(400) → 310(665) → 430(565) → 810(1735) → 30(50) → | 6 740(940) ← 85(180) ← 960(635) → 5(5) → 5(5) → 170(160) → |
| MEADOWBROOK PKWY/MARKSHEFFEL RD | US-24/MARKSHEFFEL ROAD | NEWT DR/MEADOWBROOK PKWY | SH-94/US-24 | SH-94/MARKSHEFFEL RD | SH-94/SPACE VILLAGE AVENUE |
| 7 150(30) ← 1520(1735) ← 105(250) ← 70(50) → 135(225) → 75(180) → 50(130) → 115(195) → 180(370) → 425(330) → 1335(2125) → 55(85) → | 8 MEADOWBROOK 5(5) ← 630(1035) ← 5(15) ← 15(10) → 30(20) → 5(5) → 10(10) → 5(10) → 675(715) → 10(30) → | 9 MEADOWBROOK 220(310) ← 1675(1760) ← 100(100) → 100(100) → 55(80) → 1160(2025) → | 10 110(155) ← 1665(1705) ← 75(75) → 225(225) → 165(235) → 1145(2030) → | 11 55(15) ← 1770(1985) ← 45(205) → 10(25) → 1390(2150) → 60(150) → | 12 15(50) ← 15(50) ← 30(10) → 675(575) → 35(10) → 325(640) → |
| SPACE VILLAGE AVE/MARKSHEFFEL RD | MEADOWBROOK PARKWAY ACCESS | MARKSHEFFEL RD NORTH ACCESS | MARKSHEFFEL RD/AIR LANE ACCESS | MARKSHEFFEL ROAD RIRO ACCESS | SPACE VILLAGE AVE FULL ACCESS |
| 13 45(205) ← 5(5) ← 10(20) → 170(180) → 10(20) → 80(210) → 160(240) → 30(85) → 55(70) → 15(15) → | 14 100(50) ← 5(15) ← 65(140) → 10(20) → 35(95) → 125(125) → 15(35) → 25(30) → 15(15) → | 15 1765(2275) ← 70(85) → 1745(2455) → 10(20) → | 16 1660(2010) ← 105(275) ← 105(135) → 1650(2335) → 25(30) → | 17 1660(2010) ← 140(175) → 1525(2200) → 25(50) → | 18 1550(1710) ← 120(305) ← 95(120) → 95(120) → 1450(2130) → 25(50) → |
| SPACE VILLAGE AVE W FULL ACCESS | SPACE VILLAGE AVE E FULL ACCESS | MARKSHEFFEL ROAD RIRO ACCESS | MARKSHEFFEL ROAD 3/4 ACCESS | MARKSHEFFEL ROAD RIRO ACCESS | MARKSHEFFEL ROAD FULL ACCESS |
| 19 1640(1825) ← 70(85) → 1405(2095) → 25(50) → | 20 1530(1925) ← 120(305) ← 130(165) → 1300(1985) → 15(35) → | 21 850(780) ← 585(500) ← 100(255) ← 155(200) → 85(110) → 35(45) → 680(1095) → 30(85) → 145(220) → 190(150) → 475(730) → 10(20) → | 22 2(2) ← 2(2) ← 50(50) → 55(80) → 55(80) → 165(235) → 2(2) → 2(2) → 100(100) → | 23 55(80) ← 80(90) ← 30(40) ← 25(25) → 5(5) → 50(50) → 30(40) → 55(65) → 2(2) → | 24 2(2) ← 125(125) → 110(155) → 55(80) → 50(50) → |
| MARKSHEFFEL ROAD RIRO ACCESS | MARKSHEFFEL ROAD 3/4 ACCESS | MARKSHEFFEL RD FULL ACCESS | CROSSROADS NORTH INT #22 | CROSSROADS NORTH INT #23 | AIR LANE WEST INTERSECTION |
| 25 5(5) ← 125(125) → 110(155) → 165(235) → 5(5) → 175(175) → | LEGEND (X) Existing Key Intersection (X) Proposed Access Intersection (X) Proposed Internal Intersection XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes [XX,X00] Estimated Daily Traffic Volume | | | | |
| AIR LANE EAST INTERSECTION | | | | | |

FIGURE 12

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2026 and 2040 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual*².

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways in this study area, standard traffic engineering practice recommends intersection LOS D as the minimum threshold for acceptable operations for signalized intersections and LOS E for movements of unsignalized intersections. **Table 3** shows the definition of level of service for signalized and unsignalized intersections.

Table 3 – Level of Service Definitions

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

Study area intersections were analyzed based on average total control delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service for a two-way stop-controlled intersection is not defined for the intersection as a whole. Level of service for a signalized and four-way stop controlled intersection is defined for the overall intersection.

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

5.2 Key Intersection Operational Analysis

Calculations for the level of service at the key intersections identified for study are provided in **Appendix D**. The existing and background traffic analyses are based on the lane geometry and intersection control shown in **Figure 3**. The signalized intersection analysis utilizes the observed cycle lengths with existing phasing and timing. Based on increased national attention given to setting appropriate yellow and all-red clearance intervals to improve intersection safety, these have been calculated and are applied for the approaches to the signalized intersections. The increase in the yellow and all red time sacrifices intersection capacity for improved safety. These yellow and all red time calculations are also included in **Appendix E**. Existing peak hour factors were used for all horizons while the recommended HCM urban area peak hour factor of 0.92 was used for the project accesses. Synchro traffic analysis software was used to analyze the study area intersections and access drives for level of service. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection control delay and level of service.

Meadowbrook Parkway and Marksheffel Road (#1)

Meadowbrook Parkway and Marksheffel Road (#1) is a four-leg signalized intersection. This intersection currently operates with LOS B during the morning and afternoon peak hours under the existing lane configuration and signal control. With or without the completion of the proposed developments, the intersection is anticipated to operate acceptably with LOS D or better during both the morning and afternoon peak hours throughout 2040. **Table 4** provides the results of the level of service at this intersection.

Table 4 – Meadowbrook Parkway and Marksheffel Road (#1) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|------------------------------|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Adjusted Existing | 10.5 | B | 14.0 | B |
| 2026 Background | 11.4 | B | 14.0 | B |
| 2026 Background Plus Project | 25.7 | C | 23.4 | C |
| 2040 Background | 12.5 | B | 16.4 | B |
| 2040 Background Plus Project | 24.9 | C | 35.5 | D |

US-24 and Marksheffel Road (#2)

US-24 and Marksheffel Road (#2) is a four-leg signalized intersection. This intersection currently operates with a LOS D during the morning and afternoon peak hours under the existing lane configuration and signal control. During the afternoon peak hour in 2026, the intersection may operate with a LOS E, with the addition of development project traffic. Therefore, it is recommended that westbound dual left turn lanes be designated along US-24. With these improvements, the intersection is expected to operate with LOS D during both peak hours in the 2026 total condition.

By 2040, it is anticipated that the intersection will operate with long delays during the peak hours without the addition of project traffic. To improve operations at this intersection, both US-24 and Marksheffel Road may need to provide three through lanes on all approaches. With these improvements, the intersection is anticipated to operate at LOS D during the peak hours in 2040. **Table 5** provides the results of the level of service at this intersection.

Table 5 – US-24 and Marksheffel Road (#2) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|---------------------------------|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Adjusted Existing | 39.7 | D | 42.9 | D |
| 2026 Background | 44.0 | D | 45.9 | D |
| 2026 Background Plus Project | 53.9 | D | 58.7 | E |
| 2026 Background Plus Project # | 53.7 | D | 54.2 | D |
| 2040 Background | 71.7 | E | 74.6 | E |
| 2040 Background Plus Project ## | 42.4 | D | 51.5 | D |

= US-24 westbound dual left turn lanes, ## = Three through lanes on all approaches

Newt Drive and Meadowbrook Parkway (#3)

The existing intersection of Newt Drive and Meadowbrook Parkway (#3) is a three-leg stop-controlled intersection with the east and west legs along Newt Drive providing stop control. This intersection currently operates with all movements at LOS B. In the 2026 background condition, the movements at this intersection are anticipated to continue to operate at LOS B. With the completion of phase 1 development in 2026, and specifically the Crossroads Mix Use development area in 2026, a south leg of Meadowbrook Parkway will be constructed and extended to the west limits of the Crossroads Mix Use property. The project does not have plans to extend Meadowbrook Parkway to Peterson Boulevard. Once this northbound leg is constructed, the westbound approach is anticipated to operate at LOS F during both peak hours. Based on projected traffic volumes, it is recommended that a roundabout with single lane approaches eastbound, northbound and southbound and a shared left turn/through lane with separate right turn lane on westbound Newt Drive be constructed at this intersection by 2026. With the recommended improvements, it is anticipated that the intersection will operate acceptably throughout 2040, with or without the addition of project traffic, with LOS B or better. **Table 6** provides the results of the level of service at this intersection.

Table 6 – Newt Drive and Meadowbrook Parkway (#3) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|--|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Adjusted Existing | | | | |
| Eastbound Approach | 12.3 | B | 14.0 | B |
| Westbound Approach | 12.0 | B | 14.1 | B |
| 2026 Background | | | | |
| Eastbound Approach | 12.7 | B | 14.7 | B |
| Westbound Approach | 12.3 | B | 14.7 | B |
| 2026 Background Plus Project # | | | | |
| Eastbound Left | 33.0 | D | 45.7 | E |
| Eastbound Through/Right | 30.1 | D | 33.6 | D |
| Westbound Left | >300 | F | >300 | F |
| Westbound Through | 20.3 | C | 27.0 | D |
| Westbound Right | 11.8 | B | 10.8 | B |
| Southbound Left | 9.9 | A | 9.4 | A |
| 2026 Background Plus Project ## | 9.2 | A | 8.6 | A |
| 2040 Background ## | 4.3 | A | 5.1 | A |
| 2040 Background Plus Project ## | 11.2 | A | 12.3 | B |

= South Leg and Associated Movements; ## = Roundabout

SH-94/Newt Drive and US-24 (#4)

SH-94/Newt Drive and US-24 (#4) is a four-leg signalized intersection. Although both highways are east-west, the traffic software at this intersection assigned US-24 as north-south based on cardinal direction of existing roadway alignments. This intersection currently operates with LOS E during the morning and afternoon peak hours under the existing lane configuration and signal control. With or without the completion of the phase 1 development in 2026, the intersection is anticipated to operate with LOS F during the morning and afternoon peak hours. If future project volumes are realized, it is recommended that an additional through lane be considered as a regional improvement on the US-24 approaches. The US-24 right turn to eastbound SH-94 is recommended to include a separate right turn lane operating with free movements. Acceleration lanes currently exist in both directions along US-24 from both Newt Drive and SH-94. For southwestbound US-24 at SH-94 (#4), the existing acceleration lane along US-24 will need to be reconstructed with 960 feet of length plus a 225-foot taper if and when US-24 is improved to provide three through lanes along northbound US-24. For northeastbound US-24 at SH-94, it is recommended that this acceleration lane be converted to the third northbound through lane as the acceleration lane is not warranted. Further, the northeastbound US-24 third through lane needs to continue for 1,200 feet plus provide a 660-foot taper based on MUTCD standards. Also, it is recommended that triple westbound left turns be designated by converting the inside westbound through lane to a left turn lane. It is believed that with these improvements, the intersection is at its ultimate configuration. With the ultimate configuration the intersection improves significantly and operates acceptably in 2026, but long delays may still occur during the peak hours in 2040. As such, and as requested by CDOT, an additional analysis was performed with an interchange grade separation including a westbound left turn flyover ramp condition. With this westbound left turn flyover ramp, this intersection is expected to operate acceptably with LOS D or better during the peak hours throughout the 2040 horizon. **Table 7** provides the results of the level of service at this intersection.

Table 7 – SH-94/Newt Drive and US-24 (#4) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|--|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Adjusted Existing | 76.6 | E | 58.3 | E |
| 2026 Background | 98.8 | F | 77.0 | E |
| 2026 Background Plus Project | 207.1 | F | 153.3 | F |
| 2026 Background Plus Project # | 54.7 | D | 46.0 | D |
| 2026 Background Plus Project ## (WBL Flyover) | 32.4 | C | 28.1 | C |
| 2040 Background # | 66.1 | E | 43.0 | D |
| 2040 Background Plus Project # | 133.2 | F | 118.3 | F |
| 2040 Background Plus Project ## (WBL Flyover) | 44.7 | D | 32.0 | C |

= Three northbound and southbound through lanes, dual northbound left turn lanes, triple westbound left turn lanes.

= Three northbound and southbound through lanes, dual northbound left turn lanes and westbound left flyover ramp

SH-94 and Marksheffel Road (#5)

The existing intersection of SH-94 and Marksheffel Road (#5) is currently a four-leg signalized intersection. This intersection currently operates with LOS C during the morning and afternoon peaks hours with existing traffic volumes and lane configurations. With the completion of the phase 1 development in 2026, the northbound and southbound right turns at this intersection are anticipated to be a free southbound right turn due to CDOT State Highway Access Code guidelines. By completion of Phase 1 development in 2026, this intersection is expected to continue to operate acceptably during the peak hours with existing lane configurations and control. With the completion of the proposed development by 2040, the following improvements are recommended: eastbound and westbound right turn movements to implement permissive/overlap phasing, two eastbound and westbound through lanes, and three northbound and southbound through lanes. With these improvements, this intersection is anticipated to operate acceptable with LOS D or better during the peak hours in 2040. **Table 8** provides the results of the level of service at this intersection.

Table 8 – SH-94 and Marksheffel Road (#5) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|---------------------------------|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Adjusted Existing | 24.8 | C | 25.9 | C |
| 2026 Background | 25.0 | C | 27.0 | C |
| 2026 Background Plus Project # | 26.3 | C | 31.6 | C |
| 2040 Background | 23.8 | C | 28.2 | C |
| 2040 Background Plus Project ## | 31.6 | C | 49.3 | D |

= NB to EB right turn acceleration lane, and SB to WB right turn acceleration lane

= Two eastbound and westbound through lanes, three northbound and southbound through lanes, NB to EB right turn acceleration lane, and SB to WB right turn acceleration lane

SH-94 and Space Village Avenue (#6)

The existing intersection of SH-94 and Space Village Avenue (#6) is a three-leg stop-controlled intersection with the northbound leg providing stop control. This intersection currently operates acceptably with all movements at LOS B or better during the peak hours. With or without the completion of the proposed development, all movements at the intersection are anticipated to operate acceptably during the peak hours throughout the 2040 horizon. **Table 9** provides the results of the level of service at this intersection.

Table 9 – SH-94 and Space Village Avenue (#6) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|-------------------------------------|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Existing | | | | |
| Northbound Approach | 14.4 | B | 10.6 | B |
| Westbound Left | 10.3 | B | 8.6 | A |
| 2026 Background | | | | |
| Northbound Approach | 16.3 | C | 11.0 | B |
| Westbound Left | 11.1 | B | 8.8 | A |
| 2026 Background Plus Project | | | | |
| Northbound Approach | 19.5 | C | 12.9 | B |
| Westbound Left | 11.8 | B | 9.3 | A |
| 2040 Background | | | | |
| Northbound Approach | 26.3 | D | 12.3 | B |
| Westbound Left | 13.6 | B | 9.6 | A |
| 2026 Background Plus Project | | | | |
| Northbound Approach | 48.6 | E | 16.2 | C |
| Westbound Left | 16.8 | C | 10.7 | B |

Space Village Avenue and Marksheffel Road (#7)

The existing intersection of Space Village Avenue and Marksheffel Road (#7) is a four-leg two-way stop-controlled intersection with the east and west legs providing stop control. This intersection currently operates poorly with LOS F on the eastbound and westbound approaches during the morning and afternoon peak hours. By completion of phase 1 development in 2026, a signal is expected to be warranted for this intersection. With construction of a traffic signal, the intersection operates acceptably with LOS B during the peak hours in 2026. By 2040, three through lanes northbound and southbound are recommended along Marksheffel Road north of

the Peterson Air Force Base Access. With construction of the additional through lanes, this intersection continues to operate acceptably with LOS C or better during both peak hours in 2040. A signal warrant analysis figure is included in **Appendix E** for this intersection. **Table 10** provides the results of the level of service at this intersection.

Table 10 – Space Village Avenue and Marksheffel Road (#7) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|--|-------------------------|-----|-------------------------|-----|
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| 2020 Existing | | | | |
| Northbound Left | 10.5 | B | 8.4 | A |
| Eastbound Left | 93.6 | F | 48.1 | E |
| Eastbound Through | 279.4 | F | 146.6 | F |
| Eastbound Right | 10.9 | B | 10.8 | B |
| Westbound Left | V>C | F | >300 | F |
| Westbound Through | 154.0 | F | 87.5 | F |
| Westbound Right | 9.9 | A | 12.0 | B |
| Southbound Left | 8.6 | A | 10.3 | B |
| 2026 Background | | | | |
| Northbound Left | 11.2 | B | 8.5 | A |
| Eastbound Left | >300 | F | 80.7 | F |
| Eastbound Through | >300 | F | 277.4 | F |
| Eastbound Right | 11.3 | B | 11.1 | B |
| Westbound Left | V>C | F | >300 | F |
| Westbound Through | >300 | F | 151.3 | F |
| Westbound Right | 10.1 | B | 12.4 | B |
| Southbound Left | 8.7 | A | 10.7 | B |
| 2026 Background Plus Project | | | | |
| Northbound Left | 12.6 | B | 9.5 | A |
| Eastbound Left | V>C | F | V>C | F |
| Eastbound Through | >300 | F | >300 | F |
| Eastbound Right | 12.5 | B | 13.6 | B |
| Westbound Left | V>C | F | V>C | F |
| Westbound Through | >300 | F | >300 | F |
| Westbound Right | 11.8 | B | 15.0 | C |
| Southbound Left | 10.3 | B | 14.5 | B |
| 2026 Background Plus Project # | 13.4 | B | 15.2 | B |
| 2040 Background # | 27.1 | C | 17.4 | B |
| 2040 Background Plus Project ## | 33.3 | C | 33.0 | C |

Signalized; ## = Three northbound and southbound through lanes

5.3 Project Access Operational Analysis

With completion of the Crossroads-Meadowbrook-Reagan Ranch project, direct access included for evaluation is proposed from 14 accesses (#8-21) along Meadowbrook Parkway (#8), Marksheffel Road (#9-11, and #15-21), and Space Village Avenue (#12-14). The following includes project access information and recommendations for each development area.

Crossroads Mix Use and Meadowbrook Park

With completion of the Crossroads Mix Use project, the site proposes three accesses along the east side of Meadowbrook Parkway. The northeastern access along Meadowbrook Parkway for Crossroads Mix Use may be right-in/right-out while the two southern most access will provide full movements with stop control on the minor legs. These three accesses to Crossroads Mix Use were not included for evaluation as Meadowbrook Parkway terminates to the west property limits and these are private streets. However, all three project access driveways to Crossroads Mix Use are recommended to have R1-1 “STOP” signs installed for the exiting approaches.

The Meadowbrook Park development area has one proposed driveway access (#8) along the east side of Meadowbrook Parkway that will align with Preble Drive. Left turn movements for entering this project access will be provided from an existing two-way left turn lane along Meadowbrook Parkway. The westbound exiting approach of this driveway should provide stop control with installation of a R1-1 “STOP” sign. With the recommended lane configurations and control at the Project Access (#8)/Preble Drive and Meadowbrook Parkway intersection, all movements are expected to operate acceptably during the peak hours throughout the 2040 horizon.

Crossroads North

Direct access to Crossroads North is proposed from two full movement accesses (#9 and #10) along Marksheffel Road approximately 2,000 feet and 1,000 feet north of SH-94. The south access is currently proposed to be named Air Lane which will provide east-west collector roadway connectivity to Crossroads North. These accesses do not meet the El Paso County standard of half-mile spacing for full movement accesses along Urban Principal Arterial roadways. The spacing of these proposed accesses is believed to be only deviations from El Paso County standards. As such and as requested by El Paso County, a sensitivity analysis has been prepared

later in Section 5.8 comparing the north access along Marksheffel Road as a full movement signalized intersection and a three-quarter movement unsignalized intersection due to these accesses not meeting El Paso County standards for full movement intersection spacing.

El Paso County uses the CDOT State Highway Access Code for determination of turn lanes. Based on this, a right turn lane is required for any access with a projected peak hour right ingress turning volume of 25 vehicles per hour or greater for principal arterials, therefore it is recommended that a southbound right turn lane be constructed at both intersections due to the volumes being 200 vehicles per hour at the north access and 100 vehicles per hour at the south access in 2026. Northbound left turn lanes will also be required at both of these accesses (#9 and #10) along Marksheffel Road. Based on El Paso County standards, the two northbound left turn lanes and two southbound right turns lanes should provide a turn lane length of 235 feet plus a 200-foot taper.

The eastbound left turn movements at these two proposed accesses along Marksheffel Road are expected to operate with LOS F during the peak hours in 2026 under stop control. As such, a signal warrant evaluation was performed, and warrants are expected to be met at these two accesses based on 2026 traffic volume projections. The signal warrant analysis is attached in **Appendix E**. With signal control, the two Crossroads North access intersections to Marksheffel Road are expected to operate acceptably with LOS A during the peak hours throughout the 2040 horizon. El Paso County does not have specified criteria for when acceleration lanes are required but references the AASHTO “Green Book” for when these lanes are not desirable. Based on acceptable operations of LOS A and vehicle queues being accommodated on-site, right turn acceleration lanes are not recommended at the two accesses to Crossroads North along Marksheffel Road.

Reagan Ranch

For the northwest development area of Reagan Ranch, a right-in/right access is proposed along Marksheffel Road (#11) between SH-94 and Space Village Avenue (to also serve the northeast development area of Reagan Ranch) and a full movement access is proposed along Space Village Avenue (#12). It is likely that rights to an easement for a proposed new access along Space Village Avenue will be acquired and was evaluated as such in this traffic study.

Three accesses are proposed to serve the northeast development area of Reagan Ranch. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue (previously mentioned #11) and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94 (#13 and #14).

For the southeast development area of Reagan Ranch, access will be gained at these same two roundabouts along Space Village Avenue (#13 and #14) as well as seven (7) accesses (#15-21) planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile spacing (#18) is expected to require signalization by 2040 while the access in alignment with Peterson Air Force Base (#21) is expected to need signalization by the short-term 2026 horizon. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses (#16 and #20) while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses (#15 and #17 and #19).

By 2040, most of the accesses along Marksheffel Road to the south of SH-94 are anticipated to operate poorly. For these intersections to operate acceptably, it is recommended that three northbound and southbound through lanes be considered on Marksheffel Road, north of the Peterson Air Force Base Access throughout the project area if future traffic volume growth is realized.

With the recommended lane configurations and intersection control, all movements at the project accesses to Reagan Ranch (#11-21) are expected to operate acceptably during the peak hours in the 2026 and 2040 horizons. A four-hour vehicle volume signal warrant analysis was performed at the north and south full movement accesses to Reagan Ranch along Marksheffel Road. A traffic signal is expected to be needed at the south access (#21) aligning with the Air Force Base Access in 2026 while the north full movement access (#18) to Reagan Ranch along Marksheffel Road is expected to meet warrants in 2040. The signal warrant analysis graphs are attached in **Appendix E**. With the signal improvements at both full movement accesses along Marksheffel Road and dual eastbound left turns at the Peterson Air Force Base Access (#21), the intersections operate acceptably with LOS D or better throughout the 2026 horizon. With the additional northbound and southbound through lanes in 2040, the north signalized full movement access

(#18) along Marksheffel Road is anticipated to continue operating acceptably. For the south full access (#21) to operate acceptably in 2040, it is recommended that the westbound right turn lane be provided at this access.

Crossroads North Internal Intersections

As requested by El Paso County, an internal street evaluation was conducted for the Crossroads North development area. The south access to Crossroads North along Marksheffel Road is proposed to be named Air Lane and is expected to be classified as an El Paso County Urban Non-Residential Collector roadway with a 60-foot right-of-way (ROW). Air Lane extends east-west and is proposed to connect with a north-south extending Non-Residential Collector street (#24) and a north-south extending Urban Local street (#25). Intersection #25 (collector to collector) is proposed to be located approximately 660 feet west of Marksheffel Road while Intersection #24 (collector to local street) is located approximately 380 feet west of Marksheffel Road. These distances meet the El Paso County Urban Non-Residential Collector spacing standards of 660 feet to other collectors and 330 feet to intersections with a local street. The north-south extending Non-Residential Collector street also connects with an east-west collector street (#22) that extends from the north access to Marksheffel Road as well as with an Urban Local street on site (#23). The north access street connecting with Marksheffel Road is proposed to be classified as an El Paso County Urban Non-Residential Collector roadway. The recommended left-turn lanes internal to Crossroads North should provide 115 feet of length plus 120-foot tapers to meet El Paso County standards. With the recommended lane configurations and control, all movements at four internal intersections (#22-25) to Crossroads North expected to operate acceptably with LOS C or better during the peak hours throughout the 2040 horizon. As requested by El Paso County, **Figure 13** illustrates the street classification map for roadways internal to Crossroads North.

The operational analysis at the proposed project driveways of all four development areas as well as the internal intersections to Crossroads North is summarized in **Table 11** for phase 1 development in 2026 and for the long-term 2040 horizon. Detailed results of the operational analysis are also provided in **Appendix D**.

Table 11 – Project Access LOS Results

| Access and Movement | 2026 Total Traffic | | | | 2040 Total Traffic | | | |
|---|-------------------------|-----|-------------------------|-----|-------------------------|--------|-------------------------|--------|
| | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | PM Peak Hour | |
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| Meadowbrook Parkway Access (#8) | | | | | | | | |
| Northbound Left | 8.3 | A | 8.7 | A | 9.0 | A | 10.9 | B |
| Eastbound Approach | 12.5 | B | 13.8 | B | 16.2 | C | 24.5 | C |
| Westbound Approach | 14.4 | B | 15.1 | C | 21.0 | C | 29.7 | D |
| Southbound Left | 8.2 | A | 8.1 | A | 9.2 | A | 9.5 | A |
| Crossroads North: Marksheffel Road North Access (#9) | | | | | | | | |
| Northbound Left | 15.6 | C | 12.9 | B | - | - | - | - |
| Eastbound Left | 76.7 | F | 62.1 | F | | | | |
| Eastbound Right | 17.8 | C | 14.8 | B | | | | |
| Crossroads North: Marksheffel Rd North Access (#9 - Signal) | | | | | | | | |
| | 8.6 | A | 6.7 | A | # 3.9 | # A | # 3.1 | # A |
| Crossroads North: Marksheffel Road South Access (#10) | | | | | | | | |
| Northbound Left | 18.0 | C | 13.8 | B | - | - | - | - |
| Eastbound Left | 108.3 | F | 74.1 | F | | | | |
| Eastbound Right | 26.3 | D | 19.2 | C | | | | |
| Crossroads North: Marksheffel Rd South Access (#10 - Signal) | | | | | | | | |
| | 8.2 | A | 9.4 | A | # 8.7 | # A | # 7.6 | # A |
| NW & NE Reagan Ranch: Marksheffel Road RIRO Access (#11) | | | | | | | | |
| Eastbound Right | 11.7 | B | 10.5 | B | # 12.6 | # B | # 13.7 | # B |
| Westbound Right | 12.4 | B | 17.5 | C | 11.7 | B | 25.3 | D |
| Northwest Reagan Ranch: Space Village Avenue Full Access (#12) | | | | | | | | |
| Eastbound Left | 8.8 | A | 8.2 | A | 10.2 | B | 9.1 | A |
| Southbound Left | 13.9 | B | 13.4 | B | 17.6 | C | 21.0 | C |
| Southbound Right | 12.2 | B | 10.7 | B | 12.6 | B | 11.7 | B |
| Space Village Ave West Full Access (#13) (Roundabout) | | | | | | | | |
| | 3.8 | A | 4.0 | A | 4.6 | A | 6.5 | A |
| Space Village Ave East Full Access (#14) (Roundabout) | | | | | | | | |
| | 3.4 | A | 3.5 | A | 3.8 | A | 4.4 | A |
| Marksheffel Rd RIRO Access (#15) | | | | | | | | |
| Westbound Right | 13.5 | B | 17.4 | C | # 13.2 | # B | # 19.7 | # C |
| Marksheffel Rd 3/4 Access (#16) | | | | | | | | |
| Westbound Right | 13.6 | B | 17.8 | C | # 13.5 | # B | # 21.8 | # C |
| Southbound Left | 11.5 | B | 16.4 | C | 11.4 | B | 27.2 | D |
| Marksheffel Rd RIRO Access (#17) | | | | | | | | |
| Westbound Approach | 13.5 | B | 17.9 | C | # 13.9 | # B | # 21.7 | # C |
| Marksheffel Rd Full Access (#18) | | | | | | | | |
| Westbound Approach | 23.6 | C | 45.9 | E | - | - | - | - |
| Southbound Left | 11.2 | B | 16.1 | C | | | | |

| Access and Movement | 2026 Total Traffic | | | | 2040 Total Traffic | | | |
|--|---|----------------------------|--|----------------------------|---|----------------------------|---|----------------------------|
| | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | PM Peak Hour | |
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| Marksheffel Rd Full Access (#18 - Signalized) | - | - | - | - | # 4.2 | # A | # 16.1 | # B |
| Marksheffel Rd RIRO Access (#19) Westbound Right | 12.9 | B | 16.5 | C | # 12.1 | # B | # 15.8 | # C |
| Marksheffel Rd Three-Quarter Access (#20) Westbound Right Southbound Left | 12.9 10.9 | B B | 17.2 15.5 | C C | # 12.5 10.5 | # B B | # 18.3 20.1 | # C C |
| Marksheffel Rd Peterson AFB / Access (#21) Northbound Left Eastbound Left Eastbound Through/Right Westbound Left Westbound Through/Right Southbound Left | 14.6 >300 15.9 295.3 120.5 8.3 | B F C F F A | 11.9 >300 19.9 220.4 48.4 9.1 | B F C F E A | - - - - | - - - - | - - - - | - - - - |
| Marksheffel Rd Peterson AFB / Access (#21) (Signalized) | 34.8 | C | 39.3 | D | ## 32.4 | ## C | ## 54.5 | ## D |
| Crossroads North Internal Intersections: North Intersection (#22) Northbound Left Northbound Through/Right Eastbound Left Westbound Left Southbound Left Southbound Through/Right | 12.4 9.0 7.4 7.6 13.6 10.7 | B A A A B B | 12.1 9.0 7.4 7.6 13.3 10.6 | B A A A B B | 12.9 9.1 7.5 7.6 14.5 11.0 | B A A A B B | 15.6 9.2 7.6 7.8 17.5 12.3 | C A A A C B |
| Crossroads North Internal Intersections: Middle Intersection (#23) Northbound Left Eastbound Approach Westbound Approach Southbound Left | 7.5 10.0 9.2 7.4 | A B A A | 7.5 10.0 9.2 7.4 | A B A A | 7.6 10.1 9.3 7.4 | A B A A | 7.7 10.5 9.9 7.4 | A B A A |
| Crossroads North Internal Intersections: Air Lane West Intersection (#24) Eastbound Left Southbound Left Southbound Right | 7.5 10.3 8.8 | A B A | 7.5 10.2 8.8 | A B A | 7.6 10.5 8.9 | A B A | 7.8 10.8 9.1 | A B A |
| Crossroads North Internal Intersections: Air Lane East Intersection (#25) Eastbound Left Southbound Approach | 7.8 11.7 | A B | 7.8 11.6 | A B | 7.9 12.2 | A B | 8.2 13.2 | A B |

= Three northbound and southbound through lanes

5.4 Sight Distance Evaluation

It is recommended that appropriate sight distance triangles be provided at all site access points to give drivers exiting the development areas a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct drivers' views of the adjacent travel lanes. Intersection sight distances for left turn from stop and right turn from stop were analyzed for the proposed project accesses along Marksheffel Road, Meadowbrook Parkway, and Space Village Avenue.

With AASHTO standards and a design speed of 55 miles per hour along Marksheffel Road, the intersection sight distance for a vehicle turning left from stop is 610 feet, while the sight distance for a vehicle turning right from stop is 530 feet. Therefore, all obstructions for left turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way (typical position of the minor road driver's eye when stopped) and a line of sight distance of 610 feet located in the middle of the nearest lane opposite of the center median for both accesses along Marksheffel Road. Likewise, all obstructions for right turning vehicles from stop should be clear to the left within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 530 feet located in the middle of the nearest lane for all accesses along Marksheffel Road.

Along with the accesses along Marksheffel Road, the access along Meadowbrook Parkway was analyzed for sight distance requirements. With AASHTO standards and a design speed of 35 miles per hour along Meadowbrook Parkway, the intersection sight distance for a vehicle turning left from stop is 390 feet, while the sight distance for a vehicle turning right from stop is 335 feet. Therefore, all obstructions for left turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 390 feet located in the middle of the nearest lane opposite of the center median for the access along Meadowbrook Parkway. Likewise, all obstructions for right turning vehicles from stop should be clear to the left within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 335 feet located in the middle of the nearest lane for the access along Meadowbrook Parkway.

With AASHTO standards and a design speed of 45 miles per hour along Space Village Avenue, the intersection sight distance for a vehicle turning left from stop is 500 feet, while the sight distance for a vehicle turning right from stop is 430 feet. Therefore, all obstructions for left turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 500 feet located in the middle of the nearest lane opposite of the center median for both accesses along Space Village Avenue. Likewise, all obstructions for right turning vehicles from stop should be clear to the left within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 430 feet located in the middle of the nearest lane for the accesses along Space Village Avenue.

5.5 Bicycle and Pedestrian Access

Bicycle and pedestrian access evaluations were conducted for the Crossroads-Meadowbrook-Reagan Ranch project. This focused on the areas of Meadowbrook Parkway, Marksheffel Road, US-24, SH-94, and Space Village Avenue adjacent to the site development areas. The following provides a description of the assessment.

Adjacent to the site, Meadowbrook Parkway provides the only sidewalks within the project area along both sides of the street. Pedestrian access is good along Meadowbrook Parkway between Newt Drive and Marksheffel Road with wide sidewalks with minimal gaps and signalized crossings of Marksheffel Road, where a great level of service exists for pedestrians. To the east of Marksheffel Road, Meadowbrook Parkway leads into a neighborhood with no sidewalks on either side of the road. Although the only sidewalks that exist within the study area are on Meadowbrook Parkway there are very few destinations outside of the ones provided on Meadowbrook Parkway. The only new sidewalks shown on the site plan are along the east side of Meadowbrook Parkway at the Meadowbrook Park development. Sidewalks will be provided internal to the development areas and connections will be made to the external public streets.

Transit within the Colorado Springs area is provided by Mountain Metropolitan Transit. From review of the most recent route map from August 1, 2019 there are currently no transit routes that run through the site area.

5.6 CDOT Turn Lane Evaluation

CDOT Access Permits will be required for the intersections of SH-94/US-24 (#4) SH-94/Marksheffel Road (#5), and SH-94/Space Village Avenue (#6) in association with the project.

Since US-24 and SH-94 are state owned and maintained facilities, it is recommended that auxiliary turn lanes along US-24 and SH-94 be constructed in accordance with the current CDOT State Highway Access Code (SHAC). CDOT categorizes the segments of US-24 and SH-94 through the study area as E-X: Expressway, Major Bypass. According to the State Highway Access Code for category E-X roadways, the following thresholds apply:

- A left turn deceleration lane is required for any access with a projected average daily left turn ingress volume greater than 10 with the transition taper included within the required deceleration length. If the projected peak hour left ingress turning volume is greater than 10 vehicles per hour (vph), a left turn deceleration, storage, and taper lane is required for any access.
- A right turn lane with deceleration and taper lengths is required for any access with a projected peak hour right ingress turning volume greater than 10 vph.
- A right turn lane with acceleration and taper lengths is required for any access with a project peak hour turning volume greater than 10 vph.

Based on traffic projections and the above thresholds, auxiliary turn lane requirements were calculated for the key intersections along SH-94. SH-94 provides one lane of travel in each direction and has a posted speed limit of 40 miles per hour at US-24, 55 miles per hour west of Marksheffel Road and 65 miles per hour east of Marksheffel Road. US-24 provides two lanes of travel in each direction and has a posted speed limit of 55 miles per hour through the SH-94 intersection. As such, turn lane requirements at the study area intersections along SH-94 to be impacted by project traffic are as follows:

SH-94 and US-24 (#4)

Left Turn Deceleration Lanes:

- A westbound left turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 820 westbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the left turn lane

requirement is deceleration, storage, and taper lengths. Currently there are westbound dual left-turn lanes of approximately a 475-foot length with a 525-foot taper. Based on the 40-mile per hour speed limit, the deceleration lane length is 370 feet, plus a 150-foot taper. Since triple left turn lanes are recommended here with conversion of the inside westbound through lane to a left turn lane, the storage requirement is 275 feet per lane. Therefore, it is recommended that these two left turn lanes be constructed and designated to 645 feet plus a 200-foot taper, with the outside third left turn lane being continuous. By 2040, this turn lane may need to be 760 feet plus a 200-foot taper.

- A northbound left turn deceleration lane exists and **is** warranted along US-24 approach to Newt Drive/SH-94 based on projected 2026 background plus project traffic being 225 left turns during the peak hour. Since US-24 has a category of E-X the left turn lane requirement is deceleration, storage, and taper lengths. Currently the northbound left-turn lane is approximately 900 feet long and the taper is approximately 150 feet. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet, plus a 225-foot taper, and 480 feet of storage for a total length of 1,080 feet plus 225-foot taper. However, by 2026 it is recommended that dual northbound US-24 left turn lanes be designated at this intersection. Dividing the storage in half results in 850-foot plus 225-foot taper northbound dual left turn lanes.
- A southbound US-24 left turn deceleration lane exists but **is not** warranted based on projected 2026 background plus project traffic being 5 southbound left turns during the peak hour and the threshold being greater than 10 vph.

Right Turn Deceleration Lanes:

- A northbound right turn deceleration lane along US-24 exists and **is** warranted based on projected 2026 background plus project traffic being 635 northbound right turns during the peak hour and the threshold being 10 vph. Since US-24 has a category of E-X the right turn lane requirement is deceleration and taper lengths. The northbound right turn lane is currently 600 feet with a 225-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet plus a 225-foot taper. Therefore, the existing northbound right turn lane meets current CDOT SHAC requirements.

- A southbound US-24 right turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 65 southbound right turns during the peak hour and the threshold being 10 vph. Since US-24 has a category of E-X the right turn lane requirement is deceleration, and taper lengths. The southbound right turn lane is currently 800 feet long with a 200-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet plus a 225-foot taper. Therefore, the existing southbound right turn lane meets current CDOT SHAC requirements.
- A westbound right turn deceleration lane exists but **is not** warranted based on projected 2026 background plus project traffic being 10 westbound right turns during the peak hour and the threshold being greater than 10 vph. Since US-24 has a category of E-X the right turn lane requirement is deceleration, and taper lengths. The westbound right turn lane is currently 475 feet long with a 750-foot taper. Based on the 40-mile per hour speed limit, the deceleration lane length is 370 feet, plus a 150-foot taper. Therefore, the existing westbound right turn lane meets current CDOT SHAC requirements.

Acceleration Lanes:

- An eastbound acceleration lane along SH-94 from the US-24 northbound right turn exists and **is** warranted based on projected 2026 background plus project traffic being 635 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration and taper length. Currently the eastbound acceleration lane is approximately 425 feet long with a 175-foot taper. Based on the 40-mile per hour speed limit, the acceleration lane length requirement is 380 feet plus a 145-foot taper. Therefore, no improvements are needed for this lane.
- A southwestbound right turn acceleration lane along US-24 from the Newt Drive right turn exists and **is** warranted based on projected 2026 background plus project traffic being 495 eastbound right turns during the peak hour and the threshold being 10 vph. Since US-24 has a category of E-X and a speed limit of 55 mph the right turn lane requirement is acceleration, and taper lengths. Based on the 55-mile per hour speed limit, the acceleration lane length requirement is 960 feet plus a 225-foot taper. This acceleration

lane exists today for a length of 760 feet plus 225-foot taper; therefore, this lane should be extended from 760 feet to 960 feet.

- A northeastbound acceleration lane along US-24 from the SH-94 westbound right turn exists but **is not** warranted based on projected 2026 background plus project traffic being 10 westbound right turns during the peak hour and the threshold being greater than 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration and taper length. Currently the eastbound acceleration lane is approximately 1,425 feet long with a 300-foot taper. Based on the 55-mile per hour speed limit, the acceleration lane length requirement is 960 feet plus a 225-foot taper. Therefore, no improvements are needed for this lane. However, if and when a third northbound through lane is provided along US-24 at SH-94, it is recommended that this acceleration lane be converted to the third northbound through lane as the acceleration lane is not warranted.

SH-94 and Marksheffel Road (#5)

Left Turn Deceleration Lanes:

- An eastbound left turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 150 eastbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the left turn lane requirement is deceleration, storage, and taper lengths. Currently the eastbound left-turn lanes are approximately 300 feet long with a 100-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length is 600 feet, plus a 225-foot taper. The storage requirement is 150 feet in 2026 and 235 feet in 2040 based on the projected left turning volume. Therefore, it is recommended that this left turn lane be constructed and designated to 750 feet plus a 225-foot taper in 2026 and 835 feet plus a 225-foot taper in 2040.
- A westbound left turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 45 westbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the left turn lane requirement is deceleration, storage, and taper lengths. Currently the westbound left-turn lanes are approximately 225 feet long with a 200-foot taper. Based on the 55-mile per hour speed

limit, the deceleration lane length is 600 feet, plus a 225-foot taper. The storage requirement is 50 feet based on the projected left turning volume. Therefore, it is recommended that this lane be constructed to 650 feet with a 225-foot taper.

Right Turn Deceleration Lanes:

- An eastbound right turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 265 eastbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is deceleration plus taper length. The eastbound right turn lane is currently 250 feet long with a 200-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length requirement is 600 feet plus a 225-foot taper. Therefore, the existing eastbound right turn lane does not meet current CDOT SHAC requirements. It is recommended that this lane be constructed to 600 feet plus a 225-foot taper.
- A westbound right turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 395 westbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is deceleration plus taper length. The westbound right turn lane is currently 250 feet long with a 275-foot taper. Based on the 55-mile per hour speed limit, the deceleration lane length requirement is 600 feet plus a 225-foot taper. Therefore, the existing westbound right turn lane does not meet current CDOT SHAC requirements. It is recommended that this lane be constructed to 600 feet plus a 225-foot taper.

Acceleration Lanes:

- An eastbound acceleration lane along SH-94 from the Marksheffel Road northbound right turn **is** warranted based on projected 2026 background plus project traffic being 30 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration, and taper lengths. The right turn lane currently has no acceleration lane. Based on the 65-mile per hour speed limit, a 1,380-foot acceleration lane with 300-foot taper is recommended.

- A westbound acceleration lane along SH-94 from the Marksheffel Road southbound right turn **is** warranted based on projected 2026 background plus project traffic being 255 westbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration, and taper lengths. The right turn lane currently has no acceleration lane. Based on the 40-mile per hour speed limit, a 380-foot acceleration lane with a 145-foot taper is required; however, it is recommended that this acceleration lane be a continuous lane to tie into the outside westbound through lane on the approach to US-24.

SH-94 and Space Village Avenue (#6)

- A westbound left turn deceleration lane exists and **is** warranted based on projected 2026 background plus project traffic being 95 westbound left turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X, the left turn lane requirement is deceleration, storage, and taper lengths. Currently the westbound left-turn lane is approximately 150 feet long with a 100-foot taper. Based on the 65-mile per hour speed limit, the deceleration lane length is 800 feet, plus a 300-foot taper. The storage requirement is 100 feet based on the projected 95 left turns. Therefore, it is recommended that this lane be constructed to 900 feet with a 300-foot taper by 2026.
- An eastbound right turn deceleration lane exists and **is not** warranted based on projected 2026 background plus project traffic being 5 eastbound right turns during the peak hour and the threshold being 10 vph. A short 250-foot with 225-foot taper eastbound right turn lane exists at this intersection already today and is recommended to remain in place as-is with development of the project.
- An eastbound acceleration lane along SH-94 from the Space Village Avenue northbound right turn exists and **is** warranted based on projected 2026 background plus project traffic being 50 northbound right turns during the peak hour and the threshold being 10 vph. Since SH-94 has a category of E-X the right turn lane requirement is acceleration, and taper lengths. The right turn movement currently has a short 300-foot with 200-foot taper acceleration lane. Based on the 65-mile per hour speed limit, a 1,380-foot acceleration lane with 300-foot taper is recommended.

5.7 Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 12** with calculations provided within the level of service operational sheets of **Appendix D** for the unsignalized intersections and **Appendix F** for signalized intersections.

Table 12 – Turn Lane Storage Length Analysis Results

| Intersection Turn Lane | Existing Turn Lane Length (feet) | 2026 Calculated Queue Length (feet) | 2026 Recommended Turn Lane Length (feet) | 2040 Calculated Queue Length (feet) | 2040 Recommended Turn Lane Length (feet) |
|--|----------------------------------|-------------------------------------|--|-------------------------------------|--|
| Meadowbrook Parkway & Marksheffel Road (#1) | | | | | |
| Eastbound Left | 200' DL | 249' DL | 200' DL* | 310' DL | 200' DL* |
| Eastbound Right | 150' | 25' | 150' | 36' | 150' |
| Westbound Left | 250' | 60' | 250' | 70' | 250' |
| Westbound Right | 200' | 25' | 200' | 25' | 200' |
| Northbound Left | 425' | 25' | 425' | 57' | 425' |
| Northbound Right | C | 25' | C | 25' | C |
| Southbound Left | 350' | 96' | 350' | 92' | 350' |
| Southbound Right | 350' | 31' | 350' | 55' | 350' |
| US-24 (EB/WB) & Marksheffel Road (NB/SB) (#2) | | | | | |
| Eastbound Left | 1200' DL | 355' DL | 1200' DL | 423' DL | 1200' DL |
| Eastbound Right | 575' | FREE | 575' | 139' | 575' |
| Westbound Left | 1100' | 184' DL | 1,100' DL (CDOT) | 235' DL | 1,100' DL (CDOT) |
| Westbound Right | 700' | FREE | 700' | 25' | 700' |
| Northbound Left | 300' | 25' | 300' | 29' | 300' |
| Northbound Right | 375' | FREE | 375' | FREE | 375' |
| Southbound Left | 375' | 29' | 375' | 25' | 375' |
| Southbound Right | C | FREE | C | FREE | C |
| Newt Dr & Meadowbrook Pkwy (#3) (Future Roundabout) | | | | | |
| Eastbound Approach | NA | 25' | C | 25' | C |
| Westbound Left/Through | | 25' | C (425') | 50' | C (425') |
| Westbound Right | | 25' | C (425') | 25' | C (425') |
| Northbound Approach | | 100' | C | 125' | C |
| Southbound Approach | | 75' | C | 150' | C |

| Intersection Turn Lane | Existing Turn Lane Length (feet) | 2026 Calculated Queue Length (feet) | 2026 Recommended Turn Lane Length (feet) | 2040 Calculated Queue Length (feet) | 2040 Recommended Turn Lane Length (feet) |
|---|----------------------------------|-------------------------------------|--|-------------------------------------|--|
| SH-94 & US-24 (#4) | | | | | |
| Eastbound Newt Drive Left | 375' DL | 45' | 375' DL | 51' | 375' DL |
| Eastbound Newt Drive Right | C | FREE | C | FREE | C |
| Westbound SH-94 Left | 475' DL | 314' | 645' (CDOT) TL | 587' TL | 760' (CDOT) TL |
| Westbound SH-94 Right | 475' | FREE | 475' | FREE | 475' |
| Northbound US-24 Left | 900' | 391' DL | 900' DL | 442' | 900' DL |
| Northbound US-24 Right | 600' | FREE | 600' | FREE | 600' |
| Southbound US-24 Left | 800' | 25' | 800' | 25' | 800' |
| Southbound US-24 Right | 800' | 25' | 800' | 25' | 800' |
| SH-94 & Marksheffel Road (#5) | | | | | |
| Eastbound Left | 300' | 256' | 750' (CDOT) | 239' | 835' (CDOT) |
| Eastbound Right | 250' | 90' | 600' (CDOT) | 439' | 600' (CDOT) |
| Westbound Left | 225' | 60' | 650' (CDOT) | 56' | 650' (CDOT) |
| Westbound Right | 250' | 275' | 600' (CDOT) | 371' | 600' (CDOT) |
| Northbound Left | 375' | 157' | 375' | 260' DL | 375' DL |
| Northbound Right | 400' | FREE | 400' | - | - |
| Southbound Left | 400' | 210' | 400' | 338' | 400' |
| Southbound Right | 400' | FREE | 400' | FREE | 400' |
| SH-94 & Space Village Avenue (#6) | | | | | |
| Eastbound Right | 250' | 25' | 250' | 25' | 250' |
| Northbound Approach | C | 50' | C | 125' | C |
| Westbound Left | 150' | 25' | 900' (CDOT) | 25' | 980' (CDOT) |
| Space Village Avenue & Marksheffel Road (#7) | | | | | |
| Eastbound Left | 225' | 83' | 225' | 178' | 225' |
| Eastbound Right | 250' | 93' | 250' | 314' | 325' |
| Westbound Left | 300' | 114' | 300' | 204' | 300' |
| Westbound Right | 200' | 25' | 200' | 25' | 200' |
| Northbound Left | 400' | 199' | 400' | 523' | 525' |
| Northbound Right | 425' | 25' | 425' | - | - |
| Southbound Left | 425' | 75' | 425' | 175' | 425' |
| Southbound Right | 425' | 41' | 425' | - | - |
| Meadowbrook Pkwy Access (#8) | | | | | |
| Eastbound Approach | C | 25' | C | 25' | C |
| Westbound Approach | DNE | 25' | 50' | 25' | 50' |
| Northbound Left | TWLTL | 25' | TWLTL | 25' | TWLTL |
| Southbound Left | TWLTL | 25' | TWLTL | 25' | TWLTL |
| Crossroads North: Marksheffel Rd North Access (#9) | | | | | |
| Eastbound Left | DNE | 126' | 150' | 137' | 150' |
| Eastbound Right | DNE | 50' | C | 52' | C |
| Northbound Left | DNE | 35' | 235'+200' T (EPC) | 57' | 235'+200' T (EPC) |
| Southbound Right | DNE | 83' | 235'+200' T (EPC) | 120' | 235'+200' T (EPC) |

| Intersection Turn Lane | Existing Turn Lane Length (feet) | 2026 Calculated Queue Length (feet) | 2026 Recommended Turn Lane Length (feet) | 2040 Calculated Queue Length (feet) | 2040 Recommended Turn Lane Length (feet) |
|---|----------------------------------|-------------------------------------|--|-------------------------------------|--|
| Crossroads North: | | | | | |
| Marksheffel Rd North Access (#10) | | | | | |
| Eastbound Left | DNE | 105' | 150' | 111' | 150' |
| Eastbound Right | DNE | 78' | C | 77' | C |
| Northbound Left | DNE | 106' | 235'+200' T (EPC) | 152' | 235'+200' T (EPC) |
| Southbound Right | DNE | 25' | 235'+200' T (EPC) | 25' | 235'+200' T (EPC) |
| Reagan NW & NE: | | | | | |
| Marksheffel Rd RIRO Access (#11) | | | | | |
| Eastbound Right | DNE | 25' | C | 25' | C |
| Westbound Right | DNE | 25' | C | 100' | C |
| Space Village Ave Full Access (#12) | | | | | |
| Eastbound Left | DNE | 25' | 200'+180'T (CS) | 25' | 200'+180'T (CS) |
| Southbound Left | DNE | 25' | 50' | 25' | 50' |
| Southbound Right | DNE | 25' | 50' | 25' | 50' |
| Space Village Ave West Roundabout Access (#13) | | | | | |
| Eastbound Approach | DNE | 25' | C | 50' | C |
| Westbound Approach | DNE | 25' | C | 25' | C |
| Northbound Approach | DNE | 25' | C | 25' | C |
| Southbound Approach | DNE | 25' | C | 25' | C |
| Space Village Ave East Roundabout Access (#14) | | | | | |
| Eastbound Approach | DNE | 25' | C | 25' | C |
| Westbound Approach | DNE | 25' | C | 25' | C |
| Northbound Approach | DNE | 25' | C | 25' | C |
| Southbound Approach | DNE | 25' | C | 25' | C |
| Marksheffel Rd RIRO Access (#15) | | | | | |
| Westbound Right | DNE | 25' | 50' | 25' | 50' |
| Marksheffel Road 3/4 Access (#16) | | | | | |
| Westbound Right | DNE | 25' | C | 50' | C |
| Southbound Left | DNE | 25' | 235' + 200' T (CS) | 125' | 235' + 200' T (CS) |
| Marksheffel Rd RIRO Access (#17) | | | | | |
| Westbound Right | DNE | 25' | 75' | 75' | 75' |
| Marksheffel Road Full Access (#18) | | | | | |
| Westbound Approach | DNE | 75' | C | 319' | C |
| Southbound Left | DNE | 25' | 235' + 200' T (CS) | 304' | 300' |
| Marksheffel Rd RIRO Access (#19) | | | | | |
| Westbound Right | DNE | 25' | 50' | 25' | 50' |
| Marksheffel Road 3/4 Access (#20) | | | | | |
| Westbound Right | DNE | 25' | C | 50' | C |
| Southbound Left | DNE | 25' | 235' + 200' T (CS) | 100' | 235' + 200' T (CS) |

| Intersection Turn Lane | Existing Turn Lane Length (feet) | 2026 Calculated Queue Length (feet) | 2026 Recommended Turn Lane Length (feet) | 2040 Calculated Queue Length (feet) | 2040 Recommended Turn Lane Length (feet) |
|---|----------------------------------|-------------------------------------|--|-------------------------------------|--|
| Marksheffel Road Full Access (#21) & Air Force Base Access | | | | | |
| Eastbound Left | 175' | 402' DL | 400' DL | 623' DL | C DL |
| Westbound Left | DNE | 27' | 155'+160' T (CS) | 75' | 155'+160' T (CS) |
| Westbound Right | DNE | - | DNE | 114' | 155'+160' T (CS) |
| Northbound Left | 600' | 107' | 600' | 142' | 600' |
| Southbound Left | DNE | 64' | 235' +200'T (CS) | 360' | 375' |
| Southbound Right | C | 93' | C | 369' | C |
| Crossroads North: Internal Access Intersection (#22) | | | | | |
| Eastbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Westbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Northbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Southbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Crossroads North: Internal Access Intersection (#23) | | | | | |
| Eastbound Approach | DNE | 25' | C | 25' | C |
| Westbound Approach | DNE | 25' | C | 25' | C |
| Northbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Southbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Crossroads North: Air Lane West Intersection (#24) | | | | | |
| Eastbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Southbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Southbound Right | DNE | 25' | C | 25' | C |
| Crossroads North: Air Lane East Intersection (#25) | | | | | |
| Eastbound Left | DNE | 25' | 115' (EPC) | 25' | 115' (EPC) |
| Southbound Approach | DNE | 25' | C | 25' | C |

* = Maximum Possible Length, DL = Dual Left Turn Lanes, TL = Triple Left Turn Lanes, DNE = Does Not Exist, C = Continuous Lane, FREE = Free Right Turn Movement, NA = Not Applicable, (CDOT) = CDOT Standard, (EPC) = El Paso County Standard, (CS) = City of Colorado Springs Standard, **Blue text = Improvement or New Turn Lane**

Turn lane lengths along Meadowbrook Parkway and Marksheffel Road, north of SH-94 were derived from El Paso County standards while turn lane lengths along Space Village Avenue and Marksheffel Road south of SH-94 were recommended based on City of Colorado Springs standards. It should be noted that 95th percentile vehicle queue lengths were recommended if they were reporting lengths longer than design standards.

5.8 Crossroads North: North Access Sensitivity Analysis

As requested by El Paso County, a sensitivity analysis within Crossroads North has been prepared comparing the north access along Marksheffel Road as a full movement signalized intersection and a three-quarter movement unsignalized intersection due to the accesses along Marksheffel Road not meeting intersection spacing standards set forth by El Paso County. As such, an intersection operational, vehicle queuing, signal progression, and safety evaluation has been analyzed and prepared comparing both access scenarios.

Intersection Operational Analysis

A traffic operational analysis comparing the north access along Marksheffel Road as a full movement signalized intersection and as a three-quarter movement unsignalized intersection has been evaluated to determine operational differences. **Table 13** provides the results of the level of service at the two control access intersections (#9 and #10) for both access scenarios to Crossroads North.

Table 13 – Crossroads North Access Scenarios LOS Results

| Access and Movement | 2026 Total Traffic | | | | 2040 Total Traffic | | | |
|---|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|
| | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | PM Peak Hour | |
| | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS | Control Delay (sec/veh) | LOS |
| Crossroads North: Marksheffel Road North Access (#9) (3/4 Movements – Unsignalized) | | | | | # | # | # | # |
| Northbound Left | 15.6 | C | 12.9 | B | 12.3 | B | 14.9 | B |
| Eastbound Right | 17.8 | C | 14.8 | B | 13.9 | B | 14.4 | B |
| Crossroads North: Marksheffel Rd North Access (#9) (Full Movements - Signal) | 8.6 | A | 6.7 | A | 3.9 | A | 3.1 | A |
| Crossroads North: Marksheffel Rd South Access (#10) (Signal w/ North Access 3/4 Movements) | 15.6 | B | 14.4 | B | 29.2 | C | 25.5 | C |
| Crossroads North: Marksheffel Rd South Access (#10) (Signal w/ North Access Signalized) | 8.2 | A | 9.4 | A | 8.7 | A | 7.6 | A |

= Three northbound and southbound through lanes

As shown in **Table 13**, both proposed access intersections (#9 and #10) to Crossroads North along Mark are expected to operate acceptably with LOS C or better during the peak hours under

both access scenarios. It should be noted that the south access (#10) along Marksheffel Road is expected to have delays increase by approximately 20 seconds (from LOS A to LOS C) during the peak hours in 2040 if the north access is unsignalized.

Vehicle Queuing Analysis

A vehicle queuing analysis comparing the north access along Marksheffel Road as a full movement signalized intersection and as a three-quarter movement unsignalized intersection has been evaluated to determine potential vehicle queuing deficiencies. **Table 14** provides the results of the 95th percentile vehicle queues at the two control access intersections (#9 and #10) for both access scenarios to Crossroads North.

Table 14 – Crossroads North Access Scenarios Vehicle Queuing Results

| Intersection Turn Lane | 2026 Calculated Queue Length (feet) | 2040 Calculated Queue Length (feet) |
|--|--|--|
| Crossroads North: Marksheffel Rd North Access (#9) (3/4 Movements – Unsignalized) | | # |
| Eastbound Right | 25' | 25' |
| Northbound Left | 25' | 25' |
| Crossroads North: Marksheffel Rd North Access (#9) (Full Movements - Signal) | | # |
| Eastbound Left | 126' | 137' |
| Eastbound Right | 50' | 52' |
| Northbound Left | 35' | 57' |
| Southbound Right | 83' | 120' |
| Crossroads North: Marksheffel Rd North Access (#10) (Signal w/ North Access 3/4 Mvmts) | | # |
| Eastbound Left | 192' | 218' |
| Eastbound Right | 70' | 71' |
| Northbound Left | 120' | 171' |
| Southbound Right | 41' | 79' |
| Crossroads North: Marksheffel Rd North Access (#10) (Signal w/ North Access Signalized) | | # |
| Eastbound Left | 105' | 111' |
| Eastbound Right | 78' | 77' |
| Northbound Left | 106' | 152' |
| Southbound Right | 25' | 25' |

= Three northbound and southbound through lanes

As shown in **Table 14**, vehicle queues are relatively uniform between the two access intersections when both are signalized. Eastbound left exiting vehicle queues are longer at the south access intersection when the north access intersection is stop control controlled as all traffic with destinations to the north are routed through the south access.

Signal Progression Analysis

A traffic signal progression analysis was conducted along the approximate 1.6-mile-long segment of Marksheffel Road from Meadowbrook Parkway to the north to the proposed Access Intersection #18 to the south due to the proposed signalization of the two access intersections (#9 and #10) to Crossroads North, the Space Village Avenue intersection (#7) as well as one of the proposed Reagan Ranch accesses (#18). As such, four (4) new signalized intersections and three (3) existing signalizations for a total of seven (7) signalized intersections were evaluated for progression along this corridor. Further, a comparison evaluation was conducted with the north access (#9) to Crossroads North along Marksheffel Road operating with stop control. In the second scenario, six (6) signalized intersections were evaluated for progression along the Marksheffel Road corridor.

The signal progression analysis was conducted to determine if the four traffic signals proposed along Marksheffel Road would interrupt the northbound and southbound bandwidth and platooning of vehicles along Marksheffel Road. Bandwidth is the window of time within the cycle length of a traffic signal that allows vehicles to travel through coordinated intersections without stopping. The goal of signal coordination is to provide sufficient bandwidth to allow for the progression of traffic along a corridor. Intersection coordination bandwidths for the study area were estimated using *Synchro 10* and were evaluated under full buildout 2040 total traffic conditions during the weekday morning and afternoon peak hours.

With the intersection of Space Village Avenue/Marksheffel Road (#7) and three proposed access intersections (#9, #10, and #18) along Marksheffel Road (two accesses to Crossroads North and one access to Reagan Ranch) as signalized intersections and coordinated with the intersections of Meadowbrook Parkway/Marksheffel Road (#1), US-24/Marksheffel Road (#2), and SH-94/Marksheffel Road (#5), the available vehicle bandwidth through the studied Marksheffel Road corridor is anticipated to be 43 seconds northbound and 44 seconds southbound during the

morning peak hour in 2040. Likewise, the bandwidth during the afternoon peak hour is anticipated to be 36 seconds northbound and 37 seconds southbound in 2040. These bandwidths equate to a platoon efficiency of approximately 36/37 percent and 30/31 percent in the morning and afternoon peak hours, respectively.

With the north access (#9) to Crossroads North along Marksheffel Road operating with stop control, the six (6) studied signalized intersections along the Marksheffel Road corridor are expected to have an available bandwidth of 45 seconds northbound and 49 seconds southbound during the morning peak hour in 2040. Likewise, the bandwidth during the afternoon peak hour is anticipated to be 36 seconds both northbound and southbound in 2040. These bandwidths equate to a platoon efficiency of approximately 38/41 percent and 30 percent in the morning and afternoon peak hours, respectively. The following **Table 15** summarizes the available bandwidths and platoon efficiencies for both access scenarios withing Crossroads North.

Table 15 – Signal Progression Comparison

| Analysis Year and Peak | Bandwidth (seconds) | | Platoon Efficiency (%) | |
|---|---------------------|------------|------------------------|------------|
| | Northbound | Southbound | Northbound | Southbound |
| Crossroads North: Signalized North Access (7 studied signalized intersections) | | | | |
| 2040 Total AM | 43 sec. | 44 sec. | 36% | 37% |
| 2040 Total PM | 36 sec. | 37 sec. | 30% | 31% |
| Crossroads North: Unsignalized North Access (6 studied signalized intersections) | | | | |
| 2040 Total AM | 45 sec. | 49 sec. | 38% | 41% |
| 2040 Total PM | 36 sec. | 36 sec. | 30% | 30% |

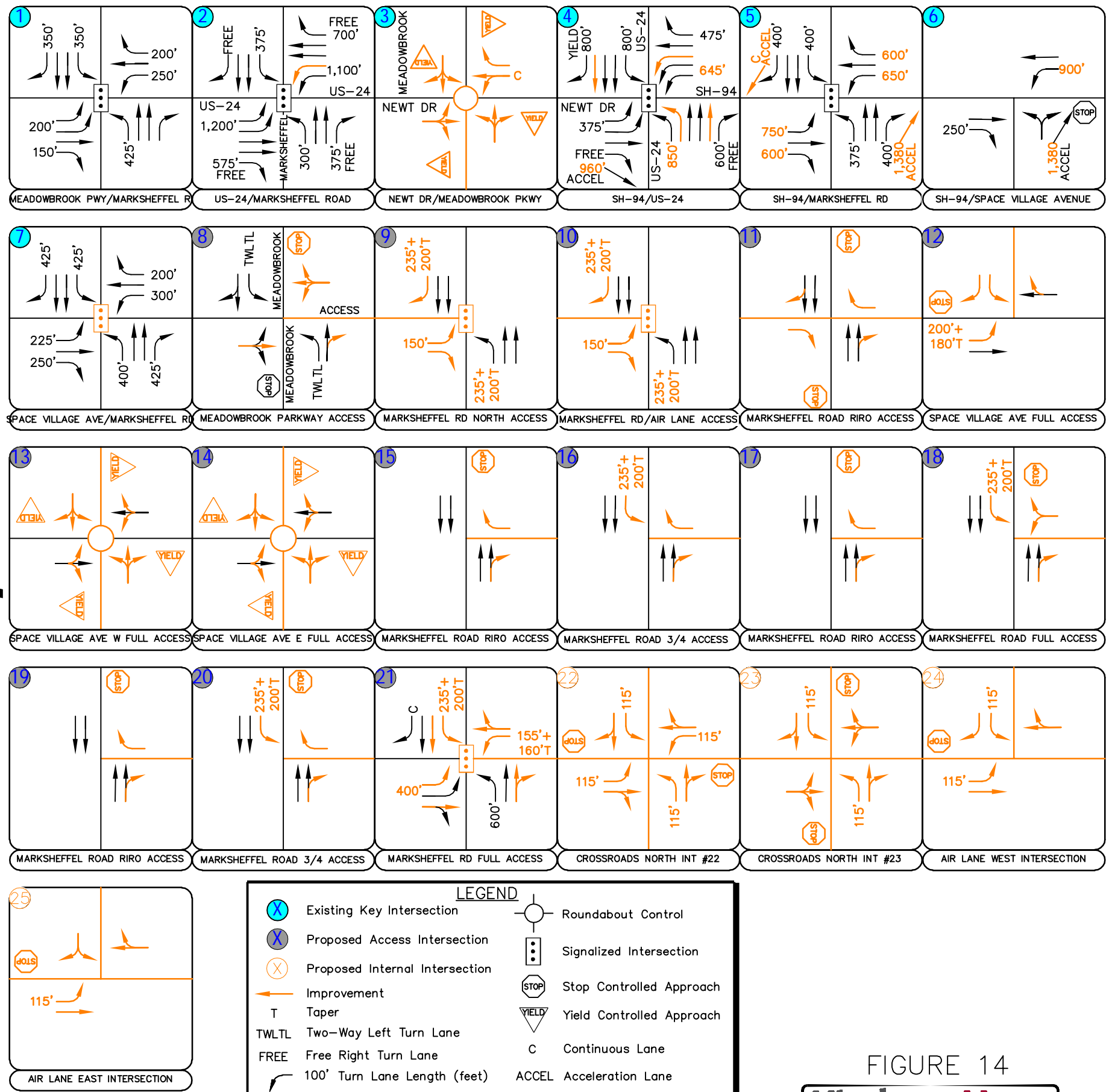
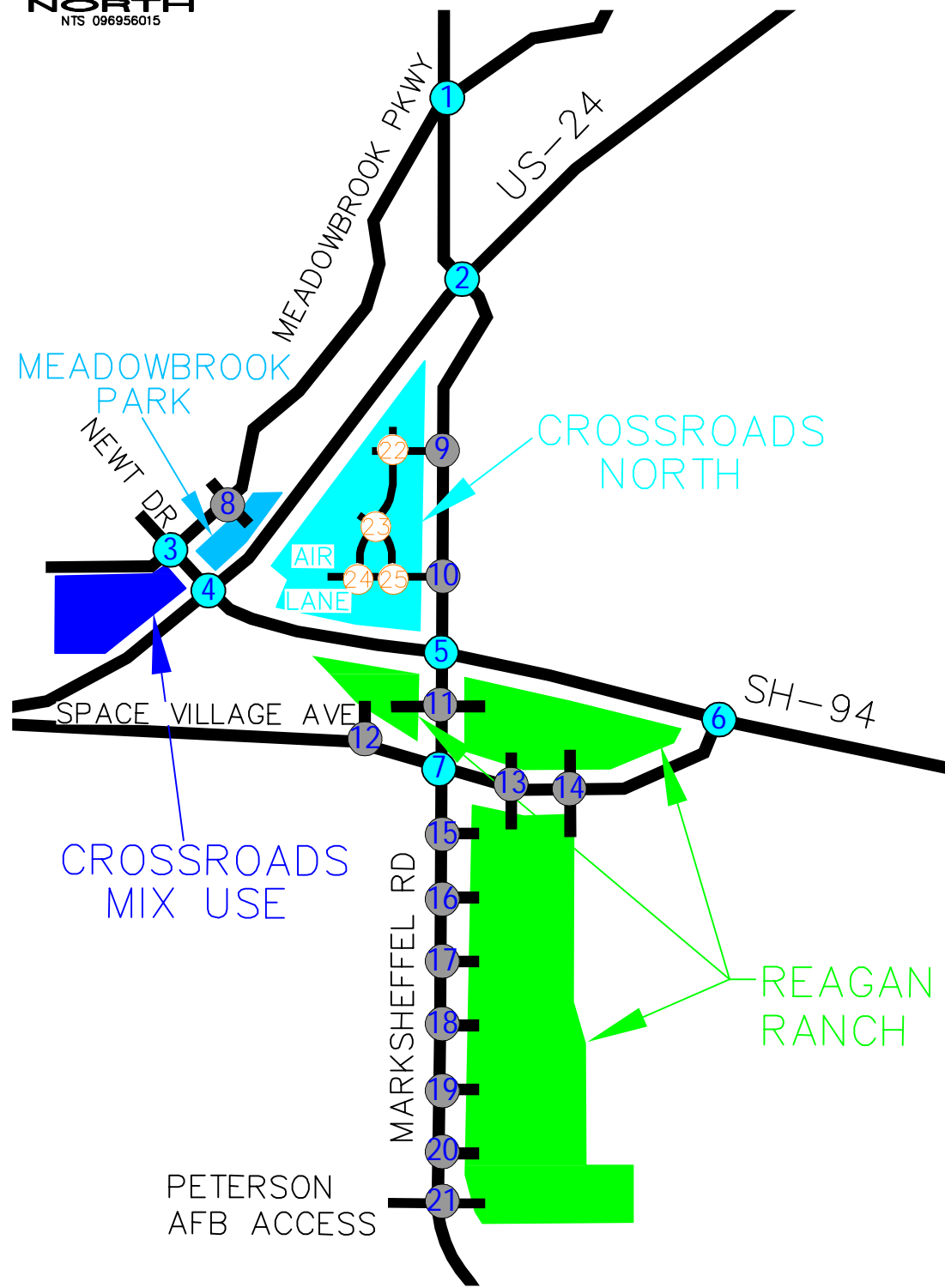
Marksheffel Road is comparable to a NR-B: Non-Rural Arterial as defined in the State of Colorado State Highway Access Code. A goal platoon efficiency for an NR-B corridor is typically 30 percent or better, which has been achieved in 2040 for both directions of travel under both access scenarios. Therefore, it is believed that traffic signals at the intersections of Space Village Avenue/Marksheffel Road (#5), two Crossroads North accesses (#9 and #10) and Marksheffel Road, and Reagan Ranch Full Movement Access (#18)/Marksheffel Road would maintain an acceptable platoon efficiency along the Marksheffel Road corridor if coordinated with the adjacent traffic signals. Time-space diagrams for the corridor are attached in **Appendix G**.

Safety Evaluation

The north access to Crossroads North along Marksheffel Road meets standards for capacity operations, vehicle queues, and signal progression under a signal control. Further, national standards are met for signal warrants, sight distance, and intersection spacing at this access. As such, it is believed that the north access to Crossroads North along Marksheffel Road should be considered for full movement signalized control.

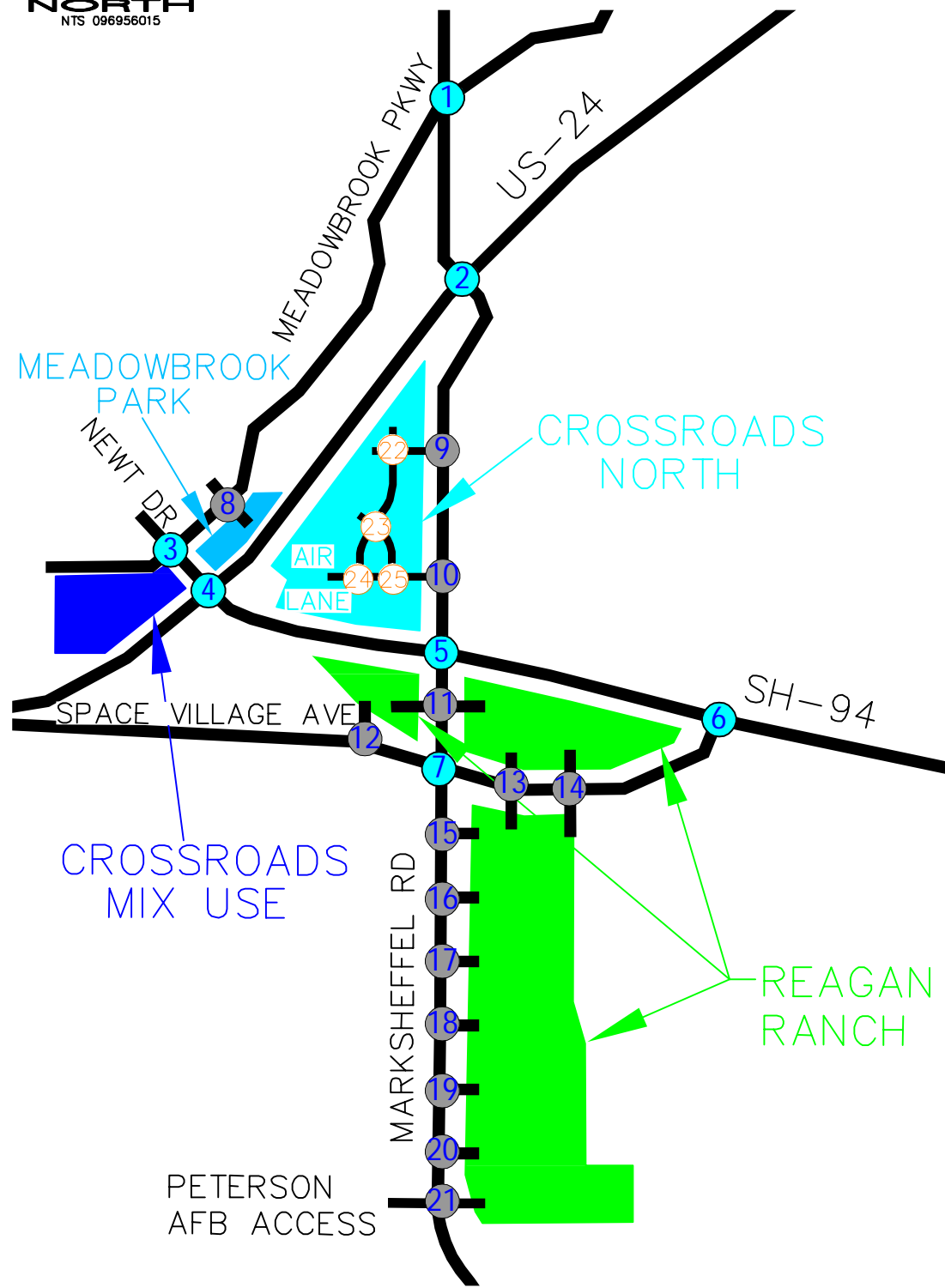
5.9 Improvement Summary

Based on the results of the level of service operational and turn lane analysis for Crossroads-Meadowbrook-Reagan Ranch, the recommended lane configurations and control of the study area intersections for the 2026 short term horizon as well as the 2040 long-term twenty-year horizon are shown in **Figures 14** and **15**, respectively. Likewise, a recommended improvements summary table is provided in **Table 16**. The recommended improvements for nonregional commitments identified in the table shows all geometry, control, and storage lane improvements along with the development area associated with that recommended improvement. Traffic contribution percentages were not defined in the improvement summary table due to multiple review agencies being involved with the project. Further, El Paso County road impact fees were not provided due to a portion of the project being located within the City of Colorado Springs and having studied roadways controlled by CDOT. These will be provided to the appropriate agency as needed through other deliverables.



CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2026 RECOMMENDED LANE CONFIGURATIONS

FIGURE 14



| | | | | | |
|--|--|---|---|---|--|
| <p>1</p> <p>MEADOWBROOK PKWY/MARKSHEFFEL RD</p> | <p>2</p> <p>US-24/MARKSHEFFEL RD</p> | <p>3</p> <p>NEWT DR/MEADOWBROOK PKWY</p> | <p>4</p> <p>SH-94/US-24</p> | <p>5</p> <p>SH-94/MARKSHEFFEL RD</p> | <p>6</p> <p>SH-94/SPACE VILLAGE AVENUE</p> |
| <p>7</p> <p>SPACE VILLAGE AVE/MARKSHEFFEL RD</p> | <p>8</p> <p>MEADOWBROOK PARKWAY ACCESS</p> | <p>9</p> <p>MARKSHEFFEL RD NORTH ACCESS</p> | <p>10</p> <p>MARKSHEFFEL RD/AIR LANE ACCESS</p> | <p>11</p> <p>MARKSHEFFEL RD RIRO ACCESS</p> | <p>12</p> <p>SPACE VILLAGE AVE FULL ACCESS</p> |
| <p>13</p> <p>SPACE VILLAGE AVE W FULL ACCESS</p> | <p>14</p> <p>SPACE VILLAGE AVE E FULL ACCESS</p> | <p>15</p> <p>MARKSHEFFEL RD RIRO ACCESS</p> | <p>16</p> <p>MARKSHEFFEL RD 3/4 ACCESS</p> | <p>17</p> <p>MARKSHEFFEL RD RIRO ACCESS</p> | <p>18</p> <p>MARKSHEFFEL RD FULL ACCESS</p> |
| <p>19</p> <p>MARKSHEFFEL RD RIRO ACCESS</p> | <p>20</p> <p>MARKSHEFFEL RD 3/4 ACCESS</p> | <p>21</p> <p>MARKSHEFFEL RD FULL ACCESS</p> | <p>22</p> <p>CROSSROADS NORTH INT #22</p> | <p>23</p> <p>CROSSROADS NORTH INT #23</p> | <p>24</p> <p>AIR LANE WEST INTERSECTION</p> |
| <p>25</p> <p>AIR LANE EAST INTERSECTION</p> | <p>LEGEND</p> <ul style="list-style-type: none"> Existing Key Intersection Proposed Access Intersection Proposed Internal Intersection Improvement T Taper TWLTL Two-Way Left Turn Lane FREE Free Right Turn Lane 100' Turn Lane Length (feet) Roundabout Control Signalized Intersection Stop Controlled Approach Yield Controlled Approach C Continuous Lane ACCEL Acceleration Lane | | | | |

CROSSROADS-MEADOWBROOK & REAGAN RANCH
 COLORADO SPRINGS, CO
 2040 RECOMMENDED LANE CONFIGURATIONS

FIGURE 15

Table 16 – Crossroads-Meadowbrook-Reagan Ranch Improvement Summary

| Intersection | Improvements | Associated Development Area and Horizon Year Needed |
|---|---|---|
| Meadowbrook Pkwy & Marksheffel Road (#1) | No Improvements | |
| US-24 & Marksheffel Road (#2) | Designate westbound dual left turn lanes | Crossroads North & Reagan Ranch 2026 |
| | Three through lanes on all four approaches | All Four Development Areas 2040 |
| Newt Drive & Meadowbrook Pkwy (#3) | Roundabout Control | Crossroads Mix Use 2026 |
| SH-94 & US-24 (#4) | Designate northbound dual left turn lanes with 850-foot plus 225-foot taper | Crossroads Mix Use 2026 |
| | Provide triple westbound left turn lanes with 760 feet plus 145-foot taper | Crossroads North 2026 |
| | Extend eastbound to southwestbound right turn acceleration lane from 760 feet to 960 feet | Crossroads Mix Use 2026 |
| | Three US-24 northbound and southbound through lanes | Crossroads North 2026 |
| SH-94 & Marksheffel Road (#5) | Extend the 300-foot eastbound left turn lane to 835 feet with a 225-foot taper | Crossroads North 2026 |
| | Extend the 250-foot eastbound right turn lane to 600 feet with a 225-foot taper | Reagan Ranch 2026 |
| | Extend the 225-foot westbound left turn lane to 650 feet with a 225-foot taper | No Development Area 2026 |
| | Extend the 250-foot westbound right turn lane to 600 feet with a 225-foot taper | Crossroads North 2026 |

| Intersection | Improvements | Associated Development Area and Horizon Year Needed |
|--|--|---|
| SH-94 & Marksheffel Road (#5) | Provide northbound to eastbound right turn acceleration lane | Reagan Ranch 2026 |
| | Provide southbound to westbound right turn acceleration lane | Crossroads North 2026 |
| | Provide northbound dual left turn lanes | Reagan Ranch 2040 |
| | Provide two through lane both eastbound and westbound and three through lanes both northbound and southbound | Reagan Ranch & Crossroads North 2040 |
| Space Village Avenue & SH-94 (#6) | Extend the 300-foot northbound to eastbound acceleration lane to 1,380 feet a 300-foot taper | Reagan Ranch 2026 |
| | Extend the 150-foot westbound left turn lane to 900 feet with a 300-foot taper | Reagan Ranch 2026 |
| | Extend westbound left turn lane to 980 feet with a 300-foot taper | Reagan Ranch 2040 |
| Space Village Avenue & Marksheffel Road (#7) | Signalized control | Reagan Ranch 2026 |
| | Provide three northbound and southbound through lanes | Reagan Ranch & Crossroads North 2040 |
| All Development Accesses and Internal Intersections (#8-25) | All Access and Internal Intersections | All Development Areas |

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes the Crossroads-Meadowbrook-Reagan Ranch developments will be successfully incorporated into the existing and future roadway network. The proposed background traffic volume growth, project development, and expected future traffic volumes in each of the 2026 Phase 1 and 2040 full buildout horizons resulted in the following recommendations/conclusions:

Phase 1 2026 Recommendations:

- CDOT will likely require Access Permits for the intersections of SH-94/US-24 (#4) SH-94/Marksheffel Road (#5), and SH-94/Space Village Avenue (#6) in association with the project.
- Southwestbound dual left turn lanes are recommended to be designated along US-24 at the Marksheffel Road intersection (#2). Presently there is a single left turn lane with a striped-out area to shadow the dual left turn lanes on northeastbound US-24. These new southwestbound dual left turn lanes should be designated with a length of 1,100 feet plus 600-foot taper (25 to 1).
- It is recommended that a single lane roundabout be constructed at the Meadowbrook Parkway and Newt Drive intersection (#3) with development of the Crossroads Mix Use project. The roundabout should have single lane approaches on the eastbound Newt Drive, northbound Meadowbrook Parkway, and southbound Meadowbrook Parkway approaches and a two-lane approach on westbound Newt Drive with a shared left turn/through lane into the roundabout and a separate right turn lane.
- The intersection of SH-94/US-24 (#4) currently operates poorly during the peak hours in the existing condition. As a regional capacity improvement, it was found that US-24 may need to provide three through lanes in each direction from the Peterson Road interchange through this intersection with SH-94 in the near-term horizon. The additional through lanes should be considered by CDOT and El Paso County in the near future. If and when US-24 is improved to provide three through lanes in each direction, it is recommended that a separate 600-foot

plus 225-foot taper right turn deceleration lane be constructed to maintain free right turn movements to eastbound SH-94. For southwestbound US-24 at SH-94 (#4), the existing acceleration lane along US-24 will need to be reconstructed with 960 feet of length plus a 225-foot taper if and when US-24 is improved to provide three through lanes along westbound US-24. For northeastbound US-24 at SH-94, it is recommended that this acceleration lane be converted to the third northbound through lane as the acceleration lane is not warranted. Further, the northeastbound US-24 third through lane needs to continue for 1,200 feet plus provide a 660-foot taper based on MUTCD standards. In addition to these regional improvements, it is recommended that the existing single 900-foot left turn lane be changed to 850-feet plus 225-foot taper with dual left turn lanes on the northeastbound US-24 approach for the left turn to Newt Drive. The area for these dual lefts is presently available (mostly); however, the lane is striped out which will require restriping with a slight extension that may also need to be constructed. Also at the intersection of US-24 and SH-94 (#4), it is recommended that the existing dual westbound left turn lanes on SH-94 be converted to triple left turn lanes by restriping the inside westbound through lane to a left turn lane. The inside two westbound left turn lanes should be extended to a length of 760 feet plus a 225-foot taper per CDOT SHAC requirements. With the expansion of US-24 to three westbound lanes to the Peterson Road interchange off-ramp, these triple left turn lanes will be able to be received. A traffic signal modification will be required at the intersection to incorporate all of these improvements.

- At SH-94 and Marksheffel Road (#5), it is recommended that the eastbound and westbound right turns operate with overlap phasing, while the northbound and southbound right turns operate with free movements with acceleration lanes constructed in accordance with the CDOT State Highway Access Code (SHAC). The acceleration lane along westbound SH-94 is recommended to tie into the outside through lane on the approach to US-24. The eastbound left turn lane shall be extended to a length of 750 feet with a 225-foot taper while the westbound left turn lane should be extended to a length of 650 feet with a 225-foot taper. The eastbound and westbound right turn lanes should be extended to 600 feet. The eastbound acceleration lane from the Marksheffel Road northbound right turn should be constructed to 1,380 feet with a 300-foot taper. These improvements at this intersection may already be identified with the SH-94 improvements already being planned by CDOT.

- In order to comply with the CDOT State Highway Access Code, it was found that the existing 150-foot westbound left turn lane at the intersection of SH-94 and Space Village Avenue (#6) does not meet current CDOT standards with a length need of 900 feet and a 300-foot taper. An eastbound acceleration lane along SH-94 from the Space Village Avenue northbound right turn is also warranted based on existing traffic. This existing 300-foot with 200-foot taper acceleration lane would need to be extended to a length of 1,380 feet with a 300-foot taper to meet current CDOT standards. Extension of these lanes may not be feasible due to the bridge along SH-94 to the east, which is likely why CDOT constructed to lengths shorter than standard.
- Currently the intersection of Space Village Avenue and Marksheffel Road (#7) is unsignalized. By 2026, this intersection is anticipated to meet the Four-Hour Vehicle Volume signal warrant with development of Reagan Ranch; therefore, it is recommended that a traffic signal be installed at this intersection.
- With completion of the Crossroads Mix Use project, the site proposes three accesses along the southeast side of Meadowbrook Parkway. The northeastern access along Meadowbrook Parkway for Crossroads Mix Use may be right-in/right-out while the two southern most access will provide full movements with stop control on the minor legs. All three project access driveways to Crossroads Mix Use are recommended to have R1-1 “STOP” signs installed for the exiting approaches.
- The Meadowbrook Park development area has one proposed driveway access (#8) along the east side of Meadowbrook Parkway that will align with Preble Drive. Left turn movements for entering this project access will be provided from an existing two-way left turn lane along Meadowbrook Parkway. The westbound exiting approach of this driveway should provide stop control with installation of a R1-1 “STOP” sign.
- Traffic signals are anticipated to be needed and warranted at both full movement access intersections (#9 and #10) along Marksheffel Road for Crossroads North. Therefore, traffic signals are recommended for installation at these two access intersections with development

of Crossroads North. It is recommended that a 235-foot with 200-foot taper (based on El Paso County standards for 50 mph) southbound right turn lane be constructed at both access intersections along Marksheffel Road due to the volume of traffic entering Crossroads North at this access. Likewise, northbound left turn lanes with 235 feet of length plus 200-foot tapers should also be constructed at both full movement access intersections along Marksheffel Road for Crossroads North. Lastly, separate eastbound left turn and right turn lanes are recommended to serve exiting traffic out of Crossroads North. As requested by El Paso County, a sensitivity analysis has been prepared later in Section 5.8 comparing the north access along Marksheffel Road as a full movement signalized intersection and a three-quarter movement unsignalized intersection due to these accesses not meeting El Paso County standards for intersection spacing.

- For the northwest development area of Reagan Ranch, a right-in/right access is proposed along Marksheffel Road (#11) between SH-94 and Space Village Avenue (to also serve the northeast development area of Reagan Ranch) and a full movement access is proposed along Space Village Avenue (#12). It is likely that rights to an easement for a proposed new access along Space Village Avenue will be acquired and was evaluated as such in this traffic study. It is recommended that the access along Space Village Avenue (#12) to the northwest region of Reagan Ranch have a 200-foot plus 180-foot taper eastbound left turn lane to accommodate volumes entering the northwest region of Reagan Ranch.
- Three accesses are proposed to serve the northeast development area of Reagan Ranch. These include a right-in/right-out access on the east side of Marksheffel Road between SH-94 and Space Village Avenue (to align with the previously mentioned access intersection #11) and two roundabouts providing full turning movements along Space Village Avenue between Marksheffel Road and SH-94 (#13 and #14). It is recommended that the roundabouts have single lane approaches on all entering legs.
- For the southeast development area of Reagan Ranch, access will be gained at these same two roundabouts along Space Village Avenue (#13 and #14) as well as seven (7) accesses (#15-21) planned along the east side of Marksheffel Road south of Space Village Avenue at the standard City 600-foot spacing. The access intersection at the approximate half-mile

spacing (#18) is expected to require signalization by 2040 while the access in alignment with Peterson Air Force Base (#21) is expected to need signalization by the short-term 2026 horizon. The accesses at the quarter-mile spacing are proposed as three-quarter movement accesses (#16 and #20) while the accesses at the eighth-mile spacing are proposed as right-in/right-out accesses (#15 and #17 and #19).

- It is recommended that the two three-quarter movement accesses along Marksheffel Road (#16 and #20) as well as the northern full movement access (#18) along Marksheffel Road provide 235-foot plus 200-foot taper southbound left turn lanes to accommodate volumes entering the southeast region of Reagan Ranch.
- The southern full movement access intersection (#21) for Reagan Ranch is proposed to align with the existing Peterson Air Force Base High-T intersection (Intersection #21). With this access alignment, it is recommended that the intersection be signalized. This intersection will need to be reconfigured so that a southbound left turn lane and dual eastbound left turn lanes can be provided. The southbound left turn lane is recommended to include a length of 235 feet plus 200-foot taper and the dual eastbound left turn lanes are recommended to provide a length of 400 feet.
- As requested by El Paso County, an internal street evaluation was conducted for the Crossroads North development area. The south access to Crossroads North along Marksheffel Road is proposed to be named Air Lane and is expected to be classified as an El Paso County Urban Non-Residential Collector roadway with a 60-foot right-of-way (ROW). Air Lane extends east-west and is proposed to connect with a north-south extending Non-Residential Collector street (#24) and a north-south extending Urban Local street (#25). Intersection #25 (collector to collector) is proposed to be located approximately 660 feet west of Marksheffel Road while Intersection #24 (collector to local street) is located approximately 380 feet west of Marksheffel Road. These distances meet the El Paso County Urban Non-Residential Collector spacing standards of 660 feet to other collectors and 330 feet to intersections with a local street. The north-south extending Non-Residential Collector street also connects with an east-west collector street (#22) that extends from the north access to Marksheffel Road as well as with an Urban Local street on site (#23). The north access street

connecting with Marksheffel Road is proposed to be classified as an El Paso County Urban Non-Residential Collector roadway. The recommended left-turn lanes internal to Crossroads North should provide 115 feet of length plus 120-foot tapers to meet El Paso County standards.

2040 Recommendations:

- If future traffic volume projections are realized, US-24 may need to provide three through lanes in each direction through the Marksheffel Road intersection. Likewise, Marksheffel Road between US-24 and Peterson Air Force Base East Gate may need to provide three through lanes in each direction. It is recommended that traffic volumes continue to be monitored by CDOT, the City of Colorado Springs, and El Paso County, as applicable, to determine if and when these regional improvements will be needed.
- A traffic signal is anticipated to be needed at the northern full movement access intersection for Reagan Ranch (#18) along Marksheffel Road by 2040.
- A westbound right turn lane may be needed at the southern full movement access intersection for Reagan Ranch (#21) proposed to align with the existing Peterson Air Force Base Access by 2040.
- Several extensions of auxiliary turn lanes may be needed by 2040 and should be monitored by CDOT, the City of Colorado Springs, and El Paso County, as applicable, to determine if and when the recommended turn lane lengths will be needed.

General Recommendations:

- Any on-site and off-site roadway, signing, striping, and signal improvements should be incorporated into the Civil Drawings, and conform to City of Colorado Springs, El Paso County, and/or CDOT standards as applicable, as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

APPENDICES

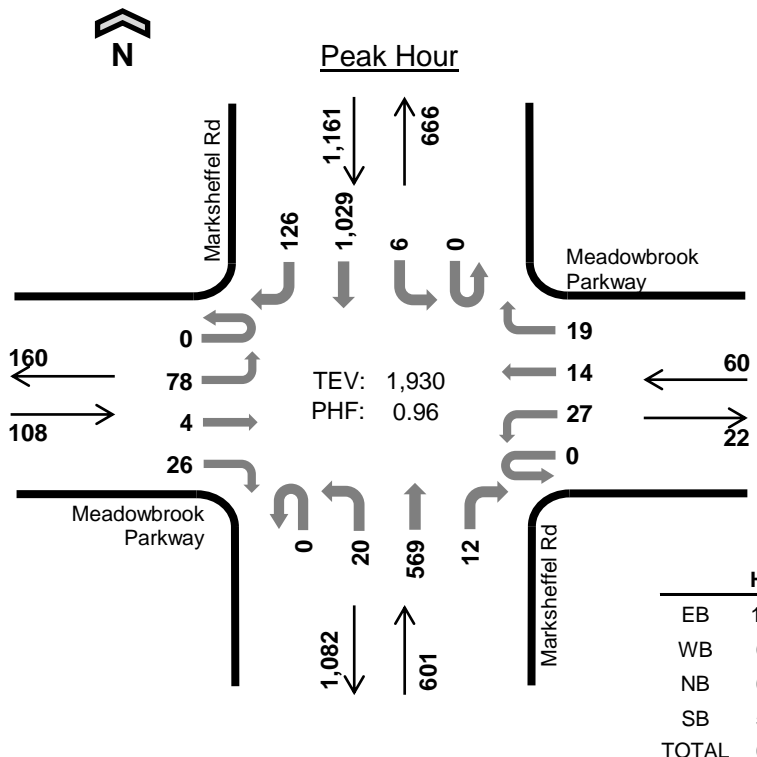
APPENDIX A

Intersection Count Sheets

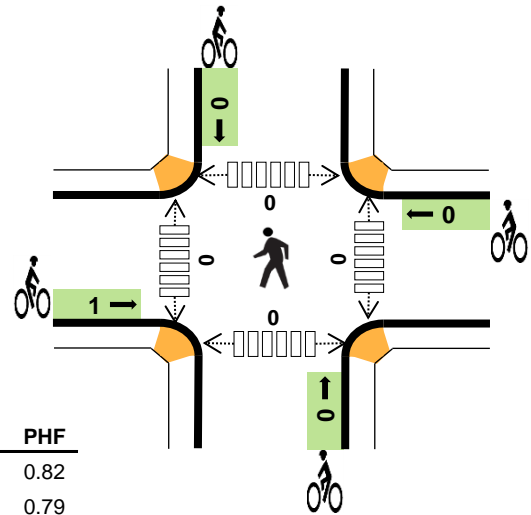
COVID-19 Count Adjustment Data



Marksheffel Rd Meadowbrook Parkway



Date: Thu, Jun 04, 2020
 Count Period: 7:00 AM to 9:00 AM
 Peak Hour: 7:00 AM to 8:00 AM



| | HV %: | PHF |
|-------|-------|------|
| EB | 10.2% | 0.82 |
| WB | 0.0% | 0.79 |
| NB | 6.7% | 0.87 |
| SB | 5.7% | 0.92 |
| TOTAL | 6.1% | 0.96 |

Two-Hour Count Summaries

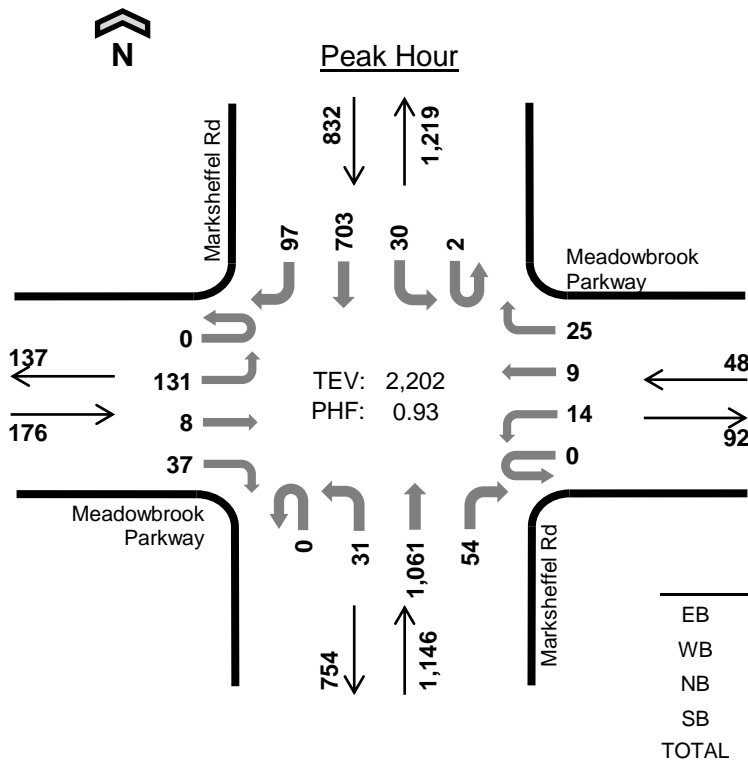
| Interval Start | Meadowbrook Parkway | | | | Meadowbrook Parkway | | | | Marksheffel Rd | | | | Marksheffel Rd | | | | 15-min Total | Rolling One Hour |
|----------------|---------------------|-----|----|----|---------------------|----|----|----|----------------|----|-----|----|----------------|----|-------|-----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 12 | 2 | 7 | 0 | 11 | 3 | 5 | 0 | 3 | 167 | 2 | 0 | 0 | 268 | 24 | 504 | 0 |
| 7:15 AM | 0 | 24 | 1 | 5 | 0 | 5 | 3 | 2 | 0 | 4 | 144 | 4 | 0 | 0 | 256 | 26 | 474 | 0 |
| 7:30 AM | 0 | 18 | 1 | 5 | 0 | 5 | 4 | 6 | 0 | 8 | 130 | 3 | 0 | 3 | 276 | 38 | 497 | 0 |
| 7:45 AM | 0 | 24 | 0 | 9 | 0 | 6 | 4 | 6 | 0 | 5 | 128 | 3 | 0 | 3 | 229 | 38 | 455 | 1,930 |
| 8:00 AM | 0 | 25 | 2 | 9 | 0 | 3 | 4 | 6 | 0 | 9 | 100 | 7 | 0 | 5 | 219 | 24 | 413 | 1,839 |
| 8:15 AM | 0 | 21 | 1 | 3 | 0 | 4 | 2 | 8 | 0 | 2 | 98 | 3 | 1 | 3 | 159 | 25 | 330 | 1,695 |
| 8:30 AM | 0 | 7 | 2 | 4 | 0 | 8 | 4 | 5 | 0 | 4 | 127 | 5 | 0 | 2 | 200 | 27 | 395 | 1,593 |
| 8:45 AM | 0 | 24 | 1 | 4 | 0 | 11 | 2 | 6 | 0 | 4 | 103 | 4 | 0 | 2 | 158 | 30 | 349 | 1,487 |
| Count Total | 0 | 155 | 10 | 46 | 0 | 53 | 26 | 44 | 0 | 39 | 997 | 31 | 1 | 18 | 1,765 | 232 | 3,417 | 0 |
| Peak Hour | 0 | 78 | 4 | 26 | 0 | 27 | 14 | 19 | 0 | 20 | 569 | 12 | 0 | 6 | 1,029 | 126 | 1,930 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

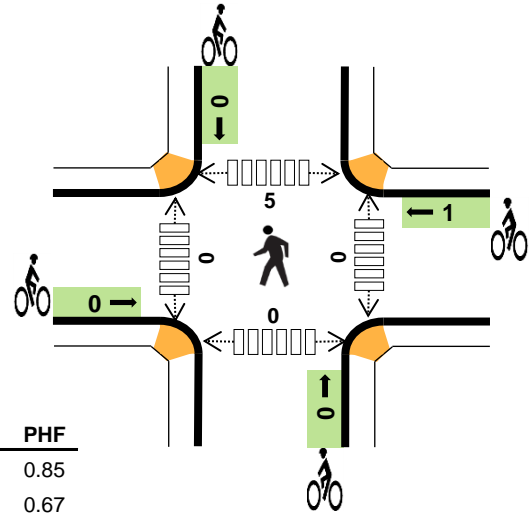
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|-----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 2 | 0 | 8 | 21 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 3 | 0 | 9 | 14 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 4 | 0 | 10 | 16 | 30 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 2 | 0 | 13 | 15 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 3 | 0 | 12 | 10 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 4 | 0 | 4 | 12 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 8:30 AM | 2 | 0 | 6 | 7 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 1 | 9 | 12 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 20 | 1 | 71 | 107 | 199 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Peak Hour | 11 | 0 | 40 | 66 | 117 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |



Marksheffel Rd Meadowbrook Parkway



Date: Thu, Jun 04, 2020
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:00 PM to 5:00 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 1.7% | 0.85 |
| WB | 0.0% | 0.67 |
| NB | 1.5% | 0.90 |
| SB | 3.8% | 0.87 |
| TOTAL | 2.4% | 0.93 |

Two-Hour Count Summaries

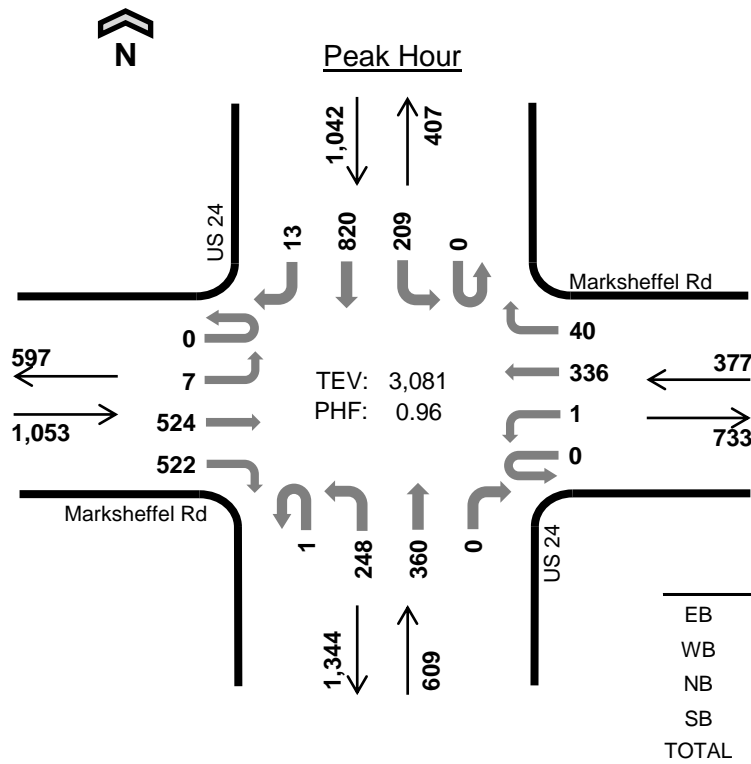
| Interval Start | Meadowbrook Parkway | | | | Meadowbrook Parkway | | | | Marksheffel Rd | | | | Marksheffel Rd | | | | 15-min Total | Rolling One Hour |
|----------------|---------------------|-----|----|----|---------------------|----|----|----|----------------|----|-------|-----|----------------|----|-------|-----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 43 | 0 | 5 | 0 | 5 | 3 | 10 | 0 | 12 | 227 | 7 | 0 | 5 | 183 | 21 | 521 | 0 |
| 4:15 PM | 0 | 29 | 3 | 9 | 0 | 5 | 2 | 6 | 0 | 8 | 294 | 16 | 1 | 6 | 164 | 25 | 568 | 0 |
| 4:30 PM | 0 | 39 | 2 | 11 | 0 | 1 | 1 | 5 | 0 | 5 | 260 | 11 | 1 | 10 | 150 | 27 | 523 | 0 |
| 4:45 PM | 0 | 20 | 3 | 12 | 0 | 3 | 3 | 4 | 0 | 6 | 280 | 20 | 0 | 9 | 206 | 24 | 590 | 2,202 |
| 5:00 PM | 0 | 42 | 5 | 10 | 0 | 6 | 0 | 5 | 0 | 5 | 226 | 12 | 0 | 10 | 173 | 13 | 507 | 2,188 |
| 5:15 PM | 0 | 29 | 3 | 10 | 0 | 4 | 0 | 9 | 0 | 3 | 260 | 14 | 0 | 7 | 193 | 23 | 555 | 2,175 |
| 5:30 PM | 0 | 18 | 3 | 9 | 0 | 4 | 1 | 5 | 0 | 3 | 214 | 13 | 0 | 12 | 200 | 29 | 511 | 2,163 |
| 5:45 PM | 0 | 24 | 0 | 4 | 0 | 3 | 0 | 8 | 1 | 4 | 194 | 10 | 0 | 7 | 123 | 12 | 390 | 1,963 |
| Count Total | 0 | 244 | 19 | 70 | 0 | 31 | 10 | 52 | 1 | 46 | 1,955 | 103 | 2 | 66 | 1,392 | 174 | 4,165 | 0 |
| Peak Hour | 0 | 131 | 8 | 37 | 0 | 14 | 9 | 25 | 0 | 31 | 1,061 | 54 | 2 | 30 | 703 | 97 | 2,202 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

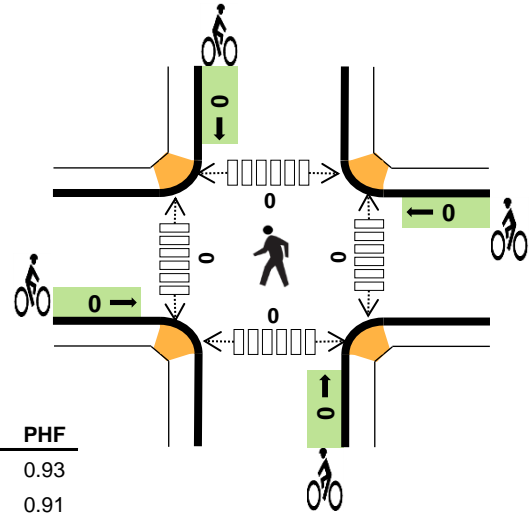
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 0 | 5 | 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 2 | 0 | 3 | 6 | 11 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 |
| 4:30 PM | 0 | 0 | 4 | 7 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 4:45 PM | 1 | 0 | 5 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 2 | 0 | 2 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 5 | 6 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 2 | 0 | 2 | 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 2 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 7 | 0 | 28 | 57 | 92 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 |
| Peak Hour | 3 | 0 | 17 | 32 | 52 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 |



US 24 Marksheffel Rd



Date: Thu, Jun 04, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



Two-Hour Count Summaries

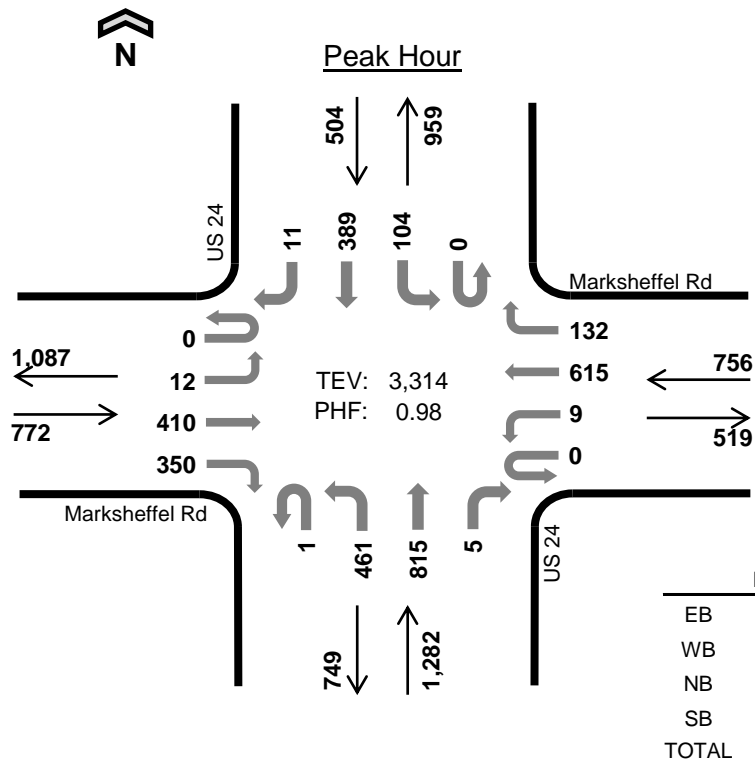
| Interval Start | Marksheffel Rd | | | | Marksheffel Rd | | | | US 24 | | | | US 24 | | | | 15-min Total | Rolling One Hour |
|----------------|----------------|----|-----|-----|----------------|----|-----|----|------------|-----|-----|----|------------|-----|-------|----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 122 | 138 | 0 | 0 | 94 | 6 | 0 | 68 | 96 | 0 | 0 | 50 | 203 | 1 | 778 | 0 |
| 7:15 AM | 0 | 0 | 155 | 127 | 0 | 0 | 96 | 8 | 1 | 59 | 96 | 0 | 0 | 43 | 213 | 3 | 801 | 0 |
| 7:30 AM | 0 | 3 | 123 | 142 | 0 | 1 | 80 | 14 | 0 | 62 | 78 | 0 | 0 | 59 | 214 | 5 | 781 | 0 |
| 7:45 AM | 0 | 4 | 124 | 115 | 0 | 0 | 66 | 12 | 0 | 59 | 90 | 0 | 0 | 57 | 190 | 4 | 721 | 3,081 |
| 8:00 AM | 0 | 8 | 106 | 109 | 0 | 2 | 57 | 17 | 0 | 50 | 75 | 0 | 0 | 37 | 125 | 7 | 593 | 2,896 |
| 8:15 AM | 0 | 1 | 87 | 90 | 0 | 0 | 48 | 16 | 0 | 50 | 73 | 1 | 0 | 42 | 138 | 1 | 547 | 2,642 |
| 8:30 AM | 0 | 3 | 83 | 105 | 0 | 1 | 84 | 13 | 0 | 48 | 71 | 0 | 0 | 30 | 155 | 1 | 594 | 2,455 |
| 8:45 AM | 0 | 0 | 92 | 85 | 0 | 2 | 58 | 8 | 0 | 52 | 91 | 0 | 0 | 39 | 162 | 5 | 594 | 2,328 |
| Count Total | 0 | 19 | 892 | 911 | 0 | 6 | 583 | 94 | 1 | 448 | 670 | 1 | 0 | 357 | 1,400 | 27 | 5,409 | 0 |
| Peak Hour | 0 | 7 | 524 | 522 | 0 | 1 | 336 | 40 | 1 | 248 | 360 | 0 | 0 | 209 | 820 | 13 | 3,081 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

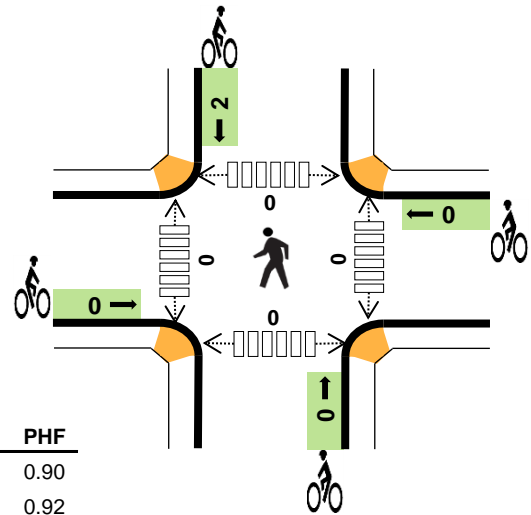
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|-----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 18 | 3 | 10 | 8 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 12 | 3 | 17 | 10 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 14 | 4 | 21 | 13 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 14 | 2 | 16 | 10 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 9 | 3 | 18 | 11 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 9 | 1 | 12 | 7 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 9 | 2 | 10 | 9 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 11 | 4 | 22 | 21 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 96 | 22 | 126 | 89 | 333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 58 | 12 | 64 | 41 | 175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



US 24 Marksheffel Rd



Date: Thu, Jun 04, 2020
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:30 PM to 5:30 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 2.8% | 0.90 |
| WB | 1.3% | 0.92 |
| NB | 1.7% | 0.97 |
| SB | 2.8% | 0.91 |
| TOTAL | 2.1% | 0.98 |

Two-Hour Count Summaries

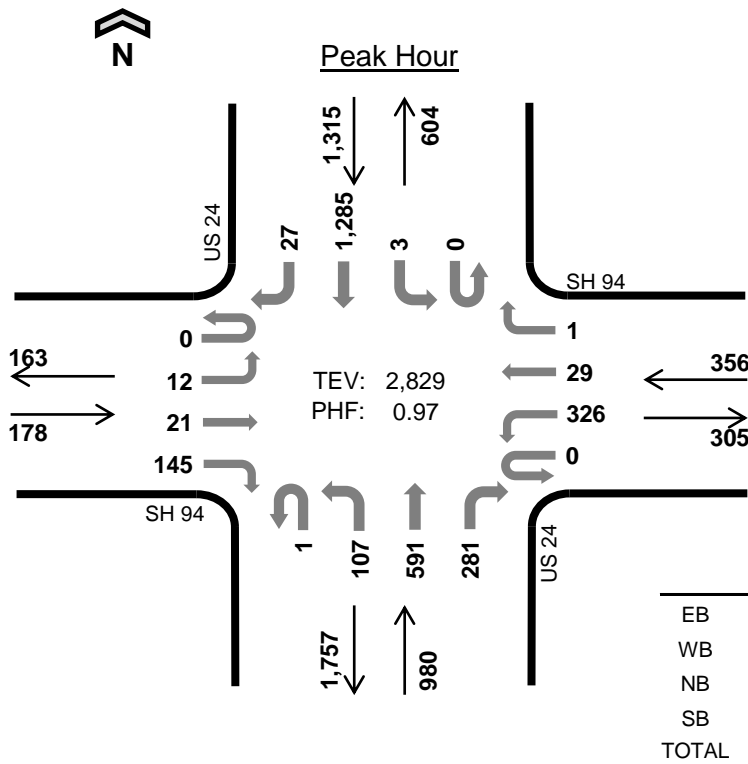
| Interval Start | Marksheffel Rd Eastbound | | | | Marksheffel Rd Westbound | | | | US 24 Northbound | | | | US 24 Southbound | | | | 15-min Total | Rolling One Hour |
|----------------|--------------------------|----|-----|-----|--------------------------|----|-------|-----|------------------|-----|-------|-----|------------------|-----|-----|-----|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 4:00 PM | 0 | 2 | 102 | 84 | 0 | 3 | 163 | 33 | 0 | 78 | 159 | 0 | 1 | 21 | 132 | | |
| 4:15 PM | 0 | 7 | 82 | 73 | 0 | 1 | 172 | 39 | 2 | 131 | 166 | 1 | 0 | 32 | 121 | 4 | 831 | 0 |
| 4:30 PM | 0 | 4 | 92 | 73 | 0 | 4 | 165 | 37 | 0 | 119 | 207 | 0 | 0 | 23 | 100 | 2 | 826 | 0 |
| 4:45 PM | 0 | 5 | 117 | 92 | 0 | 1 | 162 | 34 | 0 | 128 | 185 | 4 | 0 | 17 | 90 | 5 | 840 | 3,275 |
| 5:00 PM | 0 | 3 | 96 | 92 | 0 | 2 | 140 | 34 | 1 | 96 | 210 | 1 | 0 | 27 | 101 | 1 | 804 | 3,301 |
| 5:15 PM | 0 | 0 | 105 | 93 | 0 | 2 | 148 | 27 | 0 | 118 | 213 | 0 | 0 | 37 | 98 | 3 | 844 | 3,314 |
| 5:30 PM | 0 | 3 | 111 | 87 | 0 | 1 | 115 | 29 | 0 | 108 | 178 | 1 | 0 | 15 | 109 | 2 | 759 | 3,247 |
| 5:45 PM | 0 | 3 | 78 | 62 | 0 | 6 | 110 | 20 | 0 | 96 | 122 | 0 | 0 | 24 | 91 | 1 | 613 | 3,020 |
| Count Total | 0 | 27 | 783 | 656 | 0 | 20 | 1,175 | 253 | 3 | 874 | 1,440 | 7 | 1 | 196 | 842 | 18 | 6,295 | 0 |
| Peak Hour | 0 | 12 | 410 | 350 | 0 | 9 | 615 | 132 | 1 | 461 | 815 | 5 | 0 | 104 | 389 | 11 | 3,314 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

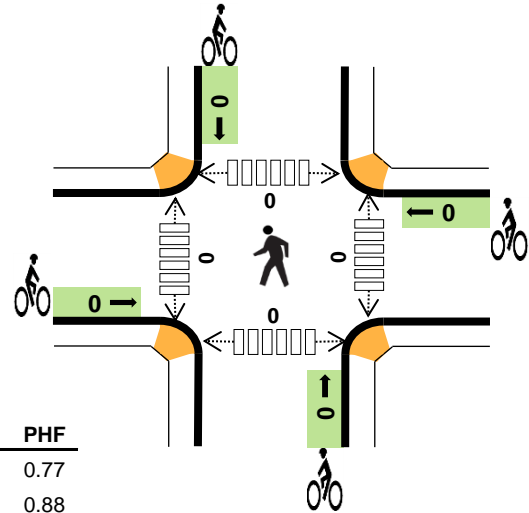
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 12 | 3 | 7 | 8 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 6 | 2 | 10 | 5 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 4 | 4 | 6 | 6 | 20 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 6 | 2 | 6 | 1 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 7 | 2 | 6 | 3 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 5 | 2 | 4 | 4 | 15 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 6 | 0 | 5 | 5 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 2 | 2 | 3 | 2 | 9 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 48 | 17 | 47 | 34 | 146 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 22 | 10 | 22 | 14 | 68 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |



**US 24
SH 94**



Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



Two-Hour Count Summaries

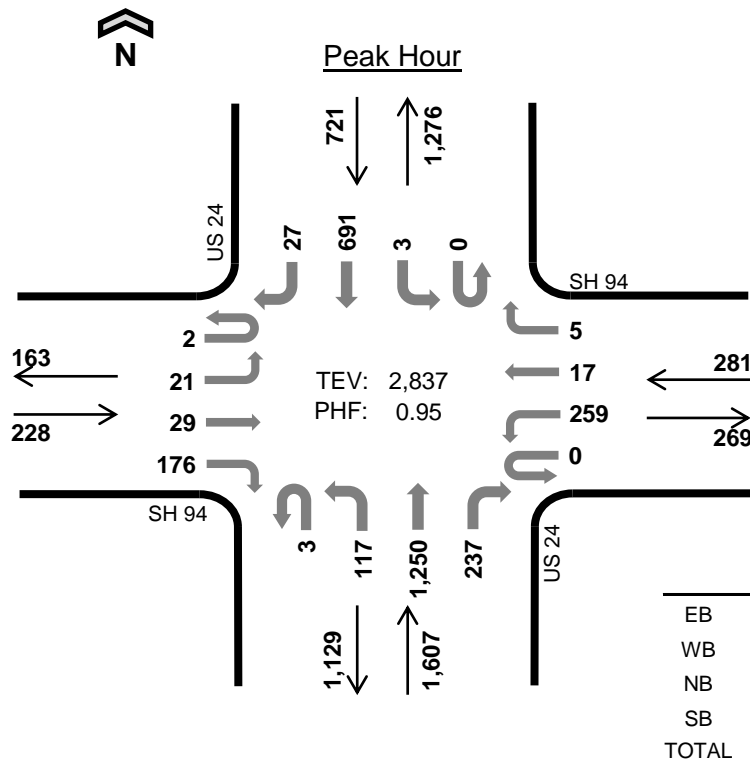
| Interval Start | SH 94 Eastbound | | | | SH 94 Westbound | | | | US 24 Northbound | | | | US 24 Southbound | | | | 15-min Total | Rolling One Hour |
|----------------|-----------------|----|----|-----|-----------------|-----|----|----|------------------|-----|-------|-----|------------------|----|-------|-----|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 7:00 AM | 0 | 1 | 6 | 45 | 0 | 81 | 10 | 0 | 0 | 27 | 147 | 65 | 0 | 1 | 319 | | |
| 7:15 AM | 0 | 6 | 7 | 21 | 0 | 90 | 10 | 1 | 0 | 25 | 145 | 79 | 0 | 0 | 336 | 8 | 728 | 0 |
| 7:30 AM | 0 | 5 | 6 | 47 | 0 | 85 | 5 | 0 | 0 | 20 | 152 | 80 | 0 | 0 | 310 | 6 | 716 | 0 |
| 7:45 AM | 0 | 0 | 2 | 32 | 0 | 70 | 4 | 0 | 1 | 35 | 147 | 57 | 0 | 2 | 320 | 6 | 676 | 2,829 |
| 8:00 AM | 0 | 4 | 4 | 25 | 0 | 51 | 7 | 1 | 0 | 28 | 120 | 54 | 0 | 3 | 230 | 5 | 532 | 2,652 |
| 8:15 AM | 0 | 4 | 4 | 34 | 0 | 51 | 6 | 0 | 1 | 17 | 107 | 64 | 0 | 1 | 207 | 10 | 506 | 2,430 |
| 8:30 AM | 0 | 1 | 4 | 26 | 0 | 66 | 2 | 0 | 0 | 25 | 128 | 55 | 0 | 0 | 223 | 4 | 534 | 2,248 |
| 8:45 AM | 0 | 3 | 7 | 29 | 0 | 48 | 6 | 1 | 1 | 23 | 131 | 44 | 0 | 1 | 197 | 9 | 500 | 2,072 |
| Count Total | 0 | 24 | 40 | 259 | 0 | 542 | 50 | 3 | 3 | 200 | 1,077 | 498 | 0 | 8 | 2,142 | 55 | 4,901 | 0 |
| Peak Hour | 0 | 12 | 21 | 145 | 0 | 326 | 29 | 1 | 1 | 107 | 591 | 281 | 0 | 3 | 1,285 | 27 | 2,829 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

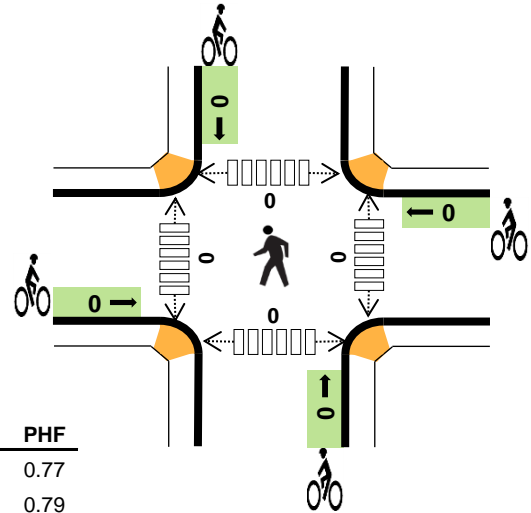
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|-----|-----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 1 | 19 | 20 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 5 | 27 | 16 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 4 | 3 | 31 | 15 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 1 | 5 | 25 | 21 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 1 | 8 | 20 | 15 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 3 | 2 | 24 | 9 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 7 | 27 | 13 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 2 | 5 | 15 | 18 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 15 | 36 | 188 | 127 | 366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 9 | 14 | 102 | 72 | 197 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



**US 24
SH 94**



Date: Tue, Jun 02, 2020
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 0.9% | 0.77 |
| WB | 2.8% | 0.79 |
| NB | 3.0% | 0.96 |
| SB | 5.0% | 0.90 |
| TOTAL | 3.3% | 0.95 |

Two-Hour Count Summaries

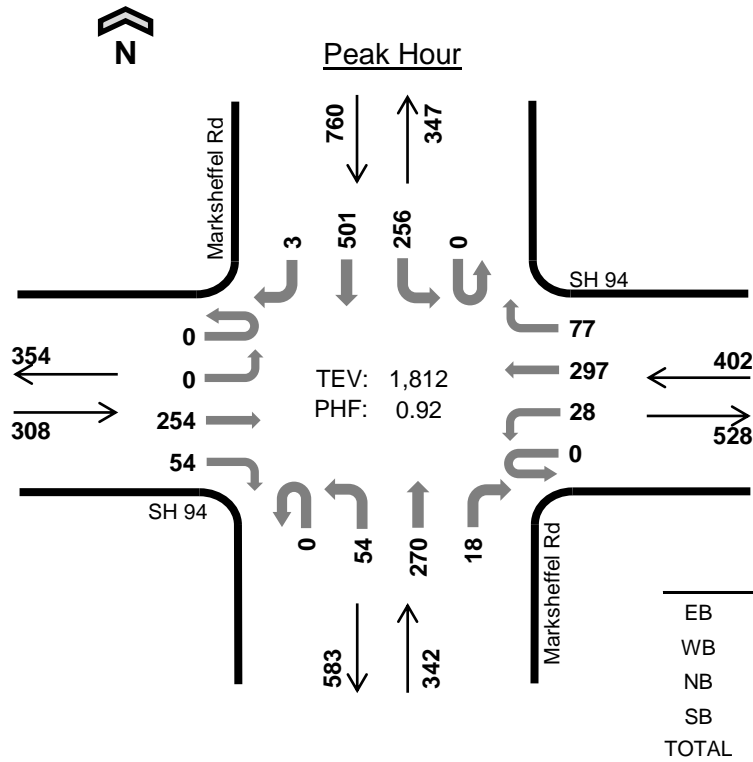
| Interval Start | SH 94 Eastbound | | | | SH 94 Westbound | | | | US 24 Northbound | | | | US 24 Southbound | | | | 15-min Total | Rolling One Hour |
|------------------|-----------------|-----------|-----------|------------|-----------------|------------|-----------|----------|------------------|------------|--------------|------------|------------------|----------|------------|-----------|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 4:00 PM | 0 | 5 | 4 | 32 | 0 | 73 | 7 | 0 | 1 | 31 | 284 | 80 | 1 | 2 | 177 | | |
| 4:15 PM | 0 | 5 | 4 | 45 | 0 | 51 | 2 | 2 | 1 | 30 | 327 | 62 | 0 | 3 | 153 | 7 | 692 | 0 |
| 4:30 PM | 0 | 4 | 13 | 33 | 0 | 66 | 7 | 0 | 1 | 29 | 300 | 46 | 0 | 0 | 194 | 7 | 700 | 0 |
| 4:45 PM | 0 | 9 | 1 | 40 | 0 | 83 | 5 | 1 | 0 | 31 | 307 | 53 | 0 | 0 | 158 | 7 | 695 | 2,791 |
| 5:00 PM | 2 | 3 | 11 | 58 | 0 | 59 | 3 | 2 | 1 | 27 | 316 | 76 | 0 | 0 | 186 | 6 | 750 | 2,837 |
| 5:15 PM | 0 | 8 | 7 | 36 | 0 | 49 | 8 | 0 | 0 | 19 | 299 | 80 | 0 | 0 | 170 | 8 | 684 | 2,829 |
| 5:30 PM | 0 | 5 | 4 | 29 | 0 | 44 | 7 | 1 | 0 | 19 | 267 | 85 | 0 | 0 | 183 | 4 | 648 | 2,777 |
| 5:45 PM | 0 | 3 | 8 | 24 | 0 | 38 | 4 | 1 | 0 | 12 | 252 | 62 | 0 | 0 | 142 | 10 | 556 | 2,638 |
| Count Total | 2 | 42 | 52 | 297 | 0 | 463 | 43 | 7 | 4 | 198 | 2,352 | 544 | 1 | 5 | 1,363 | 56 | 5,429 | 0 |
| Peak Hour | 2 | 21 | 29 | 176 | 0 | 259 | 17 | 5 | 3 | 117 | 1,250 | 237 | 0 | 3 | 691 | 27 | 2,837 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

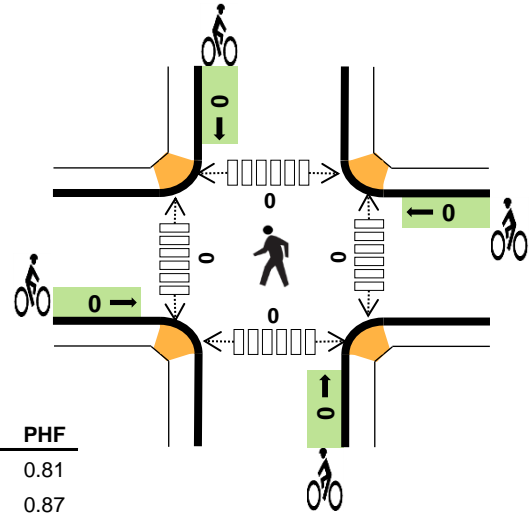
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|------------------|----------------------|----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------------------------|----------|----------|----------|----------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 4 | 16 | 12 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 3 | 11 | 12 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 1 | 1 | 20 | 12 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 1 | 1 | 14 | 5 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 3 | 4 | 7 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 1 | 2 | 10 | 6 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 2 | 1 | 7 | 11 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 1 | 2 | 3 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 6 | 17 | 85 | 72 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 2 | 8 | 49 | 36 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Marksheffel Rd SH 94



Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



Two-Hour Count Summaries

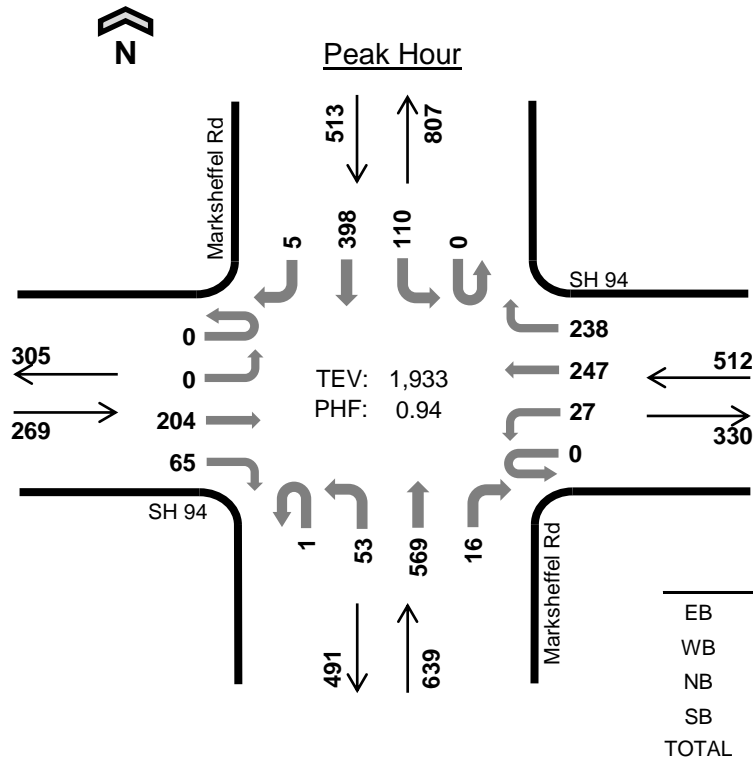
| Interval Start | SH 94 Eastbound | | | | SH 94 Westbound | | | | Marksheffel Rd Northbound | | | | Marksheffel Rd Southbound | | | | 15-min Total | Rolling One Hour |
|----------------|-----------------|----|-----|-----|-----------------|----|-----|-----|---------------------------|----|-----|----|---------------------------|-----|-----|-----|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 7:00 AM | 0 | 0 | 57 | 8 | 0 | 2 | 73 | 22 | 0 | 11 | 71 | 7 | 0 | 79 | 110 | | |
| 7:15 AM | 0 | 0 | 79 | 16 | 0 | 7 | 87 | 21 | 0 | 10 | 51 | 3 | 0 | 74 | 143 | 1 | 492 | 0 |
| 7:30 AM | 0 | 0 | 61 | 21 | 0 | 8 | 69 | 13 | 0 | 24 | 76 | 4 | 0 | 67 | 133 | 1 | 477 | 0 |
| 7:45 AM | 0 | 0 | 57 | 9 | 0 | 11 | 68 | 21 | 0 | 9 | 72 | 4 | 0 | 36 | 115 | 1 | 403 | 1,812 |
| 8:00 AM | 0 | 4 | 39 | 14 | 0 | 2 | 43 | 12 | 0 | 10 | 50 | 2 | 0 | 47 | 115 | 1 | 339 | 1,711 |
| 8:15 AM | 0 | 0 | 61 | 11 | 0 | 2 | 49 | 21 | 0 | 8 | 59 | 2 | 0 | 32 | 89 | 0 | 334 | 1,553 |
| 8:30 AM | 0 | 1 | 50 | 15 | 0 | 6 | 67 | 25 | 0 | 9 | 52 | 4 | 0 | 32 | 85 | 1 | 347 | 1,423 |
| 8:45 AM | 0 | 0 | 36 | 14 | 0 | 4 | 44 | 17 | 0 | 14 | 49 | 1 | 0 | 21 | 85 | 2 | 287 | 1,307 |
| Count Total | 0 | 5 | 440 | 108 | 0 | 42 | 500 | 152 | 0 | 95 | 480 | 27 | 0 | 388 | 875 | 7 | 3,119 | 0 |
| Peak Hour | 0 | 0 | 254 | 54 | 0 | 28 | 297 | 77 | 0 | 54 | 270 | 18 | 0 | 256 | 501 | 3 | 1,812 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

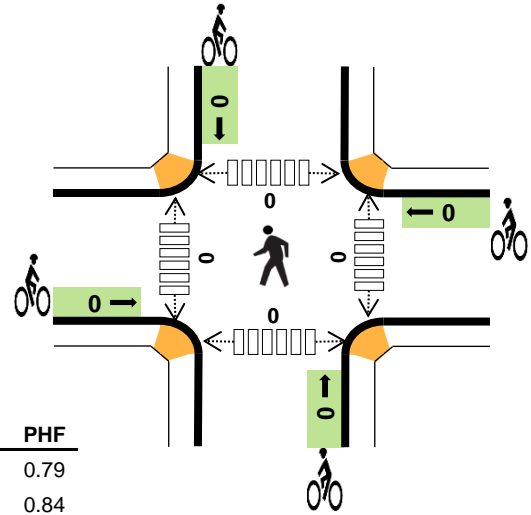
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 2 | 5 | 5 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 6 | 4 | 4 | 4 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 9 | 6 | 4 | 8 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 6 | 10 | 3 | 3 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 3 | 7 | 2 | 9 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 10 | 5 | 2 | 4 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 8 | 5 | 8 | 7 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 8 | 6 | 1 | 5 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 54 | 45 | 29 | 45 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 25 | 22 | 16 | 20 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Marksheffel Rd SH 94



Date: Tue, Jun 02, 2020
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 3.3% | 0.79 |
| WB | 2.7% | 0.84 |
| NB | 2.3% | 0.92 |
| SB | 3.9% | 0.97 |
| TOTAL | 3.0% | 0.94 |

Two-Hour Count Summaries

| Interval Start | SH 94 Eastbound | | | | SH 94 Westbound | | | | Marksheffel Rd Northbound | | | | Marksheffel Rd Southbound | | | | 15-min Total | Rolling One Hour |
|----------------|-----------------|----|-----|-----|-----------------|----|-----|-----|---------------------------|----|-----|-----|---------------------------|-----|-----|----|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 4:00 PM | 0 | 0 | 58 | 27 | 0 | 7 | 63 | 49 | 0 | 14 | 140 | 2 | 0 | 24 | 94 | | |
| 4:15 PM | 0 | 0 | 57 | 15 | 0 | 10 | 65 | 78 | 1 | 10 | 142 | 6 | 0 | 28 | 102 | 1 | 515 | 0 |
| 4:30 PM | 0 | 0 | 42 | 13 | 0 | 6 | 47 | 62 | 0 | 12 | 159 | 2 | 0 | 25 | 105 | 1 | 474 | 0 |
| 4:45 PM | 0 | 0 | 47 | 10 | 0 | 4 | 72 | 49 | 0 | 17 | 128 | 6 | 0 | 33 | 97 | 2 | 465 | 1,933 |
| 5:00 PM | 1 | 1 | 72 | 14 | 0 | 5 | 52 | 48 | 0 | 8 | 107 | 2 | 0 | 20 | 84 | 2 | 416 | 1,870 |
| 5:15 PM | 1 | 0 | 73 | 13 | 0 | 5 | 37 | 44 | 0 | 18 | 112 | 3 | 0 | 29 | 110 | 0 | 445 | 1,800 |
| 5:30 PM | 0 | 0 | 69 | 19 | 0 | 1 | 40 | 31 | 0 | 12 | 75 | 3 | 0 | 28 | 115 | 0 | 393 | 1,719 |
| 5:45 PM | 0 | 0 | 47 | 21 | 0 | 0 | 32 | 31 | 0 | 7 | 122 | 2 | 0 | 28 | 110 | 0 | 400 | 1,654 |
| Count Total | 2 | 1 | 465 | 132 | 0 | 38 | 408 | 392 | 1 | 98 | 985 | 26 | 0 | 215 | 817 | 7 | 3,587 | 0 |
| Peak Hour | 0 | 0 | 204 | 65 | 0 | 27 | 247 | 238 | 1 | 53 | 569 | 16 | 0 | 110 | 398 | 5 | 1,933 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 1 | 5 | 4 | 7 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 2 | 3 | 4 | 4 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 2 | 4 | 5 | 8 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 4 | 2 | 2 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 1 | 2 | 2 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 2 | 1 | 3 | 2 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 3 | 0 | 2 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 1 | 1 | 3 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 16 | 18 | 25 | 31 | 90 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 9 | 14 | 15 | 20 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Traffic Data Resources

Location: Marksheffel @ Space Village Village Name : MARKSHEFFEL @ SPACE VILLAGE-THUR-WSP-3-20
 Turning Movement Count Site Code : 00000000
 Weather: Clear Start Date : 3/12/2020
 Comments: Heavy truck traffic Page No : 1

Groups Printed- Unshifted

| Start Time | MARKSHEFFEL From North | | | | SPACE VILLAGE From East | | | | MARKSHEFFEL From South | | | | SPACE VILLAGE From West | | | | Int. Total |
|---------------|---------------------------|------|------|------------|----------------------------|------|------|------------|---------------------------|------|------|------------|----------------------------|------|------|------------|------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| 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 | | |
| 06:00 AM | 1 | 84 | 0 | 85 | 0 | 0 | 7 | 7 | 0 | 47 | 20 | 67 | 23 | 5 | 1 | 29 | 188 |
| 06:15 AM | 4 | 140 | 0 | 144 | 0 | 2 | 2 | 4 | 2 | 68 | 33 | 103 | 17 | 9 | 1 | 27 | 278 |
| 06:30 AM | 4 | 157 | 0 | 161 | 0 | 2 | 0 | 2 | 1 | 92 | 40 | 133 | 19 | 13 | 2 | 34 | 330 |
| 06:45 AM | 13 | 164 | 0 | 177 | 0 | 6 | 8 | 14 | 2 | 109 | 54 | 165 | 26 | 9 | 4 | 39 | 395 |
| Total | 22 | 545 | 0 | 567 | 0 | 10 | 17 | 27 | 5 | 316 | 147 | 468 | 85 | 36 | 8 | 129 | 1191 |
| 07:00 AM | 18 | 196 | 6 | 220 | 1 | 1 | 3 | 5 | 6 | 121 | 51 | 178 | 35 | 19 | 2 | 56 | 459 |
| 07:15 AM | 37 | 201 | 0 | 238 | 1 | 4 | 3 | 8 | 1 | 110 | 62 | 173 | 35 | 8 | 2 | 45 | 464 |
| 07:30 AM | 33 | 235 | 1 | 269 | 0 | 3 | 1 | 4 | 4 | 124 | 83 | 211 | 23 | 9 | 2 | 34 | 518 |
| 07:45 AM | 31 | 227 | 1 | 259 | 0 | 3 | 1 | 4 | 1 | 117 | 77 | 195 | 21 | 6 | 1 | 28 | 486 |
| Total | 119 | 859 | 8 | 986 | 2 | 11 | 8 | 21 | 12 | 472 | 273 | 757 | 114 | 42 | 7 | 163 | 1927 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:00 PM | 7 | 147 | 0 | 154 | 0 | 4 | 4 | 8 | 3 | 210 | 40 | 253 | 55 | 8 | 3 | 66 | 481 |
| 04:15 PM | 8 | 149 | 0 | 157 | 0 | 3 | 7 | 10 | 5 | 263 | 46 | 314 | 46 | 8 | 2 | 56 | 537 |
| 04:30 PM | 5 | 122 | 1 | 128 | 0 | 2 | 10 | 12 | 6 | 228 | 56 | 290 | 52 | 10 | 1 | 63 | 493 |
| 04:45 PM | 3 | 132 | 0 | 135 | 1 | 3 | 9 | 13 | 1 | 213 | 46 | 260 | 62 | 6 | 4 | 72 | 480 |
| Total | 23 | 550 | 1 | 574 | 1 | 12 | 30 | 43 | 15 | 914 | 188 | 1117 | 215 | 32 | 10 | 257 | 1991 |
| 05:00 PM | 7 | 127 | 0 | 134 | 0 | 2 | 4 | 6 | 5 | 213 | 55 | 273 | 65 | 7 | 1 | 73 | 486 |
| 05:15 PM | 4 | 155 | 2 | 161 | 0 | 1 | 2 | 3 | 1 | 226 | 48 | 275 | 58 | 10 | 4 | 72 | 511 |
| 05:30 PM | 5 | 119 | 0 | 124 | 1 | 2 | 6 | 9 | 0 | 153 | 38 | 191 | 53 | 12 | 1 | 66 | 390 |
| 05:45 PM | 2 | 111 | 0 | 113 | 0 | 3 | 1 | 4 | 0 | 152 | 31 | 183 | 46 | 6 | 2 | 54 | 354 |
| Total | 18 | 512 | 2 | 532 | 1 | 8 | 13 | 22 | 6 | 744 | 172 | 922 | 222 | 35 | 8 | 265 | 1741 |
| Grand Total | 182 | 2466 | 11 | 2659 | 4 | 41 | 68 | 113 | 38 | 2446 | 780 | 3264 | 636 | 145 | 33 | 814 | 6850 |
| Apprch % | 6.8 | 92.7 | 0.4 | | 3.5 | 36.3 | 60.2 | | 1.2 | 74.9 | 23.9 | | 78.1 | 17.8 | 4.1 | | |
| Total % | 2.7 | 36 | 0.2 | 38.8 | 0.1 | 0.6 | 1 | 1.6 | 0.6 | 35.7 | 11.4 | 47.6 | 9.3 | 2.1 | 0.5 | 11.9 | |

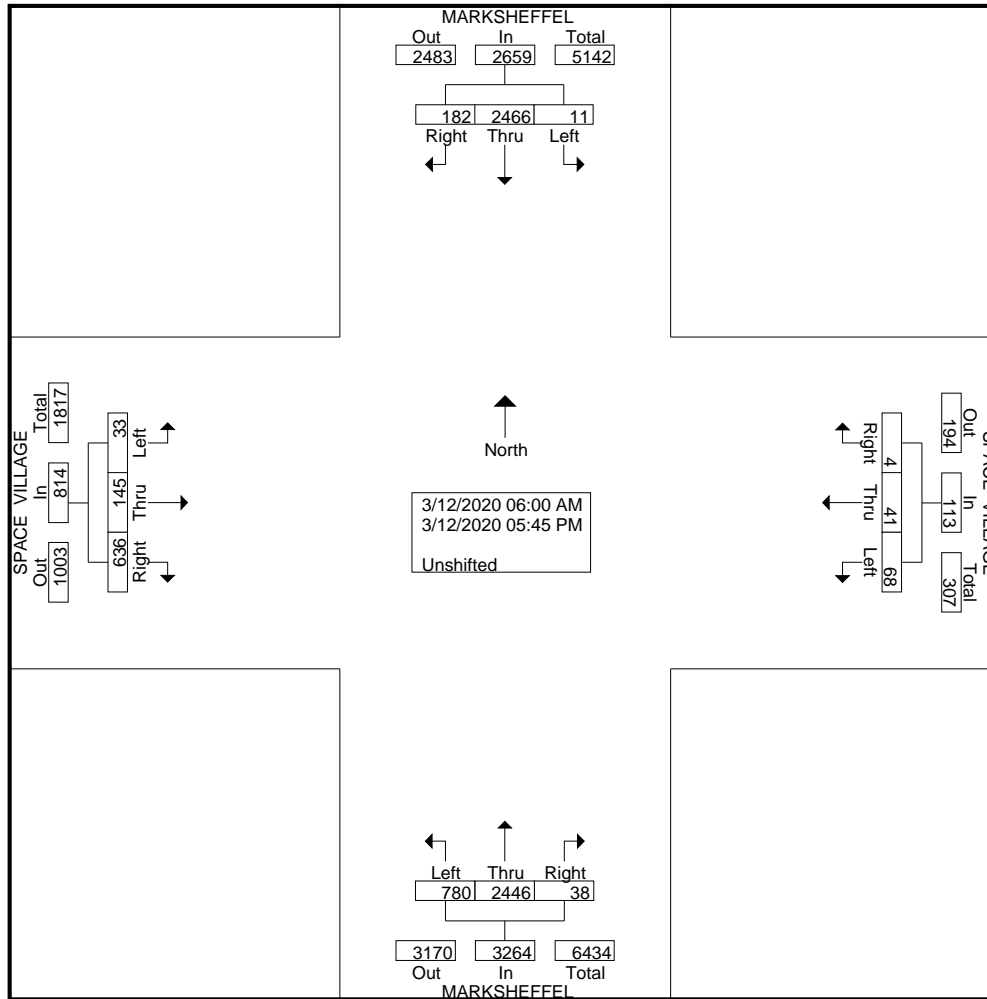
Traffic Data Resources

File Name : MARKSHEFFEL @ SPACE VILLAGE-THUR-WSP-3-20

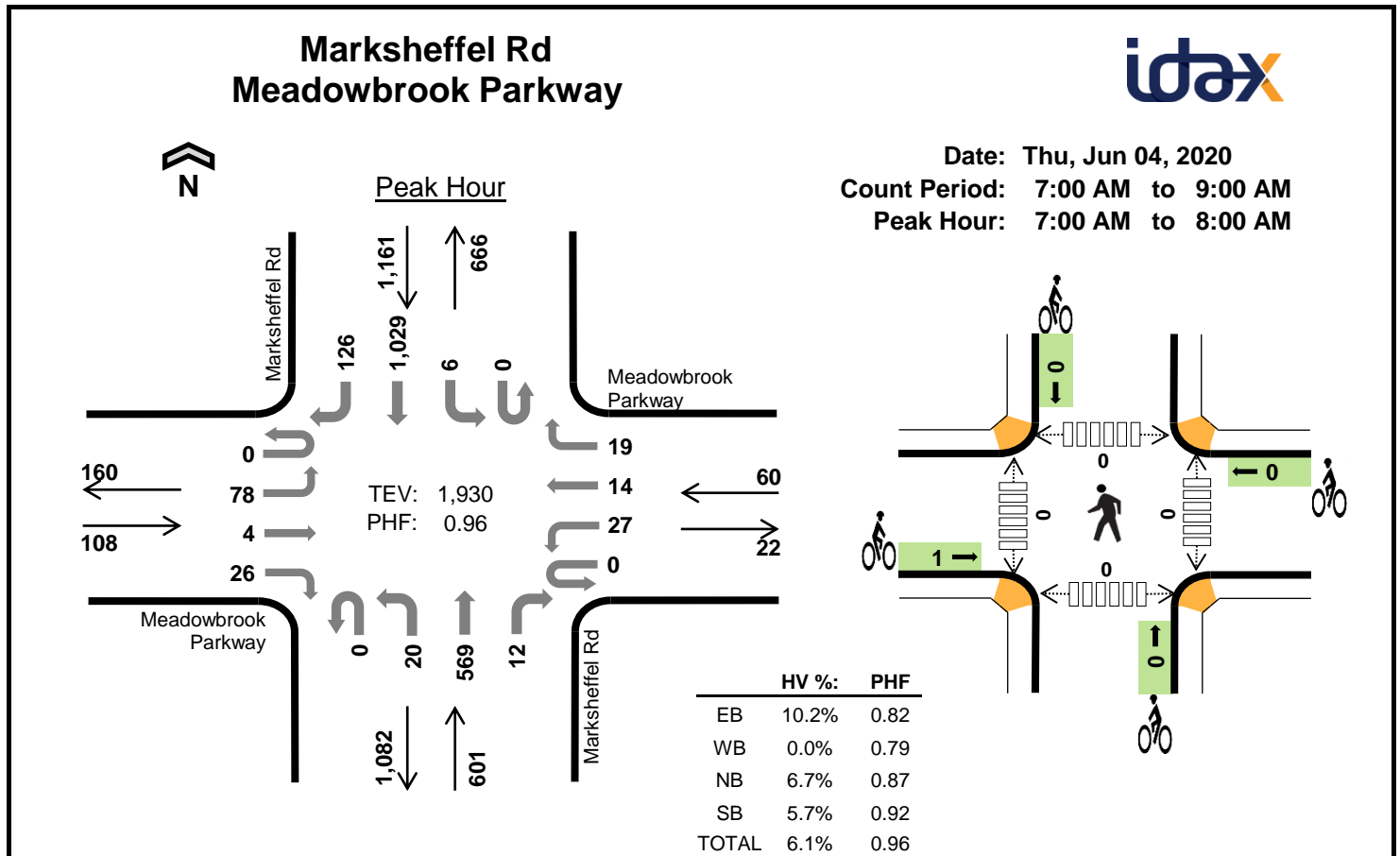
Site Code : 00000000

Start Date : 3/12/2020

Page No : 2



| Start Time | MARKSHEFFEL From North | | | | SPACE VILLAGE From East | | | | MARKSHEFFEL From South | | | | SPACE VILLAGE From West | | | | Int. Total |
|--|------------------------|------|------|------------|-------------------------|------|------|------------|------------------------|------|------|------------|-------------------------|------|------|------------|------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| Peak Hour Analysis From 06:00 AM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 8 | 149 | 0 | 157 | 0 | 3 | 7 | 10 | 5 | 263 | 46 | 314 | 46 | 8 | 2 | 56 | 537 |
| 04:30 PM | 5 | 122 | 1 | 128 | 0 | 2 | 10 | 12 | 6 | 228 | 56 | 290 | 52 | 10 | 1 | 63 | 493 |
| 04:45 PM | 3 | 132 | 0 | 135 | 1 | 3 | 9 | 13 | 1 | 213 | 46 | 260 | 62 | 6 | 4 | 72 | 480 |
| 05:00 PM | 7 | 127 | 0 | 134 | 0 | 2 | 4 | 6 | 5 | 213 | 55 | 273 | 65 | 7 | 1 | 73 | 486 |
| Total Volume | 23 | 530 | 1 | 554 | 1 | 10 | 30 | 41 | 17 | 917 | 203 | 1137 | 225 | 31 | 8 | 264 | 1996 |
| % App. Total | 4.2 | 95.7 | 0.2 | | 2.4 | 24.4 | 73.2 | | 1.5 | 80.7 | 17.9 | | 85.2 | 11.7 | 3 | | |
| PHF | .719 | .889 | .250 | .882 | .250 | .833 | .750 | .788 | .708 | .872 | .906 | .905 | .865 | .775 | .500 | .904 | .929 |



Two-Hour Count Summaries

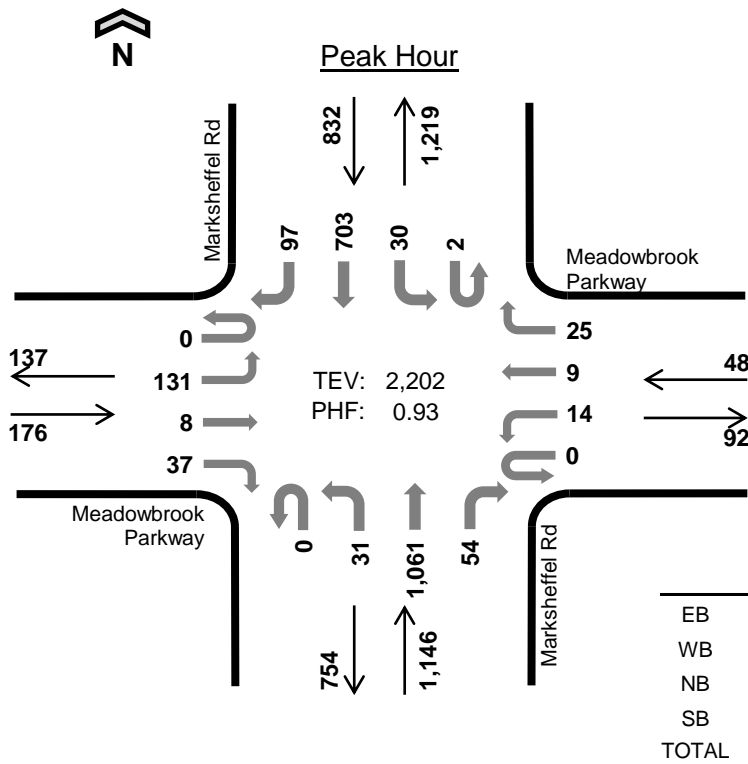
| Interval Start | Meadowbrook Parkway | | | | Meadowbrook Parkway | | | | Marksheffel Rd | | | | Marksheffel Rd | | | | 15-min Total | Rolling One Hour |
|----------------|---------------------|-----|----|----|---------------------|----|----|----|----------------|----|-----|----|----------------|----|-------|-----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 12 | 2 | 7 | 0 | 11 | 3 | 5 | 0 | 3 | 167 | 2 | 0 | 0 | 268 | 24 | 504 | 0 |
| 7:15 AM | 0 | 24 | 1 | 5 | 0 | 5 | 3 | 2 | 0 | 4 | 144 | 4 | 0 | 0 | 256 | 26 | 474 | 0 |
| 7:30 AM | 0 | 18 | 1 | 5 | 0 | 5 | 4 | 6 | 0 | 8 | 130 | 3 | 0 | 3 | 276 | 38 | 497 | 0 |
| 7:45 AM | 0 | 24 | 0 | 9 | 0 | 6 | 4 | 6 | 0 | 5 | 128 | 3 | 0 | 3 | 229 | 38 | 455 | 1,930 |
| 8:00 AM | 0 | 25 | 2 | 9 | 0 | 3 | 4 | 6 | 0 | 9 | 100 | 7 | 0 | 5 | 219 | 24 | 413 | 1,839 |
| 8:15 AM | 0 | 21 | 1 | 3 | 0 | 4 | 2 | 8 | 0 | 2 | 98 | 3 | 1 | 3 | 159 | 25 | 330 | 1,695 |
| 8:30 AM | 0 | 7 | 2 | 4 | 0 | 8 | 4 | 5 | 0 | 4 | 127 | 5 | 0 | 2 | 200 | 27 | 395 | 1,593 |
| 8:45 AM | 0 | 24 | 1 | 4 | 0 | 11 | 2 | 6 | 0 | 4 | 103 | 4 | 0 | 2 | 158 | 30 | 349 | 1,487 |
| Count Total | 0 | 155 | 10 | 46 | 0 | 53 | 26 | 44 | 0 | 39 | 997 | 31 | 1 | 18 | 1,765 | 232 | 3,417 | 0 |
| Peak Hour | 0 | 78 | 4 | 26 | 0 | 27 | 14 | 19 | 0 | 20 | 569 | 12 | 0 | 6 | 1,029 | 126 | 1,930 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

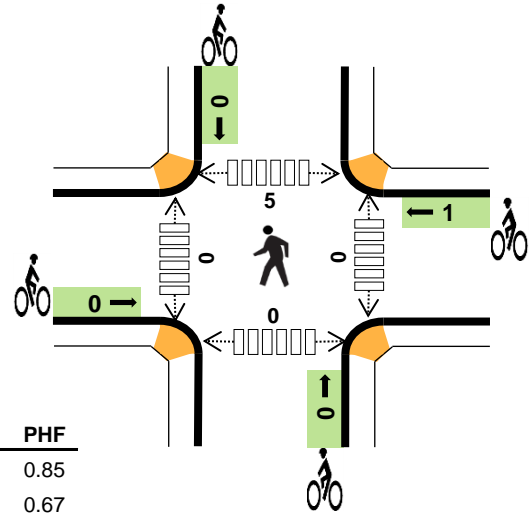
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|-----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 2 | 0 | 8 | 21 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 3 | 0 | 9 | 14 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 4 | 0 | 10 | 16 | 30 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 2 | 0 | 13 | 15 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 3 | 0 | 12 | 10 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 4 | 0 | 4 | 12 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 8:30 AM | 2 | 0 | 6 | 7 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 1 | 9 | 12 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 20 | 1 | 71 | 107 | 199 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Peak Hour | 11 | 0 | 40 | 66 | 117 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |



Marksheffel Rd Meadowbrook Parkway



Date: Thu, Jun 04, 2020
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:00 PM to 5:00 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 1.7% | 0.85 |
| WB | 0.0% | 0.67 |
| NB | 1.5% | 0.90 |
| SB | 3.8% | 0.87 |
| TOTAL | 2.4% | 0.93 |

Two-Hour Count Summaries

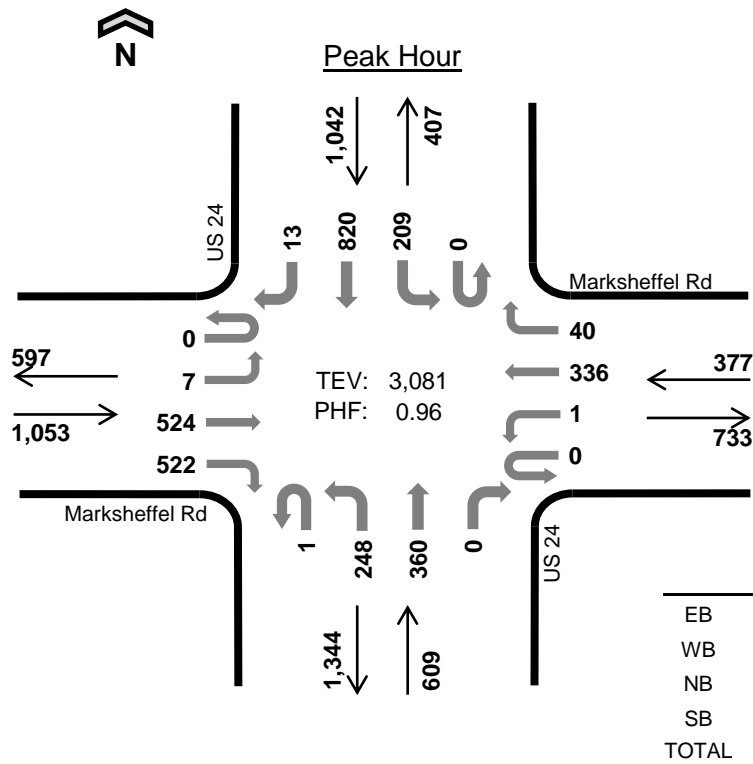
| Interval Start | Meadowbrook Parkway | | | | Meadowbrook Parkway | | | | Marksheffel Rd | | | | Marksheffel Rd | | | | 15-min Total | Rolling One Hour |
|------------------|---------------------|------------|----------|-----------|---------------------|-----------|----------|-----------|----------------|-----------|--------------|-----------|----------------|-----------|------------|-----------|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 43 | 0 | 5 | 0 | 5 | 3 | 10 | 0 | 12 | 227 | 7 | 0 | 5 | 183 | 21 | 521 | 0 |
| 4:15 PM | 0 | 29 | 3 | 9 | 0 | 5 | 2 | 6 | 0 | 8 | 294 | 16 | 1 | 6 | 164 | 25 | 568 | 0 |
| 4:30 PM | 0 | 39 | 2 | 11 | 0 | 1 | 1 | 5 | 0 | 5 | 260 | 11 | 1 | 10 | 150 | 27 | 523 | 0 |
| 4:45 PM | 0 | 20 | 3 | 12 | 0 | 3 | 3 | 4 | 0 | 6 | 280 | 20 | 0 | 9 | 206 | 24 | 590 | 2,202 |
| 5:00 PM | 0 | 42 | 5 | 10 | 0 | 6 | 0 | 5 | 0 | 5 | 226 | 12 | 0 | 10 | 173 | 13 | 507 | 2,188 |
| 5:15 PM | 0 | 29 | 3 | 10 | 0 | 4 | 0 | 9 | 0 | 3 | 260 | 14 | 0 | 7 | 193 | 23 | 555 | 2,175 |
| 5:30 PM | 0 | 18 | 3 | 9 | 0 | 4 | 1 | 5 | 0 | 3 | 214 | 13 | 0 | 12 | 200 | 29 | 511 | 2,163 |
| 5:45 PM | 0 | 24 | 0 | 4 | 0 | 3 | 0 | 8 | 1 | 4 | 194 | 10 | 0 | 7 | 123 | 12 | 390 | 1,963 |
| Count Total | 0 | 244 | 19 | 70 | 0 | 31 | 10 | 52 | 1 | 46 | 1,955 | 103 | 2 | 66 | 1,392 | 174 | 4,165 | 0 |
| Peak Hour | 0 | 131 | 8 | 37 | 0 | 14 | 9 | 25 | 0 | 31 | 1,061 | 54 | 2 | 30 | 703 | 97 | 2,202 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|------------------|----------------------|----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------------------------|----------|----------|----------|----------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 0 | 5 | 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 2 | 0 | 3 | 6 | 11 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 |
| 4:30 PM | 0 | 0 | 4 | 7 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 4:45 PM | 1 | 0 | 5 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 2 | 0 | 2 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 5 | 6 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 2 | 0 | 2 | 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 2 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 7 | 0 | 28 | 57 | 92 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 |
| Peak Hour | 3 | 0 | 17 | 32 | 52 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 |

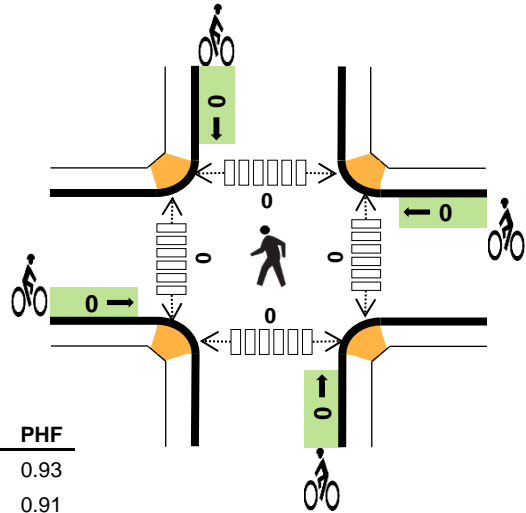


US 24 Marksheffel Rd



Date: Thu, Jun 04, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

| | HV %: | PHF |
|-------|-------|------|
| EB | 5.5% | 0.93 |
| WB | 3.2% | 0.91 |
| NB | 10.5% | 0.93 |
| SB | 3.9% | 0.94 |
| TOTAL | 5.7% | 0.96 |



Two-Hour Count Summaries

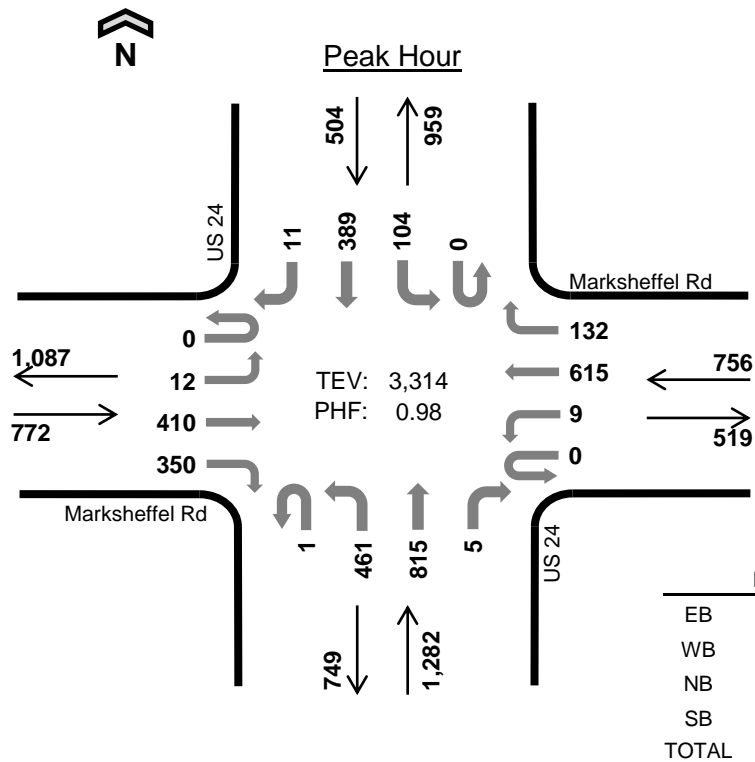
| Interval Start | Marksheffel Rd Eastbound | | | | Marksheffel Rd Westbound | | | | US 24 Northbound | | | | US 24 Southbound | | | | 15-min Total | Rolling One Hour |
|----------------|--------------------------|----|-----|-----|--------------------------|----|-----|----|------------------|-----|-----|----|------------------|-----|-------|-----|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 7:00 AM | 0 | 0 | 122 | 138 | 0 | 0 | 94 | 6 | 0 | 68 | 96 | 0 | 0 | 50 | 203 | | |
| 7:15 AM | 0 | 0 | 155 | 127 | 0 | 0 | 96 | 8 | 1 | 59 | 96 | 0 | 0 | 43 | 213 | 3 | 801 | 0 |
| 7:30 AM | 0 | 3 | 123 | 142 | 0 | 1 | 80 | 14 | 0 | 62 | 78 | 0 | 0 | 59 | 214 | 5 | 781 | 0 |
| 7:45 AM | 0 | 4 | 124 | 115 | 0 | 0 | 66 | 12 | 0 | 59 | 90 | 0 | 0 | 57 | 190 | 4 | 721 | 3,081 |
| 8:00 AM | 0 | 8 | 106 | 109 | 0 | 2 | 57 | 17 | 0 | 50 | 75 | 0 | 0 | 37 | 125 | 7 | 593 | 2,896 |
| 8:15 AM | 0 | 1 | 87 | 90 | 0 | 0 | 48 | 16 | 0 | 50 | 73 | 1 | 0 | 42 | 138 | 1 | 547 | 2,642 |
| 8:30 AM | 0 | 3 | 83 | 105 | 0 | 1 | 84 | 13 | 0 | 48 | 71 | 0 | 0 | 30 | 155 | 1 | 594 | 2,455 |
| 8:45 AM | 0 | 0 | 92 | 85 | 0 | 2 | 58 | 8 | 0 | 52 | 91 | 0 | 0 | 39 | 162 | 5 | 594 | 2,328 |
| Count Total | 0 | 19 | 892 | 911 | 0 | 6 | 583 | 94 | 1 | 448 | 670 | 1 | 0 | 357 | 1,400 | 27 | 5,409 | 0 |
| Peak Hour | 0 | 7 | 524 | 522 | 0 | 1 | 336 | 40 | 1 | 248 | 360 | 0 | 0 | 209 | 820 | 13 | 3,081 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

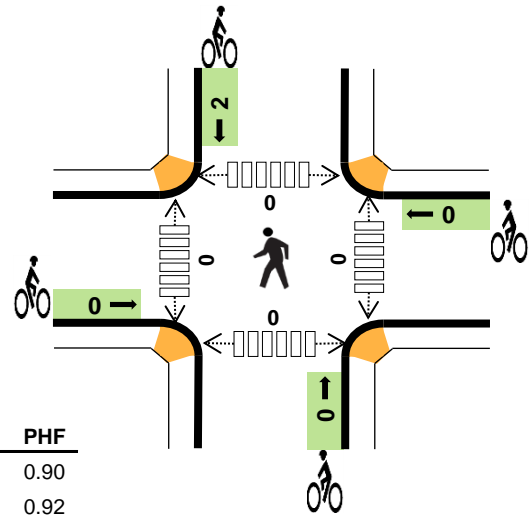
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|-----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 18 | 3 | 10 | 8 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 12 | 3 | 17 | 10 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 14 | 4 | 21 | 13 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 14 | 2 | 16 | 10 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 9 | 3 | 18 | 11 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 9 | 1 | 12 | 7 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 9 | 2 | 10 | 9 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 11 | 4 | 22 | 21 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 96 | 22 | 126 | 89 | 333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 58 | 12 | 64 | 41 | 175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



US 24 Marksheffel Rd



Date: Thu, Jun 04, 2020
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:30 PM to 5:30 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 2.8% | 0.90 |
| WB | 1.3% | 0.92 |
| NB | 1.7% | 0.97 |
| SB | 2.8% | 0.91 |
| TOTAL | 2.1% | 0.98 |

Two-Hour Count Summaries

| Interval Start | Marksheffel Rd | | | | Marksheffel Rd | | | | US 24 | | | | US 24 | | | | 15-min Total | Rolling One Hour |
|------------------|----------------|-----------|------------|------------|----------------|----------|------------|------------|------------|------------|------------|----------|------------|------------|------------|-----------|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 2 | 102 | 84 | 0 | 3 | 163 | 33 | 0 | 78 | 159 | 0 | 1 | 21 | 132 | 0 | 778 | 0 |
| 4:15 PM | 0 | 7 | 82 | 73 | 0 | 1 | 172 | 39 | 2 | 131 | 166 | 1 | 0 | 32 | 121 | 4 | 831 | 0 |
| 4:30 PM | 0 | 4 | 92 | 73 | 0 | 4 | 165 | 37 | 0 | 119 | 207 | 0 | 0 | 23 | 100 | 2 | 826 | 0 |
| 4:45 PM | 0 | 5 | 117 | 92 | 0 | 1 | 162 | 34 | 0 | 128 | 185 | 4 | 0 | 17 | 90 | 5 | 840 | 3,275 |
| 5:00 PM | 0 | 3 | 96 | 92 | 0 | 2 | 140 | 34 | 1 | 96 | 210 | 1 | 0 | 27 | 101 | 1 | 804 | 3,301 |
| 5:15 PM | 0 | 0 | 105 | 93 | 0 | 2 | 148 | 27 | 0 | 118 | 213 | 0 | 0 | 37 | 98 | 3 | 844 | 3,314 |
| 5:30 PM | 0 | 3 | 111 | 87 | 0 | 1 | 115 | 29 | 0 | 108 | 178 | 1 | 0 | 15 | 109 | 2 | 759 | 3,247 |
| 5:45 PM | 0 | 3 | 78 | 62 | 0 | 6 | 110 | 20 | 0 | 96 | 122 | 0 | 0 | 24 | 91 | 1 | 613 | 3,020 |
| Count Total | 0 | 27 | 783 | 656 | 0 | 20 | 1,175 | 253 | 3 | 874 | 1,440 | 7 | 1 | 196 | 842 | 18 | 6,295 | 0 |
| Peak Hour | 0 | 12 | 410 | 350 | 0 | 9 | 615 | 132 | 1 | 461 | 815 | 5 | 0 | 104 | 389 | 11 | 3,314 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

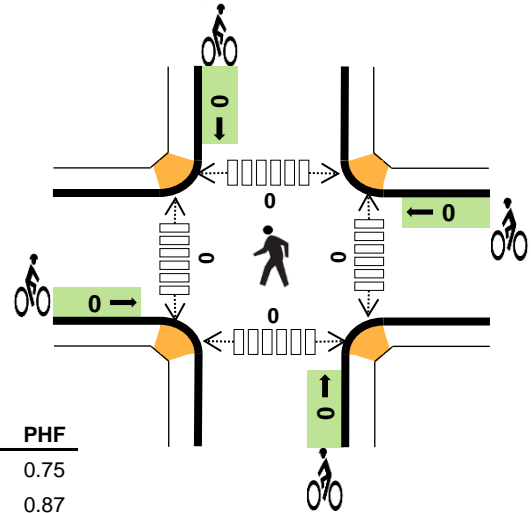
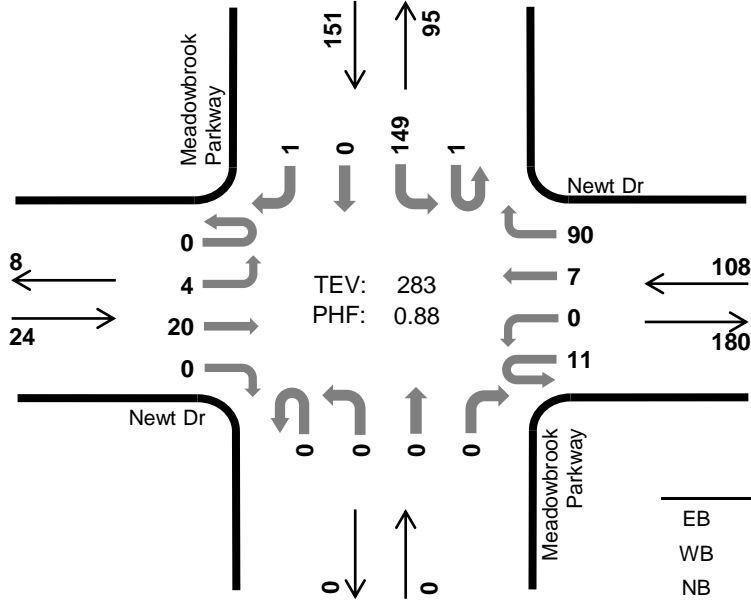
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|------------------|----------------------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------------------------|----------|----------|----------|----------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 12 | 3 | 7 | 8 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 6 | 2 | 10 | 5 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 4 | 4 | 6 | 6 | 20 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 6 | 2 | 6 | 1 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 7 | 2 | 6 | 3 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 5 | 2 | 4 | 4 | 15 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 6 | 0 | 5 | 5 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 2 | 2 | 3 | 2 | 9 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 48 | 17 | 47 | 34 | 146 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 22 | 10 | 22 | 14 | 68 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |

Meadowbrook Parkway Newt Dr



Peak Hour

Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



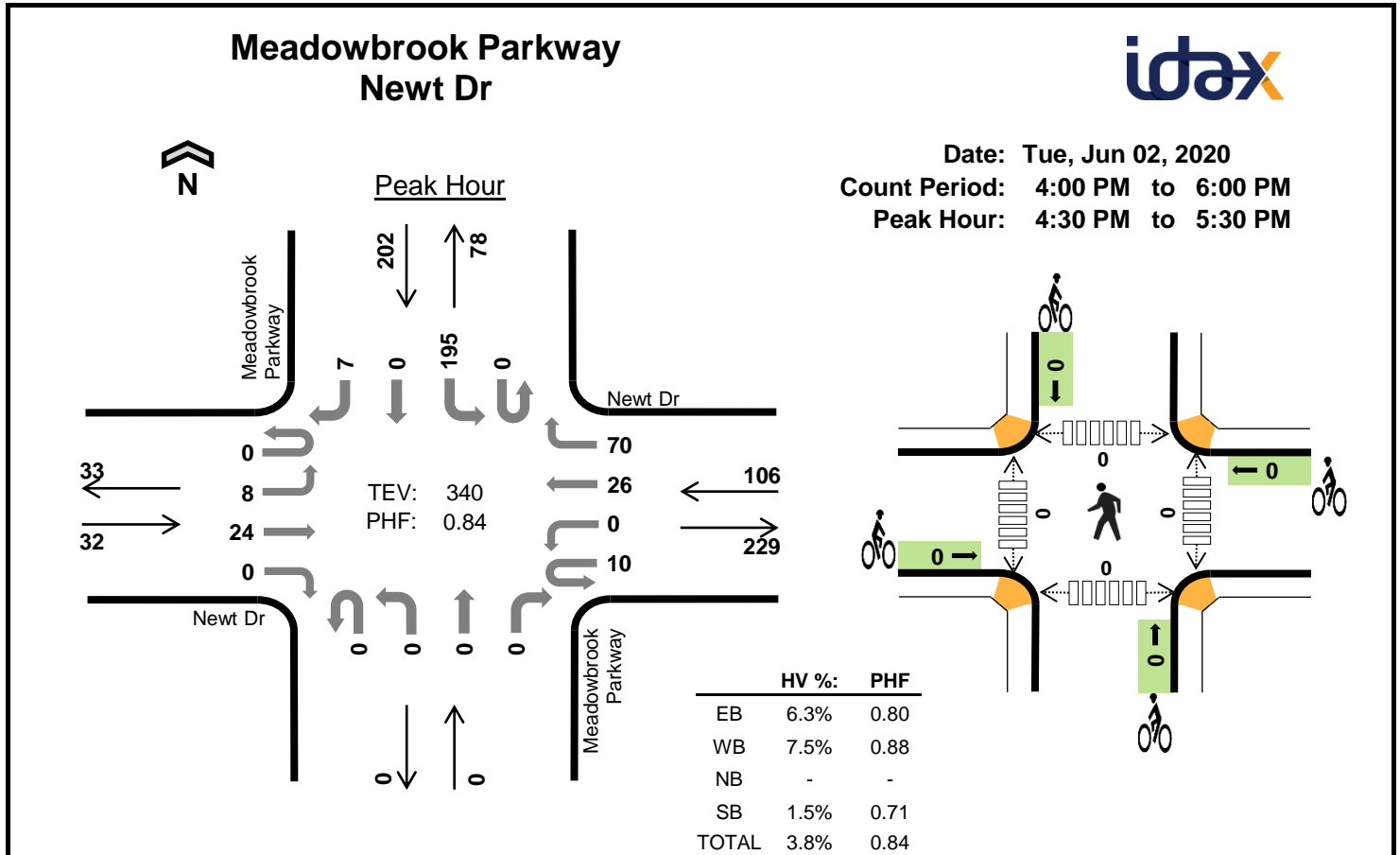
| | HV %: | PHF |
|-------|-------|------|
| EB | 0.0% | 0.75 |
| WB | 1.9% | 0.87 |
| NB | - | - |
| SB | 6.0% | 0.74 |
| TOTAL | 3.9% | 0.88 |

Two-Hour Count Summaries

| Interval Start | Newt Dr | | | | Newt Dr | | | | Meadowbrook Parkway | | | | Meadowbrook Parkway | | | | 15-min Total | Rolling One Hour |
|----------------|-----------|----|----|----|-----------|----|----|-----|---------------------|----|----|----|---------------------|-----|----|----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 3 | 5 | 0 | 4 | 0 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 1 | 76 | 0 |
| 7:15 AM | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 1 | 31 | 0 | 0 | 63 | 0 |
| 7:30 AM | 0 | 1 | 3 | 0 | 2 | 0 | 4 | 19 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 80 | 0 |
| 7:45 AM | 0 | 0 | 7 | 0 | 1 | 0 | 2 | 28 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 64 | 283 |
| 8:00 AM | 0 | 4 | 2 | 0 | 4 | 0 | 3 | 24 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 69 | 276 |
| 8:15 AM | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 11 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 52 | 265 |
| 8:30 AM | 0 | 0 | 4 | 0 | 4 | 0 | 2 | 18 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 53 | 238 |
| 8:45 AM | 0 | 1 | 5 | 0 | 4 | 0 | 2 | 17 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 59 | 233 |
| Count Total | 0 | 9 | 35 | 0 | 23 | 0 | 17 | 160 | 0 | 0 | 0 | 0 | 1 | 270 | 0 | 1 | 516 | 0 |
| Peak Hour | 0 | 4 | 20 | 0 | 11 | 0 | 7 | 90 | 0 | 0 | 0 | 0 | 1 | 149 | 0 | 1 | 283 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 1 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 1 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 6 | 0 | 15 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 2 | 0 | 9 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Two-Hour Count Summaries

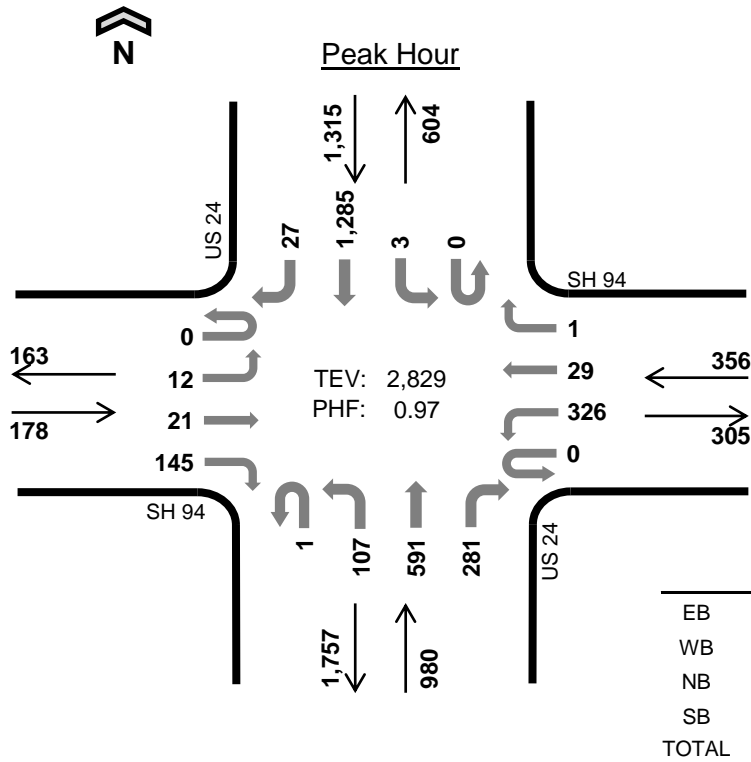
| Interval Start | Newt Dr | | | | Newt Dr | | | | Meadowbrook Parkway | | | | Meadowbrook Parkway | | | | 15-min Total | Rolling One Hour |
|----------------|-----------|----|----|----|-----------|----|----|-----|---------------------|----|----|----|---------------------|-----|----|----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 2 | 2 | 0 | 4 | 0 | 6 | 26 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 78 | 0 |
| 4:15 PM | 0 | 2 | 3 | 0 | 4 | 0 | 6 | 15 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 1 | 75 | 0 |
| 4:30 PM | 0 | 2 | 6 | 0 | 2 | 0 | 3 | 23 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 4 | 82 | 0 |
| 4:45 PM | 0 | 1 | 8 | 0 | 2 | 0 | 7 | 21 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 80 | 315 |
| 5:00 PM | 0 | 2 | 3 | 0 | 4 | 0 | 12 | 9 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 1 | 101 | 338 |
| 5:15 PM | 0 | 3 | 7 | 0 | 2 | 0 | 4 | 17 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 2 | 77 | 340 |
| 5:30 PM | 0 | 0 | 4 | 0 | 6 | 0 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 49 | 307 |
| 5:45 PM | 0 | 1 | 4 | 0 | 2 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 1 | 50 | 277 |
| Count Total | 0 | 13 | 37 | 0 | 26 | 0 | 48 | 126 | 0 | 0 | 0 | 0 | 0 | 333 | 0 | 9 | 592 | 0 |
| Peak Hour | 0 | 8 | 24 | 0 | 10 | 0 | 26 | 70 | 0 | 0 | 0 | 0 | 0 | 195 | 0 | 7 | 340 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

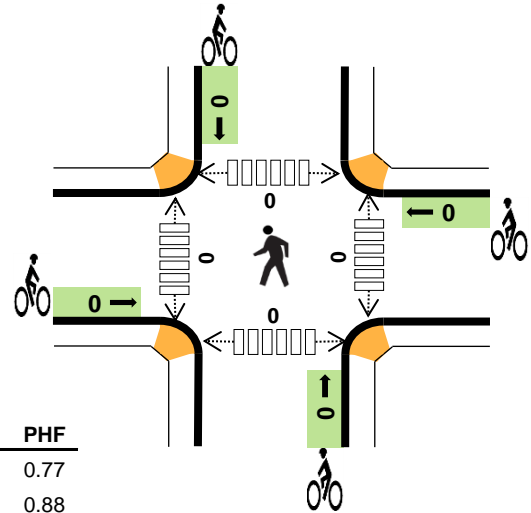
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 4 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 2 | 2 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 2 | 10 | 0 | 5 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 2 | 8 | 0 | 3 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



**US 24
SH 94**



Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



Two-Hour Count Summaries

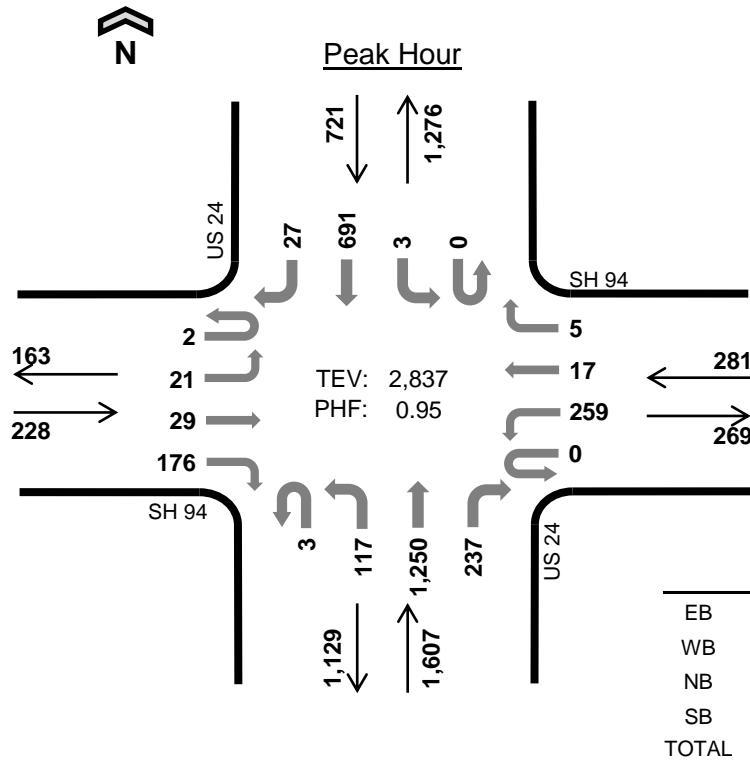
| Interval Start | SH 94 | | | | SH 94 | | | | US 24 | | | | US 24 | | | | 15-min Total | Rolling One Hour |
|----------------|-----------|----|----|-----|-----------|-----|----|----|------------|-----|-------|-----|------------|----|-------|----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 1 | 6 | 45 | 0 | 81 | 10 | 0 | 0 | 27 | 147 | 65 | 0 | 1 | 319 | 7 | 709 | 0 |
| 7:15 AM | 0 | 6 | 7 | 21 | 0 | 90 | 10 | 1 | 0 | 25 | 145 | 79 | 0 | 0 | 336 | 8 | 728 | 0 |
| 7:30 AM | 0 | 5 | 6 | 47 | 0 | 85 | 5 | 0 | 0 | 20 | 152 | 80 | 0 | 0 | 310 | 6 | 716 | 0 |
| 7:45 AM | 0 | 0 | 2 | 32 | 0 | 70 | 4 | 0 | 1 | 35 | 147 | 57 | 0 | 2 | 320 | 6 | 676 | 2,829 |
| 8:00 AM | 0 | 4 | 4 | 25 | 0 | 51 | 7 | 1 | 0 | 28 | 120 | 54 | 0 | 3 | 230 | 5 | 532 | 2,652 |
| 8:15 AM | 0 | 4 | 4 | 34 | 0 | 51 | 6 | 0 | 1 | 17 | 107 | 64 | 0 | 1 | 207 | 10 | 506 | 2,430 |
| 8:30 AM | 0 | 1 | 4 | 26 | 0 | 66 | 2 | 0 | 0 | 25 | 128 | 55 | 0 | 0 | 223 | 4 | 534 | 2,248 |
| 8:45 AM | 0 | 3 | 7 | 29 | 0 | 48 | 6 | 1 | 1 | 23 | 131 | 44 | 0 | 1 | 197 | 9 | 500 | 2,072 |
| Count Total | 0 | 24 | 40 | 259 | 0 | 542 | 50 | 3 | 3 | 200 | 1,077 | 498 | 0 | 8 | 2,142 | 55 | 4,901 | 0 |
| Peak Hour | 0 | 12 | 21 | 145 | 0 | 326 | 29 | 1 | 1 | 107 | 591 | 281 | 0 | 3 | 1,285 | 27 | 2,829 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

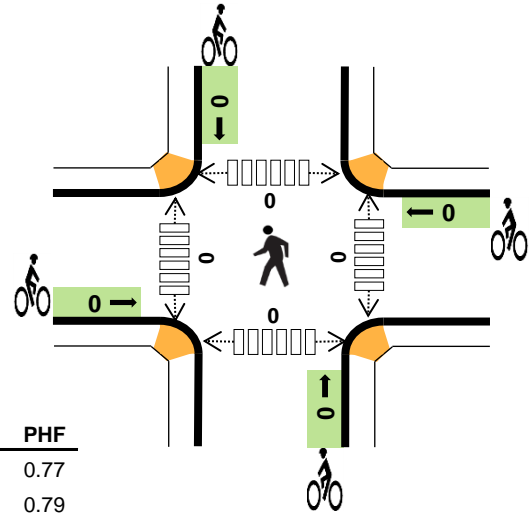
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|-----|-----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 1 | 19 | 20 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 5 | 27 | 16 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 4 | 3 | 31 | 15 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 1 | 5 | 25 | 21 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 1 | 8 | 20 | 15 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 3 | 2 | 24 | 9 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 7 | 27 | 13 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 2 | 5 | 15 | 18 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 15 | 36 | 188 | 127 | 366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 9 | 14 | 102 | 72 | 197 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



**US 24
SH 94**



Date: Tue, Jun 02, 2020
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



Two-Hour Count Summaries

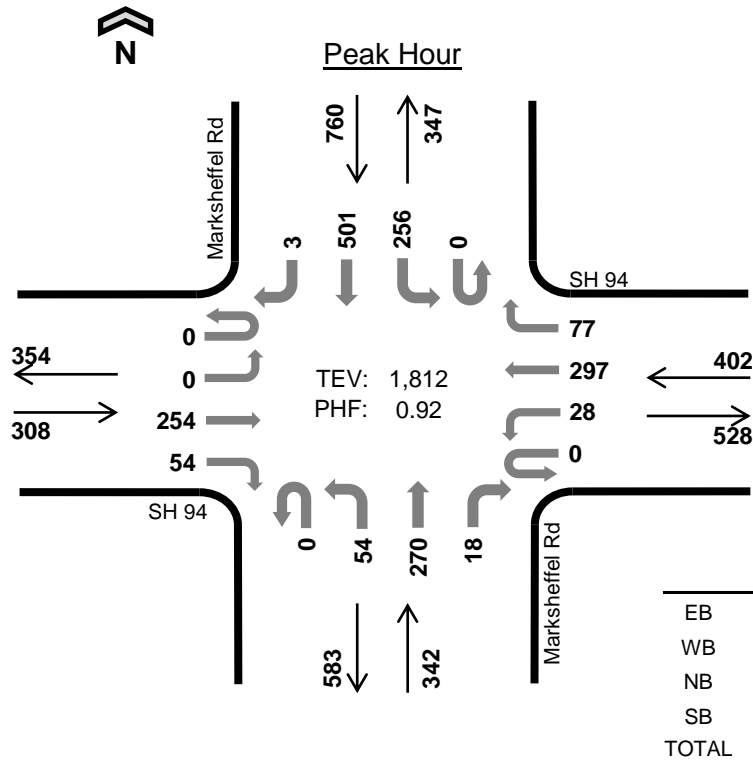
| Interval Start | SH 94 Eastbound | | | | SH 94 Westbound | | | | US 24 Northbound | | | | US 24 Southbound | | | | 15-min Total | Rolling One Hour |
|------------------|-----------------|-----------|-----------|------------|-----------------|------------|-----------|----------|------------------|------------|--------------|------------|------------------|----------|------------|-----------|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 4:00 PM | 0 | 5 | 4 | 32 | 0 | 73 | 7 | 0 | 1 | 31 | 284 | 80 | 1 | 2 | 177 | | |
| 4:15 PM | 0 | 5 | 4 | 45 | 0 | 51 | 2 | 2 | 1 | 30 | 327 | 62 | 0 | 3 | 153 | 7 | 692 | 0 |
| 4:30 PM | 0 | 4 | 13 | 33 | 0 | 66 | 7 | 0 | 1 | 29 | 300 | 46 | 0 | 0 | 194 | 7 | 700 | 0 |
| 4:45 PM | 0 | 9 | 1 | 40 | 0 | 83 | 5 | 1 | 0 | 31 | 307 | 53 | 0 | 0 | 158 | 7 | 695 | 2,791 |
| 5:00 PM | 2 | 3 | 11 | 58 | 0 | 59 | 3 | 2 | 1 | 27 | 316 | 76 | 0 | 0 | 186 | 6 | 750 | 2,837 |
| 5:15 PM | 0 | 8 | 7 | 36 | 0 | 49 | 8 | 0 | 0 | 19 | 299 | 80 | 0 | 0 | 170 | 8 | 684 | 2,829 |
| 5:30 PM | 0 | 5 | 4 | 29 | 0 | 44 | 7 | 1 | 0 | 19 | 267 | 85 | 0 | 0 | 183 | 4 | 648 | 2,777 |
| 5:45 PM | 0 | 3 | 8 | 24 | 0 | 38 | 4 | 1 | 0 | 12 | 252 | 62 | 0 | 0 | 142 | 10 | 556 | 2,638 |
| Count Total | 2 | 42 | 52 | 297 | 0 | 463 | 43 | 7 | 4 | 198 | 2,352 | 544 | 1 | 5 | 1,363 | 56 | 5,429 | 0 |
| Peak Hour | 2 | 21 | 29 | 176 | 0 | 259 | 17 | 5 | 3 | 117 | 1,250 | 237 | 0 | 3 | 691 | 27 | 2,837 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

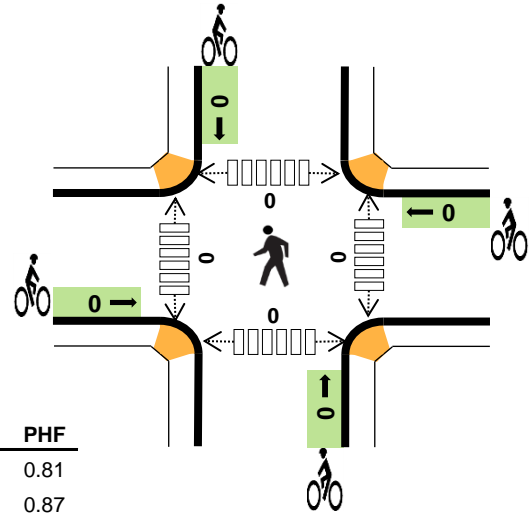
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|------------------|----------------------|----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------------------------|----------|----------|----------|----------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 4 | 16 | 12 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 3 | 11 | 12 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 1 | 1 | 20 | 12 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 1 | 1 | 14 | 5 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 3 | 4 | 7 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 1 | 2 | 10 | 6 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 2 | 1 | 7 | 11 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 1 | 2 | 3 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 6 | 17 | 85 | 72 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 2 | 8 | 49 | 36 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Marksheffel Rd SH 94



Date: Tue, Jun 02, 2020
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



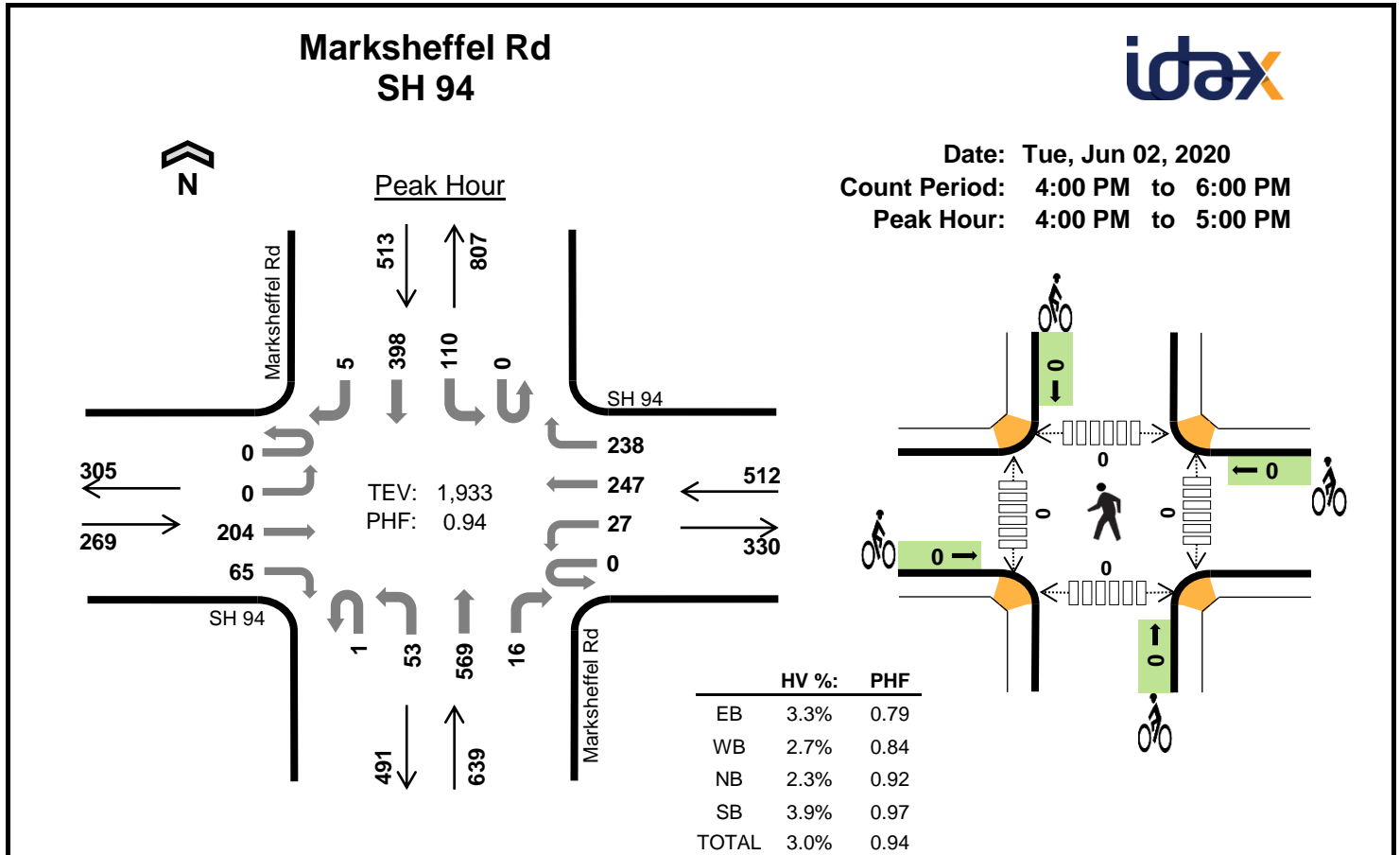
| | HV %: | PHF |
|-------|-------|------|
| EB | 8.1% | 0.81 |
| WB | 5.5% | 0.87 |
| NB | 4.7% | 0.82 |
| SB | 2.6% | 0.87 |
| TOTAL | 4.6% | 0.92 |

Two-Hour Count Summaries

| Interval Start | SH 94 Eastbound | | | | SH 94 Westbound | | | | Marksheffel Rd Northbound | | | | Marksheffel Rd Southbound | | | | 15-min Total | Rolling One Hour |
|----------------|-----------------|----|-----|-----|-----------------|----|-----|-----|---------------------------|----|-----|----|---------------------------|-----|-----|-----|--------------|------------------|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| | 7:00 AM | 0 | 0 | 57 | 8 | 0 | 2 | 73 | 22 | 0 | 11 | 71 | 7 | 0 | 79 | 110 | | |
| 7:15 AM | 0 | 0 | 79 | 16 | 0 | 7 | 87 | 21 | 0 | 10 | 51 | 3 | 0 | 74 | 143 | 1 | 492 | 0 |
| 7:30 AM | 0 | 0 | 61 | 21 | 0 | 8 | 69 | 13 | 0 | 24 | 76 | 4 | 0 | 67 | 133 | 1 | 477 | 0 |
| 7:45 AM | 0 | 0 | 57 | 9 | 0 | 11 | 68 | 21 | 0 | 9 | 72 | 4 | 0 | 36 | 115 | 1 | 403 | 1,812 |
| 8:00 AM | 0 | 4 | 39 | 14 | 0 | 2 | 43 | 12 | 0 | 10 | 50 | 2 | 0 | 47 | 115 | 1 | 339 | 1,711 |
| 8:15 AM | 0 | 0 | 61 | 11 | 0 | 2 | 49 | 21 | 0 | 8 | 59 | 2 | 0 | 32 | 89 | 0 | 334 | 1,553 |
| 8:30 AM | 0 | 1 | 50 | 15 | 0 | 6 | 67 | 25 | 0 | 9 | 52 | 4 | 0 | 32 | 85 | 1 | 347 | 1,423 |
| 8:45 AM | 0 | 0 | 36 | 14 | 0 | 4 | 44 | 17 | 0 | 14 | 49 | 1 | 0 | 21 | 85 | 2 | 287 | 1,307 |
| Count Total | 0 | 5 | 440 | 108 | 0 | 42 | 500 | 152 | 0 | 95 | 480 | 27 | 0 | 388 | 875 | 7 | 3,119 | 0 |
| Peak Hour | 0 | 0 | 254 | 54 | 0 | 28 | 297 | 77 | 0 | 54 | 270 | 18 | 0 | 256 | 501 | 3 | 1,812 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 2 | 5 | 5 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 6 | 4 | 4 | 4 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 9 | 6 | 4 | 8 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 6 | 10 | 3 | 3 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 3 | 7 | 2 | 9 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 10 | 5 | 2 | 4 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 8 | 5 | 8 | 7 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 8 | 6 | 1 | 5 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 54 | 45 | 29 | 45 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 25 | 22 | 16 | 20 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Two-Hour Count Summaries

| Interval Start | SH 94 | | | | SH 94 | | | | Marksheffel Rd | | | | Marksheffel Rd | | | | 15-min Total | Rolling One Hour |
|----------------|-----------|----|-----|-----|-----------|----|-----|-----|----------------|----|-----|----|----------------|-----|-----|----|--------------|------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 58 | 27 | 0 | 7 | 63 | 49 | 0 | 14 | 140 | 2 | 0 | 24 | 94 | 1 | 479 | 0 |
| 4:15 PM | 0 | 0 | 57 | 15 | 0 | 10 | 65 | 78 | 1 | 10 | 142 | 6 | 0 | 28 | 102 | 1 | 515 | 0 |
| 4:30 PM | 0 | 0 | 42 | 13 | 0 | 6 | 47 | 62 | 0 | 12 | 159 | 2 | 0 | 25 | 105 | 1 | 474 | 0 |
| 4:45 PM | 0 | 0 | 47 | 10 | 0 | 4 | 72 | 49 | 0 | 17 | 128 | 6 | 0 | 33 | 97 | 2 | 465 | 1,933 |
| 5:00 PM | 1 | 1 | 72 | 14 | 0 | 5 | 52 | 48 | 0 | 8 | 107 | 2 | 0 | 20 | 84 | 2 | 416 | 1,870 |
| 5:15 PM | 1 | 0 | 73 | 13 | 0 | 5 | 37 | 44 | 0 | 18 | 112 | 3 | 0 | 29 | 110 | 0 | 445 | 1,800 |
| 5:30 PM | 0 | 0 | 69 | 19 | 0 | 1 | 40 | 31 | 0 | 12 | 75 | 3 | 0 | 28 | 115 | 0 | 393 | 1,719 |
| 5:45 PM | 0 | 0 | 47 | 21 | 0 | 0 | 32 | 31 | 0 | 7 | 122 | 2 | 0 | 28 | 110 | 0 | 400 | 1,654 |
| Count Total | 2 | 1 | 465 | 132 | 0 | 38 | 408 | 392 | 1 | 98 | 985 | 26 | 0 | 215 | 817 | 7 | 3,587 | 0 |
| Peak Hour | 0 | 0 | 204 | 65 | 0 | 27 | 247 | 238 | 1 | 53 | 569 | 16 | 0 | 110 | 398 | 5 | 1,933 | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 1 | 5 | 4 | 7 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 2 | 3 | 4 | 4 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 2 | 4 | 5 | 8 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 4 | 2 | 2 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 1 | 2 | 2 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 2 | 1 | 3 | 2 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 3 | 0 | 2 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 1 | 1 | 3 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 16 | 18 | 25 | 31 | 90 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 9 | 14 | 15 | 20 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Traffic Data Resources

Location: Marksheffel @ Space Village Village Name : MARKSHEFFEL @ SPACE VILLAGE-THUR-WSP-3-20
 Turning Movement Count Site Code : 00000000
 Weather: Clear Start Date : 3/12/2020
 Comments: Heavy truck traffic Page No : 1

Groups Printed- Unshifted

| Start Time | MARKSHEFFEL From North | | | | SPACE VILLAGE From East | | | | MARKSHEFFEL From South | | | | SPACE VILLAGE From West | | | | Int. Total |
|---------------|---------------------------|------|------|------------|----------------------------|------|------|------------|---------------------------|------|------|------------|----------------------------|------|------|------------|------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| 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 | | |
| 06:00 AM | 1 | 84 | 0 | 85 | 0 | 0 | 7 | 7 | 0 | 47 | 20 | 67 | 23 | 5 | 1 | 29 | 188 |
| 06:15 AM | 4 | 140 | 0 | 144 | 0 | 2 | 2 | 4 | 2 | 68 | 33 | 103 | 17 | 9 | 1 | 27 | 278 |
| 06:30 AM | 4 | 157 | 0 | 161 | 0 | 2 | 0 | 2 | 1 | 92 | 40 | 133 | 19 | 13 | 2 | 34 | 330 |
| 06:45 AM | 13 | 164 | 0 | 177 | 0 | 6 | 8 | 14 | 2 | 109 | 54 | 165 | 26 | 9 | 4 | 39 | 395 |
| Total | 22 | 545 | 0 | 567 | 0 | 10 | 17 | 27 | 5 | 316 | 147 | 468 | 85 | 36 | 8 | 129 | 1191 |
| 07:00 AM | 18 | 196 | 6 | 220 | 1 | 1 | 3 | 5 | 6 | 121 | 51 | 178 | 35 | 19 | 2 | 56 | 459 |
| 07:15 AM | 37 | 201 | 0 | 238 | 1 | 4 | 3 | 8 | 1 | 110 | 62 | 173 | 35 | 8 | 2 | 45 | 464 |
| 07:30 AM | 33 | 235 | 1 | 269 | 0 | 3 | 1 | 4 | 4 | 124 | 83 | 211 | 23 | 9 | 2 | 34 | 518 |
| 07:45 AM | 31 | 227 | 1 | 259 | 0 | 3 | 1 | 4 | 1 | 117 | 77 | 195 | 21 | 6 | 1 | 28 | 486 |
| Total | 119 | 859 | 8 | 986 | 2 | 11 | 8 | 21 | 12 | 472 | 273 | 757 | 114 | 42 | 7 | 163 | 1927 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:00 PM | 7 | 147 | 0 | 154 | 0 | 4 | 4 | 8 | 3 | 210 | 40 | 253 | 55 | 8 | 3 | 66 | 481 |
| 04:15 PM | 8 | 149 | 0 | 157 | 0 | 3 | 7 | 10 | 5 | 263 | 46 | 314 | 46 | 8 | 2 | 56 | 537 |
| 04:30 PM | 5 | 122 | 1 | 128 | 0 | 2 | 10 | 12 | 6 | 228 | 56 | 290 | 52 | 10 | 1 | 63 | 493 |
| 04:45 PM | 3 | 132 | 0 | 135 | 1 | 3 | 9 | 13 | 1 | 213 | 46 | 260 | 62 | 6 | 4 | 72 | 480 |
| Total | 23 | 550 | 1 | 574 | 1 | 12 | 30 | 43 | 15 | 914 | 188 | 1117 | 215 | 32 | 10 | 257 | 1991 |
| 05:00 PM | 7 | 127 | 0 | 134 | 0 | 2 | 4 | 6 | 5 | 213 | 55 | 273 | 65 | 7 | 1 | 73 | 486 |
| 05:15 PM | 4 | 155 | 2 | 161 | 0 | 1 | 2 | 3 | 1 | 226 | 48 | 275 | 58 | 10 | 4 | 72 | 511 |
| 05:30 PM | 5 | 119 | 0 | 124 | 1 | 2 | 6 | 9 | 0 | 153 | 38 | 191 | 53 | 12 | 1 | 66 | 390 |
| 05:45 PM | 2 | 111 | 0 | 113 | 0 | 3 | 1 | 4 | 0 | 152 | 31 | 183 | 46 | 6 | 2 | 54 | 354 |
| Total | 18 | 512 | 2 | 532 | 1 | 8 | 13 | 22 | 6 | 744 | 172 | 922 | 222 | 35 | 8 | 265 | 1741 |
| Grand Total | 182 | 2466 | 11 | 2659 | 4 | 41 | 68 | 113 | 38 | 2446 | 780 | 3264 | 636 | 145 | 33 | 814 | 6850 |
| Apprch % | 6.8 | 92.7 | 0.4 | | 3.5 | 36.3 | 60.2 | | 1.2 | 74.9 | 23.9 | | 78.1 | 17.8 | 4.1 | | |
| Total % | 2.7 | 36 | 0.2 | 38.8 | 0.1 | 0.6 | 1 | 1.6 | 0.6 | 35.7 | 11.4 | 47.6 | 9.3 | 2.1 | 0.5 | 11.9 | |

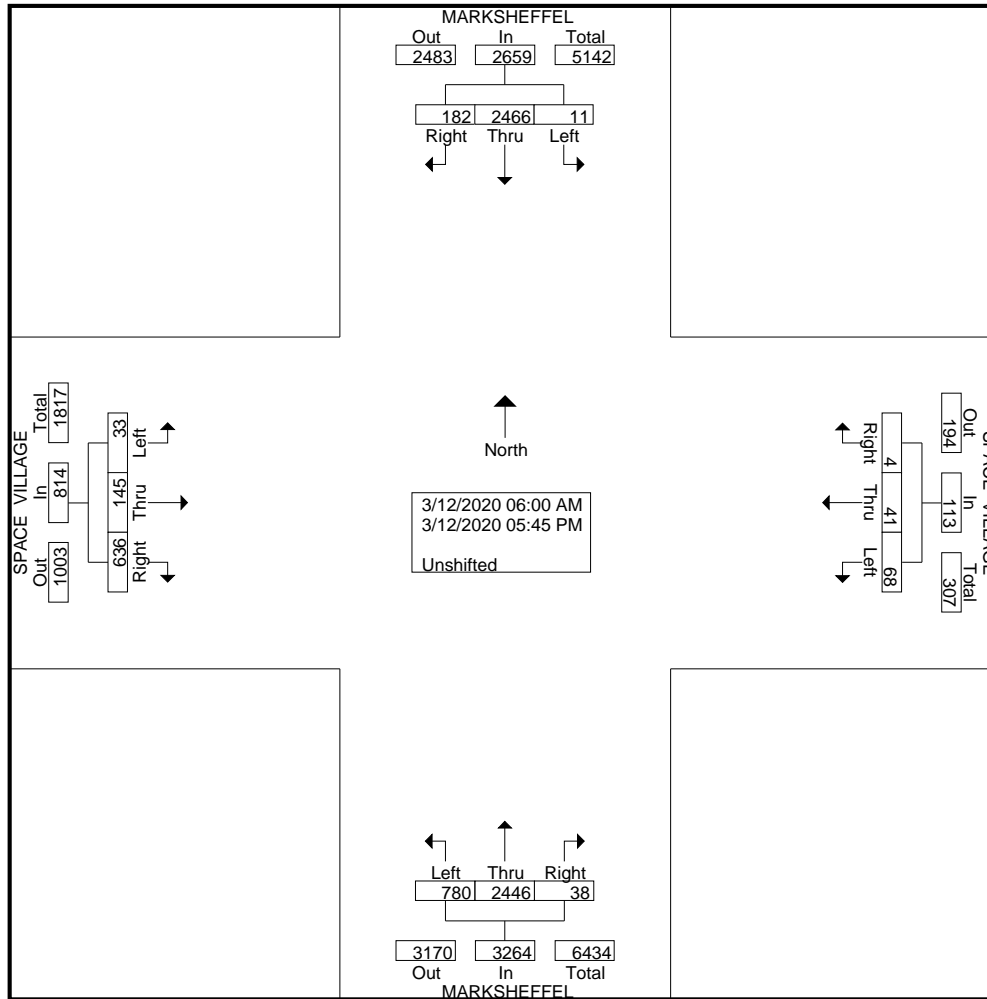
Traffic Data Resources

File Name : MARKSHEFFEL @ SPACE VILLAGE-THUR-WSP-3-20

Site Code : 00000000

Start Date : 3/12/2020

Page No : 2



| Start Time | MARKSHEFFEL From North | | | | SPACE VILLAGE From East | | | | MARKSHEFFEL From South | | | | SPACE VILLAGE From West | | | | Int. Total |
|--|------------------------|------|------|------------|-------------------------|------|------|------------|------------------------|------|------|------------|-------------------------|------|------|------------|------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| Peak Hour Analysis From 06:00 AM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 8 | 149 | 0 | 157 | 0 | 3 | 7 | 10 | 5 | 263 | 46 | 314 | 46 | 8 | 2 | 56 | 537 |
| 04:30 PM | 5 | 122 | 1 | 128 | 0 | 2 | 10 | 12 | 6 | 228 | 56 | 290 | 52 | 10 | 1 | 63 | 493 |
| 04:45 PM | 3 | 132 | 0 | 135 | 1 | 3 | 9 | 13 | 1 | 213 | 46 | 260 | 62 | 6 | 4 | 72 | 480 |
| 05:00 PM | 7 | 127 | 0 | 134 | 0 | 2 | 4 | 6 | 5 | 213 | 55 | 273 | 65 | 7 | 1 | 73 | 486 |
| Total Volume | 23 | 530 | 1 | 554 | 1 | 10 | 30 | 41 | 17 | 917 | 203 | 1137 | 225 | 31 | 8 | 264 | 1996 |
| % App. Total | 4.2 | 95.7 | 0.2 | | 2.4 | 24.4 | 73.2 | | 1.5 | 80.7 | 17.9 | | 85.2 | 11.7 | 3 | | |
| PHF | .719 | .889 | .250 | .882 | .250 | .833 | .750 | .788 | .708 | .872 | .906 | .905 | .865 | .775 | .500 | .904 | .929 |

APPENDIX B

CDOT Annual Traffic Data

2040 PPACOG Traffic Model

Station ID: 103943
 Date: 7/11/2019
 Route: 094A

Description: SH 94 E/O Marksheffel Rd, Colorado Springs

| COUNTDIR | 12:00 AM | 1:00 AM | 2:00 AM | 3:00 AM | 4:00 AM | 5:00 AM | 6:00 AM | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | 6:00 PM | 7:00 PM | 8:00 PM | 9:00 PM | 10:00 PM | 11:00 PM | | | |
|----------|----------|---------|---------|---------|---------|---------|---------|--------------------|---------|---------|----------|----------|----------|---------|---------|---------|---------|---------|---------|--------------------|---------|--------------------|----------|----------|--|------|--|
| P | 21 | 16 | 9 | 23 | 82 | 299 | 705 | 500 | 366 | 246 | 211 | 243 | 253 | 246 | 252 | 271 | 391 | 383 | 282 | 193 | 178 | 120 | 99 | 54 | | | |
| S | 17 | 6 | 10 | 14 | 45 | 141 | 322 | 359 | 287 | 278 | 237 | 292 | 270 | 272 | 395 | 606 | 824 | 541 | 282 | 153 | 90 | 54 | 40 | 51 | | | |
| | | | | | | | | Peak Hour Counts | | 528 | | 95% | | | | | | | | | | Peak Hour Counts | | 330 | | 118% | |
| | | | | | | | | Percent Difference | | 402 | | 89% | | | | | | | | | | Percent Difference | | 512 | | 161% | |
| | | | | | | | | Percent Difference | | 92% | | | | | | | | | | Percent Difference | | 144% | | | | | |

Station ID: 100851
 Date: 2/20/2020
 Route: 024G

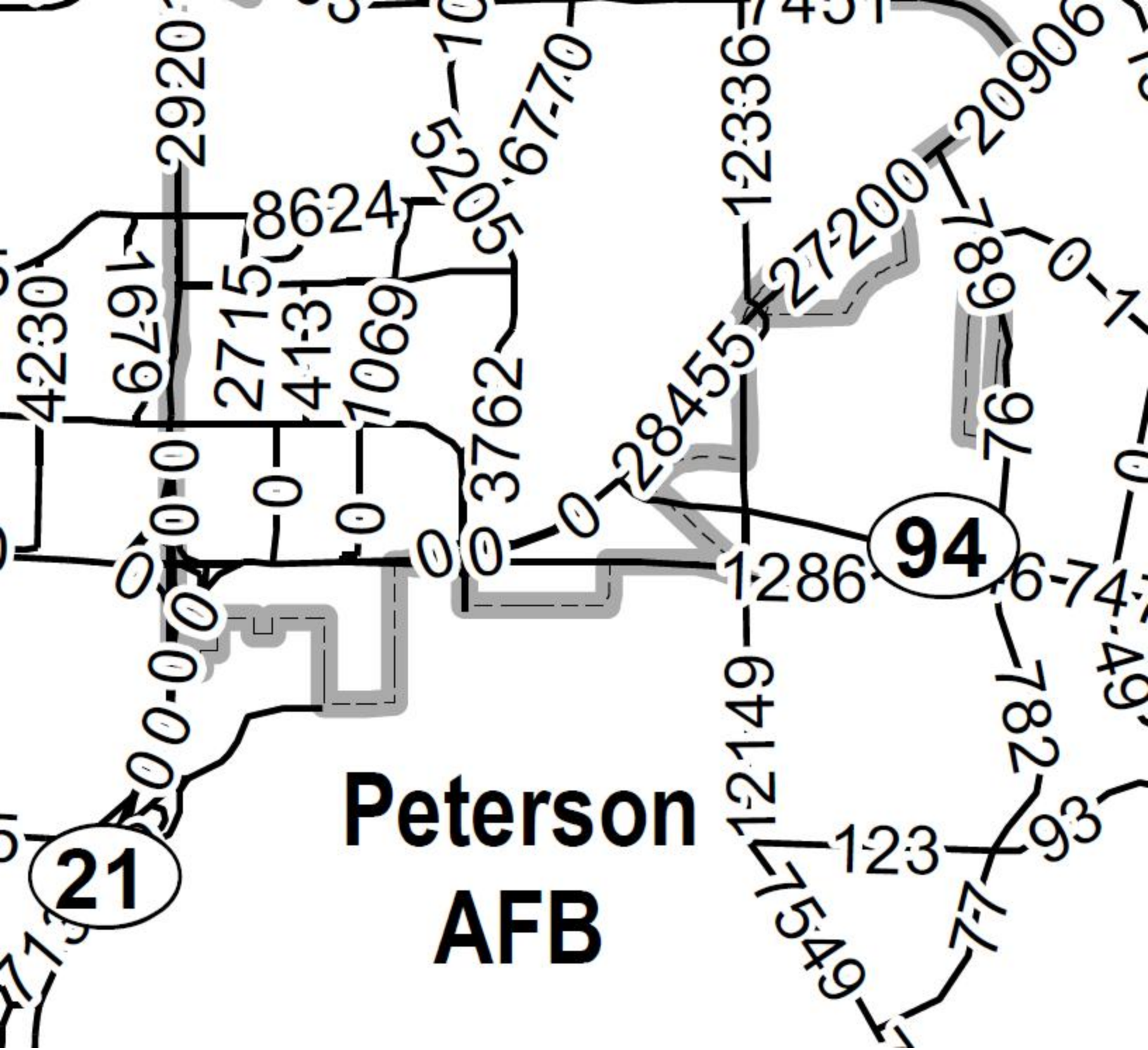
Description: SH 24 NE/O SH 94, Colorado Springs

| COUNTDIR | 12:00 AM | 1:00 AM | 2:00 AM | 3:00 AM | 4:00 AM | 5:00 AM | 6:00 AM | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | 6:00 PM | 7:00 PM | 8:00 PM | 9:00 PM | 10:00 PM | 11:00 PM | | | |
|----------|----------|---------|---------|---------|---------|---------|---------|--------------------|---------|---------|----------|----------|----------|---------|---------|---------|---------|---------|---------|--------------------|---------|--------------------|----------|----------|--|------|--|
| P | 55 | 33 | 24 | 26 | 94 | 150 | 465 | 601 | 503 | 409 | 468 | 614 | 622 | 633 | 920 | 1088 | 1495 | 1289 | 704 | 712 | 452 | 268 | 159 | 82 | | | |
| S | 36 | 17 | 38 | 95 | 301 | 818 | 1863 | 1716 | 1023 | 715 | 636 | 665 | 609 | 577 | 613 | 655 | 693 | 685 | 369 | 224 | 183 | 124 | 79 | 53 | | | |
| | | | | | | | | Peak Hour Counts | | 604 | | 100% | | | | | | | | | | Peak Hour Counts | | 1276 | | 117% | |
| | | | | | | | | Percent Difference | | 1315 | | 130% | | | | | | | | | | Percent Difference | | 721 | | 96% | |
| | | | | | | | | Percent Difference | | 121% | | | | | | | | | | Percent Difference | | 110% | | | | | |
| | | | | | | | | Peak Hour Counts | | 609 | | 99% | | | | | | | | | | Peak Hour Counts | | 1282 | | 117% | |
| | | | | | | | | Percent Difference | | 1344 | | 128% | | | | | | | | | | Percent Difference | | 749 | | 93% | |
| | | | | | | | | Percent Difference | | 119% | | | | | | | | | | Percent Difference | | 108% | | | | | |

Reagan Ranch Traffic Projection

| ROUTE | REFPT | ENDREFPT | LENGTH | YR20FACTOR | DHV | LOCATION |
|-------|-------|----------|--------|------------|------|--|
| 094A | 0.548 | 1 | 0.47 | 1.33 | 13.5 | ON SH 94 E/O MARKSHEFFEL RD COLORADO SPRINGS |
| 094A | 1 | 8.085 | 7.077 | 1.25 | 12.5 | ON SH 94 E/O SPACE VILLAGE AVE CR 2804 |

| Station ID | 2018 AADT | 2040 AADT | Growth Factor | Yearly Growth Rate |
|-----------------|-----------|-----------|---------------|--------------------|
| 103943 | 10000 | 13630 | 1.33 | 1.30% |
| 103944 | 11000 | 14025 | 1.25 | 1.02% |
| Avg Growth Rate | | | | 1.16% |



2040 PPACOG MODEL

APPENDIX C

Trip Generation Worksheets

Crossroads-Meadowbrook-Reagan Ranch Phase 1 Trip Generation Summary

| Use | Quantity | Daily | Weekday Vehicle Trips | | | | | |
|--|------------|---------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| | | | AM Peak Hour | | | PM Peak Hour | | |
| | | | In | Out | Total | In | Out | Total |
| Crossroads North | | | | | | | | |
| Public Park (ITE 411) | 20 Acres | 16 | 0 | 0 | 0 | 1 | 1 | 2 |
| Tire Superstore (ITE 849) | 7,000 SF | 144 | 6 | 3 | 9 | 7 | 8 | 15 |
| Home Improvement Superstore (ITE 862) | 127,000 SF | 3,904 | 113 | 86 | 199 | 145 | 151 | 296 |
| Furniture Store (ITE 890) | 114,000 SF | 720 | 21 | 9 | 30 | 28 | 31 | 59 |
| Sit Down Restaurant (ITE 932) | 11,000 SF | 1,234 | 60 | 49 | 109 | 66 | 41 | 107 |
| Fast-Food Restaurant (ITE 934) | 2,500 SF | 1,178 | 51 | 49 | 100 | 43 | 39 | 82 |
| Gas Station Super Convenience (ITE 960) | 6,000 SF | 5,026 | 249 | 250 | 499 | 208 | 208 | 416 |
| Total Crossroads North Trips | | 12,222 | 500 | 446 | 946 | 498 | 479 | 977 |
| Crossroads North Trips after Internal Capture | | 11,246 | 490 | 437 | 927 | 458 | 441 | 899 |
| Meadowbrook Park | | | | | | | | |
| Single Family Housing (ITE 210) | 67 Units | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Meadowbrook Park Total Trips | | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Crossroads Mix Use | | | | | | | | |
| Mid-Rise Multifamily Housing (ITE 221) | 300 Units | 1,634 | 26 | 74 | 100 | 77 | 50 | 127 |
| Shopping Center (ITE 820) | 10,000 SF | 1,256 | 97 | 60 | 157 | 48 | 51 | 99 |
| Sit Down Restaurant (ITE 932) | 4,000 SF | 450 | 22 | 18 | 40 | 24 | 15 | 39 |
| Fast Food Restaurant (ITE 934) | 11,000 SF | 5,182 | 225 | 217 | 442 | 187 | 172 | 359 |
| Coffee Shop (ITE 937) | 2,500 SF | 2,050 | 113 | 109 | 222 | 55 | 55 | 110 |
| Total Crossroads Mix Use Trips | | 10,572 | 483 | 478 | 961 | 391 | 343 | 734 |
| Crossroads Mix Use Trips after Internal Capture | | 9,726 | 474 | 468 | 942 | 359 | 316 | 675 |
| Reagan Ranch Northwest Area | | | | | | | | |
| Industrial Park (ITE 130) | 220,000 SF | 742 | 71 | 17 | 88 | 18 | 70 | 88 |
| Reagan Ranch Northwest Area Total Trips | | 742 | 71 | 17 | 88 | 18 | 70 | 88 |
| Reagan Ranch Northeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 125 Units | 1,276 | 22 | 72 | 94 | 79 | 47 | 126 |
| Shopping Center (ITE 820) | 30,000 SF | 2,652 | 104 | 63 | 167 | 107 | 116 | 223 |
| Total Reagan Ranch Northeast Area Trips | | 3,928 | 126 | 135 | 261 | 186 | 163 | 349 |
| Reagan Ranch NE Area Trips after Internal Capture | | 3,614 | 124 | 132 | 256 | 171 | 150 | 321 |
| Reagan Ranch Southeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 255 Units | 2,460 | 45 | 141 | 186 | 156 | 94 | 250 |
| Mid-Rise Multifamily Housing (ITE 221) | 360 Units | 1,962 | 31 | 89 | 120 | 93 | 59 | 152 |
| Shopping Center (ITE 820) | 70,000 SF | 4,718 | 116 | 71 | 187 | 200 | 217 | 417 |
| Total Reagan Ranch Southeast Area Trips | | 9,140 | 192 | 301 | 493 | 449 | 370 | 819 |
| Reagan Ranch SE Area Trips after Internal Capture | | 8,410 | 188 | 295 | 483 | 413 | 340 | 753 |
| Total Site Generated Trips | | 37,324 | 1,385 | 1,416 | 2,801 | 1,585 | 1,451 | 3,036 |
| Total Site External Trips after Internal Capture | | 34,458 | 1,360 | 1,389 | 2,748 | 1,462 | 1,343 | 2,806 |

Crossroads-Meadowbrook-Reagan Ranch Full Buildout Trip Generation Summary

| Use | Quantity | Daily | Weekday Vehicle Trips | | | | | |
|--|------------|---------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| | | | AM Peak Hour | | | PM Peak Hour | | |
| | | | In | Out | Total | In | Out | Total |
| Crossroads North | | | | | | | | |
| Public Park (ITE 411) | 20 Acres | 16 | 0 | 0 | 0 | 1 | 1 | 2 |
| Movie Theatre (ITE 444) | 52,000 SF | 4,062 | 5 | 6 | 11 | 302 | 19 | 321 |
| Tire Superstore (ITE 849) | 7,000 SF | 144 | 6 | 3 | 9 | 7 | 8 | 15 |
| Home Improvement Superstore (ITE 862) | 127,000 SF | 3,904 | 113 | 86 | 199 | 145 | 151 | 296 |
| Furniture Store (ITE 890) | 114,000 SF | 720 | 21 | 9 | 30 | 28 | 31 | 59 |
| Sit Down Restaurant (ITE 932) | 11,000 SF | 1,234 | 60 | 49 | 109 | 66 | 41 | 107 |
| Fast-Food Restaurant (ITE 934) | 5,000 SF | 2,356 | 103 | 98 | 201 | 85 | 78 | 163 |
| Gas Station Super Convenience (ITE 960) | 6,000 SF | 5,026 | 249 | 250 | 499 | 208 | 208 | 416 |
| Total Crossroads North Trips | | 17,462 | 557 | 501 | 1,058 | 842 | 537 | 1,379 |
| Crossroads North Trips after Internal Capture | | 16,066 | 546 | 491 | 1,037 | 775 | 494 | 1,269 |
| Meadowbrook Park | | | | | | | | |
| Single Family Housing (ITE 210) | 67 Units | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Meadowbrook Park Total Trips | | 720 | 13 | 39 | 52 | 43 | 26 | 69 |
| Crossroads Mix Use | | | | | | | | |
| Mid-Rise Multifamily Housing (ITE 221) | 300 Units | 1,634 | 26 | 74 | 100 | 77 | 50 | 127 |
| Shopping Center (ITE 820) | 10,000 SF | 1,256 | 97 | 60 | 157 | 48 | 51 | 99 |
| Pharmacy (ITE 881) | 14,000 SF | 1,528 | 29 | 25 | 54 | 72 | 72 | 144 |
| Sit Down Restaurant (ITE 932) | 8,000 SF | 898 | 44 | 36 | 80 | 48 | 30 | 78 |
| Fast Food Restaurant (ITE 934) | 11,000 SF | 5,182 | 225 | 217 | 442 | 187 | 172 | 359 |
| Coffee Shop (ITE 937) | 2,500 SF | 2,050 | 113 | 109 | 222 | 55 | 55 | 110 |
| Total Crossroads Mix Use Trips | | 12,548 | 534 | 521 | 1,055 | 487 | 430 | 917 |
| Crossroads Mix Use Trips after Internal Capture | | 11,544 | 523 | 511 | 1,034 | 448 | 396 | 844 |
| Reagan Ranch Northwest Area | | | | | | | | |
| Industrial Park (ITE 130) | 365,000 SF | 1,232 | 118 | 28 | 146 | 31 | 115 | 146 |
| Reagan Ranch Northwest Area Total Trips | | 1,232 | 118 | 28 | 146 | 31 | 115 | 146 |
| Reagan Ranch Northeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 200 Units | 1,968 | 37 | 110 | 147 | 125 | 73 | 198 |
| Shopping Center (ITE 820) | 175,000 SF | 8,796 | 148 | 91 | 239 | 395 | 427 | 822 |
| Total Reagan Ranch Northeast Area Trips | | 10,764 | 185 | 201 | 386 | 520 | 500 | 1,020 |
| Reagan Ranch NE Area Trips after Internal Capture | | 9,904 | 181 | 197 | 378 | 478 | 460 | 938 |
| Reagan Ranch Southeast Area | | | | | | | | |
| Single Family Housing (ITE 210) | 393 Units | 3,662 | 71 | 213 | 284 | 238 | 140 | 378 |
| Mid-Rise Multifamily Housing (ITE 221) | 360 Units | 1,962 | 31 | 89 | 120 | 93 | 59 | 152 |
| Office (ITE 710) | 100,000 SF | 1,062 | 103 | 17 | 120 | 18 | 96 | 114 |
| Shopping Center (ITE 820) | 350,000 SF | 14,092 | 203 | 124 | 327 | 659 | 714 | 1,373 |
| Total Reagan Ranch Southeast Area Trips | | 20,778 | 408 | 443 | 851 | 1,008 | 1,009 | 2,017 |
| Reagan Ranch SE Area Trips after Internal Capture | | 19,116 | 400 | 434 | 834 | 928 | 928 | 1,856 |
| Total Site Generated Trips | | 63,504 | 1,815 | 1,733 | 3,548 | 2,931 | 2,617 | 5,548 |
| Total Site External Trips after Internal Capture | | 58,582 | 1,781 | 1,700 | 3,481 | 2,703 | 2,419 | 5,121 |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North - Phase 1)
 Subject Trip Generation - Public Park
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 20
 $X = 20$
 T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (400 Series Page 3)

Directional Distribution: 59% ent. 41% exit.
 $(T) = 0.02 (X)$
 $(T) = 0.02^* (20.0)$
 $T = 0$ Average Vehicle Trip Ends
 0 entering 0 exiting
 0 + 0 = 0

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (400 Series Page 4)

Directional Distribution: 55% ent. 45% exit.
 $(T) = 0.11 (X)$
 $(T) = 0.11^* (20.0)$
 $T = 2$ Average Vehicle Trip Ends
 1 entering 1 exiting
 1 + 1 = 2

Weekday (400 Series page 2)

Average Weekday
 $T = 0.78^* (X)$
 $T = 0.78^* 20$
 Directional Distribution: 50% entering, 50% exiting
 $T = 16$ Average Vehicle Trip Ends
 8 entering 8 exiting
 8 + 8 = 16

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North Phase 1)
 Subject Trip Generation for Tire Superstore
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Tire Superstore (849)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **7,000** Square Feet

X = 7.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 262)

| | | | | |
|--------------|-------|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 65% ent. | 35% exit. |
| T = 1.34 (X) | | T = | 9 | Average Vehicle Trip Ends |
| T = 1.34 * | 7.000 | 6 | entering | 3 exiting |
| | | 6 | + | 3 = 9 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 263)

| | | | | |
|--------------|-------|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 47% ent. | 53% exit. |
| T = 2.11 (X) | | T = | 15 | Average Vehicle Trip Ends |
| T = 2.11 * | 7.000 | 7 | entering | 8 exiting |
| | | 7 | + | 8 = 15 |

Weekday (800 Series Page 261)

| | | | | |
|-----------------|-------|---------------------------|---------------|---------------------------|
| Average Weekday | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 20.37 (X) | | T = | 144 | Average Vehicle Trip Ends |
| T = 20.37* | 7.000 | 72 | entering | 72 exiting |
| | | 72 | + | 72 = 144 |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North Phase 1)
 Subject Trip Generation for Home Improvements Superstore
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Home Improvement Superstore (862)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **127,000** Square Feet

X = 127.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 437)

| | | | | |
|--------------|---------|---------------------------|------------|---------------------------|
| | | Directional Distribution: | 57% ent. | 43% exit. |
| T = 1.57 (X) | | T = | 199 | Average Vehicle Trip Ends |
| T = 1.57 * | 127.000 | 113 entering | 86 exiting | |
| | | 113 (*) · 86 = | 199 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 438)

| | | | | |
|--------------|---------|---------------------------|-------------|---------------------------|
| | | Directional Distribution: | 49% ent. | 51% exit. |
| T = 2.33 (X) | | T = | 296 | Average Vehicle Trip Ends |
| T = 2.33 * | 127.000 | 145 entering | 151 exiting | |
| | | 145 + 151 = | 296 | |

Weekday (800 Series Page 436)

| | | | | |
|--------------------|--|---------------------------|---------------|---------------------------|
| Average Weekday | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 30.74 (X) | | T = | 3904 | Average Vehicle Trip Ends |
| T = 30.74* 127.000 | | 1952 entering | 1952 exiting | |
| | | 1952 + 1952 = | 3904 | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North Phase 1)
 Subject Trip Generation for Furniture Store
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rates

Land Use Code - Furniture Store (890)

Independent Variable - 1000 Square Feet (X)

SF = **114,000**

X = 114.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 585)

| | | | | |
|----------------|---------|---------------------------|---------------------------|-----------|
| (T) = 0.26 (X) | | Directional Distribution: | 71% ent. | 29% exit. |
| (T) = 0.26 * | (114.0) | T = 30 | Average Vehicle Trip Ends | |
| | | 21 entering | 9 | exiting |
| | | 21 + 9 | = | 30 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 586)

| | | | | |
|----------------|---------|---------------------------|---------------------------|-----------|
| (T) = 0.52 (X) | | Directional Distribution: | 47% ent. | 53% exit. |
| (T) = 0.52 * | (114.0) | T = 59 | Average Vehicle Trip Ends | |
| | | 28 entering | 31 | exiting |
| | | 28 + 31 | = | 59 |

Weekday (800 Series Page 584)

| | | | | |
|-----------------|---------|---------------------------|---------------------------|-----------|
| Average Weekday | | Directional Distribution: | 50% ent. | 50% exit. |
| (T) = 6.30 (X) | | T = 720 | Average Vehicle Trip Ends | |
| (T) = 6.30 * | (114.0) | 360 entering | 360 | exiting |
| | | 360 + 360 | = | 720 |

Saturday, Peak Hour of Generator (800 Series Page 590)

| | | | | |
|----------------|---------|---------------------------|---------------------------|-----------|
| Daily Weekday | | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 1.10 (X) | | T = 125 | Average Vehicle Trip Ends | |
| (T) = 1.10 * | (114.0) | 68 entering | 58 | exiting |
| | | 68 + 57 | = | 125 |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North Phase 1)
 Subject Trip Generation for High-Turnover (Sit-Down) Restaurant
 Designed by TES Date June 24, 2020 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - High Turnover Sit-Down Restaurant (932)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **11,000** Square Feet

X = 11.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 97)

Average Weekday Directional Distribution: 55% ent. 45% exit.
 T = 9.94 (X) T = 109 Average Vehicle Trip Ends
 T = 9.94 * 11.000 60 entering 49 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series Page 98)

Average Weekday Directional Distribution: 62% ent. 38% exit.
 T = 9.77 (X) T = 107 Average Vehicle Trip Ends
 T = 9.77 * 11.000 66 entering 41 exiting

Weekday (900 Series Page 96)

Average Weekday Directional Distribution: 50% entering, 50% exiting
 T = 112.18 (X) T = 1234 Average Vehicle Trip Ends
 T = 112.18 * 11.000 617 entering 617 exiting

P.M. Peak Hour of Generator (900 Series Page 100)

Average Weekday Directional Distribution: 52% ent. 48% exit.
 T = 17.41 (X) T = 192 Average Vehicle Trip Ends
 T = 17.41 * 11.000 100 entering 92 exiting

Saturday Peak Hour of Generator (900 Series Page 105)

Average Saturday Directional Distribution: 51% ent. 49% exit.
 T = 11.19 (X) T = 124 Average Vehicle Trip Ends
 T = 11.19 * 11.000 63 entering 61 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 207)

| | | | | | |
|----------------|-----|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 57% | Non-Pass By | PM Peak Hour = | 57% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 34 | 28 | 62 | | |
| PM Peak | 38 | 23 | 61 | | |
| Daily | 352 | 352 | 704 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 207)

| | | | | | |
|----------------|-----|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 43% | Pass By | PM Peak Hour = | 43% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 26 | 21 | 48 | | |
| PM Peak | 28 | 18 | 46 | | |
| Daily | 265 | 265 | 530 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North Phase 1)
 Subject Trip Generation for Fast-Food Restaurant with Drive-Through Window
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Fast Food Restaurant With Drive-Through Window (934)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **2,500** Square Feet

X = 2.500

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series page 158)

Average Weekday
 T = 40.19 (X)
 T = 40.19 * 2.500

Directional Distribution: 51% ent. 49% exit.
 T = 100 Average Vehicle Trip Ends
 51 entering 49 exiting
 51 + 49 = 100

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series page 159)

Average Weekday
 T = 32.67 (X)
 T = 32.67 * 2.500

Directional Distribution: 52% ent. 48% exit.
 T = 82 Average Vehicle Trip Ends
 43 entering 39 exiting
 43 + 39 (*) = 82

Weekday (900 Series page 157)

Average Weekday
 T = 470.95 (X)
 T = 470.95 * 2.500

Directional Distribution: 50% entering, 50% exiting
 T = 1178 Average Vehicle Trip Ends
 589 entering 589 exiting
 589 + 589 = 1178

Saturday Peak Hour of Generator (900 Series page 163)

T = 54.86 (X)
 T = 54.86 * 2.500

Directional Distribution: 51% ent. 49% exit.
 T = 137 Average Vehicle Trip Ends
 70 entering 67 exiting
 70 + 67 = 137

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|-----|-------------|----------------|-----|------------------------------------|
| AM Peak Hour = | 51% | Non-Pass By | PM Peak Hour = | 50% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 26 | 25 | 51 | | |
| PM Peak | 22 | 20 | 41 | | |
| Daily | 295 | 295 | 590 | | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|-----|---------|----------------|-----|------------------------------------|
| AM Peak Hour = | 49% | Pass By | PM Peak Hour = | 50% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 25 | 24 | 49 | | |
| PM Peak | 22 | 20 | 41 | | |
| Daily | 294 | 294 | 588 | | PM Peak Hour Rate Applied to Daily |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North Phase 1)
 Subject Trip Generation for Super Convenience Market/Gas Station
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Super Convenience Market/Gas Station (960)

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

Gross Leasable Area = **6,000** Square Feet

X = 6.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 404)

| | | | | |
|---------------|-------|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 83.14 (X) | | T = 499 | Average Vehicle Trip Ends | |
| T = 83.14 * | 6.000 | 249 entering | 250 | exiting |
| | | 249 + 250 = | 499 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series page 405)

| | | | | |
|---------------|-------|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 69.28 (X) | | T = 416 | Average Vehicle Trip Ends | |
| T = 69.28 * | 6.000 | 208 entering | 208 | exiting |
| | | 208 + 208 = | 416 | |

Weekday (800 Series page 335)

| | | | | |
|-----------------|-------|---------------------------|---------------------------|-------------|
| | | Directional Distribution: | 50% entering, | 50% exiting |
| Average Weekday | | T = 5026 | Average Vehicle Trip Ends | |
| T = 837.58 (X) | | 2513 entering | 2513 | exiting |
| T = 837.58 * | 6.000 | 2513 + 2513 = | 5026 | |

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|-------------|----------------|---|-------------|
| PM Peak Hour = | 44% | Non-Pass By | AM Peak Hour = | 38% | Non-Pass By |
| | IN | Out | Total | * Utilized ITE 945 pass-by calculations | |
| AM Peak | 95 | 95 | 190 | | |
| PM Peak | 92 | 92 | 183 | | |
| Daily | 1106 | 1106 | 2212 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|---------|----------------|------------------------------------|---------|
| PM Peak Hour = | 56% | Pass By | AM Peak Hour = | 62% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 154 | 155 | 309 | | |
| PM Peak | 116 | 116 | 233 | | |
| Daily | 1407 | 1407 | 2814 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadwobrook-Reagan Ranch (Meadowbrook Park Phase 1)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 67$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|--------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| (T) = 0.71 (X) + 4.80 | T = 52 | Average Vehicle Trip Ends | |
| (T) = 0.71 * (67) + 4.80 | 13 entering | 39 | exiting |
| | 13 + 39 = 52 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| Ln(T) = 0.96 Ln(X) + 0.20 | T = 69 | Average Vehicle Trip Ends | |
| Ln(T) = 0.96 * Ln(67) + 0.20 | 43 entering | 26 | exiting |
| | 43 + 26 = 69 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|---------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 0.84 (X) + 17.99 | T = 74 | Average Vehicle Trip Ends | |
| (T) = 0.84 * (67) + 17.99 | 40 entering | 34 | exiting |
| | 40 + 34 = 74 | | |

Weekday (200 Series Page 2)

| | | | |
|------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| Ln(T) = 0.92 Ln(X) + 2.71 | T = 720 | Average Vehicle Trip Ends | |
| Ln(T) = 0.92 * Ln(67) + 2.71 | 360 entering | 360 | exiting |
| | 360 + 360 = 720 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use Phase 1)
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

$$X = 300$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

| | | | | | | | | | | | | | | | | | |
|---|---|---------------------------|------------|----------|-----------|-----|-----|---------------------------|--|--|----|----------|------------|--|----|---|----------|
| $\ln(T) = 0.98 \ln(X) - 0.98$ $\ln(T) = 0.98 * \ln(300.0) - 0.98$ | <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Directional Distribution:</td> <td style="text-align: right;">26% ent.</td> <td style="text-align: right;">74% exit.</td> </tr> <tr> <td>T =</td> <td style="text-align: right;">100</td> <td colspan="2">Average Vehicle Trip Ends</td> </tr> <tr> <td></td> <td style="text-align: right;">26</td> <td style="text-align: right;">entering</td> <td style="text-align: right;">74 exiting</td> </tr> <tr> <td></td> <td style="text-align: right;">26</td> <td style="text-align: right;">+</td> <td style="text-align: right;">74 = 100</td> </tr> </table> | Directional Distribution: | | 26% ent. | 74% exit. | T = | 100 | Average Vehicle Trip Ends | | | 26 | entering | 74 exiting | | 26 | + | 74 = 100 |
| Directional Distribution: | | 26% ent. | 74% exit. | | | | | | | | | | | | | | |
| T = | 100 | Average Vehicle Trip Ends | | | | | | | | | | | | | | | |
| | 26 | entering | 74 exiting | | | | | | | | | | | | | | |
| | 26 | + | 74 = 100 | | | | | | | | | | | | | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 75)

| | | | | | | | | | | | | | | | | | |
|---|---|---------------------------|------------|----------|-----------|-----|-----|---------------------------|--|--|----|----------|------------|--|----|---|----------|
| $\ln(T) = 0.96 \ln(X) - 0.63$ $\ln(T) = 0.96 * \ln(300.0) - 0.63$ | <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Directional Distribution:</td> <td style="text-align: right;">61% ent.</td> <td style="text-align: right;">39% exit.</td> </tr> <tr> <td>T =</td> <td style="text-align: right;">127</td> <td colspan="2">Average Vehicle Trip Ends</td> </tr> <tr> <td></td> <td style="text-align: right;">77</td> <td style="text-align: right;">entering</td> <td style="text-align: right;">50 exiting</td> </tr> <tr> <td></td> <td style="text-align: right;">77</td> <td style="text-align: right;">+</td> <td style="text-align: right;">50 = 127</td> </tr> </table> | Directional Distribution: | | 61% ent. | 39% exit. | T = | 127 | Average Vehicle Trip Ends | | | 77 | entering | 50 exiting | | 77 | + | 50 = 127 |
| Directional Distribution: | | 61% ent. | 39% exit. | | | | | | | | | | | | | | |
| T = | 127 | Average Vehicle Trip Ends | | | | | | | | | | | | | | | |
| | 77 | entering | 50 exiting | | | | | | | | | | | | | | |
| | 77 | + | 50 = 127 | | | | | | | | | | | | | | |

Weekday (Series 200 Page 73)

| | | | | | | | | | | | | | | | | | |
|---|---|---------------------------|-------------|----------|-----------|-----|------|---------------------------|--|--|-----|----------|-------------|--|-----|---|------------|
| $(T) = 5.45*(X) - 1.75$ $(T) = 5.45 * 300 - 1.75$ | <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Directional Distribution:</td> <td style="text-align: right;">50% ent.</td> <td style="text-align: right;">50% exit.</td> </tr> <tr> <td>T =</td> <td style="text-align: right;">1634</td> <td colspan="2">Average Vehicle Trip Ends</td> </tr> <tr> <td></td> <td style="text-align: right;">817</td> <td style="text-align: right;">entering</td> <td style="text-align: right;">817 exiting</td> </tr> <tr> <td></td> <td style="text-align: right;">817</td> <td style="text-align: right;">+</td> <td style="text-align: right;">817 = 1634</td> </tr> </table> | Directional Distribution: | | 50% ent. | 50% exit. | T = | 1634 | Average Vehicle Trip Ends | | | 817 | entering | 817 exiting | | 817 | + | 817 = 1634 |
| Directional Distribution: | | 50% ent. | 50% exit. | | | | | | | | | | | | | | |
| T = | 1634 | Average Vehicle Trip Ends | | | | | | | | | | | | | | | |
| | 817 | entering | 817 exiting | | | | | | | | | | | | | | |
| | 817 | + | 817 = 1634 | | | | | | | | | | | | | | |

Peak Hour of Generator, Saturday (Series 200 Page 79)

| | | | | | | | | | | | | | | | | | |
|---|---|---------------------------|------------|----------|-----------|-----|-----|---------------------------|--|--|----|----------|------------|--|----|---|----------|
| $(T) = 0.42*(X) + 6.73$ $(T) = 0.42 * 300 + 6.73$ | <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Directional Distribution:</td> <td style="text-align: right;">49% ent.</td> <td style="text-align: right;">51% exit.</td> </tr> <tr> <td>T =</td> <td style="text-align: right;">133</td> <td colspan="2">Average Vehicle Trip Ends</td> </tr> <tr> <td></td> <td style="text-align: right;">65</td> <td style="text-align: right;">entering</td> <td style="text-align: right;">68 exiting</td> </tr> <tr> <td></td> <td style="text-align: right;">65</td> <td style="text-align: right;">+</td> <td style="text-align: right;">68 = 133</td> </tr> </table> | Directional Distribution: | | 49% ent. | 51% exit. | T = | 133 | Average Vehicle Trip Ends | | | 65 | entering | 68 exiting | | 65 | + | 68 = 133 |
| Directional Distribution: | | 49% ent. | 51% exit. | | | | | | | | | | | | | | |
| T = | 133 | Average Vehicle Trip Ends | | | | | | | | | | | | | | | |
| | 65 | entering | 68 exiting | | | | | | | | | | | | | | |
| | 65 | + | 68 = 133 | | | | | | | | | | | | | | |



Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use Phase 1)
 Subject Trip Generation for Shopping Center
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **10,000** Square Feet

X = 10.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Directional Distribution: 62% ent. 38% exit.
 T = 0.50 * (X) + 151.78 T = 157 Average Vehicle Trip Ends
 T = 0.50 * 10 + 151.78 97 entering 60 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 140)

Directional Distribution: 48% ent. 52% exit.
 Ln(T) = 0.74 Ln(X) + 2.89 T = 99 Average Vehicle Trip Ends
 Ln(T) = 0.74 * Ln(10) + 2.89 48 entering 51 exiting

Weekday (800 Series Page 138)

Directional Distribution: 50% entering, 50% exiting
 Daily Weekday
 Ln(T) = 0.68 Ln(X) + 5.57 T = 1256 Average Vehicle Trip Ends
 Ln(T) = 0.68 * Ln(10) + 5.57 628 entering 628 exiting

Saturday Peak Hour of Generator (Page 144)

Directional Distribution: 52% ent. 48% exit.
 Average Saturday
 Ln(T) = 0.79 Ln(X) + 2.79 T = 100 Average Vehicle Trip Ends
 Ln(T) = 0.79 * Ln(10) + 2.79 52 entering 48 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

| | | | | | |
|----------------|-----|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 66% | Non-Pass By | PM Peak Hour = | 66% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 64 | 39 | 103 | | |
| PM Peak | 32 | 34 | 65 | | |
| Daily | 414 | 414 | 828 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

| | | | | | |
|----------------|-----|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 34% | Pass By | PM Peak Hour = | 34% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 33 | 20 | 54 | | |
| PM Peak | 16 | 17 | 34 | | |
| Daily | 214 | 214 | 428 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use Phase 1)
 Subject Trip Generation for High-Turnover (Sit-Down) Restaurant
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - High Turnover Sit-Down Restaurant (932)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **4,000** Square Feet

X = 4.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 97)

Average Weekday Directional Distribution: 55% ent. 45% exit.
 T = 9.94 (X) T = 40 Average Vehicle Trip Ends
 T = 9.94 * 4.000 22 entering 18 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series Page 98)

Average Weekday Directional Distribution: 62% ent. 38% exit.
 T = 9.77 (X) T = 39 Average Vehicle Trip Ends
 T = 9.77 * 4.000 24 entering 15 exiting

Weekday (900 Series Page 96)

Average Weekday Directional Distribution: 50% entering, 50% exiting
 T = 112.18 (X) T = 450 Average Vehicle Trip Ends
 T = 112.18 * 4.000 225 entering 225 exiting

P.M. Peak Hour of Generator (900 Series Page 100)

Average Weekday Directional Distribution: 52% ent. 48% exit.
 T = 17.41 (X) T = 70 Average Vehicle Trip Ends
 T = 17.41 * 4.000 36 entering 34 exiting

Saturday Peak Hour of Generator (900 Series Page 105)

Average Saturday Directional Distribution: 51% ent. 49% exit.
 T = 11.19 (X) T = 46 Average Vehicle Trip Ends
 T = 11.19 * 4.000 23 entering 23 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 207)

| | | | | | |
|----------------|-----|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 57% | Non-Pass By | PM Peak Hour = | 57% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 12 | 10 | 23 | | |
| PM Peak | 14 | 8 | 22 | | |
| Daily | 128 | 128 | 256 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 207)

| | | | | | |
|----------------|-----|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 43% | Pass By | PM Peak Hour = | 43% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 9 | 8 | 18 | | |
| PM Peak | 10 | 6 | 17 | | |
| Daily | 97 | 97 | 194 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use Phase 1)
 Subject Trip Generation for Fast-Food Restaurant with Drive-Through Window
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Fast Food Restaurant With Drive-Through Window (934)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **11,000** Square Feet

X = 11.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series page 158)

Average Weekday
 T = 40.19 (X)
 T = 40.19 * 11.000

Directional Distribution: 51% ent. 49% exit.
 T = 442 Average Vehicle Trip Ends
 225 entering 217 exiting
 225 + 217 = 442

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series page 159)

Average Weekday
 T = 32.67 (X)
 T = 32.67 * 11.000

Directional Distribution: 52% ent. 48% exit.
 T = 359 Average Vehicle Trip Ends
 187 entering 172 exiting
 187 + 172 = 359

Weekday (900 Series page 157)

Average Weekday
 T = 470.95 (X)
 T = 470.95 * 11.000

Directional Distribution: 50% entering, 50% exiting
 T = 5182 Average Vehicle Trip Ends
 2591 entering 2591 exiting
 2591 + 2591 = 5182

Saturday Peak Hour of Generator (900 Series page 163)

T = 54.86 (X)
 T = 54.86 * 11.000

Directional Distribution: 51% ent. 49% exit.
 T = 603 Average Vehicle Trip Ends
 308 entering 295 exiting
 308 (*) - 295 = 603

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 51% | Non-Pass By | PM Peak Hour = | 50% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 115 | 111 | 225 | | |
| PM Peak | 94 | 86 | 180 | | |
| Daily | 1296 | 1296 | 2592 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 49% | Pass By | PM Peak Hour = | 50% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 110 | 106 | 217 | | |
| PM Peak | 94 | 86 | 180 | | |
| Daily | 1295 | 1295 | 2590 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use Phase 1)
 Subject Trip Generation for Coffee/Donut Shop with Drive Through
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Coffee/Donut Shop with Drive Through (937)

Independant Variable - 1000 Square Feet Gross Floor Feet (X)

Gross Floor Area = **2,500**

X = 2.5

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 900 Page 232)

| | | | | |
|---------------|-----|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 51% ent. | 49% exit. |
| T = 88.99 (X) | | T = | 222 | Average Vehicle Trip Ends |
| T = 88.99 * | 2.5 | 113 | entering | 109 exiting |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 900 Page 233)

| | | | | |
|---------------|-----|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 43.38 (X) | | T = | 110 | Average Vehicle Trip Ends |
| T = 43.38 * | 2.5 | 55 | entering | 55 exiting |

Weekday (Series 900 Page 231)

| | | | | |
|------------------|-------|---------------------------|---------------|---------------------------|
| Average Weekday | | Directional Distribution: | 50% entering, | 50% exiting |
| (T) = 820.38 (X) | | T = | 2050 | Average Vehicle Trip Ends |
| (T) = 820.38 * | (2.5) | 1025 | entering | 1025 exiting |
| | | 1025 | + | 1025 = 2050 |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch NW Parcel Phase 1)
 Subject Trip Generation for Industrial Park
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Industrial Park (130)

Independant Variable - 1000 Square Feet Gross Floor Feet (X)

Gross Floor Area = **220,000**

X = 220.0

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (100 Series Page 22)

| | | | | |
|--------------|-----|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 81% ent. | 19% exit. |
| T = 0.40 (X) | | T = 88 | Average Vehicle Trip Ends | |
| T = 0.40 * | 220 | 71 entering | 17 | exiting |
| | | 71 + 17 = | 88 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (100 Series Page 23)

| | | | | |
|--------------|-----|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 21% ent. | 79% exit. |
| T = 0.40 (X) | | T = 88 | Average Vehicle Trip Ends | |
| T = 0.40 * | 220 | 18 entering | 70 | exiting |
| | | 18 + 70 = | 88 | |

Weekday (100 Series Page 21)

| | | | | |
|--------------|-----|---------------------------|---------------------------|-------------|
| | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 3.37 (X) | | T = 742 | Average Vehicle Trip Ends | |
| T = 3.37 * | 220 | 371 entering | 371 | exiting |
| | | 371 + 371 = | 742 | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch NE Parcel Phase 1)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 125$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|-----------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| $(T) = 0.71 (X) + 4.80$ | T = 94 | Average Vehicle Trip Ends | |
| $(T) = 0.71 * (125) + 4.80$ | 22 entering | 71 | exiting |
| | 22 + 72 = 94 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|-----------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| $\ln(T) = 0.96 \ln(X) + 0.20$ | T = 126 | Average Vehicle Trip Ends | |
| $\ln(T) = 0.96 * \ln(125) + 0.20$ | 79 entering | 47 | exiting |
| | 79 + 47 = 126 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|------------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| $(T) = 0.84 (X) + 17.99$ | T = 123 | Average Vehicle Trip Ends | |
| $(T) = 0.84 * (125) + 17.99$ | 66 entering | 57 | exiting |
| | 66 + 57 = 123 | | |

Weekday (200 Series Page 2)

| | | | |
|-----------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| $\ln(T) = 0.92 \ln(X) + 2.71$ | T = 1276 | Average Vehicle Trip Ends | |
| $\ln(T) = 0.92 * \ln(125) + 2.71$ | 638 entering | 638 | exiting |
| | 638 + 638 = 1276 | | |



Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch NE Parcel Phase 1)
 Subject Trip Generation for Shopping Center
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **30,000** Square Feet

X = 30.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Directional Distribution: 62% ent. 38% exit.
 $T = 0.50 * (X) + 151.78$ T = 167 Average Vehicle Trip Ends
 $T = 0.50 * 30 + 151.78$ 104 entering 63 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 140)

Directional Distribution: 48% ent. 52% exit.
 $\ln(T) = 0.74 \ln(X) + 2.89$ T = 223 Average Vehicle Trip Ends
 $\ln(T) = 0.74 * \ln(30) + 2.89$ 107 entering 116 exiting

Weekday (800 Series Page 138)

Daily Weekday Directional Distribution: 50% entering, 50% exiting
 $\ln(T) = 0.68 \ln(X) + 5.57$ T = 2652 Average Vehicle Trip Ends
 $\ln(T) = 0.68 * \ln(30) + 5.57$ 1326 entering 1326 exiting

Saturday Peak Hour of Generator (Page 144)

Average Saturday Directional Distribution: 52% ent. 48% exit.
 $\ln(T) = 0.79 \ln(X) + 2.79$ T = 239 Average Vehicle Trip Ends
 $\ln(T) = 0.79 * \ln(30) + 2.79$ 124 entering 115 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

| | | | | | |
|----------------|-----|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 66% | Non-Pass By | PM Peak Hour = | 66% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 69 | 42 | 110 | | |
| PM Peak | 71 | 77 | 147 | | |
| Daily | 875 | 875 | 1750 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

| | | | | | |
|----------------|-----|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 34% | Pass By | PM Peak Hour = | 34% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 35 | 21 | 57 | | |
| PM Peak | 36 | 39 | 76 | | |
| Daily | 451 | 451 | 902 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel Phase 1)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 255$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|---------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| (T) = 0.71 (X) + 4.80 | T = 186 | Average Vehicle Trip Ends | |
| (T) = 0.71 * (255) + 4.80 | 45 entering | 140 | exiting |
| | 45 + 141 = 186 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|-------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| Ln(T) = 0.96 Ln(X) + 0.20 | T = 250 | Average Vehicle Trip Ends | |
| Ln(T) = 0.96 * Ln(255) + 0.20 | 156 entering | 93 | exiting |
| | 156 + 94 = 250 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|----------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 0.84 (X) + 17.99 | T = 232 | Average Vehicle Trip Ends | |
| (T) = 0.84 * (255) + 17.99 | 125 entering | 107 | exiting |
| | 125 + 107 = 232 | | |

Weekday (200 Series Page 2)

| | | | |
|-------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| Ln(T) = 0.92 Ln(X) + 2.71 | T = 2460 | Average Vehicle Trip Ends | |
| Ln(T) = 0.92 * Ln(255) + 2.71 | 1230 entering | 1230 | exiting |
| | 1230 + 1230 = 2460 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel Phase 1)
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

$$X = 360$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

| | | | |
|-------------------------------------|---------------------------|------------|---------------------------|
| $\ln(T) = 0.98 \ln(X) - 0.98$ | Directional Distribution: | 26% ent. | 74% exit. |
| $\ln(T) = 0.98 * \ln(360.0) - 0.98$ | T = | 120 | Average Vehicle Trip Ends |
| | 31 entering | 89 exiting | |
| | 31 + 89 = | 120 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 75)

| | | | |
|-------------------------------------|---------------------------|------------|---------------------------|
| $\ln(T) = 0.96 \ln(X) - 0.63$ | Directional Distribution: | 61% ent. | 39% exit. |
| $\ln(T) = 0.96 * \ln(360.0) - 0.63$ | T = | 152 | Average Vehicle Trip Ends |
| | 93 entering | 59 exiting | |
| | 93 + 59 = | 152 | |

Weekday (Series 200 Page 73)

| | | | |
|---------------------------|---------------------------|-------------|---------------------------|
| $(T) = 5.45*(X) - 1.75$ | Directional Distribution: | 50% ent. | 50% exit. |
| $(T) = 5.45 * 360 - 1.75$ | T = | 1962 | Average Vehicle Trip Ends |
| | 981 entering | 981 exiting | |
| | 981 + 981 = | 1962 | |

Peak Hour of Generator, Saturday (Series 200 Page 79)

| | | | |
|---------------------------|---------------------------|------------|---------------------------|
| $(T) = 0.42*(X) + 6.73$ | Directional Distribution: | 49% ent. | 51% exit. |
| $(T) = 0.42 * 360 + 6.73$ | T = | 158 | Average Vehicle Trip Ends |
| | 77 entering | 81 exiting | |
| | 77 + 81 = | 158 | |



Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel Phase 1)
 Subject Trip Generation for Shopping Center
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **70,000** Square Feet

X = 70.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Directional Distribution: 62% ent. 38% exit.
 T = 0.50 * (X) + 151.78 T = 187 Average Vehicle Trip Ends
 T = 0.50 * 70 + 151.78 116 entering 71 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 140)

Directional Distribution: 48% ent. 52% exit.
 Ln(T) = 0.74 Ln(X) + 2.89 T = 417 Average Vehicle Trip Ends
 Ln(T) = 0.74 * Ln(70) + 2.89 200 entering 217 exiting

Weekday (800 Series Page 138)

Daily Weekday Directional Distribution: 50% entering, 50% exiting
 Ln(T) = 0.68 Ln(X) + 5.57 T = 4718 Average Vehicle Trip Ends
 Ln(T) = 0.68 * Ln(70) + 5.57 2359 entering 2359 exiting

Saturday Peak Hour of Generator (Page 144)

Average Saturday Directional Distribution: 52% ent. 48% exit.
 Ln(T) = 0.79 Ln(X) + 2.79 T = 467 Average Vehicle Trip Ends
 Ln(T) = 0.79 * Ln(70) + 2.79 243 entering 224 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

| | | | | | |
|----------------|------|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 66% | Non-Pass By | PM Peak Hour = | 66% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 76 | 47 | 123 | | |
| PM Peak | 132 | 143 | 275 | | |
| Daily | 1557 | 1557 | 3114 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

| | | | | | |
|----------------|-----|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 34% | Pass By | PM Peak Hour = | 34% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 39 | 24 | 64 | | |
| PM Peak | 68 | 74 | 142 | | |
| Daily | 802 | 802 | 1604 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation - Public Park
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

P

ITE Trip Generation Manual 10th Edition, Average Rate Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 20
 X = 20
 T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (400 Series Page 3)

| | | | | |
|----------------|--------|---------------------------|---------------------------|-----------|
| (T) = 0.02 (X) | | Directional Distribution: | 59% ent. | 41% exit. |
| (T) = 0.02 * | (20.0) | T = 0 | Average Vehicle Trip Ends | |
| | | 0 entering | 0 exiting | |
| | | 0 + 0 = 0 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (400 Series Page 4)

| | | | | |
|----------------|--------|---------------------------|---------------------------|-----------|
| (T) = 0.11 (X) | | Directional Distribution: | 55% ent. | 45% exit. |
| (T) = 0.11 * | (20.0) | T = 2 | Average Vehicle Trip Ends | |
| | | 1 entering | 1 exiting | |
| | | 1 + 1 = 2 | | |

Weekday (400 Series page 2)

| | | | | |
|-----------------|----|---------------------------|---------------------------|--|
| Average Weekday | | Directional Distribution: | 50% entering, 50% exiting | |
| T = 0.78* (X) | | T = 16 | Average Vehicle Trip Ends | |
| T = 0.78 * | 20 | 8 entering | 8 exiting | |
| | | 8 + 8 = 16 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for Movie Theater
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Movie Theater (444)

Independent Variable - Gross Floor Area

Gross Floor Area = **52,000** Square Feet

X = 52.0

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (400 Series Page 111)

| | | | | |
|--------------|----|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 0.22 (X) | | T = 11 | Average Vehicle Trip Ends | |
| T = 0.22 * | 52 | 5 entering | 6 | exiting |
| | | 5 (*) + 6 = | 11 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (400 Series Page 112)

| | | | | |
|--------------|----|---------------------------|---------------------------|----------|
| | | Directional Distribution: | 94% ent. | 6% exit. |
| T = 6.17 (X) | | T = 321 | Average Vehicle Trip Ends | |
| T = 6.17 * | 52 | 302 entering | 19 | exiting |
| | | 302 + 19 = | 321 | |

Weekday (400 Series Page 110)

| | | | | |
|-----------------|----|---------------------------|---------------------------|-------------|
| Average Weekday | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 78.09 (X) | | T = 4062 | Average Vehicle Trip Ends | |
| T = 78.09* | 52 | 2031 entering | 2031 | exiting |
| | | 2031 + 2031 = | 4062 | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for Tire Superstore
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Tire Superstore (849)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **7,000** Square Feet

X = 7.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 262)

| | | | | |
|--------------|-------|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 65% ent. | 35% exit. |
| T = 1.34 (X) | | T = | 9 | Average Vehicle Trip Ends |
| T = 1.34 * | 7.000 | 6 | entering | 3 exiting |
| | | 6 | + | 3 = 9 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 263)

| | | | | |
|--------------|-------|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 47% ent. | 53% exit. |
| T = 2.11 (X) | | T = | 15 | Average Vehicle Trip Ends |
| T = 2.11 * | 7.000 | 7 | entering | 8 exiting |
| | | 7 | + | 8 = 15 |

Weekday (800 Series Page 261)

| | | | | |
|-----------------|-------|---------------------------|---------------|---------------------------|
| Average Weekday | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 20.37 (X) | | T = | 144 | Average Vehicle Trip Ends |
| T = 20.37* | 7.000 | 72 | entering | 72 exiting |
| | | 72 | + | 72 = 144 |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for Home Improvements Superstore
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Home Improvement Superstore (862)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **127,000** Square Feet

X = 127.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 437)

| | | | | |
|--------------|---------|---------------------------|------------|---------------------------|
| | | Directional Distribution: | 57% ent. | 43% exit. |
| T = 1.57 (X) | | T = | 199 | Average Vehicle Trip Ends |
| T = 1.57 * | 127.000 | 113 | entering | 86 exiting |
| | | 113 | (*) · 86 = | 199 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 438)

| | | | | |
|--------------|---------|---------------------------|----------|---------------------------|
| | | Directional Distribution: | 49% ent. | 51% exit. |
| T = 2.33 (X) | | T = | 296 | Average Vehicle Trip Ends |
| T = 2.33 * | 127.000 | 145 | entering | 151 exiting |
| | | 145 | + | 151 = 296 |

Weekday (800 Series Page 436)

| | | | | |
|-----------------|---------|---------------------------|---------------|---------------------------|
| Average Weekday | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 30.74 (X) | | T = | 3904 | Average Vehicle Trip Ends |
| T = 30.74* | 127.000 | 1952 | entering | 1952 exiting |
| | | 1952 | + | 1952 = 3904 |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for Furniture Store
 Designed by JRP Date ### February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rates

Land Use Code - Furniture Store (890)

Independent Variable - 1000 Square Feet (X)

SF = **114,000**

X = 114.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 585)

| | | | | |
|----------------|---------|---------------------------|---------------------------|-----------|
| (T) = 0.26 (X) | | Directional Distribution: | 71% ent. | 29% exit. |
| (T) = 0.26 * | (114.0) | T = 30 | Average Vehicle Trip Ends | |
| | | 21 entering | 9 | exiting |
| | | 21 + 9 | = | 30 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 586)

| | | | | |
|----------------|---------|---------------------------|---------------------------|-----------|
| (T) = 0.52 (X) | | Directional Distribution: | 47% ent. | 53% exit. |
| (T) = 0.52 * | (114.0) | T = 59 | Average Vehicle Trip Ends | |
| | | 28 entering | 31 | exiting |
| | | 28 + 31 | = | 59 |

Weekday (800 Series Page 584)

| | | | | |
|-----------------|---------|---------------------------|---------------------------|-----------|
| Average Weekday | | Directional Distribution: | 50% ent. | 50% exit. |
| (T) = 6.30 (X) | | T = 720 | Average Vehicle Trip Ends | |
| (T) = 6.30 * | (114.0) | 360 entering | 360 | exiting |
| | | 360 + 360 | = | 720 |

Saturday, Peak Hour of Generator (800 Series Page 590)

| | | | | |
|----------------|---------|---------------------------|---------------------------|-----------|
| Daily Weekday | | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 1.10 (X) | | T = 125 | Average Vehicle Trip Ends | |
| (T) = 1.10 * | (114.0) | 68 entering | 57 | exiting |
| | | 68 + 57 | = | 125 |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for High-Turnover (Sit-Down) Restaurant
 Designed by TES Date June 24, 2020 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - High Turnover Sit-Down Restaurant (932)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **11,000** Square Feet

X = 11.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 97)

| | | | |
|-------------------|---------------------------|----------|---------------------------|
| Average Weekday | Directional Distribution: | 55% ent. | 45% exit. |
| T = 9.94 (X) | T = | 109 | Average Vehicle Trip Ends |
| T = 9.94 * 11.000 | 60 entering | 49 | exiting |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series Page 98)

| | | | |
|-------------------|---------------------------|----------|---------------------------|
| Average Weekday | Directional Distribution: | 62% ent. | 38% exit. |
| T = 9.77 (X) | T = | 107 | Average Vehicle Trip Ends |
| T = 9.77 * 11.000 | 66 entering | 41 | exiting |

Weekday (900 Series Page 96)

| | | |
|---------------------|---------------------------|--------------------------------|
| Average Weekday | Directional Distribution: | 50% entering, 50% exiting |
| T = 112.18 (X) | T = | 1234 Average Vehicle Trip Ends |
| T = 112.18 * 11.000 | 617 entering | 617 exiting |

P.M. Peak Hour of Generator (900 Series Page 100)

| | | | |
|--------------------|---------------------------|----------|---------------------------|
| Average Weekday | Directional Distribution: | 52% ent. | 48% exit. |
| T = 17.41 (X) | T = | 192 | Average Vehicle Trip Ends |
| T = 17.41 * 11.000 | 100 entering | 92 | exiting |

Saturday Peak Hour of Generator (900 Series Page 105)

| | | | |
|--------------------|---------------------------|----------|---------------------------|
| Average Saturday | Directional Distribution: | 51% ent. | 49% exit. |
| T = 11.19 (X) | T = | 124 | Average Vehicle Trip Ends |
| T = 11.19 * 11.000 | 63 entering | 61 | exiting |

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 207)

| | | | | | |
|----------------|-----|-------------|----------------|-----|------------------------------------|
| AM Peak Hour = | 57% | Non-Pass By | PM Peak Hour = | 57% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 34 | 28 | 62 | | |
| PM Peak | 38 | 23 | 61 | | |
| Daily | 352 | 352 | 704 | | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 207)

| | | | | | |
|----------------|-----|---------|----------------|-----|------------------------------------|
| AM Peak Hour = | 43% | Pass By | PM Peak Hour = | 43% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 26 | 21 | 48 | | |
| PM Peak | 28 | 18 | 46 | | |
| Daily | 265 | 265 | 530 | | PM Peak Hour Rate Applied to Daily |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for Fast-Food Restaurant with Drive-Through Window
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Fast Food Restaurant With Drive-Through Window (934)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **5,000** Square Feet

X = 5.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series page 158)

Average Weekday
 T = 40.19 (X)
 T = 40.19 * 5.000

Directional Distribution: 51% ent. 49% exit.
 T = 201 Average Vehicle Trip Ends
 103 entering 98 exiting
 103 + 98 (*) = 201

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series page 159)

Average Weekday
 T = 32.67 (X)
 T = 32.67 * 5.000

Directional Distribution: 52% ent. 48% exit.
 T = 163 Average Vehicle Trip Ends
 85 entering 78 exiting
 85 + 78 = 163

Weekday (900 Series page 157)

Average Weekday
 T = 470.95 (X)
 T = 470.95 * 5.000

Directional Distribution: 50% entering, 50% exiting
 T = 2356 Average Vehicle Trip Ends
 1178 entering 1178 exiting
 1178 + 1178 = 2356

Saturday Peak Hour of Generator (900 Series page 163)

T = 54.86 (X)
 T = 54.86 * 5.000

Directional Distribution: 51% ent. 49% exit.
 T = 274 Average Vehicle Trip Ends
 140 entering 134 exiting
 140 + 134 = 274

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|-----|-------------|----------------|-----|------------------------------------|
| AM Peak Hour = | 51% | Non-Pass By | PM Peak Hour = | 50% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 53 | 50 | 103 | | |
| PM Peak | 43 | 39 | 82 | | |
| Daily | 589 | 589 | 1178 | | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|-----|---------|----------------|-----|------------------------------------|
| AM Peak Hour = | 49% | Pass By | PM Peak Hour = | 50% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 50 | 48 | 98 | | |
| PM Peak | 43 | 39 | 82 | | |
| Daily | 589 | 589 | 1178 | | PM Peak Hour Rate Applied to Daily |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads North)
 Subject Trip Generation for Super Convenience Market/Gas Station
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Super Convenience Market/Gas Station (960)

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

Gross Leasable Area = **6,000** Square Feet

X = 6.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 404)

| | | | | |
|---------------|-------|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 83.14 (X) | | T = 499 | Average Vehicle Trip Ends | |
| T = 83.14 * | 6.000 | 249 entering | 250 | exiting |
| | | 249 + 250 = | 499 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series page 405)

| | | | | |
|---------------|-------|---------------------------|---------------------------|-----------|
| | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 69.28 (X) | | T = 416 | Average Vehicle Trip Ends | |
| T = 69.28 * | 6.000 | 208 entering | 208 | exiting |
| | | 208 + 208 = | 416 | |

Weekday (800 Series page 335)

| | | | | |
|-----------------|-------|---------------------------|---------------------------|---------|
| | | Directional Distribution: | 50% entering, 50% exiting | |
| Average Weekday | | T = 5026 | Average Vehicle Trip Ends | |
| T = 837.58 (X) | | 2513 entering | 2513 | exiting |
| T = 837.58 * | 6.000 | 2513 + 2513 = | 5026 | |

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|-------------|----------------|---|-------------|
| PM Peak Hour = | 44% | Non-Pass By | AM Peak Hour = | 38% | Non-Pass By |
| | IN | Out | Total | * Utilized ITE 945 pass-by calculations | |
| AM Peak | 95 | 95 | 190 | | |
| PM Peak | 92 | 92 | 183 | | |
| Daily | 1106 | 1106 | 2212 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|---------|----------------|------------------------------------|---------|
| PM Peak Hour = | 56% | Pass By | AM Peak Hour = | 62% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 154 | 155 | 309 | | |
| PM Peak | 116 | 116 | 233 | | |
| Daily | 1407 | 1407 | 2814 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadwobrook-Reagan Ranch (Meadowbrook Park)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 67$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|--------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| (T) = 0.71 (X) + 4.80 | T = 52 | Average Vehicle Trip Ends | |
| (T) = 0.71 * (67) + 4.80 | 13 entering | 39 | exiting |
| | 13 + 39 = 52 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| Ln(T) = 0.96 Ln(X) + 0.20 | T = 69 | Average Vehicle Trip Ends | |
| Ln(T) = 0.96 * Ln(67) + 0.20 | 43 entering | 26 | exiting |
| | 43 + 26 = 69 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|---------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 0.84 (X) + 17.99 | T = 74 | Average Vehicle Trip Ends | |
| (T) = 0.84 * (67) + 17.99 | 40 entering | 34 | exiting |
| | 40 + 34 = 74 | | |

Weekday (200 Series Page 2)

| | | | |
|------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| Ln(T) = 0.92 Ln(X) + 2.71 | T = 720 | Average Vehicle Trip Ends | |
| Ln(T) = 0.92 * Ln(67) + 2.71 | 360 entering | 360 | exiting |
| | 360 + 360 = 720 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use)
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

$$X = 300$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

| | | | | | |
|---------------------------------|---------------------------|----------|---------------------------|---------|-------|
| Ln(T) = 0.98 Ln(X) - 0.98 | Directional Distribution: | 26% | ent. | 74% | exit. |
| Ln(T) = 0.98 * Ln(300.0) - 0.98 | T = | 100 | Average Vehicle Trip Ends | | |
| | 26 | entering | 74 | exiting | |
| | 26 | + | 74 | = | 100 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 75)

| | | | | | |
|---------------------------------|---------------------------|----------|---------------------------|---------|-------|
| Ln(T) = 0.96 Ln(X) - 0.63 | Directional Distribution: | 61% | ent. | 39% | exit. |
| Ln(T) = 0.96 * Ln(300.0) - 0.63 | T = | 127 | Average Vehicle Trip Ends | | |
| | 77 | entering | 50 | exiting | |
| | 77 | + | 50 | = | 127 |

Weekday (Series 200 Page 73)

| | | | | | |
|-------------------------|---------------------------|----------|---------------------------|---------|-------|
| (T) = 5.45*(X) - 1.75 | Directional Distribution: | 50% | ent. | 50% | exit. |
| (T) = 5.45 * 300 - 1.75 | T = | 1634 | Average Vehicle Trip Ends | | |
| | 817 | entering | 817 | exiting | |
| | 817 | + | 817 | = | 1634 |

Peak Hour of Generator, Saturday (Series 200 Page 79)

| | | | | | |
|-------------------------|---------------------------|----------|---------------------------|---------|-------|
| (T) = 0.42*(X) + 6.73 | Directional Distribution: | 49% | ent. | 51% | exit. |
| (T) = 0.42 * 300 + 6.73 | T = | 133 | Average Vehicle Trip Ends | | |
| | 65 | entering | 68 | exiting | |
| | 65 | + | 68 | = | 133 |



Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use)
 Subject Trip Generation for Shopping Center
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **10,000** Square Feet

X = 10.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Directional Distribution: 62% ent. 38% exit.
 T = 0.50 * (X) + 151.78 T = 157 Average Vehicle Trip Ends
 T = 0.50 * 10 + 151.78 97 entering 60 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 140)

Directional Distribution: 48% ent. 52% exit.
 Ln(T) = 0.74 Ln(X) + 2.89 T = 99 Average Vehicle Trip Ends
 Ln(T) = 0.74 * Ln(10) + 2.89 48 entering 51 exiting

Weekday (800 Series Page 138)

Daily Weekday Directional Distribution: 50% entering, 50% exiting
 Ln(T) = 0.68 Ln(X) + 5.57 T = 1256 Average Vehicle Trip Ends
 Ln(T) = 0.68 * Ln(10) + 5.57 628 entering 628 exiting

Saturday Peak Hour of Generator (Page 144)

Average Saturday Directional Distribution: 52% ent. 48% exit.
 Ln(T) = 0.79 Ln(X) + 2.79 T = 100 Average Vehicle Trip Ends
 Ln(T) = 0.79 * Ln(10) + 2.79 52 entering 48 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

| | | | | | |
|----------------|-----|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 66% | Non-Pass By | PM Peak Hour = | 66% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 64 | 39 | 103 | | |
| PM Peak | 32 | 34 | 65 | | |
| Daily | 414 | 414 | 828 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

| | | | | | |
|----------------|-----|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 34% | Pass By | PM Peak Hour = | 34% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 33 | 20 | 54 | | |
| PM Peak | 16 | 17 | 34 | | |
| Daily | 214 | 214 | 428 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use)
 Subject Trip Generation for Pharmacy/Drugstore with Drive-Through Window
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Pharmacy/Drugstore with Drive-Through Window (881)

Independant Variable - 1000 Sq. Feet Gross Floor Area (X)

SF= 14000

X = 14.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (page Series 800 Page 562)

Average Weekday Directional Distribution: 53% ent. 47% exit.
 T = 3.84 (X) T = 54 Average Vehicle Trip Ends
 (T) = 3.84* (14.0) 29 entering 25 exiting
 29 + 25 = 54

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 800 page 563)

Average Weekday Directional Distribution: 50% ent. 50% exit.
 T = 10.29 (X) T = 144 Average Vehicle Trip Ends
 (T) = 10.29 * (14.0) 72 entering 72 exiting
 72 + 72 = 144

Weekday (Series 800 page 561)

Average Weekday Directional Distribution: 50% entering, 50% exiting
 T = 109.16 (X) T = 1528 Average Vehicle Trip Ends
 (T) = 109.16 * (14.0) 764 entering 764 exiting
 764 + 764 = 1528

Saturday Peak Hour of Generator (page 1807)

T = 8.20 (X) Directional Distribution: 49% ent. 51% exit.
 (T) = 8.20 * (14.0) T = 115 Average Vehicle Trip Ends
 56 entering 59 exiting
 56 + 59 = 115

Non-Pass-by Trip Volumes (page 63, ITE Trip Generation Handbook, December 2012)

PM Average Pass By Percentage: 51% Pass By

| | IN | Out | Total | |
|----------|-----|-----|-------|-----------------------------|
| AM Peak | 15 | 13 | 28 | PM Rate Applied to AM Peak |
| PM Peak | 37 | 37 | 73 | |
| Daily | 390 | 390 | 780 | PM Rate Applied to Daily |
| Saturday | 29 | 30 | 59 | PM Rate Applied to Saturday |

Pass-by Trip Volumes (page 63, ITE Trip Generation Handbook, December 2012)

PM Average Pass By Percentage: 49% Pass By

| | IN | Out | Total | |
|----------|-----|-----|-------|-----------------------------|
| AM Peak | 14 | 12 | 26 | PM Rate Applied to AM Peak |
| PM Peak | 35 | 35 | 71 | |
| Daily | 374 | 374 | 750 | PM Rate Applied to Daily |
| Saturday | 27 | 29 | 56 | PM Rate Applied to Saturday |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use)
 Subject Trip Generation for High-Turnover (Sit-Down) Restaurant
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - High Turnover Sit-Down Restaurant (932)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **8,000** Square Feet

X = 8.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 97)

Average Weekday Directional Distribution: 55% ent. 45% exit.
 T = 9.94 (X) T = 80 Average Vehicle Trip Ends
 T = 9.94 * 8.000 44 entering 36 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series Page 98)

Average Weekday Directional Distribution: 62% ent. 38% exit.
 T = 9.77 (X) T = 78 Average Vehicle Trip Ends
 T = 9.77 * 8.000 48 entering 30 exiting

Weekday (900 Series Page 96)

Average Weekday Directional Distribution: 50% entering, 50% exiting
 T = 112.18 (X) T = 898 Average Vehicle Trip Ends
 T = 112.18 * 8.000 449 entering 449 exiting

P.M. Peak Hour of Generator (900 Series Page 100)

Average Weekday Directional Distribution: 52% ent. 48% exit.
 T = 17.41 (X) T = 139 Average Vehicle Trip Ends
 T = 17.41 * 8.000 72 entering 67 exiting

Saturday Peak Hour of Generator (900 Series Page 105)

Average Saturday Directional Distribution: 51% ent. 49% exit.
 T = 11.19 (X) T = 90 Average Vehicle Trip Ends
 T = 11.19 * 8.000 46 entering 44 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 207)

| | | | | | |
|----------------|-----|-------------|----------------|-----|------------------------------------|
| AM Peak Hour = | 57% | Non-Pass By | PM Peak Hour = | 57% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 25 | 20 | 45 | | |
| PM Peak | 28 | 17 | 45 | | |
| Daily | 256 | 256 | 512 | | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 207)

| | | | | | |
|----------------|-----|---------|----------------|-----|------------------------------------|
| AM Peak Hour = | 43% | Pass By | PM Peak Hour = | 43% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 19 | 15 | 35 | | |
| PM Peak | 21 | 13 | 34 | | |
| Daily | 193 | 193 | 386 | | PM Peak Hour Rate Applied to Daily |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use)
 Subject Trip Generation for Fast-Food Restaurant with Drive-Through Window
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Fast Food Restaurant With Drive-Through Window (934)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **11,000** Square Feet Fast

X = 11.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series page 158)

Average Weekday Directional Distribution: 51% ent. 49% exit.
 T = 40.19 (X) T = 442 Average Vehicle Trip Ends
 T = 40.19 * 11.000 225 entering 217 exiting
225 + 217 = 442

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series page 159)

Average Weekday Directional Distribution: 52% ent. 48% exit.
 T = 32.67 (X) T = 359 Average Vehicle Trip Ends
 T = 32.67 * 11.000 187 entering 172 exiting
187 + 172 = 359

Weekday (900 Series page 157)

Average Weekday Directional Distribution: 50% entering, 50% exiting
 T = 470.95 (X) T = 5182 Average Vehicle Trip Ends
 T = 470.95 * 11.000 2591 entering 2591 exiting
2591 + 2591 = 5182

Saturday Peak Hour of Generator (900 Series page 163)

Directional Distribution: 51% ent. 49% exit.
 T = 54.86 (X) T = 603 Average Vehicle Trip Ends
 T = 54.86 * 11.000 308 entering 295 exiting
308 (*) - 295 = 603

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|-------------|----------------|------------------------------------|-------------|
| AM Peak Hour = | 51% | Non-Pass By | PM Peak Hour = | 50% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 115 | 111 | 225 | | |
| PM Peak | 94 | 86 | 180 | | |
| Daily | 1296 | 1296 | 2592 | PM Peak Hour Rate Applied to Daily | |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017)

| | | | | | |
|----------------|------|---------|----------------|------------------------------------|---------|
| AM Peak Hour = | 49% | Pass By | PM Peak Hour = | 50% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 110 | 106 | 217 | | |
| PM Peak | 94 | 86 | 180 | | |
| Daily | 1295 | 1295 | 2590 | PM Peak Hour Rate Applied to Daily | |

Project Crossroads-Meadowbrook-Reagan Ranch (Crossroads Mix Use)
 Subject Trip Generation for Coffee/Donut Shop with Drive Through
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Coffee/Donut Shop with Drive Through (937)

Independant Variable - 1000 Square Feet Gross Floor Feet (X)

Gross Floor Area = **2,500**

X = 2.5

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 900 Page 232)

| | | | | |
|---------------|-----|---------------------------|---------------------------|-----------|
| T = 88.99 (X) | | Directional Distribution: | 51% ent. | 49% exit. |
| T = 88.99 * | 2.5 | T = 222 | Average Vehicle Trip Ends | |
| | | 113 entering | 109 exiting | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 900 Page 233)

| | | | | |
|---------------|-----|---------------------------|---------------------------|-----------|
| T = 43.38 (X) | | Directional Distribution: | 50% ent. | 50% exit. |
| T = 43.38 * | 2.5 | T = 110 | Average Vehicle Trip Ends | |
| | | 55 entering | 55 exiting | |

Weekday (Series 900 Page 231)

| | | | | |
|------------------|-------|---------------------------|---------------------------|--|
| Average Weekday | | Directional Distribution: | 50% entering, 50% exiting | |
| (T) = 820.38 (X) | | T = 2050 | Average Vehicle Trip Ends | |
| (T) = 820.38 * | (2.5) | 1025 entering | 1025 exiting | |
| | | 1025 + 1025 = 2050 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch NW Parcel)
 Subject Trip Generation for Industrial Park
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Industrial Park (130)

Independent Variable - 1000 Square Feet Gross Floor Feet (X)

Gross Floor Area = **365,000**

X = 365.0

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (100 Series Page 22)

| | | | | |
|--------------|-----|---------------------------|------------|---------------------------|
| | | Directional Distribution: | 81% ent. | 19% exit. |
| T = 0.40 (X) | | T = | 146 | Average Vehicle Trip Ends |
| T = 0.40 * | 365 | 118 entering | 28 exiting | |
| | | 118 + 28 = | 146 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (100 Series Page 23)

| | | | | |
|--------------|-----|---------------------------|-------------|---------------------------|
| | | Directional Distribution: | 21% ent. | 79% exit. |
| T = 0.40 (X) | | T = | 146 | Average Vehicle Trip Ends |
| T = 0.40 * | 365 | 31 entering | 115 exiting | |
| | | 31 + 115 = | 146 | |

Weekday (100 Series Page 21)

| | | | | |
|--------------|-----|---------------------------|---------------|---------------------------|
| | | Directional Distribution: | 50% entering, | 50% exiting |
| T = 3.37 (X) | | T = | 1232 | Average Vehicle Trip Ends |
| T = 3.37 * | 365 | 616 entering | 616 exiting | |
| | | 616 + 616 = | 1232 | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch NE Parcel)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 200$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|---------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| (T) = 0.71 (X) + 4.80 | T = 147 | Average Vehicle Trip Ends | |
| (T) = 0.71 * (200) + 4.80 | 37 entering | 110 | exiting |
| | 37 + 110 = 147 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|-------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| Ln(T) = 0.96 Ln(X) + 0.20 | T = 198 | Average Vehicle Trip Ends | |
| Ln(T) = 0.96 * Ln(200) + 0.20 | 125 entering | 73 | exiting |
| | 125 + 73 = 198 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|----------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 0.84 (X) + 17.99 | T = 186 | Average Vehicle Trip Ends | |
| (T) = 0.84 * (200) + 17.99 | 100 entering | 86 | exiting |
| | 100 + 86 = 186 | | |

Weekday (200 Series Page 2)

| | | | |
|-------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| Ln(T) = 0.92 Ln(X) + 2.71 | T = 1968 | Average Vehicle Trip Ends | |
| Ln(T) = 0.92 * Ln(200) + 2.71 | 984 entering | 984 | exiting |
| | 984 + 984 = 1968 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch NE Parcel)
 Subject Trip Generation for Shopping Center
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **175,000** Square Feet

X = 175.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Directional Distribution: 62% ent. 38% exit.
 T = 0.50 * (X) + 151.78 T = 239 Average Vehicle Trip Ends
 T = 0.50 * 175 + 151.78 148 entering 91 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 140)

Directional Distribution: 48% ent. 52% exit.
 Ln(T) = 0.74 Ln(X) + 2.89 T = 822 Average Vehicle Trip Ends
 Ln(T) = 0.74 * Ln(175) + 2.89 395 entering 427 exiting

Weekday (800 Series Page 138)

Directional Distribution: 50% entering, 50% exiting
 Daily Weekday
 Ln(T) = 0.68 Ln(X) + 5.57 T = 8796 Average Vehicle Trip Ends
 Ln(T) = 0.68 * Ln(175) + 5.57 4398 entering 4398 exiting

Saturday Peak Hour of Generator (Page 144)

Directional Distribution: 52% ent. 48% exit.
 Average Saturday
 Ln(T) = 0.79 Ln(X) + 2.79 T = 963 Average Vehicle Trip Ends
 Ln(T) = 0.79 * Ln(175) + 2.79 501 entering 462 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

| | |
|--------------------------------|------------------------------------|
| AM Peak Hour = 66% Non-Pass By | PM Peak Hour = 66% Non-Pass By |
| IN Out Total | |
| AM Peak 98 60 158 | |
| PM Peak 261 282 543 | |
| Daily 2903 2903 5806 | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

| | |
|----------------------------|------------------------------------|
| AM Peak Hour = 34% Pass By | PM Peak Hour = 34% Pass By |
| IN Out Total | |
| AM Peak 50 31 82 | |
| PM Peak 134 145 279 | |
| Daily 1495 1495 2990 | PM Peak Hour Rate Applied to Daily |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 393$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|---------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| (T) = 0.71 (X) + 4.80 | T = 284 | Average Vehicle Trip Ends | |
| (T) = 0.71 * (393) + 4.80 | 71 entering | 213 | exiting |
| | 71 + 213 = 284 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|-------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| Ln(T) = 0.96 Ln(X) + 0.20 | T = 378 | Average Vehicle Trip Ends | |
| Ln(T) = 0.96 * Ln(393) + 0.20 | 238 entering | 140 | exiting |
| | 238 + 140 = 378 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|----------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 0.84 (X) + 17.99 | T = 348 | Average Vehicle Trip Ends | |
| (T) = 0.84 * (393) + 17.99 | 188 entering | 160 | exiting |
| | 188 + 160 = 348 | | |

Weekday (200 Series Page 2)

| | | | |
|-------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| Ln(T) = 0.92 Ln(X) + 2.71 | T = 3662 | Average Vehicle Trip Ends | |
| Ln(T) = 0.92 * Ln(393) + 2.71 | 1831 entering | 1831 | exiting |
| | 1831 + 1831 = 3662 | | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel)
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

$$X = 360$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

| | | | |
|-------------------------------------|---------------------------|------------|---------------------------|
| $\ln(T) = 0.98 \ln(X) - 0.98$ | Directional Distribution: | 26% ent. | 74% exit. |
| $\ln(T) = 0.98 * \ln(360.0) - 0.98$ | T = | 120 | Average Vehicle Trip Ends |
| | 31 entering | 89 exiting | |
| | 31 + 89 = | 120 | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 75)

| | | | |
|-------------------------------------|---------------------------|------------|---------------------------|
| $\ln(T) = 0.96 \ln(X) - 0.63$ | Directional Distribution: | 61% ent. | 39% exit. |
| $\ln(T) = 0.96 * \ln(360.0) - 0.63$ | T = | 152 | Average Vehicle Trip Ends |
| | 93 entering | 59 exiting | |
| | 93 + 59 = | 152 | |

Weekday (Series 200 Page 73)

| | | | |
|---------------------------|---------------------------|-------------|---------------------------|
| $(T) = 5.45*(X) - 1.75$ | Directional Distribution: | 50% ent. | 50% exit. |
| $(T) = 5.45 * 360 - 1.75$ | T = | 1962 | Average Vehicle Trip Ends |
| | 981 entering | 981 exiting | |
| | 981 + 981 = | 1962 | |

Peak Hour of Generator, Saturday (Series 200 Page 79)

| | | | |
|---------------------------|---------------------------|------------|---------------------------|
| $(T) = 0.42*(X) + 6.73$ | Directional Distribution: | 49% ent. | 51% exit. |
| $(T) = 0.42 * 360 + 6.73$ | T = | 158 | Average Vehicle Trip Ends |
| | 77 entering | 81 exiting | |
| | 77 + 81 = | 158 | |

Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel)
 Subject Trip Generation for Office Building (South Parcel)
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)

$$SF = 100,000$$

$$X = 100.000$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 4)

| | |
|---|--|
| $T = 0.94 (X) + 26.49$ $T = 0.94 * (100.0) + 26.49$ | Directional Distribution: 86% ent. 14% exit. T = 120 Average Vehicle Trip Ends 103 entering 17 exiting 103 + 17 = 120 |
|---|--|

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 5)

| | |
|---|--|
| $\ln(T) = 0.95 \ln(X) + 0.36$ $\ln(T) = 0.95 * \ln(100.0) + 0.36$ | Directional Distribution: 16% ent. 84% exit. T = 114 Average Vehicle Trip Ends 18 entering 96 exiting 18 + 96 = 114 |
|---|--|

Weekday (700 Series Page 3)

| | |
|--|--|
| Average Weekday $\ln(T) = 0.97 \ln(X) + 2.50$ $\ln(T) = 0.97 * \ln(100.0) + 2.50$ | Directional Distribution: 50% entering, 50% exiting T = 1062 Average Vehicle Trip Ends 531 entering 531 exiting 531 + 531 = 1062 |
|--|--|



Project Crossroads-Meadowbrook-Reagan Ranch (Reagan Ranch SE Parcel)
 Subject Trip Generation for Shopping Center
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **350,000** Square Feet

X = 350.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Directional Distribution: 62% ent. 38% exit.
 T = 0.50 * (X) + 151.78 T = 327 Average Vehicle Trip Ends
 T = 0.50 * 350 + 151.78 203 entering 124 exiting

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series Page 140)

Directional Distribution: 48% ent. 52% exit.
 Ln(T) = 0.74 Ln(X) + 2.89 T = 1373 Average Vehicle Trip Ends
 Ln(T) = 0.74 * Ln(350) + 2.89 659 entering 714 exiting

Weekday (800 Series Page 138)

Daily Weekday Directional Distribution: 50% entering, 50% exiting
 Ln(T) = 0.68 Ln(X) + 5.57 T = 14092 Average Vehicle Trip Ends
 Ln(T) = 0.68 * Ln(350) + 5.57 7046 entering 7046 exiting

Saturday Peak Hour of Generator (Page 144)

Average Saturday Directional Distribution: 52% ent. 48% exit.
 Ln(T) = 0.79 Ln(X) + 2.79 T = 1665 Average Vehicle Trip Ends
 Ln(T) = 0.79 * Ln(350) + 2.79 866 entering 799 exiting

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

| | |
|-------------------------------------|------------------------------------|
| AM Peak Hour = 66% Non-Pass By | PM Peak Hour = 66% Non-Pass By |
| IN Out Total | |
| AM Peak 134 82 216 | |
| PM Peak 435 471 906 | |
| Daily 4650 4650 9300 | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

| | |
|-------------------------------------|------------------------------------|
| AM Peak Hour = 34% Pass By | PM Peak Hour = 34% Pass By |
| IN Out Total | |
| AM Peak 69 42 112 | |
| PM Peak 224 243 467 | |
| Daily 2396 2396 4792 | PM Peak Hour Rate Applied to Daily |

Project Crossroads-Meadowbrook-Reagan Ranch (East of Reagan Ranch 2040 Background Parcel)
 Subject Trip Generation for Single-Family Detached Housing
 Designed by JRP Date February 08, 2021 Job No. 096956015
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

$$X = 1,123$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

| | | | |
|----------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 25% ent. | 75% exit. |
| (T) = 0.71 (X) + 4.80 | T = 802 | Average Vehicle Trip Ends | |
| (T) = 0.71 * (1123) + 4.80 | 201 entering | 602 | exiting |
| | 201 + 601 = 802 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

| | | | |
|--------------------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 63% ent. | 37% exit. |
| Ln(T) = 0.96 Ln(X) + 0.20 | T = 1036 | Average Vehicle Trip Ends | |
| Ln(T) = 0.96 * Ln(1123) + 0.20 | 653 entering | 383 | exiting |
| | 653 + 383 = 1036 | | |

Peak Hour of Generator, Saturday (200 Series Page 8)

| | | | |
|-----------------------------|---------------------------|---------------------------|-----------|
| Average Saturday | Directional Distribution: | 54% ent. | 46% exit. |
| (T) = 0.84 (X) + 17.99 | T = 961 | Average Vehicle Trip Ends | |
| (T) = 0.84 * (1123) + 17.99 | 519 entering | 442 | exiting |
| | 519 + 442 = 961 | | |

Weekday (200 Series Page 2)

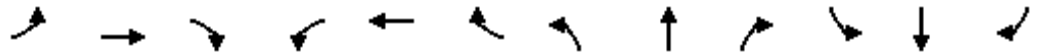
| | | | |
|--------------------------------|---------------------------|---------------------------|-------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| Ln(T) = 0.92 Ln(X) + 2.71 | T = 9622 | Average Vehicle Trip Ends | |
| Ln(T) = 0.92 * Ln(1123) + 2.71 | 4811 entering | 4811 | exiting |
| | 4811 + 4811 = 9622 | | |

APPENDIX D

Intersection Analysis Worksheets

Timings

1: Marksheffel Rd & Meadowbrook Parkway

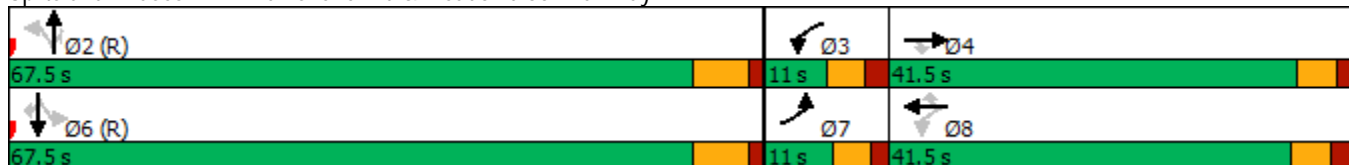


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 105 | 5 | 35 | 36 | 19 | 26 | 27 | 768 | 16 | 8 | 1389 | 170 |
| Future Volume (vph) | 105 | 5 | 35 | 36 | 19 | 26 | 27 | 768 | 16 | 8 | 1389 | 170 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 11.0 | 41.5 | 41.5 | 11.0 | 41.5 | 41.5 | 67.5 | 67.5 | 67.5 | 67.5 | 67.5 | 67.5 |
| Total Split (%) | 9.2% | 34.6% | 34.6% | 9.2% | 34.6% | 34.6% | 56.3% | 56.3% | 56.3% | 56.3% | 56.3% | 56.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 6.0 | 7.3 | 7.3 | 10.1 | 6.9 | 6.9 | 94.6 | 94.6 | 94.6 | 94.6 | 94.6 | 94.6 |
| Actuated g/C Ratio | 0.05 | 0.06 | 0.06 | 0.08 | 0.06 | 0.06 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| v/c Ratio | 0.69 | 0.05 | 0.22 | 0.27 | 0.19 | 0.16 | 0.13 | 0.30 | 0.01 | 0.02 | 0.54 | 0.14 |
| Control Delay | 77.9 | 53.0 | 3.0 | 50.0 | 57.4 | 2.1 | 14.8 | 15.4 | 2.8 | 4.2 | 6.3 | 0.9 |
| 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 | 77.9 | 53.0 | 3.0 | 50.0 | 57.4 | 2.1 | 14.8 | 15.4 | 2.8 | 4.2 | 6.3 | 0.9 |
| LOS | E | D | A | D | E | A | B | B | A | A | A | A |
| Approach Delay | | 59.1 | | | 36.5 | | | 15.2 | | | | 5.7 |
| Approach LOS | | E | | | D | | | B | | | | A |

Intersection Summary

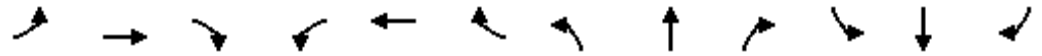
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 12.6
 Intersection LOS: B
 Intersection Capacity Utilization 60.9%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

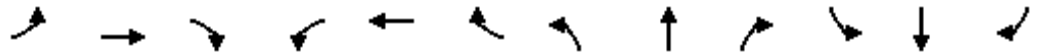
2020 Adjusted Existing AM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 105 | 5 | 35 | 36 | 19 | 26 | 27 | 768 | 16 | 8 | 1389 | 170 |
| Future Volume (veh/h) | 105 | 5 | 35 | 36 | 19 | 26 | 27 | 768 | 16 | 8 | 1389 | 170 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 | 1796 | 1796 | 1796 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 109 | 5 | 36 | 38 | 20 | 27 | 28 | 800 | 17 | 8 | 1447 | 177 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 2 | 2 | 2 | 7 | 7 | 7 | 6 | 6 | 6 |
| Cap, veh/h | 157 | 97 | 82 | 169 | 77 | 65 | 239 | 2624 | 1170 | 512 | 2645 | 1180 |
| Arrive On Green | 0.05 | 0.06 | 0.06 | 0.03 | 0.04 | 0.04 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Sat Flow, veh/h | 3237 | 1752 | 1485 | 1781 | 1870 | 1585 | 298 | 3413 | 1522 | 648 | 3441 | 1535 |
| Grp Volume(v), veh/h | 109 | 5 | 36 | 38 | 20 | 27 | 28 | 800 | 17 | 8 | 1447 | 177 |
| Grp Sat Flow(s),veh/h/ln | 1618 | 1752 | 1485 | 1781 | 1870 | 1585 | 298 | 1706 | 1522 | 648 | 1721 | 1535 |
| Q Serve(g_s), s | 4.0 | 0.3 | 2.8 | 2.4 | 1.2 | 2.0 | 5.0 | 8.5 | 0.3 | 0.5 | 20.1 | 3.6 |
| Cycle Q Clear(g_c), s | 4.0 | 0.3 | 2.8 | 2.4 | 1.2 | 2.0 | 25.1 | 8.5 | 0.3 | 8.9 | 20.1 | 3.6 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 157 | 97 | 82 | 169 | 77 | 65 | 239 | 2624 | 1170 | 512 | 2645 | 1180 |
| V/C Ratio(X) | 0.69 | 0.05 | 0.44 | 0.22 | 0.26 | 0.42 | 0.12 | 0.30 | 0.01 | 0.02 | 0.55 | 0.15 |
| Avail Cap(c_a), veh/h | 162 | 533 | 452 | 198 | 561 | 476 | 239 | 2624 | 1170 | 512 | 2645 | 1180 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.72 | 0.72 | 0.72 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 56.2 | 53.7 | 54.9 | 52.9 | 55.8 | 56.1 | 10.5 | 4.2 | 3.2 | 5.5 | 5.5 | 3.6 |
| Incr Delay (d2), s/veh | 11.7 | 0.2 | 3.6 | 0.7 | 1.8 | 4.2 | 0.7 | 0.2 | 0.0 | 0.1 | 0.8 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.9 | 0.1 | 1.1 | 1.1 | 0.6 | 0.9 | 0.4 | 2.6 | 0.1 | 0.1 | 6.3 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 67.9 | 53.9 | 58.5 | 53.6 | 57.5 | 60.3 | 11.3 | 4.4 | 3.3 | 5.6 | 6.4 | 3.9 |
| LnGrp LOS | E | D | E | D | E | E | B | A | A | A | A | A |
| Approach Vol, veh/h | | 150 | | | 85 | | | 845 | | | 1632 | |
| Approach Delay, s/veh | | 65.2 | | | 56.6 | | | 4.6 | | | 6.1 | |
| Approach LOS | | E | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 98.8 | 9.1 | 12.2 | | 98.8 | 10.8 | 10.4 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 61.0 | 5.5 | * 37 | | 61.0 | 6.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 27.1 | 4.4 | 4.8 | | 22.1 | 6.0 | 4.0 | | | | |
| Green Ext Time (p_c), s | | 7.6 | 0.0 | 0.1 | | 17.0 | 0.0 | 0.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 10.5 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

Timings

1: Marksheffel Rd & Meadowbrook Parkway

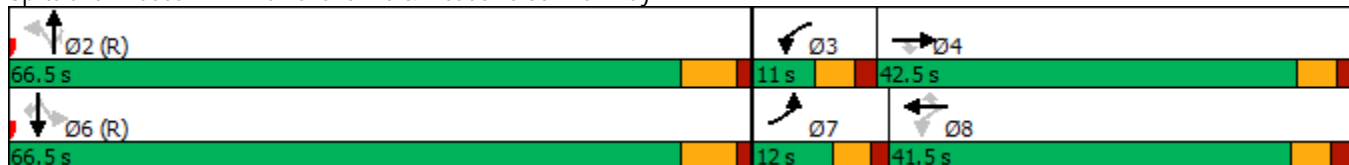


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 177 | 11 | 50 | 19 | 12 | 34 | 42 | 1432 | 73 | 41 | 949 | 131 |
| Future Volume (vph) | 177 | 11 | 50 | 19 | 12 | 34 | 42 | 1432 | 73 | 41 | 949 | 131 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 12.0 | 42.5 | 42.5 | 11.0 | 41.5 | 41.5 | 66.5 | 66.5 | 66.5 | 66.5 | 66.5 | 66.5 |
| Total Split (%) | 10.0% | 35.4% | 35.4% | 9.2% | 34.6% | 34.6% | 55.4% | 55.4% | 55.4% | 55.4% | 55.4% | 55.4% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 7.0 | 12.3 | 12.3 | 10.8 | 6.4 | 6.4 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 |
| Actuated g/C Ratio | 0.06 | 0.10 | 0.10 | 0.09 | 0.05 | 0.05 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| v/c Ratio | 0.95 | 0.06 | 0.23 | 0.14 | 0.13 | 0.23 | 0.12 | 0.57 | 0.06 | 0.24 | 0.38 | 0.12 |
| Control Delay | 108.3 | 51.1 | 6.9 | 45.5 | 56.5 | 3.3 | 8.0 | 14.0 | 3.6 | 8.9 | 5.6 | 0.9 |
| 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 | 108.3 | 51.1 | 6.9 | 45.5 | 56.5 | 3.3 | 8.0 | 14.0 | 3.6 | 8.9 | 5.6 | 0.9 |
| LOS | F | D | A | D | E | A | A | B | A | A | A | A |
| Approach Delay | | 84.3 | | | 25.2 | | | 13.4 | | | 5.2 | |
| Approach LOS | | F | | | C | | | B | | | 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: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 16.2
 Intersection LOS: B
 Intersection Capacity Utilization 63.0%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
1: Marksheffel Rd & Meadowbrook Parkway

2020 Adjusted Existing PM.syn
02/15/2021

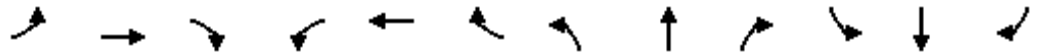


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 177 | 11 | 50 | 19 | 12 | 34 | 42 | 1432 | 73 | 41 | 949 | 131 |
| Future Volume (veh/h) | 177 | 11 | 50 | 19 | 12 | 34 | 42 | 1432 | 73 | 41 | 949 | 131 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 190 | 12 | 54 | 20 | 13 | 37 | 45 | 1540 | 78 | 44 | 1020 | 141 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 202 | 140 | 119 | 151 | 77 | 65 | 379 | 2696 | 1203 | 237 | 2654 | 1184 |
| Arrive On Green | 0.06 | 0.08 | 0.08 | 0.02 | 0.04 | 0.04 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 1781 | 1870 | 1585 | 484 | 3554 | 1585 | 307 | 3497 | 1560 |
| Grp Volume(v), veh/h | 190 | 12 | 54 | 20 | 13 | 37 | 45 | 1540 | 78 | 44 | 1020 | 141 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1781 | 1870 | 1585 | 484 | 1777 | 1585 | 307 | 1749 | 1560 |
| Q Serve(g_s), s | 6.6 | 0.7 | 3.9 | 1.3 | 0.8 | 2.7 | 4.2 | 22.1 | 1.5 | 8.5 | 11.9 | 2.9 |
| Cycle Q Clear(g_c), s | 6.6 | 0.7 | 3.9 | 1.3 | 0.8 | 2.7 | 16.1 | 22.1 | 1.5 | 30.7 | 11.9 | 2.9 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 202 | 140 | 119 | 151 | 77 | 65 | 379 | 2696 | 1203 | 237 | 2654 | 1184 |
| V/C Ratio(X) | 0.94 | 0.09 | 0.45 | 0.13 | 0.17 | 0.57 | 0.12 | 0.57 | 0.06 | 0.19 | 0.38 | 0.12 |
| Avail Cap(c_a), veh/h | 202 | 584 | 495 | 197 | 561 | 476 | 379 | 2696 | 1203 | 237 | 2654 | 1184 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.39 | 0.39 | 0.39 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 56.3 | 51.7 | 53.1 | 53.4 | 55.5 | 56.5 | 7.7 | 6.2 | 3.7 | 12.7 | 4.9 | 3.8 |
| Incr Delay (d2), s/veh | 47.2 | 0.3 | 2.7 | 0.4 | 1.0 | 7.5 | 0.2 | 0.3 | 0.0 | 1.7 | 0.4 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.2 | 0.3 | 1.7 | 0.6 | 0.4 | 1.2 | 0.4 | 7.1 | 0.4 | 0.7 | 3.9 | 0.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 103.5 | 51.9 | 55.8 | 53.8 | 56.6 | 64.0 | 7.9 | 6.5 | 3.7 | 14.4 | 5.4 | 4.0 |
| LnGrp LOS | F | D | E | D | E | E | A | A | A | B | A | A |
| Approach Vol, veh/h | | 256 | | | 70 | | | 1663 | | | 1205 | |
| Approach Delay, s/veh | | 91.0 | | | 59.7 | | | 6.4 | | | 5.5 | |
| Approach LOS | | F | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 97.6 | 7.9 | 14.5 | | 97.6 | 12.0 | 10.4 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 60.0 | 5.5 | * 38 | | 60.0 | 7.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 24.1 | 3.3 | 5.9 | | 32.7 | 8.6 | 4.7 | | | | |
| Green Ext Time (p_c), s | | 18.0 | 0.0 | 0.2 | | 10.4 | 0.0 | 0.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 14.0 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

Timings

1: Marksheffel Rd & Meadowbrook Parkway

02/15/2021

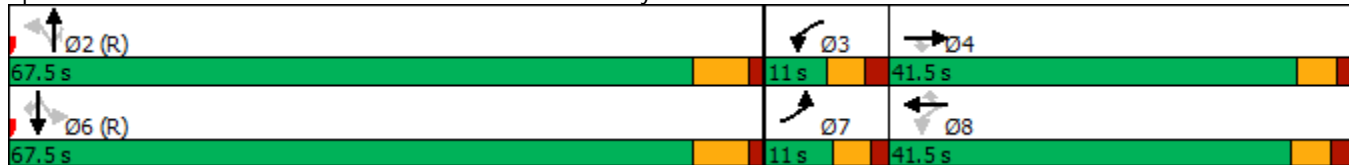


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 115 | 10 | 40 | 40 | 25 | 30 | 30 | 825 | 20 | 10 | 1490 | 185 |
| Future Volume (vph) | 115 | 10 | 40 | 40 | 25 | 30 | 30 | 825 | 20 | 10 | 1490 | 185 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 11.0 | 41.5 | 41.5 | 11.0 | 41.5 | 41.5 | 67.5 | 67.5 | 67.5 | 67.5 | 67.5 | 67.5 |
| Total Split (%) | 9.2% | 34.6% | 34.6% | 9.2% | 34.6% | 34.6% | 56.3% | 56.3% | 56.3% | 56.3% | 56.3% | 56.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 6.0 | 7.7 | 7.7 | 11.6 | 7.2 | 7.2 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 |
| Actuated g/C Ratio | 0.05 | 0.06 | 0.06 | 0.10 | 0.06 | 0.06 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| v/c Ratio | 0.75 | 0.09 | 0.25 | 0.28 | 0.23 | 0.18 | 0.17 | 0.33 | 0.02 | 0.02 | 0.59 | 0.16 |
| Control Delay | 84.4 | 53.6 | 4.8 | 48.5 | 58.1 | 2.3 | 17.7 | 17.2 | 3.0 | 4.4 | 7.8 | 0.9 |
| 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 | 84.4 | 53.6 | 4.8 | 48.5 | 58.1 | 2.3 | 17.7 | 17.2 | 3.0 | 4.4 | 7.8 | 0.9 |
| LOS | F | D | A | D | E | A | B | B | A | A | A | A |
| Approach Delay | | 63.2 | | | 36.5 | | | 16.8 | | | 7.0 | |
| Approach LOS | | E | | | D | | | B | | | A | |

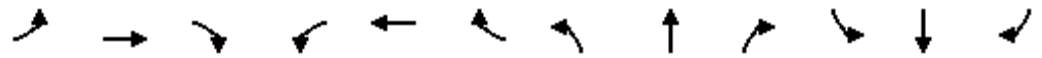
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 14.3
 Intersection Capacity Utilization 63.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 115 | 10 | 40 | 40 | 25 | 30 | 30 | 825 | 20 | 10 | 1490 | 185 |
| Future Volume (veh/h) | 115 | 10 | 40 | 40 | 25 | 30 | 30 | 825 | 20 | 10 | 1490 | 185 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 | 1796 | 1796 | 1796 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 120 | 10 | 42 | 42 | 26 | 31 | 31 | 859 | 21 | 10 | 1552 | 193 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 2 | 2 | 2 | 7 | 7 | 7 | 6 | 6 | 6 |
| Cap, veh/h | 162 | 98 | 83 | 172 | 77 | 66 | 213 | 2617 | 1167 | 480 | 2639 | 1177 |
| Arrive On Green | 0.05 | 0.06 | 0.06 | 0.03 | 0.04 | 0.04 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Sat Flow, veh/h | 3237 | 1752 | 1485 | 1781 | 1870 | 1585 | 265 | 3413 | 1522 | 611 | 3441 | 1535 |
| Grp Volume(v), veh/h | 120 | 10 | 42 | 42 | 26 | 31 | 31 | 859 | 21 | 10 | 1552 | 193 |
| Grp Sat Flow(s),veh/h/ln | 1618 | 1752 | 1485 | 1781 | 1870 | 1585 | 265 | 1706 | 1522 | 611 | 1721 | 1535 |
| Q Serve(g_s), s | 4.4 | 0.7 | 3.3 | 2.7 | 1.6 | 2.3 | 6.7 | 9.4 | 0.4 | 0.6 | 23.0 | 4.0 |
| Cycle Q Clear(g_c), s | 4.4 | 0.7 | 3.3 | 2.7 | 1.6 | 2.3 | 29.7 | 9.4 | 0.4 | 10.0 | 23.0 | 4.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 162 | 98 | 83 | 172 | 77 | 66 | 213 | 2617 | 1167 | 480 | 2639 | 1177 |
| V/C Ratio(X) | 0.74 | 0.10 | 0.51 | 0.24 | 0.34 | 0.47 | 0.15 | 0.33 | 0.02 | 0.02 | 0.59 | 0.16 |
| Avail Cap(c_a), veh/h | 162 | 533 | 452 | 198 | 561 | 476 | 213 | 2617 | 1167 | 480 | 2639 | 1177 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.72 | 0.72 | 0.72 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 56.2 | 53.8 | 55.0 | 52.8 | 55.9 | 56.2 | 12.2 | 4.4 | 3.3 | 5.9 | 5.9 | 3.7 |
| Incr Delay (d2), s/veh | 16.6 | 0.5 | 4.7 | 0.7 | 2.5 | 5.2 | 1.0 | 0.2 | 0.0 | 0.1 | 1.0 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.2 | 0.3 | 1.3 | 1.2 | 0.8 | 1.0 | 0.5 | 2.9 | 0.1 | 0.1 | 7.3 | 1.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 72.8 | 54.2 | 59.8 | 53.6 | 58.4 | 61.4 | 13.3 | 4.6 | 3.3 | 6.0 | 6.9 | 4.0 |
| LnGrp LOS | E | D | E | D | E | E | B | A | A | A | A | A |
| Approach Vol, veh/h | | 172 | | | 99 | | | 911 | | | 1755 | |
| Approach Delay, s/veh | | 68.6 | | | 57.3 | | | 4.9 | | | 6.6 | |
| Approach LOS | | E | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 98.5 | 9.3 | 12.2 | | 98.5 | 11.0 | 10.5 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 61.0 | 5.5 | * 37 | | 61.0 | 6.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 31.7 | 4.7 | 5.3 | | 25.0 | 6.4 | 4.3 | | | | |
| Green Ext Time (p_c), s | | 8.2 | 0.0 | 0.1 | | 18.3 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 11.4 |
| HCM 6th LOS | B |

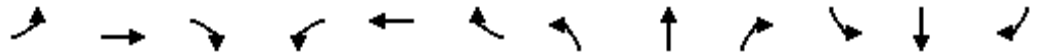
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: Marksheffel Rd & Meadowbrook Parkway

02/15/2021

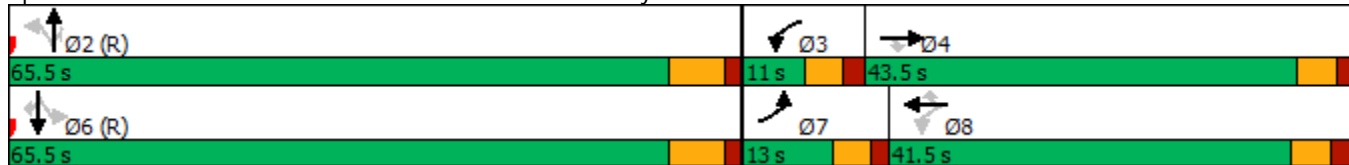


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 190 | 15 | 55 | 25 | 15 | 40 | 50 | 1535 | 80 | 45 | 1020 | 145 |
| Future Volume (vph) | 190 | 15 | 55 | 25 | 15 | 40 | 50 | 1535 | 80 | 45 | 1020 | 145 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 13.0 | 43.5 | 43.5 | 11.0 | 41.5 | 41.5 | 65.5 | 65.5 | 65.5 | 65.5 | 65.5 | 65.5 |
| Total Split (%) | 10.8% | 36.3% | 36.3% | 9.2% | 34.6% | 34.6% | 54.6% | 54.6% | 54.6% | 54.6% | 54.6% | 54.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 8.0 | 11.3 | 11.3 | 11.0 | 6.6 | 6.6 | 90.6 | 90.6 | 90.6 | 90.6 | 90.6 | 90.6 |
| Actuated g/C Ratio | 0.07 | 0.09 | 0.09 | 0.09 | 0.06 | 0.06 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| v/c Ratio | 0.89 | 0.09 | 0.26 | 0.19 | 0.16 | 0.26 | 0.16 | 0.62 | 0.07 | 0.32 | 0.42 | 0.13 |
| Control Delay | 93.3 | 51.9 | 8.2 | 45.5 | 56.9 | 5.5 | 9.4 | 16.6 | 4.2 | 12.4 | 6.3 | 1.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 93.3 | 51.9 | 8.2 | 45.5 | 56.9 | 5.5 | 9.4 | 16.6 | 4.2 | 12.4 | 6.3 | 1.0 |
| LOS | F | D | A | D | E | A | A | B | A | B | A | A |
| Approach Delay | | 72.9 | | | 27.6 | | | 15.8 | | | | 5.9 |
| Approach LOS | | E | | | C | | | B | | | | 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: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 17.0
 Intersection LOS: B
 Intersection Capacity Utilization 66.2%
 ICU Level of Service C
 Analysis Period (min) 15

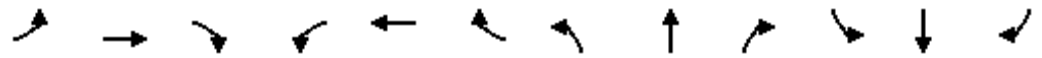
Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

2026 Background PM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 190 | 15 | 55 | 25 | 15 | 40 | 50 | 1535 | 80 | 45 | 1020 | 145 |
| Future Volume (veh/h) | 190 | 15 | 55 | 25 | 15 | 40 | 50 | 1535 | 80 | 45 | 1020 | 145 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 204 | 16 | 59 | 27 | 16 | 43 | 54 | 1651 | 86 | 48 | 1097 | 156 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 230 | 154 | 131 | 163 | 83 | 71 | 340 | 2655 | 1184 | 204 | 2613 | 1165 |
| Arrive On Green | 0.07 | 0.08 | 0.08 | 0.02 | 0.04 | 0.04 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 1781 | 1870 | 1585 | 443 | 3554 | 1585 | 274 | 3497 | 1560 |
| Grp Volume(v), veh/h | 204 | 16 | 59 | 27 | 16 | 43 | 54 | 1651 | 86 | 48 | 1097 | 156 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1781 | 1870 | 1585 | 443 | 1777 | 1585 | 274 | 1749 | 1560 |
| Q Serve(g_s), s | 7.0 | 1.0 | 4.3 | 1.7 | 1.0 | 3.2 | 6.1 | 26.3 | 1.7 | 12.0 | 13.9 | 3.4 |
| Cycle Q Clear(g_c), s | 7.0 | 1.0 | 4.3 | 1.7 | 1.0 | 3.2 | 20.0 | 26.3 | 1.7 | 38.4 | 13.9 | 3.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 230 | 154 | 131 | 163 | 83 | 71 | 340 | 2655 | 1184 | 204 | 2613 | 1165 |
| V/C Ratio(X) | 0.89 | 0.10 | 0.45 | 0.17 | 0.19 | 0.61 | 0.16 | 0.62 | 0.07 | 0.23 | 0.42 | 0.13 |
| Avail Cap(c_a), veh/h | 230 | 600 | 509 | 201 | 561 | 476 | 340 | 2655 | 1184 | 204 | 2613 | 1165 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.5 | 51.0 | 52.5 | 52.8 | 55.2 | 56.3 | 9.3 | 7.2 | 4.1 | 16.2 | 5.6 | 4.3 |
| Incr Delay (d2), s/veh | 31.0 | 0.3 | 2.4 | 0.5 | 1.1 | 8.2 | 0.3 | 0.4 | 0.0 | 2.7 | 0.5 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.0 | 0.5 | 1.8 | 0.8 | 0.5 | 1.4 | 0.6 | 8.7 | 0.5 | 0.9 | 4.6 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 86.5 | 51.3 | 54.9 | 53.2 | 56.3 | 64.5 | 9.6 | 7.5 | 4.1 | 18.9 | 6.1 | 4.5 |
| LnGrp LOS | F | D | D | D | E | E | A | A | A | B | A | A |
| Approach Vol, veh/h | | 279 | | | 86 | | | 1791 | | | 1301 | |
| Approach Delay, s/veh | | 77.8 | | | 59.4 | | | 7.4 | | | 6.4 | |
| Approach LOS | | E | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 96.1 | 8.5 | 15.4 | | 96.1 | 13.0 | 10.9 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 59.0 | 5.5 | * 39 | | 59.0 | 8.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 28.3 | 3.7 | 6.3 | | 40.4 | 9.0 | 5.2 | | | | |
| Green Ext Time (p_c), s | | 18.4 | 0.0 | 0.2 | | 9.5 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 14.0 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: Marksheffel Rd & Meadowbrook Parkway

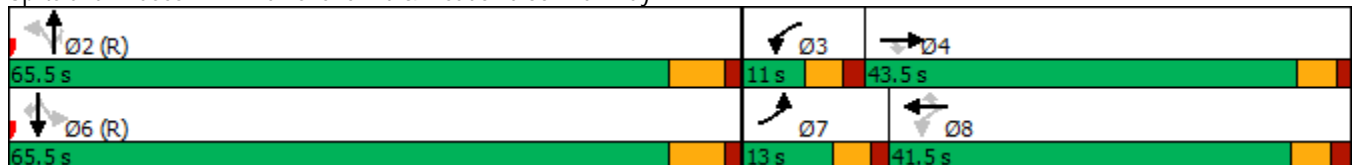
2026 Total AM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 270 | 10 | 40 | 40 | 25 | 30 | 30 | 1090 | 20 | 10 | 1755 | 335 |
| Future Volume (vph) | 270 | 10 | 40 | 40 | 25 | 30 | 30 | 1090 | 20 | 10 | 1755 | 335 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 13.0 | 43.5 | 43.5 | 11.0 | 41.5 | 41.5 | 65.5 | 65.5 | 65.5 | 65.5 | 65.5 | 65.5 |
| Total Split (%) | 10.8% | 36.3% | 36.3% | 9.2% | 34.6% | 34.6% | 54.6% | 54.6% | 54.6% | 54.6% | 54.6% | 54.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 8.0 | 9.7 | 9.7 | 11.6 | 7.2 | 7.2 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| Actuated g/C Ratio | 0.07 | 0.08 | 0.08 | 0.10 | 0.06 | 0.06 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| v/c Ratio | 1.33 | 0.07 | 0.22 | 0.28 | 0.23 | 0.18 | 0.28 | 0.45 | 0.02 | 0.03 | 0.72 | 0.29 |
| Control Delay | 218.3 | 51.2 | 3.9 | 46.9 | 58.1 | 2.3 | 24.1 | 16.8 | 1.9 | 5.2 | 10.9 | 1.4 |
| 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 | 218.3 | 51.2 | 3.9 | 46.9 | 58.1 | 2.3 | 24.1 | 16.8 | 1.9 | 5.2 | 10.9 | 1.4 |
| LOS | F | D | A | D | E | A | C | B | A | A | B | A |
| Approach Delay | | 186.3 | | | 35.9 | | | 16.7 | | | 9.4 | |
| Approach LOS | | F | | | D | | | B | | | 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: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.33
 Intersection Signal Delay: 27.8
 Intersection LOS: C
 Intersection Capacity Utilization 72.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

2026 Total AM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-------|-------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 270 | 10 | 40 | 40 | 25 | 30 | 30 | 1090 | 20 | 10 | 1755 | 335 |
| Future Volume (veh/h) | 270 | 10 | 40 | 40 | 25 | 30 | 30 | 1090 | 20 | 10 | 1755 | 335 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 | 1796 | 1796 | 1796 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 281 | 10 | 42 | 42 | 26 | 31 | 31 | 1135 | 21 | 10 | 1828 | 349 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 2 | 2 | 2 | 7 | 7 | 7 | 6 | 6 | 6 |
| Cap, veh/h | 216 | 127 | 108 | 172 | 77 | 66 | 141 | 2561 | 1142 | 355 | 2582 | 1152 |
| Arrive On Green | 0.07 | 0.07 | 0.07 | 0.03 | 0.04 | 0.04 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Sat Flow, veh/h | 3237 | 1752 | 1485 | 1781 | 1870 | 1585 | 174 | 3413 | 1522 | 471 | 3441 | 1535 |
| Grp Volume(v), veh/h | 281 | 10 | 42 | 42 | 26 | 31 | 31 | 1135 | 21 | 10 | 1828 | 349 |
| Grp Sat Flow(s),veh/h/ln | 1618 | 1752 | 1485 | 1781 | 1870 | 1585 | 174 | 1706 | 1522 | 471 | 1721 | 1535 |
| Q Serve(g_s), s | 8.0 | 0.6 | 3.2 | 2.7 | 1.6 | 2.3 | 13.9 | 14.9 | 0.4 | 1.0 | 34.0 | 8.8 |
| Cycle Q Clear(g_c), s | 8.0 | 0.6 | 3.2 | 2.7 | 1.6 | 2.3 | 47.8 | 14.9 | 0.4 | 15.9 | 34.0 | 8.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 216 | 127 | 108 | 172 | 77 | 66 | 141 | 2561 | 1142 | 355 | 2582 | 1152 |
| V/C Ratio(X) | 1.30 | 0.08 | 0.39 | 0.24 | 0.34 | 0.47 | 0.22 | 0.44 | 0.02 | 0.03 | 0.71 | 0.30 |
| Avail Cap(c_a), veh/h | 216 | 562 | 476 | 198 | 561 | 476 | 141 | 2561 | 1142 | 355 | 2582 | 1152 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.63 | 0.63 | 0.63 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 56.0 | 51.9 | 53.1 | 52.8 | 55.9 | 56.2 | 20.7 | 5.6 | 3.8 | 8.6 | 8.0 | 4.8 |
| Incr Delay (d2), s/veh | 165.5 | 0.3 | 2.3 | 0.7 | 2.5 | 5.2 | 2.2 | 0.4 | 0.0 | 0.1 | 1.7 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.2 | 0.3 | 1.3 | 1.2 | 0.8 | 1.0 | 0.6 | 4.7 | 0.1 | 0.1 | 11.2 | 2.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 221.5 | 52.2 | 55.4 | 53.6 | 58.4 | 61.4 | 23.0 | 6.0 | 3.8 | 8.7 | 9.7 | 5.5 |
| LnGrp LOS | F | D | E | D | E | E | C | A | A | A | A | A |
| Approach Vol, veh/h | | 333 | | | 99 | | | 1187 | | | 2187 | |
| Approach Delay, s/veh | | 195.5 | | | 57.3 | | | 6.4 | | | 9.0 | |
| Approach LOS | | F | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 96.5 | 9.3 | 14.2 | | 96.5 | 13.0 | 10.5 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 59.0 | 5.5 | * 39 | | 59.0 | 8.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 49.8 | 4.7 | 5.2 | | 36.0 | 10.0 | 4.3 | | | | |
| Green Ext Time (p_c), s | | 5.8 | 0.0 | 0.2 | | 17.2 | 0.0 | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 25.7 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

Timings

1: Marksheffel Rd & Meadowbrook Parkway

2026 Total PM.syn

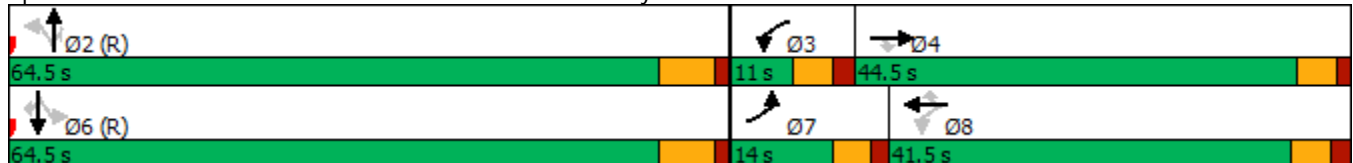
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 295 | 15 | 55 | 25 | 15 | 40 | 50 | 1835 | 80 | 45 | 1340 | 270 |
| Future Volume (vph) | 295 | 15 | 55 | 25 | 15 | 40 | 50 | 1835 | 80 | 45 | 1340 | 270 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | | 6 |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 14.0 | 44.5 | 44.5 | 11.0 | 41.5 | 41.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 |
| Total Split (%) | 11.7% | 37.1% | 37.1% | 9.2% | 34.6% | 34.6% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 9.0 | 12.3 | 12.3 | 11.0 | 6.6 | 6.6 | 89.6 | 89.6 | 89.6 | 89.6 | 89.6 | 89.6 |
| Actuated g/C Ratio | 0.08 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| v/c Ratio | 1.23 | 0.08 | 0.25 | 0.19 | 0.16 | 0.26 | 0.26 | 0.75 | 0.07 | 0.59 | 0.56 | 0.24 |
| Control Delay | 179.8 | 50.8 | 7.8 | 44.7 | 56.9 | 5.5 | 11.8 | 19.3 | 4.0 | 43.2 | 8.1 | 1.1 |
| 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 | 179.8 | 50.8 | 7.8 | 44.7 | 56.9 | 5.5 | 11.8 | 19.3 | 4.0 | 43.2 | 8.1 | 1.1 |
| LOS | F | D | A | D | E | A | B | B | A | D | A | A |
| Approach Delay | | 148.6 | | | 27.4 | | | 18.5 | | | | 7.9 |
| Approach LOS | | F | | | C | | | B | | | | 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: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 26.0
 Intersection LOS: C
 Intersection Capacity Utilization 77.5%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

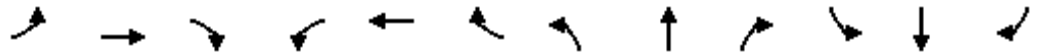
2026 Total PM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-------|-------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 295 | 15 | 55 | 25 | 15 | 40 | 50 | 1835 | 80 | 45 | 1340 | 270 |
| Future Volume (veh/h) | 295 | 15 | 55 | 25 | 15 | 40 | 50 | 1835 | 80 | 45 | 1340 | 270 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 317 | 16 | 59 | 27 | 16 | 43 | 54 | 1973 | 86 | 48 | 1441 | 290 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 259 | 170 | 144 | 163 | 83 | 71 | 216 | 2625 | 1171 | 143 | 2584 | 1152 |
| Arrive On Green | 0.08 | 0.09 | 0.09 | 0.02 | 0.04 | 0.04 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 1781 | 1870 | 1585 | 280 | 3554 | 1585 | 200 | 3497 | 1560 |
| Grp Volume(v), veh/h | 317 | 16 | 59 | 27 | 16 | 43 | 54 | 1973 | 86 | 48 | 1441 | 290 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1781 | 1870 | 1585 | 280 | 1777 | 1585 | 200 | 1749 | 1560 |
| Q Serve(g_s), s | 9.0 | 0.9 | 4.2 | 1.7 | 1.0 | 3.2 | 12.7 | 39.1 | 1.8 | 22.3 | 22.0 | 7.2 |
| Cycle Q Clear(g_c), s | 9.0 | 0.9 | 4.2 | 1.7 | 1.0 | 3.2 | 34.7 | 39.1 | 1.8 | 61.4 | 22.0 | 7.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 259 | 170 | 144 | 163 | 83 | 71 | 216 | 2625 | 1171 | 143 | 2584 | 1152 |
| V/C Ratio(X) | 1.22 | 0.09 | 0.41 | 0.17 | 0.19 | 0.61 | 0.25 | 0.75 | 0.07 | 0.34 | 0.56 | 0.25 |
| Avail Cap(c_a), veh/h | 259 | 616 | 522 | 201 | 561 | 476 | 216 | 2625 | 1171 | 143 | 2584 | 1152 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.17 | 0.17 | 0.17 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.5 | 50.0 | 51.5 | 52.8 | 55.2 | 56.3 | 14.7 | 9.2 | 4.3 | 27.2 | 7.0 | 5.0 |
| Incr Delay (d2), s/veh | 129.8 | 0.2 | 1.9 | 0.5 | 1.1 | 8.2 | 0.5 | 0.4 | 0.0 | 6.3 | 0.9 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.6 | 0.5 | 1.8 | 0.8 | 0.5 | 1.4 | 0.8 | 13.1 | 0.5 | 1.3 | 7.5 | 2.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 185.3 | 50.3 | 53.4 | 53.2 | 56.3 | 64.5 | 15.2 | 9.6 | 4.4 | 33.5 | 7.8 | 5.6 |
| LnGrp LOS | F | D | D | D | E | E | B | A | A | C | A | A |
| Approach Vol, veh/h | | 392 | | | 86 | | | 2113 | | | 1779 | |
| Approach Delay, s/veh | | 160.0 | | | 59.4 | | | 9.5 | | | 8.2 | |
| Approach LOS | | F | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 95.1 | 8.5 | 16.4 | | 95.1 | 14.0 | 10.9 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 58.0 | 5.5 | * 40 | | 58.0 | 9.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 41.1 | 3.7 | 6.2 | | 63.4 | 11.0 | 5.2 | | | | |
| Green Ext Time (p_c), s | | 14.0 | 0.0 | 0.2 | | 0.0 | 0.0 | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 23.4 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

Timings

1: Marksheffel Rd & Meadowbrook Parkway

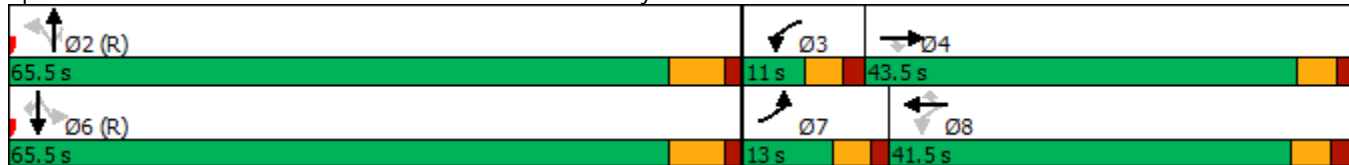


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 135 | 10 | 45 | 50 | 25 | 35 | 35 | 1150 | 25 | 15 | 1810 | 215 |
| Future Volume (vph) | 135 | 10 | 45 | 50 | 25 | 35 | 35 | 1150 | 25 | 15 | 1810 | 215 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 13.0 | 43.5 | 43.5 | 11.0 | 41.5 | 41.5 | 65.5 | 65.5 | 65.5 | 65.5 | 65.5 | 65.5 |
| Total Split (%) | 10.8% | 36.3% | 36.3% | 9.2% | 34.6% | 34.6% | 54.6% | 54.6% | 54.6% | 54.6% | 54.6% | 54.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 7.9 | 9.7 | 9.7 | 11.6 | 7.2 | 7.2 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| Actuated g/C Ratio | 0.07 | 0.08 | 0.08 | 0.10 | 0.06 | 0.06 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| v/c Ratio | 0.67 | 0.07 | 0.24 | 0.34 | 0.23 | 0.21 | 0.36 | 0.47 | 0.02 | 0.06 | 0.74 | 0.19 |
| Control Delay | 70.8 | 51.2 | 5.7 | 49.1 | 58.1 | 2.7 | 28.5 | 16.2 | 2.3 | 5.5 | 11.5 | 1.4 |
| 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 | 70.8 | 51.2 | 5.7 | 49.1 | 58.1 | 2.7 | 28.5 | 16.2 | 2.3 | 5.5 | 11.5 | 1.4 |
| LOS | E | D | A | D | E | A | C | B | A | A | B | A |
| Approach Delay | | 54.4 | | | 36.5 | | | 16.3 | | | 10.4 | |
| Approach LOS | | D | | | D | | | B | | | B | |

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: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 15.5
 Intersection LOS: B
 Intersection Capacity Utilization 72.5%
 ICU Level of Service C
 Analysis Period (min) 15

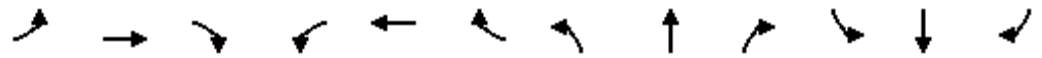
Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

2040 Background AM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 135 | 10 | 45 | 50 | 25 | 35 | 35 | 1150 | 25 | 15 | 1810 | 215 |
| Future Volume (veh/h) | 135 | 10 | 45 | 50 | 25 | 35 | 35 | 1150 | 25 | 15 | 1810 | 215 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 | 1796 | 1796 | 1796 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 141 | 10 | 47 | 52 | 26 | 36 | 36 | 1198 | 26 | 16 | 1885 | 224 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 2 | 2 | 2 | 7 | 7 | 7 | 6 | 6 | 6 |
| Cap, veh/h | 192 | 105 | 89 | 181 | 78 | 66 | 146 | 2585 | 1153 | 336 | 2607 | 1163 |
| Arrive On Green | 0.06 | 0.06 | 0.06 | 0.04 | 0.04 | 0.04 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Sat Flow, veh/h | 3237 | 1752 | 1485 | 1781 | 1870 | 1585 | 186 | 3413 | 1522 | 441 | 3441 | 1535 |
| Grp Volume(v), veh/h | 141 | 10 | 47 | 52 | 26 | 36 | 36 | 1198 | 26 | 16 | 1885 | 224 |
| Grp Sat Flow(s),veh/h/ln | 1618 | 1752 | 1485 | 1781 | 1870 | 1585 | 186 | 1706 | 1522 | 441 | 1721 | 1535 |
| Q Serve(g_s), s | 5.1 | 0.6 | 3.7 | 3.3 | 1.6 | 2.7 | 15.5 | 15.7 | 0.5 | 1.7 | 35.2 | 5.0 |
| Cycle Q Clear(g_c), s | 5.1 | 0.6 | 3.7 | 3.3 | 1.6 | 2.7 | 50.7 | 15.7 | 0.5 | 17.4 | 35.2 | 5.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 192 | 105 | 89 | 181 | 78 | 66 | 146 | 2585 | 1153 | 336 | 2607 | 1163 |
| V/C Ratio(X) | 0.74 | 0.10 | 0.53 | 0.29 | 0.33 | 0.55 | 0.25 | 0.46 | 0.02 | 0.05 | 0.72 | 0.19 |
| Avail Cap(c_a), veh/h | 216 | 562 | 476 | 198 | 561 | 476 | 146 | 2585 | 1153 | 336 | 2607 | 1163 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.57 | 0.57 | 0.57 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.5 | 53.3 | 54.7 | 52.5 | 55.9 | 56.4 | 21.4 | 5.4 | 3.6 | 8.7 | 7.8 | 4.1 |
| Incr Delay (d2), s/veh | 10.9 | 0.4 | 4.8 | 0.9 | 2.5 | 6.9 | 2.3 | 0.3 | 0.0 | 0.3 | 1.8 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.4 | 0.3 | 1.5 | 1.5 | 0.8 | 1.2 | 0.8 | 4.9 | 0.1 | 0.2 | 11.5 | 1.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 66.4 | 53.7 | 59.5 | 53.4 | 58.4 | 63.3 | 23.7 | 5.8 | 3.6 | 9.0 | 9.6 | 4.5 |
| LnGrp LOS | E | D | E | D | E | E | C | A | A | A | A | A |
| Approach Vol, veh/h | | 198 | | | 114 | | | 1260 | | | 2125 | |
| Approach Delay, s/veh | | 64.1 | | | 57.7 | | | 6.2 | | | 9.0 | |
| Approach LOS | | E | | | E | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 97.4 | 9.9 | 12.7 | | 97.4 | 12.1 | 10.5 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 59.0 | 5.5 | * 39 | | 59.0 | 8.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 52.7 | 5.3 | 5.7 | | 37.2 | 7.1 | 4.7 | | | | |
| Green Ext Time (p_c), s | | 4.4 | 0.0 | 0.2 | | 16.5 | 0.0 | 0.2 | | | | |

Intersection Summary

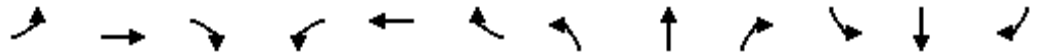
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 12.5 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: Marksheffel Rd & Meadowbrook Parkway

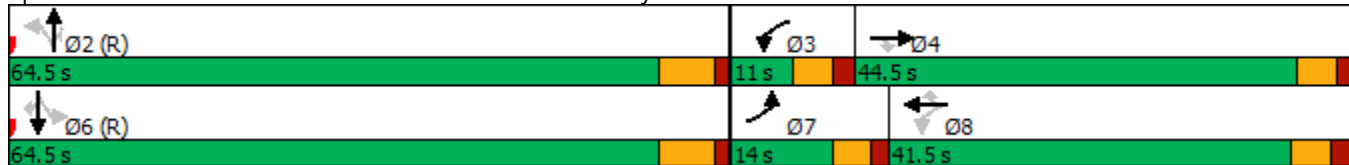


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 225 | 15 | 65 | 25 | 20 | 45 | 55 | 1920 | 95 | 55 | 1395 | 165 |
| Future Volume (vph) | 225 | 15 | 65 | 25 | 20 | 45 | 55 | 1920 | 95 | 55 | 1395 | 165 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 14.0 | 44.5 | 44.5 | 11.0 | 41.5 | 41.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 |
| Total Split (%) | 11.7% | 37.1% | 37.1% | 9.2% | 34.6% | 34.6% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 9.0 | 12.7 | 12.7 | 11.4 | 7.0 | 7.0 | 89.2 | 89.2 | 89.2 | 89.2 | 89.2 | 89.2 |
| Actuated g/C Ratio | 0.08 | 0.11 | 0.11 | 0.10 | 0.06 | 0.06 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| v/c Ratio | 0.94 | 0.08 | 0.29 | 0.18 | 0.20 | 0.28 | 0.32 | 0.78 | 0.09 | 0.91 | 0.58 | 0.15 |
| Control Delay | 98.4 | 50.3 | 11.4 | 44.1 | 57.6 | 7.4 | 13.8 | 22.1 | 4.7 | 113.3 | 8.6 | 1.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 98.4 | 50.3 | 11.4 | 44.1 | 57.6 | 7.4 | 13.8 | 22.1 | 4.7 | 113.3 | 8.6 | 1.0 |
| LOS | F | D | B | D | E | A | B | C | A | F | A | A |
| Approach Delay | | 77.5 | | | 29.0 | | | 21.1 | | | 11.4 | |
| Approach LOS | | E | | | C | | | C | | | B | |

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: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 77.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

2040 Background PM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 225 | 15 | 65 | 25 | 20 | 45 | 55 | 1920 | 95 | 55 | 1395 | 165 |
| Future Volume (veh/h) | 225 | 15 | 65 | 25 | 20 | 45 | 55 | 1920 | 95 | 55 | 1395 | 165 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 242 | 16 | 70 | 27 | 22 | 48 | 59 | 2065 | 102 | 59 | 1500 | 177 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 259 | 176 | 149 | 167 | 90 | 76 | 218 | 2613 | 1165 | 126 | 2571 | 1147 |
| Arrive On Green | 0.08 | 0.09 | 0.09 | 0.02 | 0.05 | 0.05 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 1781 | 1870 | 1585 | 295 | 3554 | 1585 | 180 | 3497 | 1560 |
| Grp Volume(v), veh/h | 242 | 16 | 70 | 27 | 22 | 48 | 59 | 2065 | 102 | 59 | 1500 | 177 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1781 | 1870 | 1585 | 295 | 1777 | 1585 | 180 | 1749 | 1560 |
| Q Serve(g_s), s | 8.4 | 0.9 | 5.0 | 1.7 | 1.4 | 3.6 | 13.9 | 44.1 | 2.2 | 37.1 | 23.9 | 4.1 |
| Cycle Q Clear(g_c), s | 8.4 | 0.9 | 5.0 | 1.7 | 1.4 | 3.6 | 37.8 | 44.1 | 2.2 | 81.1 | 23.9 | 4.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 259 | 176 | 149 | 167 | 90 | 76 | 218 | 2613 | 1165 | 126 | 2571 | 1147 |
| V/C Ratio(X) | 0.93 | 0.09 | 0.47 | 0.16 | 0.24 | 0.63 | 0.27 | 0.79 | 0.09 | 0.47 | 0.58 | 0.15 |
| Avail Cap(c_a), veh/h | 259 | 616 | 522 | 205 | 561 | 476 | 218 | 2613 | 1165 | 126 | 2571 | 1147 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.09 | 0.09 | 0.09 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.2 | 49.6 | 51.5 | 52.4 | 55.0 | 56.1 | 16.1 | 10.0 | 4.5 | 35.7 | 7.4 | 4.7 |
| Incr Delay (d2), s/veh | 38.4 | 0.2 | 2.3 | 0.4 | 1.4 | 8.2 | 0.3 | 0.2 | 0.0 | 11.9 | 1.0 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.0 | 0.5 | 2.1 | 0.8 | 0.7 | 1.6 | 0.9 | 14.7 | 0.6 | 2.0 | 8.1 | 1.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 93.6 | 49.9 | 53.8 | 52.8 | 56.4 | 64.3 | 16.4 | 10.3 | 4.5 | 47.6 | 8.3 | 5.0 |
| LnGrp LOS | F | D | D | D | E | E | B | B | A | D | A | A |
| Approach Vol, veh/h | | 328 | | | 97 | | | 2226 | | | 1736 | |
| Approach Delay, s/veh | | 82.9 | | | 59.3 | | | 10.2 | | | 9.3 | |
| Approach LOS | | F | | | E | | | B | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 94.7 | 8.5 | 16.8 | | 94.7 | 14.0 | 11.3 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 58.0 | 5.5 | * 40 | | 58.0 | 9.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 46.1 | 3.7 | 7.0 | | 83.1 | 10.4 | 5.6 | | | | |
| Green Ext Time (p_c), s | | 10.6 | 0.0 | 0.3 | | 0.0 | 0.0 | 0.2 | | | | |

Intersection Summary

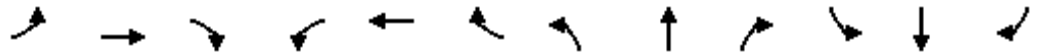
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 16.4 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: Marksheffel Rd & Meadowbrook Parkway

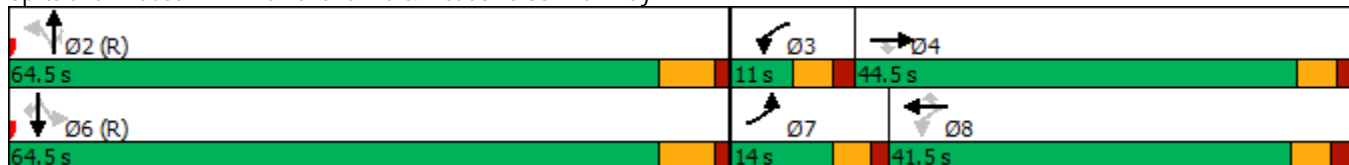


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 300 | 10 | 45 | 50 | 25 | 35 | 35 | 1495 | 25 | 15 | 2185 | 380 |
| Future Volume (vph) | 300 | 10 | 45 | 50 | 25 | 35 | 35 | 1495 | 25 | 15 | 2185 | 380 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 14.0 | 44.5 | 44.5 | 11.0 | 41.5 | 41.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 |
| Total Split (%) | 11.7% | 37.1% | 37.1% | 9.2% | 34.6% | 34.6% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 9.0 | 10.7 | 10.7 | 11.6 | 7.2 | 7.2 | 89.0 | 89.0 | 89.0 | 89.0 | 89.0 | 89.0 |
| Actuated g/C Ratio | 0.08 | 0.09 | 0.09 | 0.10 | 0.06 | 0.06 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| v/c Ratio | 1.32 | 0.06 | 0.23 | 0.34 | 0.23 | 0.21 | 0.60 | 0.62 | 0.02 | 0.10 | 0.90 | 0.33 |
| Control Delay | 211.4 | 50.0 | 5.2 | 48.3 | 58.1 | 2.7 | 62.7 | 29.0 | 3.5 | 6.9 | 19.7 | 2.4 |
| 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 | 211.4 | 50.0 | 5.2 | 48.3 | 58.1 | 2.7 | 62.7 | 29.0 | 3.5 | 6.9 | 19.7 | 2.4 |
| LOS | F | D | A | D | E | A | E | C | A | A | B | A |
| Approach Delay | | 180.9 | | | 36.1 | | | 29.4 | | | 17.1 | |
| Approach LOS | | F | | | D | | | C | | | B | |

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: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.32
 Intersection Signal Delay: 34.3
 Intersection LOS: C
 Intersection Capacity Utilization 85.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

2040 Total AM.syn
 02/15/2021



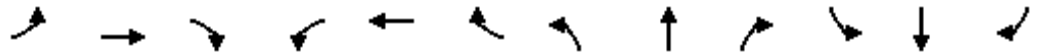
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-------|-------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 300 | 10 | 45 | 50 | 25 | 35 | 35 | 1495 | 25 | 15 | 2185 | 380 |
| Future Volume (veh/h) | 300 | 10 | 45 | 50 | 25 | 35 | 35 | 1495 | 25 | 15 | 2185 | 380 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 | 1796 | 1796 | 1796 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 312 | 10 | 47 | 52 | 26 | 36 | 36 | 1557 | 26 | 16 | 2276 | 396 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 2 | 2 | 2 | 7 | 7 | 7 | 6 | 6 | 6 |
| Cap, veh/h | 243 | 133 | 113 | 181 | 78 | 66 | 85 | 2532 | 1129 | 292 | 2553 | 1139 |
| Arrive On Green | 0.08 | 0.08 | 0.08 | 0.04 | 0.04 | 0.04 | 1.00 | 1.00 | 1.00 | 0.74 | 0.74 | 0.74 |
| Sat Flow, veh/h | 3237 | 1752 | 1485 | 1781 | 1870 | 1585 | 106 | 3413 | 1522 | 313 | 3441 | 1535 |
| Grp Volume(v), veh/h | 312 | 10 | 47 | 52 | 26 | 36 | 36 | 1557 | 26 | 16 | 2276 | 396 |
| Grp Sat Flow(s),veh/h/ln | 1618 | 1752 | 1485 | 1781 | 1870 | 1585 | 106 | 1706 | 1522 | 313 | 1721 | 1535 |
| Q Serve(g_s), s | 9.0 | 0.6 | 3.6 | 3.3 | 1.6 | 2.7 | 28.5 | 0.0 | 0.0 | 1.7 | 60.5 | 10.8 |
| Cycle Q Clear(g_c), s | 9.0 | 0.6 | 3.6 | 3.3 | 1.6 | 2.7 | 89.0 | 0.0 | 0.0 | 1.7 | 60.5 | 10.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 243 | 133 | 113 | 181 | 78 | 66 | 85 | 2532 | 1129 | 292 | 2553 | 1139 |
| V/C Ratio(X) | 1.29 | 0.08 | 0.42 | 0.29 | 0.33 | 0.55 | 0.42 | 0.62 | 0.02 | 0.05 | 0.89 | 0.35 |
| Avail Cap(c_a), veh/h | 243 | 577 | 489 | 198 | 561 | 476 | 85 | 2532 | 1129 | 292 | 2553 | 1139 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.52 | 0.52 | 0.52 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.5 | 51.5 | 52.9 | 52.5 | 55.9 | 56.4 | 34.5 | 0.0 | 0.0 | 4.2 | 11.8 | 5.4 |
| Incr Delay (d2), s/veh | 155.9 | 0.2 | 2.5 | 0.9 | 2.5 | 6.9 | 7.8 | 0.6 | 0.0 | 0.4 | 5.2 | 0.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.9 | 0.3 | 1.4 | 1.5 | 0.8 | 1.2 | 1.2 | 0.2 | 0.0 | 0.1 | 21.1 | 3.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 211.4 | 51.8 | 55.4 | 53.4 | 58.4 | 63.3 | 42.3 | 0.6 | 0.0 | 4.6 | 17.1 | 6.2 |
| LnGrp LOS | F | D | E | D | E | E | D | A | A | A | B | A |
| Approach Vol, veh/h | | 369 | | | 114 | | | 1619 | | | 2688 | |
| Approach Delay, s/veh | | 187.2 | | | 57.7 | | | 1.5 | | | 15.4 | |
| Approach LOS | | F | | | E | | | A | | | B | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 95.5 | 9.9 | 14.6 | | 95.5 | 14.0 | 10.5 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 58.0 | 5.5 | * 40 | | 58.0 | 9.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 91.0 | 5.3 | 5.6 | | 62.5 | 11.0 | 4.7 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 0.2 | | 0.0 | 0.0 | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 24.9 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

Timings

2040 Total PM.syn

1: Marksheffel Rd & Meadowbrook Parkway

02/15/2021

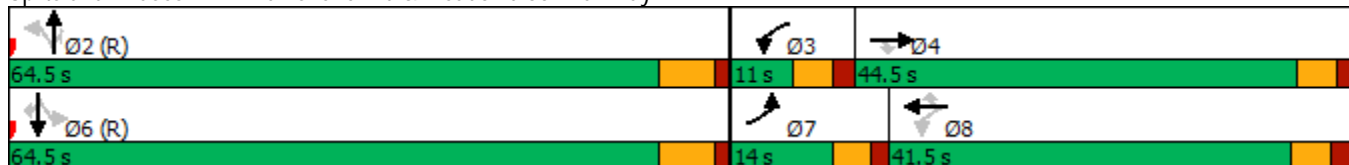


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 355 | 15 | 65 | 25 | 20 | 45 | 55 | 2520 | 95 | 55 | 2060 | 315 |
| Future Volume (vph) | 355 | 15 | 65 | 25 | 20 | 45 | 55 | 2520 | 95 | 55 | 2060 | 315 |
| Turn Type | Prot | NA | Perm | pm+pt | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 23.0 | 23.0 | 11.0 | 41.5 | 41.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 | 24.5 |
| Total Split (s) | 14.0 | 44.5 | 44.5 | 11.0 | 41.5 | 41.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 | 64.5 |
| Total Split (%) | 11.7% | 37.1% | 37.1% | 9.2% | 34.6% | 34.6% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% | 53.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 9.0 | 12.7 | 12.7 | 11.4 | 7.0 | 7.0 | 89.2 | 89.2 | 89.2 | 89.2 | 89.2 | 89.2 |
| Actuated g/C Ratio | 0.08 | 0.11 | 0.11 | 0.10 | 0.06 | 0.06 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| v/c Ratio | 1.49 | 0.08 | 0.29 | 0.18 | 0.20 | 0.28 | 0.94 | 1.03 | 0.09 | 0.95 | 0.86 | 0.28 |
| Control Delay | 276.8 | 50.3 | 11.4 | 44.1 | 57.6 | 7.4 | 94.0 | 49.8 | 4.6 | 127.2 | 16.5 | 2.1 |
| 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 | 276.8 | 50.3 | 11.4 | 44.1 | 57.6 | 7.4 | 94.0 | 49.8 | 4.6 | 127.2 | 16.5 | 2.1 |
| LOS | F | D | B | D | E | A | F | D | A | F | B | A |
| Approach Delay | | 229.4 | | | 29.0 | | | 49.1 | | | 17.2 | |
| Approach LOS | | F | | | C | | | D | | | B | |

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: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.49
 Intersection Signal Delay: 48.9
 Intersection LOS: D
 Intersection Capacity Utilization 98.1%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 1: Marksheffel Rd & Meadowbrook Parkway



HCM 6th Signalized Intersection Summary
 1: Marksheffel Rd & Meadowbrook Parkway

2040 Total PM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖ | ↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 355 | 15 | 65 | 25 | 20 | 45 | 55 | 2520 | 95 | 55 | 2060 | 315 |
| Future Volume (veh/h) | 355 | 15 | 65 | 25 | 20 | 45 | 55 | 2520 | 95 | 55 | 2060 | 315 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 382 | 16 | 70 | 27 | 22 | 48 | 59 | 2710 | 102 | 59 | 2215 | 339 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 259 | 176 | 149 | 167 | 90 | 76 | 95 | 2613 | 1165 | 129 | 2571 | 1147 |
| Arrive On Green | 0.08 | 0.09 | 0.09 | 0.02 | 0.05 | 0.05 | 1.00 | 1.00 | 1.00 | 0.74 | 0.74 | 0.74 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 1781 | 1870 | 1585 | 124 | 3554 | 1585 | 94 | 3497 | 1560 |
| Grp Volume(v), veh/h | 382 | 16 | 70 | 27 | 22 | 48 | 59 | 2710 | 102 | 59 | 2215 | 339 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1781 | 1870 | 1585 | 124 | 1777 | 1585 | 94 | 1749 | 1560 |
| Q Serve(g_s), s | 9.0 | 0.9 | 5.0 | 1.7 | 1.4 | 3.6 | 33.3 | 0.0 | 0.0 | 52.9 | 54.9 | 8.8 |
| Cycle Q Clear(g_c), s | 9.0 | 0.9 | 5.0 | 1.7 | 1.4 | 3.6 | 88.2 | 0.0 | 0.0 | 52.9 | 54.9 | 8.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 259 | 176 | 149 | 167 | 90 | 76 | 95 | 2613 | 1165 | 129 | 2571 | 1147 |
| V/C Ratio(X) | 1.47 | 0.09 | 0.47 | 0.16 | 0.24 | 0.63 | 0.62 | 1.04 | 0.09 | 0.46 | 0.86 | 0.30 |
| Avail Cap(c_a), veh/h | 259 | 616 | 522 | 205 | 561 | 476 | 95 | 2613 | 1165 | 129 | 2571 | 1147 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.20 | 0.20 | 0.20 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 55.5 | 49.6 | 51.5 | 52.4 | 55.0 | 56.1 | 34.4 | 0.0 | 0.0 | 11.2 | 11.5 | 5.4 |
| Incr Delay (d2), s/veh | 233.0 | 0.2 | 2.3 | 0.4 | 1.4 | 8.2 | 6.1 | 20.0 | 0.0 | 11.1 | 4.1 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.3 | 0.5 | 2.1 | 0.8 | 0.7 | 1.6 | 1.9 | 7.3 | 0.0 | 1.3 | 19.4 | 2.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 288.5 | 49.9 | 53.8 | 52.8 | 56.4 | 64.3 | 40.5 | 20.0 | 0.0 | 22.4 | 15.6 | 6.0 |
| LnGrp LOS | F | D | D | D | E | E | D | F | A | C | B | A |
| Approach Vol, veh/h | | 468 | | | 97 | | | 2871 | | | 2613 | |
| Approach Delay, s/veh | | 245.2 | | | 59.3 | | | 19.7 | | | 14.5 | |
| Approach LOS | | F | | | E | | | B | | | B | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 94.7 | 8.5 | 16.8 | | 94.7 | 14.0 | 11.3 | | | | |
| Change Period (Y+Rc), s | | 6.5 | 5.5 | * 5.5 | | 6.5 | 5.0 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 58.0 | 5.5 | * 40 | | 58.0 | 9.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 90.2 | 3.7 | 7.0 | | 56.9 | 11.0 | 5.6 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 0.3 | | 1.1 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 35.5 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: Marksheffel Rd & US-24

2020 Adjusted Existing AM.syn
02/15/2021

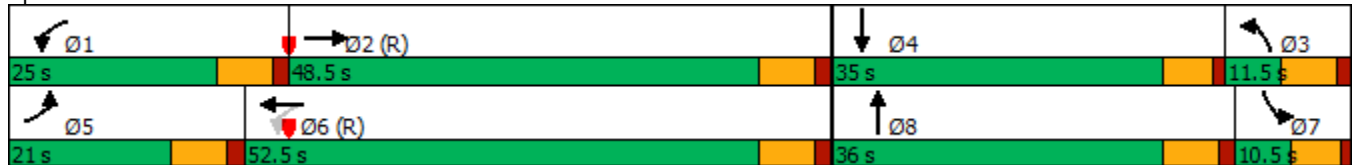


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 335 | 486 | 282 | 1107 | 18 | 1 | 454 | 54 | 9 | 707 | 705 |
| Future Volume (vph) | 335 | 486 | 282 | 1107 | 18 | 1 | 454 | 54 | 9 | 707 | 705 |
| Turn Type | Prot | NA | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 6 | | Free | | | 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) | 12.0 | 12.0 | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 21.0 | 48.5 | 25.0 | 52.5 | | 11.5 | 36.0 | | 10.5 | 35.0 | |
| Total Split (%) | 17.5% | 40.4% | 20.8% | 43.8% | | 9.6% | 30.0% | | 8.8% | 29.2% | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 17.7 | 56.4 | 66.7 | 52.7 | 120.0 | 5.1 | 27.6 | 120.0 | 6.2 | 28.8 | 120.0 |
| Actuated g/C Ratio | 0.15 | 0.47 | 0.56 | 0.44 | 1.00 | 0.04 | 0.23 | 1.00 | 0.05 | 0.24 | 1.00 |
| v/c Ratio | 0.75 | 0.33 | 0.52 | 0.76 | 0.01 | 0.01 | 0.59 | 0.04 | 0.10 | 0.90 | 0.48 |
| Control Delay | 51.7 | 38.2 | 14.5 | 33.2 | 0.0 | 71.0 | 50.2 | 0.0 | 51.4 | 53.2 | 1.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 51.7 | 38.2 | 14.5 | 33.2 | 0.0 | 71.0 | 50.2 | 0.0 | 51.4 | 53.2 | 1.6 |
| LOS | D | D | B | C | A | E | D | A | D | D | A |
| Approach Delay | | 43.7 | | 29.0 | | | 45.0 | | | 27.6 | |
| Approach LOS | | D | | C | | | D | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 33.4
 Intersection LOS: C
 Intersection Capacity Utilization 75.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
2: Marksheffel Rd & US-24

2020 Adjusted Existing AM.syn
02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|-------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 335 | 486 | 0 | 282 | 1107 | 18 | 1 | 454 | 54 | 9 | 707 | 705 |
| Future Volume (veh/h) | 335 | 486 | 0 | 282 | 1107 | 18 | 1 | 454 | 54 | 9 | 707 | 705 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1737 | 1737 | 1737 | 1841 | 1841 | 1841 | 1856 | 1856 | 1856 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 349 | 506 | 0 | 294 | 1153 | 0 | 1 | 473 | 0 | 9 | 736 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 11 | 11 | 11 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 6 |
| Cap, veh/h | 388 | 1474 | | 560 | 1529 | | 2 | 586 | | 102 | 799 | |
| Arrive On Green | 0.12 | 0.45 | 0.00 | 0.11 | 0.44 | 0.00 | 0.00 | 0.17 | 0.00 | 0.10 | 0.39 | 0.00 |
| Sat Flow, veh/h | 3209 | 3300 | 1472 | 1753 | 3497 | 1560 | 1767 | 3526 | 1572 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 349 | 506 | 0 | 294 | 1153 | 0 | 1 | 473 | 0 | 9 | 736 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1605 | 1650 | 1472 | 1753 | 1749 | 1560 | 1767 | 1763 | 1572 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 12.9 | 12.0 | 0.0 | 10.9 | 33.2 | 0.0 | 0.1 | 15.5 | 0.0 | 0.6 | 24.4 | 0.0 |
| Cycle Q Clear(g_c), s | 12.9 | 12.0 | 0.0 | 10.9 | 33.2 | 0.0 | 0.1 | 15.5 | 0.0 | 0.6 | 24.4 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 388 | 1474 | | 560 | 1529 | | 2 | 586 | | 102 | 799 | |
| V/C Ratio(X) | 0.90 | 0.34 | | 0.53 | 0.75 | | 0.41 | 0.81 | | 0.09 | 0.92 | |
| Avail Cap(c_a), veh/h | 388 | 1474 | | 635 | 1529 | | 74 | 867 | | 102 | 846 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.84 | 0.84 | 0.00 |
| Uniform Delay (d), s/veh | 52.0 | 21.7 | 0.0 | 15.4 | 28.4 | 0.0 | 59.9 | 48.2 | 0.0 | 51.1 | 35.7 | 0.0 |
| Incr Delay (d2), s/veh | 23.2 | 0.6 | 0.0 | 0.8 | 3.5 | 0.0 | 85.9 | 3.6 | 0.0 | 0.3 | 12.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.4 | 4.8 | 0.0 | 4.4 | 14.4 | 0.0 | 0.1 | 7.1 | 0.0 | 0.3 | 10.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 75.3 | 22.3 | 0.0 | 16.2 | 31.9 | 0.0 | 145.8 | 51.7 | 0.0 | 51.5 | 48.5 | 0.0 |
| LnGrp LOS | E | C | | B | C | | F | D | | D | D | |
| Approach Vol, veh/h | | 855 | A | | 1447 | A | | 474 | A | | 745 | A |
| Approach Delay, s/veh | | 43.9 | | | 28.7 | | | 51.9 | | | 48.6 | |
| Approach LOS | | D | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 19.9 | 60.1 | 6.7 | 33.4 | 21.0 | 59.0 | 13.6 | 26.5 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 18.5 | 42.0 | 5.0 | 29.5 | 14.5 | 46.0 | 5.0 | * 30 | | | | |
| Max Q Clear Time (g_c+l1), s | 12.9 | 14.0 | 2.1 | 26.4 | 14.9 | 35.2 | 2.6 | 17.5 | | | | |
| Green Ext Time (p_c), s | 0.4 | 3.7 | 0.0 | 1.4 | 0.0 | 5.9 | 0.0 | 2.4 | | | | |

Intersection Summary

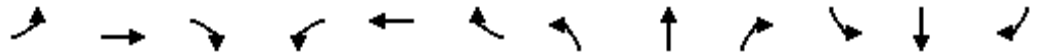
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 39.7 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2: Marksheffel Rd & US-24



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↔↔ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 622 | 1100 | 7 | 140 | 525 | 15 | 12 | 830 | 178 | 16 | 554 | 473 |
| Future Volume (vph) | 622 | 1100 | 7 | 140 | 525 | 15 | 12 | 830 | 178 | 16 | 554 | 473 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | 6 | | Free | | | 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) | 12.0 | 12.0 | | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 33.0 | 53.5 | | 15.0 | 35.5 | | 11.5 | 41.0 | | 10.5 | 40.0 | |
| Total Split (%) | 27.5% | 44.6% | | 12.5% | 29.6% | | 9.6% | 34.2% | | 8.8% | 33.3% | |
| Yellow Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 25.5 | 54.4 | 120.0 | 46.7 | 37.8 | 120.0 | 6.4 | 33.0 | 120.0 | 5.2 | 35.4 | 120.0 |
| Actuated g/C Ratio | 0.21 | 0.45 | 1.00 | 0.39 | 0.32 | 1.00 | 0.05 | 0.28 | 1.00 | 0.04 | 0.30 | 1.00 |
| v/c Ratio | 0.87 | 0.70 | 0.00 | 0.64 | 0.49 | 0.01 | 0.13 | 0.87 | 0.11 | 0.21 | 0.55 | 0.31 |
| Control Delay | 37.9 | 39.6 | 0.0 | 34.5 | 36.9 | 0.0 | 50.3 | 43.2 | 0.1 | 58.2 | 33.2 | 0.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.9 | 39.6 | 0.0 | 34.5 | 36.9 | 0.0 | 50.3 | 43.2 | 0.1 | 58.2 | 33.2 | 0.6 |
| LOS | D | D | A | C | D | A | D | D | A | E | C | A |
| Approach Delay | | 38.8 | | | 35.6 | | | 35.7 | | | 18.8 | |
| Approach LOS | | D | | | D | | | D | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 33.0
 Intersection LOS: C
 Intersection Capacity Utilization 77.4%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
2: Marksheffel Rd & US-24

2020 Adjusted Existing PM.syn
02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↔↔ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (veh/h) | 622 | 1100 | 7 | 140 | 525 | 15 | 12 | 830 | 178 | 16 | 554 | 473 |
| Future Volume (veh/h) | 622 | 1100 | 7 | 140 | 525 | 15 | 12 | 830 | 178 | 16 | 554 | 473 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 635 | 1122 | 0 | 143 | 536 | 0 | 12 | 847 | 0 | 16 | 565 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| Cap, veh/h | 701 | 1523 | | 267 | 1046 | | 181 | 948 | | 30 | 672 | |
| Arrive On Green | 0.20 | 0.43 | 0.00 | 0.07 | 0.30 | 0.00 | 0.10 | 0.27 | 0.00 | 0.03 | 0.38 | 0.00 |
| Sat Flow, veh/h | 3456 | 3554 | 1585 | 1767 | 3526 | 1572 | 1781 | 3554 | 1585 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 635 | 1122 | 0 | 143 | 536 | 0 | 12 | 847 | 0 | 16 | 565 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1585 | 1767 | 1763 | 1572 | 1781 | 1777 | 1585 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 21.5 | 31.6 | 0.0 | 6.7 | 15.1 | 0.0 | 0.7 | 27.5 | 0.0 | 1.1 | 17.5 | 0.0 |
| Cycle Q Clear(g_c), s | 21.5 | 31.6 | 0.0 | 6.7 | 15.1 | 0.0 | 0.7 | 27.5 | 0.0 | 1.1 | 17.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 701 | 1523 | | 267 | 1046 | | 181 | 948 | | 30 | 672 | |
| V/C Ratio(X) | 0.91 | 0.74 | | 0.53 | 0.51 | | 0.07 | 0.89 | | 0.53 | 0.84 | |
| Avail Cap(c_a), veh/h | 763 | 1523 | | 267 | 1046 | | 181 | 1022 | | 74 | 1014 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.94 | 0.94 | 0.00 |
| Uniform Delay (d), s/veh | 46.7 | 28.6 | 0.0 | 27.6 | 35.0 | 0.0 | 48.7 | 42.4 | 0.0 | 57.5 | 35.5 | 0.0 |
| Incr Delay (d2), s/veh | 13.8 | 3.2 | 0.0 | 2.1 | 1.8 | 0.0 | 0.2 | 9.7 | 0.0 | 12.6 | 3.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 10.6 | 13.9 | 0.0 | 3.0 | 6.8 | 0.0 | 0.3 | 13.3 | 0.0 | 0.6 | 6.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.5 | 31.8 | 0.0 | 29.7 | 36.8 | 0.0 | 48.9 | 52.1 | 0.0 | 70.0 | 39.4 | 0.0 |
| LnGrp LOS | E | C | | C | D | | D | D | | E | D | |
| Approach Vol, veh/h | | 1757 | A | | 679 | A | | 859 | A | | 581 | A |
| Approach Delay, s/veh | | 42.2 | | | 35.3 | | | 52.0 | | | 40.2 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.0 | 57.9 | 18.7 | 28.4 | 30.8 | 42.1 | 8.6 | 38.5 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 8.5 | 47.0 | 5.0 | 34.5 | 26.5 | 29.0 | 5.0 | * 35 | | | | |
| Max Q Clear Time (g_c+I1), s | 8.7 | 33.6 | 2.7 | 19.5 | 23.5 | 17.1 | 3.1 | 29.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.7 | 0.0 | 3.3 | 0.8 | 2.8 | 0.0 | 2.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 42.9 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

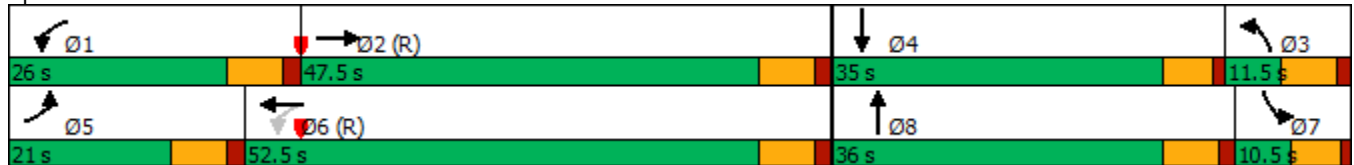


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↔↔ | ↑↑ | ↔ | ↑↑ | ↔ | ↔ | ↑↑ | ↔ | ↔ | ↑↑ | ↔ |
| Traffic Volume (vph) | 360 | 525 | 305 | 1190 | 20 | 5 | 490 | 60 | 10 | 760 | 760 |
| Future Volume (vph) | 360 | 525 | 305 | 1190 | 20 | 5 | 490 | 60 | 10 | 760 | 760 |
| Turn Type | Prot | NA | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 6 | | Free | | | 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) | 12.0 | 12.0 | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 21.0 | 47.5 | 26.0 | 52.5 | | 11.5 | 36.0 | | 10.5 | 35.0 | |
| Total Split (%) | 17.5% | 39.6% | 21.7% | 43.8% | | 9.6% | 30.0% | | 8.8% | 29.2% | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| 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) | 19.5 | 54.8 | 65.2 | 50.2 | 120.0 | 5.1 | 28.6 | 120.0 | 5.8 | 29.4 | 120.0 |
| Actuated g/C Ratio | 0.16 | 0.46 | 0.54 | 0.42 | 1.00 | 0.04 | 0.24 | 1.00 | 0.05 | 0.24 | 1.00 |
| v/c Ratio | 0.73 | 0.37 | 0.59 | 0.85 | 0.01 | 0.07 | 0.61 | 0.04 | 0.12 | 0.95 | 0.52 |
| Control Delay | 48.5 | 38.9 | 16.2 | 39.0 | 0.0 | 68.0 | 48.9 | 0.1 | 52.2 | 57.6 | 2.0 |
| 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 | 48.5 | 38.9 | 16.2 | 39.0 | 0.0 | 68.0 | 48.9 | 0.1 | 52.2 | 57.6 | 2.0 |
| LOS | D | D | B | D | A | E | D | A | D | E | A |
| Approach Delay | | 42.8 | | 33.9 | | | 43.7 | | | 29.9 | |
| Approach LOS | | D | | C | | | D | | | C | |

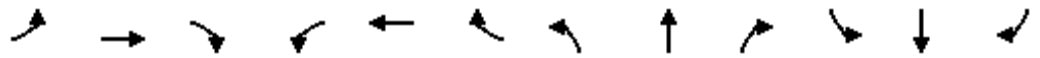
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 35.5
 Intersection LOS: D
 Intersection Capacity Utilization 79.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
 2: Marksheffel Rd & US-24



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 360 | 525 | 0 | 305 | 1190 | 20 | 5 | 490 | 60 | 10 | 760 | 760 |
| Future Volume (veh/h) | 360 | 525 | 0 | 305 | 1190 | 20 | 5 | 490 | 60 | 10 | 760 | 760 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1737 | 1737 | 1737 | 1841 | 1841 | 1841 | 1856 | 1856 | 1856 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 375 | 547 | 0 | 318 | 1240 | 0 | 5 | 510 | 0 | 10 | 792 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 11 | 11 | 11 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 6 |
| Cap, veh/h | 388 | 1388 | | 532 | 1475 | | 11 | 623 | | 110 | 835 | |
| Arrive On Green | 0.12 | 0.42 | 0.00 | 0.12 | 0.42 | 0.00 | 0.01 | 0.18 | 0.00 | 0.11 | 0.41 | 0.00 |
| Sat Flow, veh/h | 3209 | 3300 | 1472 | 1753 | 3497 | 1560 | 1767 | 3526 | 1572 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 375 | 547 | 0 | 318 | 1240 | 0 | 5 | 510 | 0 | 10 | 792 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1605 | 1650 | 1472 | 1753 | 1749 | 1560 | 1767 | 1763 | 1572 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 14.0 | 13.8 | 0.0 | 12.2 | 38.1 | 0.0 | 0.3 | 16.7 | 0.0 | 0.6 | 26.7 | 0.0 |
| Cycle Q Clear(g_c), s | 14.0 | 13.8 | 0.0 | 12.2 | 38.1 | 0.0 | 0.3 | 16.7 | 0.0 | 0.6 | 26.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 388 | 1388 | | 532 | 1475 | | 11 | 623 | | 110 | 835 | |
| V/C Ratio(X) | 0.97 | 0.39 | | 0.60 | 0.84 | | 0.44 | 0.82 | | 0.09 | 0.95 | |
| Avail Cap(c_a), veh/h | 388 | 1388 | | 603 | 1475 | | 74 | 867 | | 110 | 846 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.79 | 0.79 | 0.00 |
| Uniform Delay (d), s/veh | 52.5 | 24.2 | 0.0 | 16.6 | 31.1 | 0.0 | 59.4 | 47.5 | 0.0 | 50.4 | 34.9 | 0.0 |
| Incr Delay (d2), s/veh | 37.0 | 0.8 | 0.0 | 1.3 | 6.0 | 0.0 | 24.8 | 4.4 | 0.0 | 0.3 | 16.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.6 | 5.5 | 0.0 | 5.0 | 17.0 | 0.0 | 0.2 | 7.7 | 0.0 | 0.3 | 11.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 89.5 | 25.0 | 0.0 | 17.9 | 37.0 | 0.0 | 84.2 | 51.9 | 0.0 | 50.7 | 51.4 | 0.0 |
| LnGrp LOS | F | C | | B | D | | F | D | | D | D | |
| Approach Vol, veh/h | | 922 | A | | 1558 | A | | 515 | A | | 802 | A |
| Approach Delay, s/veh | | 51.2 | | | 33.1 | | | 52.2 | | | 51.4 | |
| Approach LOS | | D | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 21.1 | 57.0 | 7.3 | 34.6 | 21.0 | 57.1 | 14.2 | 27.7 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 19.5 | 41.0 | 5.0 | 29.5 | 14.5 | 46.0 | 5.0 | * 30 | | | | |
| Max Q Clear Time (g_c+I1), s | 14.2 | 15.8 | 2.3 | 28.7 | 16.0 | 40.1 | 2.6 | 18.7 | | | | |
| Green Ext Time (p_c), s | 0.5 | 3.9 | 0.0 | 0.5 | 0.0 | 3.9 | 0.0 | 2.5 | | | | |

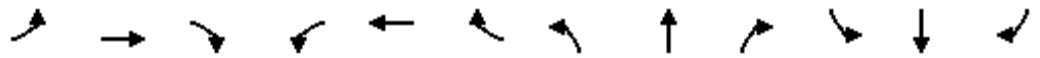
Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 44.0 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Marksheffel Rd & US-24



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↖↖ | ↖ | ↖ | ↖↖ | ↖ | ↖ | ↖↖ | ↖ | ↖ | ↖↖ | ↖ |
| Traffic Volume (veh/h) | 670 | 1180 | 10 | 155 | 565 | 20 | 15 | 890 | 195 | 20 | 595 | 510 |
| Future Volume (veh/h) | 670 | 1180 | 10 | 155 | 565 | 20 | 15 | 890 | 195 | 20 | 595 | 510 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 684 | 1204 | 0 | 158 | 577 | 0 | 15 | 908 | 0 | 20 | 607 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| Cap, veh/h | 739 | 1473 | | 238 | 957 | | 186 | 987 | | 36 | 713 | |
| Arrive On Green | 0.21 | 0.41 | 0.00 | 0.07 | 0.27 | 0.00 | 0.10 | 0.28 | 0.00 | 0.04 | 0.40 | 0.00 |
| Sat Flow, veh/h | 3456 | 3554 | 1585 | 1767 | 3526 | 1572 | 1781 | 3554 | 1585 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 684 | 1204 | 0 | 158 | 577 | 0 | 15 | 908 | 0 | 20 | 607 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1585 | 1767 | 1763 | 1572 | 1781 | 1777 | 1585 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 23.3 | 36.0 | 0.0 | 7.8 | 17.1 | 0.0 | 0.9 | 29.7 | 0.0 | 1.3 | 18.8 | 0.0 |
| Cycle Q Clear(g_c), s | 23.3 | 36.0 | 0.0 | 7.8 | 17.1 | 0.0 | 0.9 | 29.7 | 0.0 | 1.3 | 18.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 739 | 1473 | | 238 | 957 | | 186 | 987 | | 36 | 713 | |
| V/C Ratio(X) | 0.92 | 0.82 | | 0.66 | 0.60 | | 0.08 | 0.92 | | 0.56 | 0.85 | |
| Avail Cap(c_a), veh/h | 763 | 1473 | | 238 | 957 | | 186 | 1022 | | 74 | 1014 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.92 | 0.92 | 0.00 |
| Uniform Delay (d), s/veh | 46.2 | 31.1 | 0.0 | 30.8 | 38.1 | 0.0 | 48.6 | 42.0 | 0.0 | 57.0 | 34.1 | 0.0 |
| Incr Delay (d2), s/veh | 16.8 | 5.1 | 0.0 | 6.8 | 2.8 | 0.0 | 0.2 | 12.8 | 0.0 | 11.9 | 4.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.7 | 16.2 | 0.0 | 3.7 | 7.8 | 0.0 | 0.4 | 14.7 | 0.0 | 0.7 | 7.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 63.0 | 36.2 | 0.0 | 37.5 | 40.9 | 0.0 | 48.7 | 54.8 | 0.0 | 68.9 | 38.8 | 0.0 |
| LnGrp LOS | E | D | | D | D | | D | D | | E | D | |
| Approach Vol, veh/h | | 1888 | A | | 735 | A | | 923 | A | | 627 | A |
| Approach Delay, s/veh | | 45.9 | | | 40.2 | | | 54.7 | | | 39.7 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.0 | 56.2 | 19.0 | 29.8 | 32.2 | 39.1 | 8.9 | 39.8 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 8.5 | 47.0 | 5.0 | 34.5 | 26.5 | 29.0 | 5.0 | * 35 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.8 | 38.0 | 2.9 | 20.8 | 25.3 | 19.1 | 3.3 | 31.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 5.4 | 0.0 | 3.5 | 0.4 | 2.7 | 0.0 | 1.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 45.9 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Marksheffel Rd & US-24

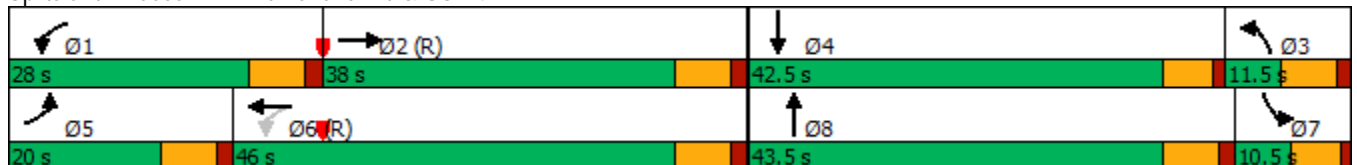
2026 Total AM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Future Volume (vph) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | 6 | | Free | | | 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) | 12.0 | 12.0 | | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 20.0 | 38.0 | | 28.0 | 46.0 | | 11.5 | 43.5 | | 10.5 | 42.5 | |
| Total Split (%) | 16.7% | 31.7% | | 23.3% | 38.3% | | 9.6% | 36.3% | | 8.8% | 35.4% | |
| Yellow Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 20.6 | 42.2 | 120.0 | 61.0 | 41.5 | 120.0 | 5.0 | 36.3 | 120.0 | 5.5 | 37.1 | 120.0 |
| Actuated g/C Ratio | 0.17 | 0.35 | 1.00 | 0.51 | 0.35 | 1.00 | 0.04 | 0.30 | 1.00 | 0.05 | 0.31 | 1.00 |
| v/c Ratio | 0.69 | 0.50 | 0.09 | 0.75 | 1.06 | 0.01 | 0.07 | 0.74 | 0.07 | 0.13 | 1.01 | 0.52 |
| Control Delay | 40.9 | 46.8 | 0.1 | 25.9 | 80.6 | 0.0 | 56.8 | 40.6 | 0.1 | 49.2 | 60.5 | 0.9 |
| 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 | 40.9 | 46.8 | 0.1 | 25.9 | 80.6 | 0.0 | 56.8 | 40.6 | 0.1 | 49.2 | 60.5 | 0.9 |
| LOS | D | D | A | C | F | A | E | D | A | D | E | A |
| Approach Delay | | 39.1 | | | 67.5 | | | 35.7 | | | 35.2 | |
| Approach LOS | | D | | | E | | | D | | | D | |

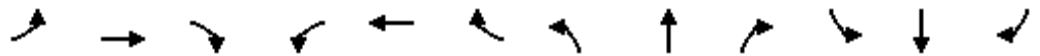
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 45.8
 Intersection LOS: D
 Intersection Capacity Utilization 87.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



2: Marksheffel Rd & US-24



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Future Volume (veh/h) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1737 | 1737 | 1737 | 1841 | 1841 | 1841 | 1856 | 1856 | 1856 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 375 | 573 | 0 | 365 | 1266 | 0 | 5 | 786 | 0 | 10 | 1068 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 11 | 11 | 11 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 6 |
| Cap, veh/h | 361 | 1060 | | 481 | 1275 | | 11 | 917 | | 80 | 1061 | |
| Arrive On Green | 0.11 | 0.32 | 0.00 | 0.16 | 0.36 | 0.00 | 0.01 | 0.26 | 0.00 | 0.09 | 0.62 | 0.00 |
| Sat Flow, veh/h | 3209 | 3300 | 1472 | 1753 | 3497 | 1560 | 1767 | 3526 | 1572 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 375 | 573 | 0 | 365 | 1266 | 0 | 5 | 786 | 0 | 10 | 1068 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1605 | 1650 | 1472 | 1753 | 1749 | 1560 | 1767 | 1763 | 1572 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 13.5 | 17.1 | 0.0 | 16.3 | 43.3 | 0.0 | 0.3 | 25.5 | 0.0 | 0.6 | 37.0 | 0.0 |
| Cycle Q Clear(g_c), s | 13.5 | 17.1 | 0.0 | 16.3 | 43.3 | 0.0 | 0.3 | 25.5 | 0.0 | 0.6 | 37.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 361 | 1060 | | 481 | 1275 | | 11 | 917 | | 80 | 1061 | |
| V/C Ratio(X) | 1.04 | 0.54 | | 0.76 | 0.99 | | 0.44 | 0.86 | | 0.12 | 1.01 | |
| Avail Cap(c_a), veh/h | 361 | 1060 | | 521 | 1275 | | 74 | 1087 | | 80 | 1061 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.66 | 0.66 | 0.00 |
| Uniform Delay (d), s/veh | 53.3 | 33.5 | 0.0 | 22.6 | 38.0 | 0.0 | 59.4 | 42.3 | 0.0 | 52.2 | 23.0 | 0.0 |
| Incr Delay (d2), s/veh | 57.7 | 2.0 | 0.0 | 5.9 | 23.7 | 0.0 | 24.8 | 6.1 | 0.0 | 0.5 | 24.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.3 | 7.1 | 0.0 | 7.4 | 22.3 | 0.0 | 0.2 | 11.8 | 0.0 | 0.3 | 13.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 111.0 | 35.5 | 0.0 | 28.6 | 61.6 | 0.0 | 84.2 | 48.4 | 0.0 | 52.6 | 47.1 | 0.0 |
| LnGrp LOS | F | D | | C | E | | F | D | | D | F | |
| Approach Vol, veh/h | | 948 | A | | 1631 | A | | 791 | A | | 1078 | A |
| Approach Delay, s/veh | | 65.3 | | | 54.2 | | | 48.6 | | | 47.1 | |
| Approach LOS | | E | | | D | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 25.2 | 45.0 | 7.3 | 42.5 | 20.0 | 50.2 | 12.1 | 37.7 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 21.5 | 31.5 | 5.0 | 37.0 | 13.5 | 39.5 | 5.0 | * 37 | | | | |
| Max Q Clear Time (g_c+I1), s | 18.3 | 19.1 | 2.3 | 39.0 | 15.5 | 45.3 | 2.6 | 27.5 | | | | |
| Green Ext Time (p_c), s | 0.4 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 53.9 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

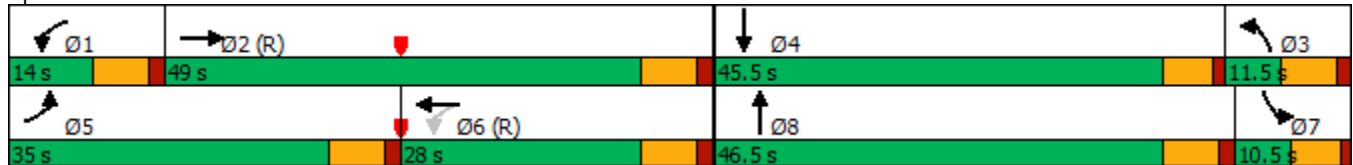
Timings
2: Marksheffel Rd & US-24

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Future Volume (vph) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | 6 | | Free | | | 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) | 12.0 | 12.0 | | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 35.0 | 49.0 | | 14.0 | 28.0 | | 11.5 | 46.5 | | 10.5 | 45.5 | |
| Total Split (%) | 29.2% | 40.8% | | 11.7% | 23.3% | | 9.6% | 38.8% | | 8.8% | 37.9% | |
| Yellow Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 27.2 | 42.5 | 120.0 | 42.9 | 29.1 | 120.0 | 5.4 | 40.0 | 120.0 | 5.0 | 40.6 | 120.0 |
| Actuated g/C Ratio | 0.23 | 0.35 | 1.00 | 0.36 | 0.24 | 1.00 | 0.04 | 0.33 | 1.00 | 0.04 | 0.34 | 1.00 |
| v/c Ratio | 0.88 | 0.98 | 0.08 | 0.79 | 0.70 | 0.01 | 0.19 | 1.03 | 0.16 | 0.27 | 0.79 | 0.33 |
| Control Delay | 33.2 | 50.2 | 0.0 | 51.5 | 48.1 | 0.0 | 52.0 | 61.6 | 0.2 | 57.7 | 34.4 | 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 | 33.2 | 50.2 | 0.0 | 51.5 | 48.1 | 0.0 | 52.0 | 61.6 | 0.2 | 57.7 | 34.4 | 0.5 |
| LOS | C | D | A | D | D | A | D | E | A | E | C | A |
| Approach Delay | | 41.3 | | | 47.8 | | | 51.1 | | | 22.8 | |
| Approach LOS | | D | | | D | | | D | | | C | |

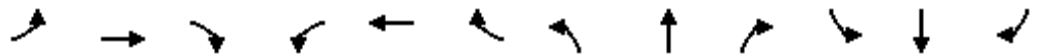
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 40.0
 Intersection LOS: D
 Intersection Capacity Utilization 94.0%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



2: Marksheffel Rd & US-24



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Future Volume (veh/h) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 684 | 1224 | 0 | 214 | 597 | 0 | 15 | 1214 | 0 | 20 | 934 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| Cap, veh/h | 752 | 1305 | | 186 | 747 | | 128 | 1185 | | 36 | 1023 | |
| Arrive On Green | 0.22 | 0.37 | 0.00 | 0.06 | 0.21 | 0.00 | 0.07 | 0.33 | 0.00 | 0.04 | 0.58 | 0.00 |
| Sat Flow, veh/h | 3456 | 3554 | 1585 | 1767 | 3526 | 1572 | 1781 | 3554 | 1585 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 684 | 1224 | 0 | 214 | 597 | 0 | 15 | 1214 | 0 | 20 | 934 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1585 | 1767 | 1763 | 1572 | 1781 | 1777 | 1585 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 23.2 | 39.9 | 0.0 | 7.5 | 19.3 | 0.0 | 0.9 | 40.0 | 0.0 | 1.3 | 28.4 | 0.0 |
| Cycle Q Clear(g_c), s | 23.2 | 39.9 | 0.0 | 7.5 | 19.3 | 0.0 | 0.9 | 40.0 | 0.0 | 1.3 | 28.4 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 752 | 1305 | | 186 | 747 | | 128 | 1185 | | 36 | 1023 | |
| V/C Ratio(X) | 0.91 | 0.94 | | 1.15 | 0.80 | | 0.12 | 1.02 | | 0.56 | 0.91 | |
| Avail Cap(c_a), veh/h | 821 | 1305 | | 186 | 747 | | 128 | 1185 | | 74 | 1175 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.83 | 0.83 | 0.00 |
| Uniform Delay (d), s/veh | 45.8 | 36.6 | 0.0 | 42.5 | 44.9 | 0.0 | 52.1 | 40.0 | 0.0 | 57.0 | 23.8 | 0.0 |
| Incr Delay (d2), s/veh | 13.3 | 13.9 | 0.0 | 112.0 | 8.7 | 0.0 | 0.4 | 32.6 | 0.0 | 10.8 | 8.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.3 | 19.5 | 0.0 | 7.8 | 9.3 | 0.0 | 0.4 | 22.5 | 0.0 | 0.7 | 9.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.1 | 50.6 | 0.0 | 154.5 | 53.6 | 0.0 | 52.5 | 72.6 | 0.0 | 67.8 | 32.3 | 0.0 |
| LnGrp LOS | E | D | | F | D | | D | F | | E | C | |
| Approach Vol, veh/h | | 1908 | A | | 811 | A | | 1229 | A | | 954 | A |
| Approach Delay, s/veh | | 53.6 | | | 80.2 | | | 72.4 | | | 33.1 | |
| Approach LOS | | D | | | F | | | E | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.0 | 50.6 | 15.1 | 40.3 | 32.6 | 31.9 | 8.9 | 46.5 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 7.5 | 42.5 | 5.0 | 40.0 | 28.5 | 21.5 | 5.0 | * 40 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.5 | 41.9 | 2.9 | 30.4 | 25.2 | 21.3 | 3.3 | 42.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.5 | 0.0 | 4.5 | 1.0 | 0.1 | 0.0 | 0.0 | | | | |

Intersection Summary

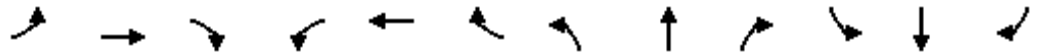
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 58.7 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2: Marksheffel Rd & US-24

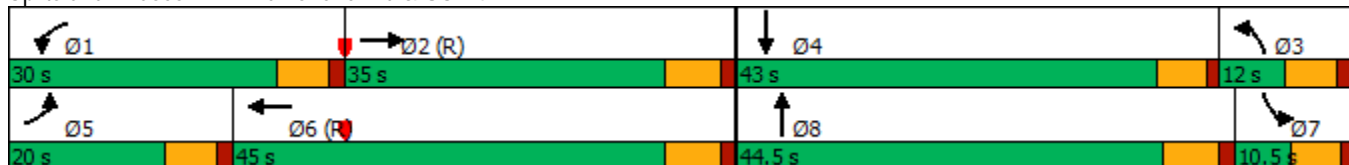


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations | ↖↗ | ↕ | ↗ | ↖↗ | ↕ | ↗ | ↖ | ↕ | ↗ | ↖ | ↕ | ↗ |
| Traffic Volume (vph) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Future Volume (vph) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | | | Free | | | 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) | 12.0 | 12.0 | | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 20.0 | 35.0 | | 30.0 | 45.0 | | 12.0 | 44.5 | | 10.5 | 43.0 | |
| Total Split (%) | 16.7% | 29.2% | | 25.0% | 37.5% | | 10.0% | 37.1% | | 8.8% | 35.8% | |
| Yellow Time (s) | 4.5 | 5.0 | | 4.5 | 5.0 | | 4.5 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.5 | | 6.0 | 6.5 | | 6.0 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 20.0 | 43.9 | 120.0 | 18.2 | 42.0 | 120.0 | 5.8 | 36.8 | 120.0 | 5.7 | 37.5 | 120.0 |
| Actuated g/C Ratio | 0.17 | 0.37 | 1.00 | 0.15 | 0.35 | 1.00 | 0.05 | 0.31 | 1.00 | 0.05 | 0.31 | 1.00 |
| v/c Ratio | 0.71 | 0.48 | 0.09 | 0.72 | 1.04 | 0.01 | 0.06 | 0.73 | 0.07 | 0.12 | 1.00 | 0.52 |
| Control Delay | 42.6 | 45.9 | 0.1 | 56.4 | 75.7 | 0.0 | 43.0 | 29.1 | 0.1 | 48.7 | 57.6 | 0.9 |
| 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 | 42.6 | 45.9 | 0.1 | 56.4 | 75.7 | 0.0 | 43.0 | 29.1 | 0.1 | 48.7 | 57.6 | 0.9 |
| LOS | D | D | A | E | E | A | D | C | A | D | E | A |
| Approach Delay | | 39.3 | | | 70.5 | | | 25.7 | | | 33.6 | |
| Approach LOS | | D | | | E | | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 44.5
 Intersection LOS: D
 Intersection Capacity Utilization 87.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24

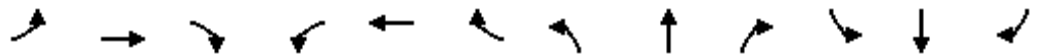


HCM 6th Signalized Intersection Summary

2026 Total AM Improved.syn

02/17/2021

2: Marksheffel Rd & US-24



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Future Volume (veh/h) | 360 | 550 | 125 | 350 | 1215 | 20 | 5 | 755 | 105 | 10 | 1025 | 760 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1737 | 1737 | 1737 | 1841 | 1841 | 1841 | 1856 | 1856 | 1856 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 375 | 573 | 0 | 365 | 1266 | 0 | 5 | 786 | 0 | 10 | 1068 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 11 | 11 | 11 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 6 |
| Cap, veh/h | 374 | 1162 | | 439 | 1275 | | 11 | 922 | | 84 | 1075 | |
| Arrive On Green | 0.12 | 0.35 | 0.00 | 0.13 | 0.36 | 0.00 | 0.01 | 0.26 | 0.00 | 0.10 | 0.63 | 0.00 |
| Sat Flow, veh/h | 3209 | 3300 | 1472 | 3401 | 3497 | 1560 | 1767 | 3526 | 1572 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 375 | 573 | 0 | 365 | 1266 | 0 | 5 | 786 | 0 | 10 | 1068 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1605 | 1650 | 1472 | 1700 | 1749 | 1560 | 1767 | 1763 | 1572 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 14.0 | 16.3 | 0.0 | 12.6 | 43.3 | 0.0 | 0.3 | 25.4 | 0.0 | 0.6 | 36.8 | 0.0 |
| Cycle Q Clear(g_c), s | 14.0 | 16.3 | 0.0 | 12.6 | 43.3 | 0.0 | 0.3 | 25.4 | 0.0 | 0.6 | 36.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 374 | 1162 | | 439 | 1275 | | 11 | 922 | | 84 | 1075 | |
| V/C Ratio(X) | 1.00 | 0.49 | | 0.83 | 0.99 | | 0.44 | 0.85 | | 0.12 | 0.99 | |
| Avail Cap(c_a), veh/h | 374 | 1162 | | 680 | 1275 | | 88 | 1116 | | 84 | 1075 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.66 | 0.66 | 0.00 |
| Uniform Delay (d), s/veh | 53.0 | 30.5 | 0.0 | 51.0 | 38.0 | 0.0 | 59.4 | 42.1 | 0.0 | 51.8 | 22.4 | 0.0 |
| Incr Delay (d2), s/veh | 46.9 | 1.5 | 0.0 | 5.2 | 23.7 | 0.0 | 24.8 | 5.6 | 0.0 | 0.4 | 20.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.1 | 6.7 | 0.0 | 5.7 | 22.3 | 0.0 | 0.2 | 11.7 | 0.0 | 0.3 | 12.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 99.9 | 32.0 | 0.0 | 56.2 | 61.6 | 0.0 | 84.2 | 47.7 | 0.0 | 52.2 | 43.0 | 0.0 |
| LnGrp LOS | F | C | | E | E | | F | D | | D | D | |
| Approach Vol, veh/h | | 948 | A | | 1631 | A | | 791 | A | | 1078 | A |
| Approach Delay, s/veh | | 58.8 | | | 60.4 | | | 47.9 | | | 43.1 | |
| Approach LOS | | E | | | E | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 21.5 | 48.7 | 6.8 | 43.0 | 20.0 | 50.2 | 11.9 | 37.9 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.5 | 6.0 | 5.5 | 6.0 | 6.5 | 6.0 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 24.0 | 28.5 | 6.0 | 37.5 | 14.0 | 38.5 | 5.0 | * 38 | | | | |
| Max Q Clear Time (g_c+I1), s | 14.6 | 18.3 | 2.3 | 38.8 | 16.0 | 45.3 | 2.6 | 27.4 | | | | |
| Green Ext Time (p_c), s | 0.9 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | | | | |

Intersection Summary

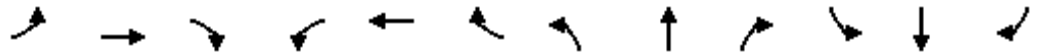
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 53.7 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2: Marksheffel Rd & US-24

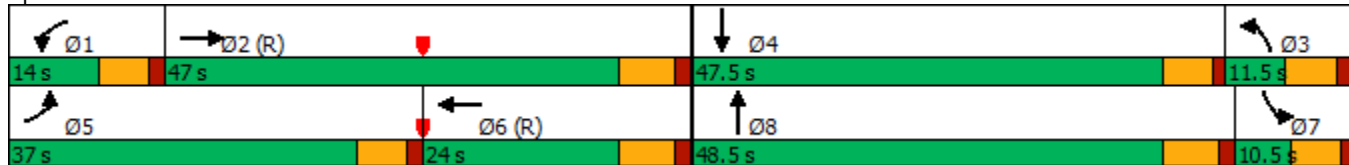


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↔↔ | ↑↑ | ↗ | ↔↔ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Future Volume (vph) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | | | Free | | | 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) | 12.0 | 12.0 | | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 37.0 | 47.0 | | 14.0 | 24.0 | | 11.5 | 48.5 | | 10.5 | 47.5 | |
| Total Split (%) | 30.8% | 39.2% | | 11.7% | 20.0% | | 9.6% | 40.4% | | 8.8% | 39.6% | |
| Yellow Time (s) | 4.5 | 5.0 | | 4.5 | 5.0 | | 4.5 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.5 | | 6.0 | 6.5 | | 6.0 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 28.0 | 43.9 | 120.0 | 10.9 | 26.8 | 120.0 | 5.7 | 42.0 | 120.0 | 5.0 | 42.6 | 120.0 |
| Actuated g/C Ratio | 0.23 | 0.37 | 1.00 | 0.09 | 0.22 | 1.00 | 0.05 | 0.35 | 1.00 | 0.04 | 0.36 | 1.00 |
| v/c Ratio | 0.85 | 0.95 | 0.08 | 0.69 | 0.76 | 0.01 | 0.18 | 0.98 | 0.16 | 0.27 | 0.75 | 0.33 |
| Control Delay | 36.7 | 51.8 | 0.1 | 65.7 | 52.3 | 0.0 | 52.9 | 55.6 | 0.2 | 57.6 | 31.6 | 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 | 36.7 | 51.8 | 0.1 | 65.7 | 52.3 | 0.0 | 52.9 | 55.6 | 0.2 | 57.6 | 31.6 | 0.5 |
| LOS | D | D | A | E | D | A | D | E | A | E | C | A |
| Approach Delay | | 43.5 | | | 54.5 | | | 46.2 | | | 21.0 | |
| Approach LOS | | D | | | D | | | D | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 40.0
 Intersection LOS: D
 Intersection Capacity Utilization 87.9%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24

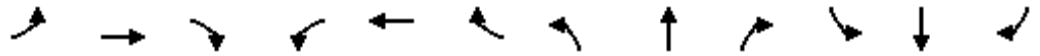


HCM 6th Signalized Intersection Summary

2026 Total PM Improved.syn

2: Marksheffel Rd & US-24

02/17/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Future Volume (veh/h) | 670 | 1200 | 125 | 210 | 585 | 20 | 15 | 1190 | 245 | 20 | 915 | 510 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 684 | 1224 | 0 | 214 | 597 | 0 | 15 | 1214 | 0 | 20 | 934 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| Cap, veh/h | 764 | 1261 | | 229 | 706 | | 153 | 1244 | | 36 | 1033 | |
| Arrive On Green | 0.22 | 0.35 | 0.00 | 0.07 | 0.20 | 0.00 | 0.09 | 0.35 | 0.00 | 0.04 | 0.59 | 0.00 |
| Sat Flow, veh/h | 3456 | 3554 | 1585 | 3428 | 3526 | 1572 | 1781 | 3554 | 1585 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 684 | 1224 | 0 | 214 | 597 | 0 | 15 | 1214 | 0 | 20 | 934 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1585 | 1714 | 1763 | 1572 | 1781 | 1777 | 1585 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 23.1 | 40.7 | 0.0 | 7.5 | 19.6 | 0.0 | 0.9 | 40.5 | 0.0 | 1.3 | 28.0 | 0.0 |
| Cycle Q Clear(g_c), s | 23.1 | 40.7 | 0.0 | 7.5 | 19.6 | 0.0 | 0.9 | 40.5 | 0.0 | 1.3 | 28.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 764 | 1261 | | 229 | 706 | | 153 | 1244 | | 36 | 1033 | |
| V/C Ratio(X) | 0.89 | 0.97 | | 0.94 | 0.85 | | 0.10 | 0.98 | | 0.56 | 0.90 | |
| Avail Cap(c_a), veh/h | 893 | 1261 | | 229 | 706 | | 153 | 1244 | | 74 | 1234 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.83 | 0.83 | 0.00 |
| Uniform Delay (d), s/veh | 45.4 | 38.1 | 0.0 | 55.7 | 46.2 | 0.0 | 50.6 | 38.5 | 0.0 | 57.0 | 23.4 | 0.0 |
| Incr Delay (d2), s/veh | 10.4 | 19.3 | 0.0 | 42.2 | 11.9 | 0.0 | 0.3 | 19.9 | 0.0 | 10.8 | 7.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 10.9 | 20.8 | 0.0 | 4.6 | 9.7 | 0.0 | 0.4 | 20.7 | 0.0 | 0.7 | 9.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 55.8 | 57.4 | 0.0 | 97.9 | 58.1 | 0.0 | 50.9 | 58.4 | 0.0 | 67.8 | 30.6 | 0.0 |
| LnGrp LOS | E | E | | F | E | | D | E | | E | C | |
| Approach Vol, veh/h | | 1908 | A | | 811 | A | | 1229 | A | | 954 | A |
| Approach Delay, s/veh | | 56.8 | | | 68.6 | | | 58.3 | | | 31.4 | |
| Approach LOS | | E | | | E | | | E | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.0 | 49.1 | 16.3 | 40.7 | 32.5 | 30.5 | 8.4 | 48.5 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.5 | 6.0 | 5.5 | 6.0 | 6.5 | 6.0 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 8.0 | 40.5 | 5.5 | 42.0 | 31.0 | 17.5 | 5.0 | * 42 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.5 | 42.7 | 2.9 | 30.0 | 25.1 | 21.6 | 3.3 | 42.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 5.2 | 1.5 | 0.0 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 54.2 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

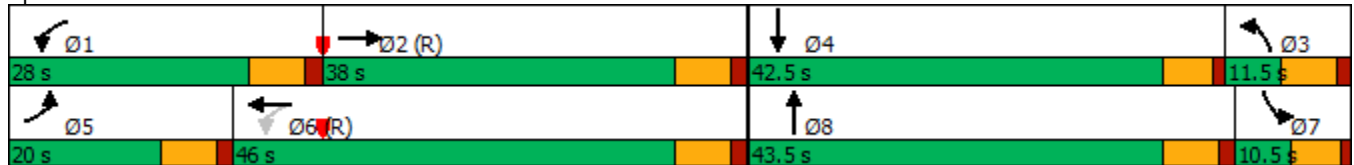
Timings
2: Marksheffel Rd & US-24

| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|--|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 425 | 615 | 370 | 1395 | 25 | 5 | 755 | 100 | 15 | 955 | 890 | |
| Future Volume (vph) | 425 | 615 | 370 | 1395 | 25 | 5 | 755 | 100 | 15 | 955 | 890 | |
| Turn Type | Prot | NA | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free | |
| Protected Phases | 5 | 2 | 1 | 6 | | 3 | 8 | | 7 | 4 | | |
| Permitted Phases | | | 6 | | Free | | | 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) | 12.0 | 12.0 | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | | |
| Total Split (s) | 20.0 | 38.0 | 28.0 | 46.0 | | 11.5 | 43.5 | | 10.5 | 42.5 | | |
| Total Split (%) | 16.7% | 31.7% | 23.3% | 38.3% | | 9.6% | 36.3% | | 8.8% | 35.4% | | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | | |
| Lead/Lag | Lead | Lag | Lead | Lag | | Lag | Lead | | Lag | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | | |
| Recall Mode | None | C-Max | None | C-Max | | None | None | | None | None | | |
| Act Effct Green (s) | 20.4 | 38.1 | 60.7 | 39.5 | 120.0 | 5.0 | 36.3 | 120.0 | 5.6 | 39.3 | 120.0 | |
| Actuated g/C Ratio | 0.17 | 0.32 | 0.51 | 0.33 | 1.00 | 0.04 | 0.30 | 1.00 | 0.05 | 0.33 | 1.00 | |
| v/c Ratio | 0.83 | 0.62 | 0.85 | 1.27 | 0.02 | 0.07 | 0.74 | 0.07 | 0.20 | 0.89 | 0.61 | |
| Control Delay | 54.1 | 58.0 | 37.8 | 164.5 | 0.0 | 57.2 | 39.7 | 0.1 | 50.2 | 38.4 | 2.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 54.1 | 58.0 | 37.8 | 164.5 | 0.0 | 57.2 | 39.7 | 0.1 | 50.2 | 38.4 | 2.7 | |
| LOS | D | E | D | F | A | E | D | A | D | D | A | |
| Approach Delay | | 56.4 | | 136.0 | | | 35.2 | | | 21.4 | | |
| Approach LOS | | E | | F | | | D | | | C | | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.27
 Intersection Signal Delay: 67.1
 Intersection LOS: E
 Intersection Capacity Utilization 92.5%
 ICU Level of Service F
 Analysis Period (min) 15

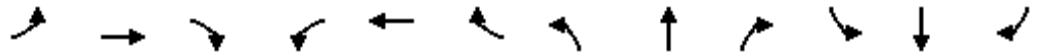
Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
 2: Marksheffel Rd & US-24

2040 Background AM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|------|-------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 425 | 615 | 0 | 370 | 1395 | 25 | 5 | 755 | 100 | 15 | 955 | 890 |
| Future Volume (veh/h) | 425 | 615 | 0 | 370 | 1395 | 25 | 5 | 755 | 100 | 15 | 955 | 890 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1737 | 1737 | 1737 | 1841 | 1841 | 1841 | 1856 | 1856 | 1856 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 443 | 641 | 0 | 385 | 1453 | 0 | 5 | 786 | 0 | 16 | 995 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 11 | 11 | 11 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 6 |
| Cap, veh/h | 361 | 1065 | | 467 | 1299 | | 11 | 917 | | 68 | 1037 | |
| Arrive On Green | 0.11 | 0.32 | 0.00 | 0.16 | 0.37 | 0.00 | 0.01 | 0.26 | 0.00 | 0.08 | 0.60 | 0.00 |
| Sat Flow, veh/h | 3209 | 3300 | 1472 | 1753 | 3497 | 1560 | 1767 | 3526 | 1572 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 443 | 641 | 0 | 385 | 1453 | 0 | 5 | 786 | 0 | 16 | 995 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1605 | 1650 | 1472 | 1753 | 1749 | 1560 | 1767 | 1763 | 1572 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 13.5 | 19.6 | 0.0 | 17.0 | 44.6 | 0.0 | 0.3 | 25.5 | 0.0 | 1.0 | 32.7 | 0.0 |
| Cycle Q Clear(g_c), s | 13.5 | 19.6 | 0.0 | 17.0 | 44.6 | 0.0 | 0.3 | 25.5 | 0.0 | 1.0 | 32.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 361 | 1065 | | 467 | 1299 | | 11 | 917 | | 68 | 1037 | |
| V/C Ratio(X) | 1.23 | 0.60 | | 0.83 | 1.12 | | 0.44 | 0.86 | | 0.24 | 0.96 | |
| Avail Cap(c_a), veh/h | 361 | 1065 | | 498 | 1299 | | 74 | 1087 | | 72 | 1061 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.63 | 0.63 | 0.00 |
| Uniform Delay (d), s/veh | 53.3 | 34.2 | 0.0 | 23.2 | 37.7 | 0.0 | 59.4 | 42.3 | 0.0 | 53.6 | 23.2 | 0.0 |
| Incr Delay (d2), s/veh | 124.3 | 2.5 | 0.0 | 10.4 | 64.1 | 0.0 | 24.8 | 6.1 | 0.0 | 1.1 | 13.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.7 | 8.2 | 0.0 | 8.2 | 30.2 | 0.0 | 0.2 | 11.8 | 0.0 | 0.5 | 10.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 177.5 | 36.7 | 0.0 | 33.6 | 101.8 | 0.0 | 84.2 | 48.4 | 0.0 | 54.7 | 36.7 | 0.0 |
| LnGrp LOS | F | D | | C | F | | F | D | | D | D | |
| Approach Vol, veh/h | | 1084 | A | | 1838 | A | | 791 | A | | 1011 | A |
| Approach Delay, s/veh | | 94.3 | | | 87.5 | | | 48.6 | | | 37.0 | |
| Approach LOS | | F | | | F | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 25.9 | 45.2 | 7.3 | 41.6 | 20.0 | 51.1 | 11.2 | 37.7 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 21.5 | 31.5 | 5.0 | 37.0 | 13.5 | 39.5 | 5.0 | * 37 | | | | |
| Max Q Clear Time (g_c+I1), s | 19.0 | 21.6 | 2.3 | 34.7 | 15.5 | 46.6 | 3.0 | 27.5 | | | | |
| Green Ext Time (p_c), s | 0.3 | 3.1 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 3.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 71.7 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

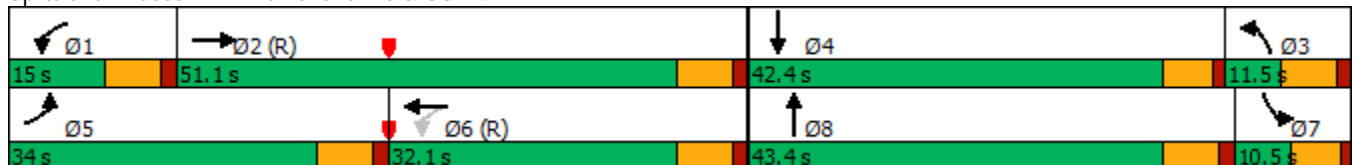
Timings
2: Marksheffel Rd & US-24

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 785 | 1390 | 10 | 210 | 665 | 20 | 20 | 1165 | 245 | 25 | 895 | 600 |
| Future Volume (vph) | 785 | 1390 | 10 | 210 | 665 | 20 | 20 | 1165 | 245 | 25 | 895 | 600 |
| Turn Type | Prot | NA | Free | pm+pt | NA | Free | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | 6 | | Free | | | 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) | 12.0 | 12.0 | | 12.0 | 12.0 | | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 34.0 | 51.1 | | 15.0 | 32.1 | | 11.5 | 43.4 | | 10.5 | 42.4 | |
| Total Split (%) | 28.3% | 42.6% | | 12.5% | 26.8% | | 9.6% | 36.2% | | 8.8% | 35.3% | |
| Yellow Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | | 6.5 | 6.5 | | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effct Green (s) | 30.7 | 44.6 | 120.0 | 39.3 | 26.6 | 120.0 | 5.4 | 36.9 | 120.0 | 5.0 | 39.6 | 120.0 |
| Actuated g/C Ratio | 0.26 | 0.37 | 1.00 | 0.33 | 0.22 | 1.00 | 0.04 | 0.31 | 1.00 | 0.04 | 0.33 | 1.00 |
| v/c Ratio | 0.91 | 1.08 | 0.01 | 0.83 | 0.87 | 0.01 | 0.25 | 1.09 | 0.16 | 0.36 | 0.79 | 0.39 |
| Control Delay | 43.5 | 90.3 | 0.0 | 56.8 | 58.6 | 0.0 | 51.1 | 84.0 | 0.2 | 60.4 | 35.0 | 0.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 43.5 | 90.3 | 0.0 | 56.8 | 58.6 | 0.0 | 51.1 | 84.0 | 0.2 | 60.4 | 35.0 | 0.6 |
| LOS | D | F | A | E | E | A | D | F | A | E | C | A |
| Approach Delay | | 73.1 | | | 56.9 | | | 69.2 | | | 21.9 | |
| Approach LOS | | E | | | E | | | E | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 56.8
 Intersection LOS: E
 Intersection Capacity Utilization 98.5%
 ICU Level of Service F
 Analysis Period (min) 15

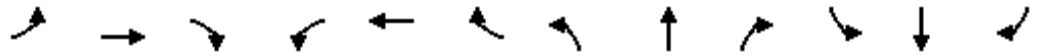
Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
 2: Marksheffel Rd & US-24

2040 Background PM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↕ | ↖ | ↖ | ↕ | ↖ | ↖ | ↕ | ↖ | ↖ | ↕ | ↖ |
| Traffic Volume (veh/h) | 785 | 1390 | 10 | 210 | 665 | 20 | 20 | 1165 | 245 | 25 | 895 | 600 |
| Future Volume (veh/h) | 785 | 1390 | 10 | 210 | 665 | 20 | 20 | 1165 | 245 | 25 | 895 | 600 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 801 | 1418 | 0 | 214 | 679 | 0 | 20 | 1189 | 0 | 26 | 913 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| Cap, veh/h | 792 | 1353 | | 185 | 784 | | 106 | 1093 | | 43 | 988 | |
| Arrive On Green | 0.23 | 0.38 | 0.00 | 0.07 | 0.22 | 0.00 | 0.06 | 0.31 | 0.00 | 0.05 | 0.56 | 0.00 |
| Sat Flow, veh/h | 3456 | 3554 | 1585 | 1767 | 3526 | 1572 | 1781 | 3554 | 1585 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 801 | 1418 | 0 | 214 | 679 | 0 | 20 | 1189 | 0 | 26 | 913 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1585 | 1767 | 1763 | 1572 | 1781 | 1777 | 1585 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 27.5 | 45.7 | 0.0 | 8.5 | 22.3 | 0.0 | 1.3 | 36.9 | 0.0 | 1.7 | 28.3 | 0.0 |
| Cycle Q Clear(g_c), s | 27.5 | 45.7 | 0.0 | 8.5 | 22.3 | 0.0 | 1.3 | 36.9 | 0.0 | 1.7 | 28.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 792 | 1353 | | 185 | 784 | | 106 | 1093 | | 43 | 988 | |
| V/C Ratio(X) | 1.01 | 1.05 | | 1.16 | 0.87 | | 0.19 | 1.09 | | 0.61 | 0.92 | |
| Avail Cap(c_a), veh/h | 792 | 1353 | | 185 | 784 | | 106 | 1093 | | 74 | 1084 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.81 | 0.81 | 0.00 |
| Uniform Delay (d), s/veh | 46.3 | 37.1 | 0.0 | 39.1 | 44.9 | 0.0 | 53.6 | 41.6 | 0.0 | 56.5 | 25.2 | 0.0 |
| Incr Delay (d2), s/veh | 34.8 | 38.0 | 0.0 | 114.3 | 12.3 | 0.0 | 0.8 | 54.4 | 0.0 | 10.8 | 10.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 26.5 | 0.0 | 7.3 | 11.0 | 0.0 | 0.6 | 24.2 | 0.0 | 0.9 | 9.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 81.1 | 75.1 | 0.0 | 153.4 | 57.2 | 0.0 | 54.5 | 96.0 | 0.0 | 67.4 | 35.6 | 0.0 |
| LnGrp LOS | F | F | | F | E | | D | F | | E | D | |
| Approach Vol, veh/h | | 2219 | A | | 893 | A | | 1209 | A | | 939 | A |
| Approach Delay, s/veh | | 77.3 | | | 80.2 | | | 95.3 | | | 36.4 | |
| Approach LOS | | E | | | F | | | F | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.0 | 52.2 | 13.7 | 39.1 | 34.0 | 33.2 | 9.4 | 43.4 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 8.5 | 44.6 | 5.0 | 36.9 | 27.5 | 25.6 | 5.0 | * 37 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.5 | 47.7 | 3.3 | 30.3 | 29.5 | 24.3 | 3.7 | 38.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 0.6 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 74.6 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Marksheffel Rd & US-24

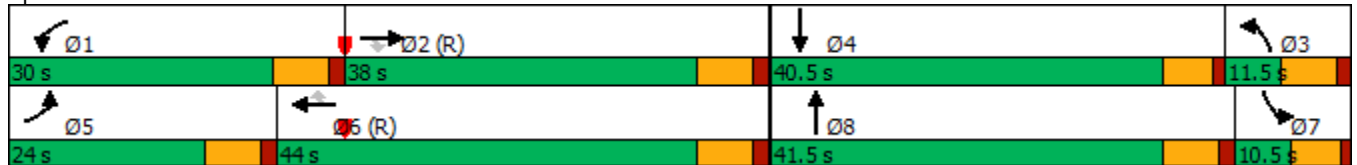
2040 Total AM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 425 | 645 | 140 | 435 | 1425 | 25 | 5 | 1100 | 160 | 15 | 1330 | 890 |
| Future Volume (vph) | 425 | 645 | 140 | 435 | 1425 | 25 | 5 | 1100 | 160 | 15 | 1330 | 890 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | Free | | | 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) | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 24.0 | 38.0 | 38.0 | 30.0 | 44.0 | 44.0 | 11.5 | 41.5 | | 10.5 | 40.5 | |
| Total Split (%) | 20.0% | 31.7% | 31.7% | 25.0% | 36.7% | 36.7% | 9.6% | 34.6% | | 8.8% | 33.8% | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | | None | None | |
| Act Effct Green (s) | 20.2 | 41.0 | 41.0 | 20.7 | 41.5 | 41.5 | 5.0 | 34.6 | 120.0 | 5.2 | 37.5 | 120.0 |
| Actuated g/C Ratio | 0.17 | 0.34 | 0.34 | 0.17 | 0.35 | 0.35 | 0.04 | 0.29 | 1.00 | 0.04 | 0.31 | 1.00 |
| v/c Ratio | 0.84 | 0.42 | 0.25 | 0.78 | 0.86 | 0.04 | 0.07 | 0.79 | 0.11 | 0.22 | 0.91 | 0.61 |
| Control Delay | 51.2 | 45.9 | 25.9 | 57.4 | 43.3 | 0.1 | 37.6 | 25.3 | 0.1 | 49.5 | 36.1 | 1.2 |
| 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 | 51.2 | 45.9 | 25.9 | 57.4 | 43.3 | 0.1 | 37.6 | 25.3 | 0.1 | 49.5 | 36.1 | 1.2 |
| LOS | D | D | C | E | D | A | D | C | A | D | D | A |
| Approach Delay | | 45.5 | | | 45.9 | | | 22.2 | | | 22.3 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 33.3
 Intersection LOS: C
 Intersection Capacity Utilization 80.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
 2: Marksheffel Rd & US-24

2040 Total AM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↔↔ | ↑↑↑ | ↗ | ↔↔ | ↑↑↑ | ↗ | ↔ | ↑↑↑ | ↗ | ↔ | ↑↑↑ | ↗ |
| Traffic Volume (veh/h) | 425 | 645 | 140 | 435 | 1425 | 25 | 5 | 1100 | 160 | 15 | 1330 | 890 |
| Future Volume (veh/h) | 425 | 645 | 140 | 435 | 1425 | 25 | 5 | 1100 | 160 | 15 | 1330 | 890 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1737 | 1737 | 1737 | 1841 | 1841 | 1841 | 1856 | 1856 | 1856 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 443 | 672 | 0 | 453 | 1484 | 0 | 5 | 1146 | 0 | 16 | 1385 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 11 | 11 | 11 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 6 |
| Cap, veh/h | 468 | 1617 | | 524 | 1755 | | 11 | 1340 | | 41 | 1435 | |
| Arrive On Green | 0.15 | 0.34 | 0.00 | 0.15 | 0.35 | 0.00 | 0.01 | 0.35 | 0.00 | 0.05 | 0.58 | 0.00 |
| Sat Flow, veh/h | 3209 | 4742 | 1472 | 3401 | 5025 | 1560 | 1767 | 5066 | 1572 | 1725 | 4944 | 1535 |
| Grp Volume(v), veh/h | 443 | 672 | 0 | 453 | 1484 | 0 | 5 | 1146 | 0 | 16 | 1385 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1605 | 1581 | 1472 | 1700 | 1675 | 1560 | 1767 | 1689 | 1572 | 1725 | 1648 | 1535 |
| Q Serve(g_s), s | 16.4 | 13.1 | 0.0 | 15.6 | 32.7 | 0.0 | 0.3 | 25.2 | 0.0 | 1.1 | 32.1 | 0.0 |
| Cycle Q Clear(g_c), s | 16.4 | 13.1 | 0.0 | 15.6 | 32.7 | 0.0 | 0.3 | 25.2 | 0.0 | 1.1 | 32.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 468 | 1617 | | 524 | 1755 | | 11 | 1340 | | 41 | 1435 | |
| V/C Ratio(X) | 0.95 | 0.42 | | 0.86 | 0.85 | | 0.44 | 0.86 | | 0.39 | 0.97 | |
| Avail Cap(c_a), veh/h | 468 | 1617 | | 666 | 1755 | | 74 | 1477 | | 72 | 1442 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.95 | 0.95 | 0.00 | 0.36 | 0.36 | 0.00 |
| Uniform Delay (d), s/veh | 50.8 | 30.4 | 0.0 | 49.5 | 36.1 | 0.0 | 59.3 | 36.8 | 0.0 | 56.3 | 24.6 | 0.0 |
| Incr Delay (d2), s/veh | 28.5 | 0.8 | 0.0 | 9.4 | 5.2 | 0.0 | 23.7 | 4.6 | 0.0 | 2.2 | 7.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.4 | 5.1 | 0.0 | 7.3 | 14.0 | 0.0 | 0.2 | 10.3 | 0.0 | 0.5 | 9.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 79.3 | 31.2 | 0.0 | 58.9 | 41.3 | 0.0 | 83.0 | 41.3 | 0.0 | 58.5 | 32.5 | 0.0 |
| LnGrp LOS | E | C | | E | D | | F | D | | E | C | |
| Approach Vol, veh/h | | 1115 | A | | 1937 | A | | 1151 | A | | 1401 | A |
| Approach Delay, s/veh | | 50.3 | | | 45.4 | | | 41.5 | | | 32.8 | |
| Approach LOS | | D | | | D | | | D | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 25.0 | 47.4 | 7.3 | 40.3 | 24.0 | 48.4 | 9.4 | 38.2 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 23.5 | 31.5 | 5.0 | 35.0 | 17.5 | 37.5 | 5.0 | * 35 | | | | |
| Max Q Clear Time (g_c+I1), s | 17.6 | 15.1 | 2.3 | 34.1 | 18.4 | 34.7 | 3.1 | 27.2 | | | | |
| Green Ext Time (p_c), s | 0.9 | 4.3 | 0.0 | 0.7 | 0.0 | 2.2 | 0.0 | 4.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 42.4 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Marksheffel Rd & US-24

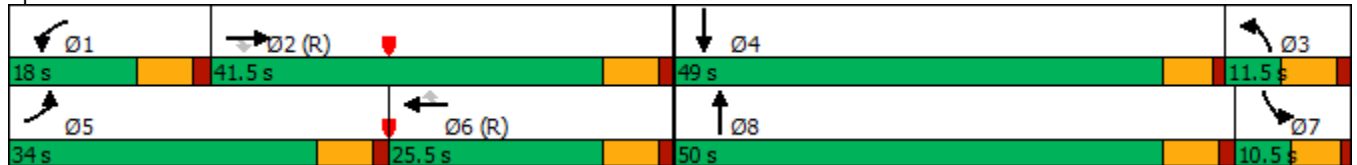
2040 Total PM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 785 | 1415 | 205 | 325 | 690 | 20 | 20 | 1765 | 345 | 25 | 1560 | 600 |
| Future Volume (vph) | 785 | 1415 | 205 | 325 | 690 | 20 | 20 | 1765 | 345 | 25 | 1560 | 600 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Free | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | Free | | | 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) | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 11.5 | 11.5 | | 10.5 | 10.5 | |
| Total Split (s) | 34.0 | 41.5 | 41.5 | 18.0 | 25.5 | 25.5 | 11.5 | 50.0 | | 10.5 | 49.0 | |
| Total Split (%) | 28.3% | 34.6% | 34.6% | 15.0% | 21.3% | 21.3% | 9.6% | 41.7% | | 8.8% | 40.8% | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | 5.5 | 5.5 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lag | Lead | | Lag | Lead | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | | None | None | |
| Act Effct Green (s) | 30.7 | 36.5 | 36.5 | 14.2 | 20.0 | 20.0 | 5.1 | 43.5 | 120.0 | 5.0 | 46.2 | 120.0 |
| Actuated g/C Ratio | 0.26 | 0.30 | 0.30 | 0.12 | 0.17 | 0.17 | 0.04 | 0.36 | 1.00 | 0.04 | 0.38 | 1.00 |
| v/c Ratio | 0.91 | 0.93 | 0.36 | 0.83 | 0.84 | 0.05 | 0.27 | 0.98 | 0.22 | 0.36 | 0.82 | 0.39 |
| Control Delay | 33.5 | 47.7 | 21.8 | 69.9 | 58.6 | 0.2 | 59.9 | 45.3 | 0.3 | 53.6 | 28.5 | 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 | 33.5 | 47.7 | 21.8 | 69.9 | 58.6 | 0.2 | 59.9 | 45.3 | 0.3 | 53.6 | 28.5 | 0.4 |
| LOS | C | D | C | E | E | A | E | D | A | D | C | A |
| Approach Delay | | 40.8 | | | 61.1 | | | 38.2 | | | 21.1 | |
| Approach LOS | | D | | | E | | | D | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 37.3
 Intersection LOS: D
 Intersection Capacity Utilization 87.0%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Marksheffel Rd & US-24



HCM 6th Signalized Intersection Summary
 2: Marksheffel Rd & US-24

2040 Total PM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↔↔ | ↑↑↑ | ↗ | ↔↔ | ↑↑↑ | ↗ | ↔ | ↑↑↑ | ↗ | ↔ | ↑↑↑ | ↗ |
| Traffic Volume (veh/h) | 785 | 1415 | 205 | 325 | 690 | 20 | 20 | 1765 | 345 | 25 | 1560 | 600 |
| Future Volume (veh/h) | 785 | 1415 | 205 | 325 | 690 | 20 | 20 | 1765 | 345 | 25 | 1560 | 600 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 801 | 1444 | 0 | 332 | 704 | 0 | 20 | 1801 | 0 | 26 | 1592 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| Cap, veh/h | 792 | 1536 | | 329 | 849 | | 96 | 1851 | | 43 | 1729 | |
| Arrive On Green | 0.23 | 0.30 | 0.00 | 0.10 | 0.17 | 0.00 | 0.05 | 0.36 | 0.00 | 0.05 | 0.68 | 0.00 |
| Sat Flow, veh/h | 3456 | 5106 | 1585 | 3428 | 5066 | 1572 | 1781 | 5106 | 1585 | 1767 | 5066 | 1572 |
| Grp Volume(v), veh/h | 801 | 1444 | 0 | 332 | 704 | 0 | 20 | 1801 | 0 | 26 | 1592 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1702 | 1585 | 1714 | 1689 | 1572 | 1781 | 1702 | 1585 | 1767 | 1689 | 1572 |
| Q Serve(g_s), s | 27.5 | 33.1 | 0.0 | 11.5 | 16.1 | 0.0 | 1.3 | 41.7 | 0.0 | 1.7 | 32.2 | 0.0 |
| Cycle Q Clear(g_c), s | 27.5 | 33.1 | 0.0 | 11.5 | 16.1 | 0.0 | 1.3 | 41.7 | 0.0 | 1.7 | 32.2 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 792 | 1536 | | 329 | 849 | | 96 | 1851 | | 43 | 1729 | |
| V/C Ratio(X) | 1.01 | 0.94 | | 1.01 | 0.83 | | 0.21 | 0.97 | | 0.61 | 0.92 | |
| Avail Cap(c_a), veh/h | 792 | 1536 | | 329 | 849 | | 96 | 1851 | | 74 | 1836 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.81 | 0.81 | 0.00 | 0.44 | 0.44 | 0.00 |
| Uniform Delay (d), s/veh | 46.3 | 40.9 | 0.0 | 54.2 | 48.3 | 0.0 | 54.3 | 37.7 | 0.0 | 56.5 | 17.7 | 0.0 |
| Incr Delay (d2), s/veh | 34.8 | 12.5 | 0.0 | 52.3 | 9.2 | 0.0 | 0.9 | 13.1 | 0.0 | 6.0 | 3.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 15.5 | 0.0 | 7.3 | 7.5 | 0.0 | 0.6 | 19.3 | 0.0 | 0.8 | 7.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 81.1 | 53.4 | 0.0 | 106.6 | 57.5 | 0.0 | 55.2 | 50.8 | 0.0 | 62.6 | 21.5 | 0.0 |
| LnGrp LOS | F | D | | F | E | | E | D | | E | C | |
| Approach Vol, veh/h | | 2245 | A | | 1036 | A | | 1821 | A | | 1618 | A |
| Approach Delay, s/veh | | 63.3 | | | 73.2 | | | 50.8 | | | 22.1 | |
| Approach LOS | | E | | | E | | | D | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 18.0 | 42.6 | 12.9 | 46.5 | 34.0 | 26.6 | 9.4 | 50.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | * 6.5 | | | | |
| Max Green Setting (Gmax), s | 11.5 | 35.0 | 5.0 | 43.5 | 27.5 | 19.0 | 5.0 | * 44 | | | | |
| Max Q Clear Time (g_c+I1), s | 13.5 | 35.1 | 3.3 | 34.2 | 29.5 | 18.1 | 3.7 | 43.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 6.7 | 0.0 | 0.4 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 51.5 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 5 | 27 | 0 | 0 | 9 | 122 | 0 | 0 | 0 | 201 | 0 | 1 |
| Future Vol, veh/h | 5 | 27 | 0 | 0 | 9 | 122 | 0 | 0 | 0 | 201 | 0 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 50 | - | - | 100 | - | 0 | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 6 |
| Mvmt Flow | 6 | 31 | 0 | 0 | 10 | 139 | 0 | 0 | 0 | 228 | 0 | 1 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 532 | 457 | 1 | 472 | 457 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Stage 1 | 457 | 457 | - | 0 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 75 | 0 | - | 472 | 457 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.16 | - | - |
| 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 | - | - | 2.254 | - | - |
| Pot Cap-1 Maneuver | 458 | 500 | 1084 | 502 | 500 | - | 1622 | - | - | - | - | - |
| Stage 1 | 583 | 568 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 934 | - | - | 573 | 568 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | 500 | 1084 | 479 | 500 | - | 1622 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 291 | 525 | - | 503 | 528 | - | - | - | - | - | - | - |
| Stage 1 | 583 | 568 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 934 | - | - | 542 | 568 | - | - | - | - | - | - | - |

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

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | 1622 | - | - | - | 525 | - | 528 | - | - | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.058 | - | 0.019 | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | - | 12.3 | 0 | 12 | - | - | - | - |
| HCM Lane LOS | A | - | - | - | B | A | B | - | - | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | - | 0.1 | - | - | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 11 | 32 | 0 | 0 | 35 | 95 | 0 | 0 | 0 | 263 | 0 | 9 |
| Future Vol, veh/h | 11 | 32 | 0 | 0 | 35 | 95 | 0 | 0 | 0 | 263 | 0 | 9 |
| 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 | 50 | - | - | 100 | - | 0 | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| Heavy Vehicles, % | 6 | 6 | 6 | 8 | 8 | 8 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 38 | 0 | 0 | 42 | 113 | 0 | 0 | 0 | 313 | 0 | 11 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 710 | 632 | 6 | 651 | 637 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| Stage 1 | 632 | 632 | - | 0 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 78 | 0 | - | 651 | 637 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.16 | 6.56 | 6.26 | 7.18 | 6.58 | 6.28 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.16 | 5.56 | - | 6.18 | 5.58 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.16 | 5.56 | - | 6.18 | 5.58 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4.054 | 3.354 | 3.572 | 4.072 | 3.372 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 343 | 392 | 1065 | 373 | 387 | - | 1608 | - | - | - | - | - |
| Stage 1 | 462 | 468 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 921 | - | - | 447 | 462 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | 392 | 1065 | 348 | 387 | - | 1608 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 239 | 436 | - | 388 | 438 | - | - | - | - | - | - | - |
| Stage 1 | 462 | 468 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 921 | - | - | 411 | 462 | - | - | - | - | - | - | - |

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

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | 1608 | - | - | - | 436 | - | 438 | - | - | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.087 | - | 0.095 | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | - | 14 | 0 | 14.1 | - | - | - | - |
| HCM Lane LOS | A | - | - | - | B | A | B | - | - | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.3 | - | 0.3 | - | - | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 10 | 30 | 0 | 0 | 10 | 135 | 0 | 0 | 0 | 220 | 0 | 5 |
| Future Vol, veh/h | 10 | 30 | 0 | 0 | 10 | 135 | 0 | 0 | 0 | 220 | 0 | 5 |
| 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 | 50 | - | - | 100 | - | 0 | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 6 |
| Mvmt Flow | 11 | 34 | 0 | 0 | 11 | 153 | 0 | 0 | 0 | 250 | 0 | 6 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 585 | 503 | 3 | 520 | 506 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| Stage 1 | 503 | 503 | - | 0 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 82 | 0 | - | 520 | 506 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.16 | - | - |
| 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 | - | - | 2.254 | - | - |
| Pot Cap-1 Maneuver | 422 | 471 | 1081 | 467 | 469 | - | 1615 | - | - | - | - | - |
| Stage 1 | 551 | 541 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 926 | - | - | 539 | 540 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | 471 | 1081 | 443 | 469 | - | 1615 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 277 | 501 | - | 470 | 504 | - | - | - | - | - | - | - |
| Stage 1 | 551 | 541 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 926 | - | - | 505 | 540 | - | - | - | - | - | - | - |

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

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | 1615 | - | - | - | 501 | - | 504 | - | - | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.068 | - | 0.023 | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | - | 12.7 | 0 | 12.3 | - | - | - | - |
| HCM Lane LOS | A | - | - | - | B | A | B | - | - | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | - | 0.1 | - | - | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 15 | 35 | 0 | 0 | 40 | 105 | 0 | 0 | 0 | 285 | 0 | 10 |
| Future Vol, veh/h | 15 | 35 | 0 | 0 | 40 | 105 | 0 | 0 | 0 | 285 | 0 | 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 | 50 | - | - | 100 | - | 0 | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| Heavy Vehicles, % | 6 | 6 | 6 | 8 | 8 | 8 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 42 | 0 | 0 | 48 | 125 | 0 | 0 | 0 | 339 | 0 | 12 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 771 | 684 | 6 | 705 | 690 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| Stage 1 | 684 | 684 | - | 0 | 0 | - | - | - | - | - | - | - |
| Stage 2 | 87 | 0 | - | 705 | 690 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.16 | 6.56 | 6.26 | 7.18 | 6.58 | 6.28 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.16 | 5.56 | - | 6.18 | 5.58 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.16 | 5.56 | - | 6.18 | 5.58 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4.054 | 3.354 | 3.572 | 4.072 | 3.372 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 312 | 366 | 1065 | 343 | 361 | - | 1607 | - | - | - | - | - |
| Stage 1 | 432 | 443 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 911 | - | - | 418 | 437 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | 366 | 1065 | 317 | 361 | - | 1607 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 224 | 413 | - | 360 | 417 | - | - | - | - | - | - | - |
| Stage 1 | 432 | 443 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 911 | - | - | 379 | 437 | - | - | - | - | - | - | - |

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

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | 1607 | - | - | - | 413 | - | 417 | - | - | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.101 | - | 0.114 | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | - | 14.7 | 0 | 14.7 | - | - | - | - |
| HCM Lane LOS | A | - | - | - | B | A | B | - | - | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.3 | - | 0.4 | - | - | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 103.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 10 | 30 | 0 | 335 | 10 | 145 | 0 | 140 | 330 | 250 | 145 | 5 |
| Future Vol, veh/h | 10 | 30 | 0 | 335 | 10 | 145 | 0 | 140 | 330 | 250 | 145 | 5 |
| 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 | 50 | - | - | 100 | - | 0 | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 6 |
| Mvmt Flow | 11 | 34 | 0 | 381 | 11 | 165 | 0 | 159 | 375 | 284 | 165 | 6 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 1171 | 1270 | 168 | 1100 | 1086 | 347 | 171 | 0 | 0 | 534 | 0 | 0 |
| Stage 1 | 736 | 736 | - | 347 | 347 | - | - | - | - | - | - | - |
| Stage 2 | 435 | 534 | - | 753 | 739 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.16 | - | - |
| 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 | - | - | 2.254 | - | - |
| Pot Cap-1 Maneuver | 170 | 168 | 876 | ~ 190 | 216 | 696 | 1406 | - | - | 1014 | - | - |
| Stage 1 | 411 | 425 | - | 669 | 635 | - | - | - | - | - | - | - |
| Stage 2 | 600 | 524 | - | 402 | 424 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 98 | 121 | 876 | ~ 128 | 156 | 696 | 1406 | - | - | 1014 | - | - |
| Mov Cap-2 Maneuver | 140 | 177 | - | ~ 212 | 246 | - | - | - | - | - | - | - |
| Stage 1 | 411 | 306 | - | 669 | 635 | - | - | - | - | - | - | - |
| Stage 2 | 450 | 524 | - | ~ 257 | 305 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|-------|--|----|--|-----|--|
| HCM Control Delay, s | 30.8 | | 287.6 | | 0 | | 6.2 | |
| HCM LOS | D | | F | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|--------|-------|-------|------|-----|-----|
| Capacity (veh/h) | 1406 | - | - | 140 | 177 | 212 | 246 | 696 | 1014 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.081 | 0.193 | 1.796 | 0.046 | 0.237 | 0.28 | - | - |
| HCM Control Delay (s) | 0 | - | - | 33 | 30.1 | \$ 415 | 20.3 | 11.8 | 9.9 | - | - |
| HCM Lane LOS | A | - | - | D | D | F | C | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.3 | 0.7 | 26.5 | 0.1 | 0.9 | 1.2 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 98.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Vol, veh/h | 15 | 35 | 0 | 255 | 40 | 135 | 0 | 95 | 225 | 305 | 110 | 10 |
| Future Vol, veh/h | 15 | 35 | 0 | 255 | 40 | 135 | 0 | 95 | 225 | 305 | 110 | 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 | 50 | - | - | 100 | - | 0 | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| Heavy Vehicles, % | 6 | 6 | 6 | 8 | 8 | 8 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 42 | 0 | 304 | 48 | 161 | 0 | 113 | 268 | 363 | 131 | 12 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 1215 | 1244 | 137 | 1131 | 1116 | 247 | 143 | 0 | 0 | 381 | 0 | 0 |
| Stage 1 | 863 | 863 | - | 247 | 247 | - | - | - | - | - | - | - |
| Stage 2 | 352 | 381 | - | 884 | 869 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.16 | 6.56 | 6.26 | 7.18 | 6.58 | 6.28 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.16 | 5.56 | - | 6.18 | 5.58 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.16 | 5.56 | - | 6.18 | 5.58 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.554 | 4.054 | 3.354 | 3.572 | 4.072 | 3.372 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 155 | 171 | 901 | ~ 176 | 202 | 777 | 1440 | - | - | 1177 | - | - |
| Stage 1 | 344 | 366 | - | 744 | 691 | - | - | - | - | - | - | - |
| Stage 2 | 657 | 606 | - | 332 | 361 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 78 | 118 | 901 | ~ 109 | 140 | 777 | 1440 | - | - | 1177 | - | - |
| Mov Cap-2 Maneuver | 106 | 167 | - | ~ 166 | 211 | - | - | - | - | - | - | - |
| Stage 1 | 344 | 253 | - | 744 | 691 | - | - | - | - | - | - | - |
| Stage 2 | 485 | 606 | - | ~ 192 | 250 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | | SB | | |
|----------------------|------|--|-------|--|----|--|--|-----|--|--|
| HCM Control Delay, s | 37.2 | | 268.3 | | 0 | | | 6.8 | | |
| HCM LOS | E | | F | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1440 | - | - | 106 | 167 | 166 | 211 | 777 | 1177 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.168 | 0.25 | 1.829 | 0.226 | 0.207 | 0.308 | - | - |
| HCM Control Delay (s) | 0 | - | - | 45.7 | 33.6 | 442.5 | 27 | 10.8 | 9.4 | - | - |
| HCM Lane LOS | A | - | - | E | D | F | D | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.6 | 0.9 | 22.3 | 0.8 | 0.8 | 1.3 | - | - |

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

| Intersection | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 9.2 | | | | |
| Intersection LOS | A | | | | |
| Approach | EB | WB | | NB | SB |
| Entry Lanes | 1 | 2 | | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | | 1 | 1 |
| Adj Approach Flow, veh/h | 45 | 557 | | 534 | 455 |
| Demand Flow Rate, veh/h | 46 | 568 | | 544 | 482 |
| Vehicles Circulating, veh/h | 865 | 173 | | 347 | 400 |
| Vehicles Exiting, veh/h | 17 | 718 | | 564 | 341 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | | 1.000 | 1.000 |
| Approach Delay, s/veh | 7.4 | 5.6 | | 11.3 | 11.3 |
| Approach LOS | A | A | | B | B |
| Lane | Left | Left | Right | Left | Left |
| Designated Moves | LTR | LT | R | LTR | LTR |
| Assumed Moves | LTR | LT | R | LTR | LTR |
| RT Channelized | | | | | |
| Lane Util | 1.000 | 0.704 | 0.296 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.535 | 2.535 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.544 | 4.544 | 4.976 | 4.976 |
| Entry Flow, veh/h | 46 | 400 | 168 | 544 | 482 |
| Cap Entry Lane, veh/h | 571 | 1213 | 1213 | 969 | 918 |
| Entry HV Adj Factor | 0.985 | 0.979 | 0.982 | 0.981 | 0.944 |
| Flow Entry, veh/h | 45 | 392 | 165 | 534 | 455 |
| Cap Entry, veh/h | 563 | 1188 | 1192 | 950 | 866 |
| V/C Ratio | 0.081 | 0.330 | 0.138 | 0.562 | 0.525 |
| Control Delay, s/veh | 7.4 | 6.2 | 4.2 | 11.3 | 11.3 |
| LOS | A | A | A | B | B |
| 95th %tile Queue, veh | 0 | 1 | 0 | 4 | 3 |

| Intersection | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 8.6 | | | | |
| Intersection LOS | A | | | | |
| Approach | EB | WB | | NB | SB |
| Entry Lanes | 1 | 2 | | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | | 1 | 1 |
| Adj Approach Flow, veh/h | 60 | 513 | | 381 | 506 |
| Demand Flow Rate, veh/h | 64 | 554 | | 388 | 516 |
| Vehicles Circulating, veh/h | 832 | 134 | | 434 | 380 |
| Vehicles Exiting, veh/h | 64 | 688 | | 462 | 308 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | | 1.000 | 1.000 |
| Approach Delay, s/veh | 7.8 | 5.4 | | 9.5 | 11.4 |
| Approach LOS | A | A | | A | B |
| Lane | Left | Left | Right | Left | Left |
| Designated Moves | LTR | LT | R | LTR | LTR |
| Assumed Moves | LTR | LT | R | LTR | LTR |
| RT Channelized | | | | | |
| Lane Util | 1.000 | 0.686 | 0.314 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.535 | 2.535 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.544 | 4.544 | 4.976 | 4.976 |
| Entry Flow, veh/h | 64 | 380 | 174 | 388 | 516 |
| Cap Entry Lane, veh/h | 591 | 1257 | 1257 | 886 | 937 |
| Entry HV Adj Factor | 0.945 | 0.927 | 0.925 | 0.981 | 0.981 |
| Flow Entry, veh/h | 60 | 352 | 161 | 381 | 506 |
| Cap Entry, veh/h | 558 | 1165 | 1163 | 870 | 919 |
| V/C Ratio | 0.108 | 0.302 | 0.138 | 0.438 | 0.551 |
| Control Delay, s/veh | 7.8 | 5.9 | 4.3 | 9.5 | 11.4 |
| LOS | A | A | A | A | B |
| 95th %tile Queue, veh | 0 | 1 | 0 | 2 | 3 |

| Intersection | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 4.3 | | | | |
| Intersection LOS | A | | | | |
| Approach | EB | WB | | NB | SB |
| Entry Lanes | 1 | 2 | | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | | 1 | 1 |
| Adj Approach Flow, veh/h | 51 | 193 | | 0 | 296 |
| Demand Flow Rate, veh/h | 52 | 197 | | 0 | 313 |
| Vehicles Circulating, veh/h | 307 | 11 | | 359 | 17 |
| Vehicles Exiting, veh/h | 23 | 348 | | 0 | 191 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.1 | 3.6 | | 0.0 | 4.8 |
| Approach LOS | A | A | | - | A |
| Lane | Left | Left | Right | Left | Left |
| Designated Moves | LTR | LT | R | LTR | LTR |
| Assumed Moves | LTR | LT | R | LTR | LTR |
| RT Channelized | | | | | |
| Lane Util | 1.000 | 0.086 | 0.914 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.535 | 2.535 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.544 | 4.544 | 4.976 | 4.976 |
| Entry Flow, veh/h | 52 | 17 | 180 | 0 | 313 |
| Cap Entry Lane, veh/h | 1009 | 1406 | 1406 | 957 | 1356 |
| Entry HV Adj Factor | 0.985 | 0.980 | 0.978 | 1.000 | 0.946 |
| Flow Entry, veh/h | 51 | 17 | 176 | 0 | 296 |
| Cap Entry, veh/h | 993 | 1378 | 1375 | 957 | 1282 |
| V/C Ratio | 0.052 | 0.012 | 0.128 | 0.000 | 0.231 |
| Control Delay, s/veh | 4.1 | 2.7 | 3.6 | 3.8 | 4.8 |
| LOS | A | A | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 | 0 | 1 |

| Intersection | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 5.1 | | | | |
| Intersection LOS | A | | | | |
| Approach | EB | WB | | NB | SB |
| Entry Lanes | 1 | 2 | | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | | 1 | 1 |
| Adj Approach Flow, veh/h | 72 | 197 | | 0 | 417 |
| Demand Flow Rate, veh/h | 76 | 212 | | 0 | 425 |
| Vehicles Circulating, veh/h | 407 | 19 | | 483 | 58 |
| Vehicles Exiting, veh/h | 76 | 464 | | 0 | 173 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | | 1.000 | 1.000 |
| Approach Delay, s/veh | 5.0 | 3.5 | | 0.0 | 5.8 |
| Approach LOS | A | A | | - | A |
| Lane | Left | Left | Right | Left | Left |
| Designated Moves | LTR | LT | R | LTR | LTR |
| Assumed Moves | LTR | LT | R | LTR | LTR |
| RT Channelized | | | | | |
| Lane Util | 1.000 | 0.274 | 0.726 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.535 | 2.535 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.544 | 4.544 | 4.976 | 4.976 |
| Entry Flow, veh/h | 76 | 58 | 154 | 0 | 425 |
| Cap Entry Lane, veh/h | 911 | 1396 | 1396 | 843 | 1301 |
| Entry HV Adj Factor | 0.944 | 0.926 | 0.929 | 1.000 | 0.981 |
| Flow Entry, veh/h | 72 | 54 | 143 | 0 | 417 |
| Cap Entry, veh/h | 860 | 1292 | 1296 | 843 | 1276 |
| V/C Ratio | 0.083 | 0.042 | 0.110 | 0.000 | 0.327 |
| Control Delay, s/veh | 5.0 | 3.1 | 3.7 | 4.3 | 5.8 |
| LOS | A | A | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 | 0 | 1 |

| Intersection | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 11.2 | | | | |
| Intersection LOS | B | | | | |
| Approach | EB | WB | | NB | SB |
| Entry Lanes | 1 | 2 | | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | | 1 | 1 |
| Adj Approach Flow, veh/h | 51 | 625 | | 585 | 512 |
| Demand Flow Rate, veh/h | 52 | 637 | | 597 | 542 |
| Vehicles Circulating, veh/h | 964 | 191 | | 395 | 445 |
| Vehicles Exiting, veh/h | 23 | 801 | | 621 | 383 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | | 1.000 | 1.000 |
| Approach Delay, s/veh | 8.4 | 6.1 | | 14.2 | 14.2 |
| Approach LOS | A | A | | B | B |
| Lane | Left | Left | Right | Left | Left |
| Designated Moves | LTR | LT | R | LTR | LTR |
| Assumed Moves | LTR | LT | R | LTR | LTR |
| RT Channelized | | | | | |
| Lane Util | 1.000 | 0.699 | 0.301 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.535 | 2.535 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.544 | 4.544 | 4.976 | 4.976 |
| Entry Flow, veh/h | 52 | 445 | 192 | 597 | 542 |
| Cap Entry Lane, veh/h | 516 | 1194 | 1194 | 922 | 876 |
| Entry HV Adj Factor | 0.985 | 0.981 | 0.979 | 0.981 | 0.945 |
| Flow Entry, veh/h | 51 | 437 | 188 | 585 | 512 |
| Cap Entry, veh/h | 508 | 1171 | 1169 | 904 | 828 |
| V/C Ratio | 0.101 | 0.373 | 0.161 | 0.647 | 0.618 |
| Control Delay, s/veh | 8.4 | 6.8 | 4.5 | 14.2 | 14.2 |
| LOS | A | A | A | B | B |
| 95th %tile Queue, veh | 0 | 2 | 1 | 5 | 4 |

| Intersection | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 12.3 | | | | |
| Intersection LOS | B | | | | |
| Approach | EB | WB | | NB | SB |
| Entry Lanes | 1 | 2 | | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | | 1 | 1 |
| Adj Approach Flow, veh/h | 72 | 608 | | 476 | 602 |
| Demand Flow Rate, veh/h | 76 | 656 | | 486 | 613 |
| Vehicles Circulating, veh/h | 1000 | 165 | | 507 | 463 |
| Vehicles Exiting, veh/h | 76 | 828 | | 569 | 358 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | | 1.000 | 1.000 |
| Approach Delay, s/veh | 9.8 | 6.3 | | 13.7 | 17.6 |
| Approach LOS | A | A | | B | C |
| Lane | Left | Left | Right | Left | Left |
| Designated Moves | LTR | LT | R | LTR | LTR |
| Assumed Moves | LTR | LT | R | LTR | LTR |
| RT Channelized | | | | | |
| Lane Util | 1.000 | 0.706 | 0.294 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.535 | 2.535 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.544 | 4.544 | 4.976 | 4.976 |
| Entry Flow, veh/h | 76 | 463 | 193 | 486 | 613 |
| Cap Entry Lane, veh/h | 498 | 1222 | 1222 | 823 | 861 |
| Entry HV Adj Factor | 0.944 | 0.926 | 0.927 | 0.980 | 0.982 |
| Flow Entry, veh/h | 72 | 429 | 179 | 476 | 602 |
| Cap Entry, veh/h | 470 | 1132 | 1133 | 806 | 845 |
| V/C Ratio | 0.153 | 0.379 | 0.158 | 0.591 | 0.712 |
| Control Delay, s/veh | 9.8 | 7.0 | 4.6 | 13.7 | 17.6 |
| LOS | A | A | A | B | C |
| 95th %tile Queue, veh | 1 | 2 | 1 | 4 | 6 |

Timings
4: US-24 & Newt Dr/SH-94

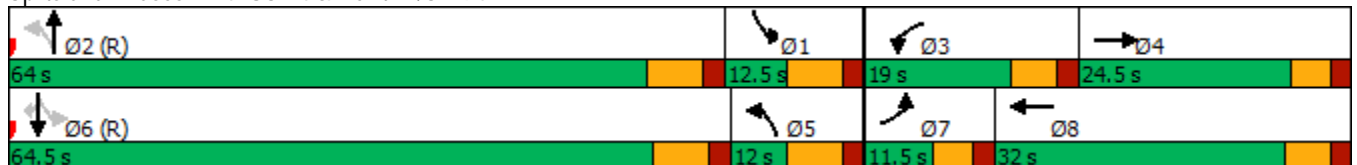
2020 Adjusted Existing AM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 16 | 28 | 196 | 440 | 39 | 1 | 144 | 798 | 379 | 4 | 1735 | 36 |
| Future Volume (vph) | 16 | 28 | 196 | 440 | 39 | 1 | 144 | 798 | 379 | 4 | 1735 | 36 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 19.0 | 32.0 | | 12.0 | 64.0 | | 12.5 | 64.5 | 64.5 |
| Total Split (%) | 9.6% | 20.4% | | 15.8% | 26.7% | | 10.0% | 53.3% | | 10.4% | 53.8% | 53.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.8 | 7.5 | 120.0 | 13.0 | 16.8 | 120.0 | 84.1 | 83.1 | 120.0 | 79.1 | 73.6 | 73.6 |
| Actuated g/C Ratio | 0.05 | 0.06 | 1.00 | 0.11 | 0.14 | 1.00 | 0.70 | 0.69 | 1.00 | 0.66 | 0.61 | 0.61 |
| v/c Ratio | 0.10 | 0.26 | 0.13 | 1.25 | 0.08 | 0.00 | 1.12 | 0.36 | 0.27 | 0.01 | 0.86 | 0.04 |
| Control Delay | 55.9 | 58.6 | 0.2 | 160.8 | 24.1 | 0.0 | 150.4 | 9.7 | 0.4 | 6.8 | 24.2 | 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 | 0.0 |
| Total Delay | 55.9 | 58.6 | 0.2 | 160.8 | 24.1 | 0.0 | 150.4 | 9.7 | 0.4 | 6.8 | 24.2 | 0.1 |
| LOS | E | E | A | F | C | A | F | A | A | A | C | A |
| Approach Delay | | 10.7 | | | 149.5 | | | 22.3 | | | 23.7 | |
| Approach LOS | | B | | | F | | | C | | | C | |

Intersection Summary

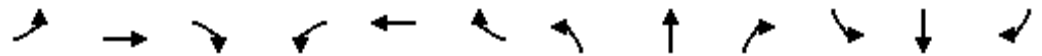
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.25
 Intersection Signal Delay: 38.2
 Intersection LOS: D
 Intersection Capacity Utilization 91.8%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
4: US-24 & Newt Dr/SH-94

2020 Adjusted Existing AM.syn
02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 16 | 28 | 196 | 440 | 39 | 1 | 144 | 798 | 379 | 4 | 1735 | 36 |
| Future Volume (veh/h) | 16 | 28 | 196 | 440 | 39 | 1 | 144 | 798 | 379 | 4 | 1735 | 36 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1841 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 16 | 29 | 0 | 454 | 40 | 0 | 148 | 823 | 0 | 4 | 1789 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 4 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 58 | 72 | | 368 | 470 | | 321 | 1581 | | 532 | 1649 | |
| Arrive On Green | 0.02 | 0.04 | 0.00 | 0.11 | 0.13 | 0.00 | 0.16 | 0.47 | 0.00 | 0.16 | 0.48 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 3401 | 3497 | 1560 | 1668 | 3328 | 1485 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 16 | 29 | 0 | 454 | 40 | 0 | 148 | 823 | 0 | 4 | 1789 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 1700 | 1749 | 1560 | 1668 | 1664 | 1485 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 0.6 | 1.9 | 0.0 | 13.0 | 1.2 | 0.0 | 5.1 | 20.7 | 0.0 | 0.0 | 57.5 | 0.0 |
| Cycle Q Clear(g_c), s | 0.6 | 1.9 | 0.0 | 13.0 | 1.2 | 0.0 | 5.1 | 20.7 | 0.0 | 0.0 | 57.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 58 | 72 | | 368 | 470 | | 321 | 1581 | | 532 | 1649 | |
| V/C Ratio(X) | 0.28 | 0.41 | | 1.23 | 0.09 | | 0.46 | 0.52 | | 0.01 | 1.09 | |
| Avail Cap(c_a), veh/h | 169 | 289 | | 368 | 758 | | 321 | 1581 | | 532 | 1649 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.69 | 0.69 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 58.2 | 56.3 | 0.0 | 53.5 | 45.5 | 0.0 | 43.8 | 22.0 | 0.0 | 17.4 | 31.3 | 0.0 |
| Incr Delay (d2), s/veh | 2.5 | 3.6 | 0.0 | 120.1 | 0.1 | 0.0 | 1.0 | 1.2 | 0.0 | 0.0 | 49.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 0.9 | 0.0 | 11.7 | 0.5 | 0.0 | 4.0 | 8.2 | 0.0 | 0.1 | 34.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.8 | 59.9 | 0.0 | 173.6 | 45.5 | 0.0 | 44.8 | 23.2 | 0.0 | 17.4 | 80.4 | 0.0 |
| LnGrp LOS | E | E | | F | D | | D | C | | B | F | |
| Approach Vol, veh/h | | 45 | A | | 494 | A | | 971 | A | | 1793 | A |
| Approach Delay, s/veh | | 60.2 | | | 163.2 | | | 26.5 | | | 80.2 | |
| Approach LOS | | E | | | F | | | C | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.3 | 64.0 | 19.0 | 10.7 | 25.8 | 64.5 | 7.6 | 22.1 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 57.0 | 13.0 | * 19 | 5.0 | 57.5 | 6.0 | 26.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 22.7 | 15.0 | 3.9 | 7.1 | 59.5 | 2.6 | 3.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.9 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 76.6 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

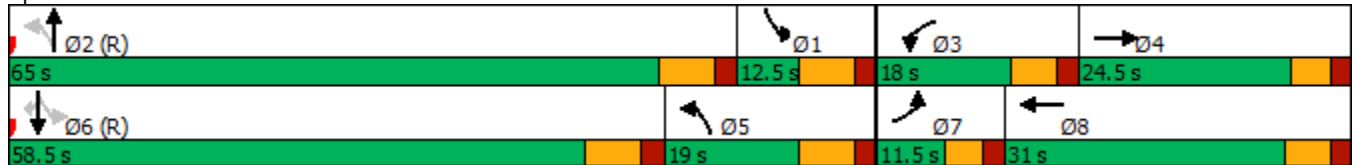
2020 Adjusted Existing PM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 39 | 238 | 350 | 23 | 7 | 158 | 1688 | 320 | 4 | 933 | 36 |
| Future Volume (vph) | 28 | 39 | 238 | 350 | 23 | 7 | 158 | 1688 | 320 | 4 | 933 | 36 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 18.0 | 31.0 | | 19.0 | 65.0 | | 12.5 | 58.5 | 58.5 |
| Total Split (%) | 9.6% | 20.4% | | 15.0% | 25.8% | | 15.8% | 54.2% | | 10.4% | 48.8% | 48.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 6.1 | 8.1 | 120.0 | 16.8 | 21.1 | 120.0 | 78.7 | 76.3 | 120.0 | 70.1 | 64.6 | 64.6 |
| Actuated g/C Ratio | 0.05 | 0.07 | 1.00 | 0.14 | 0.18 | 1.00 | 0.66 | 0.64 | 1.00 | 0.58 | 0.54 | 0.54 |
| v/c Ratio | 0.17 | 0.33 | 0.16 | 0.77 | 0.04 | 0.00 | 0.50 | 0.80 | 0.21 | 0.03 | 0.53 | 0.04 |
| Control Delay | 56.7 | 59.5 | 0.2 | 82.0 | 35.7 | 0.0 | 21.3 | 21.1 | 0.3 | 5.8 | 18.5 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 56.7 | 59.5 | 0.2 | 82.0 | 35.7 | 0.0 | 21.3 | 21.1 | 0.3 | 5.8 | 18.5 | 0.2 |
| LOS | E | E | A | F | D | A | C | C | A | A | B | A |
| Approach Delay | | 12.9 | | | 77.7 | | | 18.1 | | | 17.8 | |
| Approach LOS | | B | | | E | | | B | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 23.5
 Intersection LOS: C
 Intersection Capacity Utilization 84.1%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary

2020 Adjusted Existing PM.syn

4: US-24 & Newt Dr/SH-94

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 28 | 39 | 238 | 350 | 23 | 7 | 158 | 1688 | 320 | 4 | 933 | 36 |
| Future Volume (veh/h) | 28 | 39 | 238 | 350 | 23 | 7 | 158 | 1688 | 320 | 4 | 933 | 36 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 29 | 41 | 0 | 368 | 24 | 0 | 166 | 1777 | 0 | 4 | 982 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 89 | 75 | | 343 | 417 | | 547 | 1704 | | 338 | 1489 | |
| Arrive On Green | 0.03 | 0.04 | 0.00 | 0.10 | 0.12 | 0.00 | 0.21 | 0.48 | 0.00 | 0.16 | 0.43 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 3428 | 3526 | 1572 | 1767 | 3526 | 1572 | 1739 | 3469 | 1547 |
| Grp Volume(v), veh/h | 29 | 41 | 0 | 368 | 24 | 0 | 166 | 1777 | 0 | 4 | 982 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1714 | 1763 | 1572 | 1767 | 1763 | 1572 | 1739 | 1735 | 1547 |
| Q Serve(g_s), s | 1.0 | 2.6 | 0.0 | 12.0 | 0.7 | 0.0 | 0.0 | 58.0 | 0.0 | 0.0 | 27.0 | 0.0 |
| Cycle Q Clear(g_c), s | 1.0 | 2.6 | 0.0 | 12.0 | 0.7 | 0.0 | 0.0 | 58.0 | 0.0 | 0.0 | 27.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 89 | 75 | | 343 | 417 | | 547 | 1704 | | 338 | 1489 | |
| V/C Ratio(X) | 0.33 | 0.55 | | 1.07 | 0.06 | | 0.30 | 1.04 | | 0.01 | 0.66 | |
| Avail Cap(c_a), veh/h | 173 | 296 | | 343 | 734 | | 547 | 1704 | | 338 | 1489 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.71 | 0.71 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 57.4 | 56.6 | 0.0 | 54.0 | 47.0 | 0.0 | 29.5 | 31.0 | 0.0 | 42.3 | 27.3 | 0.0 |
| Incr Delay (d2), s/veh | 2.1 | 6.2 | 0.0 | 62.1 | 0.0 | 0.0 | 0.3 | 33.9 | 0.0 | 0.0 | 2.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 1.3 | 0.0 | 8.1 | 0.3 | 0.0 | 3.9 | 31.6 | 0.0 | 0.1 | 11.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.5 | 62.7 | 0.0 | 116.1 | 47.0 | 0.0 | 29.8 | 64.9 | 0.0 | 42.3 | 29.6 | 0.0 |
| LnGrp LOS | E | E | | F | D | | C | F | | D | C | |
| Approach Vol, veh/h | | 70 | A | | 392 | A | | 1943 | A | | 986 | A |
| Approach Delay, s/veh | | 61.4 | | | 111.8 | | | 61.9 | | | 29.6 | |
| Approach LOS | | E | | | F | | | E | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.2 | 65.0 | 18.0 | 10.8 | 32.7 | 58.5 | 8.6 | 20.2 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 58.0 | 12.0 | * 19 | 12.0 | 51.5 | 6.0 | 25.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 60.0 | 14.0 | 4.6 | 2.0 | 29.0 | 3.0 | 2.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 7.5 | 0.0 | 0.1 | | | | |

Intersection Summary

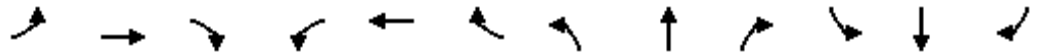
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 58.3 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

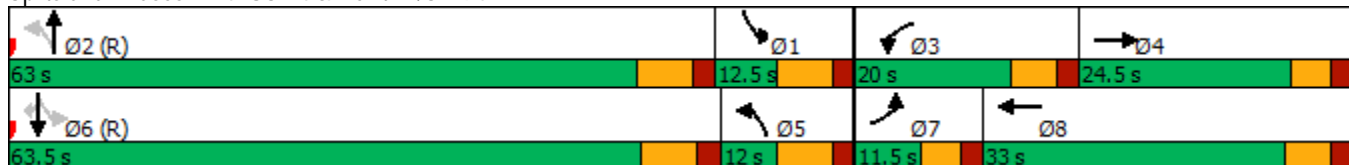


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (vph) | 20 | 35 | 215 | 475 | 45 | 5 | 155 | 860 | 410 | 5 | 1860 | 40 |
| Future Volume (vph) | 20 | 35 | 215 | 475 | 45 | 5 | 155 | 860 | 410 | 5 | 1860 | 40 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 20.0 | 33.0 | | 12.0 | 63.0 | | 12.5 | 63.5 | 63.5 |
| Total Split (%) | 9.6% | 20.4% | | 16.7% | 27.5% | | 10.0% | 52.5% | | 10.4% | 52.9% | 52.9% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.8 | 7.9 | 120.0 | 14.0 | 18.1 | 120.0 | 82.8 | 81.8 | 120.0 | 77.8 | 72.3 | 72.3 |
| Actuated g/C Ratio | 0.05 | 0.07 | 1.00 | 0.12 | 0.15 | 1.00 | 0.69 | 0.68 | 1.00 | 0.65 | 0.60 | 0.60 |
| v/c Ratio | 0.13 | 0.31 | 0.14 | 1.25 | 0.09 | 0.00 | 1.21 | 0.40 | 0.29 | 0.01 | 0.94 | 0.04 |
| Control Delay | 56.5 | 59.3 | 0.2 | 161.4 | 23.4 | 0.0 | 181.5 | 10.7 | 0.5 | 7.6 | 31.4 | 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 | 56.5 | 59.3 | 0.2 | 161.4 | 23.4 | 0.0 | 181.5 | 10.7 | 0.5 | 7.6 | 31.4 | 0.1 |
| LOS | E | E | A | F | C | A | F | B | A | A | C | A |
| Approach Delay | | 12.1 | | | 148.2 | | | 26.3 | | | 30.7 | |
| Approach LOS | | B | | | F | | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.25
 Intersection Signal Delay: 42.9
 Intersection Capacity Utilization 96.9%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F

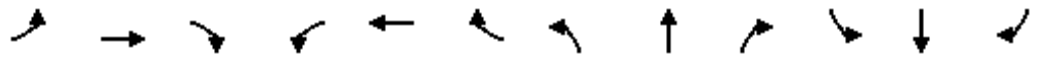
Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2026 Background AM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|------|------|------|-------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 20 | 35 | 215 | 475 | 45 | 5 | 155 | 860 | 410 | 5 | 1860 | 40 |
| Future Volume (veh/h) | 20 | 35 | 215 | 475 | 45 | 5 | 155 | 860 | 410 | 5 | 1860 | 40 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1841 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 21 | 36 | 0 | 490 | 46 | 0 | 160 | 887 | 0 | 5 | 1918 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 4 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 71 | 74 | | 397 | 490 | | 319 | 1553 | | 501 | 1620 | |
| Arrive On Green | 0.02 | 0.04 | 0.00 | 0.12 | 0.14 | 0.00 | 0.16 | 0.47 | 0.00 | 0.16 | 0.47 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 3401 | 3497 | 1560 | 1668 | 3328 | 1485 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 21 | 36 | 0 | 490 | 46 | 0 | 160 | 887 | 0 | 5 | 1918 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 1700 | 1749 | 1560 | 1668 | 1664 | 1485 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 0.7 | 2.3 | 0.0 | 14.0 | 1.4 | 0.0 | 6.0 | 23.3 | 0.0 | 0.0 | 56.5 | 0.0 |
| Cycle Q Clear(g_c), s | 0.7 | 2.3 | 0.0 | 14.0 | 1.4 | 0.0 | 6.0 | 23.3 | 0.0 | 0.0 | 56.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 71 | 74 | | 397 | 490 | | 319 | 1553 | | 501 | 1620 | |
| V/C Ratio(X) | 0.30 | 0.49 | | 1.23 | 0.09 | | 0.50 | 0.57 | | 0.01 | 1.18 | |
| Avail Cap(c_a), veh/h | 169 | 289 | | 397 | 787 | | 319 | 1553 | | 501 | 1620 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.68 | 0.68 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 57.9 | 56.4 | 0.0 | 53.0 | 44.9 | 0.0 | 44.2 | 23.3 | 0.0 | 19.5 | 31.7 | 0.0 |
| Incr Delay (d2), s/veh | 2.3 | 4.9 | 0.0 | 120.0 | 0.1 | 0.0 | 1.2 | 1.5 | 0.0 | 0.0 | 89.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 1.2 | 0.0 | 12.6 | 0.6 | 0.0 | 4.4 | 9.3 | 0.0 | 0.1 | 42.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.2 | 61.3 | 0.0 | 173.0 | 45.0 | 0.0 | 45.4 | 24.8 | 0.0 | 19.5 | 121.1 | 0.0 |
| LnGrp LOS | E | E | | F | D | | D | C | | B | F | |
| Approach Vol, veh/h | | 57 | A | | 536 | A | | 1047 | A | | 1923 | A |
| Approach Delay, s/veh | | 60.9 | | | 162.0 | | | 27.9 | | | 120.8 | |
| Approach LOS | | E | | | F | | | C | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.2 | 63.0 | 20.0 | 10.8 | 25.7 | 63.5 | 8.0 | 22.8 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 56.0 | 14.0 | * 19 | 5.0 | 56.5 | 6.0 | 27.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 25.3 | 16.0 | 4.3 | 8.0 | 58.5 | 2.7 | 3.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | | | | |

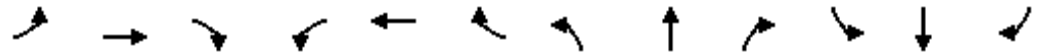
Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 98.8 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

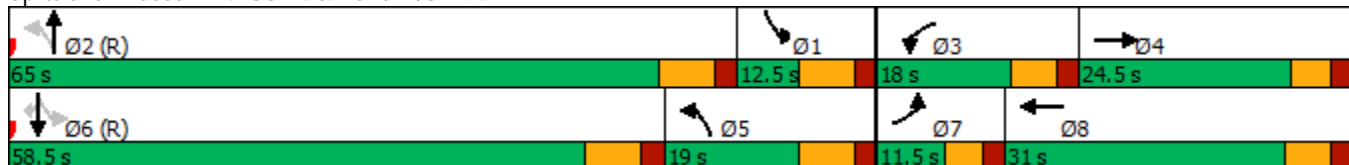


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↗ | ↘ | ↖↖ | ↗↗ | ↘ | ↖ | ↗↗ | ↘ | ↘ | ↗↗ | ↘ |
| Traffic Volume (vph) | 35 | 45 | 260 | 380 | 25 | 10 | 170 | 1810 | 345 | 5 | 1000 | 40 |
| Future Volume (vph) | 35 | 45 | 260 | 380 | 25 | 10 | 170 | 1810 | 345 | 5 | 1000 | 40 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 18.0 | 31.0 | | 19.0 | 65.0 | | 12.5 | 58.5 | 58.5 |
| Total Split (%) | 9.6% | 20.4% | | 15.0% | 25.8% | | 15.8% | 54.2% | | 10.4% | 48.8% | 48.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 6.3 | 8.4 | 120.0 | 15.9 | 20.3 | 120.0 | 79.3 | 76.9 | 120.0 | 69.8 | 64.3 | 64.3 |
| Actuated g/C Ratio | 0.05 | 0.07 | 1.00 | 0.13 | 0.17 | 1.00 | 0.66 | 0.64 | 1.00 | 0.58 | 0.54 | 0.54 |
| v/c Ratio | 0.21 | 0.36 | 0.17 | 0.89 | 0.04 | 0.01 | 0.56 | 0.85 | 0.23 | 0.03 | 0.57 | 0.05 |
| Control Delay | 57.1 | 60.1 | 0.2 | 91.8 | 39.1 | 0.0 | 26.5 | 23.1 | 0.3 | 6.2 | 20.3 | 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 | 57.1 | 60.1 | 0.2 | 91.8 | 39.1 | 0.0 | 26.5 | 23.1 | 0.3 | 6.2 | 20.3 | 0.4 |
| LOS | E | E | A | F | D | A | C | C | A | A | C | A |
| Approach Delay | | 14.0 | | | 86.4 | | | 19.9 | | | 19.5 | |
| Approach LOS | | B | | | F | | | B | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 26.0
 Intersection LOS: C
 Intersection Capacity Utilization 88.4%
 ICU Level of Service E
 Analysis Period (min) 15

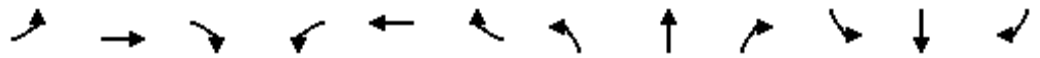
Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2026 Background PM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 35 | 45 | 260 | 380 | 25 | 10 | 170 | 1810 | 345 | 5 | 1000 | 40 |
| Future Volume (veh/h) | 35 | 45 | 260 | 380 | 25 | 10 | 170 | 1810 | 345 | 5 | 1000 | 40 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 37 | 47 | 0 | 400 | 26 | 0 | 179 | 1905 | 0 | 5 | 1053 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 102 | 77 | | 343 | 409 | | 526 | 1704 | | 336 | 1489 | |
| Arrive On Green | 0.03 | 0.04 | 0.00 | 0.10 | 0.12 | 0.00 | 0.21 | 0.48 | 0.00 | 0.16 | 0.43 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 3428 | 3526 | 1572 | 1767 | 3526 | 1572 | 1739 | 3469 | 1547 |
| Grp Volume(v), veh/h | 37 | 47 | 0 | 400 | 26 | 0 | 179 | 1905 | 0 | 5 | 1053 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1714 | 1763 | 1572 | 1767 | 1763 | 1572 | 1739 | 1735 | 1547 |
| Q Serve(g_s), s | 1.3 | 3.0 | 0.0 | 12.0 | 0.8 | 0.0 | 0.0 | 58.0 | 0.0 | 0.0 | 29.9 | 0.0 |
| Cycle Q Clear(g_c), s | 1.3 | 3.0 | 0.0 | 12.0 | 0.8 | 0.0 | 0.0 | 58.0 | 0.0 | 0.0 | 29.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 102 | 77 | | 343 | 409 | | 526 | 1704 | | 336 | 1489 | |
| V/C Ratio(X) | 0.36 | 0.61 | | 1.17 | 0.06 | | 0.34 | 1.12 | | 0.01 | 0.71 | |
| Avail Cap(c_a), veh/h | 173 | 296 | | 343 | 734 | | 526 | 1704 | | 336 | 1489 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 0.68 | 0.68 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 57.1 | 56.6 | 0.0 | 54.0 | 47.2 | 0.0 | 32.1 | 31.0 | 0.0 | 42.5 | 28.1 | 0.0 |
| Incr Delay (d2), s/veh | 2.2 | 7.5 | 0.0 | 94.8 | 0.0 | 0.0 | 0.4 | 61.7 | 0.0 | 0.0 | 2.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 1.6 | 0.0 | 9.7 | 0.4 | 0.0 | 4.2 | 38.2 | 0.0 | 0.1 | 12.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.3 | 64.1 | 0.0 | 148.8 | 47.3 | 0.0 | 32.5 | 92.7 | 0.0 | 42.5 | 30.9 | 0.0 |
| LnGrp LOS | E | E | | F | D | | C | F | | D | C | |
| Approach Vol, veh/h | | 84 | A | | 426 | A | | 2084 | A | | 1058 | A |
| Approach Delay, s/veh | | 62.0 | | | 142.6 | | | 87.5 | | | 31.0 | |
| Approach LOS | | E | | | F | | | F | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.0 | 65.0 | 18.0 | 11.0 | 32.5 | 58.5 | 9.0 | 19.9 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 58.0 | 12.0 | * 19 | 12.0 | 51.5 | 6.0 | 25.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 60.0 | 14.0 | 5.0 | 2.0 | 31.9 | 3.3 | 2.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 7.7 | 0.0 | 0.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 77.0 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

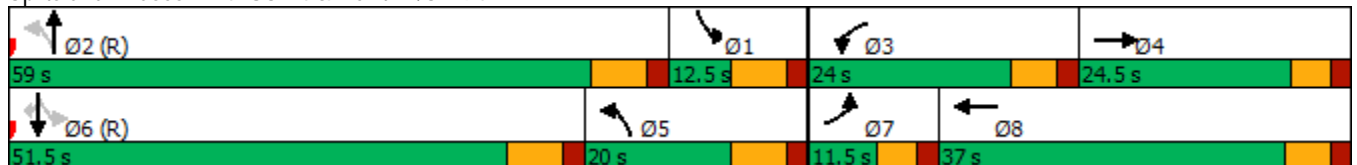
2026 Total AM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Future Volume (vph) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 24.0 | 37.0 | | 20.0 | 59.0 | | 12.5 | 51.5 | 51.5 |
| Total Split (%) | 9.6% | 20.4% | | 20.0% | 30.8% | | 16.7% | 49.2% | | 10.4% | 42.9% | 42.9% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 11.5 | 120.0 | 18.0 | 25.8 | 120.0 | 72.0 | 69.5 | 120.0 | 57.5 | 52.0 | 52.0 |
| Actuated g/C Ratio | 0.05 | 0.10 | 1.00 | 0.15 | 0.22 | 1.00 | 0.60 | 0.58 | 1.00 | 0.48 | 0.43 | 0.43 |
| v/c Ratio | 0.28 | 0.54 | 0.33 | 1.67 | 0.13 | 0.00 | 1.81 | 0.53 | 0.45 | 0.02 | 1.30 | 0.08 |
| Control Delay | 59.6 | 62.4 | 0.6 | 340.6 | 35.1 | 0.0 | 409.3 | 18.0 | 1.0 | 9.6 | 172.2 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 59.6 | 62.4 | 0.6 | 340.6 | 35.1 | 0.0 | 409.3 | 18.0 | 1.0 | 9.6 | 172.2 | 0.3 |
| LOS | E | E | A | F | D | A | F | B | A | A | F | A |
| Approach Delay | | 13.6 | | | 307.2 | | | 94.0 | | | 166.0 | |
| Approach LOS | | B | | | F | | | F | | | F | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.81
 Intersection Signal Delay: 145.5
 Intersection LOS: F
 Intersection Capacity Utilization 121.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary

2026 Total AM.syn

4: US-24 & Newt Dr/SH-94

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Future Volume (veh/h) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1841 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 46 | 93 | 0 | 845 | 98 | 0 | 438 | 1015 | 0 | 5 | 1918 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 4 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 110 | 126 | | 510 | 666 | | 383 | 1442 | | 352 | 1276 | |
| Arrive On Green | 0.03 | 0.07 | 0.00 | 0.05 | 0.06 | 0.00 | 0.19 | 0.43 | 0.00 | 0.13 | 0.37 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 3401 | 3497 | 1560 | 1668 | 3328 | 1485 | 1725 | 3441 | 1535 |
| Grp Volume(v), veh/h | 46 | 93 | 0 | 845 | 98 | 0 | 438 | 1015 | 0 | 5 | 1918 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 1700 | 1749 | 1560 | 1668 | 1664 | 1485 | 1725 | 1721 | 1535 |
| Q Serve(g_s), s | 1.6 | 6.0 | 0.0 | 18.0 | 3.2 | 0.0 | 23.2 | 29.8 | 0.0 | 0.0 | 44.5 | 0.0 |
| Cycle Q Clear(g_c), s | 1.6 | 6.0 | 0.0 | 18.0 | 3.2 | 0.0 | 23.2 | 29.8 | 0.0 | 0.0 | 44.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 110 | 126 | | 510 | 666 | | 383 | 1442 | | 352 | 1276 | |
| V/C Ratio(X) | 0.42 | 0.74 | | 1.66 | 0.15 | | 1.14 | 0.70 | | 0.01 | 1.50 | |
| Avail Cap(c_a), veh/h | 169 | 289 | | 510 | 903 | | 383 | 1442 | | 352 | 1276 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.82 | 0.82 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.9 | 54.8 | 0.0 | 57.0 | 47.0 | 0.0 | 46.6 | 27.7 | 0.0 | 33.8 | 37.8 | 0.0 |
| Incr Delay (d2), s/veh | 2.5 | 8.2 | 0.0 | 302.5 | 0.1 | 0.0 | 91.0 | 2.9 | 0.0 | 0.0 | 230.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 3.0 | 0.0 | 29.7 | 1.4 | 0.0 | 21.0 | 12.3 | 0.0 | 0.1 | 59.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.4 | 63.1 | 0.0 | 359.5 | 47.1 | 0.0 | 137.6 | 30.6 | 0.0 | 33.8 | 268.3 | 0.0 |
| LnGrp LOS | E | E | | F | D | | F | C | | C | F | |
| Approach Vol, veh/h | | 139 | A | | 943 | A | | 1453 | A | | 1923 | A |
| Approach Delay, s/veh | | 61.9 | | | 327.1 | | | 62.9 | | | 267.7 | |
| Approach LOS | | E | | | F | | | E | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.7 | 59.0 | 24.0 | 14.3 | 30.2 | 51.5 | 9.4 | 28.8 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 52.0 | 18.0 | * 19 | 13.0 | 44.5 | 6.0 | 31.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 31.8 | 20.0 | 8.0 | 25.2 | 46.5 | 3.6 | 5.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.5 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.5 | | | | |

Intersection Summary

HCM 6th Ctrl Delay 207.1

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

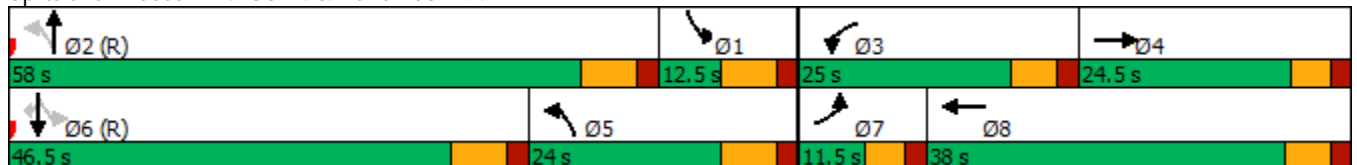
2026 Total PM.syn
02/15/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Future Volume (vph) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 25.0 | 38.0 | | 24.0 | 58.0 | | 12.5 | 46.5 | 46.5 |
| Total Split (%) | 9.6% | 20.4% | | 20.8% | 31.7% | | 20.0% | 48.3% | | 10.4% | 38.8% | 38.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 10.7 | 120.0 | 19.0 | 23.6 | 120.0 | 74.2 | 71.7 | 120.0 | 55.7 | 50.2 | 50.2 |
| Actuated g/C Ratio | 0.05 | 0.09 | 1.00 | 0.16 | 0.20 | 1.00 | 0.62 | 0.60 | 1.00 | 0.46 | 0.42 | 0.42 |
| v/c Ratio | 0.34 | 0.51 | 0.30 | 1.45 | 0.10 | 0.01 | 1.16 | 0.97 | 0.42 | 0.03 | 0.73 | 0.08 |
| Control Delay | 60.9 | 61.9 | 0.5 | 252.5 | 36.8 | 0.0 | 135.8 | 38.2 | 0.8 | 13.2 | 40.9 | 1.3 |
| 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 | 60.9 | 61.9 | 0.5 | 252.5 | 36.8 | 0.0 | 135.8 | 38.2 | 0.8 | 13.2 | 40.9 | 1.3 |
| LOS | E | E | A | F | D | A | F | D | A | B | D | A |
| Approach Delay | | 14.5 | | | 232.2 | | | 43.4 | | | 38.6 | |
| Approach LOS | | B | | | F | | | D | | | D | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.45
 Intersection Signal Delay: 67.8
 Intersection LOS: E
 Intersection Capacity Utilization 101.8%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2026 Total PM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ | ↖ | ↑↑ | ↖ |
| Traffic Volume (veh/h) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Future Volume (veh/h) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 58 | 84 | 0 | 779 | 68 | 0 | 416 | 2026 | 0 | 5 | 1053 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 123 | 117 | | 543 | 668 | | 483 | 1498 | | 299 | 1142 | |
| Arrive On Green | 0.04 | 0.06 | 0.00 | 0.16 | 0.19 | 0.00 | 0.23 | 0.43 | 0.00 | 0.14 | 0.33 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 3428 | 3526 | 1572 | 1767 | 3526 | 1572 | 1739 | 3469 | 1547 |
| Grp Volume(v), veh/h | 58 | 84 | 0 | 779 | 68 | 0 | 416 | 2026 | 0 | 5 | 1053 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1714 | 1763 | 1572 | 1767 | 1763 | 1572 | 1739 | 1735 | 1547 |
| Q Serve(g_s), s | 2.0 | 5.3 | 0.0 | 19.0 | 1.9 | 0.0 | 22.1 | 51.0 | 0.0 | 0.0 | 35.1 | 0.0 |
| Cycle Q Clear(g_c), s | 2.0 | 5.3 | 0.0 | 19.0 | 1.9 | 0.0 | 22.1 | 51.0 | 0.0 | 0.0 | 35.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 123 | 117 | | 543 | 668 | | 483 | 1498 | | 299 | 1142 | |
| V/C Ratio(X) | 0.47 | 0.72 | | 1.44 | 0.10 | | 0.86 | 1.35 | | 0.02 | 0.92 | |
| Avail Cap(c_a), veh/h | 173 | 296 | | 543 | 940 | | 483 | 1498 | | 299 | 1142 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.73 | 0.73 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.8 | 55.2 | 0.0 | 50.5 | 40.2 | 0.0 | 41.8 | 34.5 | 0.0 | 44.7 | 38.8 | 0.0 |
| Incr Delay (d2), s/veh | 2.8 | 7.9 | 0.0 | 203.5 | 0.0 | 0.0 | 14.7 | 163.0 | 0.0 | 0.0 | 13.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 2.8 | 0.0 | 23.5 | 0.8 | 0.0 | 13.6 | 55.1 | 0.0 | 0.1 | 16.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.5 | 63.1 | 0.0 | 254.0 | 40.2 | 0.0 | 56.5 | 197.5 | 0.0 | 44.7 | 52.2 | 0.0 |
| LnGrp LOS | E | E | | F | D | | E | F | | D | D | |
| Approach Vol, veh/h | | 142 | A | | 847 | A | | 2442 | A | | 1058 | A |
| Approach Delay, s/veh | | 61.6 | | | 236.8 | | | 173.5 | | | 52.2 | |
| Approach LOS | | E | | | F | | | F | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 23.5 | 58.0 | 25.0 | 13.5 | 35.0 | 46.5 | 9.8 | 28.7 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 51.0 | 19.0 | * 19 | 17.0 | 39.5 | 6.0 | 32.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 53.0 | 21.0 | 7.3 | 24.1 | 37.1 | 4.0 | 3.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.6 | 0.0 | 0.3 | | | | |

Intersection Summary

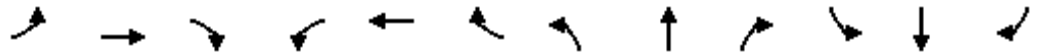
| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 153.3 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

4: US-24 & Newt Dr/SH-94

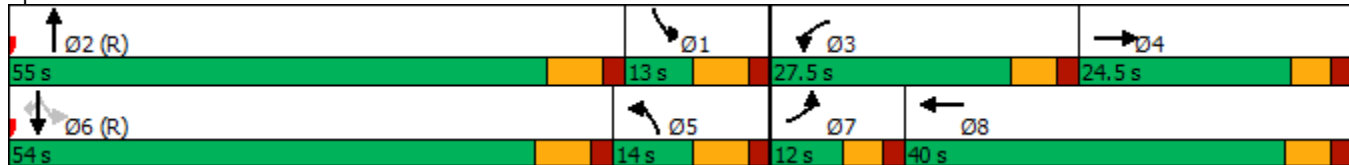


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↖↖↖ | ↑ | ↗ | ↖↖ | ↑↑↑ | ↗ | ↖ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Future Volume (vph) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.0 | 25.0 | 25.0 |
| Total Split (s) | 12.0 | 24.5 | | 27.5 | 40.0 | | 14.0 | 55.0 | | 13.0 | 54.0 | 54.0 |
| Total Split (%) | 10.0% | 20.4% | | 22.9% | 33.3% | | 11.7% | 45.8% | | 10.8% | 45.0% | 45.0% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 6.3 | 11.5 | 120.0 | 21.5 | 28.9 | 120.0 | 7.0 | 65.9 | 120.0 | 60.1 | 54.5 | 54.5 |
| Actuated g/C Ratio | 0.05 | 0.10 | 1.00 | 0.18 | 0.24 | 1.00 | 0.06 | 0.55 | 1.00 | 0.50 | 0.45 | 0.45 |
| v/c Ratio | 0.26 | 0.54 | 0.33 | 0.96 | 0.22 | 0.00 | 2.37 | 0.39 | 0.45 | 0.02 | 0.86 | 0.08 |
| Control Delay | 58.5 | 62.4 | 0.6 | 58.1 | 29.8 | 0.0 | 656.5 | 17.2 | 1.0 | 9.4 | 32.3 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 58.5 | 62.4 | 0.6 | 58.1 | 29.8 | 0.0 | 656.5 | 17.2 | 1.0 | 9.4 | 32.3 | 0.8 |
| LOS | E | E | A | E | C | A | F | B | A | A | C | A |
| Approach Delay | | 13.5 | | | 54.9 | | | 145.0 | | | 31.2 | |
| Approach LOS | | B | | | D | | | F | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.37
 Intersection Signal Delay: 75.3
 Intersection Capacity Utilization 87.0%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service E

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2026 Total AM Improved.syn
 02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↗↘ | ↑ | ↗ | ↗↘↙ | ↑ | ↗ | ↗↘ | ↑↑↑ | ↗ | ↘ | ↑↑↑ | ↗ |
| Traffic Volume (veh/h) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Future Volume (veh/h) | 45 | 90 | 495 | 820 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1841 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 46 | 93 | 0 | 845 | 98 | 0 | 438 | 1015 | 0 | 5 | 1918 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 4 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 110 | 126 | | 886 | 404 | | 465 | 1913 | | 417 | 1936 | |
| Arrive On Green | 0.03 | 0.07 | 0.00 | 0.06 | 0.07 | 0.00 | 0.14 | 0.40 | 0.00 | 0.14 | 0.39 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 4944 | 1841 | 1560 | 3237 | 4782 | 1485 | 1725 | 4944 | 1535 |
| Grp Volume(v), veh/h | 46 | 93 | 0 | 845 | 98 | 0 | 438 | 1015 | 0 | 5 | 1918 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 1648 | 1841 | 1560 | 1618 | 1594 | 1485 | 1725 | 1648 | 1535 |
| Q Serve(g_s), s | 1.6 | 6.0 | 0.0 | 20.5 | 6.0 | 0.0 | 16.1 | 19.4 | 0.0 | 0.0 | 46.3 | 0.0 |
| Cycle Q Clear(g_c), s | 1.6 | 6.0 | 0.0 | 20.5 | 6.0 | 0.0 | 16.1 | 19.4 | 0.0 | 0.0 | 46.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 110 | 126 | | 886 | 404 | | 465 | 1913 | | 417 | 1936 | |
| V/C Ratio(X) | 0.42 | 0.74 | | 0.95 | 0.24 | | 0.94 | 0.53 | | 0.01 | 0.99 | |
| Avail Cap(c_a), veh/h | 183 | 289 | | 886 | 522 | | 465 | 1913 | | 417 | 1936 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 0.86 | 0.86 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.9 | 54.8 | 0.0 | 56.0 | 46.2 | 0.0 | 50.9 | 27.4 | 0.0 | 24.4 | 36.3 | 0.0 |
| Incr Delay (d2), s/veh | 2.5 | 8.2 | 0.0 | 18.0 | 0.3 | 0.0 | 27.7 | 1.1 | 0.0 | 0.0 | 18.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 3.0 | 0.0 | 10.6 | 2.9 | 0.0 | 8.3 | 7.5 | 0.0 | 0.1 | 21.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.4 | 63.1 | 0.0 | 74.0 | 46.5 | 0.0 | 78.6 | 28.5 | 0.0 | 24.4 | 54.6 | 0.0 |
| LnGrp LOS | E | E | | E | D | | E | C | | C | D | |
| Approach Vol, veh/h | | 139 | A | | 943 | A | | 1453 | A | | 1923 | A |
| Approach Delay, s/veh | | 61.9 | | | 71.1 | | | 43.6 | | | 54.5 | |
| Approach LOS | | E | | | E | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 23.2 | 55.0 | 27.5 | 14.3 | 24.2 | 54.0 | 9.4 | 32.3 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 6.0 | 48.0 | 21.5 | * 19 | 7.0 | 47.0 | 6.5 | 34.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 21.4 | 22.5 | 8.0 | 18.1 | 48.3 | 3.6 | 8.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 8.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 54.7 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2026 Total PM Improved.syn

4: US-24 & Newt Dr/SH-94

02/18/2021

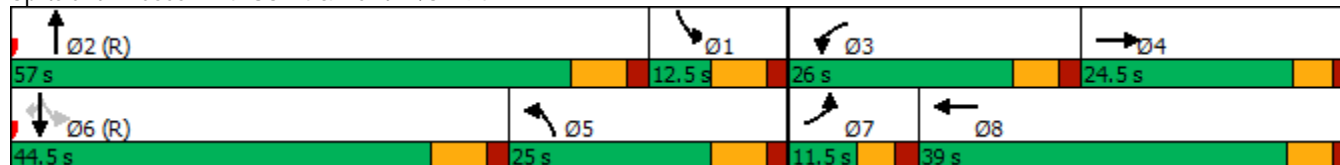


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗↘ | ↑ | ↖ | ↖↗ | ↖↗↘ | ↖ | ↖ | ↖↗↘ | ↖ |
| Traffic Volume (vph) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Future Volume (vph) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 26.0 | 39.0 | | 25.0 | 57.0 | | 12.5 | 44.5 | 44.5 |
| Total Split (%) | 9.6% | 20.4% | | 21.7% | 32.5% | | 20.8% | 47.5% | | 10.4% | 37.1% | 37.1% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 10.7 | 120.0 | 20.2 | 24.8 | 120.0 | 17.5 | 70.5 | 120.0 | 54.0 | 48.5 | 48.5 |
| Actuated g/C Ratio | 0.05 | 0.09 | 1.00 | 0.17 | 0.21 | 1.00 | 0.15 | 0.59 | 1.00 | 0.45 | 0.40 | 0.40 |
| v/c Ratio | 0.34 | 0.51 | 0.30 | 0.94 | 0.18 | 0.01 | 0.84 | 0.68 | 0.42 | 0.03 | 0.53 | 0.08 |
| Control Delay | 60.9 | 61.9 | 0.5 | 77.8 | 37.5 | 0.0 | 65.9 | 20.5 | 0.8 | 14.8 | 37.3 | 1.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.9 | 61.9 | 0.5 | 77.8 | 37.5 | 0.0 | 65.9 | 20.5 | 0.8 | 14.8 | 37.3 | 1.7 |
| LOS | E | E | A | E | D | A | E | C | A | B | D | A |
| Approach Delay | | 14.5 | | | 73.6 | | | 22.4 | | | 35.2 | |
| Approach LOS | | B | | | E | | | C | | | D | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 31.8
 Intersection LOS: C
 Intersection Capacity Utilization 78.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2026 Total PM Improved.syn
 02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗↘ | ↑ | ↖ | ↖↗ | ↖↗↘ | ↖ | ↖ | ↖↗↘ | ↖ |
| Traffic Volume (veh/h) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Future Volume (veh/h) | 55 | 80 | 450 | 740 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 58 | 84 | 0 | 779 | 68 | 0 | 416 | 2026 | 0 | 5 | 1053 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 123 | 117 | | 831 | 367 | | 828 | 2111 | | 299 | 1558 | |
| Arrive On Green | 0.04 | 0.06 | 0.00 | 0.28 | 0.33 | 0.00 | 0.24 | 0.42 | 0.00 | 0.14 | 0.31 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 4983 | 1856 | 1572 | 3428 | 5066 | 1572 | 1739 | 4985 | 1547 |
| Grp Volume(v), veh/h | 58 | 84 | 0 | 779 | 68 | 0 | 416 | 2026 | 0 | 5 | 1053 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1661 | 1856 | 1572 | 1714 | 1689 | 1572 | 1739 | 1662 | 1547 |
| Q Serve(g_s), s | 2.0 | 5.3 | 0.0 | 18.3 | 3.1 | 0.0 | 12.6 | 46.7 | 0.0 | 0.0 | 22.1 | 0.0 |
| Cycle Q Clear(g_c), s | 2.0 | 5.3 | 0.0 | 18.3 | 3.1 | 0.0 | 12.6 | 46.7 | 0.0 | 0.0 | 22.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 123 | 117 | | 831 | 367 | | 828 | 2111 | | 299 | 1558 | |
| V/C Ratio(X) | 0.47 | 0.72 | | 0.94 | 0.19 | | 0.50 | 0.96 | | 0.02 | 0.68 | |
| Avail Cap(c_a), veh/h | 173 | 296 | | 831 | 510 | | 828 | 2111 | | 299 | 1558 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.78 | 0.78 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.8 | 55.2 | 0.0 | 42.7 | 33.3 | 0.0 | 39.3 | 34.0 | 0.0 | 44.7 | 36.0 | 0.0 |
| Incr Delay (d2), s/veh | 2.8 | 7.9 | 0.0 | 15.0 | 0.2 | 0.0 | 0.5 | 12.2 | 0.0 | 0.0 | 2.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 2.8 | 0.0 | 7.9 | 1.4 | 0.0 | 5.4 | 21.0 | 0.0 | 0.1 | 9.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.5 | 63.1 | 0.0 | 57.7 | 33.5 | 0.0 | 39.8 | 46.2 | 0.0 | 44.7 | 38.3 | 0.0 |
| LnGrp LOS | E | E | | E | C | | D | D | | D | D | |
| Approach Vol, veh/h | | 142 | A | | 847 | A | | 2442 | A | | 1058 | A |
| Approach Delay, s/veh | | 61.6 | | | 55.7 | | | 45.1 | | | 38.4 | |
| Approach LOS | | E | | | E | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 23.5 | 57.0 | 26.0 | 13.5 | 36.0 | 44.5 | 9.8 | 29.7 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 50.0 | 20.0 | * 19 | 18.0 | 37.5 | 6.0 | 33.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 48.7 | 20.3 | 7.3 | 14.6 | 24.1 | 4.0 | 5.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.2 | 0.0 | 0.2 | 0.5 | 6.2 | 0.0 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 46.0 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

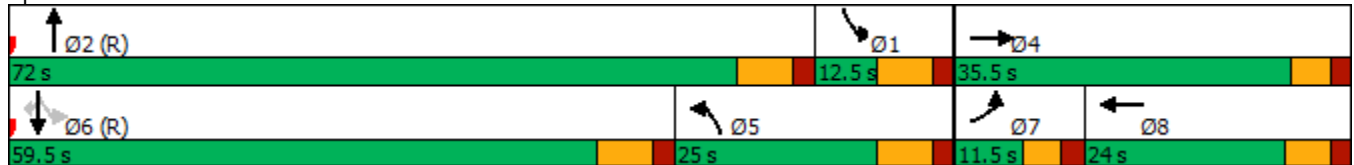


| Lane Group | EBL | EBT | EBR | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↕↕ | ↗ | ↖↖ | ↕↕↕ | ↗ | ↖ | ↕↕↕ | ↗ |
| Traffic Volume (vph) | 45 | 90 | 495 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Future Volume (vph) | 45 | 90 | 495 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Turn Type | Prot | NA | Free | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | | 5 | 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 |
| Minimum Split (s) | 11.5 | 24.5 | | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 35.5 | | 24.0 | | 25.0 | 72.0 | | 12.5 | 59.5 | 59.5 |
| Total Split (%) | 9.6% | 29.6% | | 20.0% | | 20.8% | 60.0% | | 10.4% | 49.6% | 49.6% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | | | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 18.5 | 120.0 | 8.8 | 120.0 | 18.0 | 86.5 | 120.0 | 69.5 | 64.0 | 64.0 |
| Actuated g/C Ratio | 0.05 | 0.15 | 1.00 | 0.07 | 1.00 | 0.15 | 0.72 | 1.00 | 0.58 | 0.53 | 0.53 |
| v/c Ratio | 0.28 | 0.33 | 0.33 | 0.39 | 0.00 | 0.92 | 0.30 | 0.45 | 0.02 | 0.73 | 0.07 |
| Control Delay | 59.6 | 46.9 | 0.6 | 47.9 | 0.0 | 76.0 | 7.3 | 1.0 | 7.0 | 23.0 | 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 |
| Total Delay | 59.6 | 46.9 | 0.6 | 47.9 | 0.0 | 76.0 | 7.3 | 1.0 | 7.0 | 23.0 | 0.5 |
| LOS | E | D | A | D | A | E | A | A | A | C | A |
| Approach Delay | | 11.4 | | 45.6 | | | 19.6 | | | 22.2 | |
| Approach LOS | | B | | D | | | B | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 20.1
 Intersection Capacity Utilization 72.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
4: US-24 & Newt Dr/SH-94

2026 Total AM Improved_4 WBL Flyover.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | | ↑↑ | ↖ | ↖↗ | ↑↑↑ | ↖ | ↖ | ↑↑↑ | ↖ |
| Traffic Volume (veh/h) | 45 | 90 | 495 | 0 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Future Volume (veh/h) | 45 | 90 | 495 | 0 | 95 | 5 | 425 | 985 | 635 | 5 | 1860 | 65 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 0 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 46 | 93 | 0 | 0 | 98 | 0 | 438 | 1015 | 0 | 5 | 1918 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 0 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 110 | 230 | | 0 | 166 | | 874 | 2590 | | 515 | 2163 | |
| Arrive On Green | 0.03 | 0.13 | 0.00 | 0.00 | 0.02 | 0.00 | 0.27 | 0.54 | 0.00 | 0.17 | 0.44 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 0 | 3589 | 1560 | 3237 | 4782 | 1485 | 1725 | 4944 | 1535 |
| Grp Volume(v), veh/h | 46 | 93 | 0 | 0 | 98 | 0 | 438 | 1015 | 0 | 5 | 1918 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 0 | 1749 | 1560 | 1618 | 1594 | 1485 | 1725 | 1648 | 1535 |
| Q Serve(g_s), s | 1.6 | 5.6 | 0.0 | 0.0 | 3.3 | 0.0 | 13.7 | 14.8 | 0.0 | 0.0 | 42.8 | 0.0 |
| Cycle Q Clear(g_c), s | 1.6 | 5.6 | 0.0 | 0.0 | 3.3 | 0.0 | 13.7 | 14.8 | 0.0 | 0.0 | 42.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 110 | 230 | | 0 | 166 | | 874 | 2590 | | 515 | 2163 | |
| V/C Ratio(X) | 0.42 | 0.40 | | 0.00 | 0.59 | | 0.50 | 0.39 | | 0.01 | 0.89 | |
| Avail Cap(c_a), veh/h | 169 | 456 | | 0 | 525 | | 874 | 2590 | | 515 | 2163 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.00 | 0.82 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.9 | 48.3 | 0.0 | 0.0 | 57.9 | 0.0 | 37.0 | 16.0 | 0.0 | 16.4 | 31.0 | 0.0 |
| Incr Delay (d2), s/veh | 2.5 | 1.1 | 0.0 | 0.0 | 2.8 | 0.0 | 0.5 | 0.4 | 0.0 | 0.0 | 5.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 2.6 | 0.0 | 0.0 | 1.6 | 0.0 | 5.5 | 5.4 | 0.0 | 0.1 | 17.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.4 | 49.5 | 0.0 | 0.0 | 60.7 | 0.0 | 37.4 | 16.4 | 0.0 | 16.4 | 36.9 | 0.0 |
| LnGrp LOS | E | D | | A | E | | D | B | | B | D | |
| Approach Vol, veh/h | | 139 | A | | 98 | A | | 1453 | A | | 1923 | A |
| Approach Delay, s/veh | | 52.8 | | | 60.7 | | | 22.8 | | | 36.8 | |
| Approach LOS | | D | | | E | | | C | | | D | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.9 | 72.0 | | 21.1 | 39.4 | 59.5 | 9.4 | 11.7 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 65.0 | | * 30 | 18.0 | 52.5 | 6.0 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 16.8 | | 7.6 | 15.7 | 44.8 | 3.6 | 5.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 9.4 | | 0.4 | 0.4 | 6.5 | 0.0 | 0.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 32.4 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

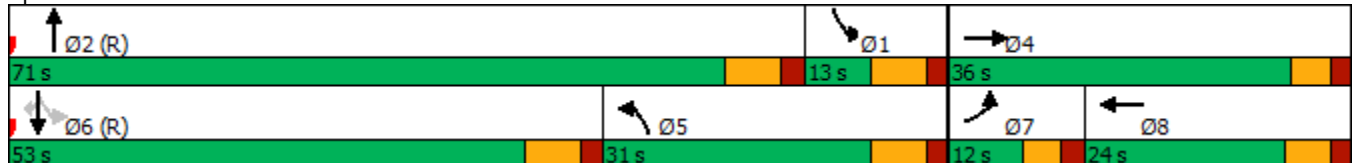


| Lane Group | EBL | EBT | EBR | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↑↑ | ↗ | ↖↖ | ↑↑↑ | ↗ | ↖ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 55 | 80 | 450 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Future Volume (vph) | 55 | 80 | 450 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Turn Type | Prot | NA | Free | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | | 5 | 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 |
| Minimum Split (s) | 11.5 | 24.5 | | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 12.0 | 36.0 | | 24.0 | | 31.0 | 71.0 | | 13.0 | 53.0 | 53.0 |
| Total Split (%) | 10.0% | 30.0% | | 20.0% | | 25.8% | 59.2% | | 10.8% | 44.2% | 44.2% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | | | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 6.9 | 18.5 | 120.0 | 7.7 | 120.0 | 19.7 | 90.3 | 120.0 | 70.1 | 64.8 | 64.8 |
| Actuated g/C Ratio | 0.06 | 0.15 | 1.00 | 0.06 | 1.00 | 0.16 | 0.75 | 1.00 | 0.58 | 0.54 | 0.54 |
| v/c Ratio | 0.30 | 0.29 | 0.30 | 0.30 | 0.01 | 0.75 | 0.53 | 0.42 | 0.03 | 0.39 | 0.07 |
| Control Delay | 58.1 | 45.9 | 0.5 | 54.9 | 0.0 | 56.2 | 9.4 | 0.8 | 10.2 | 22.2 | 1.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 58.1 | 45.9 | 0.5 | 54.9 | 0.0 | 56.2 | 9.4 | 0.8 | 10.2 | 22.2 | 1.4 |
| LOS | E | D | A | D | A | E | A | A | B | C | A |
| Approach Delay | | 12.1 | | 47.3 | | | 13.9 | | | 21.0 | |
| Approach LOS | | B | | D | | | B | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 15.8
 Intersection Capacity Utilization 65.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

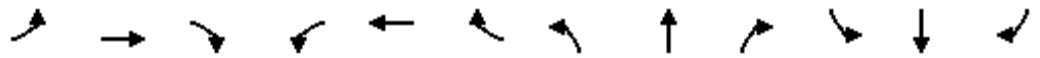
Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2026 Total PM Improved_4 WBL Flyover.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | | ↑↑ | ↖ | ↖↗ | ↑↑↑ | ↖ | ↖ | ↑↑↑ | ↖ |
| Traffic Volume (veh/h) | 55 | 80 | 450 | 0 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Future Volume (veh/h) | 55 | 80 | 450 | 0 | 65 | 10 | 395 | 1925 | 625 | 5 | 1000 | 60 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 0 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 58 | 84 | 0 | 0 | 68 | 0 | 416 | 2026 | 0 | 5 | 1053 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 0 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 123 | 230 | | 0 | 146 | | 1121 | 2702 | | 383 | 1911 | |
| Arrive On Green | 0.04 | 0.12 | 0.00 | 0.00 | 0.04 | 0.00 | 0.33 | 0.53 | 0.00 | 0.18 | 0.38 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 0 | 3618 | 1572 | 3428 | 5066 | 1572 | 1739 | 4985 | 1547 |
| Grp Volume(v), veh/h | 58 | 84 | 0 | 0 | 68 | 0 | 416 | 2026 | 0 | 5 | 1053 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 0 | 1763 | 1572 | 1714 | 1689 | 1572 | 1739 | 1662 | 1547 |
| Q Serve(g_s), s | 2.0 | 4.9 | 0.0 | 0.0 | 2.3 | 0.0 | 11.2 | 37.3 | 0.0 | 0.0 | 19.8 | 0.0 |
| Cycle Q Clear(g_c), s | 2.0 | 4.9 | 0.0 | 0.0 | 2.3 | 0.0 | 11.2 | 37.3 | 0.0 | 0.0 | 19.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 123 | 230 | | 0 | 146 | | 1121 | 2702 | | 383 | 1911 | |
| V/C Ratio(X) | 0.47 | 0.37 | | 0.00 | 0.47 | | 0.37 | 0.75 | | 0.01 | 0.55 | |
| Avail Cap(c_a), veh/h | 187 | 475 | | 0 | 529 | | 1121 | 2702 | | 383 | 1911 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.00 | 0.73 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.8 | 48.3 | 0.0 | 0.0 | 56.2 | 0.0 | 30.9 | 21.8 | 0.0 | 34.6 | 28.9 | 0.0 |
| Incr Delay (d2), s/veh | 2.8 | 1.0 | 0.0 | 0.0 | 1.7 | 0.0 | 0.2 | 2.0 | 0.0 | 0.0 | 1.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 2.4 | 0.0 | 0.0 | 1.0 | 0.0 | 4.7 | 14.7 | 0.0 | 0.1 | 8.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.5 | 49.3 | 0.0 | 0.0 | 57.9 | 0.0 | 31.1 | 23.7 | 0.0 | 34.7 | 30.1 | 0.0 |
| LnGrp LOS | E | D | | A | E | | C | C | | C | C | |
| Approach Vol, veh/h | | 142 | A | | 68 | A | | 2442 | A | | 1058 | A |
| Approach Delay, s/veh | | 53.5 | | | 57.9 | | | 25.0 | | | 30.1 | |
| Approach LOS | | D | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 28.3 | 71.0 | | 20.7 | 46.3 | 53.0 | 9.8 | 11.0 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 6.0 | 64.0 | | * 31 | 24.0 | 46.0 | 6.5 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 39.3 | | 6.9 | 13.2 | 21.8 | 4.0 | 4.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 17.6 | | 0.4 | 1.2 | 8.3 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 28.1 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

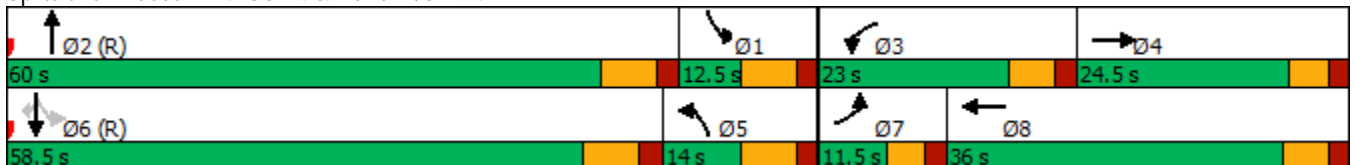
4: US-24 & Newt Dr/SH-94

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 25 | 40 | 250 | 735 | 50 | 5 | 185 | 1010 | 540 | 10 | 2190 | 50 |
| Future Volume (vph) | 25 | 40 | 250 | 735 | 50 | 5 | 185 | 1010 | 540 | 10 | 2190 | 50 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 23.0 | 36.0 | | 14.0 | 60.0 | | 12.5 | 58.5 | 58.5 |
| Total Split (%) | 9.6% | 20.4% | | 19.2% | 30.0% | | 11.7% | 50.0% | | 10.4% | 48.8% | 48.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effect Green (s) | 5.9 | 8.2 | 120.0 | 17.0 | 21.6 | 120.0 | 7.0 | 76.0 | 120.0 | 70.0 | 64.5 | 64.5 |
| Actuated g/C Ratio | 0.05 | 0.07 | 1.00 | 0.14 | 0.18 | 1.00 | 0.06 | 0.63 | 1.00 | 0.58 | 0.54 | 0.54 |
| v/c Ratio | 0.16 | 0.33 | 0.17 | 1.09 | 0.16 | 0.00 | 1.03 | 0.35 | 0.38 | 0.03 | 0.86 | 0.06 |
| Control Delay | 57.0 | 59.9 | 0.2 | 100.2 | 34.0 | 0.0 | 129.9 | 12.0 | 0.7 | 5.8 | 27.1 | 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 | 57.0 | 59.9 | 0.2 | 100.2 | 34.0 | 0.0 | 129.9 | 12.0 | 0.7 | 5.8 | 27.1 | 0.2 |
| LOS | E | E | A | F | C | A | F | B | A | A | C | A |
| Approach Delay | | 12.3 | | | 95.4 | | | 21.1 | | | 26.4 | |
| Approach LOS | | B | | | F | | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 34.4
 Intersection Capacity Utilization 84.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
4: US-24 & Newt Dr/SH-94

2040 Background AM.syn
02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗↘ | ↑ | ↖ | ↖↗ | ↖↗↘ | ↖ | ↖ | ↖↗↘ | ↖ |
| Traffic Volume (veh/h) | 25 | 40 | 250 | 735 | 50 | 5 | 185 | 1010 | 540 | 10 | 2190 | 50 |
| Future Volume (veh/h) | 25 | 40 | 250 | 735 | 50 | 5 | 185 | 1010 | 540 | 10 | 2190 | 50 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1841 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 26 | 41 | 0 | 758 | 52 | 0 | 191 | 1041 | 0 | 10 | 2258 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 4 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 81 | 75 | | 700 | 299 | | 555 | 2112 | | 478 | 2122 | |
| Arrive On Green | 0.02 | 0.04 | 0.00 | 0.05 | 0.05 | 0.00 | 0.17 | 0.44 | 0.00 | 0.16 | 0.43 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 4944 | 1841 | 1560 | 3237 | 4782 | 1485 | 1725 | 4944 | 1535 |
| Grp Volume(v), veh/h | 26 | 41 | 0 | 758 | 52 | 0 | 191 | 1041 | 0 | 10 | 2258 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 1648 | 1841 | 1560 | 1618 | 1594 | 1485 | 1725 | 1648 | 1535 |
| Q Serve(g_s), s | 0.9 | 2.6 | 0.0 | 17.0 | 3.2 | 0.0 | 6.2 | 18.6 | 0.0 | 0.0 | 51.5 | 0.0 |
| Cycle Q Clear(g_c), s | 0.9 | 2.6 | 0.0 | 17.0 | 3.2 | 0.0 | 6.2 | 18.6 | 0.0 | 0.0 | 51.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 81 | 75 | | 700 | 299 | | 555 | 2112 | | 478 | 2122 | |
| V/C Ratio(X) | 0.32 | 0.55 | | 1.08 | 0.17 | | 0.34 | 0.49 | | 0.02 | 1.06 | |
| Avail Cap(c_a), veh/h | 169 | 289 | | 700 | 460 | | 555 | 2112 | | 478 | 2122 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.60 | 0.60 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 57.6 | 56.5 | 0.0 | 57.2 | 49.1 | 0.0 | 43.8 | 23.9 | 0.0 | 19.7 | 34.2 | 0.0 |
| Incr Delay (d2), s/veh | 2.2 | 6.2 | 0.0 | 51.6 | 0.2 | 0.0 | 0.4 | 0.8 | 0.0 | 0.0 | 39.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 1.3 | 0.0 | 10.9 | 1.5 | 0.0 | 2.5 | 7.1 | 0.0 | 0.2 | 27.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.8 | 62.6 | 0.0 | 108.8 | 49.2 | 0.0 | 44.1 | 24.7 | 0.0 | 19.7 | 73.5 | 0.0 |
| LnGrp LOS | E | E | | F | D | | D | C | | B | F | |
| Approach Vol, veh/h | | 67 | A | | 810 | A | | 1232 | A | | 2268 | A |
| Approach Delay, s/veh | | 61.5 | | | 105.0 | | | 27.7 | | | 73.2 | |
| Approach LOS | | E | | | F | | | C | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.1 | 60.0 | 23.0 | 10.9 | 27.6 | 58.5 | 8.4 | 25.5 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 53.0 | 17.0 | * 19 | 7.0 | 51.5 | 6.0 | 30.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 20.6 | 19.0 | 4.6 | 8.2 | 53.5 | 2.9 | 5.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 9.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 66.1 |
| HCM 6th LOS | E |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

2040 Background PM.syn
02/18/2021

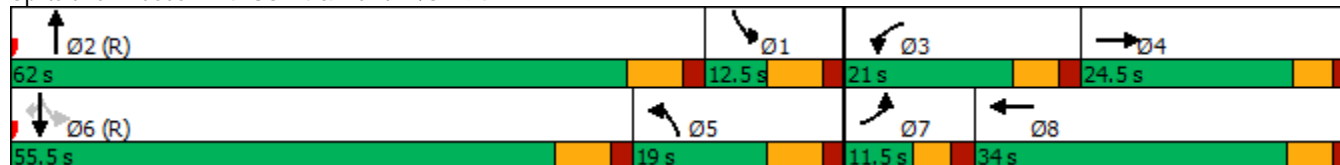


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↗↘ | ↑ | ↗ | ↗↘↙ | ↑ | ↗ | ↗↘ | ↑↑↑ | ↗ | ↘ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 40 | 50 | 300 | 560 | 30 | 10 | 200 | 2130 | 600 | 10 | 1180 | 50 |
| Future Volume (vph) | 40 | 50 | 300 | 560 | 30 | 10 | 200 | 2130 | 600 | 10 | 1180 | 50 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 21.0 | 34.0 | | 19.0 | 62.0 | | 12.5 | 55.5 | 55.5 |
| Total Split (%) | 9.6% | 20.4% | | 17.5% | 28.3% | | 15.8% | 51.7% | | 10.4% | 46.3% | 46.3% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 8.8 | 120.0 | 15.6 | 20.8 | 120.0 | 11.3 | 76.8 | 120.0 | 66.5 | 61.0 | 61.0 |
| Actuated g/C Ratio | 0.05 | 0.07 | 1.00 | 0.13 | 0.17 | 1.00 | 0.09 | 0.64 | 1.00 | 0.55 | 0.51 | 0.51 |
| v/c Ratio | 0.25 | 0.39 | 0.20 | 0.92 | 0.10 | 0.01 | 0.66 | 0.70 | 0.40 | 0.07 | 0.49 | 0.06 |
| Control Delay | 58.6 | 60.5 | 0.3 | 84.1 | 43.9 | 0.0 | 62.8 | 17.1 | 0.8 | 9.6 | 25.8 | 0.9 |
| 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 | 58.6 | 60.5 | 0.3 | 84.1 | 43.9 | 0.0 | 62.8 | 17.1 | 0.8 | 9.6 | 25.8 | 0.9 |
| LOS | E | E | A | F | D | A | E | B | A | A | C | A |
| Approach Delay | | 14.0 | | | 80.6 | | | 16.9 | | | 24.6 | |
| Approach LOS | | B | | | F | | | B | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 25.9
 Intersection LOS: C
 Intersection Capacity Utilization 79.3%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary

2040 Background PM.syn

4: US-24 & Newt Dr/SH-94

02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗↘ | ↑ | ↖ | ↖↗ | ↖↗↘ | ↖ | ↖ | ↖↗↘ | ↖ |
| Traffic Volume (veh/h) | 40 | 50 | 300 | 560 | 30 | 10 | 200 | 2130 | 600 | 10 | 1180 | 50 |
| Future Volume (veh/h) | 40 | 50 | 300 | 560 | 30 | 10 | 200 | 2130 | 600 | 10 | 1180 | 50 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 42 | 53 | 0 | 589 | 32 | 0 | 211 | 2242 | 0 | 11 | 1242 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 108 | 84 | | 623 | 265 | | 717 | 2322 | | 330 | 2015 | |
| Arrive On Green | 0.03 | 0.04 | 0.00 | 0.13 | 0.14 | 0.00 | 0.21 | 0.46 | 0.00 | 0.16 | 0.40 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 4983 | 1856 | 1572 | 3428 | 5066 | 1572 | 1739 | 4985 | 1547 |
| Grp Volume(v), veh/h | 42 | 53 | 0 | 589 | 32 | 0 | 211 | 2242 | 0 | 11 | 1242 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1661 | 1856 | 1572 | 1714 | 1689 | 1572 | 1739 | 1662 | 1547 |
| Q Serve(g_s), s | 1.4 | 3.3 | 0.0 | 14.1 | 1.8 | 0.0 | 6.2 | 51.6 | 0.0 | 0.0 | 23.7 | 0.0 |
| Cycle Q Clear(g_c), s | 1.4 | 3.3 | 0.0 | 14.1 | 1.8 | 0.0 | 6.2 | 51.6 | 0.0 | 0.0 | 23.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 108 | 84 | | 623 | 265 | | 717 | 2322 | | 330 | 2015 | |
| V/C Ratio(X) | 0.39 | 0.63 | | 0.95 | 0.12 | | 0.29 | 0.97 | | 0.03 | 0.62 | |
| Avail Cap(c_a), veh/h | 173 | 296 | | 623 | 433 | | 717 | 2322 | | 330 | 2015 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 0.47 | 0.47 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 57.0 | 56.3 | 0.0 | 52.1 | 44.9 | 0.0 | 40.0 | 31.6 | 0.0 | 42.8 | 28.4 | 0.0 |
| Incr Delay (d2), s/veh | 2.2 | 7.5 | 0.0 | 13.8 | 0.1 | 0.0 | 0.2 | 12.2 | 0.0 | 0.0 | 1.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 1.8 | 0.0 | 6.6 | 0.8 | 0.0 | 2.7 | 22.9 | 0.0 | 0.3 | 9.6 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.2 | 63.8 | 0.0 | 65.9 | 45.0 | 0.0 | 40.2 | 43.8 | 0.0 | 42.9 | 29.8 | 0.0 |
| LnGrp LOS | E | E | | E | D | | D | D | | D | C | |
| Approach Vol, veh/h | | 95 | A | | 621 | A | | 2453 | A | | 1253 | A |
| Approach Delay, s/veh | | 61.8 | | | 64.8 | | | 43.5 | | | 29.9 | |
| Approach LOS | | E | | | E | | | D | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 25.6 | 62.0 | 21.0 | 11.4 | 32.1 | 55.5 | 9.3 | 23.1 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 55.0 | 15.0 | * 19 | 12.0 | 48.5 | 6.0 | 28.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 53.6 | 16.1 | 5.3 | 8.2 | 25.7 | 3.4 | 3.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.3 | 0.0 | 0.1 | 0.2 | 9.8 | 0.0 | 0.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 43.0 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

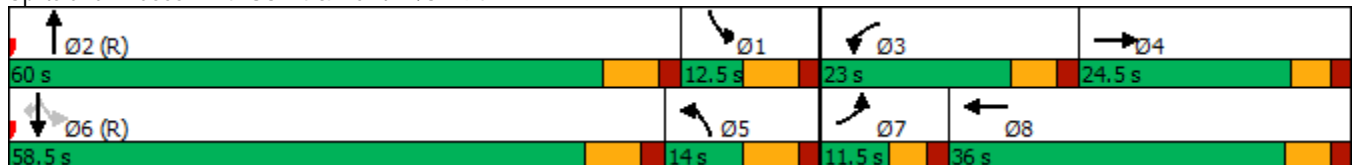
2040 Total AM.syn
02/18/2021

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 55 | 95 | 555 | 1155 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Future Volume (vph) | 55 | 95 | 555 | 1155 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 23.0 | 36.0 | | 14.0 | 60.0 | | 12.5 | 58.5 | 58.5 |
| Total Split (%) | 9.6% | 20.4% | | 19.2% | 30.0% | | 11.7% | 50.0% | | 10.4% | 48.8% | 48.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 11.8 | 120.0 | 17.0 | 25.1 | 120.0 | 7.0 | 70.2 | 120.0 | 64.2 | 58.7 | 58.7 |
| Actuated g/C Ratio | 0.05 | 0.10 | 1.00 | 0.14 | 0.21 | 1.00 | 0.06 | 0.58 | 1.00 | 0.54 | 0.49 | 0.49 |
| v/c Ratio | 0.35 | 0.55 | 0.37 | 1.72 | 0.28 | 0.00 | 2.68 | 0.43 | 0.60 | 0.04 | 0.94 | 0.10 |
| Control Delay | 61.2 | 62.7 | 0.7 | 359.8 | 45.7 | 0.0 | 791.2 | 15.5 | 1.8 | 6.9 | 31.8 | 1.1 |
| 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 | 61.2 | 62.7 | 0.7 | 359.8 | 45.7 | 0.0 | 791.2 | 15.5 | 1.8 | 6.9 | 31.8 | 1.1 |
| LOS | E | E | A | F | D | A | F | B | A | A | C | A |
| Approach Delay | | 13.8 | | | 332.4 | | | 160.7 | | | 30.6 | |
| Approach LOS | | B | | | F | | | F | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.68
 Intersection Signal Delay: 133.5
 Intersection LOS: F
 Intersection Capacity Utilization 101.3%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2040 Total AM.syn
 02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|-------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗↘ | ↑ | ↖ | ↖↗ | ↖↗↘ | ↖ | ↖ | ↖↗↘ | ↖ |
| Traffic Volume (veh/h) | 55 | 95 | 555 | 1155 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Future Volume (veh/h) | 55 | 95 | 555 | 1155 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1841 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 57 | 98 | 0 | 1191 | 108 | 0 | 495 | 1186 | 0 | 10 | 2258 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 4 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 120 | 131 | | 700 | 335 | | 456 | 2112 | | 394 | 2122 | |
| Arrive On Green | 0.04 | 0.07 | 0.00 | 0.14 | 0.18 | 0.00 | 0.14 | 0.44 | 0.00 | 0.13 | 0.43 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 4944 | 1841 | 1560 | 3237 | 4782 | 1485 | 1725 | 4944 | 1535 |
| Grp Volume(v), veh/h | 57 | 98 | 0 | 1191 | 108 | 0 | 495 | 1186 | 0 | 10 | 2258 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 1648 | 1841 | 1560 | 1618 | 1594 | 1485 | 1725 | 1648 | 1535 |
| Q Serve(g_s), s | 2.0 | 6.3 | 0.0 | 17.0 | 6.1 | 0.0 | 16.9 | 22.1 | 0.0 | 0.0 | 51.5 | 0.0 |
| Cycle Q Clear(g_c), s | 2.0 | 6.3 | 0.0 | 17.0 | 6.1 | 0.0 | 16.9 | 22.1 | 0.0 | 0.0 | 51.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 120 | 131 | | 700 | 335 | | 456 | 2112 | | 394 | 2122 | |
| V/C Ratio(X) | 0.48 | 0.75 | | 1.70 | 0.32 | | 1.09 | 0.56 | | 0.03 | 1.06 | |
| Avail Cap(c_a), veh/h | 169 | 289 | | 700 | 460 | | 456 | 2112 | | 394 | 2122 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.84 | 0.84 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.8 | 54.6 | 0.0 | 51.5 | 42.6 | 0.0 | 51.5 | 24.9 | 0.0 | 24.1 | 34.2 | 0.0 |
| Incr Delay (d2), s/veh | 2.9 | 8.3 | 0.0 | 320.4 | 0.5 | 0.0 | 67.2 | 1.1 | 0.0 | 0.0 | 39.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 3.2 | 0.0 | 27.8 | 2.8 | 0.0 | 11.1 | 8.5 | 0.0 | 0.2 | 27.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.7 | 62.9 | 0.0 | 371.9 | 43.1 | 0.0 | 118.8 | 26.0 | 0.0 | 24.1 | 73.5 | 0.0 |
| LnGrp LOS | E | E | | F | D | | F | C | | C | F | |
| Approach Vol, veh/h | | 155 | A | | 1299 | A | | 1681 | A | | 2268 | A |
| Approach Delay, s/veh | | 61.7 | | | 344.6 | | | 53.3 | | | 73.3 | |
| Approach LOS | | E | | | F | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.4 | 60.0 | 23.0 | 14.6 | 23.9 | 58.5 | 9.8 | 27.8 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 53.0 | 17.0 | * 19 | 7.0 | 51.5 | 6.0 | 30.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 24.1 | 19.0 | 8.3 | 18.9 | 53.5 | 4.0 | 8.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 10.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.5 | | | | |

Intersection Summary

| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 131.9 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

2040 Total PM.syn
02/18/2021

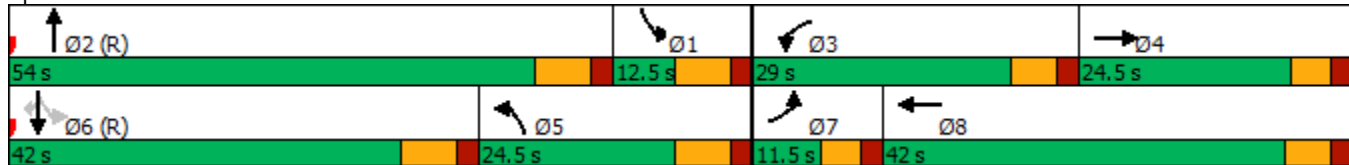


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↖↖↖ | ↑ | ↗ | ↖↖ | ↑↑↑ | ↗ | ↖ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 65 | 95 | 535 | 1160 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Future Volume (vph) | 65 | 95 | 535 | 1160 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Turn Type | Prot | NA | Free | Prot | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | | 11.0 | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 24.5 | | 29.0 | 42.0 | | 24.5 | 54.0 | | 12.5 | 42.0 | 42.0 |
| Total Split (%) | 9.6% | 20.4% | | 24.2% | 35.0% | | 20.4% | 45.0% | | 10.4% | 35.0% | 35.0% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| 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) | 5.5 | 5.5 | | 6.0 | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 6.0 | 11.8 | 120.0 | 23.0 | 31.1 | 120.0 | 17.5 | 64.2 | 120.0 | 47.7 | 42.2 | 42.2 |
| Actuated g/C Ratio | 0.05 | 0.10 | 1.00 | 0.19 | 0.26 | 1.00 | 0.15 | 0.54 | 1.00 | 0.40 | 0.35 | 0.35 |
| v/c Ratio | 0.40 | 0.55 | 0.36 | 1.29 | 0.18 | 0.01 | 1.00 | 0.91 | 0.78 | 0.07 | 0.71 | 0.11 |
| Control Delay | 62.5 | 62.2 | 0.6 | 168.2 | 15.2 | 0.0 | 91.9 | 32.1 | 4.0 | 16.2 | 60.1 | 2.9 |
| 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 | 62.5 | 62.2 | 0.6 | 168.2 | 15.2 | 0.0 | 91.9 | 32.1 | 4.0 | 16.2 | 60.1 | 2.9 |
| LOS | E | E | A | F | B | A | F | C | A | B | E | A |
| Approach Delay | | 14.8 | | | 157.0 | | | 30.9 | | | 56.3 | |
| Approach LOS | | B | | | F | | | C | | | E | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 55.8
 Intersection LOS: E
 Intersection Capacity Utilization 94.5%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary

2040 Total PM.syn

4: US-24 & Newt Dr/SH-94

02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|-------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | ↖↗↘ | ↑ | ↖ | ↖↗ | ↖↗↘ | ↖ | ↖ | ↖↗↘ | ↖ |
| Traffic Volume (veh/h) | 65 | 95 | 535 | 1160 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Future Volume (veh/h) | 65 | 95 | 535 | 1160 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 68 | 100 | 0 | 1221 | 84 | 0 | 495 | 2447 | 0 | 11 | 1242 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 129 | 134 | | 955 | 427 | | 783 | 1984 | | 283 | 1454 | |
| Arrive On Green | 0.04 | 0.07 | 0.00 | 0.19 | 0.23 | 0.00 | 0.23 | 0.39 | 0.00 | 0.13 | 0.29 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 4983 | 1856 | 1572 | 3428 | 5066 | 1572 | 1739 | 4985 | 1547 |
| Grp Volume(v), veh/h | 68 | 100 | 0 | 1221 | 84 | 0 | 495 | 2447 | 0 | 11 | 1242 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 1661 | 1856 | 1572 | 1714 | 1689 | 1572 | 1739 | 1662 | 1547 |
| Q Serve(g_s), s | 2.3 | 6.3 | 0.0 | 23.0 | 4.4 | 0.0 | 15.6 | 47.0 | 0.0 | 0.0 | 28.2 | 0.0 |
| Cycle Q Clear(g_c), s | 2.3 | 6.3 | 0.0 | 23.0 | 4.4 | 0.0 | 15.6 | 47.0 | 0.0 | 0.0 | 28.2 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 129 | 134 | | 955 | 427 | | 783 | 1984 | | 283 | 1454 | |
| V/C Ratio(X) | 0.53 | 0.75 | | 1.28 | 0.20 | | 0.63 | 1.23 | | 0.04 | 0.85 | |
| Avail Cap(c_a), veh/h | 173 | 296 | | 955 | 557 | | 783 | 1984 | | 283 | 1454 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.71 | 0.71 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.7 | 54.7 | 0.0 | 48.5 | 37.3 | 0.0 | 41.7 | 36.5 | 0.0 | 45.6 | 40.1 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 8.1 | 0.0 | 131.1 | 0.2 | 0.0 | 1.7 | 109.6 | 0.0 | 0.1 | 6.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 3.3 | 0.0 | 21.1 | 2.0 | 0.0 | 6.8 | 39.0 | 0.0 | 0.3 | 12.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.0 | 62.7 | 0.0 | 179.6 | 37.4 | 0.0 | 43.4 | 146.1 | 0.0 | 45.6 | 46.7 | 0.0 |
| LnGrp LOS | E | E | | F | D | | D | F | | D | D | |
| Approach Vol, veh/h | | 168 | A | | 1305 | A | | 2942 | A | | 1253 | A |
| Approach Delay, s/veh | | 61.6 | | | 170.5 | | | 128.8 | | | 46.7 | |
| Approach LOS | | E | | | F | | | F | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.4 | 54.0 | 29.0 | 14.6 | 34.4 | 42.0 | 10.0 | 33.6 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | 6.0 | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 47.0 | 23.0 | * 19 | 17.5 | 35.0 | 6.0 | 36.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 49.0 | 25.0 | 8.3 | 17.6 | 30.2 | 4.3 | 6.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 3.2 | 0.0 | 0.4 | | | | |

Intersection Summary

HCM 6th Ctrl Delay 118.3

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

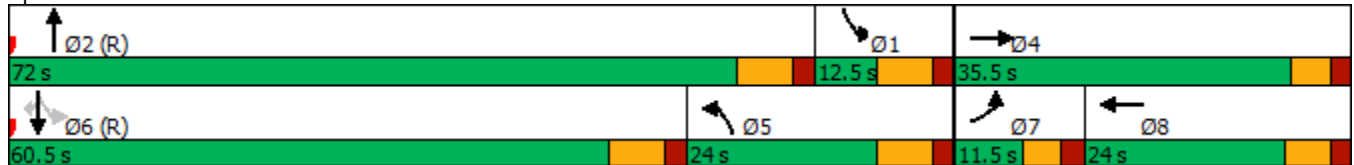


| Lane Group | EBL | EBT | EBR | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔↔ | ↑ | ↔ | ↑↑ | ↔ | ↔↔ | ↑↑↑ | ↔ | ↔ | ↑↑↑ | ↔ |
| Traffic Volume (vph) | 55 | 95 | 555 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Future Volume (vph) | 55 | 95 | 555 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Turn Type | Prot | NA | Free | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | | 5 | 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 |
| Minimum Split (s) | 11.5 | 24.5 | | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 35.5 | | 24.0 | | 24.0 | 72.0 | | 12.5 | 60.5 | 60.5 |
| Total Split (%) | 9.6% | 29.6% | | 20.0% | | 20.0% | 60.0% | | 10.4% | 50.4% | 50.4% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | | | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effct Green (s) | 5.9 | 18.8 | 120.0 | 9.1 | 120.0 | 17.0 | 86.2 | 120.0 | 70.2 | 64.7 | 64.7 |
| Actuated g/C Ratio | 0.05 | 0.16 | 1.00 | 0.08 | 1.00 | 0.14 | 0.72 | 1.00 | 0.58 | 0.54 | 0.54 |
| v/c Ratio | 0.35 | 0.35 | 0.37 | 0.41 | 0.00 | 1.10 | 0.35 | 0.60 | 0.04 | 0.86 | 0.09 |
| Control Delay | 61.2 | 46.8 | 0.7 | 56.0 | 0.0 | 120.0 | 7.8 | 1.8 | 6.1 | 24.5 | 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 |
| Total Delay | 61.2 | 46.8 | 0.7 | 56.0 | 0.0 | 120.0 | 7.8 | 1.8 | 6.1 | 24.5 | 0.5 |
| LOS | E | D | A | E | A | F | A | A | A | C | A |
| Approach Delay | | 11.7 | | 53.6 | | | 27.4 | | | 23.6 | |
| Approach LOS | | B | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.10
 Intersection Signal Delay: 24.4
 Intersection Capacity Utilization 80.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary
 4: US-24 & Newt Dr/SH-94

2040 Total AM_4 WBL Flyover.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | | ↑↑ | ↖ | ↖↗ | ↑↑↑ | ↖ | ↖ | ↑↑↑ | ↖ |
| Traffic Volume (veh/h) | 55 | 95 | 555 | 0 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Future Volume (veh/h) | 55 | 95 | 555 | 0 | 105 | 5 | 480 | 1150 | 855 | 10 | 2190 | 80 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 0 | 1841 | 1841 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 |
| Adj Flow Rate, veh/h | 57 | 98 | 0 | 0 | 108 | 0 | 495 | 1186 | 0 | 10 | 2258 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 0 | 4 | 4 | 10 | 10 | 10 | 6 | 6 | 6 |
| Cap, veh/h | 120 | 241 | | 0 | 177 | | 827 | 2590 | | 470 | 2204 | |
| Arrive On Green | 0.04 | 0.13 | 0.00 | 0.00 | 0.02 | 0.00 | 0.26 | 0.54 | 0.00 | 0.16 | 0.45 | 0.00 |
| Sat Flow, veh/h | 3374 | 1826 | 1547 | 0 | 3589 | 1560 | 3237 | 4782 | 1485 | 1725 | 4944 | 1535 |
| Grp Volume(v), veh/h | 57 | 98 | 0 | 0 | 108 | 0 | 495 | 1186 | 0 | 10 | 2258 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1687 | 1826 | 1547 | 0 | 1749 | 1560 | 1618 | 1594 | 1485 | 1725 | 1648 | 1535 |
| Q Serve(g_s), s | 2.0 | 5.9 | 0.0 | 0.0 | 3.7 | 0.0 | 16.1 | 18.1 | 0.0 | 0.0 | 53.5 | 0.0 |
| Cycle Q Clear(g_c), s | 2.0 | 5.9 | 0.0 | 0.0 | 3.7 | 0.0 | 16.1 | 18.1 | 0.0 | 0.0 | 53.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 120 | 241 | | 0 | 177 | | 827 | 2590 | | 470 | 2204 | |
| V/C Ratio(X) | 0.48 | 0.41 | | 0.00 | 0.61 | | 0.60 | 0.46 | | 0.02 | 1.02 | |
| Avail Cap(c_a), veh/h | 169 | 456 | | 0 | 525 | | 827 | 2590 | | 470 | 2204 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 0.00 | 0.17 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.8 | 47.8 | 0.0 | 0.0 | 57.8 | 0.0 | 39.2 | 16.8 | 0.0 | 18.3 | 33.3 | 0.0 |
| Incr Delay (d2), s/veh | 2.9 | 1.1 | 0.0 | 0.0 | 0.6 | 0.0 | 1.2 | 0.6 | 0.0 | 0.0 | 25.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 2.8 | 0.0 | 0.0 | 1.7 | 0.0 | 6.5 | 6.7 | 0.0 | 0.2 | 25.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 59.7 | 48.9 | 0.0 | 0.0 | 58.4 | 0.0 | 40.4 | 17.3 | 0.0 | 18.3 | 58.9 | 0.0 |
| LnGrp LOS | E | D | | A | E | | D | B | | B | F | |
| Approach Vol, veh/h | | 155 | A | | 108 | A | | 1681 | A | | 2268 | A |
| Approach Delay, s/veh | | 52.9 | | | 58.4 | | | 24.1 | | | 58.7 | |
| Approach LOS | | D | | | E | | | C | | | E | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.2 | 72.0 | | 21.8 | 37.7 | 60.5 | 9.8 | 12.1 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 65.0 | | * 30 | 17.0 | 53.5 | 6.0 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 20.1 | | 7.9 | 18.1 | 55.5 | 4.0 | 5.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 11.6 | | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 44.7 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
4: US-24 & Newt Dr/SH-94

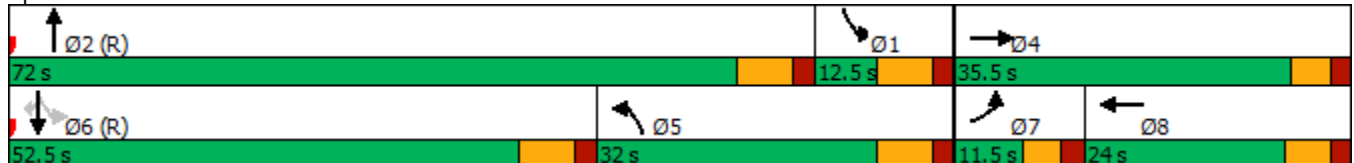


| Lane Group | EBL | EBT | EBR | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑ | ↗ | ↑↑ | ↗ | ↖↖ | ↑↑↑ | ↗ | ↖ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 65 | 95 | 535 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Future Volume (vph) | 65 | 95 | 535 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Turn Type | Prot | NA | Free | NA | Free | Prot | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | Free | | Free | | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | | 5 | 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 |
| Minimum Split (s) | 11.5 | 24.5 | | 24.0 | | 12.0 | 25.0 | | 12.5 | 25.5 | 25.5 |
| Total Split (s) | 11.5 | 35.5 | | 24.0 | | 32.0 | 72.0 | | 12.5 | 52.5 | 52.5 |
| Total Split (%) | 9.6% | 29.6% | | 20.0% | | 26.7% | 60.0% | | 10.4% | 43.8% | 43.8% |
| Yellow Time (s) | 3.5 | 3.5 | | 4.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | | 6.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | | | Lag | | Lag | Lead | | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | | None | | None | C-Max | | None | C-Max | C-Max |
| Act Effect Green (s) | 6.6 | 18.7 | 120.0 | 8.4 | 120.0 | 22.0 | 86.3 | 120.0 | 65.3 | 59.8 | 59.8 |
| Actuated g/C Ratio | 0.06 | 0.16 | 1.00 | 0.07 | 1.00 | 0.18 | 0.72 | 1.00 | 0.54 | 0.50 | 0.50 |
| v/c Ratio | 0.36 | 0.34 | 0.36 | 0.34 | 0.01 | 0.80 | 0.68 | 0.78 | 0.08 | 0.50 | 0.09 |
| Control Delay | 60.5 | 47.1 | 0.6 | 57.7 | 0.0 | 56.7 | 11.9 | 4.0 | 11.9 | 27.5 | 1.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.5 | 47.1 | 0.6 | 57.7 | 0.0 | 56.7 | 11.9 | 4.0 | 11.9 | 27.5 | 1.6 |
| LOS | E | D | A | E | A | E | B | A | B | C | A |
| Approach Delay | | 12.5 | | 51.0 | | | 14.9 | | | 25.8 | |
| Approach LOS | | B | | D | | | B | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55.9 (47%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 17.5
 Intersection Capacity Utilization 73.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 4: US-24 & Newt Dr/SH-94



HCM 6th Signalized Intersection Summary

2040 Total PM_4 WBL Flyover.syn

4: US-24 & Newt Dr/SH-94

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↑ | ↖ | | ↑↑ | ↖ | ↖↗ | ↑↑↑ | ↖ | ↖ | ↑↑↑ | ↖ |
| Traffic Volume (veh/h) | 65 | 95 | 535 | 0 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Future Volume (veh/h) | 65 | 95 | 535 | 0 | 80 | 10 | 470 | 2325 | 1165 | 10 | 1180 | 75 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 0 | 1856 | 1856 | 1856 | 1856 | 1856 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 68 | 100 | 0 | 0 | 84 | 0 | 495 | 2447 | 0 | 11 | 1242 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 0 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| Cap, veh/h | 129 | 235 | | 0 | 149 | | 1127 | 2744 | | 349 | 1890 | |
| Arrive On Green | 0.04 | 0.13 | 0.00 | 0.00 | 0.04 | 0.00 | 0.33 | 0.54 | 0.00 | 0.17 | 0.38 | 0.00 |
| Sat Flow, veh/h | 3456 | 1870 | 1585 | 0 | 3618 | 1572 | 3428 | 5066 | 1572 | 1739 | 4985 | 1547 |
| Grp Volume(v), veh/h | 68 | 100 | 0 | 0 | 84 | 0 | 495 | 2447 | 0 | 11 | 1242 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1870 | 1585 | 0 | 1763 | 1572 | 1714 | 1689 | 1572 | 1739 | 1662 | 1547 |
| Q Serve(g_s), s | 2.3 | 5.9 | 0.0 | 0.0 | 2.8 | 0.0 | 13.6 | 51.4 | 0.0 | 0.0 | 24.7 | 0.0 |
| Cycle Q Clear(g_c), s | 2.3 | 5.9 | 0.0 | 0.0 | 2.8 | 0.0 | 13.6 | 51.4 | 0.0 | 0.0 | 24.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 129 | 235 | | 0 | 149 | | 1127 | 2744 | | 349 | 1890 | |
| V/C Ratio(X) | 0.53 | 0.43 | | 0.00 | 0.56 | | 0.44 | 0.89 | | 0.03 | 0.66 | |
| Avail Cap(c_a), veh/h | 173 | 468 | | 0 | 529 | | 1127 | 2744 | | 349 | 1890 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.00 | 0.00 | 0.09 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 56.7 | 48.5 | 0.0 | 0.0 | 56.4 | 0.0 | 31.6 | 24.4 | 0.0 | 41.7 | 30.8 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 1.2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.3 | 4.9 | 0.0 | 0.0 | 1.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 2.9 | 0.0 | 0.0 | 1.3 | 0.0 | 5.7 | 20.8 | 0.0 | 0.3 | 10.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.0 | 49.7 | 0.0 | 0.0 | 56.7 | 0.0 | 31.9 | 29.3 | 0.0 | 41.8 | 32.6 | 0.0 |
| LnGrp LOS | E | D | | A | E | | C | C | | D | C | |
| Approach Vol, veh/h | | 168 | A | | 84 | A | | 2942 | A | | 1253 | A |
| Approach Delay, s/veh | | 53.9 | | | 56.7 | | | 29.7 | | | 32.7 | |
| Approach LOS | | D | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 26.9 | 72.0 | | 21.1 | 46.4 | 52.5 | 10.0 | 11.1 | | | | |
| Change Period (Y+Rc), s | 7.0 | 7.0 | | * 6 | 7.0 | 7.0 | 5.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 65.0 | | * 30 | 25.0 | 45.5 | 6.0 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.0 | 53.4 | | 7.9 | 15.6 | 26.7 | 4.3 | 4.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 10.5 | | 0.4 | 1.3 | 8.9 | 0.0 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 32.0 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

5: Marksheffel Rd & SH-94

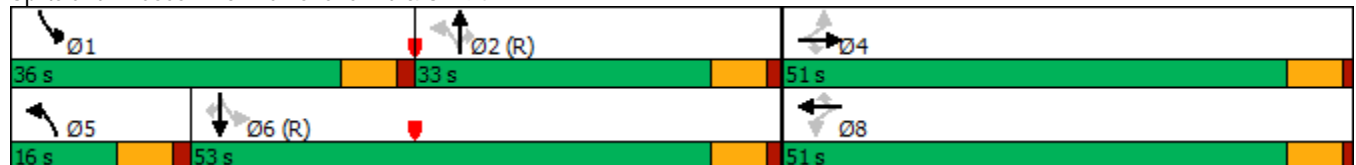


| Lane Group | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 254 | 54 | 28 | 297 | 77 | 54 | 270 | 18 | 256 | 501 | 3 |
| Future Volume (vph) | 254 | 54 | 28 | 297 | 77 | 54 | 270 | 18 | 256 | 501 | 3 |
| Turn Type | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 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 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 16.0 | 33.0 | 33.0 | 36.0 | 53.0 | 53.0 |
| Total Split (%) | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 13.3% | 27.5% | 27.5% | 30.0% | 44.2% | 44.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 27.8 | 27.8 | 27.8 | 27.8 | 27.8 | 66.7 | 59.6 | 59.6 | 79.3 | 68.6 | 68.6 |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.56 | 0.50 | 0.50 | 0.66 | 0.57 | 0.57 |
| v/c Ratio | 0.68 | 0.13 | 0.20 | 0.78 | 0.18 | 0.12 | 0.17 | 0.02 | 0.39 | 0.27 | 0.00 |
| Control Delay | 46.8 | 0.6 | 37.5 | 55.9 | 0.8 | 10.2 | 19.2 | 0.1 | 5.1 | 5.9 | 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 | 46.8 | 0.6 | 37.5 | 55.9 | 0.8 | 10.2 | 19.2 | 0.1 | 5.1 | 5.9 | 0.0 |
| LOS | D | A | D | E | A | B | B | A | A | A | A |
| Approach Delay | 38.7 | | | 44.0 | | | 16.7 | | | 5.6 | |
| Approach LOS | D | | | D | | | B | | | A | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 21.9
 Intersection Capacity Utilization 60.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary

2020 Adjusted Existing AM.syn

5: Marksheffel Rd & SH-94

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↕ | ↗ | ↘ | ↕ | ↖ |
| Traffic Volume (veh/h) | 0 | 254 | 54 | 28 | 297 | 77 | 54 | 270 | 18 | 256 | 501 | 3 |
| Future Volume (veh/h) | 0 | 254 | 54 | 28 | 297 | 77 | 54 | 270 | 18 | 256 | 501 | 3 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1781 | 1781 | 1781 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 0 | 276 | -104 | 30 | 323 | -25 | 59 | 293 | 20 | 278 | 545 | 3 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 8 | 8 | 8 | 6 | 6 | 6 | 5 | 5 | 5 | 3 | 3 | 3 |
| Cap, veh/h | 60 | 367 | 311 | 147 | 373 | 316 | 564 | 1899 | 847 | 751 | 2115 | 943 |
| Arrive On Green | 0.00 | 0.41 | 0.00 | 0.21 | 0.21 | 0.00 | 0.04 | 0.55 | 0.55 | 0.09 | 0.60 | 0.60 |
| Sat Flow, veh/h | 1030 | 1781 | 1510 | 1174 | 1811 | 1535 | 1739 | 3469 | 1547 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 0 | 276 | -104 | 30 | 323 | -25 | 59 | 293 | 20 | 278 | 545 | 3 |
| Grp Sat Flow(s),veh/h/ln | 1030 | 1781 | 1510 | 1174 | 1811 | 1535 | 1739 | 1735 | 1547 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 0.0 | 15.8 | 0.0 | 2.9 | 20.7 | 0.0 | 1.8 | 5.0 | 0.7 | 7.8 | 8.8 | 0.1 |
| Cycle Q Clear(g_c), s | 0.0 | 15.8 | 0.0 | 18.8 | 20.7 | 0.0 | 1.8 | 5.0 | 0.7 | 7.8 | 8.8 | 0.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 60 | 367 | 311 | 147 | 373 | 316 | 564 | 1899 | 847 | 751 | 2115 | 943 |
| V/C Ratio(X) | 0.00 | 0.75 | -0.33 | 0.20 | 0.87 | -0.08 | 0.10 | 0.15 | 0.02 | 0.37 | 0.26 | 0.00 |
| Avail Cap(c_a), veh/h | 234 | 668 | 566 | 345 | 679 | 576 | 639 | 1899 | 847 | 1029 | 2115 | 943 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.00 | 0.97 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 32.7 | 0.0 | 52.8 | 46.0 | 0.0 | 10.8 | 13.4 | 12.5 | 8.9 | 11.4 | 9.6 |
| Incr Delay (d2), s/veh | 0.0 | 3.0 | 0.0 | 0.7 | 6.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.3 | 0.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 5.8 | 0.0 | 0.9 | 9.9 | 0.0 | 0.7 | 2.0 | 0.3 | 2.9 | 3.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 35.7 | 0.0 | 53.5 | 52.2 | 0.0 | 10.9 | 13.6 | 12.5 | 9.3 | 11.7 | 9.6 |
| LnGrp LOS | A | D | A | D | D | A | B | B | B | A | B | A |
| Approach Vol, veh/h | | 172 | | | 328 | | | 372 | | | 826 | |
| Approach Delay, s/veh | | 57.3 | | | 56.3 | | | 13.1 | | | 10.8 | |
| Approach LOS | | E | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 17.1 | 72.2 | | 30.7 | 10.8 | 78.5 | | 30.7 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 29.5 | 26.5 | | 45.0 | 9.5 | 46.5 | | 45.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.8 | 7.0 | | 17.8 | 3.8 | 10.8 | | 22.7 | | | | |
| Green Ext Time (p_c), s | 0.8 | 1.8 | | 1.7 | 0.0 | 4.1 | | 2.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 24.8 |
| HCM 6th LOS | C |

Timings

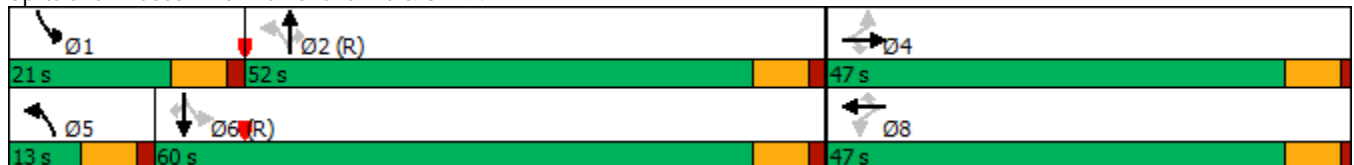
5: Marksheffel Rd & SH-94

| | → | ↘ | ↙ | ← | ↖ | ↗ | ↑ | ↘ | ↙ | ↓ | ↖ |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑ | ↗ | ↙ | ↑ | ↗ | ↙ | ↑↑ | ↗ | ↙ | ↑↑ | ↗ |
| Traffic Volume (vph) | 294 | 94 | 39 | 356 | 343 | 76 | 819 | 23 | 158 | 573 | 7 |
| Future Volume (vph) | 294 | 94 | 39 | 356 | 343 | 76 | 819 | 23 | 158 | 573 | 7 |
| Turn Type | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 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 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | 13.0 | 52.0 | 52.0 | 21.0 | 60.0 | 60.0 |
| Total Split (%) | 39.2% | 39.2% | 39.2% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 17.5% | 50.0% | 50.0% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 32.1 | 32.1 | 32.1 | 32.1 | 32.1 | 65.4 | 58.4 | 58.4 | 73.1 | 64.3 | 64.3 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.54 | 0.49 | 0.49 | 0.61 | 0.54 | 0.54 |
| v/c Ratio | 0.63 | 0.19 | 0.24 | 0.77 | 0.64 | 0.17 | 0.51 | 0.03 | 0.46 | 0.33 | 0.01 |
| Control Delay | 41.4 | 0.9 | 35.3 | 50.7 | 20.7 | 11.8 | 24.1 | 0.0 | 13.2 | 21.4 | 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 |
| Total Delay | 41.4 | 0.9 | 35.3 | 50.7 | 20.7 | 11.8 | 24.1 | 0.0 | 13.2 | 21.4 | 0.4 |
| LOS | D | A | D | D | C | B | C | A | B | C | A |
| Approach Delay | 31.6 | | | 35.9 | | | 22.5 | | | 19.4 | |
| Approach LOS | C | | | D | | | C | | | B | |

Intersection Summary

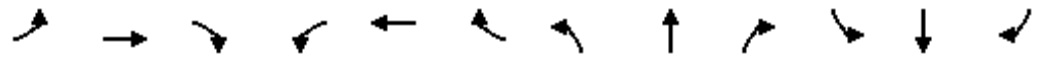
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 26.5
 Intersection LOS: C
 Intersection Capacity Utilization 75.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary
5: Marksheffel Rd & SH-94

2020 Adjusted Existing PM.syn
02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 0 | 294 | 94 | 39 | 356 | 343 | 76 | 819 | 23 | 158 | 573 | 7 |
| Future Volume (veh/h) | 0 | 294 | 94 | 39 | 356 | 343 | 76 | 819 | 23 | 158 | 573 | 7 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 0 | 313 | -60 | 41 | 379 | 259 | 81 | 871 | 24 | 168 | 610 | 7 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 60 | 442 | 374 | 177 | 442 | 374 | 510 | 1930 | 861 | 408 | 1975 | 881 |
| Arrive On Green | 0.00 | 0.48 | 0.00 | 0.24 | 0.24 | 0.24 | 0.04 | 0.54 | 0.54 | 0.06 | 0.56 | 0.56 |
| Sat Flow, veh/h | 784 | 1856 | 1572 | 1118 | 1856 | 1572 | 1781 | 3554 | 1585 | 1753 | 3497 | 1560 |
| Grp Volume(v), veh/h | 0 | 313 | -60 | 41 | 379 | 259 | 81 | 871 | 24 | 168 | 610 | 7 |
| Grp Sat Flow(s),veh/h/ln | 784 | 1856 | 1572 | 1118 | 1856 | 1572 | 1781 | 1777 | 1585 | 1753 | 1749 | 1560 |
| Q Serve(g_s), s | 0.0 | 16.0 | 0.0 | 4.1 | 23.5 | 18.0 | 2.4 | 17.8 | 0.8 | 5.0 | 11.0 | 0.2 |
| Cycle Q Clear(g_c), s | 0.0 | 16.0 | 0.0 | 20.1 | 23.5 | 18.0 | 2.4 | 17.8 | 0.8 | 5.0 | 11.0 | 0.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 60 | 442 | 374 | 177 | 442 | 374 | 510 | 1930 | 861 | 408 | 1975 | 881 |
| V/C Ratio(X) | 0.00 | 0.71 | -0.16 | 0.23 | 0.86 | 0.69 | 0.16 | 0.45 | 0.03 | 0.41 | 0.31 | 0.01 |
| Avail Cap(c_a), veh/h | 141 | 634 | 537 | 293 | 634 | 537 | 538 | 1930 | 861 | 513 | 1975 | 881 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 0.98 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 28.1 | 0.0 | 49.9 | 43.8 | 41.7 | 11.3 | 16.6 | 12.7 | 12.2 | 13.8 | 11.4 |
| Incr Delay (d2), s/veh | 0.0 | 2.1 | 0.0 | 0.7 | 8.1 | 2.3 | 0.1 | 0.8 | 0.1 | 0.7 | 0.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 5.8 | 0.0 | 1.2 | 11.7 | 7.2 | 1.0 | 7.3 | 0.3 | 2.0 | 4.4 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 30.2 | 0.0 | 50.6 | 51.8 | 44.0 | 11.5 | 17.4 | 12.8 | 12.9 | 14.2 | 11.4 |
| LnGrp LOS | A | C | A | D | D | D | B | B | B | B | B | B |
| Approach Vol, veh/h | | 253 | | | 679 | | | 976 | | | 785 | |
| Approach Delay, s/veh | | 37.4 | | | 48.8 | | | 16.8 | | | 13.9 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.8 | 71.7 | | 34.6 | 11.2 | 74.3 | | 34.6 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 45.5 | | 41.0 | 6.5 | 53.5 | | 41.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.0 | 19.8 | | 18.0 | 4.4 | 13.0 | | 25.5 | | | | |
| Green Ext Time (p_c), s | 0.2 | 6.9 | | 1.9 | 0.0 | 4.8 | | 3.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 25.9 |
| HCM 6th LOS | C |

Timings
5: Marksheffel Rd & SH-94

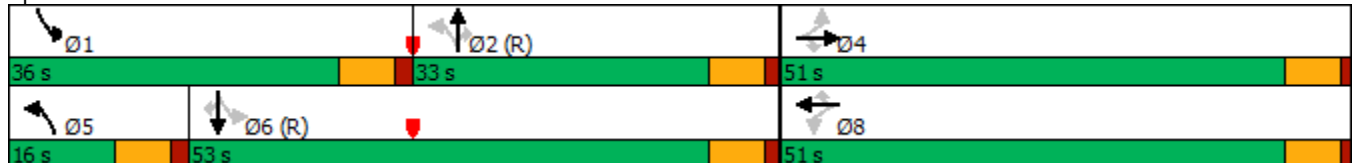


| Lane Group | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 275 | 60 | 35 | 320 | 85 | 60 | 290 | 20 | 275 | 540 | 5 |
| Future Volume (vph) | 275 | 60 | 35 | 320 | 85 | 60 | 290 | 20 | 275 | 540 | 5 |
| Turn Type | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 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 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 16.0 | 33.0 | 33.0 | 36.0 | 53.0 | 53.0 |
| Total Split (%) | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 13.3% | 27.5% | 27.5% | 30.0% | 44.2% | 44.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 29.6 | 29.6 | 29.6 | 29.6 | 29.6 | 64.0 | 56.7 | 56.7 | 77.7 | 66.5 | 66.5 |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.53 | 0.47 | 0.47 | 0.65 | 0.55 | 0.55 |
| v/c Ratio | 0.69 | 0.14 | 0.25 | 0.79 | 0.19 | 0.14 | 0.19 | 0.03 | 0.43 | 0.30 | 0.01 |
| Control Delay | 45.4 | 0.6 | 37.8 | 54.7 | 1.4 | 11.3 | 21.2 | 0.1 | 5.5 | 6.6 | 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 | 45.4 | 0.6 | 37.8 | 54.7 | 1.4 | 11.3 | 21.2 | 0.1 | 5.5 | 6.6 | 0.0 |
| LOS | D | A | D | D | A | B | C | A | A | A | A |
| Approach Delay | 37.4 | | | 43.1 | | | 18.5 | | | 6.2 | |
| Approach LOS | D | | | D | | | B | | | A | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 22.1
 Intersection LOS: C
 Intersection Capacity Utilization 65.1%
 ICU Level of Service C
 Analysis Period (min) 15

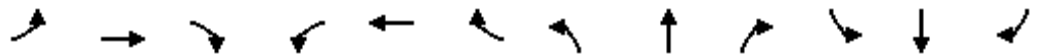
Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary
 5: Marksheffel Rd & SH-94

2026 Background AM.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 275 | 60 | 35 | 320 | 85 | 60 | 290 | 20 | 275 | 540 | 5 |
| Future Volume (veh/h) | 0 | 275 | 60 | 35 | 320 | 85 | 60 | 290 | 20 | 275 | 540 | 5 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1781 | 1781 | 1781 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 0 | 299 | -98 | 38 | 348 | -17 | 65 | 315 | 22 | 299 | 587 | 5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 8 | 8 | 8 | 6 | 6 | 6 | 5 | 5 | 5 | 3 | 3 | 3 |
| Cap, veh/h | 60 | 393 | 333 | 151 | 399 | 338 | 528 | 1817 | 811 | 725 | 2060 | 919 |
| Arrive On Green | 0.00 | 0.44 | 0.00 | 0.22 | 0.22 | 0.00 | 0.04 | 0.52 | 0.52 | 0.10 | 0.58 | 0.58 |
| Sat Flow, veh/h | 999 | 1781 | 1510 | 1144 | 1811 | 1535 | 1739 | 3469 | 1547 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 0 | 299 | -98 | 38 | 348 | -17 | 65 | 315 | 22 | 299 | 587 | 5 |
| Grp Sat Flow(s),veh/h/ln | 999 | 1781 | 1510 | 1144 | 1811 | 1535 | 1739 | 1735 | 1547 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 0.0 | 17.0 | 0.0 | 3.8 | 22.3 | 0.0 | 2.0 | 5.7 | 0.8 | 8.8 | 10.0 | 0.2 |
| Cycle Q Clear(g_c), s | 0.0 | 17.0 | 0.0 | 20.7 | 22.3 | 0.0 | 2.0 | 5.7 | 0.8 | 8.8 | 10.0 | 0.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 60 | 393 | 333 | 151 | 399 | 338 | 528 | 1817 | 811 | 725 | 2060 | 919 |
| V/C Ratio(X) | 0.00 | 0.76 | -0.29 | 0.25 | 0.87 | -0.05 | 0.12 | 0.17 | 0.03 | 0.41 | 0.28 | 0.01 |
| Avail Cap(c_a), veh/h | 214 | 668 | 566 | 327 | 679 | 576 | 601 | 1817 | 811 | 987 | 2060 | 919 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.00 | 0.97 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 30.9 | 0.0 | 52.6 | 45.1 | 0.0 | 12.1 | 15.0 | 13.8 | 9.8 | 12.4 | 10.4 |
| Incr Delay (d2), s/veh | 0.0 | 3.0 | 0.0 | 0.9 | 6.5 | 0.0 | 0.1 | 0.2 | 0.1 | 0.4 | 0.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 6.1 | 0.0 | 1.1 | 10.7 | 0.0 | 0.8 | 2.3 | 0.3 | 3.4 | 4.0 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 33.9 | 0.0 | 53.5 | 51.6 | 0.0 | 12.2 | 15.2 | 13.9 | 10.2 | 12.8 | 10.4 |
| LnGrp LOS | A | C | A | D | D | A | B | B | B | B | B | B |
| Approach Vol, veh/h | | 201 | | | 369 | | | 402 | | | 891 | |
| Approach Delay, s/veh | | 50.4 | | | 54.2 | | | 14.6 | | | 11.9 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 18.2 | 69.4 | | 32.5 | 10.9 | 76.6 | | 32.5 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 29.5 | 26.5 | | 45.0 | 9.5 | 46.5 | | 45.0 | | | | |
| Max Q Clear Time (g_c+l1), s | 10.8 | 7.7 | | 19.0 | 4.0 | 12.0 | | 24.3 | | | | |
| Green Ext Time (p_c), s | 0.8 | 2.0 | | 1.8 | 0.0 | 4.5 | | 2.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 25.0 |
| HCM 6th LOS | C |

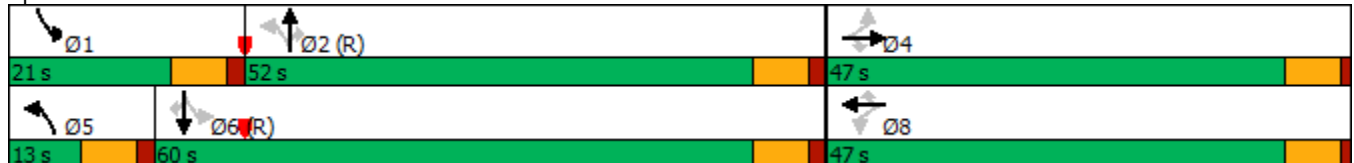
Timings
5: Marksheffel Rd & SH-94

| | → | ↘ | ↙ | ← | ↖ | ↗ | ↑ | ↘ | ↙ | ↓ | ↖ |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑ | ↗ | ↙ | ↑ | ↗ | ↙ | ↑↑ | ↗ | ↙ | ↑↑ | ↗ |
| Traffic Volume (vph) | 320 | 105 | 45 | 385 | 370 | 85 | 880 | 25 | 170 | 615 | 10 |
| Future Volume (vph) | 320 | 105 | 45 | 385 | 370 | 85 | 880 | 25 | 170 | 615 | 10 |
| Turn Type | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 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 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | 13.0 | 52.0 | 52.0 | 21.0 | 60.0 | 60.0 |
| Total Split (%) | 39.2% | 39.2% | 39.2% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 17.5% | 50.0% | 50.0% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 33.5 | 33.5 | 33.5 | 33.5 | 33.5 | 63.8 | 56.5 | 56.5 | 70.9 | 60.2 | 60.2 |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.53 | 0.47 | 0.47 | 0.59 | 0.50 | 0.50 |
| v/c Ratio | 0.66 | 0.21 | 0.29 | 0.80 | 0.68 | 0.21 | 0.56 | 0.03 | 0.53 | 0.38 | 0.01 |
| Control Delay | 41.3 | 1.6 | 36.5 | 51.4 | 24.1 | 12.6 | 26.2 | 0.1 | 15.2 | 24.2 | 1.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 41.3 | 1.6 | 36.5 | 51.4 | 24.1 | 12.6 | 26.2 | 0.1 | 15.2 | 24.2 | 1.5 |
| LOS | D | A | D | D | C | B | C | A | B | C | A |
| Approach Delay | 31.4 | | | 37.9 | | | 24.4 | | | 22.0 | |
| Approach LOS | C | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 28.4
 Intersection Capacity Utilization 79.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 5: Marksheffel Rd & SH-94





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 320 | 105 | 45 | 385 | 370 | 85 | 880 | 25 | 170 | 615 | 10 |
| Future Volume (veh/h) | 0 | 320 | 105 | 45 | 385 | 370 | 85 | 880 | 25 | 170 | 615 | 10 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 0 | 340 | -48 | 48 | 410 | 288 | 90 | 936 | 27 | 181 | 654 | 11 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 60 | 474 | 401 | 182 | 474 | 401 | 472 | 1849 | 825 | 376 | 1913 | 853 |
| Arrive On Green | 0.00 | 0.51 | 0.00 | 0.26 | 0.26 | 0.26 | 0.04 | 0.52 | 0.52 | 0.07 | 0.55 | 0.55 |
| Sat Flow, veh/h | 742 | 1856 | 1572 | 1079 | 1856 | 1572 | 1781 | 3554 | 1585 | 1753 | 3497 | 1560 |
| Grp Volume(v), veh/h | 0 | 340 | -48 | 48 | 410 | 288 | 90 | 936 | 27 | 181 | 654 | 11 |
| Grp Sat Flow(s),veh/h/ln | 742 | 1856 | 1572 | 1079 | 1856 | 1572 | 1781 | 1777 | 1585 | 1753 | 1749 | 1560 |
| Q Serve(g_s), s | 0.0 | 17.0 | 0.0 | 5.0 | 25.4 | 20.0 | 2.8 | 20.6 | 1.0 | 5.7 | 12.5 | 0.4 |
| Cycle Q Clear(g_c), s | 0.0 | 17.0 | 0.0 | 21.9 | 25.4 | 20.0 | 2.8 | 20.6 | 1.0 | 5.7 | 12.5 | 0.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 60 | 474 | 401 | 182 | 474 | 401 | 472 | 1849 | 825 | 376 | 1913 | 853 |
| V/C Ratio(X) | 0.00 | 0.72 | -0.12 | 0.26 | 0.87 | 0.72 | 0.19 | 0.51 | 0.03 | 0.48 | 0.34 | 0.01 |
| Avail Cap(c_a), veh/h | 124 | 634 | 537 | 276 | 634 | 537 | 498 | 1849 | 825 | 472 | 1913 | 853 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.00 | 0.98 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 26.0 | 0.0 | 49.3 | 42.7 | 40.7 | 12.7 | 18.8 | 14.1 | 14.0 | 15.2 | 12.4 |
| Incr Delay (d2), s/veh | 0.0 | 2.5 | 0.0 | 0.8 | 9.5 | 3.0 | 0.2 | 1.0 | 0.1 | 1.0 | 0.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 6.0 | 0.0 | 1.4 | 12.8 | 8.1 | 1.1 | 8.6 | 0.4 | 2.3 | 5.0 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 28.6 | 0.0 | 50.1 | 52.2 | 43.8 | 12.8 | 19.7 | 14.1 | 15.0 | 15.6 | 12.4 |
| LnGrp LOS | A | C | A | D | D | D | B | B | B | B | B | B |
| Approach Vol, veh/h | | 292 | | | 746 | | | 1053 | | | 846 | |
| Approach Delay, s/veh | | 33.3 | | | 48.8 | | | 19.0 | | | 15.5 | |
| Approach LOS | | C | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.5 | 68.9 | | 36.6 | 11.3 | 72.1 | | 36.6 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 45.5 | | 41.0 | 6.5 | 53.5 | | 41.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.7 | 22.6 | | 19.0 | 4.8 | 14.5 | | 27.4 | | | | |
| Green Ext Time (p_c), s | 0.3 | 7.2 | | 2.0 | 0.0 | 5.2 | | 3.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 27.0 |
| HCM 6th LOS | C |

Timings

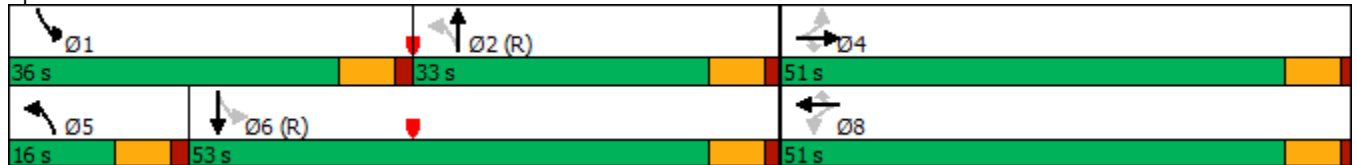
5: Marksheffel Rd & SH-94

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 150 | 300 | 160 | 35 | 345 | 115 | 190 | 470 | 25 | 300 | 695 | 245 |
| Future Volume (vph) | 150 | 300 | 160 | 35 | 345 | 115 | 190 | 470 | 25 | 300 | 695 | 245 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | Free | 6 | | Free |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | | 11.5 | 11.5 | |
| Total Split (s) | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 16.0 | 33.0 | | 36.0 | 53.0 | |
| Total Split (%) | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 13.3% | 27.5% | | 30.0% | 44.2% | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | | 6.5 | 6.5 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | None | None | None | None | None | None | C-Max | | None | C-Max | |
| Act Effct Green (s) | 35.5 | 35.5 | 35.5 | 35.5 | 35.5 | 35.5 | 58.5 | 48.1 | 120.0 | 69.8 | 55.2 | 120.0 |
| Actuated g/C Ratio | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.49 | 0.40 | 1.00 | 0.58 | 0.46 | 1.00 |
| v/c Ratio | 1.07 | 0.63 | 0.31 | 0.20 | 0.71 | 0.22 | 0.54 | 0.37 | 0.02 | 0.60 | 0.47 | 0.17 |
| Control Delay | 127.2 | 36.3 | 3.3 | 30.5 | 44.2 | 3.3 | 22.8 | 24.9 | 0.0 | 22.6 | 23.3 | 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 | 127.2 | 36.3 | 3.3 | 30.5 | 44.2 | 3.3 | 22.8 | 24.9 | 0.0 | 22.6 | 23.3 | 0.2 |
| LOS | F | D | A | C | D | A | C | C | A | C | C | A |
| Approach Delay | | 50.0 | | | 33.8 | | | 23.4 | | | 18.6 | |
| Approach LOS | | D | | | C | | | C | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 28.5
 Intersection Capacity Utilization 77.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary

2026 Total AM Improved.syn

5: Marksheffel Rd & SH-94

02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 150 | 300 | 160 | 35 | 345 | 115 | 190 | 470 | 25 | 300 | 695 | 245 |
| Future Volume (veh/h) | 150 | 300 | 160 | 35 | 345 | 115 | 190 | 470 | 25 | 300 | 695 | 245 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1781 | 1781 | 1781 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 163 | 326 | 11 | 38 | 375 | 16 | 207 | 511 | 0 | 326 | 755 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 8 | 8 | 8 | 6 | 6 | 6 | 5 | 5 | 5 | 3 | 3 | 3 |
| Cap, veh/h | 239 | 636 | 539 | 313 | 647 | 548 | 352 | 1216 | | 551 | 1429 | |
| Arrive On Green | 0.60 | 0.60 | 0.60 | 0.36 | 0.36 | 0.36 | 0.16 | 0.70 | 0.00 | 0.09 | 0.27 | 0.00 |
| Sat Flow, veh/h | 946 | 1781 | 1510 | 1010 | 1811 | 1535 | 1739 | 3469 | 1547 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 163 | 326 | 11 | 38 | 375 | 16 | 207 | 511 | 0 | 326 | 755 | 0 |
| Grp Sat Flow(s),veh/h/ln | 946 | 1781 | 1510 | 1010 | 1811 | 1535 | 1739 | 1735 | 1547 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 19.9 | 12.8 | 0.4 | 3.5 | 20.1 | 0.8 | 9.5 | 7.5 | 0.0 | 13.2 | 21.9 | 0.0 |
| Cycle Q Clear(g_c), s | 40.0 | 12.8 | 0.4 | 16.3 | 20.1 | 0.8 | 9.5 | 7.5 | 0.0 | 13.2 | 21.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 239 | 636 | 539 | 313 | 647 | 548 | 352 | 1216 | | 551 | 1429 | |
| V/C Ratio(X) | 0.68 | 0.51 | 0.02 | 0.12 | 0.58 | 0.03 | 0.59 | 0.42 | | 0.59 | 0.53 | |
| Avail Cap(c_a), veh/h | 256 | 668 | 566 | 331 | 679 | 576 | 352 | 1216 | | 748 | 1429 | |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.67 | 0.67 | 0.67 |
| Upstream Filter(I) | 0.89 | 0.89 | 0.89 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.78 | 0.78 | 0.00 |
| Uniform Delay (d), s/veh | 33.3 | 18.1 | 15.6 | 35.0 | 31.3 | 25.1 | 21.9 | 12.8 | 0.0 | 19.8 | 33.9 | 0.0 |
| Incr Delay (d2), s/veh | 5.9 | 0.6 | 0.0 | 0.2 | 1.1 | 0.0 | 2.5 | 1.1 | 0.0 | 0.8 | 1.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.5 | 4.4 | 0.1 | 0.9 | 9.0 | 0.3 | 3.7 | 2.6 | 0.0 | 5.9 | 10.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.3 | 18.7 | 15.7 | 35.2 | 32.4 | 25.1 | 24.5 | 13.9 | 0.0 | 20.6 | 35.0 | 0.0 |
| LnGrp LOS | D | B | B | D | C | C | C | B | | C | D | |
| Approach Vol, veh/h | | 500 | | | 429 | | | 718 | A | | 1081 | A |
| Approach Delay, s/veh | | 25.3 | | | 32.4 | | | 16.9 | | | 30.7 | |
| Approach LOS | | C | | | C | | | B | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.6 | 48.5 | | 48.9 | 16.0 | 55.1 | | 48.9 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 29.5 | 26.5 | | 45.0 | 9.5 | 46.5 | | 45.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 15.2 | 9.5 | | 42.0 | 11.5 | 23.9 | | 22.1 | | | | |
| Green Ext Time (p_c), s | 0.8 | 3.2 | | 0.9 | 0.0 | 5.5 | | 2.6 | | | | |

Intersection Summary

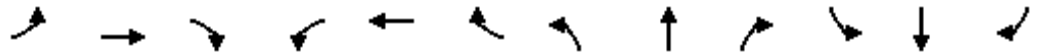
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 26.3 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

5: Marksheffel Rd & SH-94

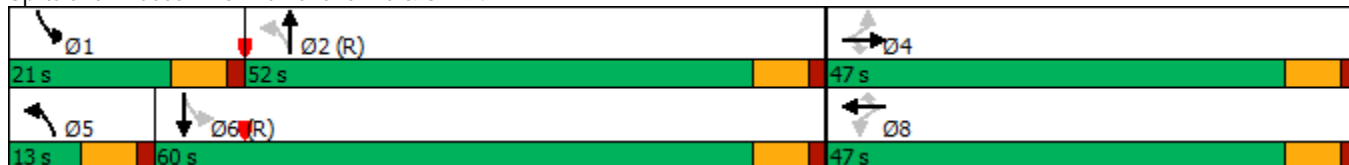


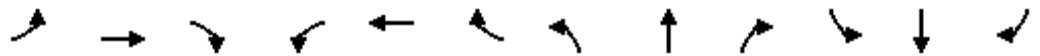
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 140 | 340 | 265 | 45 | 405 | 395 | 225 | 1100 | 30 | 200 | 845 | 255 |
| Future Volume (vph) | 140 | 340 | 265 | 45 | 405 | 395 | 225 | 1100 | 30 | 200 | 845 | 255 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | Free | 6 | | Free |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | | 11.5 | 11.5 | |
| Total Split (s) | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | 13.0 | 52.0 | | 21.0 | 60.0 | |
| Total Split (%) | 39.2% | 39.2% | 39.2% | 39.2% | 39.2% | 39.2% | 10.8% | 43.3% | | 17.5% | 50.0% | |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | | 6.5 | 6.5 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | None | None | None | None | None | None | C-Max | | None | C-Max | |
| Act Effct Green (s) | 37.6 | 37.6 | 37.6 | 37.6 | 37.6 | 37.6 | 57.8 | 50.1 | 120.0 | 68.1 | 55.7 | 120.0 |
| Actuated g/C Ratio | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.48 | 0.42 | 1.00 | 0.57 | 0.46 | 1.00 |
| v/c Ratio | 1.08 | 0.63 | 0.45 | 0.25 | 0.75 | 0.69 | 0.78 | 0.79 | 0.02 | 0.80 | 0.56 | 0.17 |
| Control Delay | 133.6 | 36.7 | 9.0 | 32.8 | 45.1 | 25.8 | 32.9 | 28.1 | 0.0 | 50.5 | 14.3 | 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 | 133.6 | 36.7 | 9.0 | 32.8 | 45.1 | 25.8 | 32.9 | 28.1 | 0.0 | 50.5 | 14.3 | 0.2 |
| LOS | F | D | A | C | D | C | C | C | A | D | B | A |
| Approach Delay | | 45.0 | | | 35.4 | | | 28.3 | | | 17.1 | |
| Approach LOS | | D | | | D | | | C | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 29.2
 Intersection Capacity Utilization 91.4%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 5: Marksheffel Rd & SH-94





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 140 | 340 | 265 | 45 | 405 | 395 | 225 | 1100 | 30 | 200 | 845 | 255 |
| Future Volume (veh/h) | 140 | 340 | 265 | 45 | 405 | 395 | 225 | 1100 | 30 | 200 | 845 | 255 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 149 | 362 | 122 | 48 | 431 | 314 | 239 | 1170 | 0 | 213 | 899 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 161 | 634 | 537 | 239 | 634 | 537 | 284 | 1472 | | 328 | 1559 | |
| Arrive On Green | 0.45 | 0.45 | 0.45 | 0.34 | 0.34 | 0.34 | 0.11 | 0.83 | 0.00 | 0.03 | 0.15 | 0.00 |
| Sat Flow, veh/h | 710 | 1856 | 1572 | 904 | 1856 | 1572 | 1781 | 3554 | 1585 | 1753 | 3497 | 1560 |
| Grp Volume(v), veh/h | 149 | 362 | 122 | 48 | 431 | 314 | 239 | 1170 | 0 | 213 | 899 | 0 |
| Grp Sat Flow(s),veh/h/ln | 710 | 1856 | 1572 | 904 | 1856 | 1572 | 1781 | 1777 | 1585 | 1753 | 1749 | 1560 |
| Q Serve(g_s), s | 17.1 | 17.2 | 5.7 | 5.4 | 23.9 | 19.7 | 6.5 | 19.9 | 0.0 | 8.1 | 28.7 | 0.0 |
| Cycle Q Clear(g_c), s | 41.0 | 17.2 | 5.7 | 22.6 | 23.9 | 19.7 | 6.5 | 19.9 | 0.0 | 8.1 | 28.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 161 | 634 | 537 | 239 | 634 | 537 | 284 | 1472 | | 328 | 1559 | |
| V/C Ratio(X) | 0.92 | 0.57 | 0.23 | 0.20 | 0.68 | 0.58 | 0.84 | 0.79 | | 0.65 | 0.58 | |
| Avail Cap(c_a), veh/h | 161 | 634 | 537 | 239 | 634 | 537 | 284 | 1472 | | 389 | 1559 | |
| HCM Platoon Ratio | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I) | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.87 | 0.87 | 0.00 |
| Uniform Delay (d), s/veh | 47.4 | 26.3 | 23.1 | 40.8 | 33.9 | 32.5 | 31.6 | 7.7 | 0.0 | 21.4 | 40.6 | 0.0 |
| Incr Delay (d2), s/veh | 46.4 | 1.1 | 0.2 | 0.4 | 2.9 | 1.6 | 19.7 | 4.5 | 0.0 | 2.5 | 1.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.5 | 7.2 | 2.1 | 1.2 | 11.2 | 7.7 | 5.6 | 4.1 | 0.0 | 3.8 | 13.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 93.9 | 27.4 | 23.3 | 41.2 | 36.8 | 34.1 | 51.3 | 12.3 | 0.0 | 24.0 | 42.0 | 0.0 |
| LnGrp LOS | F | C | C | D | D | C | D | B | | C | D | |
| Approach Vol, veh/h | | 633 | | | 793 | | | 1409 | A | | 1112 | A |
| Approach Delay, s/veh | | 42.2 | | | 36.0 | | | 18.9 | | | 38.5 | |
| Approach LOS | | D | | | D | | | B | | | D | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.8 | 56.2 | | 47.0 | 13.0 | 60.0 | | 47.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 45.5 | | 41.0 | 6.5 | 53.5 | | 41.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.1 | 21.9 | | 43.0 | 8.5 | 30.7 | | 25.9 | | | | |
| Green Ext Time (p_c), s | 0.2 | 9.5 | | 0.0 | 0.0 | 6.8 | | 3.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 31.6 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
5: Marksheffel Rd & SH-94

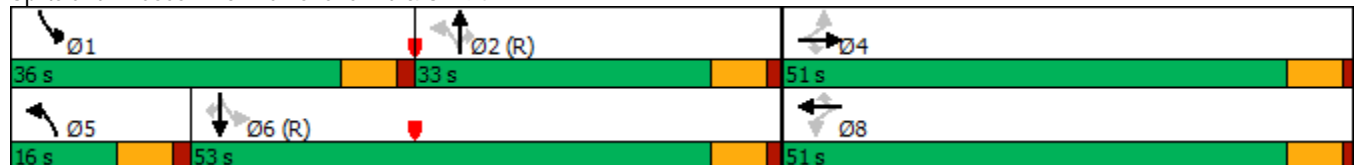


| Lane Group | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 320 | 130 | 40 | 375 | 100 | 250 | 555 | 25 | 325 | 705 | 5 |
| Future Volume (vph) | 320 | 130 | 40 | 375 | 100 | 250 | 555 | 25 | 325 | 705 | 5 |
| Turn Type | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 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 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 16.0 | 33.0 | 33.0 | 36.0 | 53.0 | 53.0 |
| Total Split (%) | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% | 13.3% | 27.5% | 27.5% | 30.0% | 44.2% | 44.2% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 33.7 | 33.7 | 33.7 | 33.7 | 33.7 | 61.4 | 45.8 | 45.8 | 70.0 | 51.7 | 51.7 |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.51 | 0.38 | 0.38 | 0.58 | 0.43 | 0.43 |
| v/c Ratio | 0.70 | 0.27 | 0.27 | 0.81 | 0.20 | 0.63 | 0.46 | 0.04 | 0.66 | 0.51 | 0.01 |
| Control Delay | 42.9 | 3.8 | 35.5 | 52.5 | 2.3 | 24.5 | 27.6 | 0.4 | 14.3 | 16.4 | 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 | 42.9 | 3.8 | 35.5 | 52.5 | 2.3 | 24.5 | 27.6 | 0.4 | 14.3 | 16.4 | 0.0 |
| LOS | D | A | D | D | A | C | C | A | B | B | A |
| Approach Delay | 31.6 | | | 41.4 | | | 25.9 | | | 15.7 | |
| Approach LOS | C | | | D | | | C | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 25.9
 Intersection Capacity Utilization 78.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary

2040 Background AM.syn

5: Marksheffel Rd & SH-94

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 320 | 130 | 40 | 375 | 100 | 250 | 555 | 25 | 325 | 705 | 5 |
| Future Volume (veh/h) | 0 | 320 | 130 | 40 | 375 | 100 | 250 | 555 | 25 | 325 | 705 | 5 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1781 | 1781 | 1781 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 0 | 348 | -22 | 43 | 408 | 0 | 272 | 603 | 27 | 353 | 766 | 5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 8 | 8 | 8 | 6 | 6 | 6 | 5 | 5 | 5 | 3 | 3 | 3 |
| Cap, veh/h | 60 | 453 | 384 | 159 | 461 | 391 | 430 | 1611 | 719 | 629 | 1791 | 799 |
| Arrive On Green | 0.00 | 0.51 | 0.00 | 0.25 | 0.25 | 0.00 | 0.16 | 0.93 | 0.93 | 0.08 | 0.34 | 0.34 |
| Sat Flow, veh/h | 931 | 1781 | 1510 | 1020 | 1811 | 1535 | 1739 | 3469 | 1547 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 0 | 348 | -22 | 43 | 408 | 0 | 272 | 603 | 27 | 353 | 766 | 5 |
| Grp Sat Flow(s),veh/h/ln | 931 | 1781 | 1510 | 1020 | 1811 | 1535 | 1739 | 1735 | 1547 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 0.0 | 18.9 | 0.0 | 4.8 | 26.0 | 0.0 | 9.5 | 2.3 | 0.2 | 11.8 | 20.1 | 0.3 |
| Cycle Q Clear(g_c), s | 0.0 | 18.9 | 0.0 | 23.7 | 26.0 | 0.0 | 9.5 | 2.3 | 0.2 | 11.8 | 20.1 | 0.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 60 | 453 | 384 | 159 | 461 | 391 | 430 | 1611 | 719 | 629 | 1791 | 799 |
| V/C Ratio(X) | 0.00 | 0.77 | -0.06 | 0.27 | 0.89 | 0.00 | 0.63 | 0.37 | 0.04 | 0.56 | 0.43 | 0.01 |
| Avail Cap(c_a), veh/h | 172 | 668 | 566 | 282 | 679 | 576 | 430 | 1611 | 719 | 846 | 1791 | 799 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.67 | 0.67 | 0.67 |
| Upstream Filter(l) | 0.00 | 0.94 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 |
| Uniform Delay (d), s/veh | 0.0 | 26.6 | 0.0 | 51.1 | 43.0 | 0.0 | 16.9 | 2.4 | 2.3 | 13.0 | 26.1 | 19.6 |
| Incr Delay (d2), s/veh | 0.0 | 3.0 | 0.0 | 0.9 | 9.5 | 0.0 | 3.0 | 0.7 | 0.1 | 0.7 | 0.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 6.4 | 0.0 | 1.3 | 12.8 | 0.0 | 3.9 | 0.8 | 0.1 | 5.1 | 9.2 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 29.6 | 0.0 | 52.0 | 52.6 | 0.0 | 19.9 | 3.0 | 2.4 | 13.7 | 26.8 | 19.6 |
| LnGrp LOS | A | C | A | D | D | A | B | A | A | B | C | B |
| Approach Vol, veh/h | | 326 | | | 451 | | | 902 | | | 1124 | |
| Approach Delay, s/veh | | 31.6 | | | 52.5 | | | 8.1 | | | 22.6 | |
| Approach LOS | | C | | | D | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 21.2 | 62.2 | | 36.5 | 16.0 | 67.5 | | 36.5 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 29.5 | 26.5 | | 45.0 | 9.5 | 46.5 | | 45.0 | | | | |
| Max Q Clear Time (g_c+l1), s | 13.8 | 4.3 | | 20.9 | 11.5 | 22.1 | | 28.0 | | | | |
| Green Ext Time (p_c), s | 1.0 | 4.3 | | 2.1 | 0.0 | 5.8 | | 2.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 23.8 |
| HCM 6th LOS | C |

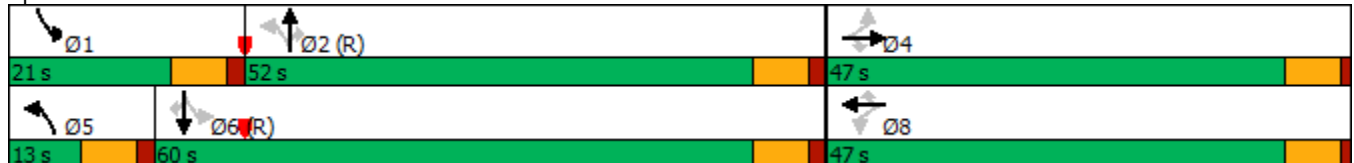
Timings
5: Marksheffel Rd & SH-94

| | → | ↘ | ↙ | ← | ↖ | ↗ | ↑ | ↘ | ↙ | ↓ | ↖ |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑ | ↗ | ↙ | ↑ | ↗ | ↙ | ↑↑ | ↗ | ↙ | ↑↑ | ↗ |
| Traffic Volume (vph) | 375 | 315 | 50 | 450 | 435 | 215 | 1170 | 30 | 200 | 955 | 10 |
| Future Volume (vph) | 375 | 315 | 50 | 450 | 435 | 215 | 1170 | 30 | 200 | 955 | 10 |
| Turn Type | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 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 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | 13.0 | 52.0 | 52.0 | 21.0 | 60.0 | 60.0 |
| Total Split (%) | 39.2% | 39.2% | 39.2% | 39.2% | 39.2% | 10.8% | 43.3% | 43.3% | 17.5% | 50.0% | 50.0% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 36.9 | 36.9 | 36.9 | 36.9 | 36.9 | 60.3 | 50.5 | 50.5 | 67.2 | 54.4 | 54.4 |
| Actuated g/C Ratio | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.50 | 0.42 | 0.42 | 0.56 | 0.45 | 0.45 |
| v/c Ratio | 0.70 | 0.55 | 0.34 | 0.85 | 0.77 | 0.80 | 0.84 | 0.04 | 0.83 | 0.65 | 0.01 |
| Control Delay | 41.2 | 16.2 | 37.5 | 53.1 | 32.0 | 36.7 | 31.1 | 0.1 | 39.9 | 35.2 | 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 | 41.2 | 16.2 | 37.5 | 53.1 | 32.0 | 36.7 | 31.1 | 0.1 | 39.9 | 35.2 | 0.0 |
| LOS | D | B | D | D | C | D | C | A | D | D | A |
| Approach Delay | 29.8 | | | 42.4 | | | 31.3 | | | 35.7 | |
| Approach LOS | C | | | D | | | C | | | D | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 34.8
 Intersection Capacity Utilization 92.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary

2040 Background PM.syn

5: Marksheffel Rd & SH-94

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 0 | 375 | 315 | 50 | 450 | 435 | 215 | 1170 | 30 | 200 | 955 | 10 |
| Future Volume (veh/h) | 0 | 375 | 315 | 50 | 450 | 435 | 215 | 1170 | 30 | 200 | 955 | 10 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 0 | 399 | 175 | 53 | 479 | 357 | 229 | 1245 | 32 | 213 | 1016 | 11 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 60 | 540 | 458 | 171 | 540 | 458 | 282 | 1676 | 747 | 371 | 1736 | 774 |
| Arrive On Green | 0.00 | 0.58 | 0.58 | 0.29 | 0.29 | 0.29 | 0.11 | 0.94 | 0.94 | 0.03 | 0.16 | 0.16 |
| Sat Flow, veh/h | 652 | 1856 | 1572 | 832 | 1856 | 1572 | 1781 | 3554 | 1585 | 1753 | 3497 | 1560 |
| Grp Volume(v), veh/h | 0 | 399 | 175 | 53 | 479 | 357 | 229 | 1245 | 32 | 213 | 1016 | 11 |
| Grp Sat Flow(s),veh/h/ln | 652 | 1856 | 1572 | 832 | 1856 | 1572 | 1781 | 1777 | 1585 | 1753 | 1749 | 1560 |
| Q Serve(g_s), s | 0.0 | 18.9 | 7.2 | 7.1 | 29.6 | 25.0 | 6.5 | 8.0 | 0.1 | 7.2 | 32.2 | 0.7 |
| Cycle Q Clear(g_c), s | 0.0 | 18.9 | 7.2 | 26.0 | 29.6 | 25.0 | 6.5 | 8.0 | 0.1 | 7.2 | 32.2 | 0.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 60 | 540 | 458 | 171 | 540 | 458 | 282 | 1676 | 747 | 371 | 1736 | 774 |
| V/C Ratio(X) | 0.00 | 0.74 | 0.38 | 0.31 | 0.89 | 0.78 | 0.81 | 0.74 | 0.04 | 0.57 | 0.59 | 0.01 |
| Avail Cap(c_a), veh/h | 93 | 634 | 537 | 213 | 634 | 537 | 282 | 1676 | 747 | 445 | 1736 | 774 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(l) | 0.00 | 0.92 | 0.92 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 |
| Uniform Delay (d), s/veh | 0.0 | 21.7 | 19.3 | 48.1 | 40.6 | 39.0 | 27.3 | 2.0 | 1.8 | 15.1 | 38.7 | 25.6 |
| Incr Delay (d2), s/veh | 0.0 | 3.5 | 0.5 | 1.0 | 12.9 | 6.2 | 16.5 | 3.0 | 0.1 | 1.3 | 1.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 6.2 | 0.1 | 1.5 | 15.3 | 10.4 | 4.8 | 1.7 | 0.1 | 3.3 | 15.5 | 0.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 25.3 | 19.8 | 49.1 | 53.5 | 45.2 | 43.8 | 5.1 | 1.9 | 16.5 | 40.1 | 25.6 |
| LnGrp LOS | A | C | B | D | D | D | D | A | A | B | D | C |
| Approach Vol, veh/h | | 574 | | | 889 | | | 1506 | | | 1240 | |
| Approach Delay, s/veh | | 23.6 | | | 49.9 | | | 10.9 | | | 35.9 | |
| Approach LOS | | C | | | D | | | B | | | D | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.0 | 63.1 | | 40.9 | 13.0 | 66.1 | | 40.9 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 45.5 | | 41.0 | 6.5 | 53.5 | | 41.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.2 | 10.0 | | 20.9 | 8.5 | 34.2 | | 31.6 | | | | |
| Green Ext Time (p_c), s | 0.3 | 12.3 | | 3.0 | 0.0 | 7.4 | | 3.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 28.2 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings
5: Marksheffel Rd & SH-94

2040 Total AM.syn
02/18/2021



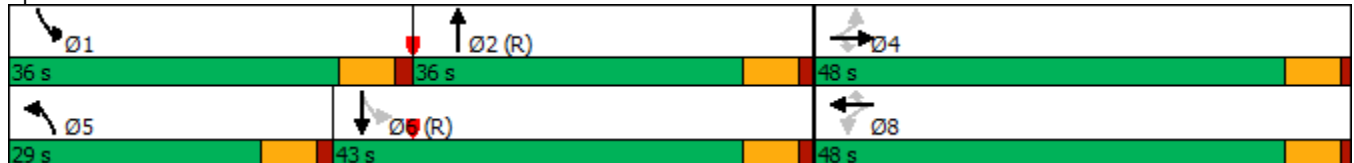
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑ | ↗ | ↘↗ | ↑↑↗ | ↘ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 165 | 350 | 310 | 40 | 405 | 135 | 430 | 810 | 355 | 975 | 275 |
| Future Volume (vph) | 165 | 350 | 310 | 40 | 405 | 135 | 430 | 810 | 355 | 975 | 275 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Prot | NA | pm+pt | NA | Free |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | | | 6 | | Free |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | 8 | 5 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | 29.0 | 36.0 | 36.0 | 43.0 | 43.0 |
| Total Split (%) | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | 24.2% | 30.0% | 30.0% | 35.8% | 35.8% |
| Yellow Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | | | | | | | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | None | None | C-Max | None | C-Max | |
| Act Effect Green (s) | 34.1 | 34.1 | 34.1 | 34.1 | 34.1 | 34.1 | 20.6 | 41.5 | 71.4 | 46.2 | 120.0 |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.17 | 0.35 | 0.60 | 0.38 | 1.00 |
| v/c Ratio | 0.90 | 0.40 | 0.51 | 0.19 | 0.45 | 0.27 | 0.82 | 0.54 | 0.76 | 0.55 | 0.19 |
| Control Delay | 73.2 | 30.9 | 3.8 | 31.1 | 35.7 | 5.4 | 65.3 | 29.3 | 47.5 | 24.6 | 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 |
| Total Delay | 73.2 | 30.9 | 3.8 | 31.1 | 35.7 | 5.4 | 65.3 | 29.3 | 47.5 | 24.6 | 0.2 |
| LOS | E | C | A | C | D | A | E | C | D | C | A |
| Approach Delay | | 29.2 | | | 28.3 | | | 41.5 | | 25.5 | |
| Approach LOS | | C | | | C | | | D | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 31.3
 Intersection Capacity Utilization 77.2%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary

2040 Total AM.syn

5: Marksheffel Rd & SH-94

02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑ | ↗ | ↘↗ | ↑↑↗ | | ↘ | ↑↑↑ | ↗ |
| Traffic Volume (veh/h) | 165 | 350 | 310 | 40 | 405 | 135 | 430 | 810 | 30 | 355 | 975 | 275 |
| Future Volume (veh/h) | 165 | 350 | 310 | 40 | 405 | 135 | 430 | 810 | 30 | 355 | 975 | 275 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1781 | 1781 | 1781 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 179 | 380 | 174 | 43 | 440 | 38 | 467 | 880 | 0 | 386 | 1060 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 8 | 8 | 8 | 6 | 6 | 6 | 5 | 5 | 5 | 3 | 3 | 3 |
| Cap, veh/h | 257 | 1100 | 491 | 277 | 1119 | 499 | 524 | 1812 | | 511 | 1830 | |
| Arrive On Green | 0.54 | 0.54 | 0.54 | 0.33 | 0.33 | 0.33 | 0.31 | 0.73 | 0.00 | 0.05 | 0.12 | 0.00 |
| Sat Flow, veh/h | 873 | 3385 | 1510 | 827 | 3441 | 1535 | 3374 | 5149 | 0 | 1767 | 5066 | 1572 |
| Grp Volume(v), veh/h | 179 | 380 | 174 | 43 | 440 | 38 | 467 | 880 | 0 | 386 | 1060 | 0 |
| Grp Sat Flow(s),veh/h/ln | 873 | 1692 | 1510 | 827 | 1721 | 1535 | 1687 | 1662 | 0 | 1767 | 1689 | 1572 |
| Q Serve(g_s), s | 23.3 | 7.6 | 7.8 | 4.9 | 11.9 | 2.1 | 15.8 | 8.9 | 0.0 | 15.4 | 23.8 | 0.0 |
| Cycle Q Clear(g_c), s | 35.2 | 7.6 | 7.8 | 12.4 | 11.9 | 2.1 | 15.8 | 8.9 | 0.0 | 15.4 | 23.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 257 | 1100 | 491 | 277 | 1119 | 499 | 524 | 1812 | | 511 | 1830 | |
| V/C Ratio(X) | 0.70 | 0.35 | 0.35 | 0.16 | 0.39 | 0.08 | 0.89 | 0.49 | | 0.75 | 0.58 | |
| Avail Cap(c_a), veh/h | 279 | 1185 | 528 | 297 | 1204 | 537 | 633 | 1812 | | 675 | 1830 | |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I) | 0.78 | 0.78 | 0.78 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.81 | 0.81 | 0.00 |
| Uniform Delay (d), s/veh | 32.2 | 20.2 | 20.3 | 34.5 | 31.3 | 28.0 | 40.4 | 11.6 | 0.0 | 21.2 | 44.2 | 0.0 |
| Incr Delay (d2), s/veh | 5.2 | 0.1 | 0.3 | 0.3 | 0.2 | 0.1 | 13.1 | 0.9 | 0.0 | 2.8 | 1.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.7 | 2.8 | 2.6 | 1.0 | 5.0 | 0.8 | 6.5 | 2.7 | 0.0 | 7.5 | 11.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 37.4 | 20.4 | 20.6 | 34.7 | 31.6 | 28.1 | 53.5 | 12.6 | 0.0 | 24.0 | 45.3 | 0.0 |
| LnGrp LOS | D | C | C | C | C | C | D | B | | C | D | |
| Approach Vol, veh/h | | 733 | | | 521 | | | 1347 | A | | 1446 | A |
| Approach Delay, s/veh | | 24.6 | | | 31.6 | | | 26.8 | | | 39.6 | |
| Approach LOS | | C | | | C | | | C | | | D | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 24.9 | 50.1 | | 45.0 | 25.1 | 49.9 | | 45.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | | 6.0 | 6.5 | 6.5 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 29.5 | 29.5 | | 42.0 | 22.5 | 36.5 | | 42.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 17.4 | 10.9 | | 37.2 | 17.8 | 25.8 | | 14.4 | | | | |
| Green Ext Time (p_c), s | 1.0 | 6.1 | | 1.8 | 0.8 | 5.4 | | 3.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 31.6 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
5: Marksheffel Rd & SH-94

2040 Total PM.syn
02/18/2021



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↘ | ↑↑ | ↗ | ↘ | ↑↑ | ↗ | ↘↗ | ↑↑↗ | ↘ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 235 | 400 | 665 | 50 | 475 | 480 | 565 | 1735 | 230 | 1480 | 285 |
| Future Volume (vph) | 235 | 400 | 665 | 50 | 475 | 480 | 565 | 1735 | 230 | 1480 | 285 |
| Turn Type | pm+pt | NA | pm+ov | pm+pt | NA | pm+ov | Prot | NA | pm+pt | NA | Free |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | | | 6 | | Free |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 11.0 | 11.5 | 9.5 | 11.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Total Split (s) | 15.0 | 38.0 | 36.0 | 9.5 | 32.5 | 19.0 | 36.0 | 53.5 | 19.0 | 36.5 | |
| Total Split (%) | 12.5% | 31.7% | 30.0% | 7.9% | 27.1% | 15.8% | 30.0% | 44.6% | 15.8% | 30.4% | |
| Yellow Time (s) | 3.5 | 5.0 | 5.0 | 3.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.5 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 6.0 | 6.5 | 4.5 | 6.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lead | Lag | Lead | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | None | C-Max | |
| Act Effct Green (s) | 39.0 | 29.9 | 63.0 | 29.0 | 22.5 | 44.4 | 27.0 | 47.6 | 52.3 | 36.4 | 120.0 |
| Actuated g/C Ratio | 0.32 | 0.25 | 0.52 | 0.24 | 0.19 | 0.37 | 0.22 | 0.40 | 0.44 | 0.30 | 1.00 |
| v/c Ratio | 1.02 | 0.49 | 0.81 | 0.21 | 0.77 | 0.74 | 0.78 | 0.94 | 0.84 | 1.04 | 0.20 |
| Control Delay | 89.7 | 43.2 | 23.0 | 29.3 | 54.3 | 28.6 | 45.7 | 57.6 | 58.2 | 84.7 | 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 |
| Total Delay | 89.7 | 43.2 | 23.0 | 29.3 | 54.3 | 28.6 | 45.7 | 57.6 | 58.2 | 84.7 | 0.2 |
| LOS | F | D | C | C | D | C | D | E | E | F | A |
| Approach Delay | | 41.3 | | | 40.7 | | | 54.7 | | 69.6 | |
| Approach LOS | | D | | | D | | | D | | E | |

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: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 54.4
 Intersection LOS: D
 Intersection Capacity Utilization 93.1%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel Rd & SH-94



HCM 6th Signalized Intersection Summary

2040 Total PM.syn

5: Marksheffel Rd & SH-94

02/18/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 235 | 400 | 665 | 50 | 475 | 480 | 565 | 1735 | 50 | 230 | 1480 | 285 |
| Future Volume (veh/h) | 235 | 400 | 665 | 50 | 475 | 480 | 565 | 1735 | 50 | 230 | 1480 | 285 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 |
| Adj Flow Rate, veh/h | 250 | 426 | 361 | 53 | 505 | 245 | 601 | 1846 | 0 | 245 | 1574 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 |
| Cap, veh/h | 242 | 809 | 676 | 214 | 623 | 441 | 693 | 2226 | | 263 | 1706 | |
| Arrive On Green | 0.15 | 0.38 | 0.38 | 0.03 | 0.18 | 0.18 | 0.07 | 0.14 | 0.00 | 0.10 | 0.34 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1767 | 3526 | 1572 | 3456 | 5274 | 0 | 1753 | 5025 | 1560 |
| Grp Volume(v), veh/h | 250 | 426 | 361 | 53 | 505 | 245 | 601 | 1846 | 0 | 245 | 1574 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1767 | 1763 | 1572 | 1728 | 1702 | 0 | 1753 | 1675 | 1560 |
| Q Serve(g_s), s | 10.5 | 11.2 | 20.4 | 2.9 | 16.5 | 15.9 | 20.7 | 42.2 | 0.0 | 11.0 | 36.1 | 0.0 |
| Cycle Q Clear(g_c), s | 10.5 | 11.2 | 20.4 | 2.9 | 16.5 | 15.9 | 20.7 | 42.2 | 0.0 | 11.0 | 36.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 242 | 809 | 676 | 214 | 623 | 441 | 693 | 2226 | | 263 | 1706 | |
| V/C Ratio(X) | 1.03 | 0.53 | 0.53 | 0.25 | 0.81 | 0.55 | 0.87 | 0.83 | | 0.93 | 0.92 | |
| Avail Cap(c_a), veh/h | 242 | 940 | 735 | 227 | 779 | 511 | 850 | 2226 | | 263 | 1706 | |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.57 | 0.57 | 0.57 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.78 | 0.78 | 0.00 |
| Uniform Delay (d), s/veh | 39.5 | 32.0 | 20.2 | 38.6 | 47.5 | 36.8 | 54.4 | 47.0 | 0.0 | 28.8 | 38.1 | 0.0 |
| Incr Delay (d2), s/veh | 52.3 | 0.3 | 0.4 | 0.6 | 5.3 | 1.1 | 8.1 | 3.7 | 0.0 | 31.5 | 8.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.8 | 4.3 | 6.1 | 1.3 | 7.7 | 6.3 | 10.4 | 20.0 | 0.0 | 6.9 | 15.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 91.8 | 32.3 | 20.6 | 39.2 | 52.7 | 37.9 | 62.5 | 50.8 | 0.0 | 60.4 | 46.1 | 0.0 |
| LnGrp LOS | F | C | C | D | D | D | E | D | | E | D | |
| Approach Vol, veh/h | | 1037 | | | 803 | | | 2447 | A | | 1819 | A |
| Approach Delay, s/veh | | 42.6 | | | 47.3 | | | 53.7 | | | 48.0 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 19.0 | 58.8 | 8.6 | 33.5 | 30.6 | 47.2 | 15.0 | 27.2 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 4.5 | 6.0 | 6.5 | 6.5 | 4.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 12.5 | 47.0 | 5.0 | 32.0 | 29.5 | 30.0 | 10.5 | 26.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 13.0 | 44.2 | 4.9 | 22.4 | 22.7 | 38.1 | 12.5 | 18.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.5 | 0.0 | 3.0 | 1.4 | 0.0 | 0.0 | 2.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 49.3 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 713 | 0 | 28 | 543 | 0 | 84 |
| Future Vol, veh/h | 713 | 0 | 28 | 543 | 0 | 84 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 775 | 0 | 30 | 590 | 0 | 91 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 775 | 0 | 1425 775 |
| Stage 1 | - | - | - | - | 775 - |
| Stage 2 | - | - | - | - | 650 - |
| Critical Hdwy | - | - | 4.15 | - | 6.45 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 - |
| Follow-up Hdwy | - | - | 2.245 | - | 3.545 3.345 |
| Pot Cap-1 Maneuver | - | - | *705 | - | *74 *473 |
| Stage 1 | - | - | - | - | *446 - |
| Stage 2 | - | - | - | - | *514 - |
| Platoon blocked, % | - | - | 1 | - | 1 1 |
| Mov Cap-1 Maneuver | - | - | *705 | - | *71 *473 |
| Mov Cap-2 Maneuver | - | - | - | - | *246 - |
| Stage 1 | - | - | - | - | *446 - |
| Stage 2 | - | - | - | - | *492 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.5 | 14.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 473 | - | - | * 705 | - |
| HCM Lane V/C Ratio | 0.193 | - | - | 0.043 | - |
| HCM Control Delay (s) | 14.4 | - | - | 10.3 | - |
| HCM Lane LOS | B | - | - | B | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.1 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↘ | ↑ | ↘ | |
| Traffic Vol, veh/h | 446 | 0 | 55 | 691 | 0 | 66 |
| Future Vol, veh/h | 446 | 0 | 55 | 691 | 0 | 66 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 485 | 0 | 60 | 751 | 0 | 72 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 485 | 0 | 1356 |
| Stage 1 | - | - | - | - | 485 |
| Stage 2 | - | - | - | - | 871 |
| Critical Hdwy | - | - | 4.13 | - | 6.43 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 |
| Follow-up Hdwy | - | - | 2.227 | - | 3.527 |
| Pot Cap-1 Maneuver | - | - | *1060 | - | *119 |
| Stage 1 | - | - | - | - | *669 |
| Stage 2 | - | - | - | - | *408 |
| Platoon blocked, % | - | - | 1 | - | 1 |
| Mov Cap-1 Maneuver | - | - | *1060 | - | *113 |
| Mov Cap-2 Maneuver | - | - | - | - | *270 |
| Stage 1 | - | - | - | - | *669 |
| Stage 2 | - | - | - | - | *385 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.6 | 10.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|--------|-----|
| Capacity (veh/h) | 709 | - | - | * 1060 | - |
| HCM Lane V/C Ratio | 0.101 | - | - | 0.056 | - |
| HCM Control Delay (s) | 10.6 | - | - | 8.6 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0.2 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 765 | 0 | 35 | 585 | 0 | 95 |
| Future Vol, veh/h | 765 | 0 | 35 | 585 | 0 | 95 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 832 | 0 | 38 | 636 | 0 | 103 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 832 | 0 | 1544 832 |
| Stage 1 | - | - | - | - | 832 - |
| Stage 2 | - | - | - | - | 712 - |
| Critical Hdwy | - | - | 4.15 | - | 6.45 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 - |
| Follow-up Hdwy | - | - | 2.245 | - | 3.545 3.345 |
| Pot Cap-1 Maneuver | - | - | *627 | - | *44 *421 |
| Stage 1 | - | - | - | - | *397 - |
| Stage 2 | - | - | - | - | *481 - |
| Platoon blocked, % | - | - | 1 | - | 1 1 |
| Mov Cap-1 Maneuver | - | - | *627 | - | *42 *421 |
| Mov Cap-2 Maneuver | - | - | - | - | *212 - |
| Stage 1 | - | - | - | - | *397 - |
| Stage 2 | - | - | - | - | *452 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.6 | 16.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 421 | - | - | * 627 | - |
| HCM Lane V/C Ratio | 0.245 | - | - | 0.061 | - |
| HCM Control Delay (s) | 16.3 | - | - | 11.1 | - |
| HCM Lane LOS | C | - | - | B | - |
| HCM 95th %tile Q(veh) | 1 | - | - | 0.2 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 480 | 0 | 60 | 745 | 0 | 75 |
| Future Vol, veh/h | 480 | 0 | 60 | 745 | 0 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 522 | 0 | 65 | 810 | 0 | 82 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 522 | 0 | 1462 522 |
| Stage 1 | - | - | - | - | 522 - |
| Stage 2 | - | - | - | - | 940 - |
| Critical Hdwy | - | - | 4.13 | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | - | - | 2.227 | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | - | - | *1021 | - | *92 *683 |
| Stage 1 | - | - | - | - | *645 - |
| Stage 2 | - | - | - | - | *378 - |
| Platoon blocked, % | - | - | 1 | - | 1 1 |
| Mov Cap-1 Maneuver | - | - | *1021 | - | *86 *683 |
| Mov Cap-2 Maneuver | - | - | - | - | *244 - |
| Stage 1 | - | - | - | - | *645 - |
| Stage 2 | - | - | - | - | *354 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0 | 0.7 | 11 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|--------|-----|
| Capacity (veh/h) | 683 | - | - | * 1021 | - |
| HCM Lane V/C Ratio | 0.119 | - | - | 0.064 | - |
| HCM Control Delay (s) | 11 | - | - | 8.8 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0.2 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 815 | 5 | 55 | 635 | 5 | 115 |
| Future Vol, veh/h | 815 | 5 | 55 | 635 | 5 | 115 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 886 | 5 | 60 | 690 | 5 | 125 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 891 | 0 | 1696 |
| Stage 1 | - | - | - | - | 886 |
| Stage 2 | - | - | - | - | 810 |
| Critical Hdwy | - | - | 4.15 | - | 6.45 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 |
| Follow-up Hdwy | - | - | 2.245 | - | 3.545 |
| Pot Cap-1 Maneuver | - | - | *589 | - | *23 |
| Stage 1 | - | - | - | - | *373 |
| Stage 2 | - | - | - | - | *432 |
| Platoon blocked, % | - | - | 1 | - | 1 |
| Mov Cap-1 Maneuver | - | - | *589 | - | *20 |
| Mov Cap-2 Maneuver | - | - | - | - | *183 |
| Stage 1 | - | - | - | - | *373 |
| Stage 2 | - | - | - | - | *388 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.9 | 19.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 377 | - | - | * 589 | - |
| HCM Lane V/C Ratio | 0.346 | - | - | 0.101 | - |
| HCM Control Delay (s) | 19.5 | - | - | 11.8 | - |
| HCM Lane LOS | C | - | - | B | - |
| HCM 95th %tile Q(veh) | 1.5 | - | - | 0.3 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 525 | 5 | 95 | 790 | 5 | 100 |
| Future Vol, veh/h | 525 | 5 | 95 | 790 | 5 | 100 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 571 | 5 | 103 | 859 | 5 | 109 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 576 | 0 | 1636 |
| Stage 1 | - | - | - | - | 571 |
| Stage 2 | - | - | - | - | 1065 |
| Critical Hdwy | - | - | 4.13 | - | 6.43 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 |
| Follow-up Hdwy | - | - | 2.227 | - | 3.527 |
| Pot Cap-1 Maneuver | - | - | *943 | - | *56 |
| Stage 1 | - | - | - | - | *596 |
| Stage 2 | - | - | - | - | *330 |
| Platoon blocked, % | - | - | 1 | - | 1 |
| Mov Cap-1 Maneuver | - | - | *943 | - | *50 |
| Mov Cap-2 Maneuver | - | - | - | - | *200 |
| Stage 1 | - | - | - | - | *596 |
| Stage 2 | - | - | - | - | *294 |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 1 | 12.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 572 | - | - | * 943 | - |
| HCM Lane V/C Ratio | 0.2 | - | - | 0.11 | - |
| HCM Control Delay (s) | 12.9 | - | - | 9.3 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.4 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | |
| Traffic Vol, veh/h | 900 | 0 | 50 | 685 | 0 | 140 |
| Future Vol, veh/h | 900 | 0 | 50 | 685 | 0 | 140 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 978 | 0 | 54 | 745 | 0 | 152 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 978 | 0 | 1831 |
| Stage 1 | - | - | - | - | 978 |
| Stage 2 | - | - | - | - | 853 |
| Critical Hdwy | - | - | 4.15 | - | 6.45 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 |
| Follow-up Hdwy | - | - | 2.245 | - | 3.545 |
| Pot Cap-1 Maneuver | - | - | *473 | - | *8 |
| Stage 1 | - | - | - | - | *300 |
| Stage 2 | - | - | - | - | *413 |
| Platoon blocked, % | - | - | 1 | - | 1 |
| Mov Cap-1 Maneuver | - | - | *473 | - | *7 |
| Mov Cap-2 Maneuver | - | - | - | - | *154 |
| Stage 1 | - | - | - | - | *300 |
| Stage 2 | - | - | - | - | *366 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.9 | 26.3 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 318 | - | - | * 473 | - |
| HCM Lane V/C Ratio | 0.479 | - | - | 0.115 | - |
| HCM Control Delay (s) | 26.3 | - | - | 13.6 | - |
| HCM Lane LOS | D | - | - | B | - |
| HCM 95th %tile Q(veh) | 2.5 | - | - | 0.4 | - |

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

Intersection

Int Delay, s/veh 1.4

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 565 | 0 | 105 | 875 | 0 | 105 |
| Future Vol, veh/h | 565 | 0 | 105 | 875 | 0 | 105 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 614 | 0 | 114 | 951 | 0 | 114 |

Major/Minor

| | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 614 | 0 | 1793 |
| Stage 1 | - | - | - | - | 614 |
| Stage 2 | - | - | - | - | 1179 |
| Critical Hdwy | - | - | 4.13 | - | 6.43 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 |
| Follow-up Hdwy | - | - | 2.227 | - | 3.527 |
| Pot Cap-1 Maneuver | - | - | *904 | - | *35 |
| Stage 1 | - | - | - | - | *571 |
| Stage 2 | - | - | - | - | *291 |
| Platoon blocked, % | - | - | 1 | - | 1 |
| Mov Cap-1 Maneuver | - | - | *904 | - | *31 |
| Mov Cap-2 Maneuver | - | - | - | - | *172 |
| Stage 1 | - | - | - | - | *571 |
| Stage 2 | - | - | - | - | *254 |

Approach

| | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 1 | 12.3 |
| HCM LOS | | | B |

Minor Lane/Major Mvmt

| | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 605 | - | - | * 904 | - |
| HCM Lane V/C Ratio | 0.189 | - | - | 0.126 | - |
| HCM Control Delay (s) | 12.3 | - | - | 9.6 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.4 | - |

Notes

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 960 | 5 | 85 | 740 | 5 | 170 |
| Future Vol, veh/h | 960 | 5 | 85 | 740 | 5 | 170 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 2 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 1043 | 5 | 92 | 804 | 5 | 185 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 1048 | 0 | 2031 |
| Stage 1 | - | - | - | - | 1043 |
| Stage 2 | - | - | - | - | 988 |
| Critical Hdwy | - | - | 4.15 | - | 6.45 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 |
| Follow-up Hdwy | - | - | 2.245 | - | 3.545 |
| Pot Cap-1 Maneuver | - | - | *396 | - | *1 |
| Stage 1 | - | - | - | - | *251 |
| Stage 2 | - | - | - | - | *356 |
| Platoon blocked, % | - | - | 1 | - | 1 |
| Mov Cap-1 Maneuver | - | - | *396 | - | *1 |
| Mov Cap-2 Maneuver | - | - | - | - | *166 |
| Stage 1 | - | - | - | - | *251 |
| Stage 2 | - | - | - | - | *273 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 1.7 | 48.6 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 261 | - | - | * 396 | - |
| HCM Lane V/C Ratio | 0.729 | - | - | 0.233 | - |
| HCM Control Delay (s) | 48.6 | - | - | 16.8 | - |
| HCM Lane LOS | E | - | - | C | - |
| HCM 95th %tile Q(veh) | 5.1 | - | - | 0.9 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↖ | ↑ | ↘ | ↙ |
| Traffic Vol, veh/h | 635 | 5 | 180 | 940 | 5 | 160 |
| Future Vol, veh/h | 635 | 5 | 180 | 940 | 5 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 150 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 690 | 5 | 196 | 1022 | 5 | 174 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 695 | 0 | 2104 690 |
| Stage 1 | - | - | - | - | 690 - |
| Stage 2 | - | - | - | - | 1414 - |
| Critical Hdwy | - | - | 4.13 | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | - | - | 2.227 | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | - | - | *827 | - | *12 *553 |
| Stage 1 | - | - | - | - | *522 - |
| Stage 2 | - | - | - | - | *223 - |
| Platoon blocked, % | - | - | 1 | - | 1 1 |
| Mov Cap-1 Maneuver | - | - | *827 | - | *9 *553 |
| Mov Cap-2 Maneuver | - | - | - | - | *120 - |
| Stage 1 | - | - | - | - | *522 - |
| Stage 2 | - | - | - | - | *170 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 1.7 | 16.2 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 498 | - | - | * 827 | - |
| HCM Lane V/C Ratio | 0.36 | - | - | 0.237 | - |
| HCM Control Delay (s) | 16.2 | - | - | 10.7 | - |
| HCM Lane LOS | C | - | - | B | - |
| HCM 95th %tile Q(veh) | 1.6 | - | - | 0.9 | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↖ | ↗ | ↖ | ↖ | ↗ | ↖ | ↖ | ↗ | ↖ |
| Traffic Vol, veh/h | 7 | 42 | 114 | 8 | 11 | 2 | 273 | 472 | 12 | 8 | 859 | 119 |
| Future Vol, veh/h | 7 | 42 | 114 | 8 | 11 | 2 | 273 | 472 | 12 | 8 | 859 | 119 |
| 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 | 225 | - | 250 | 300 | - | 200 | 400 | - | 425 | 425 | - | 425 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 8 | 46 | 124 | 9 | 12 | 2 | 297 | 513 | 13 | 9 | 934 | 129 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1809 | 2072 | 467 | 1615 | 2188 | 257 | 1063 | 0 | 0 | 526 | 0 | 0 |
| Stage 1 | 952 | 952 | - | 1107 | 1107 | - | - | - | - | - | - | - |
| Stage 2 | 857 | 1120 | - | 508 | 1081 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.6 | 6.6 | 7 | 7.6 | 6.6 | 7 | 4.2 | - | - | 4.2 | - | - |
| Critical Hdwy Stg 1 | 6.6 | 5.6 | - | 6.6 | 5.6 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.6 | 5.6 | - | 6.6 | 5.6 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.55 | 4.05 | 3.35 | 3.55 | 4.05 | 3.35 | 2.25 | - | - | 2.25 | - | - |
| Pot Cap-1 Maneuver | *86 | *66 | *730 | *139 | 52 | 733 | 955 | - | - | 1016 | - | - |
| Stage 1 | *689 | *604 | - | *219 | 278 | - | - | - | - | - | - | - |
| Stage 2 | *312 | *274 | - | *689 | 505 | - | - | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | *48 | *~ 45 | *730 | - | 35 | 733 | 955 | - | - | 1016 | - | - |
| Mov Cap-2 Maneuver | *48 | *~ 45 | - | - | 35 | - | - | - | - | - | - | - |
| Stage 1 | *475 | *599 | - | *151 | 192 | - | - | - | - | - | - | - |
| Stage 2 | *201 | *189 | - | *524 | 501 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 83.6 | | 3.8 | 0.1 |
| HCM LOS | F | - | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 955 | - | - | 48 | 45 | 730 | - | 35 | 733 | 1016 | - | - |
| HCM Lane V/C Ratio | 0.311 | - | - | 0.159 | 1.014 | 0.17 | - | 0.342 | 0.003 | 0.009 | - | - |
| HCM Control Delay (s) | 10.5 | - | - | 93.6 | 279.4 | 10.9 | - | 154 | 9.9 | 8.6 | - | - |
| HCM Lane LOS | B | - | - | F | F | B | - | F | A | A | - | - |
| HCM 95th %tile Q(veh) | 1.3 | - | - | 0.5 | 4.2 | 0.6 | - | 1.1 | 0 | 0 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 12.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↘ | ↑ | ↗ | ↘ | ↑ | ↗ | ↘ | ↑↑ | ↗ | ↘ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 8 | 31 | 225 | 30 | 10 | 1 | 203 | 917 | 17 | 1 | 530 | 23 |
| Future Vol, veh/h | 8 | 31 | 225 | 30 | 10 | 1 | 203 | 917 | 17 | 1 | 530 | 23 |
| 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 | 225 | - | 250 | 300 | - | 200 | 400 | - | 425 | 425 | - | 425 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 9 | 33 | 242 | 32 | 11 | 1 | 218 | 986 | 18 | 1 | 570 | 25 |

| Major/Minor | Minor2 | | Minor1 | | | Major1 | | Major2 | | | | |
|----------------------|--------|------|--------|-------|------|--------|-------|--------|---|------|---|---|
| Conflicting Flow All | 1507 | 2012 | 285 | 1726 | 2019 | 493 | 595 | 0 | 0 | 1004 | 0 | 0 |
| Stage 1 | 572 | 572 | - | 1422 | 1422 | - | - | - | - | - | - | - |
| Stage 2 | 935 | 1440 | - | 304 | 597 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.56 | 6.56 | 6.96 | 7.56 | 6.56 | 6.96 | 4.16 | - | - | 4.16 | - | - |
| Critical Hdwy Stg 1 | 6.56 | 5.56 | - | 6.56 | 5.56 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.56 | 5.56 | - | 6.56 | 5.56 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.53 | 4.03 | 3.33 | 3.53 | 4.03 | 3.33 | 2.23 | - | - | 2.23 | - | - |
| Pot Cap-1 Maneuver | *125 | *66 | *864 | *78 | *65 | 519 | *1291 | - | - | 680 | - | - |
| Stage 1 | *815 | *714 | - | *142 | *199 | - | - | - | - | - | - | - |
| Stage 2 | *284 | *195 | - | *815 | *714 | - | - | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | *92 | *54 | *864 | *~ 25 | *54 | 519 | *1291 | - | - | 680 | - | - |
| Mov Cap-2 Maneuver | *92 | *54 | - | *~ 25 | *54 | - | - | - | - | - | - | - |
| Stage 1 | *677 | *713 | - | *118 | *165 | - | - | - | - | - | - | - |
| Stage 2 | *220 | *162 | - | *559 | *713 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|----------|-----|----|
| HCM Control Delay, s | 27.9 | \$ 395.4 | 1.5 | 0 |
| HCM LOS | D | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|--------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | * 1291 | - | - | 92 | 54 | 864 | 25 | 54 | 519 | 680 | - | - |
| HCM Lane V/C Ratio | 0.169 | - | - | 0.094 | 0.617 | 0.28 | 1.29 | 0.199 | 0.002 | 0.002 | - | - |
| HCM Control Delay (s) | 8.4 | - | - | 48.1 | 146.6 | 10.8 | 510.8 | 87.5 | 12 | 10.3 | - | - |
| HCM Lane LOS | A | - | - | E | F | B | F | F | B | B | - | - |
| HCM 95th %tile Q(veh) | 0.6 | - | - | 0.3 | 2.5 | 1.1 | 4 | 0.7 | 0 | 0 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 19.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 10 | 50 | 125 | 10 | 15 | 5 | 295 | 510 | 15 | 10 | 925 | 130 |
| Future Vol, veh/h | 10 | 50 | 125 | 10 | 15 | 5 | 295 | 510 | 15 | 10 | 925 | 130 |
| 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 | 225 | - | 250 | 300 | - | 200 | 400 | - | 425 | 425 | - | 425 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 11 | 54 | 136 | 11 | 16 | 5 | 321 | 554 | 16 | 11 | 1005 | 141 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1954 | 2239 | 503 | 1748 | 2364 | 277 | 1146 | 0 | 0 | 570 | 0 | 0 |
| Stage 1 | 1027 | 1027 | - | 1196 | 1196 | - | - | - | - | - | - | - |
| Stage 2 | 927 | 1212 | - | 552 | 1168 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.6 | 6.6 | 7 | 7.6 | 6.6 | 7 | 4.2 | - | - | 4.2 | - | - |
| Critical Hdwy Stg 1 | 6.6 | 5.6 | - | 6.6 | 5.6 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.6 | 5.6 | - | 6.6 | 5.6 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.55 | 4.05 | 3.35 | 3.55 | 4.05 | 3.35 | 2.25 | - | - | 2.25 | - | - |
| Pot Cap-1 Maneuver | *63 | *~ 47 | *704 | *108 | 36 | 711 | 904 | - | - | 978 | - | - |
| Stage 1 | *665 | *583 | - | *193 | 252 | - | - | - | - | - | - | - |
| Stage 2 | *283 | *247 | - | *665 | 473 | - | - | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | *20 | *~ 30 | *704 | - | 23 | 711 | 904 | - | - | 978 | - | - |
| Mov Cap-2 Maneuver | *20 | *~ 30 | - | - | 23 | - | - | - | - | - | - | - |
| Stage 1 | *429 | *576 | - | *124 | 163 | - | - | - | - | - | - | - |
| Stage 2 | *163 | *159 | - | *480 | 468 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-------|----|----|-----|
| HCM Control Delay, s | 205.7 | | 4 | 0.1 |
| HCM LOS | F | - | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|----------|----------|-------|-------|----------|-------|-------|-----|-----|
| Capacity (veh/h) | 904 | - | - | 20 | 30 | 704 | - | 23 | 711 | 978 | - | - |
| HCM Lane V/C Ratio | 0.355 | - | - | 0.543 | 1.812 | 0.193 | - | 0.709 | 0.008 | 0.011 | - | - |
| HCM Control Delay (s) | 11.2 | - | - | \$ 315.9 | \$ 669.8 | 11.3 | - | \$ 328.9 | 10.1 | 8.7 | - | - |
| HCM Lane LOS | B | - | - | F | F | B | - | F | B | A | - | - |
| HCM 95th %tile Q(veh) | 1.6 | - | - | 1.5 | 6.3 | 0.7 | - | 2.1 | 0 | 0 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 65.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↘ | ↑ | ↗ | ↘ | ↑ | ↗ | ↘ | ↑↑ | ↗ | ↘ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 10 | 35 | 245 | 35 | 15 | 5 | 220 | 985 | 20 | 5 | 570 | 25 |
| Future Vol, veh/h | 10 | 35 | 245 | 35 | 15 | 5 | 220 | 985 | 20 | 5 | 570 | 25 |
| 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 | 225 | - | 250 | 300 | - | 200 | 400 | - | 425 | 425 | - | 425 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 11 | 38 | 263 | 38 | 16 | 5 | 237 | 1059 | 22 | 5 | 613 | 27 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1635 | 2178 | 307 | 1869 | 2183 | 530 | 640 | 0 | 0 | 1081 | 0 | 0 |
| Stage 1 | 623 | 623 | - | 1533 | 1533 | - | - | - | - | - | - | - |
| Stage 2 | 1012 | 1555 | - | 336 | 650 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.56 | 6.56 | 6.96 | 7.56 | 6.56 | 6.96 | 4.16 | - | - | 4.16 | - | - |
| Critical Hdwy Stg 1 | 6.56 | 5.56 | - | 6.56 | 5.56 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.56 | 5.56 | - | 6.56 | 5.56 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.53 | 4.03 | 3.33 | 3.53 | 4.03 | 3.33 | 2.23 | - | - | 2.23 | - | - |
| Pot Cap-1 Maneuver | *101 | *50 | *838 | *60 | *49 | 491 | *1253 | - | - | 635 | - | - |
| Stage 1 | *791 | *693 | - | *121 | *175 | - | - | - | - | - | - | - |
| Stage 2 | *254 | *171 | - | *791 | *693 | - | - | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | *58 | *40 | *838 | *~ 6 | *39 | 491 | *1253 | - | - | 635 | - | - |
| Mov Cap-2 Maneuver | *58 | *40 | - | *~ 6 | *39 | - | - | - | - | - | - | - |
| Stage 1 | *641 | *687 | - | *98 | *142 | - | - | - | - | - | - | - |
| Stage 2 | *181 | *139 | - | *508 | *687 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|-----------|-----|-----|
| HCM Control Delay, s | 45.8 | \$ 2302.9 | 1.5 | 0.1 |
| HCM LOS | E | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|--------|-----|-----|-------|-------|-------|--------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | * 1253 | - | - | 58 | 40 | 838 | 6 | 39 | 491 | 635 | - | - |
| HCM Lane V/C Ratio | 0.189 | - | - | 0.185 | 0.941 | 0.314 | 6.272 | 0.414 | 0.011 | 0.008 | - | - |
| HCM Control Delay (s) | 8.5 | - | - | 80.7 | 277.4 | 11.3 | 3552.2 | 151.3 | 12.4 | 10.7 | - | - |
| HCM Lane LOS | A | - | - | F | F | B | F | F | B | B | - | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.6 | 3.6 | 1.4 | 6.2 | 1.4 | 0 | 0 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↖ | ↗ | ↖ | ↖ | ↗ | ↖ | ↖ | ↗ | ↖ |
| Traffic Vol, veh/h | 40 | 80 | 135 | 45 | 75 | 40 | 325 | 770 | 30 | 70 | 1095 | 130 |
| Future Vol, veh/h | 40 | 80 | 135 | 45 | 75 | 40 | 325 | 770 | 30 | 70 | 1095 | 130 |
| 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 | 225 | - | 250 | 300 | - | 200 | 400 | - | 425 | 425 | - | 425 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 43 | 87 | 147 | 49 | 82 | 43 | 353 | 837 | 33 | 76 | 1190 | 141 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 2508 | 2918 | 595 | 2334 | 3026 | 419 | 1331 | 0 | 0 | 870 | 0 | 0 |
| Stage 1 | 1342 | 1342 | - | 1543 | 1543 | - | - | - | - | - | - | - |
| Stage 2 | 1166 | 1576 | - | 791 | 1483 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.6 | 6.6 | 7 | 7.6 | 6.6 | 7 | 4.2 | - | - | 4.2 | - | - |
| Critical Hdwy Stg 1 | 6.6 | 5.6 | - | 6.6 | 5.6 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.6 | 5.6 | - | 6.6 | 5.6 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.55 | 4.05 | 3.35 | 3.55 | 4.05 | 3.35 | 2.25 | - | - | 2.25 | - | - |
| Pot Cap-1 Maneuver | ~ 15 | ~ 9 | *627 | *~ 26 | ~ 7 | 575 | 827 | - | - | 752 | - | - |
| Stage 1 | 477 | 442 | - | *117 | 170 | - | - | - | - | - | - | - |
| Stage 2 | 201 | 164 | - | *592 | 345 | - | - | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | ~ 5 | *627 | - | ~ 4 | 575 | 827 | - | - | 752 | - | - |
| Mov Cap-2 Maneuver | - | ~ 5 | - | - | ~ 4 | - | - | - | - | - | - | - |
| Stage 1 | 273 | 397 | - | *67 | 97 | - | - | - | - | - | - | - |
| Stage 2 | ~ 17 | 94 | - | *318 | 310 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|----|-----|-----|
| HCM Control Delay, s | | | 3.6 | 0.6 |
| HCM LOS | - | - | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|----------|-------|------------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | 827 | - | - | - | 5 | 627 | - | 4 | 575 | 752 | - | - |
| HCM Lane V/C Ratio | 0.427 | - | - | -17.391 | 0.234 | - | 20.38 | 0.076 | 0.101 | - | - | - |
| HCM Control Delay (s) | 12.6 | - | - | -\$ 8799 | 12.5 | \$ 10487.6 | 11.8 | 10.3 | - | - | - | - |
| HCM Lane LOS | B | - | - | F | B | - | F | B | B | - | - | - |
| HCM 95th %tile Q(veh) | 2.2 | - | - | - | 12.8 | 0.9 | - | 12.2 | 0.2 | 0.3 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 55 | 90 | 270 | 80 | 80 | 30 | 245 | 1265 | 45 | 90 | 885 | 25 |
| Future Vol, veh/h | 55 | 90 | 270 | 80 | 80 | 30 | 245 | 1265 | 45 | 90 | 885 | 25 |
| 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 | 225 | - | 250 | 300 | - | 200 | 400 | - | 425 | 425 | - | 425 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Mvmt Flow | 59 | 97 | 290 | 86 | 86 | 32 | 263 | 1360 | 48 | 97 | 952 | 27 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|-------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 2395 | 3080 | 476 | 2605 | 3059 | 680 | 979 | 0 | 0 | 1408 | 0 | 0 |
| Stage 1 | 1146 | 1146 | - | 1886 | 1886 | - | - | - | - | - | - | - |
| Stage 2 | 1249 | 1934 | - | 719 | 1173 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.56 | 6.56 | 6.96 | 7.56 | 6.56 | 6.96 | 4.16 | - | - | 4.16 | - | - |
| Critical Hdwy Stg 1 | 6.56 | 5.56 | - | 6.56 | 5.56 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.56 | 5.56 | - | 6.56 | 5.56 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.53 | 4.03 | 3.33 | 3.53 | 4.03 | 3.33 | 2.23 | - | - | 2.23 | - | - |
| Pot Cap-1 Maneuver | ~ 20 | ~ 7 | *708 | *~ 11 | ~ 7 | 391 | *1059 | - | - | 475 | - | - |
| Stage 1 | 530 | 493 | - | *~ 72 | 117 | - | - | - | - | - | - | - |
| Stage 2 | 182 | 110 | - | *668 | 473 | - | - | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | ~ 4 | *708 | - | ~ 4 | 391 | *1059 | - | - | 475 | - | - |
| Mov Cap-2 Maneuver | - | ~ 4 | - | - | ~ 4 | - | - | - | - | - | - | - |
| Stage 1 | 398 | 392 | - | *~ 54 | 88 | - | - | - | - | - | - | - |
| Stage 2 | ~ 3 | ~ 83 | - | *236 | 376 | - | - | - | - | - | - | - |

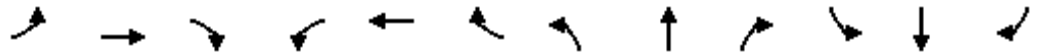
| Approach | EB | | WB | | NB | | SB | |
|----------------------|----|--|----|--|-----|--|-----|--|
| HCM Control Delay, s | | | | | 1.5 | | 1.3 | |
| HCM LOS | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | EBLn3 | WBLn1 | WBLn2 | WBLn3 | SBL | SBT | SBR |
|-----------------------|--------|-----|-----|------------|-------|------------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | * 1059 | - | - | - | 4 | 708 | - | 4 | 391 | 475 | - | - |
| HCM Lane V/C Ratio | 0.249 | - | - | -24.194 | 0.41 | -21.505 | 0.083 | 0.204 | - | - | - | - |
| HCM Control Delay (s) | 9.5 | - | - | \$ 12208.9 | 13.6 | \$ 10995.6 | 15 | 14.5 | - | - | - | - |
| HCM Lane LOS | A | - | - | - | F | B | - | F | C | B | - | - |
| HCM 95th %tile Q(veh) | 1 | - | - | - | 14.2 | 2 | - | 12.8 | 0.3 | 0.8 | - | - |

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

Timings

7: Marksheffel Rd & Space Village Ave



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↕ | ↗ | ↘ | ↕ | ↘ |
| Traffic Volume (vph) | 40 | 80 | 135 | 45 | 75 | 40 | 325 | 770 | 30 | 70 | 1095 | 130 |
| Future Volume (vph) | 40 | 80 | 135 | 45 | 75 | 40 | 325 | 770 | 30 | 70 | 1095 | 130 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 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) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 9.5 | 24.0 | 24.0 | 9.5 | 24.0 | 24.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 35.0 | 85.8 | 85.8 | 10.2 | 61.0 | 61.0 |
| Total Split (%) | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% | 29.2% | 71.5% | 71.5% | 8.5% | 50.8% | 50.8% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.0 | 1.5 | 1.5 | 1.0 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 11.3 | 98.2 | 87.8 | 87.8 | 79.5 | 71.5 | 71.5 |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.82 | 0.73 | 0.73 | 0.66 | 0.60 | 0.60 |
| v/c Ratio | 0.36 | 0.51 | 0.53 | 0.41 | 0.48 | 0.18 | 0.73 | 0.33 | 0.03 | 0.16 | 0.58 | 0.14 |
| Control Delay | 58.1 | 61.5 | 15.0 | 60.4 | 60.3 | 1.6 | 20.8 | 6.9 | 0.2 | 6.1 | 20.2 | 5.9 |
| 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 | 58.1 | 61.5 | 15.0 | 60.4 | 60.3 | 1.6 | 20.8 | 6.9 | 0.2 | 6.1 | 20.2 | 5.9 |
| LOS | E | E | B | E | E | A | C | A | A | A | C | A |
| Approach Delay | | 36.3 | | | 45.8 | | | 10.7 | | | 18.0 | |
| Approach LOS | | D | | | D | | | B | | | B | |

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: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 18.3
 Intersection LOS: B
 Intersection Capacity Utilization 71.2%
 ICU Level of Service C
 Analysis Period (min) 15

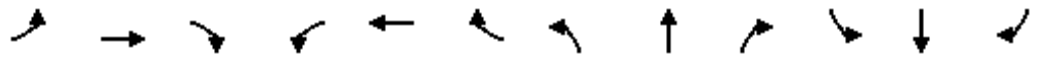
Splits and Phases: 7: Marksheffel Rd & Space Village Ave



HCM 6th Signalized Intersection Summary
 7: Marksheffel Rd & Space Village Ave

2026 Total AM Improved.syn

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 40 | 80 | 135 | 45 | 75 | 40 | 325 | 770 | 30 | 70 | 1095 | 130 |
| Future Volume (veh/h) | 40 | 80 | 135 | 45 | 75 | 40 | 325 | 770 | 30 | 70 | 1095 | 130 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 43 | 87 | 147 | 49 | 82 | 43 | 353 | 837 | 33 | 76 | 1190 | 141 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Cap, veh/h | 149 | 207 | 176 | 138 | 207 | 176 | 445 | 2465 | 1099 | 511 | 2303 | 1027 |
| Arrive On Green | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.09 | 0.71 | 0.71 | 0.05 | 0.88 | 0.88 |
| Sat Flow, veh/h | 1236 | 1826 | 1547 | 1119 | 1826 | 1547 | 1739 | 3469 | 1547 | 1739 | 3469 | 1547 |
| Grp Volume(v), veh/h | 43 | 87 | 147 | 49 | 82 | 43 | 353 | 837 | 33 | 76 | 1190 | 141 |
| Grp Sat Flow(s),veh/h/ln | 1236 | 1826 | 1547 | 1119 | 1826 | 1547 | 1739 | 1735 | 1547 | 1739 | 1735 | 1547 |
| Q Serve(g_s), s | 4.0 | 5.3 | 11.2 | 5.1 | 5.0 | 3.0 | 7.2 | 11.0 | 0.8 | 1.6 | 8.9 | 1.5 |
| Cycle Q Clear(g_c), s | 9.0 | 5.3 | 11.2 | 10.4 | 5.0 | 3.0 | 7.2 | 11.0 | 0.8 | 1.6 | 8.9 | 1.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 149 | 207 | 176 | 138 | 207 | 176 | 445 | 2465 | 1099 | 511 | 2303 | 1027 |
| V/C Ratio(X) | 0.29 | 0.42 | 0.84 | 0.36 | 0.40 | 0.24 | 0.79 | 0.34 | 0.03 | 0.15 | 0.52 | 0.14 |
| Avail Cap(c_a), veh/h | 194 | 274 | 232 | 178 | 274 | 232 | 739 | 2465 | 1099 | 527 | 2303 | 1027 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.5 | 49.5 | 52.1 | 54.4 | 49.4 | 48.5 | 8.2 | 6.6 | 5.1 | 5.6 | 2.9 | 2.5 |
| Incr Delay (d2), s/veh | 1.1 | 1.3 | 17.9 | 1.6 | 1.2 | 0.7 | 3.2 | 0.4 | 0.1 | 0.1 | 0.8 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.3 | 2.5 | 5.2 | 1.5 | 2.4 | 1.2 | 2.6 | 3.9 | 0.2 | 0.6 | 2.2 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 54.6 | 50.8 | 70.0 | 55.9 | 50.6 | 49.2 | 11.4 | 7.0 | 5.2 | 5.8 | 3.7 | 2.7 |
| LnGrp LOS | D | D | E | E | D | D | B | A | A | A | A | A |
| Approach Vol, veh/h | | 277 | | | 174 | | | 1223 | | | 1407 | |
| Approach Delay, s/veh | | 61.6 | | | 51.7 | | | 8.2 | | | 3.7 | |
| Approach LOS | | E | | | D | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 91.3 | | 19.6 | 14.7 | 85.6 | | 19.6 | | | | |
| Change Period (Y+Rc), s | 4.5 | 6.0 | | 6.0 | 4.5 | 6.0 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.7 | 79.8 | | 18.0 | 30.5 | 55.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.6 | 13.0 | | 13.2 | 9.2 | 10.9 | | 12.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.6 | | 0.5 | 1.1 | 12.9 | | 0.3 | | | | |

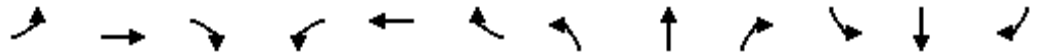
Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 13.4 |
| HCM 6th LOS | B |

Timings

7: Marksheffel Rd & Space Village Ave

02/15/2021

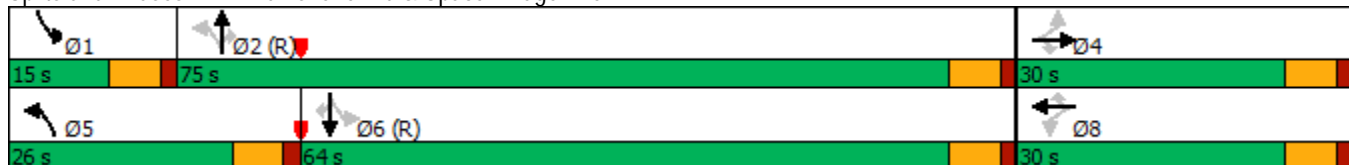


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 55 | 90 | 270 | 80 | 80 | 30 | 245 | 1265 | 45 | 90 | 885 | 25 |
| Future Volume (vph) | 55 | 90 | 270 | 80 | 80 | 30 | 245 | 1265 | 45 | 90 | 885 | 25 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 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) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 |
| Total Split (s) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 26.0 | 75.0 | 75.0 | 15.0 | 64.0 | 64.0 |
| Total Split (%) | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 21.7% | 62.5% | 62.5% | 12.5% | 53.3% | 53.3% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 91.9 | 81.5 | 81.5 | 85.0 | 77.9 | 77.9 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.77 | 0.68 | 0.68 | 0.71 | 0.65 | 0.65 |
| v/c Ratio | 0.41 | 0.47 | 0.69 | 0.61 | 0.42 | 0.11 | 0.56 | 0.57 | 0.04 | 0.33 | 0.42 | 0.03 |
| Control Delay | 56.5 | 56.3 | 15.9 | 67.5 | 54.5 | 0.7 | 8.6 | 12.0 | 0.6 | 12.7 | 24.4 | 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 | 56.5 | 56.3 | 15.9 | 67.5 | 54.5 | 0.7 | 8.6 | 12.0 | 0.6 | 12.7 | 24.4 | 0.2 |
| LOS | E | E | B | E | D | A | A | B | A | B | C | A |
| Approach Delay | | 30.0 | | | 51.5 | | | 11.1 | | | 22.8 | |
| Approach LOS | | C | | | D | | | B | | | C | |

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: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 19.7
 Intersection LOS: B
 Intersection Capacity Utilization 66.1%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 7: Marksheffel Rd & Space Village Ave



HCM 6th Signalized Intersection Summary
 7: Marksheffel Rd & Space Village Ave

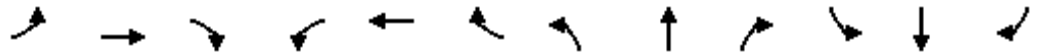
2026 Total PM Improved.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 90 | 270 | 80 | 80 | 30 | 245 | 1265 | 45 | 90 | 885 | 25 |
| Future Volume (veh/h) | 55 | 90 | 270 | 80 | 80 | 30 | 245 | 1265 | 45 | 90 | 885 | 25 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 59 | 97 | 193 | 86 | 86 | 32 | 263 | 1360 | 48 | 97 | 952 | 27 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 192 | 270 | 229 | 166 | 270 | 229 | 549 | 2342 | 1045 | 303 | 2225 | 992 |
| Arrive On Green | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.07 | 0.66 | 0.66 | 0.08 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1264 | 1856 | 1572 | 1081 | 1856 | 1572 | 1767 | 3526 | 1572 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 59 | 97 | 193 | 86 | 86 | 32 | 263 | 1360 | 48 | 97 | 952 | 27 |
| Grp Sat Flow(s),veh/h/ln | 1264 | 1856 | 1572 | 1081 | 1856 | 1572 | 1767 | 1763 | 1572 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 5.3 | 5.7 | 14.3 | 9.4 | 5.0 | 2.1 | 6.2 | 25.3 | 1.3 | 2.3 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 10.2 | 5.7 | 14.3 | 15.0 | 5.0 | 2.1 | 6.2 | 25.3 | 1.3 | 2.3 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 192 | 270 | 229 | 166 | 270 | 229 | 549 | 2342 | 1045 | 303 | 2225 | 992 |
| V/C Ratio(X) | 0.31 | 0.36 | 0.84 | 0.52 | 0.32 | 0.14 | 0.48 | 0.58 | 0.05 | 0.32 | 0.43 | 0.03 |
| Avail Cap(c_a), veh/h | 260 | 371 | 314 | 225 | 371 | 314 | 714 | 2342 | 1045 | 365 | 2225 | 992 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.5 | 46.2 | 49.9 | 53.0 | 45.9 | 44.7 | 6.2 | 11.0 | 7.0 | 9.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.9 | 0.8 | 13.9 | 2.5 | 0.7 | 0.3 | 0.6 | 1.1 | 0.1 | 0.6 | 0.6 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.7 | 2.7 | 6.5 | 2.7 | 2.4 | 0.9 | 2.2 | 9.5 | 0.4 | 0.8 | 0.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 51.4 | 47.0 | 63.8 | 55.5 | 46.6 | 45.0 | 6.8 | 12.1 | 7.1 | 9.6 | 0.6 | 0.1 |
| LnGrp LOS | D | D | E | E | D | D | A | B | A | A | A | A |
| Approach Vol, veh/h | | 349 | | | 204 | | | 1671 | | | 1076 | |
| Approach Delay, s/veh | | 57.1 | | | 50.1 | | | 11.1 | | | 1.4 | |
| Approach LOS | | E | | | D | | | B | | | A | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.8 | 85.7 | | 23.5 | 14.8 | 81.7 | | 23.5 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 9.0 | 69.0 | | 24.0 | 20.0 | 58.0 | | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 27.3 | | 16.3 | 8.2 | 2.0 | | 17.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 14.9 | | 0.8 | 0.6 | 9.0 | | 0.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 15.2 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

Timings

7: Marksheffel Rd & Space Village Ave

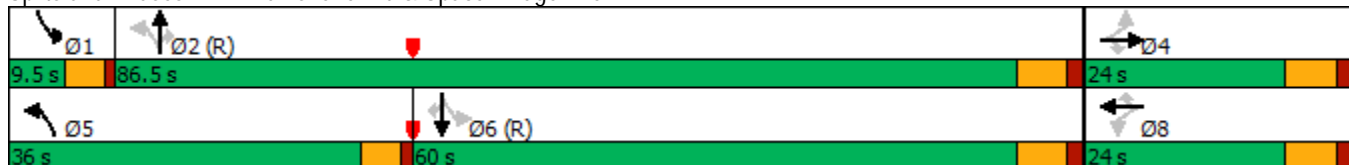


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↕ | ↗ | ↘ | ↕ | ↘ |
| Traffic Volume (vph) | 10 | 65 | 155 | 20 | 45 | 15 | 375 | 975 | 35 | 15 | 1210 | 150 |
| Future Volume (vph) | 10 | 65 | 155 | 20 | 45 | 15 | 375 | 975 | 35 | 15 | 1210 | 150 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 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) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 9.5 | 24.0 | 24.0 | 9.5 | 24.0 | 24.0 |
| Total Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 36.0 | 86.5 | 86.5 | 9.5 | 60.0 | 60.0 |
| Total Split (%) | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% | 30.0% | 72.1% | 72.1% | 7.9% | 50.0% | 50.0% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.0 | 1.5 | 1.5 | 1.0 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 99.4 | 93.8 | 93.8 | 72.7 | 65.5 | 65.5 |
| Actuated g/C Ratio | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.83 | 0.78 | 0.78 | 0.61 | 0.55 | 0.55 |
| v/c Ratio | 0.10 | 0.47 | 0.60 | 0.20 | 0.32 | 0.07 | 0.78 | 0.39 | 0.03 | 0.05 | 0.70 | 0.18 |
| Control Delay | 51.0 | 61.8 | 16.6 | 54.2 | 56.3 | 0.6 | 33.4 | 5.5 | 0.4 | 7.3 | 25.2 | 6.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 51.0 | 61.8 | 16.6 | 54.2 | 56.3 | 0.6 | 33.4 | 5.5 | 0.4 | 7.3 | 25.2 | 6.9 |
| LOS | D | E | B | D | E | A | C | A | A | A | C | A |
| Approach Delay | | 30.9 | | | 45.5 | | | 12.9 | | | 23.0 | |
| Approach LOS | | C | | | D | | | B | | | C | |

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: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 19.6
 Intersection Capacity Utilization 75.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

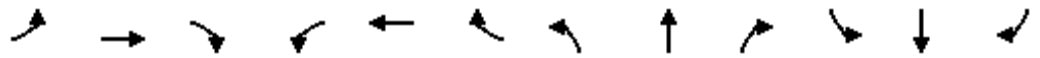
Splits and Phases: 7: Marksheffel Rd & Space Village Ave



HCM 6th Signalized Intersection Summary
 7: Marksheffel Rd & Space Village Ave

2040 Background AM.syn

02/15/2021



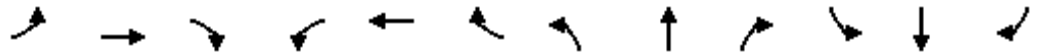
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 10 | 65 | 155 | 20 | 45 | 15 | 375 | 975 | 35 | 15 | 1210 | 150 |
| Future Volume (veh/h) | 10 | 65 | 155 | 20 | 45 | 15 | 375 | 975 | 35 | 15 | 1210 | 150 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 11 | 71 | 168 | 22 | 49 | 16 | 408 | 1060 | 38 | 16 | 1315 | 163 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Cap, veh/h | 192 | 229 | 194 | 160 | 229 | 194 | 442 | 2497 | 1114 | 375 | 1971 | 879 |
| Arrive On Green | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.17 | 0.72 | 0.72 | 0.01 | 0.38 | 0.38 |
| Sat Flow, veh/h | 1305 | 1826 | 1547 | 1114 | 1826 | 1547 | 1739 | 3469 | 1547 | 1739 | 3469 | 1547 |
| Grp Volume(v), veh/h | 11 | 71 | 168 | 22 | 49 | 16 | 408 | 1060 | 38 | 16 | 1315 | 163 |
| Grp Sat Flow(s),veh/h/ln | 1305 | 1826 | 1547 | 1114 | 1826 | 1547 | 1739 | 1735 | 1547 | 1739 | 1735 | 1547 |
| Q Serve(g_s), s | 0.9 | 4.2 | 12.8 | 2.2 | 2.9 | 1.1 | 17.2 | 14.8 | 0.8 | 0.5 | 37.8 | 8.4 |
| Cycle Q Clear(g_c), s | 3.8 | 4.2 | 12.8 | 6.4 | 2.9 | 1.1 | 17.2 | 14.8 | 0.8 | 0.5 | 37.8 | 8.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 192 | 229 | 194 | 160 | 229 | 194 | 442 | 2497 | 1114 | 375 | 1971 | 879 |
| V/C Ratio(X) | 0.06 | 0.31 | 0.86 | 0.14 | 0.21 | 0.08 | 0.92 | 0.42 | 0.03 | 0.04 | 0.67 | 0.19 |
| Avail Cap(c_a), veh/h | 224 | 274 | 232 | 188 | 274 | 232 | 605 | 2497 | 1114 | 417 | 1971 | 879 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 48.9 | 47.7 | 51.5 | 50.7 | 47.1 | 46.4 | 31.4 | 6.8 | 4.8 | 10.5 | 27.7 | 18.7 |
| Incr Delay (d2), s/veh | 0.1 | 0.8 | 24.1 | 0.4 | 0.5 | 0.2 | 16.3 | 0.5 | 0.1 | 0.0 | 1.8 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 2.0 | 6.2 | 0.6 | 1.4 | 0.4 | 13.7 | 5.1 | 0.3 | 0.2 | 17.0 | 3.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 49.0 | 48.5 | 75.5 | 51.1 | 47.6 | 46.5 | 47.7 | 7.3 | 4.9 | 10.5 | 29.6 | 19.1 |
| LnGrp LOS | D | D | E | D | D | D | D | A | A | B | C | B |
| Approach Vol, veh/h | | 250 | | | 87 | | | 1506 | | | 1494 | |
| Approach Delay, s/veh | | 66.7 | | | 48.3 | | | 18.2 | | | 28.2 | |
| Approach LOS | | E | | | D | | | B | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 6.6 | 92.4 | | 21.1 | 24.8 | 74.2 | | 21.1 | | | | |
| Change Period (Y+Rc), s | 4.5 | 6.0 | | 6.0 | 4.5 | 6.0 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 80.5 | | 18.0 | 31.5 | 54.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.5 | 16.8 | | 14.8 | 19.2 | 39.8 | | 8.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 10.7 | | 0.3 | 1.1 | 8.6 | | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 27.1 |
| HCM 6th LOS | C |

Timings

7: Marksheffel Rd & Space Village Ave

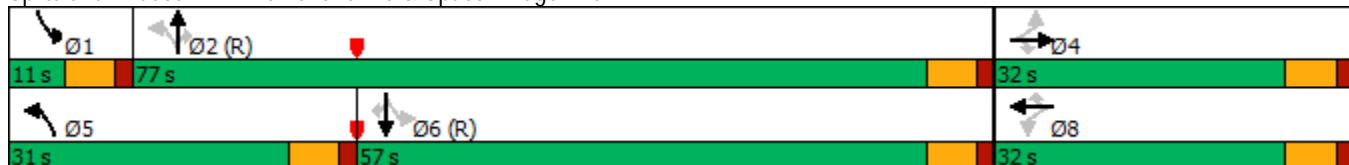


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑ | ↗ | ↖ | ↑↑ | ↗ |
| Traffic Volume (vph) | 15 | 75 | 320 | 60 | 35 | 10 | 275 | 1400 | 35 | 15 | 1080 | 30 |
| Future Volume (vph) | 15 | 75 | 320 | 60 | 35 | 10 | 275 | 1400 | 35 | 15 | 1080 | 30 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 4 | 8 | 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) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 |
| Total Split (s) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 31.0 | 77.0 | 77.0 | 11.0 | 57.0 | 57.0 |
| Total Split (%) | 26.7% | 26.7% | 26.7% | 26.7% | 26.7% | 26.7% | 25.8% | 64.2% | 64.2% | 9.2% | 47.5% | 47.5% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 95.3 | 90.5 | 90.5 | 77.7 | 71.9 | 71.9 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.79 | 0.75 | 0.75 | 0.65 | 0.60 | 0.60 |
| v/c Ratio | 0.11 | 0.42 | 0.77 | 0.47 | 0.20 | 0.04 | 0.65 | 0.57 | 0.03 | 0.06 | 0.55 | 0.03 |
| Control Delay | 46.7 | 54.9 | 19.3 | 60.0 | 48.5 | 0.3 | 14.6 | 9.3 | 0.1 | 10.9 | 39.4 | 0.9 |
| 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 | 46.7 | 54.9 | 19.3 | 60.0 | 48.5 | 0.3 | 14.6 | 9.3 | 0.1 | 10.9 | 39.4 | 0.9 |
| LOS | D | D | B | E | D | A | B | A | A | B | D | A |
| Approach Delay | | 26.9 | | | 50.4 | | | 10.0 | | | 38.0 | |
| Approach LOS | | C | | | D | | | A | | | D | |

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: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 22.7
 Intersection LOS: C
 Intersection Capacity Utilization 70.1%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 7: Marksheffel Rd & Space Village Ave



HCM 6th Signalized Intersection Summary
 7: Marksheffel Rd & Space Village Ave

2040 Background PM.syn
 02/15/2021



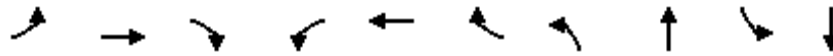
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 15 | 75 | 320 | 60 | 35 | 10 | 275 | 1400 | 35 | 15 | 1080 | 30 |
| Future Volume (veh/h) | 15 | 75 | 320 | 60 | 35 | 10 | 275 | 1400 | 35 | 15 | 1080 | 30 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 16 | 81 | 247 | 65 | 38 | 11 | 296 | 1505 | 38 | 16 | 1161 | 32 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 273 | 326 | 276 | 204 | 326 | 276 | 426 | 2316 | 1033 | 224 | 2076 | 926 |
| Arrive On Green | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.09 | 0.66 | 0.66 | 0.02 | 0.78 | 0.78 |
| Sat Flow, veh/h | 1345 | 1856 | 1572 | 1044 | 1856 | 1572 | 1767 | 3526 | 1572 | 1767 | 3526 | 1572 |
| Grp Volume(v), veh/h | 16 | 81 | 247 | 65 | 38 | 11 | 296 | 1505 | 38 | 16 | 1161 | 32 |
| Grp Sat Flow(s),veh/h/ln | 1345 | 1856 | 1572 | 1044 | 1856 | 1572 | 1767 | 1763 | 1572 | 1767 | 1763 | 1572 |
| Q Serve(g_s), s | 1.2 | 4.5 | 18.4 | 6.9 | 2.1 | 0.7 | 7.5 | 30.7 | 1.0 | 0.4 | 15.2 | 0.5 |
| Cycle Q Clear(g_c), s | 3.3 | 4.5 | 18.4 | 11.4 | 2.1 | 0.7 | 7.5 | 30.7 | 1.0 | 0.4 | 15.2 | 0.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 273 | 326 | 276 | 204 | 326 | 276 | 426 | 2316 | 1033 | 224 | 2076 | 926 |
| V/C Ratio(X) | 0.06 | 0.25 | 0.89 | 0.32 | 0.12 | 0.04 | 0.70 | 0.65 | 0.04 | 0.07 | 0.56 | 0.03 |
| Avail Cap(c_a), veh/h | 328 | 402 | 341 | 247 | 402 | 341 | 643 | 2316 | 1033 | 267 | 2076 | 926 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.0 | 42.6 | 48.4 | 47.5 | 41.6 | 41.0 | 10.3 | 12.3 | 7.2 | 11.5 | 7.0 | 5.4 |
| Incr Delay (d2), s/veh | 0.1 | 0.4 | 21.5 | 0.9 | 0.2 | 0.1 | 2.1 | 1.4 | 0.1 | 0.1 | 1.1 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 2.1 | 8.8 | 1.8 | 1.0 | 0.3 | 2.9 | 11.7 | 0.4 | 0.2 | 4.3 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 43.1 | 43.0 | 69.8 | 48.4 | 41.8 | 41.1 | 12.3 | 13.7 | 7.3 | 11.7 | 8.1 | 5.5 |
| LnGrp LOS | D | D | E | D | D | D | B | B | A | B | A | A |
| Approach Vol, veh/h | | 344 | | | 114 | | | 1839 | | | 1209 | |
| Approach Delay, s/veh | | 62.3 | | | 45.5 | | | 13.4 | | | 8.1 | |
| Approach LOS | | E | | | D | | | B | | | A | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.1 | 84.8 | | 27.1 | 16.2 | 76.7 | | 27.1 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | | 6.0 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 71.0 | | 26.0 | 25.0 | 51.0 | | 26.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.4 | 32.7 | | 20.4 | 9.5 | 17.2 | | 13.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 16.8 | | 0.7 | 0.8 | 11.0 | | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 17.4 |
| HCM 6th LOS | B |

Timings

7: Marksheffel Rd & Space Village Ave



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 50 | 115 | 180 | 75 | 135 | 70 | 425 | 1335 | 105 | 1520 |
| Future Volume (vph) | 50 | 115 | 180 | 75 | 135 | 70 | 425 | 1335 | 105 | 1520 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 6 | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 24.0 | 24.0 | 9.5 | 24.0 | 24.0 | 9.5 | 24.0 | 9.5 | 24.0 |
| Total Split (s) | 9.8 | 24.0 | 24.0 | 9.8 | 24.0 | 24.0 | 34.4 | 71.4 | 14.8 | 51.8 |
| Total Split (%) | 8.2% | 20.0% | 20.0% | 8.2% | 20.0% | 20.0% | 28.7% | 59.5% | 12.3% | 43.2% |
| Yellow Time (s) | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| All-Red Time (s) | 1.0 | 1.5 | 1.5 | 1.0 | 1.5 | 1.5 | 1.0 | 1.5 | 1.0 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 4.5 | 6.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | None | C-Max |
| Act Effct Green (s) | 20.2 | 14.5 | 14.5 | 20.2 | 14.5 | 14.5 | 87.2 | 73.1 | 60.6 | 51.1 |
| Actuated g/C Ratio | 0.17 | 0.12 | 0.12 | 0.17 | 0.12 | 0.12 | 0.73 | 0.61 | 0.50 | 0.43 |
| v/c Ratio | 0.28 | 0.57 | 0.55 | 0.39 | 0.67 | 0.24 | 0.94 | 0.50 | 0.47 | 0.87 |
| Control Delay | 41.2 | 59.8 | 12.5 | 44.8 | 65.5 | 1.8 | 55.7 | 25.2 | 21.0 | 53.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 41.2 | 59.8 | 12.5 | 44.8 | 65.5 | 1.8 | 55.7 | 25.2 | 21.0 | 53.1 |
| LOS | D | E | B | D | E | A | E | C | C | D |
| Approach Delay | | 32.4 | | | 44.0 | | | 32.3 | | 51.2 |
| Approach LOS | | C | | | D | | | C | | D |

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: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 41.1

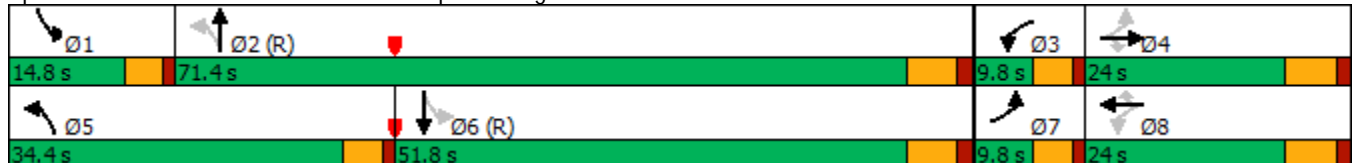
Intersection LOS: D

Intersection Capacity Utilization 85.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Marksheffel Rd & Space Village Ave



HCM 6th Signalized Intersection Summary
 7: Marksheffel Rd & Space Village Ave

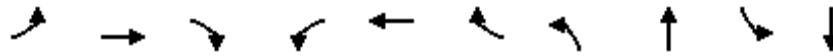
2040 Total AM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 50 | 115 | 180 | 75 | 135 | 70 | 425 | 1335 | 55 | 105 | 1520 | 150 |
| Future Volume (veh/h) | 50 | 115 | 180 | 75 | 135 | 70 | 425 | 1335 | 55 | 105 | 1520 | 150 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 54 | 125 | 98 | 82 | 147 | 38 | 462 | 1451 | 60 | 114 | 1652 | 163 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Cap, veh/h | 148 | 168 | 143 | 166 | 181 | 153 | 480 | 3136 | 130 | 304 | 2144 | 211 |
| Arrive On Green | 0.04 | 0.09 | 0.09 | 0.04 | 0.10 | 0.10 | 0.45 | 1.00 | 1.00 | 0.02 | 0.15 | 0.15 |
| Sat Flow, veh/h | 1739 | 1826 | 1547 | 1739 | 1826 | 1547 | 1739 | 4909 | 203 | 1739 | 4613 | 454 |
| Grp Volume(v), veh/h | 54 | 125 | 98 | 82 | 147 | 38 | 462 | 982 | 529 | 114 | 1189 | 626 |
| Grp Sat Flow(s),veh/h/ln | 1739 | 1826 | 1547 | 1739 | 1826 | 1547 | 1739 | 1662 | 1789 | 1739 | 1662 | 1744 |
| Q Serve(g_s), s | 3.3 | 8.0 | 7.4 | 5.1 | 9.5 | 2.7 | 24.3 | 0.0 | 0.0 | 4.0 | 41.2 | 41.3 |
| Cycle Q Clear(g_c), s | 3.3 | 8.0 | 7.4 | 5.1 | 9.5 | 2.7 | 24.3 | 0.0 | 0.0 | 4.0 | 41.2 | 41.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.11 | 1.00 | | 0.26 |
| Lane Grp Cap(c), veh/h | 148 | 168 | 143 | 166 | 181 | 153 | 480 | 2123 | 1143 | 304 | 1545 | 811 |
| V/C Ratio(X) | 0.36 | 0.74 | 0.69 | 0.50 | 0.81 | 0.25 | 0.96 | 0.46 | 0.46 | 0.38 | 0.77 | 0.77 |
| Avail Cap(c_a), veh/h | 160 | 274 | 232 | 166 | 274 | 232 | 524 | 2123 | 1143 | 366 | 1545 | 811 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.3 | 53.1 | 52.8 | 47.3 | 53.0 | 49.9 | 22.7 | 0.0 | 0.0 | 15.6 | 44.6 | 44.7 |
| Incr Delay (d2), s/veh | 1.5 | 6.3 | 5.8 | 2.3 | 10.5 | 0.8 | 29.1 | 0.7 | 1.3 | 0.8 | 3.8 | 7.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.5 | 4.0 | 3.1 | 2.3 | 4.9 | 1.1 | 12.9 | 0.2 | 0.4 | 1.7 | 19.2 | 21.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 48.8 | 59.4 | 58.6 | 49.5 | 63.4 | 50.8 | 51.8 | 0.7 | 1.3 | 16.4 | 48.4 | 51.7 |
| LnGrp LOS | D | E | E | D | E | D | D | A | A | B | D | D |
| Approach Vol, veh/h | | 277 | | | 267 | | | 1973 | | | 1929 | |
| Approach Delay, s/veh | | 57.0 | | | 57.4 | | | 12.8 | | | 47.6 | |
| Approach LOS | | E | | | E | | | B | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.5 | 82.6 | 9.8 | 17.1 | 31.4 | 61.8 | 9.0 | 17.9 | | | | |
| Change Period (Y+Rc), s | 4.5 | 6.0 | 4.5 | 6.0 | 4.5 | 6.0 | 4.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 10.3 | 65.4 | 5.3 | 18.0 | 29.9 | 45.8 | 5.3 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.0 | 2.0 | 7.1 | 10.0 | 26.3 | 43.3 | 5.3 | 11.5 | | | | |
| Green Ext Time (p_c), s | 0.1 | 16.8 | 0.0 | 0.6 | 0.6 | 2.1 | 0.0 | 0.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 33.3 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

Timings

7: Marksheffel Rd & Space Village Ave



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ | ↖ | ↑↑↑ | ↖ | ↑↑↑ |
| Traffic Volume (vph) | 130 | 195 | 370 | 180 | 225 | 50 | 330 | 2125 | 250 | 1735 |
| Future Volume (vph) | 130 | 195 | 370 | 180 | 225 | 50 | 330 | 2125 | 250 | 1735 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 6 | |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 24.0 | 24.0 | 9.5 | 24.0 | 24.0 | 11.0 | 24.0 | 11.0 | 24.0 |
| Total Split (s) | 10.0 | 24.0 | 24.0 | 12.4 | 26.4 | 26.4 | 27.0 | 62.6 | 21.0 | 56.6 |
| Total Split (%) | 8.3% | 20.0% | 20.0% | 10.3% | 22.0% | 22.0% | 22.5% | 52.2% | 17.5% | 47.2% |
| Yellow Time (s) | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.0 | 1.5 | 1.5 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | None | C-Max |
| Act Effct Green (s) | 24.0 | 17.0 | 17.0 | 28.8 | 19.4 | 19.4 | 78.4 | 57.3 | 66.8 | 51.6 |
| Actuated g/C Ratio | 0.20 | 0.14 | 0.14 | 0.24 | 0.16 | 0.16 | 0.65 | 0.48 | 0.56 | 0.43 |
| v/c Ratio | 0.78 | 0.81 | 0.93 | 0.92 | 0.81 | 0.15 | 0.96 | 0.99 | 0.95 | 0.88 |
| Control Delay | 68.1 | 73.0 | 48.8 | 83.5 | 69.9 | 0.9 | 51.9 | 63.5 | 55.0 | 28.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 68.1 | 73.0 | 48.8 | 83.5 | 69.9 | 0.9 | 51.9 | 63.5 | 55.0 | 28.9 |
| LOS | E | E | D | F | E | A | D | E | D | C |
| Approach Delay | | 59.2 | | | 67.7 | | | 62.0 | | 32.1 |
| Approach LOS | | E | | | E | | | E | | C |

Intersection Summary

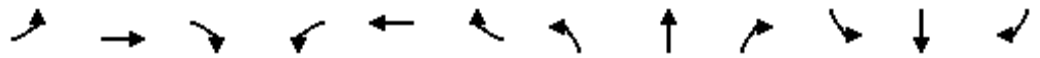
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 51.6
 Intersection LOS: D
 Intersection Capacity Utilization 95.8%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 7: Marksheffel Rd & Space Village Ave



HCM 6th Signalized Intersection Summary
 7: Marksheffel Rd & Space Village Ave

2040 Total PM.syn
 02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 130 | 195 | 370 | 180 | 225 | 50 | 330 | 2125 | 85 | 250 | 1735 | 30 |
| Future Volume (veh/h) | 130 | 195 | 370 | 180 | 225 | 50 | 330 | 2125 | 85 | 250 | 1735 | 30 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 140 | 210 | 183 | 194 | 242 | 54 | 355 | 2285 | 91 | 269 | 1866 | 32 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 171 | 249 | 211 | 200 | 286 | 243 | 387 | 2443 | 97 | 290 | 2507 | 43 |
| Arrive On Green | 0.05 | 0.13 | 0.13 | 0.07 | 0.15 | 0.15 | 0.16 | 0.65 | 0.65 | 0.25 | 0.98 | 0.98 |
| Sat Flow, veh/h | 1767 | 1856 | 1572 | 1767 | 1856 | 1572 | 1767 | 4999 | 198 | 1767 | 5129 | 88 |
| Grp Volume(v), veh/h | 140 | 210 | 183 | 194 | 242 | 54 | 355 | 1540 | 836 | 269 | 1228 | 670 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1856 | 1572 | 1767 | 1856 | 1572 | 1767 | 1689 | 1820 | 1767 | 1689 | 1840 |
| Q Serve(g_s), s | 5.5 | 13.3 | 13.7 | 7.9 | 15.2 | 3.6 | 12.2 | 48.7 | 49.6 | 12.8 | 3.6 | 3.6 |
| Cycle Q Clear(g_c), s | 5.5 | 13.3 | 13.7 | 7.9 | 15.2 | 3.6 | 12.2 | 48.7 | 49.6 | 12.8 | 3.6 | 3.6 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.11 | 1.00 | | 0.05 |
| Lane Grp Cap(c), veh/h | 171 | 249 | 211 | 200 | 286 | 243 | 387 | 1650 | 889 | 290 | 1651 | 899 |
| V/C Ratio(X) | 0.82 | 0.84 | 0.87 | 0.97 | 0.84 | 0.22 | 0.92 | 0.93 | 0.94 | 0.93 | 0.74 | 0.74 |
| Avail Cap(c_a), veh/h | 171 | 278 | 236 | 200 | 315 | 267 | 478 | 1650 | 889 | 292 | 1651 | 899 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 48.7 | 50.7 | 50.9 | 47.8 | 49.3 | 44.4 | 16.1 | 19.3 | 19.4 | 30.2 | 0.7 | 0.7 |
| Incr Delay (d2), s/veh | 26.2 | 18.8 | 25.2 | 55.1 | 17.4 | 0.5 | 20.2 | 11.1 | 18.8 | 34.3 | 3.1 | 5.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.8 | 7.4 | 6.9 | 5.1 | 8.4 | 1.4 | 6.4 | 17.9 | 21.5 | 9.4 | 1.1 | 1.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 75.0 | 69.5 | 76.1 | 102.9 | 66.8 | 44.9 | 36.3 | 30.4 | 38.2 | 64.5 | 3.8 | 6.3 |
| LnGrp LOS | E | E | E | F | E | D | D | C | D | E | A | A |
| Approach Vol, veh/h | | 533 | | | 490 | | | 2731 | | | 2167 | |
| Approach Delay, s/veh | | 73.2 | | | 78.7 | | | 33.5 | | | 12.1 | |
| Approach LOS | | E | | | E | | | C | | | B | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.8 | 64.6 | 12.4 | 22.1 | 20.8 | 64.7 | 10.0 | 24.5 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 | 6.0 | 4.5 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 15.0 | 56.6 | 7.9 | 18.0 | 21.0 | 50.6 | 5.5 | 20.4 | | | | |
| Max Q Clear Time (g_c+l1), s | 14.8 | 51.6 | 9.9 | 15.7 | 14.2 | 5.6 | 7.5 | 17.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.6 | 0.0 | 0.4 | 0.7 | 22.3 | 0.0 | 0.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 33.0 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 5 | 0 | 10 | 30 | 0 | 15 | 5 | 385 | 10 | 5 | 430 | 5 |
| Future Vol, veh/h | 5 | 0 | 10 | 30 | 0 | 15 | 5 | 385 | 10 | 5 | 430 | 5 |
| 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 | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 2 | 2 | 6 | 2 |
| Mvmt Flow | 5 | 0 | 11 | 33 | 0 | 16 | 5 | 418 | 11 | 5 | 467 | 5 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 922 | 919 | 470 | 919 | 916 | 424 | 472 | 0 | 0 | 429 | 0 | 0 |
| Stage 1 | 480 | 480 | - | 434 | 434 | - | - | - | - | - | - | - |
| Stage 2 | 442 | 439 | - | 485 | 482 | - | - | - | - | - | - | - |
| 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 | 251 | 271 | 594 | 252 | 272 | 630 | 1090 | - | - | 1130 | - | - |
| Stage 1 | 567 | 554 | - | 600 | 581 | - | - | - | - | - | - | - |
| Stage 2 | 594 | 578 | - | 563 | 553 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 243 | 269 | 594 | 246 | 270 | 630 | 1090 | - | - | 1130 | - | - |
| Mov Cap-2 Maneuver | 370 | 379 | - | 372 | 379 | - | - | - | - | - | - | - |
| Stage 1 | 564 | 552 | - | 597 | 578 | - | - | - | - | - | - | - |
| Stage 2 | 576 | 575 | - | 550 | 551 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 12.5 | | 14.4 | | 0.1 | | 0.1 | |
| HCM LOS | B | | B | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1090 | - | - | 494 | 431 | 1130 | - |
| HCM Lane V/C Ratio | 0.005 | - | - | 0.033 | 0.113 | 0.005 | - |
| HCM Control Delay (s) | 8.3 | - | - | 12.5 | 14.4 | 8.2 | - |
| HCM Lane LOS | A | - | - | B | B | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0.4 | 0 | - |

| 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 | 5 | 0 | 10 | 20 | 0 | 10 | 10 | 330 | 30 | 15 | 550 | 5 |
| Future Vol, veh/h | 5 | 0 | 10 | 20 | 0 | 10 | 10 | 330 | 30 | 15 | 550 | 5 |
| 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 | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 0 | 11 | 22 | 0 | 11 | 11 | 359 | 33 | 16 | 598 | 5 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1036 | 1047 | 601 | 1036 | 1033 | 376 | 603 | 0 | 0 | 392 | 0 | 0 |
| Stage 1 | 633 | 633 | - | 398 | 398 | - | - | - | - | - | - | - |
| Stage 2 | 403 | 414 | - | 638 | 635 | - | - | - | - | - | - | - |
| 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 | 210 | 228 | 500 | 210 | 232 | 670 | 975 | - | - | 1167 | - | - |
| Stage 1 | 468 | 473 | - | 628 | 603 | - | - | - | - | - | - | - |
| Stage 2 | 624 | 593 | - | 465 | 472 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 203 | 222 | 500 | 202 | 226 | 670 | 975 | - | - | 1167 | - | - |
| Mov Cap-2 Maneuver | 327 | 334 | - | 322 | 335 | - | - | - | - | - | - | - |
| Stage 1 | 463 | 466 | - | 621 | 596 | - | - | - | - | - | - | - |
| Stage 2 | 607 | 586 | - | 449 | 465 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 13.8 | | 15.1 | | 0.2 | | 0.2 | |
| HCM LOS | B | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 975 | - | - | 425 | 389 | 1167 | - |
| HCM Lane V/C Ratio | 0.011 | - | - | 0.038 | 0.084 | 0.014 | - |
| HCM Control Delay (s) | 8.7 | - | - | 13.8 | 15.1 | 8.1 | - |
| HCM Lane LOS | A | - | - | B | C | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0.3 | 0 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 5 | 0 | 10 | 30 | 0 | 15 | 5 | 675 | 10 | 5 | 630 | 5 |
| Future Vol, veh/h | 5 | 0 | 10 | 30 | 0 | 15 | 5 | 675 | 10 | 5 | 630 | 5 |
| 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 | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 2 | 2 | 6 | 2 |
| Mvmt Flow | 5 | 0 | 11 | 33 | 0 | 16 | 5 | 734 | 11 | 5 | 685 | 5 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 1456 | 1453 | 688 | 1453 | 1450 | 740 | 690 | 0 | 0 | 745 | 0 | 0 |
| Stage 1 | 698 | 698 | - | 750 | 750 | - | - | - | - | - | - | - |
| Stage 2 | 758 | 755 | - | 703 | 700 | - | - | - | - | - | - | - |
| 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 | 108 | 130 | 446 | 108 | 131 | 417 | 905 | - | - | 863 | - | - |
| Stage 1 | 431 | 442 | - | 403 | 419 | - | - | - | - | - | - | - |
| Stage 2 | 399 | 417 | - | 428 | 441 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 103 | 128 | 446 | 104 | 129 | 417 | 905 | - | - | 863 | - | - |
| Mov Cap-2 Maneuver | 229 | 252 | - | 233 | 253 | - | - | - | - | - | - | - |
| Stage 1 | 428 | 439 | - | 401 | 416 | - | - | - | - | - | - | - |
| Stage 2 | 381 | 414 | - | 415 | 438 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|----|--|-----|--|-----|--|
| HCM Control Delay, s | 16.2 | | 21 | | 0.1 | | 0.1 | |
| HCM LOS | C | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 905 | - | - | 339 | 273 | 863 | - |
| HCM Lane V/C Ratio | 0.006 | - | - | 0.048 | 0.179 | 0.006 | - |
| HCM Control Delay (s) | 9 | - | - | 16.2 | 21 | 9.2 | - |
| HCM Lane LOS | A | - | - | C | C | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.2 | 0.6 | 0 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 5 | 0 | 10 | 20 | 0 | 10 | 10 | 715 | 30 | 15 | 1035 | 5 |
| Future Vol, veh/h | 5 | 0 | 10 | 20 | 0 | 10 | 10 | 715 | 30 | 15 | 1035 | 5 |
| 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 | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 0 | 11 | 22 | 0 | 11 | 11 | 777 | 33 | 16 | 1125 | 5 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1981 | 1992 | 1128 | 1981 | 1978 | 794 | 1130 | 0 | 0 | 810 | 0 | 0 |
| Stage 1 | 1160 | 1160 | - | 816 | 816 | - | - | - | - | - | - | - |
| Stage 2 | 821 | 832 | - | 1165 | 1162 | - | - | - | - | - | - | - |
| 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 | 46 | 61 | 249 | 46 | 62 | 388 | 618 | - | - | 816 | - | - |
| Stage 1 | 238 | 270 | - | 371 | 391 | - | - | - | - | - | - | - |
| Stage 2 | 369 | 384 | - | 237 | 269 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 43 | 59 | 249 | 43 | 60 | 388 | 618 | - | - | 816 | - | - |
| Mov Cap-2 Maneuver | 145 | 166 | - | 140 | 165 | - | - | - | - | - | - | - |
| Stage 1 | 234 | 265 | - | 364 | 384 | - | - | - | - | - | - | - |
| Stage 2 | 352 | 377 | - | 222 | 264 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | | |
|----------------------|------|--|------|--|-----|--|-----|--|--|
| HCM Control Delay, s | 24.5 | | 29.7 | | 0.1 | | 0.1 | | |
| HCM LOS | C | | D | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|------|-----|
| Capacity (veh/h) | 618 | - | - | 201 | 178 | 816 | - |
| HCM Lane V/C Ratio | 0.018 | - | - | 0.081 | 0.183 | 0.02 | - |
| HCM Control Delay (s) | 10.9 | - | - | 24.5 | 29.7 | 9.5 | - |
| HCM Lane LOS | B | - | - | C | D | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.3 | 0.7 | 0.1 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↕↕ | ↕↕ | ↗ |
| Traffic Vol, veh/h | 90 | 90 | 50 | 775 | 1300 | 200 |
| Future Vol, veh/h | 90 | 90 | 50 | 775 | 1300 | 200 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 200 | 0 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Mvmt Flow | 98 | 98 | 54 | 842 | 1413 | 217 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1942 | 707 | 1630 | 0 | - | 0 |
| Stage 1 | 1413 | - | - | - | - | - |
| Stage 2 | 529 | - | - | - | - | - |
| 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 | *~ 80 | 378 | 394 | - | - | - |
| Stage 1 | *191 | - | - | - | - | - |
| Stage 2 | *720 | - | - | - | - | - |
| Platoon blocked, % | 1 | | | - | - | - |
| Mov Cap-1 Maneuver | *~ 69 | 378 | 394 | - | - | - |
| Mov Cap-2 Maneuver | *139 | - | - | - | - | - |
| Stage 1 | *165 | - | - | - | - | - |
| Stage 2 | *720 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 47.3 | 0.9 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 394 | - | 139 | 378 | - | - |
| HCM Lane V/C Ratio | 0.138 | - | 0.704 | 0.259 | - | - |
| HCM Control Delay (s) | 15.6 | - | 76.7 | 17.8 | - | - |
| HCM Lane LOS | C | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 4 | 1 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↕ | ↕ | ↗ |
| Traffic Vol, veh/h | 90 | 90 | 50 | 1365 | 1045 | 185 |
| Future Vol, veh/h | 90 | 90 | 50 | 1365 | 1045 | 185 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 200 | 0 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Mvmt Flow | 98 | 98 | 54 | 1484 | 1136 | 201 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1986 | 568 | 1337 | 0 | - | 0 |
| Stage 1 | 1136 | - | - | - | - | - |
| Stage 2 | 850 | - | - | - | - | - |
| 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 | ~ 53 | 466 | 512 | - | - | - |
| Stage 1 | 268 | - | - | - | - | - |
| Stage 2 | 379 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 47 | 466 | 512 | - | - | - |
| Mov Cap-2 Maneuver | 154 | - | - | - | - | - |
| Stage 1 | 240 | - | - | - | - | - |
| Stage 2 | 379 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 38.5 | 0.5 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 512 | - | 154 | 466 | - | - |
| HCM Lane V/C Ratio | 0.106 | - | 0.635 | 0.21 | - | - |
| HCM Control Delay (s) | 12.9 | - | 62.1 | 14.8 | - | - |
| HCM Lane LOS | B | - | F | B | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 3.5 | 0.8 | - | - |

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

Timings
9: Marksheffel Rd & CRN North Full Access



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑ | ↑↑ | ↗ |
| Traffic Volume (vph) | 90 | 90 | 50 | 775 | 1300 | 200 |
| Future Volume (vph) | 90 | 90 | 50 | 775 | 1300 | 200 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 30.0 | 30.0 | 11.0 | 90.0 | 79.0 | 79.0 |
| Total Split (%) | 25.0% | 25.0% | 9.2% | 75.0% | 65.8% | 65.8% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 12.0 | 12.0 | 97.5 | 97.5 | 88.0 | 88.0 |
| Actuated g/C Ratio | 0.10 | 0.10 | 0.81 | 0.81 | 0.73 | 0.73 |
| v/c Ratio | 0.55 | 0.40 | 0.18 | 0.30 | 0.56 | 0.18 |
| Control Delay | 62.7 | 14.2 | 6.6 | 5.7 | 25.0 | 8.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.7 | 14.2 | 6.6 | 5.7 | 25.0 | 8.9 |
| LOS | E | B | A | A | C | A |
| Approach Delay | 38.4 | | | 5.7 | 22.8 | |
| Approach LOS | D | | | A | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 18.3
 Intersection Capacity Utilization 55.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 9: Marksheffel Rd & CRN North Full Access



HCM 6th Signalized Intersection Summary
 9: Marksheffel Rd & CRN North Full Access

2026 Total AM Improved.syn
 02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 90 | 90 | 50 | 775 | 1300 | 200 |
| Future Volume (veh/h) | 90 | 90 | 50 | 775 | 1300 | 200 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 98 | 98 | 54 | 842 | 1413 | 217 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Cap, veh/h | 145 | 129 | 301 | 2884 | 2604 | 1190 |
| Arrive On Green | 0.08 | 0.08 | 0.07 | 1.00 | 0.75 | 0.75 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 3561 | 3561 | 1585 |
| Grp Volume(v), veh/h | 98 | 98 | 54 | 842 | 1413 | 217 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1735 | 1735 | 1585 |
| Q Serve(g_s), s | 6.4 | 7.3 | 0.7 | 0.0 | 20.6 | 4.7 |
| Cycle Q Clear(g_c), s | 6.4 | 7.3 | 0.7 | 0.0 | 20.6 | 4.7 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 145 | 129 | 301 | 2884 | 2604 | 1190 |
| V/C Ratio(X) | 0.68 | 0.76 | 0.18 | 0.29 | 0.54 | 0.18 |
| Avail Cap(c_a), veh/h | 371 | 330 | 321 | 2884 | 2604 | 1190 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.96 | 0.96 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.6 | 54.0 | 4.8 | 0.0 | 6.3 | 4.3 |
| Incr Delay (d2), s/veh | 5.5 | 8.9 | 0.3 | 0.2 | 0.8 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.1 | 6.6 | 0.2 | 0.1 | 6.8 | 1.5 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 59.1 | 62.9 | 5.1 | 0.2 | 7.1 | 4.7 |
| LnGrp LOS | E | E | A | A | A | A |
| Approach Vol, veh/h | 196 | | | 896 | 1630 | |
| Approach Delay, s/veh | 61.0 | | | 0.5 | 6.8 | |
| Approach LOS | E | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 105.3 | | 14.7 | 9.7 | 95.6 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 84.5 | | 25.0 | 5.5 | 73.5 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | 9.3 | 2.7 | 22.6 |
| Green Ext Time (p_c), s | | 7.5 | | 0.5 | 0.0 | 18.2 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 8.6 | | | |
| HCM 6th LOS | | | A | | | |

Timings
9: Marksheffel Rd & CRN North Full Access



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑ | ↑↑ | ↗ |
| Traffic Volume (vph) | 90 | 90 | 50 | 1365 | 1045 | 185 |
| Future Volume (vph) | 90 | 90 | 50 | 1365 | 1045 | 185 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 28.0 | 28.0 | 13.0 | 92.0 | 79.0 | 79.0 |
| Total Split (%) | 23.3% | 23.3% | 10.8% | 76.7% | 65.8% | 65.8% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 12.0 | 12.0 | 97.5 | 97.5 | 88.0 | 88.0 |
| Actuated g/C Ratio | 0.10 | 0.10 | 0.81 | 0.81 | 0.73 | 0.73 |
| v/c Ratio | 0.56 | 0.40 | 0.14 | 0.52 | 0.44 | 0.17 |
| Control Delay | 62.9 | 14.2 | 3.0 | 4.0 | 15.9 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.9 | 14.2 | 3.0 | 4.0 | 15.9 | 6.7 |
| LOS | E | B | A | A | B | A |
| Approach Delay | 38.5 | | | 3.9 | 14.5 | |
| Approach LOS | D | | | A | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 10.8
 Intersection Capacity Utilization 51.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 9: Marksheffel Rd & CRN North Full Access



HCM 6th Signalized Intersection Summary
 9: Marksheffel Rd & CRN North Full Access

2026 Total PM Improved.syn
 02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 90 | 90 | 50 | 1365 | 1045 | 185 |
| Future Volume (veh/h) | 90 | 90 | 50 | 1365 | 1045 | 185 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 98 | 98 | 54 | 1484 | 1136 | 201 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Cap, veh/h | 144 | 128 | 381 | 2932 | 2648 | 1190 |
| Arrive On Green | 0.08 | 0.08 | 0.07 | 1.00 | 0.75 | 0.75 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 3618 | 3618 | 1585 |
| Grp Volume(v), veh/h | 98 | 98 | 54 | 1484 | 1136 | 201 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1763 | 1763 | 1585 |
| Q Serve(g_s), s | 6.4 | 7.3 | 0.7 | 0.0 | 14.2 | 4.3 |
| Cycle Q Clear(g_c), s | 6.4 | 7.3 | 0.7 | 0.0 | 14.2 | 4.3 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 144 | 128 | 381 | 2932 | 2648 | 1190 |
| V/C Ratio(X) | 0.68 | 0.76 | 0.14 | 0.51 | 0.43 | 0.17 |
| Avail Cap(c_a), veh/h | 341 | 304 | 430 | 2932 | 2648 | 1190 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.85 | 0.85 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.6 | 54.0 | 3.5 | 0.0 | 5.5 | 4.3 |
| Incr Delay (d2), s/veh | 5.5 | 9.0 | 0.1 | 0.5 | 0.5 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.1 | 6.6 | 0.2 | 0.2 | 4.7 | 1.3 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 59.1 | 63.1 | 3.7 | 0.5 | 6.0 | 4.6 |
| LnGrp LOS | E | E | A | A | A | A |
| Approach Vol, veh/h | 196 | | | 1538 | 1337 | |
| Approach Delay, s/veh | 61.1 | | | 0.6 | 5.8 | |
| Approach LOS | E | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 105.3 | | 14.7 | 9.7 | 95.6 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 86.5 | | 23.0 | 7.5 | 73.5 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | 9.3 | 2.7 | 16.2 |
| Green Ext Time (p_c), s | | 19.6 | | 0.5 | 0.0 | 12.9 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 6.7 | | | |
| HCM 6th LOS | | | A | | | |

Timings
 9: Marksheffel Rd & CRN North Full Access

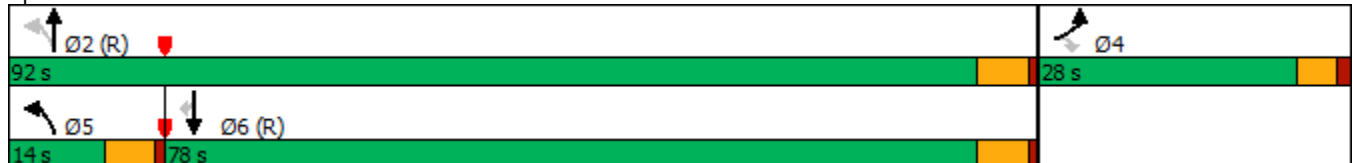


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 100 | 100 | 55 | 1160 | 1675 | 220 |
| Future Volume (vph) | 100 | 100 | 55 | 1160 | 1675 | 220 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 28.0 | 28.0 | 14.0 | 92.0 | 78.0 | 78.0 |
| Total Split (%) | 23.3% | 23.3% | 11.7% | 76.7% | 65.0% | 65.0% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 12.7 | 12.7 | 96.8 | 96.8 | 87.1 | 87.1 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.81 | 0.81 | 0.73 | 0.73 |
| v/c Ratio | 0.58 | 0.41 | 0.27 | 0.32 | 0.51 | 0.20 |
| Control Delay | 63.0 | 13.4 | 12.2 | 4.6 | 24.6 | 9.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.0 | 13.4 | 12.2 | 4.6 | 24.6 | 9.0 |
| LOS | E | B | B | A | C | A |
| Approach Delay | 38.2 | | | 5.0 | 22.8 | |
| Approach LOS | D | | | A | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 17.2
 Intersection LOS: B
 Intersection Capacity Utilization 55.4%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 9: Marksheffel Rd & CRN North Full Access



HCM 6th Signalized Intersection Summary
 9: Marksheffel Rd & CRN North Full Access

2040 Total AM.syn
 02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 100 | 100 | 55 | 1160 | 1675 | 220 |
| Future Volume (veh/h) | 100 | 100 | 55 | 1160 | 1675 | 220 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 109 | 109 | 60 | 1261 | 1821 | 239 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Cap, veh/h | 157 | 140 | 275 | 4109 | 3701 | 1177 |
| Arrive On Green | 0.09 | 0.09 | 0.07 | 1.00 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 5149 | 5149 | 1585 |
| Grp Volume(v), veh/h | 109 | 109 | 60 | 1261 | 1821 | 239 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1662 | 1662 | 1585 |
| Q Serve(g_s), s | 7.1 | 8.1 | 0.9 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.1 | 8.1 | 0.9 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 157 | 140 | 275 | 4109 | 3701 | 1177 |
| V/C Ratio(X) | 0.69 | 0.78 | 0.22 | 0.31 | 0.49 | 0.20 |
| Avail Cap(c_a), veh/h | 341 | 304 | 337 | 4109 | 3701 | 1177 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.96 | 0.96 | 0.45 | 0.45 |
| Uniform Delay (d), s/veh | 53.1 | 53.6 | 2.5 | 0.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 5.4 | 9.0 | 0.4 | 0.2 | 0.2 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.4 | 7.3 | 0.3 | 0.1 | 0.1 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 58.5 | 62.6 | 2.9 | 0.2 | 0.2 | 0.2 |
| LnGrp LOS | E | E | A | A | A | A |
| Approach Vol, veh/h | 218 | | | 1321 | 2060 | |
| Approach Delay, s/veh | 60.6 | | | 0.3 | 0.2 | |
| Approach LOS | E | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 104.4 | | 15.6 | 9.8 | 94.6 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 86.5 | | 23.0 | 8.5 | 72.5 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | 10.1 | 2.9 | 2.0 |
| Green Ext Time (p_c), s | | 13.6 | | 0.5 | 0.0 | 29.1 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 3.9 | | | |
| HCM 6th LOS | | | A | | | |

Timings
 9: Marksheffel Rd & CRN North Full Access

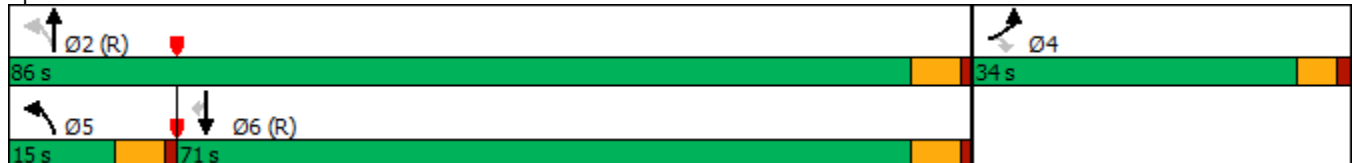


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 100 | 100 | 80 | 2025 | 1760 | 310 |
| Future Volume (vph) | 100 | 100 | 80 | 2025 | 1760 | 310 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 11.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 34.0 | 34.0 | 15.0 | 86.0 | 71.0 | 71.0 |
| Total Split (%) | 28.3% | 28.3% | 12.5% | 71.7% | 59.2% | 59.2% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 12.7 | 12.7 | 96.8 | 96.8 | 83.9 | 83.9 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.81 | 0.81 | 0.70 | 0.70 |
| v/c Ratio | 0.58 | 0.41 | 0.40 | 0.54 | 0.54 | 0.28 |
| Control Delay | 63.0 | 13.4 | 15.8 | 4.1 | 22.0 | 8.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.0 | 13.4 | 15.8 | 4.1 | 22.0 | 8.1 |
| LOS | E | B | B | A | C | A |
| Approach Delay | 38.2 | | | 4.5 | 19.9 | |
| Approach LOS | D | | | A | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 13.3
 Intersection LOS: B
 Intersection Capacity Utilization 57.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 9: Marksheffel Rd & CRN North Full Access



HCM 6th Signalized Intersection Summary
 9: Marksheffel Rd & CRN North Full Access

2040 Total PM.syn
 02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 100 | 100 | 80 | 2025 | 1760 | 310 |
| Future Volume (veh/h) | 100 | 100 | 80 | 2025 | 1760 | 310 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 109 | 109 | 87 | 2201 | 1913 | 337 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Cap, veh/h | 158 | 141 | 254 | 4172 | 3741 | 1170 |
| Arrive On Green | 0.09 | 0.09 | 0.08 | 1.00 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 5233 | 5233 | 1585 |
| Grp Volume(v), veh/h | 109 | 109 | 87 | 2201 | 1913 | 337 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1689 | 1689 | 1585 |
| Q Serve(g_s), s | 7.1 | 8.1 | 1.3 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.1 | 8.1 | 1.3 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 158 | 141 | 254 | 4172 | 3741 | 1170 |
| V/C Ratio(X) | 0.69 | 0.77 | 0.34 | 0.53 | 0.51 | 0.29 |
| Avail Cap(c_a), veh/h | 430 | 383 | 325 | 4172 | 3741 | 1170 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.83 | 0.83 | 0.54 | 0.54 |
| Uniform Delay (d), s/veh | 53.1 | 53.5 | 2.6 | 0.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 5.2 | 8.7 | 0.7 | 0.4 | 0.3 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.4 | 7.3 | 0.4 | 0.2 | 0.1 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 58.3 | 62.2 | 3.2 | 0.4 | 0.3 | 0.3 |
| LnGrp LOS | E | E | A | A | A | A |
| Approach Vol, veh/h | | | | 2288 | 2250 | |
| Approach Delay, s/veh | 60.3 | | | 0.5 | 0.3 | |
| Approach LOS | E | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 104.3 | | 15.7 | 10.2 | 94.1 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 80.5 | | 29.0 | 9.5 | 65.5 |
| Max Q Clear Time (g_c+l1), s | | 2.0 | | 10.1 | 3.3 | 2.0 |
| Green Ext Time (p_c), s | | 39.6 | | 0.6 | 0.1 | 31.7 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 3.1 | | | |
| HCM 6th LOS | | | A | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↕↕ | ↕↕ | ↗ |
| Traffic Vol, veh/h | 70 | 200 | 150 | 755 | 1290 | 100 |
| Future Vol, veh/h | 70 | 200 | 150 | 755 | 1290 | 100 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 200 | 0 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Mvmt Flow | 76 | 217 | 163 | 821 | 1402 | 109 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 2139 | 701 | 1511 | 0 | - | 0 |
| Stage 1 | 1402 | - | - | - | - | - |
| Stage 2 | 737 | - | - | - | - | - |
| 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 | *~ 52 | 381 | 439 | - | - | - |
| Stage 1 | *193 | - | - | - | - | - |
| Stage 2 | *720 | - | - | - | - | - |
| Platoon blocked, % | 1 | | | - | - | - |
| Mov Cap-1 Maneuver | *~ 33 | 381 | 439 | - | - | - |
| Mov Cap-2 Maneuver | *101 | - | - | - | - | - |
| Stage 1 | *121 | - | - | - | - | - |
| Stage 2 | *720 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 47.6 | 3 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 439 | - | 101 | 381 | - | - |
| HCM Lane V/C Ratio | 0.371 | - | 0.753 | 0.571 | - | - |
| HCM Control Delay (s) | 18 | - | 108.3 | 26.3 | - | - |
| HCM Lane LOS | C | - | F | D | - | - |
| HCM 95th %tile Q(veh) | 1.7 | - | 4 | 3.4 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↕↕ | ↕↕ | ↗ |
| Traffic Vol, veh/h | 70 | 200 | 140 | 1345 | 1040 | 95 |
| Future Vol, veh/h | 70 | 200 | 140 | 1345 | 1040 | 95 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 200 | 0 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Mvmt Flow | 76 | 217 | 152 | 1462 | 1130 | 103 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 2165 | 565 | 1233 | 0 | - | 0 |
| Stage 1 | 1130 | - | - | - | - | - |
| Stage 2 | 1035 | - | - | - | - | - |
| 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 | ~ 40 | 468 | 561 | - | - | - |
| Stage 1 | 270 | - | - | - | - | - |
| Stage 2 | 303 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 29 | 468 | 561 | - | - | - |
| Mov Cap-2 Maneuver | 122 | - | - | - | - | - |
| Stage 1 | 197 | - | - | - | - | - |
| Stage 2 | 303 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 33.4 | 1.3 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 561 | - | 122 | 468 | - | - |
| HCM Lane V/C Ratio | 0.271 | - | 0.624 | 0.465 | - | - |
| HCM Control Delay (s) | 13.8 | - | 74.1 | 19.2 | - | - |
| HCM Lane LOS | B | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 1.1 | - | 3.2 | 2.4 | - | - |

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

Timings

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑ | ↑↑ | ↗ |
| Traffic Volume (vph) | 70 | 200 | 150 | 755 | 1290 | 100 |
| Future Volume (vph) | 70 | 200 | 150 | 755 | 1290 | 100 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 25.0 | 25.0 | 19.0 | 95.0 | 76.0 | 76.0 |
| Total Split (%) | 20.8% | 20.8% | 15.8% | 79.2% | 63.3% | 63.3% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 10.5 | 10.5 | 99.0 | 99.0 | 85.1 | 85.1 |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.82 | 0.82 | 0.71 | 0.71 |
| v/c Ratio | 0.49 | 0.65 | 0.51 | 0.29 | 0.58 | 0.09 |
| Control Delay | 62.2 | 17.1 | 16.0 | 2.7 | 4.7 | 0.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.2 | 17.1 | 16.0 | 2.7 | 4.7 | 0.7 |
| LOS | E | B | B | A | A | A |
| Approach Delay | 28.8 | | | 4.9 | 4.4 | |
| Approach LOS | C | | | A | A | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 7.1
 Intersection Capacity Utilization 61.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2026 Total AM Improved.syn

02/15/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 70 | 200 | 150 | 755 | 1290 | 100 |
| Future Volume (veh/h) | 70 | 200 | 150 | 755 | 1290 | 100 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 76 | 217 | 163 | 821 | 1402 | 109 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Cap, veh/h | 272 | 242 | 375 | 2636 | 2313 | 1057 |
| Arrive On Green | 0.15 | 0.15 | 0.09 | 1.00 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 3561 | 3561 | 1585 |
| Grp Volume(v), veh/h | 76 | 217 | 163 | 821 | 1402 | 109 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1735 | 1735 | 1585 |
| Q Serve(g_s), s | 4.5 | 16.1 | 3.4 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.5 | 16.1 | 3.4 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 272 | 242 | 375 | 2636 | 2313 | 1057 |
| V/C Ratio(X) | 0.28 | 0.90 | 0.43 | 0.31 | 0.61 | 0.10 |
| Avail Cap(c_a), veh/h | 297 | 264 | 491 | 2636 | 2313 | 1057 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.86 | 0.86 | 0.76 | 0.76 |
| Uniform Delay (d), s/veh | 45.0 | 49.9 | 4.6 | 0.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.6 | 28.8 | 0.7 | 0.3 | 0.9 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 15.3 | 1.1 | 0.1 | 0.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 45.6 | 78.7 | 5.3 | 0.3 | 0.9 | 0.1 |
| LnGrp LOS | D | E | A | A | A | A |
| Approach Vol, veh/h | | | | 984 | 1511 | |
| Approach Delay, s/veh | | | | 1.1 | 0.9 | |
| Approach LOS | | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 96.7 | | 23.3 | 11.2 | 85.5 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 89.5 | | 20.0 | 13.5 | 70.5 |
| Max Q Clear Time (g_c+l1), s | | 2.0 | | 18.1 | 5.4 | 2.0 |
| Green Ext Time (p_c), s | | 7.3 | | 0.2 | 0.3 | 18.1 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 8.2 | | | |
| HCM 6th LOS | | | A | | | |

Timings

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑ | ↑↑ | ↗ |
| Traffic Volume (vph) | 70 | 200 | 140 | 1345 | 1040 | 95 |
| Future Volume (vph) | 70 | 200 | 140 | 1345 | 1040 | 95 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 29.0 | 29.0 | 20.0 | 91.0 | 71.0 | 71.0 |
| Total Split (%) | 24.2% | 24.2% | 16.7% | 75.8% | 59.2% | 59.2% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 10.5 | 10.5 | 99.0 | 99.0 | 85.9 | 85.9 |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.82 | 0.82 | 0.72 | 0.72 |
| v/c Ratio | 0.49 | 0.65 | 0.38 | 0.51 | 0.45 | 0.09 |
| Control Delay | 62.2 | 15.9 | 6.9 | 10.6 | 5.7 | 1.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.2 | 15.9 | 6.9 | 10.6 | 5.7 | 1.5 |
| LOS | E | B | A | B | A | A |
| Approach Delay | 27.9 | | | 10.3 | 5.4 | |
| Approach LOS | C | | | B | A | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 10.0
 Intersection Capacity Utilization 54.0%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2026 Total PM Improved.syn

02/15/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 70 | 200 | 140 | 1345 | 1040 | 95 |
| Future Volume (veh/h) | 70 | 200 | 140 | 1345 | 1040 | 95 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 76 | 217 | 152 | 1462 | 1130 | 103 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Cap, veh/h | 276 | 245 | 440 | 2671 | 2355 | 1059 |
| Arrive On Green | 0.15 | 0.15 | 0.04 | 0.76 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 3618 | 3618 | 1585 |
| Grp Volume(v), veh/h | 76 | 217 | 152 | 1462 | 1130 | 103 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1763 | 1763 | 1585 |
| Q Serve(g_s), s | 4.5 | 16.1 | 3.0 | 20.6 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.5 | 16.1 | 3.0 | 20.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 276 | 245 | 440 | 2671 | 2355 | 1059 |
| V/C Ratio(X) | 0.28 | 0.88 | 0.35 | 0.55 | 0.48 | 0.10 |
| Avail Cap(c_a), veh/h | 356 | 317 | 577 | 2671 | 2355 | 1059 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.51 | 0.51 | 0.86 | 0.86 |
| Uniform Delay (d), s/veh | 44.8 | 49.7 | 4.9 | 6.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.5 | 20.4 | 0.2 | 0.4 | 0.6 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.0 | 14.7 | 1.0 | 6.6 | 0.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 45.3 | 70.1 | 5.1 | 6.4 | 0.6 | 0.2 |
| LnGrp LOS | D | E | A | A | A | A |
| Approach Vol, veh/h | | | | 1614 | 1233 | |
| Approach Delay, s/veh | | | | 6.3 | 0.6 | |
| Approach LOS | | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 96.4 | | 23.6 | 10.8 | 85.7 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 85.5 | | 24.0 | 14.5 | 65.5 |
| Max Q Clear Time (g_c+I1), s | | 22.6 | | 18.1 | 5.0 | 2.0 |
| Green Ext Time (p_c), s | | 18.3 | | 0.5 | 0.3 | 12.2 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 9.4 | | | |
| HCM 6th LOS | | | A | | | |

Timings
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

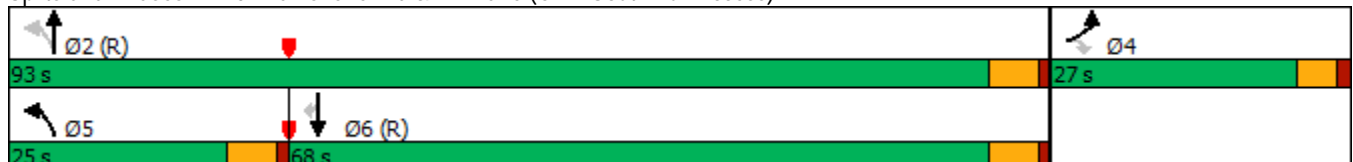


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 75 | 225 | 165 | 1145 | 1665 | 110 |
| Future Volume (vph) | 75 | 225 | 165 | 1145 | 1665 | 110 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 27.0 | 27.0 | 25.0 | 93.0 | 68.0 | 68.0 |
| Total Split (%) | 22.5% | 22.5% | 20.8% | 77.5% | 56.7% | 56.7% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 10.9 | 10.9 | 98.6 | 98.6 | 81.1 | 81.1 |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.82 | 0.82 | 0.68 | 0.68 |
| v/c Ratio | 0.51 | 0.67 | 0.61 | 0.31 | 0.54 | 0.11 |
| Control Delay | 62.4 | 15.7 | 22.1 | 7.6 | 3.1 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.4 | 15.7 | 22.1 | 7.6 | 3.1 | 0.5 |
| LOS | E | B | C | A | A | A |
| Approach Delay | 27.4 | | | 9.4 | 2.9 | |
| Approach LOS | C | | | A | A | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 7.6
 Intersection LOS: A
 Intersection Capacity Utilization 58.8%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2040 Total AM.syn
 02/15/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 75 | 225 | 165 | 1145 | 1665 | 110 |
| Future Volume (veh/h) | 75 | 225 | 165 | 1145 | 1665 | 110 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 82 | 245 | 179 | 1245 | 1810 | 120 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Cap, veh/h | 303 | 270 | 301 | 3700 | 3214 | 1022 |
| Arrive On Green | 0.17 | 0.17 | 0.05 | 0.74 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 5149 | 5149 | 1585 |
| Grp Volume(v), veh/h | 82 | 245 | 179 | 1245 | 1810 | 120 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1662 | 1662 | 1585 |
| Q Serve(g_s), s | 4.8 | 18.2 | 3.8 | 10.3 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.8 | 18.2 | 3.8 | 10.3 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 303 | 270 | 301 | 3700 | 3214 | 1022 |
| V/C Ratio(X) | 0.27 | 0.91 | 0.59 | 0.34 | 0.56 | 0.12 |
| Avail Cap(c_a), veh/h | 327 | 291 | 498 | 3700 | 3214 | 1022 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.81 | 0.81 | 0.80 | 0.80 |
| Uniform Delay (d), s/veh | 43.3 | 48.9 | 5.6 | 5.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.5 | 29.2 | 1.5 | 0.2 | 0.6 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.2 | 17.1 | 1.4 | 3.2 | 0.2 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 43.8 | 78.1 | 7.1 | 5.5 | 0.6 | 0.2 |
| LnGrp LOS | D | E | A | A | A | A |
| Approach Vol, veh/h | 327 | | | 1424 | 1930 | |
| Approach Delay, s/veh | 69.5 | | | 5.7 | 0.6 | |
| Approach LOS | E | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 94.6 | | 25.4 | 11.7 | 82.9 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 87.5 | | 22.0 | 19.5 | 62.5 |
| Max Q Clear Time (g_c+I1), s | | 12.3 | | 20.2 | 5.8 | 2.0 |
| Green Ext Time (p_c), s | | 13.2 | | 0.2 | 0.4 | 26.0 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 8.7 | | | |
| HCM 6th LOS | | | A | | | |

Timings
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

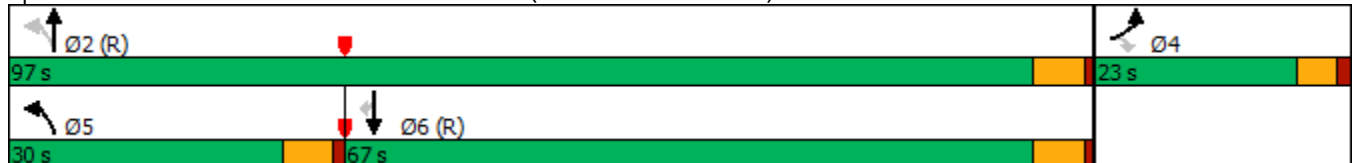


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 75 | 225 | 235 | 2030 | 1705 | 155 |
| Future Volume (vph) | 75 | 225 | 235 | 2030 | 1705 | 155 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 23.0 | 23.0 | 30.0 | 97.0 | 67.0 | 67.0 |
| Total Split (%) | 19.2% | 19.2% | 25.0% | 80.8% | 55.8% | 55.8% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 10.9 | 10.9 | 98.6 | 98.6 | 76.1 | 76.1 |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.82 | 0.82 | 0.63 | 0.63 |
| v/c Ratio | 0.51 | 0.67 | 0.74 | 0.53 | 0.58 | 0.16 |
| Control Delay | 62.5 | 15.7 | 35.3 | 1.4 | 7.7 | 1.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.5 | 15.7 | 35.3 | 1.4 | 7.7 | 1.7 |
| LOS | E | B | D | A | A | A |
| Approach Delay | 27.4 | | | 4.9 | 7.2 | |
| Approach LOS | C | | | A | A | |

Intersection Summary

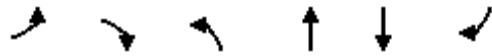
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 7.4
 Intersection Capacity Utilization 63.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2040 Total PM.syn
 02/15/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 75 | 225 | 235 | 2030 | 1705 | 155 |
| Future Volume (veh/h) | 75 | 225 | 235 | 2030 | 1705 | 155 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 82 | 245 | 255 | 2207 | 1853 | 168 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Cap, veh/h | 267 | 238 | 318 | 3863 | 3285 | 1028 |
| Arrive On Green | 0.15 | 0.15 | 0.09 | 1.00 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 5233 | 5233 | 1585 |
| Grp Volume(v), veh/h | 82 | 245 | 255 | 2207 | 1853 | 168 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1689 | 1689 | 1585 |
| Q Serve(g_s), s | 4.9 | 18.0 | 5.5 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.9 | 18.0 | 5.5 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 267 | 238 | 318 | 3863 | 3285 | 1028 |
| V/C Ratio(X) | 0.31 | 1.03 | 0.80 | 0.57 | 0.56 | 0.16 |
| Avail Cap(c_a), veh/h | 267 | 238 | 560 | 3863 | 3285 | 1028 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.33 | 1.33 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.21 | 0.21 | 0.77 | 0.77 |
| Uniform Delay (d), s/veh | 45.4 | 51.0 | 9.9 | 0.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.6 | 66.5 | 1.0 | 0.1 | 0.5 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.2 | 19.0 | 1.8 | 0.0 | 0.2 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 46.1 | 117.5 | 10.9 | 0.1 | 0.5 | 0.3 |
| LnGrp LOS | D | F | B | A | A | A |
| Approach Vol, veh/h | 327 | | | 2462 | 2021 | |
| Approach Delay, s/veh | 99.6 | | | 1.2 | 0.5 | |
| Approach LOS | F | | | A | A | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 97.0 | | 23.0 | 13.7 | 83.3 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 91.5 | | 18.0 | 24.5 | 61.5 |
| Max Q Clear Time (g_c+l1), s | | 2.0 | | 20.0 | 7.5 | 2.0 |
| Green Ext Time (p_c), s | | 42.1 | | 0.0 | 0.7 | 27.3 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 7.6 | | | |
| HCM 6th LOS | | | A | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | ↗ | | | ↗ | | ↕↔ | | | ↕↔ | |
| Traffic Vol, veh/h | 0 | 0 | 5 | 0 | 0 | 35 | 0 | 800 | 45 | 0 | 1285 | 35 |
| Future Vol, veh/h | 0 | 0 | 5 | 0 | 0 | 35 | 0 | 800 | 45 | 0 | 1285 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 0 | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 10 | 10 | 10 | 10 | 2 | 5 | 2 | 2 | 5 | 2 |
| Mvmt Flow | 0 | 0 | 5 | 0 | 0 | 38 | 0 | 870 | 49 | 0 | 1397 | 38 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|---|--------|---|--------|-----|--------|---|
| Conflicting Flow All | - | - | 718 | - | - | 460 | - | 0 |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | 7.1 | - | - | 7.1 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | 3.4 | - | - | 3.4 | - | - |
| Pot Cap-1 Maneuver | 0 | 0 | *541 | 0 | 0 | 527 | 0 | - |
| Stage 1 | 0 | 0 | - | 0 | 0 | - | 0 | - |
| Stage 2 | 0 | 0 | - | 0 | 0 | - | 0 | - |
| Platoon blocked, % | | | 1 | | | | | |
| Mov Cap-1 Maneuver | - | - | *541 | - | - | 527 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|------|----|----|
| HCM Control Delay, s | 11.7 | 12.4 | 0 | 0 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|-----------------------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | - | - | 541 | 527 | - |
| HCM Lane V/C Ratio | - | - | 0.01 | 0.072 | - |
| HCM Control Delay (s) | - | - | 11.7 | 12.4 | - |
| HCM Lane LOS | - | - | B | B | - |
| HCM 95th %tile Q(veh) | - | - | 0 | 0.2 | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | ↗ | | | ↗ | | ↕↔ | | | ↕↔ | |
| Traffic Vol, veh/h | 0 | 0 | 15 | 0 | 0 | 55 | 0 | 1300 | 40 | 0 | 980 | 10 |
| Future Vol, veh/h | 0 | 0 | 15 | 0 | 0 | 55 | 0 | 1300 | 40 | 0 | 980 | 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 | - | - | 0 | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 10 | 10 | 10 | 10 | 2 | 3 | 2 | 2 | 3 | 2 |
| Mvmt Flow | 0 | 0 | 16 | 0 | 0 | 60 | 0 | 1413 | 43 | 0 | 1065 | 11 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|---|--------|---|--------|-----|--------|---|---|---|---|---|
| Conflicting Flow All | - | - | 538 | - | - | 728 | - | 0 | 0 | - | - | 0 |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | 7.1 | - | - | 7.1 | - | - | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | 3.4 | - | - | 3.4 | - | - | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 0 | *668 | 0 | 0 | 348 | 0 | - | - | 0 | - | - |
| Stage 1 | 0 | 0 | - | 0 | 0 | - | 0 | - | - | 0 | - | - |
| Stage 2 | 0 | 0 | - | 0 | 0 | - | 0 | - | - | 0 | - | - |
| Platoon blocked, % | | | 1 | | | | | | | | | |
| Mov Cap-1 Maneuver | - | - | *668 | - | - | 348 | - | - | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | | | | |
|----------------------|------|--|------|--|----|--|----|--|--|--|--|
| HCM Control Delay, s | 10.5 | | 17.5 | | 0 | | 0 | | | | |
| HCM LOS | B | | C | | | | | | | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|-----------------------|-----|-----|-------------|-----|-----|
| Capacity (veh/h) | - | - | 668 348 | - | - |
| HCM Lane V/C Ratio | - | - | 0.024 0.172 | - | - |
| HCM Control Delay (s) | - | - | 10.5 17.5 | - | - |
| HCM Lane LOS | - | - | B C | - | - |
| HCM 95th %tile Q(veh) | - | - | 0.1 0.6 | - | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | ↗ | | | ↗ | ↑↑↑ | | | ↑↑↑ | | |
| Traffic Vol, veh/h | 0 | 0 | 10 | 0 | 0 | 45 | 0 | 1390 | 60 | 0 | 1770 | 55 |
| Future Vol, veh/h | 0 | 0 | 10 | 0 | 0 | 45 | 0 | 1390 | 60 | 0 | 1770 | 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 | - | - | 0 | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 10 | 10 | 10 | 10 | 2 | 5 | 2 | 2 | 5 | 2 |
| Mvmt Flow | 0 | 0 | 11 | 0 | 0 | 49 | 0 | 1511 | 65 | 0 | 1924 | 60 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|---|--------|---|--------|------|--------|---|
| Conflicting Flow All | - | - | 992 | - | - | 788 | - | 0 |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | 7.3 | - | - | 7.3 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | 4 | - | - | 4 | - | - |
| Pot Cap-1 Maneuver | 0 | 0 | *482 | 0 | 0 | *590 | 0 | - |
| Stage 1 | 0 | 0 | - | 0 | 0 | - | 0 | - |
| Stage 2 | 0 | 0 | - | 0 | 0 | - | 0 | - |
| Platoon blocked, % | | | 1 | | | 1 | | |
| Mov Cap-1 Maneuver | - | - | *482 | - | - | *590 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|------|----|----|
| HCM Control Delay, s | 12.6 | 11.7 | 0 | 0 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|-----------------------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | - | - | 482 | 590 | - |
| HCM Lane V/C Ratio | - | - | 0.023 | 0.083 | - |
| HCM Control Delay (s) | - | - | 12.6 | 11.7 | - |
| HCM Lane LOS | - | - | B | B | - |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0.3 | - |

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | ↗ | | | ↗ | ↑↑↑ | | | ↑↑↑ | | |
| Traffic Vol, veh/h | 0 | 0 | 25 | 0 | 0 | 205 | 0 | 2150 | 150 | 0 | 1985 | 15 |
| Future Vol, veh/h | 0 | 0 | 25 | 0 | 0 | 205 | 0 | 2150 | 150 | 0 | 1985 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 0 | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 10 | 10 | 10 | 10 | 2 | 3 | 2 | 2 | 3 | 2 |
| Mvmt Flow | 0 | 0 | 27 | 0 | 0 | 223 | 0 | 2337 | 163 | 0 | 2158 | 16 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|---|--------|---|--------|------|--------|---|
| Conflicting Flow All | - | - | 1087 | - | - | 1250 | - | 0 |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | 7.3 | - | - | 7.3 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | 4 | - | - | 4 | - | - |
| Pot Cap-1 Maneuver | 0 | 0 | *439 | 0 | 0 | *395 | 0 | - |
| Stage 1 | 0 | 0 | - | 0 | 0 | - | 0 | - |
| Stage 2 | 0 | 0 | - | 0 | 0 | - | 0 | - |
| Platoon blocked, % | | | 1 | | | 1 | - | - |
| Mov Cap-1 Maneuver | - | - | *439 | - | - | *395 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|------|----|----|
| HCM Control Delay, s | 13.7 | 25.3 | 0 | 0 |
| HCM LOS | B | D | | |

| Minor Lane/Major Mvmt | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|-----------------------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | - | - | 439 | 395 | - |
| HCM Lane V/C Ratio | - | - | 0.062 | 0.564 | - |
| HCM Control Delay (s) | - | - | 13.7 | 25.3 | - |
| HCM Lane LOS | - | - | B | D | - |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 3.4 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↖ | ↑ | ↗ | | ↖ | ↗ |
| Traffic Vol, veh/h | 25 | 235 | 505 | 20 | 10 | 10 |
| Future Vol, veh/h | 25 | 235 | 505 | 20 | 10 | 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 | 250 | - | - | - | 0 | 0 |
| Veh in Median Storage, # | - | 1 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 5 | 5 | 10 | 10 | 10 |
| Mvmt Flow | 27 | 255 | 549 | 22 | 11 | 11 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 571 | 0 | - | 0 | 869 |
| Stage 1 | - | - | - | - | 560 |
| Stage 2 | - | - | - | - | 309 |
| Critical Hdwy | 4.2 | - | - | - | 6.5 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.5 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.5 |
| Follow-up Hdwy | 2.29 | - | - | - | 3.59 |
| Pot Cap-1 Maneuver | 963 | - | - | - | 513 |
| Stage 1 | - | - | - | - | 556 |
| Stage 2 | - | - | - | - | 727 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 963 | - | - | - | 513 |
| Mov Cap-2 Maneuver | - | - | - | - | 415 |
| Stage 1 | - | - | - | - | 540 |
| Stage 2 | - | - | - | - | 727 |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.9 | 0 | 13 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 963 | - | - | - | 415 | 513 |
| HCM Lane V/C Ratio | 0.028 | - | - | - | 0.026 | 0.021 |
| HCM Control Delay (s) | 8.8 | - | - | - | 13.9 | 12.2 |
| HCM Lane LOS | A | - | - | - | B | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 | 0.1 |

Intersection

Int Delay, s/veh 1

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↙ | ↑ | ↘ | | ↙ | ↘ |
| Traffic Vol, veh/h | 5 | 380 | 335 | 5 | 30 | 30 |
| Future Vol, veh/h | 5 | 380 | 335 | 5 | 30 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | 0 |
| Veh in Median Storage, # | - | 1 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 5 | 413 | 364 | 5 | 33 | 33 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 369 | 0 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | 4.2 | - | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | 2.29 | - | - |
| Pot Cap-1 Maneuver | 1147 | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1147 | - | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.1 | 0 | 12 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1147 | - | - | - | 460 | 661 |
| HCM Lane V/C Ratio | 0.005 | - | - | - | 0.071 | 0.049 |
| HCM Control Delay (s) | 8.2 | - | - | - | 13.4 | 10.7 |
| HCM Lane LOS | A | - | - | - | B | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 | 0.2 |

Intersection

Int Delay, s/veh 0.7

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↑ | ↗ | | ↖ | ↗ |
| Traffic Vol, veh/h | 35 | 325 | 675 | 30 | 15 | 15 |
| Future Vol, veh/h | 35 | 325 | 675 | 30 | 15 | 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 | 250 | - | - | - | 0 | 0 |
| Veh in Median Storage, # | - | 1 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 5 | 5 | 10 | 10 | 10 |
| Mvmt Flow | 38 | 353 | 734 | 33 | 16 | 16 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 767 | 0 | 0 1180 751 |
| Stage 1 | - | - | - 751 - |
| Stage 2 | - | - | - 429 - |
| Critical Hdwy | 4.2 | - | - 6.5 6.3 |
| Critical Hdwy Stg 1 | - | - | - 5.5 - |
| Critical Hdwy Stg 2 | - | - | - 5.5 - |
| Follow-up Hdwy | 2.29 | - | - 3.59 3.39 |
| Pot Cap-1 Maneuver | *729 | - | - *157 *492 |
| Stage 1 | - | - | - *465 - |
| Stage 2 | - | - | - *640 - |
| Platoon blocked, % | 1 | - | - 1 1 |
| Mov Cap-1 Maneuver | *729 | - | - *149 *492 |
| Mov Cap-2 Maneuver | - | - | - *303 - |
| Stage 1 | - | - | - *441 - |
| Stage 2 | - | - | - *640 - |

| Approach | EB | WB | SB |
|----------------------|----|----|------|
| HCM Control Delay, s | 1 | 0 | 15.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | * 729 | - | - | - | 303 | 492 |
| HCM Lane V/C Ratio | 0.052 | - | - | - | 0.054 | 0.033 |
| HCM Control Delay (s) | 10.2 | - | - | - | 17.6 | 12.6 |
| HCM Lane LOS | B | - | - | - | C | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.2 | 0.1 |

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

Intersection

Int Delay, s/veh 1.3

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↑ | ↗ | | ↖ | ↗ |
| Traffic Vol, veh/h | 10 | 640 | 575 | 10 | 50 | 50 |
| Future Vol, veh/h | 10 | 640 | 575 | 10 | 50 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | 0 |
| Veh in Median Storage, # | - | 1 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 10 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 11 | 696 | 625 | 11 | 54 | 54 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 636 | 0 | 0 1349 631 |
| Stage 1 | - | - | - 631 - |
| Stage 2 | - | - | - 718 - |
| Critical Hdwy | 4.2 | - | - 6.5 6.3 |
| Critical Hdwy Stg 1 | - | - | - 5.5 - |
| Critical Hdwy Stg 2 | - | - | - 5.5 - |
| Follow-up Hdwy | 2.29 | - | - 3.59 3.39 |
| Pot Cap-1 Maneuver | *880 | - | - *106 *594 |
| Stage 1 | - | - | - *561 - |
| Stage 2 | - | - | - *469 - |
| Platoon blocked, % | 1 | - | - 1 1 |
| Mov Cap-1 Maneuver | *880 | - | - *105 *594 |
| Mov Cap-2 Maneuver | - | - | - *279 - |
| Stage 1 | - | - | - *554 - |
| Stage 2 | - | - | - *469 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.1 | 0 | 16.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | * 880 | - | - | - | 279 | 594 |
| HCM Lane V/C Ratio | 0.012 | - | - | - | 0.195 | 0.091 |
| HCM Control Delay (s) | 9.1 | - | - | - | 21 | 11.7 |
| HCM Lane LOS | A | - | - | - | C | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.7 | 0.3 |

Notes

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

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 3.8 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 190 | 124 | 21 | 43 |
| Demand Flow Rate, veh/h | 197 | 130 | 21 | 44 |
| Vehicles Circulating, veh/h | 10 | 82 | 191 | 141 |
| Vehicles Exiting, veh/h | 175 | 130 | 16 | 71 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 3.9 | 3.8 | 3.3 | 3.4 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 197 | 130 | 21 | 44 |
| Cap Entry Lane, veh/h | 1366 | 1269 | 1136 | 1195 |
| Entry HV Adj Factor | 0.966 | 0.956 | 1.000 | 0.977 |
| Flow Entry, veh/h | 190 | 124 | 21 | 43 |
| Cap Entry, veh/h | 1319 | 1213 | 1136 | 1168 |
| V/C Ratio | 0.144 | 0.102 | 0.018 | 0.037 |
| Control Delay, s/veh | 3.9 | 3.8 | 3.3 | 3.4 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 0 | 0 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 4.0 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 245 | 124 | 27 | 65 |
| Demand Flow Rate, veh/h | 252 | 127 | 27 | 66 |
| Vehicles Circulating, veh/h | 10 | 83 | 229 | 144 |
| Vehicles Exiting, veh/h | 200 | 173 | 33 | 66 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.2 | 3.7 | 3.5 | 3.5 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 252 | 127 | 27 | 66 |
| Cap Entry Lane, veh/h | 1366 | 1268 | 1092 | 1191 |
| Entry HV Adj Factor | 0.973 | 0.973 | 1.000 | 0.985 |
| Flow Entry, veh/h | 245 | 124 | 27 | 65 |
| Cap Entry, veh/h | 1329 | 1234 | 1092 | 1173 |
| V/C Ratio | 0.185 | 0.100 | 0.025 | 0.055 |
| Control Delay, s/veh | 4.2 | 3.7 | 3.5 | 3.5 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 0 | 0 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 4.6 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 294 | 207 | 76 | 54 |
| Demand Flow Rate, veh/h | 306 | 216 | 77 | 55 |
| Vehicles Circulating, veh/h | 16 | 150 | 277 | 266 |
| Vehicles Exiting, veh/h | 305 | 204 | 45 | 100 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.7 | 4.8 | 4.2 | 3.9 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 306 | 216 | 77 | 55 |
| Cap Entry Lane, veh/h | 1358 | 1184 | 1040 | 1052 |
| Entry HV Adj Factor | 0.962 | 0.957 | 0.987 | 0.982 |
| Flow Entry, veh/h | 294 | 207 | 76 | 54 |
| Cap Entry, veh/h | 1306 | 1133 | 1027 | 1033 |
| V/C Ratio | 0.225 | 0.182 | 0.074 | 0.052 |
| Control Delay, s/veh | 4.7 | 4.8 | 4.2 | 3.9 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 1 | 1 | 0 | 0 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 6.5 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 581 | 240 | 92 | 228 |
| Demand Flow Rate, veh/h | 596 | 246 | 94 | 232 |
| Vehicles Circulating, veh/h | 27 | 311 | 507 | 302 |
| Vehicles Exiting, veh/h | 507 | 290 | 116 | 255 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 7.1 | 6.1 | 5.6 | 5.8 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 596 | 246 | 94 | 232 |
| Cap Entry Lane, veh/h | 1342 | 1005 | 823 | 1014 |
| Entry HV Adj Factor | 0.975 | 0.976 | 0.979 | 0.983 |
| Flow Entry, veh/h | 581 | 240 | 92 | 228 |
| Cap Entry, veh/h | 1309 | 981 | 805 | 997 |
| V/C Ratio | 0.444 | 0.245 | 0.114 | 0.229 |
| Control Delay, s/veh | 7.1 | 6.1 | 5.6 | 5.8 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 2 | 1 | 0 | 1 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 3.4 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 119 | 59 | 16 | 82 |
| Demand Flow Rate, veh/h | 124 | 61 | 16 | 83 |
| Vehicles Circulating, veh/h | 16 | 33 | 130 | 67 |
| Vehicles Exiting, veh/h | 134 | 113 | 10 | 27 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 3.5 | 3.2 | 3.1 | 3.3 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 124 | 61 | 16 | 83 |
| Cap Entry Lane, veh/h | 1358 | 1334 | 1209 | 1289 |
| Entry HV Adj Factor | 0.963 | 0.960 | 1.000 | 0.988 |
| Flow Entry, veh/h | 119 | 59 | 16 | 82 |
| Cap Entry, veh/h | 1307 | 1281 | 1209 | 1273 |
| V/C Ratio | 0.091 | 0.046 | 0.013 | 0.064 |
| Control Delay, s/veh | 3.5 | 3.2 | 3.1 | 3.3 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 | 0 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 3.5 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 164 | 92 | 16 | 48 |
| Demand Flow Rate, veh/h | 167 | 94 | 16 | 49 |
| Vehicles Circulating, veh/h | 10 | 83 | 161 | 94 |
| Vehicles Exiting, veh/h | 133 | 94 | 16 | 83 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 3.7 | 3.5 | 3.2 | 3.2 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 167 | 94 | 16 | 49 |
| Cap Entry Lane, veh/h | 1366 | 1268 | 1171 | 1254 |
| Entry HV Adj Factor | 0.979 | 0.976 | 1.000 | 0.980 |
| Flow Entry, veh/h | 164 | 92 | 16 | 48 |
| Cap Entry, veh/h | 1338 | 1237 | 1171 | 1228 |
| V/C Ratio | 0.122 | 0.074 | 0.014 | 0.039 |
| Control Delay, s/veh | 3.7 | 3.5 | 3.2 | 3.2 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 | 0 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 3.8 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 190 | 87 | 43 | 125 |
| Demand Flow Rate, veh/h | 198 | 91 | 44 | 127 |
| Vehicles Circulating, veh/h | 27 | 67 | 198 | 114 |
| Vehicles Exiting, veh/h | 214 | 175 | 27 | 44 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.0 | 3.5 | 3.6 | 3.8 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 198 | 91 | 44 | 127 |
| Cap Entry Lane, veh/h | 1342 | 1289 | 1128 | 1228 |
| Entry HV Adj Factor | 0.961 | 0.961 | 0.977 | 0.984 |
| Flow Entry, veh/h | 190 | 87 | 43 | 125 |
| Cap Entry, veh/h | 1289 | 1238 | 1102 | 1209 |
| V/C Ratio | 0.148 | 0.071 | 0.039 | 0.103 |
| Control Delay, s/veh | 4.0 | 3.5 | 3.6 | 3.8 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 1 | 0 | 0 | 0 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 4.4 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 277 | 190 | 49 | 59 |
| Demand Flow Rate, veh/h | 284 | 195 | 50 | 60 |
| Vehicles Circulating, veh/h | 27 | 139 | 250 | 213 |
| Vehicles Exiting, veh/h | 246 | 161 | 61 | 121 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 4.5 | 4.5 | 3.8 | 3.8 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| Entry Flow, veh/h | 284 | 195 | 50 | 60 |
| Cap Entry Lane, veh/h | 1342 | 1197 | 1069 | 1110 |
| Entry HV Adj Factor | 0.975 | 0.977 | 0.980 | 0.983 |
| Flow Entry, veh/h | 277 | 190 | 49 | 59 |
| Cap Entry, veh/h | 1309 | 1169 | 1048 | 1092 |
| V/C Ratio | 0.212 | 0.163 | 0.047 | 0.054 |
| Control Delay, s/veh | 4.5 | 4.5 | 3.8 | 3.8 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 1 | 1 | 0 | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | | ↕ |
| Traffic Vol, veh/h | 0 | 20 | 1100 | 5 | 0 | 1265 |
| Future Vol, veh/h | 0 | 20 | 1100 | 5 | 0 | 1265 |
| 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, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 22 | 1196 | 5 | 0 | 1375 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 601 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 6.94 | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.32 | - |
| Pot Cap-1 Maneuver | 0 | 443 | - |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 443 | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 13.5 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 443 |
| HCM Lane V/C Ratio | - | - | 0.049 |
| HCM Control Delay (s) | - | - | 13.5 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | | ↕ |
| Traffic Vol, veh/h | 0 | 20 | 1525 | 5 | 0 | 1225 |
| Future Vol, veh/h | 0 | 20 | 1525 | 5 | 0 | 1225 |
| 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, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 22 | 1658 | 5 | 0 | 1332 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 832 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - |
| Pot Cap-1 Maneuver | 0 | 312 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | - | 312 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 17.4 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|------|
| Capacity (veh/h) | - | - | 312 |
| HCM Lane V/C Ratio | - | - | 0.07 |
| HCM Control Delay (s) | - | - | 17.4 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↑ ↑↑ | ↑↑↑ | | | ↑↑↑ |
| Traffic Vol, veh/h | 0 | 70 | 1745 | 10 | 0 | 1765 |
| Future Vol, veh/h | 0 | 70 | 1745 | 10 | 0 | 1765 |
| 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, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 76 | 1897 | 11 | 0 | 1918 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 954 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | - |
| Pot Cap-1 Maneuver | 0 | *514 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | 1 | - | - | - |
| Mov Cap-1 Maneuver | - | *514 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 13.2 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 514 |
| HCM Lane V/C Ratio | - | - | 0.148 |
| HCM Control Delay (s) | - | - | 13.2 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.5 |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↑ ↑↑ | ↑↑↑ | | | ↑↑↑ |
| Traffic Vol, veh/h | 0 | 85 | 2455 | 20 | 0 | 2275 |
| Future Vol, veh/h | 0 | 85 | 2455 | 20 | 0 | 2275 |
| 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, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 92 | 2668 | 22 | 0 | 2473 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 1345 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | - |
| Pot Cap-1 Maneuver | 0 | *337 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | 1 | - | - | - |
| Mov Cap-1 Maneuver | - | *337 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 19.7 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 337 |
| HCM Lane V/C Ratio | - | - | 0.274 |
| HCM Control Delay (s) | - | - | 19.7 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 1.1 |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | ↖ | ↕ |
| Traffic Vol, veh/h | 0 | 30 | 1070 | 10 | 35 | 1235 |
| Future Vol, veh/h | 0 | 30 | 1070 | 10 | 35 | 1235 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 2 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 33 | 1163 | 11 | 38 | 1342 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 587 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 6.94 | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.32 | - |
| Pot Cap-1 Maneuver | 0 | 453 | - |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | - | 453 | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 13.6 | 0 | 0.3 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 453 | 591 |
| HCM Lane V/C Ratio | - | - | 0.072 | 0.064 |
| HCM Control Delay (s) | - | - | 13.6 | 11.5 |
| HCM Lane LOS | - | - | B | B |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | ↖ | ↕ |
| Traffic Vol, veh/h | 0 | 35 | 1495 | 10 | 70 | 1155 |
| Future Vol, veh/h | 0 | 35 | 1495 | 10 | 70 | 1155 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 2 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 38 | 1625 | 11 | 76 | 1255 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 818 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 6.94 | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.32 | - |
| Pot Cap-1 Maneuver | 0 | 319 | - |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | - | 319 | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 17.8 | 0 | 0.9 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 319 | 392 |
| HCM Lane V/C Ratio | - | - | 0.119 | 0.194 |
| HCM Control Delay (s) | - | - | 17.8 | 16.4 |
| HCM Lane LOS | - | - | C | C |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0.7 |

Intersection

Int Delay, s/veh 0.7

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↗ ↑↑↑ | ↗ ↑↑↑ | | ↘ ↑↑↑ | ↘ ↑↑↑ |
| Traffic Vol, veh/h | 0 | 105 | 1650 | 25 | 105 | 1660 |
| Future Vol, veh/h | 0 | 105 | 1650 | 25 | 105 | 1660 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 2 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 114 | 1793 | 27 | 114 | 1804 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|------------|
| Conflicting Flow All | - | 910 | 0 0 1820 0 |
| Stage 1 | - | - | - - - - |
| Stage 2 | - | - | - - - - |
| Critical Hdwy | - | 7.14 | - - 5.34 - |
| Critical Hdwy Stg 1 | - | - | - - - - |
| Critical Hdwy Stg 2 | - | - | - - - - |
| Follow-up Hdwy | - | 3.92 | - - 3.12 - |
| Pot Cap-1 Maneuver | 0 | *536 | - - *673 - |
| Stage 1 | 0 | - | - - - - |
| Stage 2 | 0 | - | - - - - |
| Platoon blocked, % | | 1 | - - 1 - |
| Mov Cap-1 Maneuver | - | *536 | - - *673 - |
| Mov Cap-2 Maneuver | - | - | - - - - |
| Stage 1 | - | - | - - - - |
| Stage 2 | - | - | - - - - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 13.5 | 0 | 0.7 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|------------|-----|
| Capacity (veh/h) | - | - | 536 * 673 | - |
| HCM Lane V/C Ratio | - | - | 0.213 0.17 | - |
| HCM Control Delay (s) | - | - | 13.5 11.4 | - |
| HCM Lane LOS | - | - | B B | - |
| HCM 95th %tile Q(veh) | - | - | 0.8 0.6 | - |

Notes

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

Intersection

Int Delay, s/veh 2.2

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↗ ↑↑↑ | ↗ ↑↑↑ | | ↘ ↑↑↑ | ↘ ↑↑↑ |
| Traffic Vol, veh/h | 0 | 135 | 2335 | 30 | 275 | 2010 |
| Future Vol, veh/h | 0 | 135 | 2335 | 30 | 275 | 2010 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 2 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 147 | 2538 | 33 | 299 | 2185 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|------------|
| Conflicting Flow All | - | 1286 | 0 0 2571 0 |
| Stage 1 | - | - | - - - - |
| Stage 2 | - | - | - - - - |
| Critical Hdwy | - | 7.14 | - - 5.34 - |
| Critical Hdwy Stg 1 | - | - | - - - - |
| Critical Hdwy Stg 2 | - | - | - - - - |
| Follow-up Hdwy | - | 3.92 | - - 3.12 - |
| Pot Cap-1 Maneuver | 0 | *359 | - - *452 - |
| Stage 1 | 0 | - | - - - - |
| Stage 2 | 0 | - | - - - - |
| Platoon blocked, % | | 1 | - - 1 - |
| Mov Cap-1 Maneuver | - | *359 | - - *452 - |
| Mov Cap-2 Maneuver | - | - | - - - - |
| Stage 1 | - | - | - - - - |
| Stage 2 | - | - | - - - - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 21.8 | 0 | 3.3 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------------|-----|
| Capacity (veh/h) | - | - | 359 * 452 | - |
| HCM Lane V/C Ratio | - | - | 0.409 0.661 | - |
| HCM Control Delay (s) | - | - | 21.8 27.2 | - |
| HCM Lane LOS | - | - | C D | - |
| HCM 95th %tile Q(veh) | - | - | 1.9 4.7 | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | | ↕ |
| Traffic Vol, veh/h | 0 | 40 | 1035 | 10 | 0 | 1235 |
| Future Vol, veh/h | 0 | 40 | 1035 | 10 | 0 | 1235 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 43 | 1125 | 11 | 0 | 1342 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 568 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - |
| Pot Cap-1 Maneuver | 0 | 466 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | - | 466 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 13.5 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 466 |
| HCM Lane V/C Ratio | - | - | 0.093 |
| HCM Control Delay (s) | - | - | 13.5 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | | ↕ |
| Traffic Vol, veh/h | 0 | 45 | 1460 | 15 | 0 | 1155 |
| Future Vol, veh/h | 0 | 45 | 1460 | 15 | 0 | 1155 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 49 | 1587 | 16 | 0 | 1255 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 802 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - |
| Pot Cap-1 Maneuver | 0 | 327 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | - | 327 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 17.9 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|------|
| Capacity (veh/h) | - | - | 327 |
| HCM Lane V/C Ratio | - | - | 0.15 |
| HCM Control Delay (s) | - | - | 17.9 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 0.5 |

| Intersection | | | | | | |
|--------------------------|------|-------|-------|------|------|-------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ ↑↑↑ | ↗ ↑↑↑ | | | ↗ ↑↑↑ |
| Traffic Vol, veh/h | 0 | 140 | 1525 | 25 | 0 | 1660 |
| Future Vol, veh/h | 0 | 140 | 1525 | 25 | 0 | 1660 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 152 | 1658 | 27 | 0 | 1804 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 843 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | - |
| Pot Cap-1 Maneuver | 0 | *558 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | 1 | - | - | - |
| Mov Cap-1 Maneuver | - | *558 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 13.9 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 558 |
| HCM Lane V/C Ratio | - | - | 0.273 |
| HCM Control Delay (s) | - | - | 13.9 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 1.1 |

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

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ ↑↑↑ | ↑↑↑ | | | ↑↑↑ |
| Traffic Vol, veh/h | 0 | 175 | 2200 | 50 | 0 | 2010 |
| Future Vol, veh/h | 0 | 175 | 2200 | 50 | 0 | 2010 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 190 | 2391 | 54 | 0 | 2185 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 1223 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | - |
| Pot Cap-1 Maneuver | 0 | *403 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | 1 | - | - | - |
| Mov Cap-1 Maneuver | - | *403 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 21.7 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 403 |
| HCM Lane V/C Ratio | - | - | 0.472 |
| HCM Control Delay (s) | - | - | 21.7 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 2.5 |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↔ | | ↕ | | ↔ | ↕ |
| Traffic Vol, veh/h | 30 | 30 | 1015 | 10 | 40 | 1200 |
| Future Vol, veh/h | 30 | 30 | 1015 | 10 | 40 | 1200 |
| 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 | - | - | - | 150 | - |
| Veh in Median Storage, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 33 | 33 | 1103 | 11 | 43 | 1304 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 1847 | 557 | 0 | 0 | 1114 |
| Stage 1 | 1109 | - | - | - | - |
| Stage 2 | 738 | - | - | - | - |
| 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 | 66 | 474 | - | - | 623 |
| Stage 1 | 277 | - | - | - | - |
| Stage 2 | 434 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | 61 | 474 | - | - | 623 |
| Mov Cap-2 Maneuver | 177 | - | - | - | - |
| Stage 1 | 277 | - | - | - | - |
| Stage 2 | 404 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 23.6 | 0 | 0.4 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 258 | 623 |
| HCM Lane V/C Ratio | - | - | 0.253 | 0.07 |
| HCM Control Delay (s) | - | - | 23.6 | 11.2 |
| HCM Lane LOS | - | - | C | B |
| HCM 95th %tile Q(veh) | - | - | 1 | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Y | | ↑↑ | | Y | ↑↑ |
| Traffic Vol, veh/h | 35 | 35 | 1440 | 15 | 80 | 1075 |
| Future Vol, veh/h | 35 | 35 | 1440 | 15 | 80 | 1075 |
| 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 | - | - | - | 150 | - |
| Veh in Median Storage, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 38 | 38 | 1565 | 16 | 87 | 1168 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 2331 | 791 | 0 | 0 | 1581 |
| Stage 1 | 1573 | - | - | - | - |
| Stage 2 | 758 | - | - | - | - |
| 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 | ~ 31 | 332 | - | - | 412 |
| Stage 1 | 156 | - | - | - | - |
| Stage 2 | 423 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 24 | 332 | - | - | 412 |
| Mov Cap-2 Maneuver | 106 | - | - | - | - |
| Stage 1 | 156 | - | - | - | - |
| Stage 2 | 334 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 45.9 | 0 | 1.1 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 161 | 412 |
| HCM Lane V/C Ratio | - | - | 0.473 | 0.211 |
| HCM Control Delay (s) | - | - | 45.9 | 16.1 |
| HCM Lane LOS | - | - | E | C |
| HCM 95th %tile Q(veh) | - | - | 2.2 | 0.8 |

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

Timings
 18: Marksheffel Rd & RR-SE Full Access #1

2040 Total AM.syn
 02/15/2021

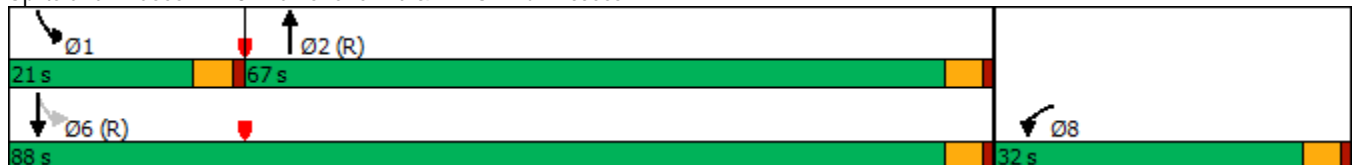


| Lane Group | WBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↙ | ↑↑↑ | ↘ | ↑↑↑ |
| Traffic Volume (vph) | 95 | 1450 | 120 | 1550 |
| Future Volume (vph) | 95 | 1450 | 120 | 1550 |
| Turn Type | Prot | NA | pm+pt | NA |
| Protected Phases | 8 | 2 | 1 | 6 |
| Permitted Phases | | | 6 | |
| Detector Phase | 8 | 2 | 1 | 6 |
| Switch Phase | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 32.0 | 67.0 | 21.0 | 88.0 |
| Total Split (%) | 26.7% | 55.8% | 17.5% | 73.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | Lag | Lead | |
| Lead-Lag Optimize? | | Yes | Yes | |
| Recall Mode | None | C-Max | None | C-Max |
| Act Effect Green (s) | 17.3 | 80.8 | 93.7 | 93.7 |
| Actuated g/C Ratio | 0.14 | 0.67 | 0.78 | 0.78 |
| v/c Ratio | 0.74 | 0.48 | 0.48 | 0.44 |
| Control Delay | 55.2 | 10.4 | 16.2 | 16.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 55.2 | 10.4 | 16.2 | 16.1 |
| LOS | E | B | B | B |
| Approach Delay | 55.2 | 10.4 | | 16.1 |
| Approach LOS | E | B | | B |

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: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 15.8
 Intersection LOS: B
 Intersection Capacity Utilization 57.6%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 18: Marksheffel Rd & RR-SE Full Access #1



HCM 6th Signalized Intersection Summary
 18: Marksheffel Rd & RR-SE Full Access #1

2040 Total AM.syn
 02/15/2021



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↑↑↑ | | ↔ | ↑↑↑ |
| Traffic Volume (veh/h) | 95 | 95 | 1450 | 25 | 120 | 1550 |
| Future Volume (veh/h) | 95 | 95 | 1450 | 25 | 120 | 1550 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | No | | | No |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1826 | 1826 | 1870 | 1826 |
| Adj Flow Rate, veh/h | 103 | 103 | 1576 | 27 | 130 | 1685 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 0 | 5 | 5 | 2 | 5 |
| Cap, veh/h | 118 | 118 | 3560 | 61 | 357 | 3907 |
| Arrive On Green | 0.14 | 0.14 | 1.00 | 1.00 | 0.08 | 1.00 |
| Sat Flow, veh/h | 835 | 835 | 5211 | 86 | 1781 | 5149 |
| Grp Volume(v), veh/h | 207 | 0 | 1038 | 565 | 130 | 1685 |
| Grp Sat Flow(s),veh/h/ln | 1678 | 0 | 1662 | 1810 | 1781 | 1662 |
| Q Serve(g_s), s | 14.5 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 |
| Cycle Q Clear(g_c), s | 14.5 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 |
| Prop In Lane | 0.50 | 0.50 | | 0.05 | 1.00 | |
| Lane Grp Cap(c), veh/h | 237 | 0 | 2344 | 1277 | 357 | 3907 |
| V/C Ratio(X) | 0.87 | 0.00 | 0.44 | 0.44 | 0.36 | 0.43 |
| Avail Cap(c_a), veh/h | 385 | 0 | 2344 | 1277 | 528 | 3907 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.5 | 0.0 | 0.0 | 0.0 | 3.5 | 0.0 |
| Incr Delay (d2), s/veh | 12.0 | 0.0 | 0.6 | 1.1 | 0.6 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.9 | 0.0 | 0.2 | 0.4 | 0.7 | 0.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 62.5 | 0.0 | 0.6 | 1.1 | 4.1 | 0.3 |
| LnGrp LOS | E | A | A | A | A | A |
| Approach Vol, veh/h | 207 | | 1603 | | | 1815 |
| Approach Delay, s/veh | 62.5 | | 0.8 | | | 0.6 |
| Approach LOS | E | | A | | | A |
| Timer - Assigned Phs | 1 | 2 | | | 6 | 8 |
| Phs Duration (G+Y+Rc), s | 9.4 | 89.1 | | | 98.6 | 21.4 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 16.5 | 62.5 | | | 83.5 | 27.5 |
| Max Q Clear Time (g_c+l1), s | 4.3 | 2.0 | | | 2.0 | 16.5 |
| Green Ext Time (p_c), s | 0.2 | 18.4 | | | 23.2 | 0.4 |

Intersection Summary

| | |
|--------------------|-----|
| HCM 6th Ctrl Delay | 4.2 |
| HCM 6th LOS | A |

Notes

User approved volume balancing among the lanes for turning movement.

Timings
 18: Marksheffel Rd & RR-SE Full Access #1

2040 Total PM.syn
 02/15/2021

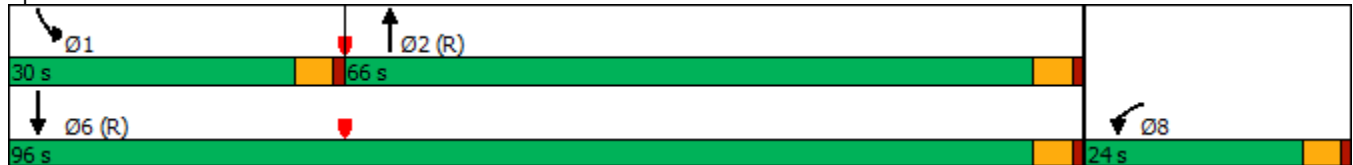


| Lane Group | WBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|
| Lane Configurations | ↘ | ↑↑↑ | ↘ | ↑↑↑ |
| Traffic Volume (vph) | 120 | 2130 | 305 | 1710 |
| Future Volume (vph) | 120 | 2130 | 305 | 1710 |
| Turn Type | Prot | NA | Prot | NA |
| Protected Phases | 8 | 2 | 1 | 6 |
| Permitted Phases | | | | |
| Detector Phase | 8 | 2 | 1 | 6 |
| Switch Phase | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 24.0 | 66.0 | 30.0 | 96.0 |
| Total Split (%) | 20.0% | 55.0% | 25.0% | 80.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | Lag | Lead | |
| Lead-Lag Optimize? | | Yes | Yes | |
| Recall Mode | None | C-Max | None | C-Max |
| Act Effect Green (s) | 18.6 | 63.3 | 24.6 | 92.4 |
| Actuated g/C Ratio | 0.16 | 0.53 | 0.20 | 0.77 |
| v/c Ratio | 0.89 | 0.89 | 0.91 | 0.48 |
| Control Delay | 73.5 | 32.5 | 50.5 | 14.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 73.5 | 32.5 | 50.5 | 14.1 |
| LOS | E | C | D | B |
| Approach Delay | 73.5 | 32.5 | | 19.6 |
| Approach LOS | E | C | | B |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 28.9
 Intersection LOS: C
 Intersection Capacity Utilization 84.4%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 18: Marksheffel Rd & RR-SE Full Access #1



HCM 6th Signalized Intersection Summary
 18: Marksheffel Rd & RR-SE Full Access #1

2040 Total PM.syn
 02/15/2021



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↑↑↑ | | ↔ | ↑↑↑ |
| Traffic Volume (veh/h) | 120 | 120 | 2130 | 50 | 305 | 1710 |
| Future Volume (veh/h) | 120 | 120 | 2130 | 50 | 305 | 1710 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | No | | | No |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1856 | 1856 | 1870 | 1856 |
| Adj Flow Rate, veh/h | 130 | 130 | 2315 | 54 | 332 | 1859 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 0 | 3 | 3 | 2 | 3 |
| Cap, veh/h | 136 | 136 | 2668 | 62 | 358 | 3863 |
| Arrive On Green | 0.16 | 0.16 | 1.00 | 1.00 | 0.20 | 0.76 |
| Sat Flow, veh/h | 836 | 836 | 5260 | 118 | 1781 | 5233 |
| Grp Volume(v), veh/h | 261 | 0 | 1533 | 836 | 332 | 1859 |
| Grp Sat Flow(s),veh/h/ln | 1678 | 0 | 1689 | 1834 | 1781 | 1689 |
| Q Serve(g_s), s | 18.5 | 0.0 | 0.0 | 0.0 | 22.0 | 16.5 |
| Cycle Q Clear(g_c), s | 18.5 | 0.0 | 0.0 | 0.0 | 22.0 | 16.5 |
| Prop In Lane | 0.50 | 0.50 | | 0.06 | 1.00 | |
| Lane Grp Cap(c), veh/h | 273 | 0 | 1769 | 961 | 358 | 3863 |
| V/C Ratio(X) | 0.96 | 0.00 | 0.87 | 0.87 | 0.93 | 0.48 |
| Avail Cap(c_a), veh/h | 273 | 0 | 1769 | 961 | 379 | 3863 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 49.8 | 0.0 | 0.0 | 0.0 | 47.1 | 5.3 |
| Incr Delay (d2), s/veh | 42.7 | 0.0 | 6.0 | 10.6 | 27.8 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.0 | 0.0 | 1.5 | 2.8 | 12.4 | 5.1 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 92.6 | 0.0 | 6.0 | 10.6 | 74.8 | 5.8 |
| LnGrp LOS | F | A | A | B | E | A |
| Approach Vol, veh/h | 261 | | 2369 | | | 2191 |
| Approach Delay, s/veh | 92.6 | | 7.6 | | | 16.2 |
| Approach LOS | F | | A | | | B |
| Timer - Assigned Phs | 1 | 2 | | | 6 | 8 |
| Phs Duration (G+Y+Rc), s | 28.6 | 67.4 | | | 96.0 | 24.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 25.5 | 61.5 | | | 91.5 | 19.5 |
| Max Q Clear Time (g_c+l1), s | 24.0 | 2.0 | | | 18.5 | 20.5 |
| Green Ext Time (p_c), s | 0.2 | 36.7 | | | 27.5 | 0.0 |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 16.1 |
| HCM 6th LOS | B |

Notes

User approved volume balancing among the lanes for turning movement.

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | | ↕ |
| Traffic Vol, veh/h | 0 | 20 | 1005 | 10 | 0 | 1225 |
| Future Vol, veh/h | 0 | 20 | 1005 | 10 | 0 | 1225 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 22 | 1092 | 11 | 0 | 1332 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 552 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - |
| Pot Cap-1 Maneuver | 0 | 477 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | - | 477 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 12.9 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 477 |
| HCM Lane V/C Ratio | - | - | 0.046 |
| HCM Control Delay (s) | - | - | 12.9 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | | ↕ |
| Traffic Vol, veh/h | 0 | 20 | 1430 | 15 | 0 | 1105 |
| Future Vol, veh/h | 0 | 20 | 1430 | 15 | 0 | 1105 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 22 | 1554 | 16 | 0 | 1201 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 785 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - |
| Pot Cap-1 Maneuver | 0 | 336 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | - | 336 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 16.5 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 336 |
| HCM Lane V/C Ratio | - | - | 0.065 |
| HCM Control Delay (s) | - | - | 16.5 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ ↑↑↑ | ↑↑↑ | | | ↑↑↑ |
| Traffic Vol, veh/h | 0 | 70 | 1405 | 25 | 0 | 1640 |
| Future Vol, veh/h | 0 | 70 | 1405 | 25 | 0 | 1640 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 76 | 1527 | 27 | 0 | 1783 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 777 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | - |
| Pot Cap-1 Maneuver | 0 | *580 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | | 1 | - | - | - |
| Mov Cap-1 Maneuver | - | *580 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 12.1 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 580 |
| HCM Lane V/C Ratio | - | - | 0.131 |
| HCM Control Delay (s) | - | - | 12.1 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.5 |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↑ ↑↑ | ↑↑↑ | | | ↑↑↑ |
| Traffic Vol, veh/h | 0 | 85 | 2095 | 50 | 0 | 1825 |
| Future Vol, veh/h | 0 | 85 | 2095 | 50 | 0 | 1825 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 92 | 2277 | 54 | 0 | 1984 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 1166 | 0 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | - |
| Pot Cap-1 Maneuver | 0 | *425 | - | - | 0 |
| Stage 1 | 0 | - | - | - | 0 |
| Stage 2 | 0 | - | - | - | 0 |
| Platoon blocked, % | - | 1 | - | - | - |
| Mov Cap-1 Maneuver | - | *425 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 15.8 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 425 |
| HCM Lane V/C Ratio | - | - | 0.217 |
| HCM Control Delay (s) | - | - | 15.8 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 0.8 |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | ↖ | ↕ |
| Traffic Vol, veh/h | 0 | 35 | 975 | 5 | 40 | 1190 |
| Future Vol, veh/h | 0 | 35 | 975 | 5 | 40 | 1190 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 38 | 1060 | 5 | 43 | 1293 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 533 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 6.94 | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.32 | - |
| Pot Cap-1 Maneuver | 0 | 491 | - |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | - | 491 | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 12.9 | 0 | 0.4 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 491 | 650 |
| HCM Lane V/C Ratio | - | - | 0.077 | 0.067 |
| HCM Control Delay (s) | - | - | 12.9 | 10.9 |
| HCM Lane LOS | - | - | B | B |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↕ | | ↖ | ↕ |
| Traffic Vol, veh/h | 0 | 45 | 1405 | 10 | 80 | 1025 |
| Future Vol, veh/h | 0 | 45 | 1405 | 10 | 80 | 1025 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 49 | 1527 | 11 | 87 | 1114 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|------------|
| Conflicting Flow All | - | 769 | 0 0 1538 0 |
| Stage 1 | - | - | - - - - |
| Stage 2 | - | - | - - - - |
| Critical Hdwy | - | 6.94 | - - 4.14 - |
| Critical Hdwy Stg 1 | - | - | - - - - |
| Critical Hdwy Stg 2 | - | - | - - - - |
| Follow-up Hdwy | - | 3.32 | - - 2.22 - |
| Pot Cap-1 Maneuver | 0 | 344 | - - 428 - |
| Stage 1 | 0 | - | - - - - |
| Stage 2 | 0 | - | - - - - |
| Platoon blocked, % | | | - - - - |
| Mov Cap-1 Maneuver | - | 344 | - - 428 - |
| Mov Cap-2 Maneuver | - | - | - - - - |
| Stage 1 | - | - | - - - - |
| Stage 2 | - | - | - - - - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 17.2 | 0 | 1.1 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 344 | 428 |
| HCM Lane V/C Ratio | - | - | 0.142 | 0.203 |
| HCM Control Delay (s) | - | - | 17.2 | 15.5 |
| HCM Lane LOS | - | - | C | C |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.8 |

| Intersection | | | | | | |
|--------------------------|------|-------|-------|------|-------|-------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ ↑↑↑ | ↗ ↑↑↑ | | ↘ ↑↑↑ | ↘ ↑↑↑ |
| Traffic Vol, veh/h | 0 | 130 | 1300 | 15 | 120 | 1530 |
| Future Vol, veh/h | 0 | 130 | 1300 | 15 | 120 | 1530 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 5 | 2 | 2 | 5 |
| Mvmt Flow | 0 | 141 | 1413 | 16 | 130 | 1663 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | - | 715 | 0 | 0 | 1429 |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | - | - | 5.34 |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | - | - | 3.12 |
| Pot Cap-1 Maneuver | 0 | *624 | - | - | *784 |
| Stage 1 | 0 | - | - | - | - |
| Stage 2 | 0 | - | - | - | - |
| Platoon blocked, % | - | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | - | *624 | - | - | *784 |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 12.5 | 0 | 0.8 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 624 | * 784 |
| HCM Lane V/C Ratio | - | - | 0.226 | 0.166 |
| HCM Control Delay (s) | - | - | 12.5 | 10.5 |
| HCM Lane LOS | - | - | B | B |
| HCM 95th %tile Q(veh) | - | - | 0.9 | 0.6 |

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

Intersection

Int Delay, s/veh 2.3

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↗ ↑↑↑ | ↗ ↑↑↑ | | ↘ ↑↑↑ | ↘ ↑↑↑ |
| Traffic Vol, veh/h | 0 | 165 | 1985 | 35 | 305 | 1525 |
| Future Vol, veh/h | 0 | 165 | 1985 | 35 | 305 | 1525 |
| 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 | - | - | 150 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 3 | 2 | 2 | 3 |
| Mvmt Flow | 0 | 179 | 2158 | 38 | 332 | 1658 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 1098 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 7.14 | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.92 | - |
| Pot Cap-1 Maneuver | 0 | *447 | - |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | - | 1 | - |
| Mov Cap-1 Maneuver | - | *447 | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 18.3 | 0 | 3.4 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 447 | * 563 |
| HCM Lane V/C Ratio | - | - | 0.401 | 0.589 |
| HCM Control Delay (s) | - | - | 18.3 | 20.1 |
| HCM Lane LOS | - | - | C | C |
| HCM 95th %tile Q(veh) | - | - | 1.9 | 3.8 |

Notes

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

Intersection

Int Delay, s/veh 401.9

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | ↖ |
| Traffic Vol, veh/h | 540 | 10 | 125 | 10 | 25 | 45 | 160 | 395 | 5 | 30 | 490 | 680 |
| Future Vol, veh/h | 540 | 10 | 125 | 10 | 25 | 45 | 160 | 395 | 5 | 30 | 490 | 680 |
| 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 | 175 | - | - | 150 | - | - | 150 | - | - | 150 | - | 150 |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 5 | 2 |
| Mvmt Flow | 587 | 11 | 136 | 11 | 27 | 49 | 174 | 429 | 5 | 33 | 533 | 739 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1417 | 1381 | 533 | 1822 | 2118 | 432 | 1272 | 0 | 0 | 434 | 0 | 0 |
| Stage 1 | 599 | 599 | - | 780 | 780 | - | - | - | - | - | - | - |
| Stage 2 | 818 | 782 | - | 1042 | 1338 | - | - | - | - | - | - | - |
| 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 | ~ 115 | 144 | 547 | 60 | 50 | 624 | 546 | - | - | 1126 | - | - |
| Stage 1 | ~ 488 | 490 | - | 388 | 406 | - | - | - | - | - | - | - |
| Stage 2 | ~ 370 | 405 | - | 277 | 222 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 34 | 95 | 547 | 32 | 33 | 624 | 546 | - | - | 1126 | - | - |
| Mov Cap-2 Maneuver | ~ 119 | 184 | - | 21 | 38 | - | - | - | - | - | - | - |
| Stage 1 | ~ 332 | 476 | - | 264 | 276 | - | - | - | - | - | - | - |
| Stage 2 | ~ 209 | 276 | - | 197 | 216 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|-----------------------|--------|--|-------|--|-----|--|-----|--|
| HCM Control Delay, \$ | 1476.8 | | 142.4 | | 4.2 | | 0.2 | |
| HCM LOS | F | | F | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|---------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 546 | - | - | 119 | 477 | 21 | 96 | 1126 | - | - |
| HCM Lane V/C Ratio | 0.319 | - | - | 4.932 | 0.308 | 0.518 | 0.793 | 0.029 | - | - |
| HCM Control Delay (s) | 14.6 | - | - | \$ 1842 | 15.9 | 295.3 | 120.5 | 8.3 | - | - |
| HCM Lane LOS | B | - | - | F | C | F | F | A | - | - |
| HCM 95th %tile Q(veh) | 1.4 | - | - | 62 | 1.3 | 1.5 | 4.2 | 0.1 | - | - |

Notes

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

Intersection

Int Delay, s/veh 1063.3

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | ↖ |
| Traffic Vol, veh/h | 805 | 25 | 185 | 10 | 30 | 55 | 130 | 560 | 5 | 70 | 400 | 565 |
| Future Vol, veh/h | 805 | 25 | 185 | 10 | 30 | 55 | 130 | 560 | 5 | 70 | 400 | 565 |
| 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 | 175 | - | - | 150 | - | - | 150 | - | - | 150 | - | 150 |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 |
| Mvmt Flow | 875 | 27 | 201 | 11 | 33 | 60 | 141 | 609 | 5 | 76 | 435 | 614 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1527 | 1483 | 435 | 1902 | 2095 | 612 | 1049 | 0 | 0 | 614 | 0 | 0 |
| Stage 1 | 587 | 587 | - | 894 | 894 | - | - | - | - | - | - | - |
| Stage 2 | 940 | 896 | - | 1008 | 1201 | - | - | - | - | - | - | - |
| 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 | ~ 96 | 125 | 621 | 52 | 52 | 493 | 663 | - | - | 965 | - | - |
| Stage 1 | ~ 496 | 497 | - | 336 | 360 | - | - | - | - | - | - | - |
| Stage 2 | ~ 316 | 359 | - | 290 | 258 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 46 | 91 | 621 | 24 | 38 | 493 | 663 | - | - | 965 | - | - |
| Mov Cap-2 Maneuver | ~ 96 | 164 | - | 26 | 78 | - | - | - | - | - | - | - |
| Stage 1 | ~ 390 | 458 | - | 264 | 283 | - | - | - | - | - | - | - |
| Stage 2 | ~ 193 | 283 | - | 170 | 238 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|--------|------|-----|-----|
| HCM Control Delay, s | 2966.9 | 66.5 | 2.2 | 0.6 |
| HCM LOS | F | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-----------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 663 | - | - | 96 | 466 | 26 | 171 | 965 | - | - |
| HCM Lane V/C Ratio | 0.213 | - | - | 9.115 | 0.49 | 0.418 | 0.54 | 0.079 | - | - |
| HCM Control Delay (s) | 11.9 | - | - | \$ 3735.7 | 19.9 | 220.4 | 48.4 | 9.1 | - | - |
| HCM Lane LOS | B | - | - | F | C | F | E | A | - | - |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 100.6 | 2.6 | 1.3 | 2.8 | 0.3 | - | - |

Notes

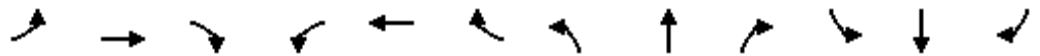
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th Signalized Intersection Summary

2026 Total AM Improved.syn

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 540 | 10 | 125 | 10 | 25 | 45 | 160 | 395 | 5 | 30 | 490 | 680 |
| Future Volume (veh/h) | 540 | 10 | 125 | 10 | 25 | 45 | 160 | 395 | 5 | 30 | 490 | 680 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 587 | 11 | 136 | 11 | 27 | 49 | 174 | 429 | 5 | 33 | 533 | 739 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 5 | 2 | 5 | 2 |
| Cap, veh/h | 663 | 36 | 446 | 138 | 38 | 68 | 350 | 2133 | 25 | 541 | 1748 | 799 |
| Arrive On Green | 0.19 | 0.30 | 0.30 | 0.06 | 0.06 | 0.06 | 0.06 | 0.61 | 0.61 | 0.50 | 0.50 | 0.50 |
| Sat Flow, veh/h | 3456 | 120 | 1483 | 1241 | 595 | 1080 | 1781 | 3512 | 41 | 954 | 3469 | 1585 |
| Grp Volume(v), veh/h | 587 | 0 | 147 | 11 | 0 | 76 | 174 | 212 | 222 | 33 | 533 | 739 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1603 | 1241 | 0 | 1676 | 1781 | 1735 | 1819 | 954 | 1735 | 1585 |
| Q Serve(g_s), s | 19.8 | 0.0 | 8.5 | 1.0 | 0.0 | 5.3 | 5.4 | 6.6 | 6.6 | 2.1 | 10.8 | 52.0 |
| Cycle Q Clear(g_c), s | 19.8 | 0.0 | 8.5 | 1.0 | 0.0 | 5.3 | 5.4 | 6.6 | 6.6 | 2.1 | 10.8 | 52.0 |
| Prop In Lane | 1.00 | | 0.93 | 1.00 | | 0.64 | 1.00 | | 0.02 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 663 | 0 | 482 | 138 | 0 | 106 | 350 | 1054 | 1105 | 541 | 1748 | 799 |
| V/C Ratio(X) | 0.88 | 0.00 | 0.30 | 0.08 | 0.00 | 0.72 | 0.50 | 0.20 | 0.20 | 0.06 | 0.30 | 0.93 |
| Avail Cap(c_a), veh/h | 792 | 0 | 681 | 246 | 0 | 251 | 359 | 1054 | 1105 | 541 | 1748 | 799 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.2 | 0.0 | 32.3 | 53.1 | 0.0 | 55.2 | 12.7 | 10.5 | 10.5 | 15.3 | 17.5 | 27.7 |
| Incr Delay (d2), s/veh | 10.3 | 0.0 | 0.4 | 0.2 | 0.0 | 8.8 | 1.1 | 0.4 | 0.4 | 0.2 | 0.5 | 18.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.5 | 0.0 | 3.4 | 0.3 | 0.0 | 2.5 | 2.2 | 2.6 | 2.7 | 0.5 | 4.4 | 22.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 57.5 | 0.0 | 32.6 | 53.4 | 0.0 | 63.9 | 13.8 | 11.0 | 10.9 | 15.5 | 17.9 | 45.8 |
| LnGrp LOS | E | A | C | D | A | E | B | B | B | B | B | D |
| Approach Vol, veh/h | | 734 | | | 87 | | | 608 | | | 1305 | |
| Approach Delay, s/veh | | 52.5 | | | 62.6 | | | 11.8 | | | 33.7 | |
| Approach LOS | | D | | | E | | | B | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 78.4 | | 41.6 | 12.4 | 66.0 | 28.5 | 13.1 | | | | |
| Change Period (Y+Rc), s | | 5.5 | | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 58.0 | | 51.0 | 8.0 | 45.0 | 27.5 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 8.6 | | 10.5 | 7.4 | 54.0 | 21.8 | 7.3 | | | | |
| Green Ext Time (p_c), s | | 2.8 | | 1.0 | 0.0 | 0.0 | 1.2 | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 34.8 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

Timings

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

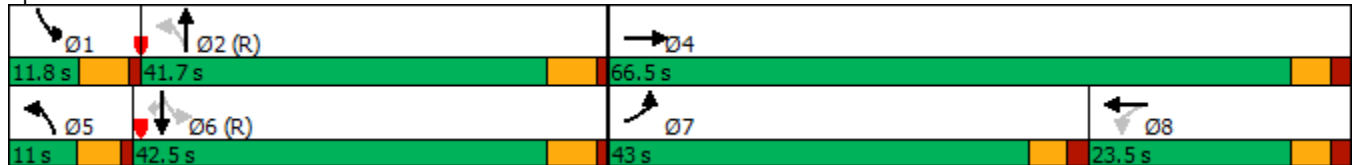


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔↔ | ↔ | ↔ | ↔ | ↔ | ↔↔ | ↔ | ↕↕ | ↔ |
| Traffic Volume (vph) | 805 | 25 | 10 | 30 | 130 | 560 | 70 | 400 | 565 |
| Future Volume (vph) | 805 | 25 | 10 | 30 | 130 | 560 | 70 | 400 | 565 |
| Turn Type | Prot | NA | Perm | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 | |
| Permitted Phases | | | 8 | | 2 | | 6 | | 6 |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 23.5 | 23.5 | 10.5 | 23.5 | 10.5 | 23.5 | 23.5 |
| Total Split (s) | 43.0 | 66.5 | 23.5 | 23.5 | 11.0 | 41.7 | 11.8 | 42.5 | 42.5 |
| Total Split (%) | 35.8% | 55.4% | 19.6% | 19.6% | 9.2% | 34.8% | 9.8% | 35.4% | 35.4% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 34.7 | 48.6 | 8.4 | 8.4 | 58.0 | 48.9 | 53.6 | 45.3 | 45.3 |
| Actuated g/C Ratio | 0.29 | 0.40 | 0.07 | 0.07 | 0.48 | 0.41 | 0.45 | 0.38 | 0.38 |
| v/c Ratio | 0.88 | 0.29 | 0.14 | 0.54 | 0.31 | 0.43 | 0.21 | 0.33 | 0.63 |
| Control Delay | 51.7 | 4.9 | 54.3 | 33.9 | 19.3 | 29.1 | 19.0 | 29.0 | 5.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 51.7 | 4.9 | 54.3 | 33.9 | 19.3 | 29.1 | 19.0 | 29.0 | 5.7 |
| LOS | D | A | D | C | B | C | B | C | A |
| Approach Delay | | 42.0 | | 36.1 | | 27.3 | | 15.6 | |
| Approach LOS | | D | | D | | C | | B | |

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: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 28.6
 Intersection LOS: C
 Intersection Capacity Utilization 63.2%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

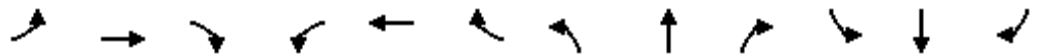


HCM 6th Signalized Intersection Summary

2026 Total PM Improved.syn

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↔↔ | ↔ | | ↔ | ↔ | | ↔ | ↕↔ | | ↔ | ↕↕ | ↔ |
| Traffic Volume (veh/h) | 805 | 25 | 185 | 10 | 30 | 55 | 130 | 560 | 5 | 70 | 400 | 565 |
| Future Volume (veh/h) | 805 | 25 | 185 | 10 | 30 | 55 | 130 | 560 | 5 | 70 | 400 | 565 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 875 | 27 | 201 | 11 | 33 | 60 | 141 | 609 | 5 | 76 | 435 | 614 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 |
| Cap, veh/h | 961 | 76 | 565 | 145 | 44 | 79 | 331 | 1529 | 13 | 378 | 1478 | 665 |
| Arrive On Green | 0.28 | 0.40 | 0.40 | 0.07 | 0.07 | 0.07 | 0.05 | 0.43 | 0.43 | 0.04 | 0.42 | 0.42 |
| Sat Flow, veh/h | 3456 | 191 | 1423 | 1153 | 595 | 1081 | 1781 | 3584 | 29 | 1781 | 3526 | 1585 |
| Grp Volume(v), veh/h | 875 | 0 | 228 | 11 | 0 | 93 | 141 | 300 | 314 | 76 | 435 | 614 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1614 | 1153 | 0 | 1676 | 1781 | 1763 | 1850 | 1781 | 1763 | 1585 |
| Q Serve(g_s), s | 29.4 | 0.0 | 11.9 | 1.1 | 0.0 | 6.5 | 5.5 | 14.1 | 14.1 | 2.9 | 9.8 | 44.1 |
| Cycle Q Clear(g_c), s | 29.4 | 0.0 | 11.9 | 1.1 | 0.0 | 6.5 | 5.5 | 14.1 | 14.1 | 2.9 | 9.8 | 44.1 |
| Prop In Lane | 1.00 | | 0.88 | 1.00 | | 0.65 | 1.00 | | 0.02 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 961 | 0 | 641 | 145 | 0 | 123 | 331 | 752 | 790 | 378 | 1478 | 665 |
| V/C Ratio(X) | 0.91 | 0.00 | 0.36 | 0.08 | 0.00 | 0.76 | 0.43 | 0.40 | 0.40 | 0.20 | 0.29 | 0.92 |
| Avail Cap(c_a), veh/h | 1080 | 0 | 821 | 233 | 0 | 251 | 331 | 752 | 790 | 404 | 1478 | 665 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 41.9 | 0.0 | 25.4 | 52.0 | 0.0 | 54.5 | 18.9 | 23.7 | 23.8 | 19.2 | 23.1 | 33.0 |
| Incr Delay (d2), s/veh | 10.6 | 0.0 | 0.3 | 0.2 | 0.0 | 9.0 | 0.9 | 1.6 | 1.5 | 0.3 | 0.5 | 20.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 13.8 | 0.0 | 4.6 | 0.3 | 0.0 | 3.1 | 2.3 | 6.2 | 6.5 | 1.2 | 4.2 | 20.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 52.5 | 0.0 | 25.7 | 52.2 | 0.0 | 63.5 | 19.8 | 25.3 | 25.3 | 19.5 | 23.6 | 53.6 |
| LnGrp LOS | D | A | C | D | A | E | B | C | C | B | C | D |
| Approach Vol, veh/h | | 1103 | | | 104 | | | 755 | | | 1125 | |
| Approach Delay, s/veh | | 47.0 | | | 62.3 | | | 24.3 | | | 39.7 | |
| Approach LOS | | D | | | E | | | C | | | D | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.1 | 56.7 | | 53.2 | 11.0 | 55.8 | 38.9 | 14.3 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 6.3 | 36.2 | | 61.0 | 6.0 | 37.0 | 37.5 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.9 | 16.1 | | 13.9 | 7.5 | 46.1 | 31.4 | 8.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.7 | | 1.6 | 0.0 | 0.0 | 2.0 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 39.3 |
| HCM 6th LOS | D |

Timings

2040 Total AM.syn

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

02/15/2021

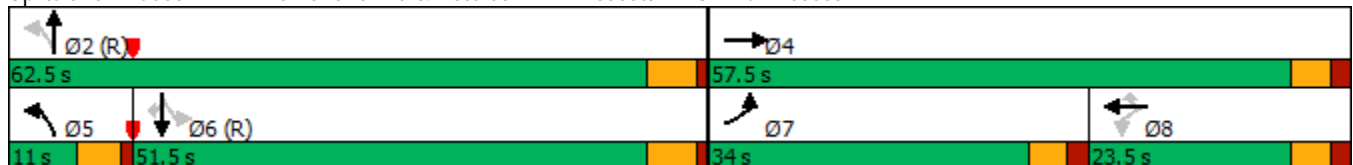


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↘ | ↖ | ↗ | ↖ | ↖ | ↖↗ | ↖ | ↗↘ | ↖ |
| Traffic Volume (vph) | 680 | 30 | 35 | 85 | 155 | 190 | 475 | 100 | 585 | 850 |
| Future Volume (vph) | 680 | 30 | 35 | 85 | 155 | 190 | 475 | 100 | 585 | 850 |
| Turn Type | Prot | NA | Perm | NA | Perm | pm+pt | NA | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | | 5 | 2 | | 6 | |
| Permitted Phases | | | 8 | | 8 | 2 | | 6 | | 6 |
| Detector Phase | 7 | 4 | 8 | 8 | 8 | 5 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 23.5 | 23.5 | 23.5 | 10.5 | 23.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 34.0 | 57.5 | 23.5 | 23.5 | 23.5 | 11.0 | 62.5 | 51.5 | 51.5 | 51.5 |
| Total Split (%) | 28.3% | 47.9% | 19.6% | 19.6% | 19.6% | 9.2% | 52.1% | 42.9% | 42.9% | 42.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | | Lag | Lag | Lag | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 27.9 | 44.8 | 11.4 | 11.4 | 11.4 | 64.7 | 64.2 | 49.0 | 49.0 | 49.0 |
| Actuated g/C Ratio | 0.23 | 0.37 | 0.10 | 0.10 | 0.10 | 0.54 | 0.54 | 0.41 | 0.41 | 0.41 |
| v/c Ratio | 0.93 | 0.27 | 0.34 | 0.52 | 0.56 | 0.52 | 0.29 | 0.32 | 0.45 | 0.83 |
| Control Delay | 63.4 | 6.6 | 57.5 | 61.4 | 14.5 | 21.3 | 16.4 | 13.9 | 12.7 | 20.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.4 | 6.6 | 57.5 | 61.4 | 14.5 | 21.3 | 16.4 | 13.9 | 12.7 | 20.5 |
| LOS | E | A | E | E | B | C | B | B | B | C |
| Approach Delay | | 51.7 | | 34.5 | | | 17.8 | | 17.1 | |
| Approach LOS | | D | | C | | | B | | B | |

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: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 27.5
 Intersection LOS: C
 Intersection Capacity Utilization 81.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

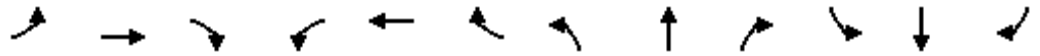


HCM 6th Signalized Intersection Summary

2040 Total AM.syn

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖↗ | ↗ | | ↖ | ↖ | ↖ | ↖ | ↖↗ | | ↖ | ↖↗ | ↖ |
| Traffic Volume (veh/h) | 680 | 30 | 145 | 35 | 85 | 155 | 190 | 475 | 10 | 100 | 585 | 850 |
| Future Volume (veh/h) | 680 | 30 | 145 | 35 | 85 | 155 | 190 | 475 | 10 | 100 | 585 | 850 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 739 | 33 | 158 | 38 | 92 | 86 | 207 | 516 | 11 | 109 | 636 | 598 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 5 | 2 | 5 | 2 |
| Cap, veh/h | 795 | 99 | 472 | 149 | 139 | 118 | 318 | 1937 | 41 | 468 | 1617 | 739 |
| Arrive On Green | 0.23 | 0.35 | 0.35 | 0.07 | 0.07 | 0.07 | 0.05 | 0.56 | 0.56 | 0.62 | 0.62 | 0.62 |
| Sat Flow, veh/h | 3456 | 281 | 1347 | 1192 | 1870 | 1585 | 1781 | 3473 | 74 | 876 | 3469 | 1585 |
| Grp Volume(v), veh/h | 739 | 0 | 191 | 38 | 92 | 86 | 207 | 258 | 269 | 109 | 636 | 598 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1628 | 1192 | 1870 | 1585 | 1781 | 1735 | 1813 | 876 | 1735 | 1585 |
| Q Serve(g_s), s | 25.1 | 0.0 | 10.4 | 3.7 | 5.7 | 6.4 | 6.0 | 9.3 | 9.3 | 6.8 | 11.1 | 34.5 |
| Cycle Q Clear(g_c), s | 25.1 | 0.0 | 10.4 | 3.7 | 5.7 | 6.4 | 6.0 | 9.3 | 9.3 | 6.8 | 11.1 | 34.5 |
| Prop In Lane | 1.00 | | 0.83 | 1.00 | | 1.00 | 1.00 | | 0.04 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 795 | 0 | 571 | 149 | 139 | 118 | 318 | 968 | 1011 | 468 | 1617 | 739 |
| V/C Ratio(X) | 0.93 | 0.00 | 0.33 | 0.26 | 0.66 | 0.73 | 0.65 | 0.27 | 0.27 | 0.23 | 0.39 | 0.81 |
| Avail Cap(c_a), veh/h | 821 | 0 | 705 | 239 | 281 | 238 | 318 | 968 | 1011 | 468 | 1617 | 739 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 45.2 | 0.0 | 28.7 | 53.1 | 54.0 | 54.3 | 18.6 | 13.8 | 13.8 | 13.5 | 14.3 | 18.7 |
| Incr Delay (d2), s/veh | 16.5 | 0.0 | 0.3 | 0.9 | 5.2 | 8.2 | 4.7 | 0.7 | 0.6 | 1.2 | 0.7 | 9.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.5 | 0.0 | 4.1 | 1.1 | 2.9 | 2.8 | 3.4 | 3.8 | 3.9 | 1.4 | 4.0 | 12.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 61.7 | 0.0 | 29.0 | 54.0 | 59.3 | 62.6 | 23.2 | 14.5 | 14.4 | 14.6 | 15.0 | 28.1 |
| LnGrp LOS | E | A | C | D | E | E | C | B | B | B | B | C |
| Approach Vol, veh/h | | 930 | | | 216 | | | 734 | | | 1343 | |
| Approach Delay, s/veh | | 55.0 | | | 59.6 | | | 16.9 | | | 20.8 | |
| Approach LOS | | E | | | E | | | B | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 72.4 | | 47.6 | 11.0 | 61.4 | 33.1 | 14.4 | | | | |
| Change Period (Y+Rc), s | | 5.5 | | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | | 57.0 | | 52.0 | 6.0 | 46.0 | 28.5 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 11.3 | | 12.4 | 8.0 | 36.5 | 27.1 | 8.4 | | | | |
| Green Ext Time (p_c), s | | 3.6 | | 1.3 | 0.0 | 5.0 | 0.5 | 0.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.4 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

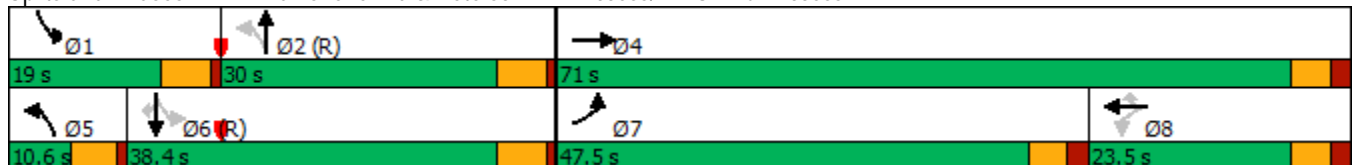


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖↗ | ↘ | ↖ | ↗ | ↖ | ↗ | ↖↗ | ↖ | ↖↗ | ↖ |
| Traffic Volume (vph) | 1095 | 85 | 45 | 110 | 200 | 150 | 730 | 255 | 500 | 780 |
| Future Volume (vph) | 1095 | 85 | 45 | 110 | 200 | 150 | 730 | 255 | 500 | 780 |
| Turn Type | Prot | NA | Perm | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 8 | | 5 | 2 | 1 | 6 | |
| Permitted Phases | | | 8 | | 8 | 2 | | 6 | | 6 |
| Detector Phase | 7 | 4 | 8 | 8 | 8 | 5 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 23.5 | 23.5 | 23.5 | 10.5 | 23.5 | 10.5 | 23.5 | 23.5 |
| Total Split (s) | 47.5 | 71.0 | 23.5 | 23.5 | 23.5 | 10.6 | 30.0 | 19.0 | 38.4 | 38.4 |
| Total Split (%) | 39.6% | 59.2% | 19.6% | 19.6% | 19.6% | 8.8% | 25.0% | 15.8% | 32.0% | 32.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4.0 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | | Lag | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 42.0 | 60.7 | 13.2 | 13.2 | 13.2 | 33.7 | 24.5 | 48.3 | 34.6 | 34.6 |
| Actuated g/C Ratio | 0.35 | 0.51 | 0.11 | 0.11 | 0.11 | 0.28 | 0.20 | 0.40 | 0.29 | 0.29 |
| v/c Ratio | 0.99 | 0.36 | 0.43 | 0.59 | 0.67 | 0.55 | 1.14 | 0.84 | 0.54 | 0.81 |
| Control Delay | 63.0 | 8.7 | 60.0 | 61.6 | 24.0 | 36.1 | 122.9 | 69.4 | 41.9 | 22.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.0 | 8.7 | 60.0 | 61.6 | 24.0 | 36.1 | 122.9 | 69.4 | 41.9 | 22.4 |
| LOS | E | A | E | E | C | D | F | E | D | C |
| Approach Delay | | 51.2 | | 40.2 | | | 108.5 | | 36.6 | |
| Approach LOS | | D | | D | | | F | | D | |

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: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 57.2
 Intersection LOS: E
 Intersection Capacity Utilization 86.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2



HCM 6th Signalized Intersection Summary

2040 Total PM.syn

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2

02/15/2021



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↔↔ | ↔ | | ↔ | ↑ | ↔ | ↔ | ↔↔ | | ↔ | ↔↔ | ↔ |
| Traffic Volume (veh/h) | 1095 | 85 | 220 | 45 | 110 | 200 | 150 | 730 | 20 | 255 | 500 | 780 |
| Future Volume (veh/h) | 1095 | 85 | 220 | 45 | 110 | 200 | 150 | 730 | 20 | 255 | 500 | 780 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 1190 | 92 | 239 | 49 | 120 | 108 | 163 | 793 | 22 | 277 | 543 | 413 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 |
| Cap, veh/h | 1209 | 223 | 580 | 154 | 167 | 142 | 255 | 928 | 26 | 294 | 1180 | 531 |
| Arrive On Green | 0.35 | 0.49 | 0.49 | 0.09 | 0.09 | 0.09 | 0.05 | 0.26 | 0.26 | 0.04 | 0.11 | 0.11 |
| Sat Flow, veh/h | 3456 | 460 | 1195 | 1049 | 1870 | 1585 | 1781 | 3504 | 97 | 1781 | 3526 | 1585 |
| Grp Volume(v), veh/h | 1190 | 0 | 331 | 49 | 120 | 108 | 163 | 399 | 416 | 277 | 543 | 413 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1655 | 1049 | 1870 | 1585 | 1781 | 1763 | 1838 | 1781 | 1763 | 1585 |
| Q Serve(g_s), s | 41.0 | 0.0 | 15.4 | 5.4 | 7.5 | 8.0 | 5.6 | 25.8 | 25.8 | 12.9 | 17.3 | 30.4 |
| Cycle Q Clear(g_c), s | 41.0 | 0.0 | 15.4 | 5.4 | 7.5 | 8.0 | 5.6 | 25.8 | 25.8 | 12.9 | 17.3 | 30.4 |
| Prop In Lane | 1.00 | | 0.72 | 1.00 | | 1.00 | 1.00 | | 0.05 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 1209 | 0 | 803 | 154 | 167 | 142 | 255 | 467 | 487 | 294 | 1180 | 531 |
| V/C Ratio(X) | 0.98 | 0.00 | 0.41 | 0.32 | 0.72 | 0.76 | 0.64 | 0.85 | 0.85 | 0.94 | 0.46 | 0.78 |
| Avail Cap(c_a), veh/h | 1209 | 0 | 903 | 217 | 281 | 238 | 255 | 467 | 487 | 294 | 1180 | 531 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 38.7 | 0.0 | 19.9 | 52.2 | 53.2 | 53.4 | 35.4 | 41.9 | 41.9 | 33.0 | 43.2 | 49.0 |
| Incr Delay (d2), s/veh | 22.0 | 0.0 | 0.3 | 1.2 | 5.7 | 8.2 | 5.3 | 17.8 | 17.2 | 37.5 | 1.3 | 10.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 20.7 | 0.0 | 6.0 | 1.5 | 3.8 | 3.5 | 2.0 | 13.5 | 14.0 | 9.2 | 8.4 | 14.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.6 | 0.0 | 20.2 | 53.4 | 58.8 | 61.6 | 40.7 | 59.7 | 59.1 | 70.5 | 44.5 | 59.8 |
| LnGrp LOS | E | A | C | D | E | E | D | E | E | E | D | E |
| Approach Vol, veh/h | | 1521 | | | 277 | | | 978 | | | 1233 | |
| Approach Delay, s/veh | | 51.8 | | | 58.9 | | | 56.3 | | | 55.5 | |
| Approach LOS | | D | | | E | | | E | | | E | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 19.0 | 37.3 | | 63.7 | 10.6 | 45.7 | 47.5 | 16.2 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | | 5.5 | 5.0 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 13.5 | 24.5 | | 65.5 | 5.6 | 32.9 | 42.0 | 18.0 | | | | |
| Max Q Clear Time (g_c+l1), s | 14.9 | 27.8 | | 17.4 | 7.6 | 32.4 | 43.0 | 10.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | | 2.5 | 0.0 | 0.3 | 0.0 | 0.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 54.5 |
| HCM 6th LOS | D |

| 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 | 2 | 45 | 2 | 150 | 50 | 50 | 2 | 2 | 90 | 45 | 2 | 2 |
| Future Vol, veh/h | 2 | 45 | 2 | 150 | 50 | 50 | 2 | 2 | 90 | 45 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 100 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 49 | 2 | 163 | 54 | 54 | 2 | 2 | 98 | 49 | 2 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 108 | 0 | 0 | 51 | 0 | 0 | 463 | 488 | 50 | 511 | 462 | 81 |
| Stage 1 | - | - | - | - | - | - | 54 | 54 | - | 407 | 407 | - |
| Stage 2 | - | - | - | - | - | - | 409 | 434 | - | 104 | 55 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1483 | - | - | 1555 | - | - | 509 | 480 | 1018 | 473 | 497 | 979 |
| Stage 1 | - | - | - | - | - | - | 958 | 850 | - | 621 | 597 | - |
| Stage 2 | - | - | - | - | - | - | 619 | 581 | - | 902 | 849 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1483 | - | - | 1555 | - | - | 465 | 429 | 1018 | 392 | 444 | 979 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 490 | 459 | - | 468 | 465 | - |
| Stage 1 | - | - | - | - | - | - | 957 | 849 | - | 620 | 534 | - |
| Stage 2 | - | - | - | - | - | - | 551 | 520 | - | 812 | 848 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-----|--|--|-----|--|--|-----|--|--|------|--|--|
| HCM Control Delay, s | 0.3 | | | 4.6 | | | 9.1 | | | 13.4 | | |
| HCM LOS | | | | | | | A | | | B | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 490 | 992 | 1483 | - | - | 1555 | - | - | 468 | 631 |
| HCM Lane V/C Ratio | 0.004 | 0.101 | 0.001 | - | - | 0.105 | - | - | 0.105 | 0.007 |
| HCM Control Delay (s) | 12.4 | 9 | 7.4 | - | - | 7.6 | - | - | 13.6 | 10.7 |
| HCM Lane LOS | B | A | A | - | - | A | - | - | B | B |
| HCM 95th %tile Q(veh) | 0 | 0.3 | 0 | - | - | 0.4 | - | - | 0.3 | 0 |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↶ | ↷ | | ↶ | ↷ | | ↶ | ↷ | | ↶ | ↷ | |
| Traffic Vol, veh/h | 2 | 45 | 2 | 140 | 50 | 50 | 2 | 2 | 90 | 45 | 2 | 2 |
| Future Vol, veh/h | 2 | 45 | 2 | 140 | 50 | 50 | 2 | 2 | 90 | 45 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 100 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 49 | 2 | 152 | 54 | 54 | 2 | 2 | 98 | 49 | 2 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 108 | 0 | 0 | 51 | 0 | 0 | 441 | 466 | 50 | 489 | 440 | 81 |
| Stage 1 | - | - | - | - | - | - | 54 | 54 | - | 385 | 385 | - |
| Stage 2 | - | - | - | - | - | - | 387 | 412 | - | 104 | 55 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1483 | - | - | 1555 | - | - | 527 | 494 | 1018 | 489 | 511 | 979 |
| Stage 1 | - | - | - | - | - | - | 958 | 850 | - | 638 | 611 | - |
| Stage 2 | - | - | - | - | - | - | 637 | 594 | - | 902 | 849 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1483 | - | - | 1555 | - | - | 484 | 445 | 1018 | 407 | 460 | 979 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 508 | 473 | - | 481 | 480 | - |
| Stage 1 | - | - | - | - | - | - | 957 | 849 | - | 637 | 551 | - |
| Stage 2 | - | - | - | - | - | - | 571 | 536 | - | 812 | 848 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-----|--|--|-----|--|--|-----|--|--|------|--|--|
| HCM Control Delay, s | 0.3 | | | 4.4 | | | 9.1 | | | 13.1 | | |
| HCM LOS | | | | | | | A | | | B | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 508 | 993 | 1483 | - | - | 1555 | - | - | 481 | 644 |
| HCM Lane V/C Ratio | 0.004 | 0.101 | 0.001 | - | - | 0.098 | - | - | 0.102 | 0.007 |
| HCM Control Delay (s) | 12.1 | 9 | 7.4 | - | - | 7.6 | - | - | 13.3 | 10.6 |
| HCM Lane LOS | B | A | A | - | - | A | - | - | B | B |
| HCM 95th %tile Q(veh) | 0 | 0.3 | 0 | - | - | 0.3 | - | - | 0.3 | 0 |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↶ | ↷ | | ↶ | ↷ | | ↶ | ↷ | | ↶ | ↷ | |
| Traffic Vol, veh/h | 2 | 50 | 2 | 165 | 55 | 55 | 2 | 2 | 100 | 50 | 2 | 2 |
| Future Vol, veh/h | 2 | 50 | 2 | 165 | 55 | 55 | 2 | 2 | 100 | 50 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 100 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 54 | 2 | 179 | 60 | 60 | 2 | 2 | 109 | 54 | 2 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 120 | 0 | 0 | 56 | 0 | 0 | 509 | 537 | 55 | 563 | 508 | 90 |
| Stage 1 | - | - | - | - | - | - | 59 | 59 | - | 448 | 448 | - |
| Stage 2 | - | - | - | - | - | - | 450 | 478 | - | 115 | 60 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1468 | - | - | 1549 | - | - | 475 | 450 | 1012 | 437 | 468 | 968 |
| Stage 1 | - | - | - | - | - | - | 953 | 846 | - | 590 | 573 | - |
| Stage 2 | - | - | - | - | - | - | 589 | 556 | - | 890 | 845 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1468 | - | - | 1549 | - | - | 430 | 397 | 1012 | 354 | 413 | 968 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 460 | 433 | - | 435 | 439 | - |
| Stage 1 | - | - | - | - | - | - | 952 | 845 | - | 589 | 507 | - |
| Stage 2 | - | - | - | - | - | - | 518 | 492 | - | 791 | 844 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-----|--|--|-----|--|--|-----|--|--|------|--|--|
| HCM Control Delay, s | 0.3 | | | 4.6 | | | 9.2 | | | 14.2 | | |
| HCM LOS | | | | | | | A | | | B | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 460 | 986 | 1468 | - | - | 1549 | - | - | 435 | 604 |
| HCM Lane V/C Ratio | 0.005 | 0.112 | 0.001 | - | - | 0.116 | - | - | 0.125 | 0.007 |
| HCM Control Delay (s) | 12.9 | 9.1 | 7.5 | - | - | 7.6 | - | - | 14.5 | 11 |
| HCM Lane LOS | B | A | A | - | - | A | - | - | B | B |
| HCM 95th %tile Q(veh) | 0 | 0.4 | 0 | - | - | 0.4 | - | - | 0.4 | 0 |

| 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 | 2 | 50 | 2 | 235 | 80 | 80 | 2 | 2 | 100 | 50 | 2 | 2 |
| Future Vol, veh/h | 2 | 50 | 2 | 235 | 80 | 80 | 2 | 2 | 100 | 50 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 100 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 54 | 2 | 255 | 87 | 87 | 2 | 2 | 109 | 54 | 2 | 2 |

| Major/Minor | Major1 | | Major2 | | | Minor1 | | | Minor2 | | | |
|----------------------|--------|---|--------|-------|---|--------|-------|-------|--------|-------|-------|-------|
| Conflicting Flow All | 174 | 0 | 0 | 56 | 0 | 0 | 702 | 743 | 55 | 756 | 701 | 131 |
| Stage 1 | - | - | - | - | - | - | 59 | 59 | - | 641 | 641 | - |
| Stage 2 | - | - | - | - | - | - | 643 | 684 | - | 115 | 60 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1403 | - | - | 1549 | - | - | 353 | 343 | 1012 | 325 | 363 | 919 |
| Stage 1 | - | - | - | - | - | - | 953 | 846 | - | 463 | 469 | - |
| Stage 2 | - | - | - | - | - | - | 462 | 449 | - | 890 | 845 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1403 | - | - | 1549 | - | - | 306 | 286 | 1012 | 252 | 303 | 919 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 341 | 330 | - | 341 | 339 | - |
| Stage 1 | - | - | - | - | - | - | 952 | 845 | - | 463 | 392 | - |
| Stage 2 | - | - | - | - | - | - | 383 | 375 | - | 791 | 844 | - |

| Approach | EB | | WB | | | NB | | | SB | | |
|----------------------|-----|--|-----|--|--|-----|--|--|------|--|--|
| HCM Control Delay, s | 0.3 | | 4.6 | | | 9.3 | | | 17.1 | | |
| HCM LOS | | | | | | A | | | C | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 341 | 973 | 1403 | - | - | 1549 | - | - | 341 | 495 |
| HCM Lane V/C Ratio | 0.006 | 0.114 | 0.002 | - | - | 0.165 | - | - | 0.159 | 0.009 |
| HCM Control Delay (s) | 15.6 | 9.2 | 7.6 | - | - | 7.8 | - | - | 17.5 | 12.3 |
| HCM Lane LOS | | C | A | - | - | A | - | - | C | B |
| HCM 95th %tile Q(veh) | | 0 | 0.4 | 0 | - | 0.6 | - | - | 0.6 | 0 |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 25 | 5 | 45 | 2 | 5 | 25 | 25 | 50 | 2 | 25 | 70 | 50 |
| Future Vol, veh/h | 25 | 5 | 45 | 2 | 5 | 25 | 25 | 50 | 2 | 25 | 70 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 27 | 5 | 49 | 2 | 5 | 27 | 27 | 54 | 2 | 27 | 76 | 54 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 282 | 267 | 103 | 293 | 293 | 55 | 130 | 0 | 0 | 56 | 0 | 0 |
| Stage 1 | 157 | 157 | - | 109 | 109 | - | - | - | - | - | - | - |
| Stage 2 | 125 | 110 | - | 184 | 184 | - | - | - | - | - | - | - |
| 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 | 670 | 639 | 952 | 659 | 618 | 1012 | 1455 | - | - | 1549 | - | - |
| Stage 1 | 845 | 768 | - | 896 | 805 | - | - | - | - | - | - | - |
| Stage 2 | 879 | 804 | - | 818 | 747 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 630 | 616 | 952 | 604 | 596 | 1012 | 1455 | - | - | 1549 | - | - |
| Mov Cap-2 Maneuver | 661 | 627 | - | 630 | 608 | - | - | - | - | - | - | - |
| Stage 1 | 829 | 755 | - | 879 | 790 | - | - | - | - | - | - | - |
| Stage 2 | 834 | 789 | - | 757 | 734 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|----|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 10 | | 9.2 | | 2.4 | | 1.3 | |
| HCM LOS | B | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1455 | - | - | 806 | 886 | 1549 | - |
| HCM Lane V/C Ratio | 0.019 | - | - | 0.101 | 0.039 | 0.018 | - |
| HCM Control Delay (s) | 7.5 | - | - | 10 | 9.2 | 7.4 | - |
| HCM Lane LOS | A | - | - | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.3 | 0.1 | 0.1 | - |

| 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 | 25 | 5 | 45 | 2 | 5 | 25 | 25 | 45 | 2 | 25 | 70 | 50 |
| Future Vol, veh/h | 25 | 5 | 45 | 2 | 5 | 25 | 25 | 45 | 2 | 25 | 70 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 27 | 5 | 49 | 2 | 5 | 27 | 27 | 49 | 2 | 27 | 76 | 54 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 277 | 262 | 103 | 288 | 288 | 50 | 130 | 0 | 0 | 51 | 0 | 0 |
| Stage 1 | 157 | 157 | - | 104 | 104 | - | - | - | - | - | - | - |
| Stage 2 | 120 | 105 | - | 184 | 184 | - | - | - | - | - | - | - |
| 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 | 675 | 643 | 952 | 664 | 622 | 1018 | 1455 | - | - | 1555 | - | - |
| Stage 1 | 845 | 768 | - | 902 | 809 | - | - | - | - | - | - | - |
| Stage 2 | 884 | 808 | - | 818 | 747 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 635 | 620 | 952 | 609 | 600 | 1018 | 1455 | - | - | 1555 | - | - |
| Mov Cap-2 Maneuver | 664 | 630 | - | 633 | 611 | - | - | - | - | - | - | - |
| Stage 1 | 829 | 755 | - | 885 | 794 | - | - | - | - | - | - | - |
| Stage 2 | 839 | 793 | - | 757 | 734 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|----|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 10 | | 9.2 | | 2.6 | | 1.3 | |
| HCM LOS | B | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1455 | - | - | 808 | 891 | 1555 | - |
| HCM Lane V/C Ratio | 0.019 | - | - | 0.101 | 0.039 | 0.017 | - |
| HCM Control Delay (s) | 7.5 | - | - | 10 | 9.2 | 7.4 | - |
| HCM Lane LOS | A | - | - | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.3 | 0.1 | 0.1 | - |

| 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 | 25 | 5 | 50 | 2 | 5 | 25 | 30 | 55 | 2 | 30 | 80 | 55 |
| Future Vol, veh/h | 25 | 5 | 50 | 2 | 5 | 25 | 30 | 55 | 2 | 30 | 80 | 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 | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 27 | 5 | 54 | 2 | 5 | 27 | 33 | 60 | 2 | 33 | 87 | 60 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 326 | 311 | 117 | 340 | 340 | 61 | 147 | 0 | 0 | 62 | 0 | 0 |
| Stage 1 | 183 | 183 | - | 127 | 127 | - | - | - | - | - | - | - |
| Stage 2 | 143 | 128 | - | 213 | 213 | - | - | - | - | - | - | - |
| 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 | 627 | 604 | 935 | 614 | 582 | 1004 | 1435 | - | - | 1541 | - | - |
| Stage 1 | 819 | 748 | - | 877 | 791 | - | - | - | - | - | - | - |
| Stage 2 | 860 | 790 | - | 789 | 726 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 586 | 577 | 935 | 555 | 556 | 1004 | 1435 | - | - | 1541 | - | - |
| Mov Cap-2 Maneuver | 628 | 599 | - | 591 | 579 | - | - | - | - | - | - | - |
| Stage 1 | 800 | 732 | - | 857 | 773 | - | - | - | - | - | - | - |
| Stage 2 | 812 | 772 | - | 722 | 711 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 10.1 | | 9.3 | | 2.6 | | 1.3 | |
| HCM LOS | B | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|------|-------|-----|
| Capacity (veh/h) | 1435 | - | - | 787 | 867 | 1541 | - |
| HCM Lane V/C Ratio | 0.023 | - | - | 0.11 | 0.04 | 0.021 | - |
| HCM Control Delay (s) | 7.6 | - | - | 10.1 | 9.3 | 7.4 | - |
| HCM Lane LOS | A | - | - | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.4 | 0.1 | 0.1 | - |

| 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 | 25 | 5 | 50 | 2 | 10 | 25 | 40 | 65 | 2 | 40 | 90 | 80 |
| Future Vol, veh/h | 25 | 5 | 50 | 2 | 10 | 25 | 40 | 65 | 2 | 40 | 90 | 80 |
| 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 | - | - | - | - | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 1 | - | - | 1 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 27 | 5 | 54 | 2 | 11 | 27 | 43 | 71 | 2 | 43 | 98 | 87 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 405 | 387 | 142 | 415 | 429 | 72 | 185 | 0 | 0 | 73 | 0 | 0 |
| Stage 1 | 228 | 228 | - | 158 | 158 | - | - | - | - | - | - | - |
| Stage 2 | 177 | 159 | - | 257 | 271 | - | - | - | - | - | - | - |
| 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 | 556 | 547 | 906 | 548 | 518 | 990 | 1390 | - | - | 1527 | - | - |
| Stage 1 | 775 | 715 | - | 844 | 767 | - | - | - | - | - | - | - |
| Stage 2 | 825 | 766 | - | 748 | 685 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 509 | 515 | 906 | 489 | 488 | 990 | 1390 | - | - | 1527 | - | - |
| Mov Cap-2 Maneuver | 568 | 553 | - | 539 | 526 | - | - | - | - | - | - | - |
| Stage 1 | 751 | 695 | - | 818 | 743 | - | - | - | - | - | - | - |
| Stage 2 | 766 | 742 | - | 678 | 666 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 10.5 | | 9.9 | | 2.9 | | 1.4 | |
| HCM LOS | B | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1390 | - | - | 739 | 771 | 1527 | - |
| HCM Lane V/C Ratio | 0.031 | - | - | 0.118 | 0.052 | 0.028 | - |
| HCM Control Delay (s) | 7.7 | - | - | 10.5 | 9.9 | 7.4 | - |
| HCM Lane LOS | A | - | - | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.4 | 0.2 | 0.1 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↖ | ↑ | ↗ | | ↖ | ↗ |
| Traffic Vol, veh/h | 2 | 45 | 50 | 100 | 110 | 2 |
| Future Vol, veh/h | 2 | 45 | 50 | 100 | 110 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | - | 150 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 49 | 54 | 109 | 120 | 2 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 163 | 0 | - | 0 | 162 109 |
| Stage 1 | - | - | - | - | 109 - |
| Stage 2 | - | - | - | - | 53 - |
| 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 | 1416 | - | - | - | 829 945 |
| Stage 1 | - | - | - | - | 916 - |
| Stage 2 | - | - | - | - | 970 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1416 | - | - | - | 828 945 |
| Mov Cap-2 Maneuver | - | - | - | - | 805 - |
| Stage 1 | - | - | - | - | 915 - |
| Stage 2 | - | - | - | - | 970 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 10.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1416 | - | - | - | 805 | 945 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.149 | 0.002 |
| HCM Control Delay (s) | 7.5 | - | - | - | 10.3 | 8.8 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 | 0 |

Intersection

Int Delay, s/veh 3.8

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↑ | ↗ | | ↖ | ↗ |
| Traffic Vol, veh/h | 2 | 45 | 50 | 95 | 110 | 2 |
| Future Vol, veh/h | 2 | 45 | 50 | 95 | 110 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | - | 150 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 49 | 54 | 103 | 120 | 2 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 157 | 0 | 0 159 106 |
| Stage 1 | - | - | - 106 - |
| Stage 2 | - | - | - 53 - |
| 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 | 1423 | - | - 832 948 |
| Stage 1 | - | - | - 918 - |
| Stage 2 | - | - | - 970 - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 1423 | - | - 831 948 |
| Mov Cap-2 Maneuver | - | - | - 807 - |
| Stage 1 | - | - | - 917 - |
| Stage 2 | - | - | - 970 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 10.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1423 | - | - | - | 807 | 948 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.148 | 0.002 |
| HCM Control Delay (s) | 7.5 | - | - | - | 10.2 | 8.8 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 | 0 |

Intersection

Int Delay, s/veh 3.9

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↙ | ↑ | ↘ | | ↙ | ↘ |
| Traffic Vol, veh/h | 2 | 50 | 55 | 110 | 125 | 2 |
| Future Vol, veh/h | 2 | 50 | 55 | 110 | 125 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | - | 150 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 54 | 60 | 120 | 136 | 2 |

Major/Minor

| | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 180 | 0 | 0 | 178 | 120 |
| Stage 1 | - | - | - | - | 120 |
| Stage 2 | - | - | - | - | 58 |
| 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 | 1396 | - | - | 812 | 931 |
| Stage 1 | - | - | - | 905 | - |
| Stage 2 | - | - | - | 965 | - |
| Platoon blocked, % | | - | - | | |
| Mov Cap-1 Maneuver | 1396 | - | - | 811 | 931 |
| Mov Cap-2 Maneuver | - | - | - | 793 | - |
| Stage 1 | - | - | - | 904 | - |
| Stage 2 | - | - | - | 965 | - |

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 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1396 | - | - | - | 793 | 931 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.171 | 0.002 |
| HCM Control Delay (s) | 7.6 | - | - | - | 10.5 | 8.9 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.6 | 0 |

Intersection

Int Delay, s/veh 3.4

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↙ | ↑ | ↘ | | ↙ | ↘ |
| Traffic Vol, veh/h | 2 | 50 | 80 | 155 | 125 | 2 |
| Future Vol, veh/h | 2 | 50 | 80 | 155 | 125 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | - | 150 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 54 | 87 | 168 | 136 | 2 |

Major/Minor

| | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 255 | 0 | 0 | 229 | 171 |
| Stage 1 | - | - | - | 171 | - |
| Stage 2 | - | - | - | 58 | - |
| 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 | 1310 | - | - | 759 | 873 |
| Stage 1 | - | - | - | 859 | - |
| Stage 2 | - | - | - | 965 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1310 | - | - | 757 | 873 |
| Mov Cap-2 Maneuver | - | - | - | 753 | - |
| Stage 1 | - | - | - | 857 | - |
| Stage 2 | - | - | - | 965 | - |

Approach

| | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 10.8 |
| HCM LOS | | | B |

Minor Lane/Major Mvmt

| | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1310 | - | - | - | 753 | 873 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.18 | 0.002 |
| HCM Control Delay (s) | 7.8 | - | - | - | 10.8 | 9.1 |
| HCM Lane LOS | A | - | - | - | B | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.7 | 0 |

Intersection

Int Delay, s/veh 2.6

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 155 | 150 | 100 | 110 | 5 |
| Future Vol, veh/h | 5 | 155 | 150 | 100 | 110 | 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 | 100 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 168 | 163 | 109 | 120 | 5 |

Major/Minor

| | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 272 | 0 | 0 | 396 | 218 |
| Stage 1 | - | - | - | 218 | - |
| Stage 2 | - | - | - | 178 | - |
| 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 | 1291 | - | - | 609 | 822 |
| Stage 1 | - | - | - | 818 | - |
| Stage 2 | - | - | - | 853 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1291 | - | - | 607 | 822 |
| Mov Cap-2 Maneuver | - | - | - | 657 | - |
| Stage 1 | - | - | - | 815 | - |
| Stage 2 | - | - | - | 853 | - |

Approach

| | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0 | 11.7 |
| HCM LOS | | | B |

Minor Lane/Major Mvmt

| | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1291 | - | - | - | 663 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.189 |
| HCM Control Delay (s) | 7.8 | - | - | - | 11.7 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.7 |

Intersection

Int Delay, s/veh 2.7

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 155 | 140 | 95 | 110 | 5 |
| Future Vol, veh/h | 5 | 155 | 140 | 95 | 110 | 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 | 100 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 168 | 152 | 103 | 120 | 5 |

Major/Minor

| | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 255 | 0 | 0 | 382 | 204 |
| Stage 1 | - | - | - | 204 | - |
| Stage 2 | - | - | - | 178 | - |
| 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 | 1310 | - | - | 620 | 837 |
| Stage 1 | - | - | - | 830 | - |
| Stage 2 | - | - | - | 853 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1310 | - | - | 618 | 837 |
| Mov Cap-2 Maneuver | - | - | - | 665 | - |
| Stage 1 | - | - | - | 827 | - |
| Stage 2 | - | - | - | 853 | - |

Approach

| | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0 | 11.6 |
| HCM LOS | | | B |

Minor Lane/Major Mvmt

| | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1310 | - | - | - | 671 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.186 |
| HCM Control Delay (s) | 7.8 | - | - | - | 11.6 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.7 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 175 | 165 | 110 | 125 | 5 |
| Future Vol, veh/h | 5 | 175 | 165 | 110 | 125 | 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 | 100 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 190 | 179 | 120 | 136 | 5 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 299 | 0 | 0 | 439 | 239 |
| Stage 1 | - | - | - | 239 | - |
| Stage 2 | - | - | - | 200 | - |
| 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 | 1262 | - | - | 575 | 800 |
| Stage 1 | - | - | - | 801 | - |
| Stage 2 | - | - | - | 834 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1262 | - | - | 573 | 800 |
| Mov Cap-2 Maneuver | - | - | - | 633 | - |
| Stage 1 | - | - | - | 798 | - |
| Stage 2 | - | - | - | 834 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0 | 12.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1262 | - | - | - | 638 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.221 |
| HCM Control Delay (s) | 7.9 | - | - | - | 12.2 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.8 |

Intersection

Int Delay, s/veh 2.5

Movement EBL EBT WBT WBR SBL SBR

| | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 175 | 235 | 155 | 125 | 5 |
| Future Vol, veh/h | 5 | 175 | 235 | 155 | 125 | 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 | 100 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 1 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 190 | 255 | 168 | 136 | 5 |

Major/Minor Major1 Major2 Minor2

| | | | | | | |
|----------------------|-------|---|---|---|-------|-------|
| Conflicting Flow All | 423 | 0 | - | 0 | 539 | 339 |
| Stage 1 | - | - | - | - | 339 | - |
| Stage 2 | - | - | - | - | 200 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1136 | - | - | - | 503 | 703 |
| Stage 1 | - | - | - | - | 722 | - |
| Stage 2 | - | - | - | - | 834 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1136 | - | - | - | 501 | 703 |
| Mov Cap-2 Maneuver | - | - | - | - | 578 | - |
| Stage 1 | - | - | - | - | 719 | - |
| Stage 2 | - | - | - | - | 834 | - |

Approach EB WB SB

| | | | |
|----------------------|-----|---|------|
| HCM Control Delay, s | 0.2 | 0 | 13.2 |
| HCM LOS | | | B |

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

| | | | | | |
|-----------------------|-------|---|---|---|-------|
| Capacity (veh/h) | 1136 | - | - | - | 582 |
| HCM Lane V/C Ratio | 0.005 | - | - | - | 0.243 |
| HCM Control Delay (s) | 8.2 | - | - | - | 13.2 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.9 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | ↗ | ↘ | ↕ | ↕ | ↗ |
| Traffic Vol, veh/h | 0 | 90 | 50 | 860 | 1300 | 200 |
| Future Vol, veh/h | 0 | 90 | 50 | 860 | 1300 | 200 |
| 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 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Mvmt Flow | 0 | 98 | 54 | 935 | 1413 | 217 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 707 | 1630 | 0 | 0 |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | 4.14 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | 2.22 | - | - |
| Pot Cap-1 Maneuver | 0 | 378 | 394 | - | - |
| Stage 1 | 0 | - | - | - | - |
| Stage 2 | 0 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | - | 378 | 394 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.8 | 0.9 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 394 | - | 378 | - | - |
| HCM Lane V/C Ratio | 0.138 | - | 0.259 | - | - |
| HCM Control Delay (s) | 15.6 | - | 17.8 | - | - |
| HCM Lane LOS | C | - | C | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | ↗ | ↘ | ↑↑ | ↑↑ | ↗ |
| Traffic Vol, veh/h | 0 | 90 | 50 | 1450 | 1045 | 185 |
| Future Vol, veh/h | 0 | 90 | 50 | 1450 | 1045 | 185 |
| 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 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Mvmt Flow | 0 | 98 | 54 | 1576 | 1136 | 201 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | - | 568 | 1337 | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 0 | 466 | 512 | - | - | - |
| Stage 1 | 0 | - | - | - | - | - |
| Stage 2 | 0 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | - | 466 | 512 | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.8 | 0.4 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 512 | - | 466 | - | - |
| HCM Lane V/C Ratio | 0.106 | - | 0.21 | - | - |
| HCM Control Delay (s) | 12.9 | - | 14.8 | - | - |
| HCM Lane LOS | B | - | B | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 0.8 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | ↗ | ↘ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Vol, veh/h | 0 | 100 | 55 | 1260 | 1675 | 220 |
| Future Vol, veh/h | 0 | 100 | 55 | 1260 | 1675 | 220 |
| 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 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Mvmt Flow | 0 | 109 | 60 | 1370 | 1821 | 239 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 911 | 2060 | 0 | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | 5.34 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | 3.12 | - | - |
| Pot Cap-1 Maneuver | 0 | *514 | 556 | - | - |
| Stage 1 | 0 | - | - | - | - |
| Stage 2 | 0 | - | - | - | - |
| Platoon blocked, % | | 1 | 1 | - | - |
| Mov Cap-1 Maneuver | - | *514 | 556 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.9 | 0.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 556 | - | 514 | - | - |
| HCM Lane V/C Ratio | 0.108 | - | 0.211 | - | - |
| HCM Control Delay (s) | 12.3 | - | 13.9 | - | - |
| HCM Lane LOS | B | - | B | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 0.8 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | ↗ | ↘ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Vol, veh/h | 0 | 100 | 80 | 2125 | 1760 | 310 |
| Future Vol, veh/h | 0 | 100 | 80 | 2125 | 1760 | 310 |
| 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 | 300 | - | - | 250 |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Mvmt Flow | 0 | 109 | 87 | 2310 | 1913 | 337 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | - | 957 | 2250 | 0 | 0 |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |
| Critical Hdwy | - | 7.14 | 5.34 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - |
| Follow-up Hdwy | - | 3.92 | 3.12 | - | - |
| Pot Cap-1 Maneuver | 0 | *492 | 449 | - | - |
| Stage 1 | 0 | - | - | - | - |
| Stage 2 | 0 | - | - | - | - |
| Platoon blocked, % | | 1 | 1 | - | - |
| Mov Cap-1 Maneuver | - | *492 | 449 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - |
| Stage 1 | - | - | - | - | - |
| Stage 2 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.4 | 0.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 449 | - | 492 | - | - |
| HCM Lane V/C Ratio | 0.194 | - | 0.221 | - | - |
| HCM Control Delay (s) | 14.9 | - | 14.4 | - | - |
| HCM Lane LOS | B | - | B | - | - |
| HCM 95th %tile Q(veh) | 0.7 | - | 0.8 | - | - |

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

Timings

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑ | ↑↑ | ↗ |
| Traffic Volume (vph) | 155 | 200 | 150 | 755 | 1290 | 100 |
| Future Volume (vph) | 155 | 200 | 150 | 755 | 1290 | 100 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 27.0 | 27.0 | 19.0 | 93.0 | 74.0 | 74.0 |
| Total Split (%) | 22.5% | 22.5% | 15.8% | 77.5% | 61.7% | 61.7% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 16.5 | 16.5 | 93.0 | 93.0 | 78.4 | 78.4 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.78 | 0.78 | 0.65 | 0.65 |
| v/c Ratio | 0.69 | 0.54 | 0.55 | 0.31 | 0.62 | 0.10 |
| Control Delay | 63.6 | 11.5 | 20.8 | 4.5 | 19.1 | 3.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.6 | 11.5 | 20.8 | 4.5 | 19.1 | 3.8 |
| LOS | E | B | C | A | B | A |
| Approach Delay | 34.2 | | | 7.2 | 18.0 | |
| Approach LOS | C | | | A | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 16.5
 Intersection LOS: B
 Intersection Capacity Utilization 65.9%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2026 Total AM Improved.syn

02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 155 | 200 | 150 | 755 | 1290 | 100 |
| Future Volume (veh/h) | 155 | 200 | 150 | 755 | 1290 | 100 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 168 | 217 | 163 | 821 | 1402 | 109 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Cap, veh/h | 276 | 245 | 296 | 2628 | 2305 | 1053 |
| Arrive On Green | 0.15 | 0.15 | 0.09 | 1.00 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 3561 | 3561 | 1585 |
| Grp Volume(v), veh/h | 168 | 217 | 163 | 821 | 1402 | 109 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1735 | 1735 | 1585 |
| Q Serve(g_s), s | 10.6 | 16.1 | 3.5 | 0.0 | 27.3 | 3.0 |
| Cycle Q Clear(g_c), s | 10.6 | 16.1 | 3.5 | 0.0 | 27.3 | 3.0 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 276 | 245 | 296 | 2628 | 2305 | 1053 |
| V/C Ratio(X) | 0.61 | 0.88 | 0.55 | 0.31 | 0.61 | 0.10 |
| Avail Cap(c_a), veh/h | 327 | 291 | 412 | 2628 | 2305 | 1053 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.86 | 0.86 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.3 | 49.7 | 10.8 | 0.0 | 11.3 | 7.3 |
| Incr Delay (d2), s/veh | 2.4 | 23.3 | 1.4 | 0.3 | 1.2 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.9 | 14.9 | 1.6 | 0.1 | 10.1 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 49.7 | 72.9 | 12.2 | 0.3 | 12.5 | 7.5 |
| LnGrp LOS | D | E | B | A | B | A |
| Approach Vol, veh/h | 385 | | | 984 | 1511 | |
| Approach Delay, s/veh | 62.8 | | | 2.2 | 12.2 | |
| Approach LOS | E | | | A | B | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 96.4 | | 23.6 | 11.2 | 85.2 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 87.5 | | 22.0 | 13.5 | 68.5 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | 18.1 | 5.5 | 29.3 |
| Green Ext Time (p_c), s | | 7.3 | | 0.5 | 0.3 | 15.7 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 15.6 | | | |
| HCM 6th LOS | | | B | | | |

Timings

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑ | ↑↑ | ↗ |
| Traffic Volume (vph) | 155 | 200 | 140 | 1345 | 1040 | 95 |
| Future Volume (vph) | 155 | 200 | 140 | 1345 | 1040 | 95 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 29.0 | 29.0 | 21.0 | 91.0 | 70.0 | 70.0 |
| Total Split (%) | 24.2% | 24.2% | 17.5% | 75.8% | 58.3% | 58.3% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 16.6 | 16.6 | 92.9 | 92.9 | 79.2 | 79.2 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.77 | 0.77 | 0.66 | 0.66 |
| v/c Ratio | 0.69 | 0.53 | 0.41 | 0.54 | 0.49 | 0.10 |
| Control Delay | 63.1 | 10.7 | 10.8 | 15.3 | 19.5 | 5.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.1 | 10.7 | 10.8 | 15.3 | 19.5 | 5.7 |
| LOS | E | B | B | B | B | A |
| Approach Delay | 33.6 | | | 14.9 | 18.4 | |
| Approach LOS | C | | | B | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 18.4
 Intersection Capacity Utilization 58.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2026 Total PM Improved.syn

02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 155 | 200 | 140 | 1345 | 1040 | 95 |
| Future Volume (veh/h) | 155 | 200 | 140 | 1345 | 1040 | 95 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 168 | 217 | 152 | 1462 | 1130 | 103 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Cap, veh/h | 278 | 247 | 369 | 2667 | 2350 | 1056 |
| Arrive On Green | 0.16 | 0.16 | 0.04 | 0.76 | 0.67 | 0.67 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 3618 | 3618 | 1585 |
| Grp Volume(v), veh/h | 168 | 217 | 152 | 1462 | 1130 | 103 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1763 | 1763 | 1585 |
| Q Serve(g_s), s | 10.5 | 16.1 | 3.1 | 20.7 | 18.9 | 2.8 |
| Cycle Q Clear(g_c), s | 10.5 | 16.1 | 3.1 | 20.7 | 18.9 | 2.8 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 278 | 247 | 369 | 2667 | 2350 | 1056 |
| V/C Ratio(X) | 0.60 | 0.88 | 0.41 | 0.55 | 0.48 | 0.10 |
| Avail Cap(c_a), veh/h | 356 | 317 | 520 | 2667 | 2350 | 1056 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.51 | 0.51 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.2 | 49.5 | 7.6 | 6.1 | 9.8 | 7.1 |
| Incr Delay (d2), s/veh | 2.1 | 19.4 | 0.4 | 0.4 | 0.7 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.8 | 14.7 | 1.1 | 6.7 | 7.1 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 49.3 | 68.9 | 8.0 | 6.5 | 10.5 | 7.3 |
| LnGrp LOS | D | E | A | A | B | A |
| Approach Vol, veh/h | 385 | | | 1614 | 1233 | |
| Approach Delay, s/veh | 60.3 | | | 6.6 | 10.3 | |
| Approach LOS | E | | | A | B | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 96.3 | | 23.7 | 10.8 | 85.5 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 85.5 | | 24.0 | 15.5 | 64.5 |
| Max Q Clear Time (g_c+I1), s | | 22.7 | | 18.1 | 5.1 | 20.9 |
| Green Ext Time (p_c), s | | 18.3 | | 0.7 | 0.3 | 11.6 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 14.4 | | | |
| HCM 6th LOS | | | B | | | |

Timings
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 175 | 225 | 165 | 1145 | 1665 | 110 |
| Future Volume (vph) | 175 | 225 | 165 | 1145 | 1665 | 110 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 92.0 | 68.0 | 68.0 |
| Total Split (%) | 23.3% | 23.3% | 20.0% | 76.7% | 56.7% | 56.7% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 17.8 | 17.8 | 91.7 | 91.7 | 73.9 | 73.9 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.76 | 0.76 | 0.62 | 0.62 |
| v/c Ratio | 0.73 | 0.55 | 0.65 | 0.33 | 0.60 | 0.12 |
| Control Delay | 64.3 | 10.3 | 29.0 | 10.9 | 14.4 | 4.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 64.3 | 10.3 | 29.0 | 10.9 | 14.4 | 4.1 |
| LOS | E | B | C | B | B | A |
| Approach Delay | 33.9 | | | 13.2 | 13.7 | |
| Approach LOS | C | | | B | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 15.8
 Intersection LOS: B
 Intersection Capacity Utilization 64.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2040 Total AM.syn
 02/16/2021



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 175 | 225 | 165 | 1145 | 1665 | 110 |
| Future Volume (veh/h) | 175 | 225 | 165 | 1145 | 1665 | 110 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1826 | 1826 | 1870 |
| Adj Flow Rate, veh/h | 190 | 245 | 179 | 1245 | 1810 | 120 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 5 | 5 | 2 |
| Cap, veh/h | 306 | 272 | 225 | 3692 | 3208 | 1020 |
| Arrive On Green | 0.17 | 0.17 | 0.03 | 0.50 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 5149 | 5149 | 1585 |
| Grp Volume(v), veh/h | 190 | 245 | 179 | 1245 | 1810 | 120 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1662 | 1662 | 1585 |
| Q Serve(g_s), s | 11.9 | 18.2 | 3.8 | 18.1 | 39.0 | 7.3 |
| Cycle Q Clear(g_c), s | 11.9 | 18.2 | 3.8 | 18.1 | 39.0 | 7.3 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 306 | 272 | 225 | 3692 | 3208 | 1020 |
| V/C Ratio(X) | 0.62 | 0.90 | 0.80 | 0.34 | 0.56 | 0.12 |
| Avail Cap(c_a), veh/h | 341 | 304 | 408 | 3692 | 3208 | 1020 |
| HCM Platoon Ratio | 1.00 | 1.00 | 0.67 | 0.67 | 0.33 | 0.33 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.81 | 0.81 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.1 | 48.7 | 24.4 | 12.4 | 32.2 | 19.7 |
| Incr Delay (d2), s/veh | 2.9 | 26.1 | 5.2 | 0.2 | 0.7 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.5 | 16.9 | 3.8 | 7.5 | 17.6 | 2.9 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 48.9 | 74.8 | 29.6 | 12.6 | 32.9 | 20.0 |
| LnGrp LOS | D | E | C | B | C | B |
| Approach Vol, veh/h | 435 | | | 1424 | 1930 | |
| Approach Delay, s/veh | 63.5 | | | 14.7 | 32.1 | |
| Approach LOS | E | | | B | C | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 94.4 | | 25.6 | 11.7 | 82.7 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 86.5 | | 23.0 | 18.5 | 62.5 |
| Max Q Clear Time (g_c+I1), s | | 20.1 | | 20.2 | 5.8 | 41.0 |
| Green Ext Time (p_c), s | | 13.1 | | 0.4 | 0.4 | 14.7 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 29.2 | | | |
| HCM 6th LOS | | | C | | | |

Timings
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2040 Total PM.syn
 02/16/2021

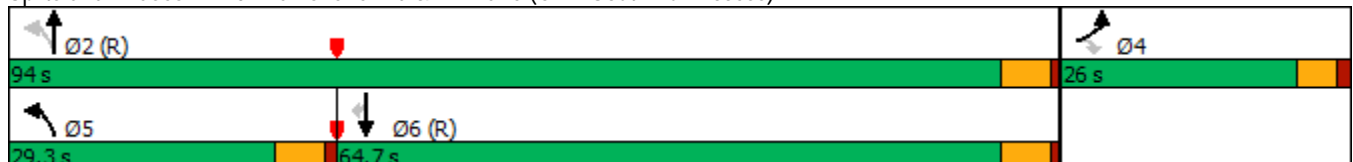


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↑↑↑ | ↑↑↑ | ↗ |
| Traffic Volume (vph) | 175 | 225 | 235 | 2030 | 1705 | 155 |
| Future Volume (vph) | 175 | 225 | 235 | 2030 | 1705 | 155 |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 23.0 | 23.0 | 10.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 26.0 | 26.0 | 29.3 | 94.0 | 64.7 | 64.7 |
| Total Split (%) | 21.7% | 21.7% | 24.4% | 78.3% | 53.9% | 53.9% |
| Yellow Time (s) | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 17.4 | 17.4 | 92.1 | 92.1 | 69.7 | 69.7 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.77 | 0.77 | 0.58 | 0.58 |
| v/c Ratio | 0.74 | 0.56 | 0.78 | 0.57 | 0.63 | 0.17 |
| Control Delay | 66.4 | 10.6 | 46.2 | 3.2 | 23.7 | 8.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 66.4 | 10.6 | 46.2 | 3.2 | 23.7 | 8.1 |
| LOS | E | B | D | A | C | A |
| Approach Delay | 35.0 | | | 7.7 | 22.4 | |
| Approach LOS | D | | | A | C | |

Intersection Summary

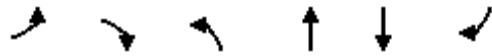
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 16.2
 Intersection LOS: B
 Intersection Capacity Utilization 69.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 10: Marksheffel Rd & Airl Lane (CRN South Full Access)



HCM 6th Signalized Intersection Summary
 10: Marksheffel Rd & Airl Lane (CRN South Full Access)

2040 Total PM.syn
 02/16/2021



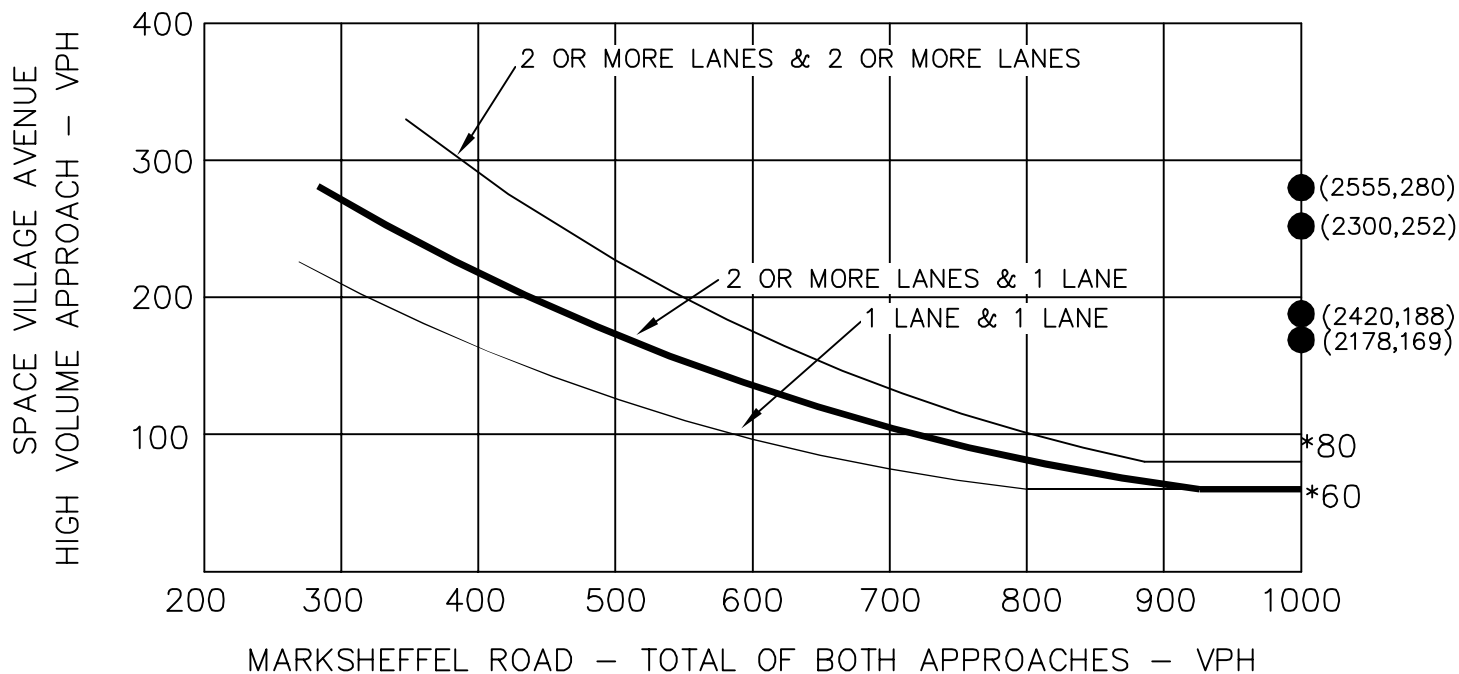
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 175 | 225 | 235 | 2030 | 1705 | 155 |
| Future Volume (veh/h) | 175 | 225 | 235 | 2030 | 1705 | 155 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1856 | 1856 | 1870 |
| Adj Flow Rate, veh/h | 190 | 245 | 255 | 2207 | 1853 | 168 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 3 | 3 | 2 |
| Cap, veh/h | 302 | 269 | 288 | 3763 | 3043 | 952 |
| Arrive On Green | 0.17 | 0.17 | 0.10 | 0.74 | 0.20 | 0.20 |
| Sat Flow, veh/h | 1781 | 1585 | 1781 | 5233 | 5233 | 1585 |
| Grp Volume(v), veh/h | 190 | 245 | 255 | 2207 | 1853 | 168 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1585 | 1781 | 1689 | 1689 | 1585 |
| Q Serve(g_s), s | 11.9 | 18.2 | 9.0 | 23.8 | 40.0 | 10.6 |
| Cycle Q Clear(g_c), s | 11.9 | 18.2 | 9.0 | 23.8 | 40.0 | 10.6 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 302 | 269 | 288 | 3763 | 3043 | 952 |
| V/C Ratio(X) | 0.63 | 0.91 | 0.89 | 0.59 | 0.61 | 0.18 |
| Avail Cap(c_a), veh/h | 312 | 277 | 470 | 3763 | 3043 | 952 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 |
| Upstream Filter(l) | 1.00 | 1.00 | 0.29 | 0.29 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.3 | 48.9 | 31.8 | 7.0 | 35.3 | 23.4 |
| Incr Delay (d2), s/veh | 3.8 | 31.4 | 3.7 | 0.2 | 0.9 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.6 | 17.3 | 7.8 | 7.5 | 18.4 | 4.6 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 50.1 | 80.3 | 35.5 | 7.2 | 36.2 | 23.9 |
| LnGrp LOS | D | F | D | A | D | C |
| Approach Vol, veh/h | 435 | | | 2462 | 2021 | |
| Approach Delay, s/veh | 67.1 | | | 10.2 | 35.2 | |
| Approach LOS | E | | | B | D | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 |
| Phs Duration (G+Y+Rc), s | | 94.6 | | 25.4 | 17.1 | 77.6 |
| Change Period (Y+Rc), s | | 5.5 | | 5.0 | 5.5 | 5.5 |
| Max Green Setting (Gmax), s | | 88.5 | | 21.0 | 23.8 | 59.2 |
| Max Q Clear Time (g_c+I1), s | | 25.8 | | 20.2 | 11.0 | 42.0 |
| Green Ext Time (p_c), s | | 35.7 | | 0.1 | 0.6 | 12.7 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 25.5 | | | |
| HCM 6th LOS | | | C | | | |

APPENDIX E

Signal Warrant Analysis

Signal Clearance Intervals

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



SPACE VILLAGE AVENUE AND
 MARKSHEFFEL ROAD
 SIGNAL WARRANT ANALYSIS
 FOUR HOUR VOLUME WARRANT

* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

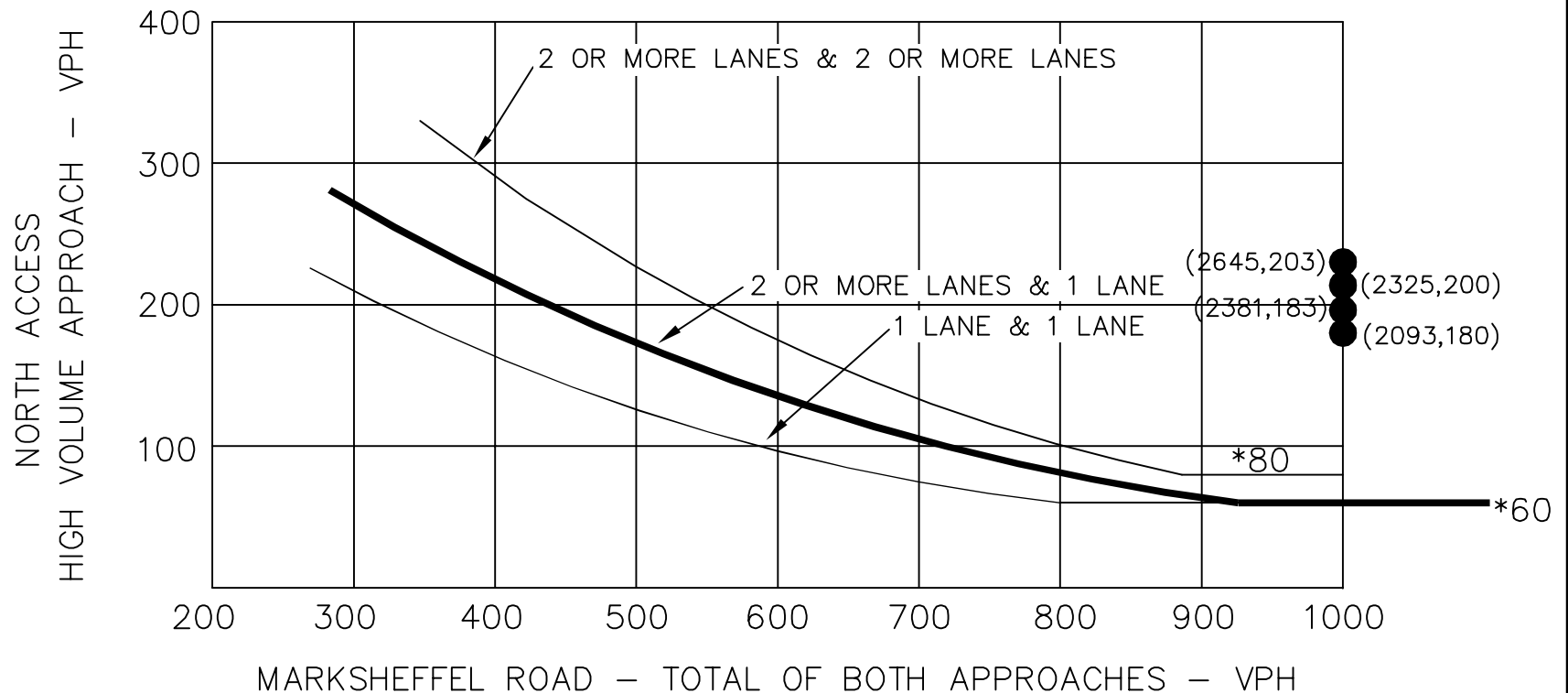
● 2026 TOTAL TRAFFIC DATA POINT WITH PROJECT

Source: Manual of Uniform Traffic Control Devices 2009



WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



MARKSHEFFEL ROAD
NORTH ACCESS
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

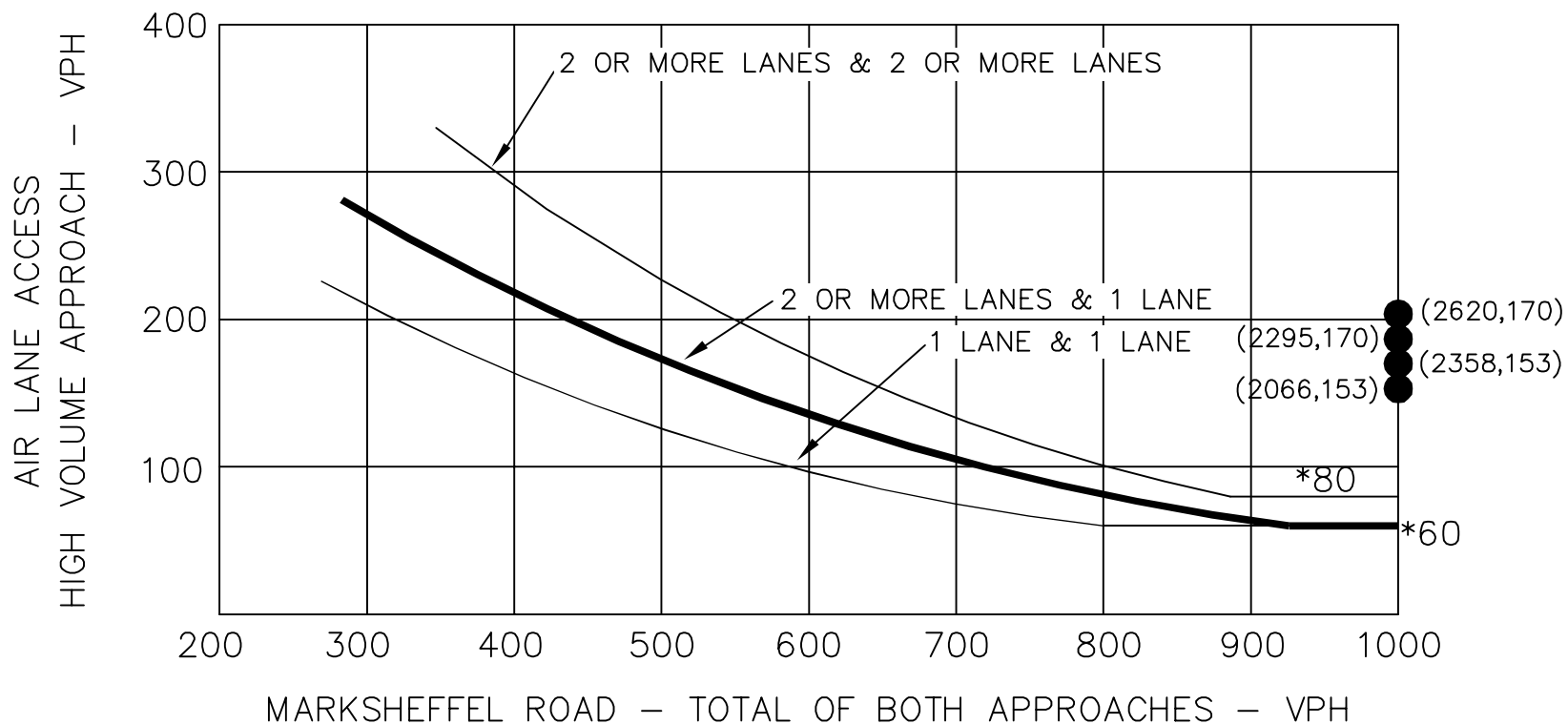
● 2026 TOTAL TRAFFIC DATA POINT WITH PROJECT

Source: Manual of Uniform Traffic Control Devices 2009



WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



MARKSHEFFEL ROAD
AND AIR LANE ACCESS
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

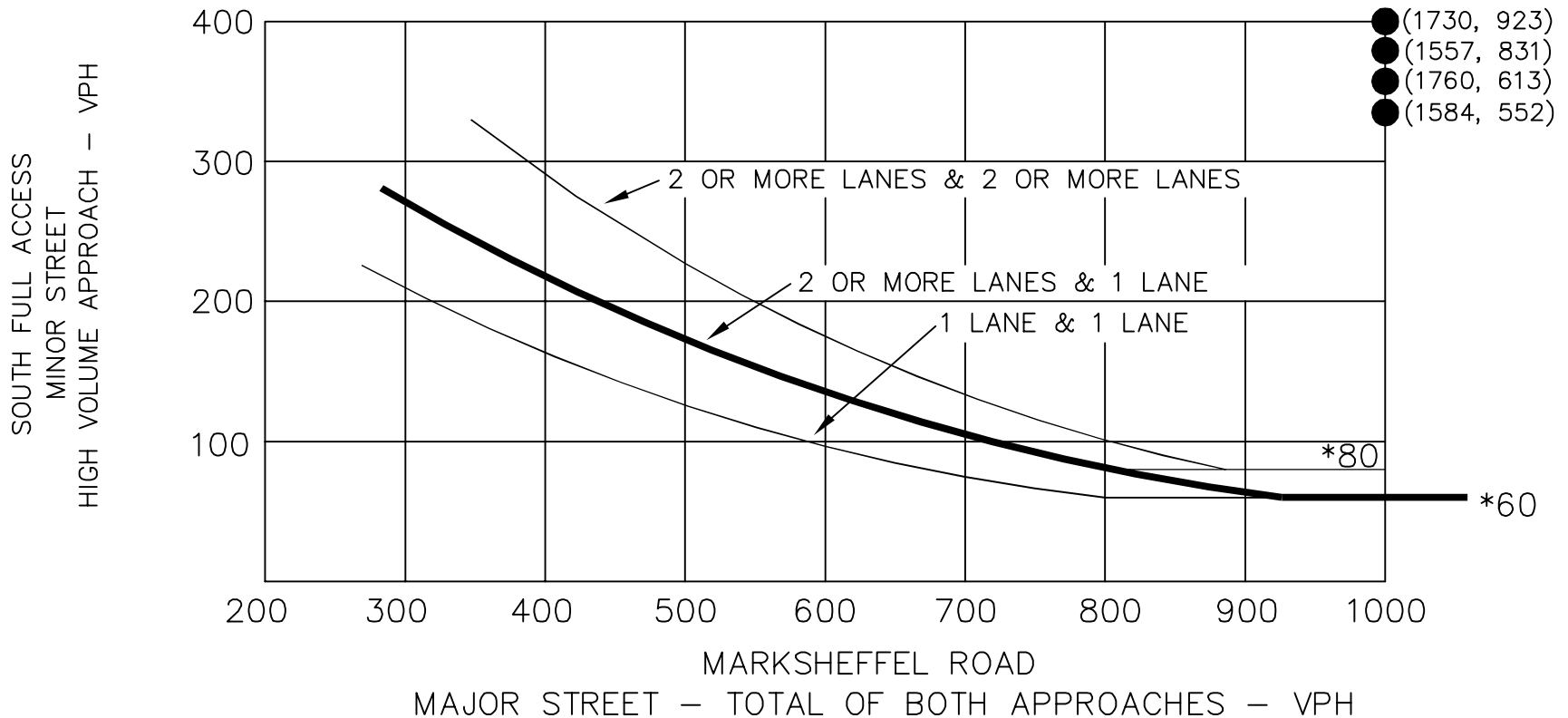
● 2026 TOTAL TRAFFIC DATA POINT WITH PROJECT

Source: Manual of Uniform Traffic Control Devices 2009



WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

MARKSHEFFEL RD SOUTH FULL ACCESS

CROSSROADS-MEADOWBROOK

FOUR HOUR VOLUME WARRANT

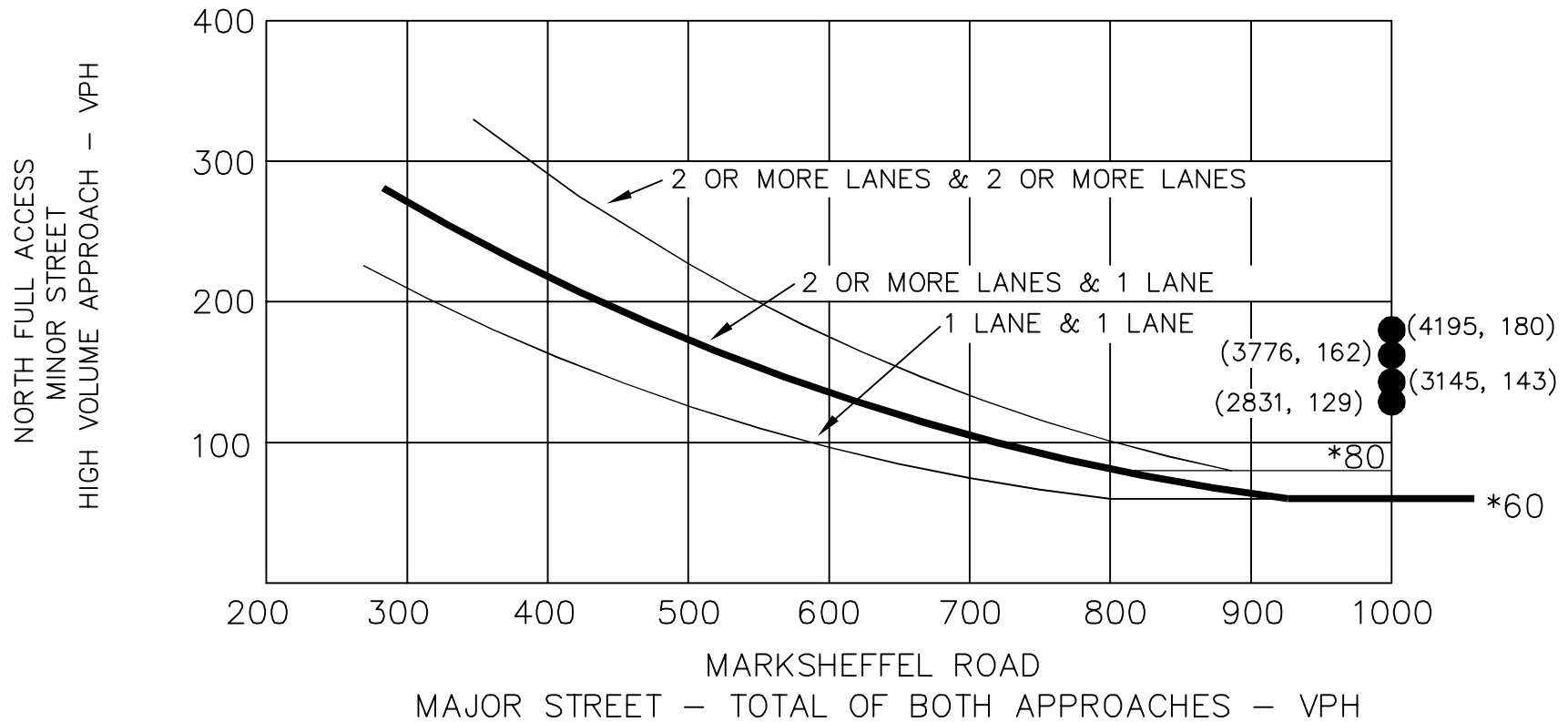
● 2026 Peak Hour Traffic Volume Projections

Source: Manual of Uniform Traffic Control Devices 2009



WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

MARKSHEFFEL RD NORTH FULL ACCESS
 CROSSROADS-MEADOWBROOK
 FOUR HOUR VOLUME WARRANT

● 2040 Peak Hour Traffic Volume Projections

Source: Manual of Uniform Traffic Control Devices 2009



Crossroads-Meadowbrook-Reagan Ranch Signal Clearance Calculations

| Signal Clearance Intervals | | | | |
|----------------------------|--|-------------|--------------|-------|
| Approach | Intersection | Yellow Time | All Red Time | Total |
| EB | Meadowbrook Pkwy and Marksheffel Rd (#1) | 3.573 | 1.458 | 5.030 |
| WB | | 2.838 | 2.503 | 5.341 |
| NB | | 5.043 | 1.484 | 6.527 |
| SB | | 5.043 | 1.484 | 6.527 |
| EB | US-24 and Marksheffel Rd (#2) | 4.675 | 1.265 | 5.940 |
| WB | | 5.043 | 1.707 | 6.749 |
| NB | | 5.778 | 1.528 | 7.305 |
| SB | | 5.778 | 1.706 | 7.483 |
| EB | SH-94 and US-24 (#4) | 2.838 | 3.020 | 5.858 |
| WB | | 3.940 | 2.245 | 6.185 |
| NB | | 5.043 | 1.868 | 6.910 |
| SB | | 5.778 | 2.009 | 7.787 |
| EB | SH-94 and Marksheffel Rd (#5) | 5.043 | 1.237 | 6.279 |
| WB | | 5.043 | 1.237 | 6.279 |
| NB | | 5.043 | 1.459 | 6.502 |
| SB | | 4.675 | 1.578 | 6.253 |

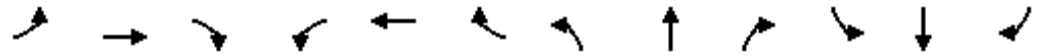
| Input Parameters | |
|-------------------|---------------------------|
| Speed Limit (mph) | Intersection Width (feet) |
| 35 | 55 |
| 25 | 72 |
| 55 | 100 |
| 55 | 100 |
| 50 | 73 |
| 55 | 118 |
| 65 | 126 |
| 65 | 143 |
| 25 | 91 |
| 40 | 112 |
| 55 | 131 |
| 65 | 172 |
| 55 | 80 |
| 55 | 80 |
| 55 | 98 |
| 50 | 96 |

APPENDIX F

Queueing Analysis Worksheets

Queues

1: Marksheffel Rd & Meadowbrook Parkway



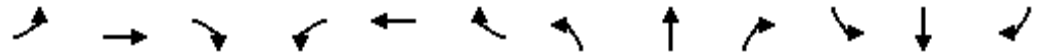
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 281 | 10 | 42 | 42 | 26 | 31 | 31 | 1135 | 21 | 10 | 1828 | 349 |
| v/c Ratio | 1.33 | 0.07 | 0.22 | 0.28 | 0.23 | 0.18 | 0.28 | 0.45 | 0.02 | 0.03 | 0.72 | 0.29 |
| Control Delay | 218.3 | 51.2 | 3.9 | 46.9 | 58.1 | 2.3 | 23.8 | 16.8 | 1.8 | 5.2 | 10.9 | 1.4 |
| 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 | 218.3 | 51.2 | 3.9 | 46.9 | 58.1 | 2.3 | 23.8 | 16.8 | 1.8 | 5.2 | 10.9 | 1.4 |
| Queue Length 50th (ft) | ~145 | 7 | 0 | 28 | 20 | 0 | 17 | 359 | 0 | 2 | 376 | 5 |
| Queue Length 95th (ft) | #235 | 25 | 6 | 60 | 49 | 0 | m23 | 441 | m0 | 7 | 498 | 31 |
| Internal Link Dist (ft) | | 823 | | | 893 | | | 1023 | | | 636 | |
| Turn Bay Length (ft) | 200 | | 150 | 250 | | 200 | 425 | | | 350 | | 350 |
| Base Capacity (vph) | 212 | 554 | 526 | 152 | 558 | 532 | 110 | 2529 | 1149 | 302 | 2553 | 1223 |
| 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 | 1.33 | 0.02 | 0.08 | 0.28 | 0.05 | 0.06 | 0.28 | 0.45 | 0.02 | 0.03 | 0.72 | 0.29 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Marksheffel Rd & Meadowbrook Parkway



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 317 | 16 | 59 | 27 | 16 | 43 | 54 | 1973 | 86 | 48 | 1441 | 290 |
| v/c Ratio | 1.23 | 0.08 | 0.25 | 0.19 | 0.16 | 0.26 | 0.26 | 0.75 | 0.07 | 0.59 | 0.56 | 0.24 |
| Control Delay | 179.8 | 50.8 | 7.8 | 44.7 | 56.9 | 5.5 | 11.8 | 19.3 | 4.0 | 43.2 | 8.1 | 1.1 |
| 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 | 179.8 | 50.8 | 7.8 | 44.7 | 56.9 | 5.5 | 11.8 | 19.3 | 4.0 | 43.2 | 8.1 | 1.1 |
| Queue Length 50th (ft) | ~156 | 12 | 0 | 18 | 12 | 0 | 21 | 587 | 9 | 16 | 238 | 0 |
| Queue Length 95th (ft) | #249 | 34 | 24 | 44 | 35 | 7 | m16 | m605 | m11 | #96 | 308 | 23 |
| Internal Link Dist (ft) | | 823 | | | 893 | | | 1023 | | | 636 | |
| Turn Bay Length (ft) | 200 | | 150 | 250 | | 200 | 425 | | | 350 | | 350 |
| Base Capacity (vph) | 257 | 613 | 576 | 145 | 558 | 532 | 206 | 2641 | 1200 | 82 | 2591 | 1232 |
| 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 | 1.23 | 0.03 | 0.10 | 0.19 | 0.03 | 0.08 | 0.26 | 0.75 | 0.07 | 0.59 | 0.56 | 0.24 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Marksheffel Rd & Meadowbrook Parkway



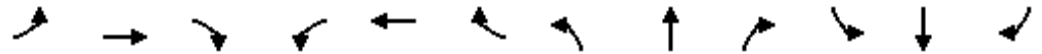
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 313 | 10 | 47 | 52 | 26 | 36 | 36 | 1557 | 26 | 16 | 2276 | 396 |
| v/c Ratio | 1.32 | 0.06 | 0.23 | 0.34 | 0.23 | 0.21 | 0.60 | 0.62 | 0.02 | 0.10 | 0.90 | 0.33 |
| Control Delay | 211.4 | 50.0 | 5.2 | 48.3 | 58.1 | 2.7 | 62.7 | 29.0 | 3.5 | 6.9 | 19.7 | 2.4 |
| 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 | 211.4 | 50.0 | 5.2 | 48.3 | 58.1 | 2.7 | 62.7 | 29.0 | 3.5 | 6.9 | 19.7 | 2.4 |
| Queue Length 50th (ft) | ~160 | 7 | 0 | 35 | 20 | 0 | 24 | 557 | 1 | 3 | 680 | 22 |
| Queue Length 95th (ft) | #254 | 24 | 11 | 70 | 49 | 0 | m33 | 630 | m1 | 12 | #965 | 55 |
| Internal Link Dist (ft) | | 823 | | | 893 | | | 1023 | | | 636 | |
| Turn Bay Length (ft) | 200 | | 150 | 250 | | 200 | 425 | | | 350 | | 350 |
| Base Capacity (vph) | 238 | 568 | 538 | 152 | 558 | 532 | 60 | 2501 | 1137 | 167 | 2525 | 1204 |
| 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 | 1.32 | 0.02 | 0.09 | 0.34 | 0.05 | 0.07 | 0.60 | 0.62 | 0.02 | 0.10 | 0.90 | 0.33 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Marksheffel Rd & Meadowbrook Parkway



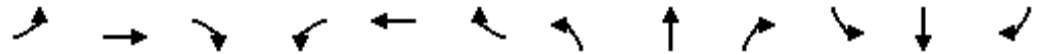
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|--------|------|-------|------|------|
| Lane Group Flow (vph) | 382 | 16 | 70 | 27 | 22 | 48 | 59 | 2710 | 102 | 59 | 2215 | 339 |
| v/c Ratio | 1.49 | 0.08 | 0.29 | 0.18 | 0.20 | 0.28 | 0.94 | 1.03 | 0.09 | 0.95 | 0.86 | 0.28 |
| Control Delay | 276.8 | 50.3 | 11.4 | 44.1 | 57.6 | 7.4 | 94.0 | 49.8 | 4.6 | 127.2 | 16.5 | 2.1 |
| 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 | 276.8 | 50.3 | 11.4 | 44.1 | 57.6 | 7.4 | 94.0 | 49.8 | 4.6 | 127.2 | 16.5 | 2.1 |
| Queue Length 50th (ft) | ~210 | 12 | 0 | 18 | 17 | 0 | 36 | ~957 | 12 | 37 | 600 | 17 |
| Queue Length 95th (ft) | #310 | 34 | 36 | 44 | 44 | 13 | m#57 | m#1287 | m15 | #92 | 796 | 47 |
| Internal Link Dist (ft) | | 823 | | | 893 | | | 1023 | | | 636 | |
| Turn Bay Length (ft) | 200 | | 150 | 250 | | 200 | 425 | | | 350 | | 350 |
| Base Capacity (vph) | 257 | 613 | 576 | 149 | 558 | 532 | 63 | 2631 | 1195 | 62 | 2580 | 1219 |
| 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 | 1.49 | 0.03 | 0.12 | 0.18 | 0.04 | 0.09 | 0.94 | 1.03 | 0.09 | 0.95 | 0.86 | 0.28 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: Marksheffel Rd & US-24



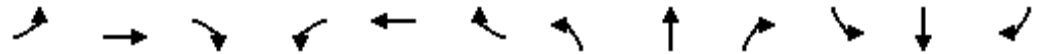
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 375 | 573 | 130 | 365 | 1266 | 21 | 5 | 786 | 109 | 10 | 1068 | 792 |
| v/c Ratio | 0.71 | 0.48 | 0.09 | 0.72 | 1.04 | 0.01 | 0.06 | 0.73 | 0.07 | 0.12 | 1.00 | 0.52 |
| Control Delay | 42.6 | 45.9 | 0.1 | 56.4 | 75.7 | 0.0 | 43.0 | 29.1 | 0.1 | 48.7 | 57.6 | 0.9 |
| 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 | 42.6 | 45.9 | 0.1 | 56.4 | 75.7 | 0.0 | 43.0 | 29.1 | 0.1 | 48.7 | 57.6 | 0.9 |
| Queue Length 50th (ft) | 141 | 239 | 0 | 140 | -550 | 0 | 4 | 278 | 0 | 8 | -438 | 0 |
| Queue Length 95th (ft) | #260 | 311 | 0 | 184 | #738 | 0 | m13 | 124 | 0 | m11 | #585 | 0 |
| Internal Link Dist (ft) | | 1511 | | | 2597 | | | 1201 | | | 1023 | |
| Turn Bay Length (ft) | 1000 | | 575 | 1000 | | 700 | 300 | | 375 | 375 | | |
| Base Capacity (vph) | 526 | 1189 | 1455 | 673 | 1216 | 1553 | 87 | 1109 | 1568 | 80 | 1065 | 1524 |
| 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 | 0.71 | 0.48 | 0.09 | 0.54 | 1.04 | 0.01 | 0.06 | 0.71 | 0.07 | 0.13 | 1.00 | 0.52 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: Marksheffel Rd & US-24



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 684 | 1224 | 128 | 214 | 597 | 20 | 15 | 1214 | 250 | 20 | 934 | 520 |
| v/c Ratio | 0.85 | 0.95 | 0.08 | 0.69 | 0.76 | 0.01 | 0.18 | 0.98 | 0.16 | 0.27 | 0.75 | 0.33 |
| Control Delay | 36.7 | 51.8 | 0.1 | 65.7 | 52.3 | 0.0 | 52.9 | 55.6 | 0.2 | 57.6 | 31.6 | 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 | 36.7 | 51.8 | 0.1 | 65.7 | 52.3 | 0.0 | 52.9 | 55.6 | 0.2 | 57.6 | 31.6 | 0.5 |
| Queue Length 50th (ft) | 261 | 536 | 0 | 81 | 220 | 0 | 10 | 375 | 0 | 16 | 333 | 0 |
| Queue Length 95th (ft) | 355 | #690 | m0 | #164 | #406 | 0 | m21 | #627 | 0 | m29 | 418 | 0 |
| Internal Link Dist (ft) | | 1511 | | | 2597 | | | 1201 | | | 1023 | |
| Turn Bay Length (ft) | 1000 | | 575 | 1000 | | 700 | 300 | | 375 | 375 | | |
| Base Capacity (vph) | 886 | 1293 | 1583 | 309 | 782 | 1568 | 84 | 1238 | 1583 | 73 | 1243 | 1568 |
| 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 | 0.77 | 0.95 | 0.08 | 0.69 | 0.76 | 0.01 | 0.18 | 0.98 | 0.16 | 0.27 | 0.75 | 0.33 |

Intersection Summary

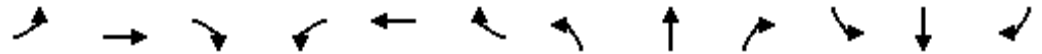
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2040 Total AM.syn

2: Marksheffel Rd & US-24

02/15/2021



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Lane Group Flow (vph) | 443 | 672 | 146 | 453 | 1484 | 26 | 5 | 1146 | 167 | 16 | 1385 | 927 |
| v/c Ratio | 0.84 | 0.42 | 0.25 | 0.78 | 0.86 | 0.04 | 0.07 | 0.79 | 0.11 | 0.22 | 0.91 | 0.61 |
| Control Delay | 51.2 | 45.9 | 25.9 | 57.4 | 43.3 | 0.1 | 37.6 | 25.3 | 0.1 | 49.5 | 36.1 | 1.2 |
| 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 | 51.2 | 45.9 | 25.9 | 57.4 | 43.3 | 0.1 | 37.6 | 25.3 | 0.1 | 49.5 | 36.1 | 1.2 |
| Queue Length 50th (ft) | 167 | 189 | 39 | 173 | 389 | 0 | 4 | 319 | 0 | 12 | 352 | 0 |
| Queue Length 95th (ft) | #284 | 248 | 126 | 227 | #512 | 0 | m12 | 111 | 0 | m14 | m#482 | m0 |
| Internal Link Dist (ft) | | 1511 | | | 2597 | | | 1917 | | | 1023 | |
| Turn Bay Length (ft) | 1000 | | 575 | 1000 | | 700 | 300 | | 375 | 375 | | |
| Base Capacity (vph) | 530 | 1597 | 589 | 659 | 1726 | 629 | 73 | 1468 | 1568 | 74 | 1529 | 1524 |
| 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 | 0.42 | 0.25 | 0.69 | 0.86 | 0.04 | 0.07 | 0.78 | 0.11 | 0.22 | 0.91 | 0.61 |

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.



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 801 | 1444 | 209 | 332 | 704 | 20 | 20 | 1801 | 352 | 26 | 1592 | 612 |
| v/c Ratio | 0.91 | 0.93 | 0.36 | 0.83 | 0.84 | 0.05 | 0.27 | 0.98 | 0.22 | 0.36 | 0.82 | 0.39 |
| Control Delay | 33.5 | 47.7 | 21.8 | 69.9 | 58.6 | 0.2 | 59.9 | 45.3 | 0.3 | 53.6 | 28.5 | 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 | 33.5 | 47.7 | 21.8 | 69.9 | 58.6 | 0.2 | 59.9 | 45.3 | 0.3 | 53.6 | 28.5 | 0.4 |
| Queue Length 50th (ft) | ~339 | 440 | 104 | ~140 | 197 | 0 | 16 | 523 | 0 | 20 | 259 | 0 |
| Queue Length 95th (ft) | m#423 | m#519 | m139 | #235 | #265 | 0 | m29 | #599 | 0 | m24 | 447 | m0 |
| Internal Link Dist (ft) | | 1511 | | | 2597 | | | 1917 | | | 1023 | |
| Turn Bay Length (ft) | 1000 | | 575 | 1000 | | 700 | 300 | | 375 | 375 | | |
| Base Capacity (vph) | 876 | 1546 | 579 | 402 | 841 | 428 | 75 | 1843 | 1583 | 73 | 1938 | 1568 |
| 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 | 0.91 | 0.93 | 0.36 | 0.83 | 0.84 | 0.05 | 0.27 | 0.98 | 0.22 | 0.36 | 0.82 | 0.39 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: US-24 & Newt Dr/SH-94



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|-------|------|------|------|------|------|
| Lane Group Flow (vph) | 46 | 93 | 510 | 845 | 98 | 5 | 438 | 1015 | 655 | 5 | 1918 | 67 |
| v/c Ratio | 0.26 | 0.54 | 0.33 | 0.96 | 0.12 | 0.00 | 2.37 | 0.39 | 0.45 | 0.02 | 0.86 | 0.08 |
| Control Delay | 58.5 | 62.4 | 0.6 | 60.1 | 29.2 | 0.0 | 656.5 | 17.2 | 1.0 | 12.4 | 36.4 | 1.1 |
| 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 | 58.5 | 62.4 | 0.6 | 60.1 | 29.2 | 0.0 | 656.5 | 17.2 | 1.0 | 12.4 | 36.4 | 1.1 |
| Queue Length 50th (ft) | 18 | 70 | 0 | 207 | 29 | 0 | -286 | 149 | 0 | 1 | 366 | 0 |
| Queue Length 95th (ft) | 38 | 121 | 0 | #314 | 48 | m0 | #391 | 249 | 0 | m2 | m387 | m2 |
| Internal Link Dist (ft) | | 543 | | | 2360 | | | 1172 | | | 881 | |
| Turn Bay Length (ft) | 375 | | | 475 | | 475 | 900 | | 600 | 800 | | 800 |
| Base Capacity (vph) | 180 | 286 | 1538 | 876 | 984 | 1553 | 185 | 2589 | 1468 | 264 | 2222 | 798 |
| 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 | 0.33 | 0.33 | 0.96 | 0.10 | 0.00 | 2.37 | 0.39 | 0.45 | 0.02 | 0.86 | 0.08 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: US-24 & Newt Dr/SH-94



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 58 | 84 | 474 | 779 | 68 | 11 | 416 | 2026 | 658 | 5 | 1053 | 63 |
| v/c Ratio | 0.34 | 0.51 | 0.30 | 0.94 | 0.09 | 0.01 | 0.84 | 0.68 | 0.42 | 0.03 | 0.53 | 0.08 |
| Control Delay | 60.9 | 61.9 | 0.5 | 75.6 | 34.4 | 0.0 | 65.9 | 20.5 | 0.8 | 14.2 | 39.4 | 1.4 |
| 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 | 60.9 | 61.9 | 0.5 | 75.6 | 34.4 | 0.0 | 65.9 | 20.5 | 0.8 | 14.2 | 39.4 | 1.4 |
| Queue Length 50th (ft) | 22 | 63 | 0 | 209 | 18 | 0 | 162 | 372 | 0 | 1 | 191 | 0 |
| Queue Length 95th (ft) | 45 | 112 | 0 | #290 | m30 | m0 | #236 | 589 | 0 | m3 | 329 | m7 |
| Internal Link Dist (ft) | | 543 | | | 2360 | | | 1172 | | | 881 | |
| Turn Bay Length (ft) | 375 | | | 475 | | 475 | 900 | | 600 | 800 | | 800 |
| Base Capacity (vph) | 171 | 294 | 1583 | 831 | 963 | 1568 | 510 | 2958 | 1568 | 149 | 1998 | 776 |
| 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 | 0.34 | 0.29 | 0.30 | 0.94 | 0.07 | 0.01 | 0.82 | 0.68 | 0.42 | 0.03 | 0.53 | 0.08 |

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
4: US-24 & Newt Dr/SH-94

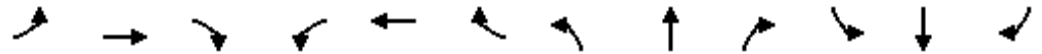
2040 Total AM.syn
02/15/2021



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|-------|------|------|-------|------|------|------|------|------|
| Lane Group Flow (vph) | 57 | 98 | 572 | 1191 | 108 | 5 | 495 | 1186 | 881 | 10 | 2258 | 82 |
| v/c Ratio | 0.35 | 0.55 | 0.37 | 1.72 | 0.15 | 0.00 | 2.68 | 0.43 | 0.60 | 0.04 | 0.94 | 0.10 |
| Control Delay | 61.2 | 62.7 | 0.7 | 360.2 | 44.2 | 0.0 | 791.2 | 15.5 | 1.8 | 6.9 | 31.8 | 1.1 |
| 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 | 61.2 | 62.7 | 0.7 | 360.2 | 44.2 | 0.0 | 791.2 | 15.5 | 1.8 | 6.9 | 31.8 | 1.1 |
| Queue Length 50th (ft) | 22 | 74 | 0 | ~493 | 42 | 0 | ~334 | 166 | 0 | 2 | 346 | 1 |
| Queue Length 95th (ft) | 45 | 126 | 0 | #587 | m64 | m0 | #442 | 279 | 0 | m2 | #741 | m4 |
| Internal Link Dist (ft) | | 543 | | | 2360 | | | 1172 | | | 881 | |
| Turn Bay Length (ft) | 375 | | | 475 | | 475 | 900 | | 600 | 800 | | 800 |
| Base Capacity (vph) | 166 | 286 | 1538 | 693 | 867 | 1553 | 185 | 2758 | 1468 | 234 | 2393 | 845 |
| 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 | 0.34 | 0.34 | 0.37 | 1.72 | 0.12 | 0.00 | 2.68 | 0.43 | 0.60 | 0.04 | 0.94 | 0.10 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 68 | 100 | 563 | 1221 | 84 | 11 | 495 | 2447 | 1226 | 11 | 1242 | 79 |
| v/c Ratio | 0.40 | 0.55 | 0.36 | 1.29 | 0.09 | 0.01 | 1.00 | 0.91 | 0.78 | 0.07 | 0.71 | 0.11 |
| Control Delay | 62.5 | 62.2 | 0.6 | 180.0 | 20.0 | 0.0 | 91.9 | 32.1 | 4.0 | 16.2 | 60.1 | 2.9 |
| 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 | 62.5 | 62.2 | 0.6 | 180.0 | 20.0 | 0.0 | 91.9 | 32.1 | 4.0 | 16.2 | 60.1 | 2.9 |
| Queue Length 50th (ft) | 26 | 75 | 0 | ~440 | 21 | 0 | 200 | 572 | 0 | 4 | 360 | 3 |
| Queue Length 95th (ft) | 51 | 128 | 0 | m#517 | m23 | m0 | #313 | #920 | 0 | m7 | 409 | m13 |
| Internal Link Dist (ft) | | 543 | | | 2360 | | | 1172 | | | 881 | |
| Turn Bay Length (ft) | 375 | | | 475 | | 475 | 900 | | 600 | 800 | | 800 |
| Base Capacity (vph) | 171 | 294 | 1583 | 947 | 1051 | 1568 | 495 | 2695 | 1568 | 150 | 1739 | 709 |
| 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 | 0.40 | 0.34 | 0.36 | 1.29 | 0.08 | 0.01 | 1.00 | 0.91 | 0.78 | 0.07 | 0.71 | 0.11 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2026 Total AM Improved.syn

5: Marksheffel Rd & SH-94

02/18/2021



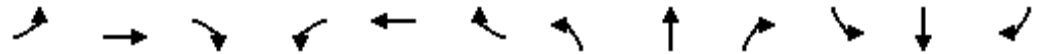
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 163 | 326 | 174 | 38 | 375 | 125 | 207 | 511 | 27 | 326 | 755 | 266 |
| v/c Ratio | 1.07 | 0.63 | 0.31 | 0.20 | 0.71 | 0.22 | 0.54 | 0.37 | 0.02 | 0.60 | 0.47 | 0.17 |
| Control Delay | 127.2 | 36.3 | 3.3 | 30.5 | 44.2 | 3.3 | 22.8 | 24.9 | 0.0 | 22.6 | 23.3 | 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 | 127.2 | 36.3 | 3.3 | 30.5 | 44.2 | 3.3 | 22.8 | 24.9 | 0.0 | 22.6 | 23.3 | 0.2 |
| Queue Length 50th (ft) | ~136 | 182 | 0 | 22 | 253 | 0 | 41 | 151 | 0 | 103 | 162 | 0 |
| Queue Length 95th (ft) | #250 | 237 | 29 | 47 | 327 | 26 | #127 | 246 | 0 | 210 | 275 | 0 |
| Internal Link Dist (ft) | | 2360 | | | 2852 | | | 463 | | | 968 | |
| Turn Bay Length (ft) | 300 | | 250 | 225 | | 250 | 375 | | 400 | 400 | | 400 |
| Base Capacity (vph) | 192 | 659 | 669 | 243 | 672 | 665 | 390 | 1378 | 1538 | 663 | 1611 | 1568 |
| 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 | 0.85 | 0.49 | 0.26 | 0.16 | 0.56 | 0.19 | 0.53 | 0.37 | 0.02 | 0.49 | 0.47 | 0.17 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

5: Marksheffel Rd & SH-94



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 149 | 362 | 282 | 48 | 431 | 420 | 239 | 1170 | 32 | 213 | 899 | 271 |
| v/c Ratio | 1.08 | 0.63 | 0.45 | 0.25 | 0.75 | 0.69 | 0.78 | 0.79 | 0.02 | 0.80 | 0.56 | 0.17 |
| Control Delay | 133.6 | 36.7 | 9.0 | 32.8 | 45.1 | 25.8 | 32.9 | 28.1 | 0.0 | 50.5 | 14.3 | 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 | 133.6 | 36.7 | 9.0 | 32.8 | 45.1 | 25.8 | 32.9 | 28.1 | 0.0 | 50.5 | 14.3 | 0.2 |
| Queue Length 50th (ft) | 116 | 237 | 28 | 26 | 285 | 158 | 51 | 442 | 0 | 101 | 191 | 0 |
| Queue Length 95th (ft) | #256 | 339 | 90 | 60 | 404 | 275 | #157 | 538 | m0 | #207 | 210 | 0 |
| Internal Link Dist (ft) | | 2360 | | | 2852 | | | 463 | | | 968 | |
| Turn Bay Length (ft) | 300 | | 250 | 225 | | 250 | 375 | | 400 | 400 | | 400 |
| Base Capacity (vph) | 151 | 630 | 666 | 208 | 630 | 652 | 306 | 1477 | 1583 | 283 | 1611 | 1553 |
| 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 | 0.99 | 0.57 | 0.42 | 0.23 | 0.68 | 0.64 | 0.78 | 0.79 | 0.02 | 0.75 | 0.56 | 0.17 |

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.



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 179 | 380 | 337 | 43 | 440 | 147 | 467 | 913 | 386 | 1060 | 299 |
| v/c Ratio | 0.90 | 0.40 | 0.51 | 0.19 | 0.45 | 0.27 | 0.82 | 0.54 | 0.76 | 0.55 | 0.19 |
| Control Delay | 73.2 | 30.9 | 3.8 | 31.1 | 35.7 | 5.4 | 65.3 | 29.3 | 47.5 | 24.6 | 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 |
| Total Delay | 73.2 | 30.9 | 3.8 | 31.1 | 35.7 | 5.4 | 65.3 | 29.3 | 47.5 | 24.6 | 0.2 |
| Queue Length 50th (ft) | 112 | 107 | 0 | 24 | 142 | 0 | 139 | 258 | 206 | 131 | 0 |
| Queue Length 95th (ft) | #239 | 137 | 38 | 52 | 178 | 42 | 188 | 319 | 314 | 226 | 0 |
| Internal Link Dist (ft) | | 2360 | | | 2852 | | | 463 | | 968 | |
| Turn Bay Length (ft) | 300 | | 250 | 225 | | 250 | 375 | | 400 | | 400 |
| Base Capacity (vph) | 245 | 1170 | 742 | 284 | 1192 | 630 | 625 | 1700 | 562 | 1939 | 1568 |
| 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 | 0.73 | 0.32 | 0.45 | 0.15 | 0.37 | 0.23 | 0.75 | 0.54 | 0.69 | 0.55 | 0.19 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 250 | 426 | 707 | 53 | 505 | 511 | 601 | 1899 | 245 | 1574 | 303 |
| v/c Ratio | 1.02 | 0.49 | 0.81 | 0.21 | 0.77 | 0.74 | 0.78 | 0.94 | 0.84 | 1.04 | 0.20 |
| Control Delay | 89.7 | 43.2 | 23.0 | 29.3 | 54.3 | 28.6 | 45.7 | 57.6 | 58.2 | 84.7 | 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 |
| Total Delay | 89.7 | 43.2 | 23.0 | 29.3 | 54.3 | 28.6 | 45.7 | 57.6 | 58.2 | 84.7 | 0.2 |
| Queue Length 50th (ft) | ~157 | 154 | 327 | 28 | 195 | 229 | 249 | 489 | 166 | -499 | 0 |
| Queue Length 95th (ft) | m#227 | m197 | 439 | 56 | 248 | 371 | m260 | m500 | #338 | #643 | 0 |
| Internal Link Dist (ft) | | 2360 | | | 2852 | | | 463 | | 968 | |
| Turn Bay Length (ft) | 300 | | 250 | 225 | | 250 | 375 | | 400 | | 400 |
| Base Capacity (vph) | 246 | 935 | 904 | 256 | 774 | 689 | 849 | 2010 | 292 | 1514 | 1553 |
| 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 | 1.02 | 0.46 | 0.78 | 0.21 | 0.65 | 0.74 | 0.71 | 0.94 | 0.84 | 1.04 | 0.20 |

Intersection Summary

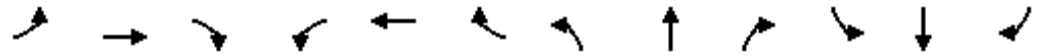
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2026 Total AM Improved.syn

7: Marksheffel Rd & Space Village Ave

02/15/2021

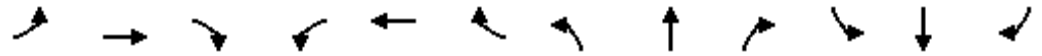


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 43 | 87 | 147 | 49 | 82 | 43 | 353 | 837 | 33 | 76 | 1190 | 141 |
| v/c Ratio | 0.36 | 0.51 | 0.53 | 0.41 | 0.48 | 0.18 | 0.73 | 0.33 | 0.03 | 0.16 | 0.58 | 0.14 |
| Control Delay | 58.1 | 61.5 | 15.0 | 60.4 | 60.3 | 1.6 | 20.8 | 6.9 | 0.2 | 6.1 | 20.2 | 5.9 |
| 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 | 58.1 | 61.5 | 15.0 | 60.4 | 60.3 | 1.6 | 20.8 | 6.9 | 0.2 | 6.1 | 20.2 | 5.9 |
| Queue Length 50th (ft) | 32 | 65 | 0 | 36 | 61 | 0 | 90 | 113 | 0 | 10 | 240 | 8 |
| Queue Length 95th (ft) | 67 | 114 | 60 | 75 | 110 | 0 | 199 | 173 | 2 | 33 | 381 | 41 |
| Internal Link Dist (ft) | | 805 | | | 708 | | | 537 | | | 546 | |
| Turn Bay Length (ft) | 225 | | 250 | 300 | | 200 | 400 | | 425 | 425 | | 425 |
| Base Capacity (vph) | 191 | 271 | 355 | 190 | 271 | 323 | 602 | 2514 | 1143 | 464 | 2049 | 973 |
| 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 | 0.23 | 0.32 | 0.41 | 0.26 | 0.30 | 0.13 | 0.59 | 0.33 | 0.03 | 0.16 | 0.58 | 0.14 |

Intersection Summary

Queues

7: Marksheffel Rd & Space Village Ave



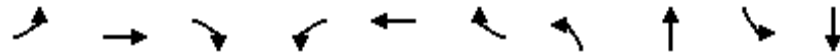
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 59 | 97 | 290 | 86 | 86 | 32 | 263 | 1360 | 48 | 97 | 952 | 27 |
| v/c Ratio | 0.41 | 0.47 | 0.69 | 0.61 | 0.42 | 0.11 | 0.56 | 0.57 | 0.04 | 0.33 | 0.42 | 0.03 |
| Control Delay | 56.5 | 56.3 | 15.9 | 67.5 | 54.5 | 0.7 | 8.6 | 12.0 | 0.6 | 12.7 | 24.4 | 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 | 56.5 | 56.3 | 15.9 | 67.5 | 54.5 | 0.7 | 8.6 | 12.0 | 0.6 | 12.7 | 24.4 | 0.2 |
| Queue Length 50th (ft) | 43 | 72 | 10 | 65 | 63 | 0 | 42 | 262 | 0 | 44 | 302 | 0 |
| Queue Length 95th (ft) | 83 | 121 | 93 | 114 | 110 | 0 | 82 | 394 | 5 | 75 | 396 | m0 |
| Internal Link Dist (ft) | | 805 | | | 708 | | | 537 | | | 546 | |
| Turn Bay Length (ft) | 225 | | 250 | 300 | | 200 | 400 | | 425 | 425 | | 425 |
| Base Capacity (vph) | 258 | 369 | 534 | 255 | 369 | 422 | 578 | 2380 | 1091 | 321 | 2276 | 1066 |
| 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 | 0.23 | 0.26 | 0.54 | 0.34 | 0.23 | 0.08 | 0.46 | 0.57 | 0.04 | 0.30 | 0.42 | 0.03 |

Intersection Summary

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

7: Marksheffel Rd & Space Village Ave

02/15/2021



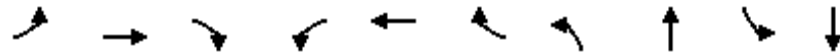
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 54 | 125 | 196 | 82 | 147 | 76 | 462 | 1511 | 114 | 1815 |
| v/c Ratio | 0.28 | 0.57 | 0.55 | 0.39 | 0.67 | 0.24 | 0.94 | 0.50 | 0.47 | 0.87 |
| Control Delay | 41.2 | 59.8 | 12.5 | 44.8 | 65.5 | 1.8 | 55.7 | 25.2 | 21.0 | 53.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 41.2 | 59.8 | 12.5 | 44.8 | 65.5 | 1.8 | 55.7 | 25.2 | 21.0 | 53.1 |
| Queue Length 50th (ft) | 34 | 92 | 0 | 52 | 110 | 0 | 313 | 296 | 54 | 534 |
| Queue Length 95th (ft) | 68 | 153 | 67 | 95 | 176 | 0 | #523 | 474 | 104 | #626 |
| Internal Link Dist (ft) | | 805 | | | 708 | | | 537 | | 546 |
| Turn Bay Length (ft) | 225 | | 250 | 300 | | 200 | 400 | | 425 | |
| Base Capacity (vph) | 190 | 271 | 397 | 208 | 271 | 358 | 507 | 2995 | 274 | 2085 |
| 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 | 0.28 | 0.46 | 0.49 | 0.39 | 0.54 | 0.21 | 0.91 | 0.50 | 0.42 | 0.87 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

7: Marksheffel Rd & Space Village Ave

02/15/2021



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|-------|------|------|------|
| Lane Group Flow (vph) | 140 | 210 | 398 | 194 | 242 | 54 | 355 | 2376 | 269 | 1898 |
| v/c Ratio | 0.78 | 0.81 | 0.93 | 0.92 | 0.81 | 0.15 | 0.96 | 0.99 | 0.95 | 0.88 |
| Control Delay | 68.1 | 73.0 | 48.8 | 83.5 | 69.9 | 0.9 | 51.9 | 63.5 | 55.0 | 28.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 68.1 | 73.0 | 48.8 | 83.5 | 69.9 | 0.9 | 51.9 | 63.5 | 55.0 | 28.9 |
| Queue Length 50th (ft) | 87 | 158 | 126 | 124 | 181 | 0 | 224 | ~723 | 176 | 300 |
| Queue Length 95th (ft) | #178 | #272 | #314 | #204 | #302 | 0 | m#308 | #819 | m175 | m296 |
| Internal Link Dist (ft) | | 805 | | | 708 | | | 537 | | 546 |
| Turn Bay Length (ft) | 225 | | 250 | 300 | | 200 | 400 | | 425 | |
| Base Capacity (vph) | 179 | 276 | 440 | 212 | 313 | 368 | 369 | 2395 | 284 | 2158 |
| 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 | 0.78 | 0.76 | 0.90 | 0.92 | 0.77 | 0.15 | 0.96 | 0.99 | 0.95 | 0.88 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

9: Marksheffel Rd & CRN North Full Access

02/16/2021



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 98 | 98 | 54 | 842 | 1413 | 217 |
| v/c Ratio | 0.55 | 0.40 | 0.18 | 0.30 | 0.56 | 0.18 |
| Control Delay | 62.7 | 14.2 | 6.6 | 5.7 | 25.0 | 8.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.7 | 14.2 | 6.6 | 5.7 | 25.0 | 8.9 |
| Queue Length 50th (ft) | 74 | 0 | 5 | 44 | 493 | 65 |
| Queue Length 95th (ft) | 125 | 50 | 35 | 205 | m523 | m83 |
| Internal Link Dist (ft) | 495 | | | 910 | 636 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 368 | 407 | 293 | 2793 | 2520 | 1218 |
| 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 | 0.27 | 0.24 | 0.18 | 0.30 | 0.56 | 0.18 |

Intersection Summary

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

9: Marksheffel Rd & CRN North Full Access

02/16/2021

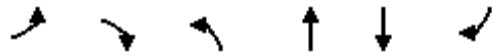


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 98 | 98 | 54 | 1484 | 1136 | 201 |
| v/c Ratio | 0.56 | 0.40 | 0.14 | 0.52 | 0.44 | 0.17 |
| Control Delay | 62.9 | 14.2 | 3.0 | 4.0 | 15.9 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.9 | 14.2 | 3.0 | 4.0 | 15.9 | 6.7 |
| Queue Length 50th (ft) | 74 | 0 | 7 | 130 | 281 | 25 |
| Queue Length 95th (ft) | 126 | 50 | m13 | 130 | 372 | m67 |
| Internal Link Dist (ft) | 495 | | | 910 | 636 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 339 | 382 | 398 | 2849 | 2570 | 1214 |
| 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 | 0.29 | 0.26 | 0.14 | 0.52 | 0.44 | 0.17 |

Intersection Summary

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

9: Marksheffel Rd & CRN North Full Access



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 109 | 109 | 60 | 1261 | 1821 | 239 |
| v/c Ratio | 0.58 | 0.41 | 0.27 | 0.32 | 0.51 | 0.20 |
| Control Delay | 63.0 | 13.4 | 12.2 | 4.6 | 24.6 | 9.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.0 | 13.4 | 12.2 | 4.6 | 24.6 | 9.0 |
| Queue Length 50th (ft) | 82 | 0 | 18 | 158 | 491 | 70 |
| Queue Length 95th (ft) | 137 | 52 | 28 | 87 | 521 | m96 |
| Internal Link Dist (ft) | 495 | | | 910 | 1917 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 339 | 391 | 248 | 3984 | 3587 | 1215 |
| 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 | 0.32 | 0.28 | 0.24 | 0.32 | 0.51 | 0.20 |

Intersection Summary

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

9: Marksheffel Rd & CRN North Full Access



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 109 | 109 | 87 | 2201 | 1913 | 337 |
| v/c Ratio | 0.58 | 0.41 | 0.40 | 0.54 | 0.54 | 0.28 |
| Control Delay | 63.0 | 13.4 | 15.8 | 4.1 | 22.0 | 8.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.0 | 13.4 | 15.8 | 4.1 | 22.0 | 8.1 |
| Queue Length 50th (ft) | 82 | 0 | 16 | 107 | 426 | 57 |
| Queue Length 95th (ft) | 137 | 52 | 57 | 147 | 495 | m120 |
| Internal Link Dist (ft) | 495 | | | 910 | 1917 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 427 | 465 | 247 | 4062 | 3522 | 1208 |
| 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 | 0.26 | 0.23 | 0.35 | 0.54 | 0.54 | 0.28 |

Intersection Summary

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

Queues

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 76 | 217 | 163 | 821 | 1402 | 109 |
| v/c Ratio | 0.49 | 0.65 | 0.51 | 0.29 | 0.58 | 0.09 |
| Control Delay | 62.2 | 17.1 | 16.0 | 2.7 | 4.7 | 0.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.2 | 17.1 | 16.0 | 2.7 | 4.7 | 0.7 |
| Queue Length 50th (ft) | 57 | 4 | 27 | 35 | 105 | 0 |
| Queue Length 95th (ft) | 105 | 78 | m106 | 112 | 184 | 3 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | 250 | |
| Base Capacity (vph) | 295 | 440 | 385 | 2835 | 2436 | 1153 |
| 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 | 0.26 | 0.49 | 0.42 | 0.29 | 0.58 | 0.09 |

Intersection Summary

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

10: Marksheffel Rd & Airl Lane (CRN South Full Access)

02/15/2021



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 76 | 217 | 152 | 1462 | 1130 | 103 |
| v/c Ratio | 0.49 | 0.65 | 0.38 | 0.51 | 0.45 | 0.09 |
| Control Delay | 62.2 | 15.9 | 6.9 | 10.6 | 5.7 | 1.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.2 | 15.9 | 6.9 | 10.6 | 5.7 | 1.5 |
| Queue Length 50th (ft) | 57 | 0 | 42 | 360 | 135 | 3 |
| Queue Length 95th (ft) | 105 | 73 | m62 | m475 | 157 | 6 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 354 | 490 | 482 | 2891 | 2510 | 1162 |
| 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 | 0.21 | 0.44 | 0.32 | 0.51 | 0.45 | 0.09 |

Intersection Summary

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

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 82 | 245 | 179 | 1245 | 1810 | 120 |
| v/c Ratio | 0.51 | 0.67 | 0.61 | 0.31 | 0.54 | 0.11 |
| Control Delay | 62.4 | 15.7 | 22.1 | 7.6 | 3.1 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.4 | 15.7 | 22.1 | 7.6 | 3.1 | 0.5 |
| Queue Length 50th (ft) | 62 | 0 | 86 | 112 | 26 | 0 |
| Queue Length 95th (ft) | 111 | 77 | m149 | 267 | 134 | 2 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 324 | 490 | 393 | 4059 | 3336 | 1108 |
| 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 | 0.50 | 0.46 | 0.31 | 0.54 | 0.11 |

Intersection Summary

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

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 82 | 245 | 255 | 2207 | 1853 | 168 |
| v/c Ratio | 0.51 | 0.67 | 0.74 | 0.53 | 0.58 | 0.16 |
| Control Delay | 62.5 | 15.7 | 35.3 | 1.4 | 7.7 | 1.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.5 | 15.7 | 35.3 | 1.4 | 7.7 | 1.7 |
| Queue Length 50th (ft) | 62 | 0 | 137 | 53 | 143 | 5 |
| Queue Length 95th (ft) | 111 | 77 | m152 | m71 | 183 | 9 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 265 | 445 | 449 | 4138 | 3192 | 1064 |
| 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 | 0.31 | 0.55 | 0.57 | 0.53 | 0.58 | 0.16 |

Intersection Summary

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

18: Marksheffel Rd & RR-SE Full Access #1



| Lane Group | WBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|
| Lane Group Flow (vph) | 206 | 1603 | 130 | 1685 |
| v/c Ratio | 0.74 | 0.48 | 0.48 | 0.44 |
| Control Delay | 55.2 | 10.4 | 16.2 | 16.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 55.2 | 10.4 | 16.2 | 16.1 |
| Queue Length 50th (ft) | 126 | 302 | 61 | 393 |
| Queue Length 95th (ft) | 197 | 360 | m99 | 450 |
| Internal Link Dist (ft) | 297 | 530 | | 470 |
| Turn Bay Length (ft) | | | 150 | |
| Base Capacity (vph) | 418 | 3320 | 378 | 3855 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.49 | 0.48 | 0.34 | 0.44 |

Intersection Summary

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

18: Marksheffel Rd & RR-SE Full Access #1



| Lane Group | WBL | NBT | SBL | SBT |
|-------------------------|------|------|-------|------|
| Lane Group Flow (vph) | 260 | 2369 | 332 | 1859 |
| v/c Ratio | 0.89 | 0.89 | 0.91 | 0.48 |
| Control Delay | 73.5 | 32.5 | 50.5 | 14.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 73.5 | 32.5 | 50.5 | 14.1 |
| Queue Length 50th (ft) | 172 | 486 | 266 | 396 |
| Queue Length 95th (ft) | #319 | m479 | m#304 | 448 |
| Internal Link Dist (ft) | 297 | 530 | | 470 |
| Turn Bay Length (ft) | | | 150 | |
| Base Capacity (vph) | 305 | 2649 | 376 | 3877 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.85 | 0.89 | 0.88 | 0.48 |

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

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 587 | 147 | 11 | 76 | 174 | 434 | 33 | 533 | 739 |
| v/c Ratio | 0.83 | 0.26 | 0.14 | 0.49 | 0.34 | 0.21 | 0.07 | 0.32 | 0.65 |
| Control Delay | 56.4 | 6.4 | 54.8 | 33.7 | 13.6 | 12.1 | 22.4 | 22.2 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 56.4 | 6.4 | 54.8 | 33.7 | 13.6 | 12.1 | 22.4 | 22.2 | 4.9 |
| Queue Length 50th (ft) | 224 | 6 | 8 | 20 | 58 | 78 | 14 | 136 | 0 |
| Queue Length 95th (ft) | 284 | 48 | 27 | 68 | 106 | 121 | 40 | 208 | 90 |
| Internal Link Dist (ft) | | 273 | | 317 | | 401 | | 520 | |
| Turn Bay Length (ft) | 175 | | 150 | | 150 | | 150 | | 150 |
| Base Capacity (vph) | 786 | 759 | 185 | 293 | 521 | 2090 | 444 | 1642 | 1142 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.75 | 0.19 | 0.06 | 0.26 | 0.33 | 0.21 | 0.07 | 0.32 | 0.65 |

Intersection Summary

Queues

21: Marksheffel Rd & Peterson AFB Access/RR-SE Full Access #2



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 875 | 228 | 11 | 93 | 141 | 614 | 76 | 435 | 614 |
| v/c Ratio | 0.88 | 0.29 | 0.14 | 0.54 | 0.31 | 0.43 | 0.21 | 0.33 | 0.63 |
| Control Delay | 51.7 | 4.9 | 54.3 | 33.9 | 19.3 | 29.1 | 19.0 | 29.0 | 5.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 51.7 | 4.9 | 54.3 | 33.9 | 19.3 | 29.1 | 19.0 | 29.0 | 5.7 |
| Queue Length 50th (ft) | 326 | 12 | 8 | 25 | 58 | 185 | 30 | 127 | 0 |
| Queue Length 95th (ft) | 402 | 56 | 27 | 77 | 107 | 271 | 64 | 187 | 93 |
| Internal Link Dist (ft) | | 273 | | 317 | | 401 | | 520 | |
| Turn Bay Length (ft) | 175 | | 150 | | 150 | | 150 | | 150 |
| Base Capacity (vph) | 1072 | 920 | 172 | 303 | 459 | 1426 | 367 | 1323 | 979 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.82 | 0.25 | 0.06 | 0.31 | 0.31 | 0.43 | 0.21 | 0.33 | 0.63 |

Intersection Summary



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 739 | 191 | 38 | 92 | 168 | 207 | 527 | 109 | 636 | 924 |
| v/c Ratio | 0.93 | 0.27 | 0.34 | 0.52 | 0.56 | 0.52 | 0.29 | 0.32 | 0.45 | 0.83 |
| Control Delay | 63.4 | 6.6 | 57.5 | 61.4 | 14.5 | 21.3 | 16.4 | 13.9 | 12.7 | 20.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.4 | 6.6 | 57.5 | 61.4 | 14.5 | 21.3 | 16.4 | 13.9 | 12.7 | 20.5 |
| Queue Length 50th (ft) | 288 | 16 | 28 | 69 | 0 | 81 | 113 | 24 | 73 | 228 |
| Queue Length 95th (ft) | #397 | 60 | 62 | 119 | 64 | 139 | 165 | 61 | 137 | 321 |
| Internal Link Dist (ft) | | 273 | | 317 | | | 401 | | 520 | |
| Turn Bay Length (ft) | 175 | | 150 | | | 150 | | 150 | | |
| Base Capacity (vph) | 815 | 796 | 178 | 279 | 380 | 396 | 1835 | 346 | 1403 | 1113 |
| 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 | 0.91 | 0.24 | 0.21 | 0.33 | 0.44 | 0.52 | 0.29 | 0.32 | 0.45 | 0.83 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|-------|-------|------|------|
| Lane Group Flow (vph) | 1190 | 331 | 49 | 120 | 217 | 163 | 815 | 277 | 543 | 848 |
| v/c Ratio | 0.99 | 0.36 | 0.43 | 0.59 | 0.67 | 0.55 | 1.14 | 0.84 | 0.54 | 0.81 |
| Control Delay | 63.0 | 8.7 | 60.0 | 61.6 | 24.0 | 36.1 | 122.9 | 69.4 | 41.9 | 22.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.0 | 8.7 | 60.0 | 61.6 | 24.0 | 36.1 | 122.9 | 69.4 | 41.9 | 22.4 |
| Queue Length 50th (ft) | 469 | 65 | 36 | 90 | 36 | 81 | -388 | 192 | 161 | 293 |
| Queue Length 95th (ft) | #623 | 116 | 75 | 147 | 114 | 142 | #518 | m#360 | m214 | m369 |
| Internal Link Dist (ft) | | 273 | | 317 | | | 401 | | 520 | |
| Turn Bay Length (ft) | 175 | | 150 | | | 150 | | 150 | | |
| Base Capacity (vph) | 1201 | 985 | 156 | 279 | 380 | 299 | 714 | 331 | 1009 | 1044 |
| 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 | 0.99 | 0.34 | 0.31 | 0.43 | 0.57 | 0.55 | 1.14 | 0.84 | 0.54 | 0.81 |

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

10: Marksheffel Rd & Airl Lane (CRN South Full Access)

02/16/2021



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 168 | 217 | 163 | 821 | 1402 | 109 |
| v/c Ratio | 0.69 | 0.54 | 0.55 | 0.31 | 0.62 | 0.10 |
| Control Delay | 63.6 | 11.5 | 20.8 | 4.5 | 19.1 | 3.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.6 | 11.5 | 20.8 | 4.5 | 19.1 | 3.8 |
| Queue Length 50th (ft) | 126 | 3 | 41 | 52 | 534 | 12 |
| Queue Length 95th (ft) | 192 | 70 | m120 | 157 | m560 | m33 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 324 | 464 | 354 | 2664 | 2246 | 1071 |
| 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 | 0.52 | 0.47 | 0.46 | 0.31 | 0.62 | 0.10 |

Intersection Summary

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

10: Marksheffel Rd & Airl Lane (CRN South Full Access)

02/16/2021



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 168 | 217 | 152 | 1462 | 1130 | 103 |
| v/c Ratio | 0.69 | 0.53 | 0.41 | 0.54 | 0.49 | 0.10 |
| Control Delay | 63.1 | 10.7 | 10.8 | 15.3 | 19.5 | 5.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.1 | 10.7 | 10.8 | 15.3 | 19.5 | 5.7 |
| Queue Length 50th (ft) | 126 | 0 | 59 | 442 | 403 | 23 |
| Queue Length 95th (ft) | 191 | 66 | m89 | m561 | 521 | m41 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 354 | 490 | 459 | 2712 | 2312 | 1079 |
| 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 | 0.47 | 0.44 | 0.33 | 0.54 | 0.49 | 0.10 |

Intersection Summary

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

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 190 | 245 | 179 | 1245 | 1810 | 120 |
| v/c Ratio | 0.73 | 0.55 | 0.65 | 0.33 | 0.60 | 0.12 |
| Control Delay | 64.3 | 10.3 | 29.0 | 10.9 | 14.4 | 4.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 64.3 | 10.3 | 29.0 | 10.9 | 14.4 | 4.1 |
| Queue Length 50th (ft) | 142 | 0 | 92 | 122 | 420 | 15 |
| Queue Length 95th (ft) | 213 | 70 | m164 | 288 | 508 | m42 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 339 | 501 | 359 | 3776 | 3041 | 1020 |
| 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 | 0.56 | 0.49 | 0.50 | 0.33 | 0.60 | 0.12 |

Intersection Summary

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

10: Marksheffel Rd & Airl Lane (CRN South Full Access)



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 190 | 245 | 255 | 2207 | 1853 | 168 |
| v/c Ratio | 0.74 | 0.56 | 0.78 | 0.57 | 0.63 | 0.17 |
| Control Delay | 66.4 | 10.6 | 46.2 | 3.2 | 23.7 | 8.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 66.4 | 10.6 | 46.2 | 3.2 | 23.7 | 8.1 |
| Queue Length 50th (ft) | 142 | 0 | 153 | 115 | 427 | 39 |
| Queue Length 95th (ft) | 218 | 71 | m171 | m115 | 564 | m79 |
| Internal Link Dist (ft) | 358 | | | 968 | 910 | |
| Turn Bay Length (ft) | 200 | | 300 | | | 250 |
| Base Capacity (vph) | 309 | 479 | 421 | 3866 | 2923 | 986 |
| 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 | 0.61 | 0.51 | 0.61 | 0.57 | 0.63 | 0.17 |

Intersection Summary

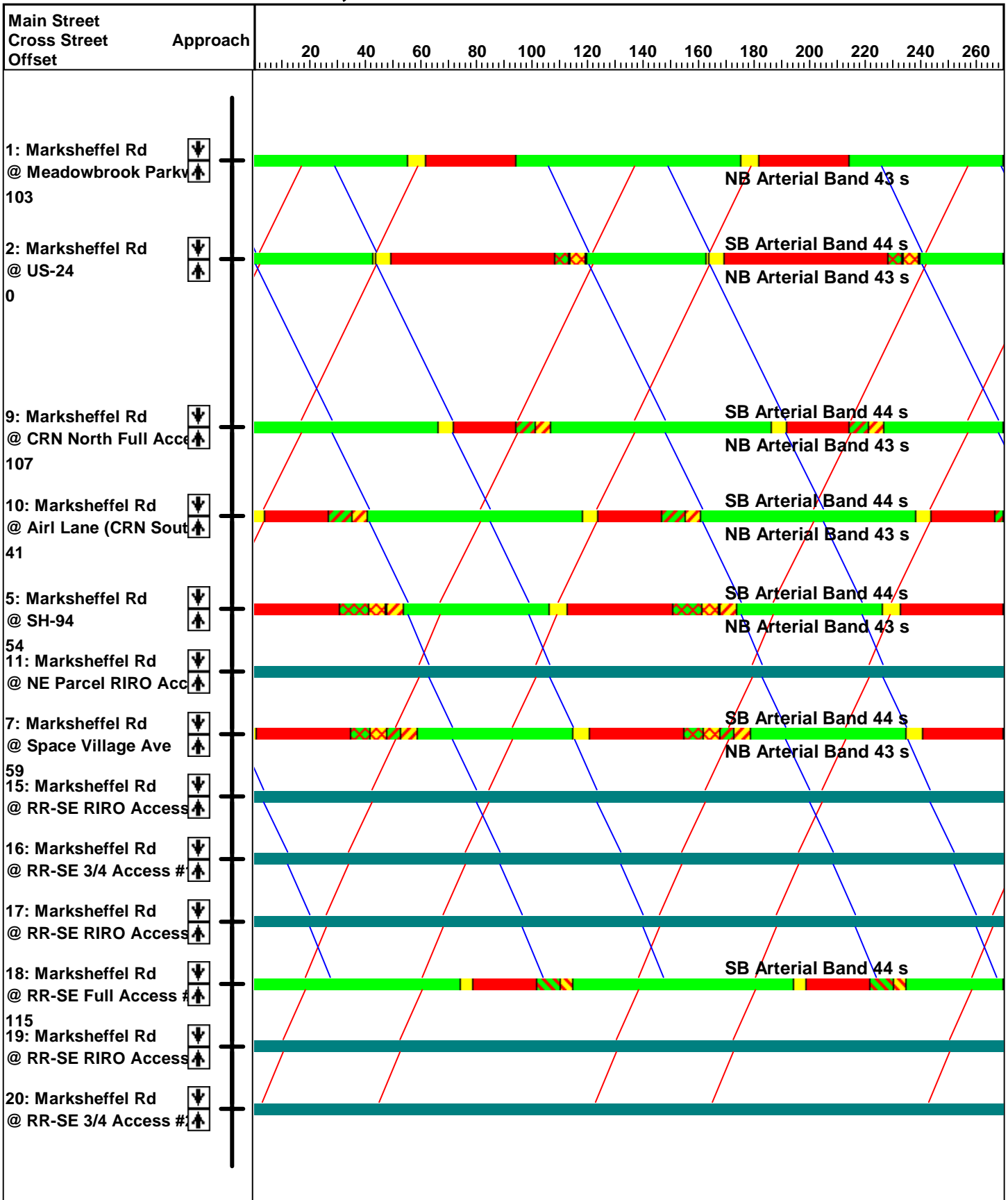
m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX G

Time-Space Diagrams

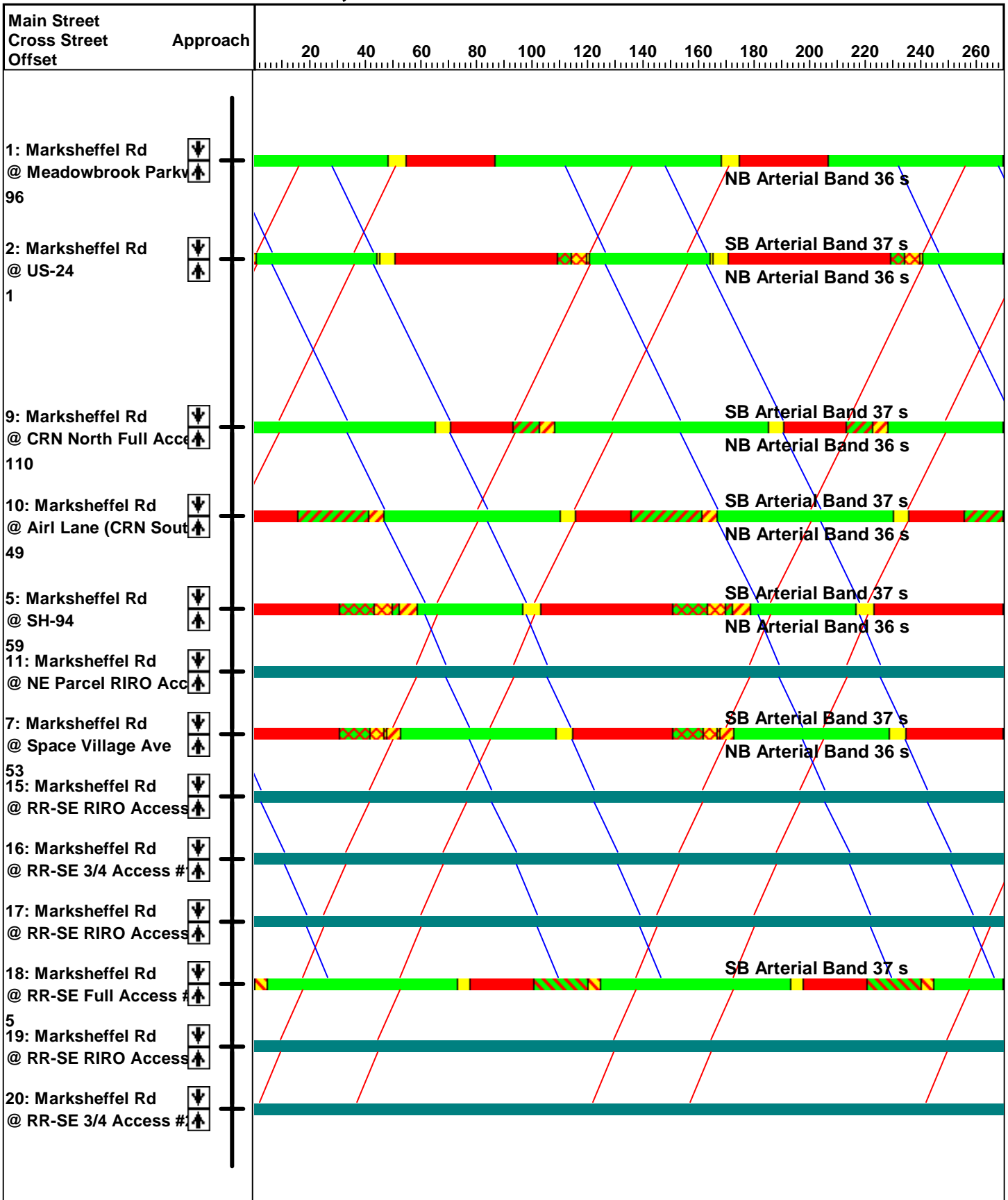
Time-Space Diagram 2040 Total AM_Signal_Int 9 Signal.syn

Arterial Bandwidths, 90th Percentile Green Times



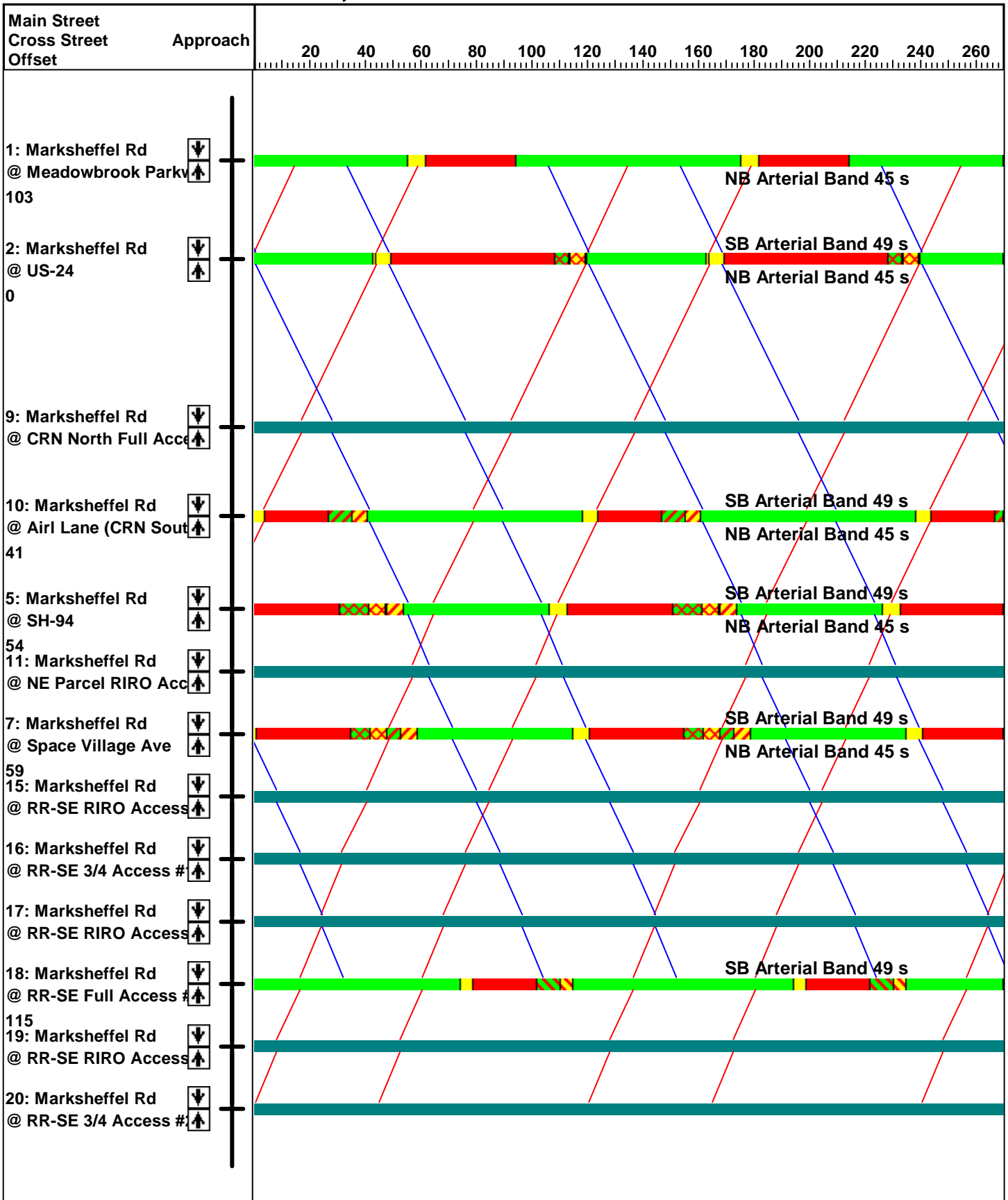
Time-Space Diagram 2040 Total PM_Signal_Int 9 Signal.syn

Arterial Bandwidths, 90th Percentile Green Times



Time-Space Diagram 2040 Total AM_Signal_Int 9 TWSC.syn

Arterial Bandwidths, 90th Percentile Green Times



APPENDIX H

Conceptual Site Plans



RESIDENTIAL

Meadowbrook Parkway

US HWY 24 EXPRESSWAY

CIRCLE K

POND

GYM/ ROCK

3.41 AC



Thomas+Thomas
 planning urban design + landscape architecture, inc.
 702 North Tejon
 Colorado Springs, Colorado 80903
 (719) 594-8777

Meadowbrook Park
 SINGLE FAMILY CONCEPT A
 59 UNITS
 Colorado Springs, CO

STAMP:

| REV # | REVISIONS | DATE |
|-------|-----------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

| | | |
|-----------------|----------|----------|
| DESIGNED | STB | 09.06.19 |
| DRAWN | STB | 09.06.19 |
| CHECKED | JH | 09.06.19 |
| PROJECT NUMBER: | 383204 | |
| SCALE: | AS NOTED | |

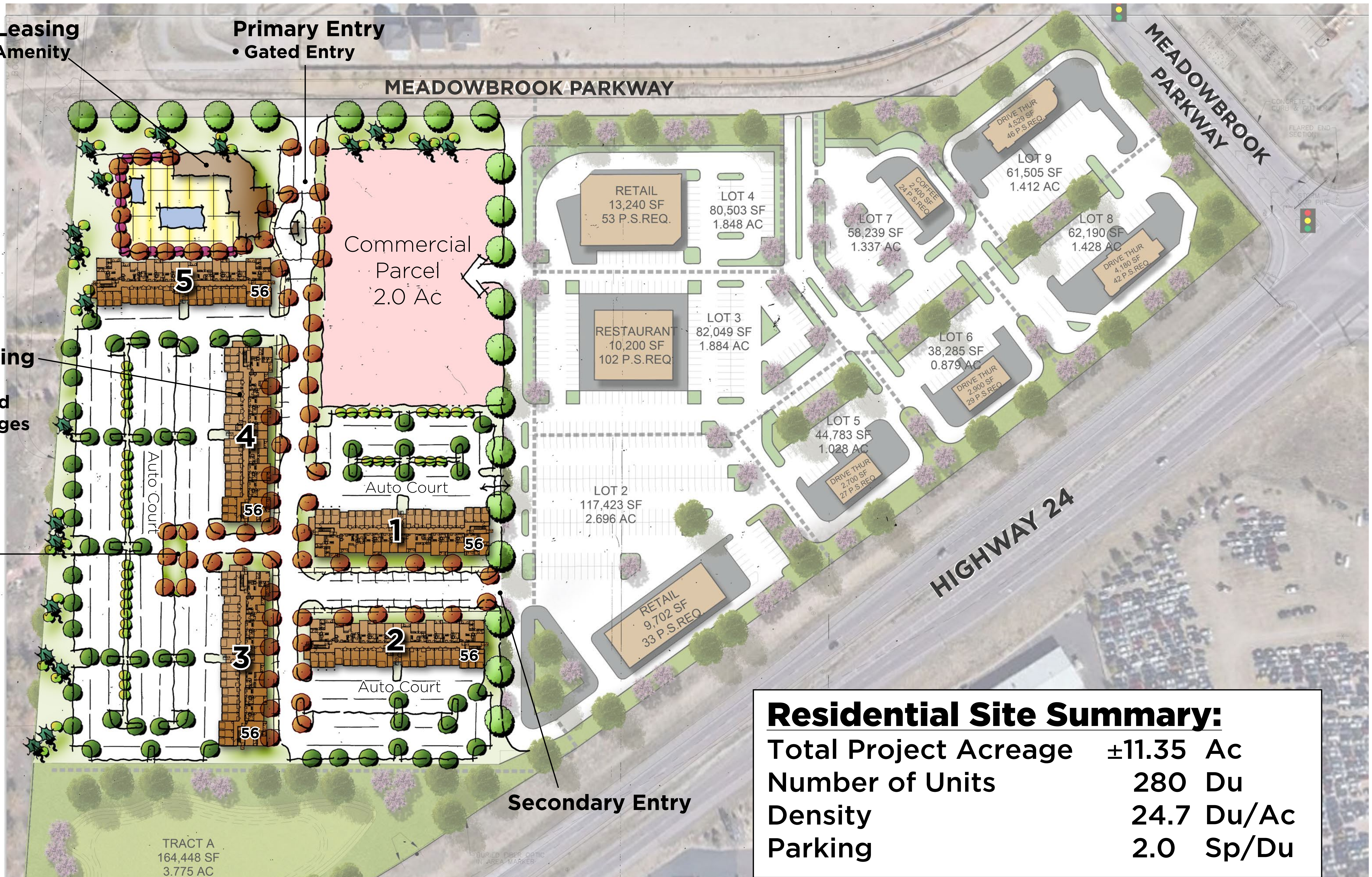
CONCEPT
 P1 OF

Clubhouse / Leasing
 • Pool/Primary Amenity

Primary Entry
 • Gated Entry

56-Plex Building
 • 4 Stories
 • Elevator Served
 • Attached Garages

Dog Run



Residential Site Summary:

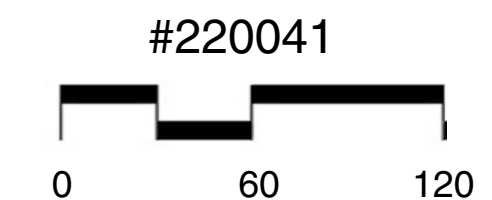
| | | |
|-----------------------|--------|-------|
| Total Project Acreage | ±11.35 | Ac |
| Number of Units | 280 | Du |
| Density | 24.7 | Du/Ac |
| Parking | 2.0 | Sp/Du |

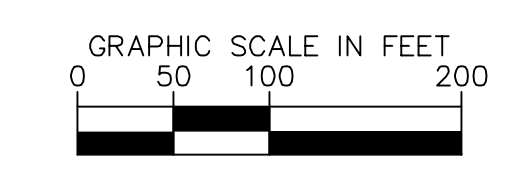
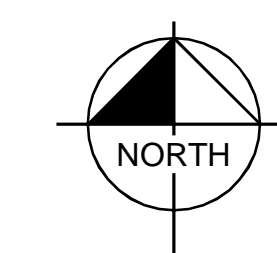
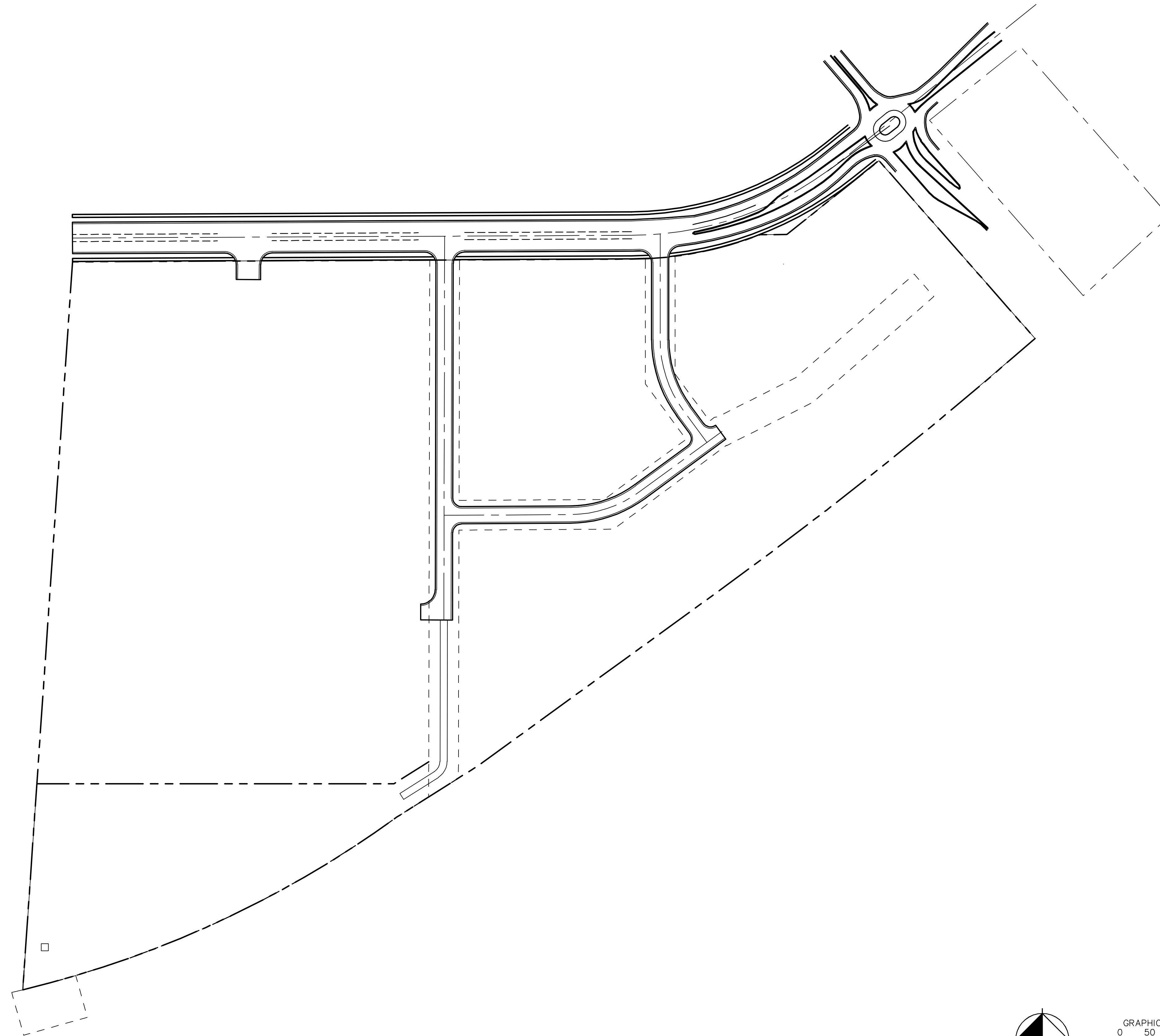
Concept Plan 2 - 4 Stories

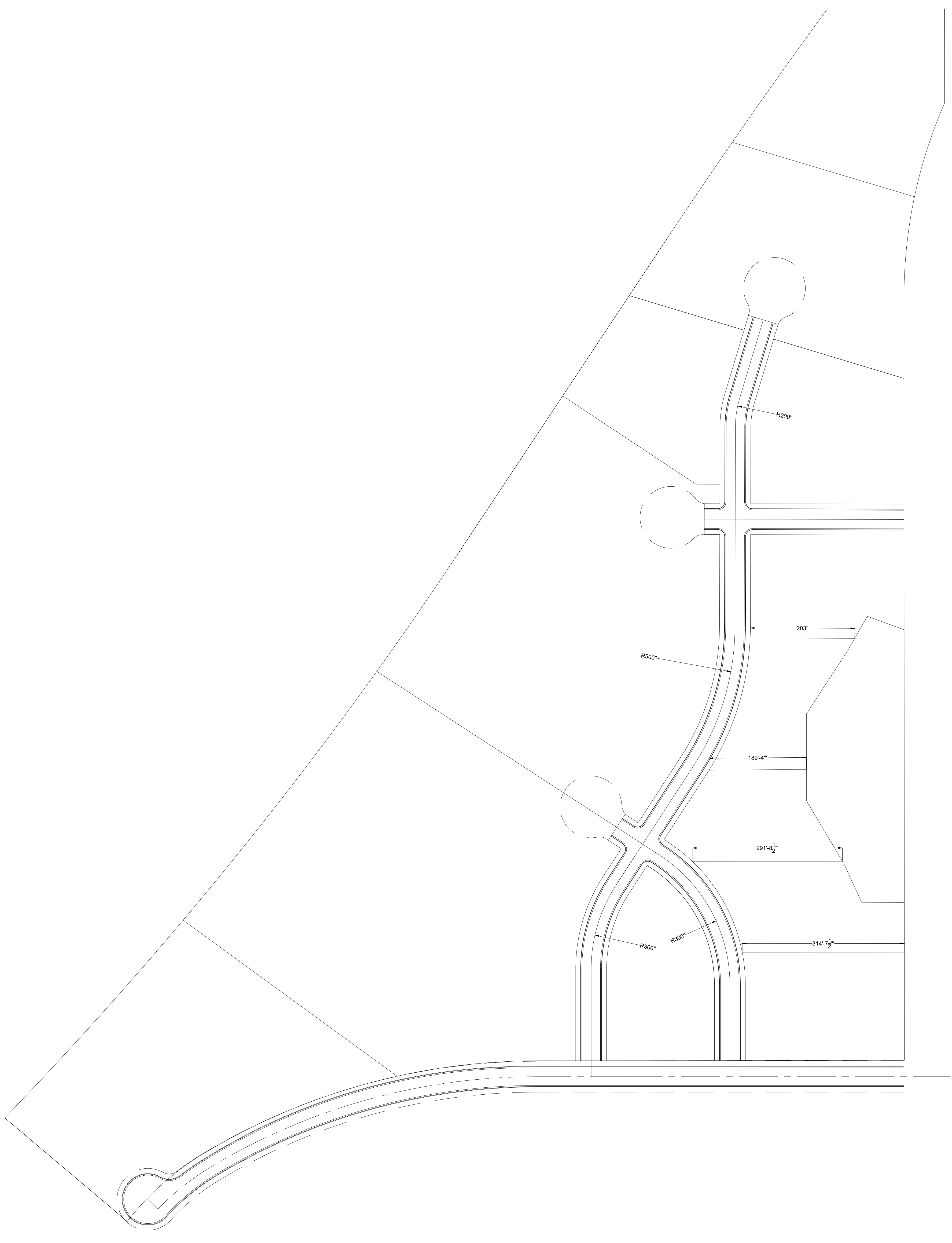
CROSSROADS APARTMENTS

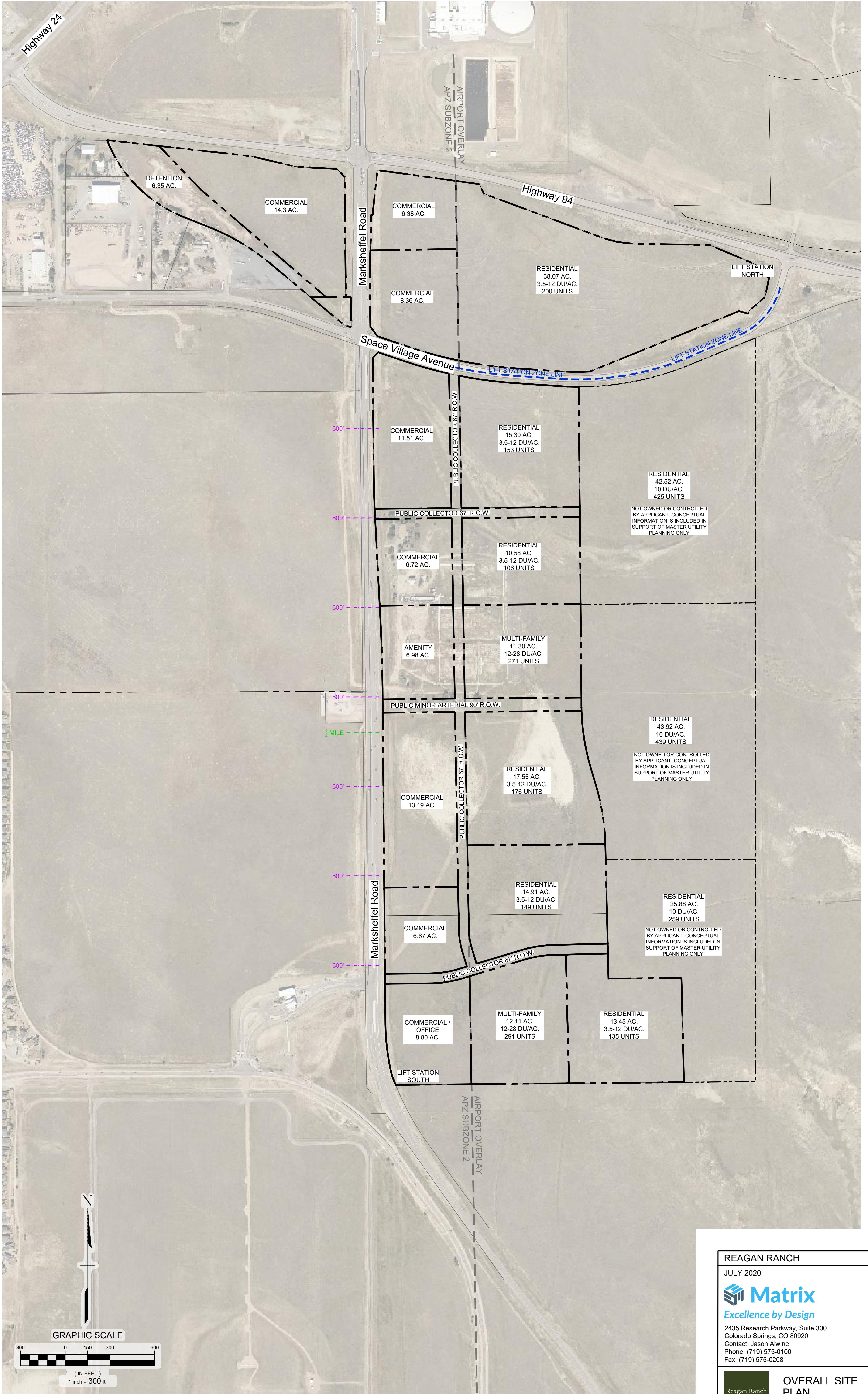
COLORADO SPRINGS, CO

4.22.2020









REAGAN RANCH

JULY 2020



2435 Research Parkway, Suite 300
 Colorado Springs, CO 80920
 Contact: Jason Alwine
 Phone (719) 575-0100
 Fax (719) 575-0208



OVERALL SITE PLAN